Soft Ferrites

THOMSON-CSF
PASSIVE COMPONENTS

THOMSON-CSF PASSIVE COMPONENTS
A Committed International Strategy

"Provide worldwide an innovative range of components and effective solutions focused on the needs of customers and the evolution of market applications."

"Ensure the growth of the company and the satisfaction of shareholders and personnel through joint successes with our customers."

Thomson-CSF Passive Components has made these outlines the fundamental basis of its worldwide operations. They foster our excellence, in terms of customer service, quality and technical know-how.

Our worldwide sales network and our ferrite operations in Beaune (France) and Hsin-Chu (Taiwan) provide TPC customers with global support. Our ISO 9000 certification highlights the importance we attach to continuously improved quality. With our initiative, Total Quality Management, we focus on service and customer satisfaction from the earliest stages of design up to delivery.

Thomson-CSF Passive Components is commited to providing its customers with performing solutions using state-of-the-art technologies in ferrites.

Beaune Factory, France

Hsin-Chu Factory, Taïwan

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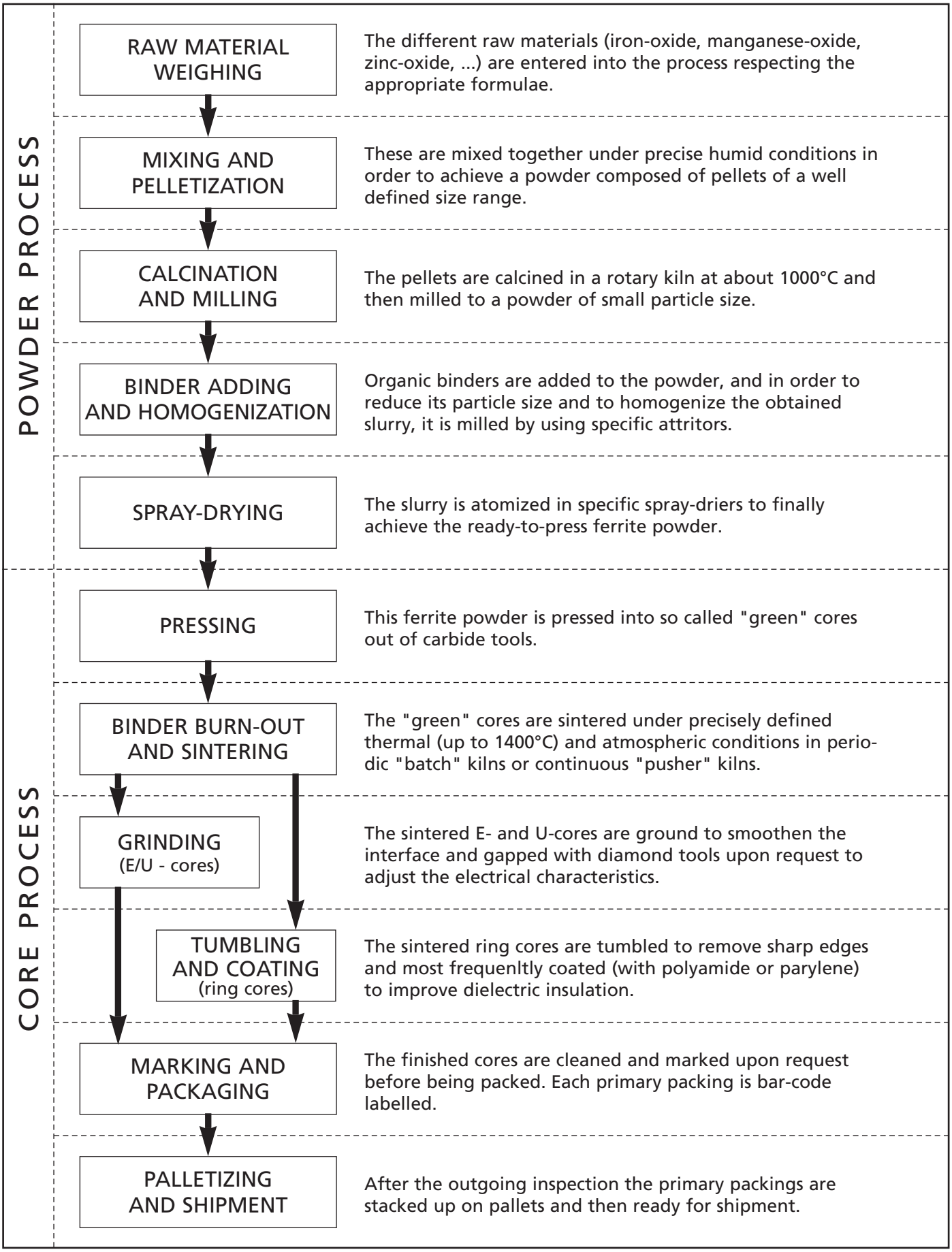
SUMMARY

GENERALITES

Ferrite process flow chart



Symbols

Symbol	Definition	Unit
A_e	Effective magnetic cross section	mm^2
A_L	Nominal inductance factor per turn	nH
B	Flux density	mT
B_r	Residual flux density - remanence	mT
B_s	Saturation flux density	mT
$\hat{B}$	Flux density peak value	mT
c	Magnetic circuit permeance factor	nH
C_1	Core factor $(C_1 = \sum \frac{l}{A})$	mm^{-1}
d	Density (or specific weight)	g/cm^3
f	Frequency	Hz (s^{-1})
F	Jordan factor pertaining to losses due to eddy currents for a 800 Hz frequency	$s/800^2$
f_c	Cut-off frequency	Hz (s^{-1})
$\hat{H}$	Magnetic field (strength) peak value	$A.m^{-1}$
H_c	Coercive force	$A.m^{-1}$
H_o	Superimposed D.C. field	$A.m^{-1}$
i	RMS value of the current in the coil	A
I_s	D.C. current intensity	A
L	Coil inductance with ferrite core	H
l	Length of a core portion with a constant section	mm
l_e	Effective magnetic path length	mm
N	Number of turns	1
P_L	Power losses at high induction level	mW/cm^3
Q	Quality-factor at low induction level	1

Symbols

Symbol	Definition	Unit
r	Jordan factor pertaining to residual losses for 800 Hz	1/800
R_s	Resistance of a coil with a ferrite core	
R_t	Resistance equivalent to total losses	
S_b	Available winding area	mm^2
U	RMS voltage value on coil terminals	V
V_e	Effective magnetic volume	mm^3
δ	Loss angle at low induction	radian
ε	Airgap length	mm
η_B	Hysteresis constant	T^{-1}
T	Temperature	°C
T_c	Curie temperature	°C
λ_s	Saturation magnetostriction coefficient	1
μ_a	Amplitude permeability (core without airgap)	1
μ_e	Effective permeability	1
μ_i	Initial permeability	1
μ_o	Absolute vacuum permeability ($4\pi \times 10^{-7}$ H/m)	$H.m^{-1}$
μ_{rev}	Reversible permeability	1
$\bar{\mu}$	Complex permeability	1
μ's , μ"s	Complex permeability factors expressed in series elements	1
ρ	Resistivity	x cm
Z	Impedance	

1 – MAGNETIC CIRCUIT CHARACTERISTICS

Core factor

This parameter is defined as the sum of $\frac{l}{A}$ values of the various parts along magnetic path :

$$C1 = \sum \frac{l}{A} \quad (mm^{-1}) \qquad (1)$$

where :

l = magnetic length in mm of each portion with constant cross section.

A = area in mm^2 of the cross section of each portion.

Permeance factor

In order to calculate the electro-magnetic characteristics, the core permeance factor, c, is prefered to core factor, C_1, by most designers (see A_L value calculation).

It is defined as : $$c = \frac{\mu_0}{C_1} \times 10^6 \quad (nH) \qquad (2)$$

where : μ_0 = absolute vacuum permeability

Other effective parameters

- effective area of magnetic path : $A_e = \frac{\sum \frac{l}{A}}{\sum \frac{l}{A^2}}$ (3)

- effective magnetic path length : $l_e = A_e \times \sum \frac{l}{A}$ (4)

- effective magnetic volume : $V_e = A_e \times l_e$ (5)

Note : These values are useful for core selection and calculation of hysteresis losses.

2 – PERMEABILITY

The magnetic flux density inside a ferrite core can be described by the formula :

$$B = \mu_0 H + J \qquad (6)$$

where :

μ_0 = absolute vacuum permeability

J = magnetic polarization of ferrite material

This relation introduces the relative permeability μ of a ferrite material which may be defined as :

$$\mu = \frac{1}{\mu_o} \times \frac{B}{H} \qquad (7)$$

- Inductance formula :

The inductance value of a magnetic circuit may be calculated as follows :

$$L = \mu.c.N^2 \qquad (8)$$

with L in nH, c in nH and, N the number of turns.

- Inductance factor : A_L

Inductance factor is given for most magnetic circuits. It is defined as :

$$A_L = \frac{L}{N^2} = \mu \, . \, c \ \ (nH) \qquad (9)$$

2.1 INITIAL PERMEABILITY : μ_i

It is defined as the ratio between the flux density variation and the field variation corresponding to the origin of the first magnetization curve within a closed ring. This applies only to a very low amplitude of the A.C. field.

$$\mu_i = \frac{1}{\mu o} \bullet \frac{\Delta B}{\Delta H} \quad \text{for small } \Delta H \text{ values.} \qquad (10)$$

The initial permeabilities listed on the material characteristics tables are measured on reference toroids (rectangular toroids of 35x12x18 mm) , with an A.C. field amplitude attaining peak value of ΔB = 1 mT.

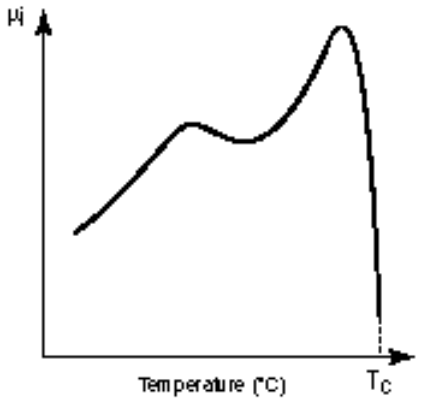


Fig. 1

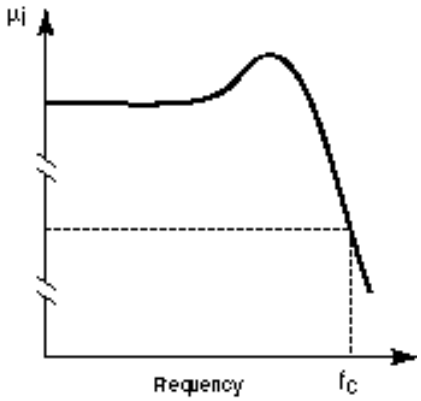


Fig. 2

Notes :

Curie temperature Tc (fig. 1) is the temperature at which the material looses its ferromagnetic properties. For FERRINOX materials, this phenomenon is completely reversible, i.e, cores cooled below the curie point recover their magnetic properties, when brought back to room temperature.
The cut-off frequency (fig. 2) is defined as the frequency at which the permeability is half the initial permeability at 1-10 kHz.

2.2 AMPLITUDE PERMEABILITY : μ_a

In the case of magnetization by a high amplitude sine field, permeability μ_a is defined as the ratio between the inductance peak value B and the field peak value H, with no D.C. magnetic field applied.

$$\mu_a = \frac{1}{\mu_o} \bullet \frac{\hat{B}}{\hat{H}} \qquad (11)$$

Amplitude permeability variation versus B or H is given for each FERRINOX material in the FERRITE MATERIALS section.

2.3 EFFECTIVE PERMEABILITY : μ_e

If a small airgap is created in a closed magnetic circuit, manufactured from material with a permeability μ, the resulting permeability will be smaller than μ due to the reluctance increase in the airgap. This permeability of the magnetic circuit system is called effective permeability.

In more general terms, it is the permeability that an homogeneous hypothetical material must have in order to get the same total reluctance as a core manufactured with several materials where the magnetic leakage flux is negligible (the same dimensions are assumed)

thus :
$$\mu_e = \frac{1}{\mu_o} \bullet \frac{L}{N^2} \bullet \sum \frac{l}{A} \times 10^3 \qquad (12)$$

or
$$\mu_e = \frac{\sum \frac{l}{A}}{\sum \frac{l}{\mu.A}} \qquad (13)$$

(μ is the permeability of each material constituting the magnetic circuit).

An interesting specific case is that of an average length and constant section circuit made of a material of permeability μ and an airgap length of $\varepsilon << l_e$ (valid for $\varepsilon < 0.005.\ l_e$).

Equation (13) becomes :
$$\frac{1}{\mu_e} \simeq \frac{1}{\mu} + \frac{\varepsilon}{l_e} \qquad (14)$$

Note :

For a given core, when μ_e decreases, the acceptable peak value of magnetic field increases (fig. 3).

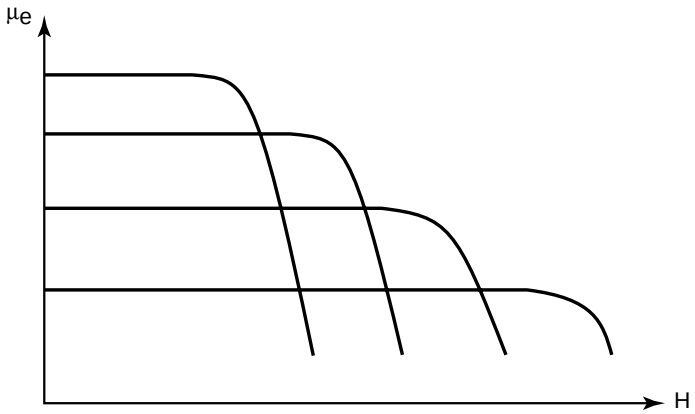


Fig. 3

Two types of μ_e may be calculated :
The effective permeability at low level (corresponding to $^3B < 1$ mT, $\mu = \mu_i$) :

$$\frac{1}{\mu_e} = \frac{1}{\mu_i} + \frac{\varepsilon}{l_e} \qquad (15)$$

The effective permeability for a high amplitude A.C. field ($\mu = \mu_a$) :

$$\frac{1}{\mu_e} = \frac{1}{\mu_a} + \frac{\varepsilon}{l_e} \qquad (16)$$

Note :

These formulas are valid only when the magnetic flux section in the airgap remains roughly the same as in the magnetic core. Conversely, when the airgap length ε is no longer negligible, it is necessary to take into account a factor β, which corresponds to the flux expansion in this airgap.

Note for designers :

Useful A_L versus airgap curves are given for E, U, RM and FM cores.

2.4 REVERSIBLE PERMEABILITY : μ_{rev}

μ_{rev} is defined as the ratio between the flux density variation ^3B and the corresponding field variation for a very low amplitude A.C. field and a superimposed D.C. field H_o :

$$\mu_{rev} = \frac{1}{\mu_o} \bullet \left[\frac{^3B}{^3H}\right]_{H_o} \qquad (17)$$

This permeability μ_{rev} can therefore be compared, to initial permeability μ_i or to the effective permeability μ_e corresponding a low level A.C. field. But the difference arises from the fact that for measurement of μ_i or μ_e the core must not previously have been subjected to the influence of any large amplitude field whilst for the measurement of μ_{rev} the core is assumed to have been previously magnetized.

3 – HYSTERESIS LOOP

The static hysteresis loops, (BH) curves (fig. 4), are obtained by measuring the resulting flux density B inside the core under test for increasing values of H field until saturation.

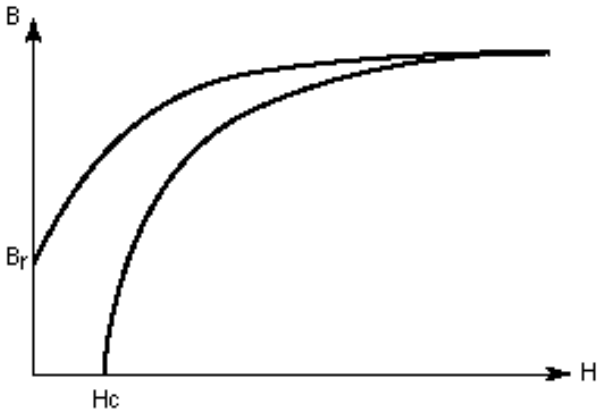


Fig. 4

Notes :

For each FERRINOX material, measurements were made on reference toroids (previously demagnetized) at 25 and 100°C.

Remanent flux density B_r is defined as the intersection of the hysteresis loop with B axis (H = 0). Br is an important factor for unipolar operating systems.

Coercive force H_c is the intersection of the hysteresis loop with H axis (B = 0). It is representative of static hysteresis loss of the considered material, which is recorded in the FERRITE MATERIALS section.

3.1 PLOTTING THE CURVES B = f(H)

The static B(H) (fig. 5) curves are given on the specific sheets pertaining to the characteristics of the various ferrinox materials. They are obtained by measuring the induction B with an analog integrator on the reference toroid (30 x 20 x 8 mm) at temperature of 25°C and 100°C.

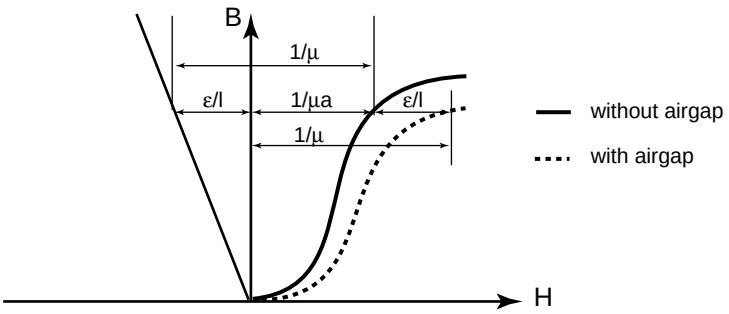


Fig. 5

This first magnetization curves are established on previously demagnetized toroids and for increasing values of field H.

3.2 SATURATION INDUCTION

Induction B in the magnetic circuit is given by the conventional formulae :

$$B = \mu_o H + J$$

J being the magnetic moment per unit of volume.

The term 4šJ comes from the magnetic material. As soon as it reaches saturation, 4šJ becomes constant and equal to $4\check{s}J_s$, which correspond to the saturation induction B_s.

However, as the value of B_s is only obtained with a very important field H, we give in the FERRINOX MATERIALS section THE VALUES OF B corresponding to a rather high specified field, this in order to give an idea of the inductions which can be obtained in practice.

Saturation magnetization varies with temperature and becomes zero at the Curie point. In the FERRINOX MATERIALS section the values of B are given for 25°C and 100°C, which correspond to the normal temperature range of utilization of transformers.

4 – LOSSES

Only losses caused by the ferrite magnetic core will be considered here.

When the core flux density is low enough (e.g. several mT), the series resistance, equivalent to the total losses R_t in the core, can be reduced to a sum of three terms R_F, R_H and R_r, corresponding respectively to the loss resistance caused by :

- eddy currents,
- hysteresis,
- magnetic drag (residual losses).

$$R_t = R_F + R_h + R_r \qquad (18)$$

In this case, it is also possible to define loss coefficients F, h and r by using the Jordan formulas.

$$R_t = F \bullet \frac{f^2}{800^2} \bullet L + h \bullet \frac{Ni}{l} \bullet \frac{f}{800} \bullet L + r \bullet \frac{f}{800} \bullet L \qquad (19)$$

L	inductance in henrys
f	frequency in hertz
i	RMS current intensity (in amperes) in the coil
l	length of the line of mean force
N	number of turns of the coil
F, h, r	Loss coefficients due to eddy currents, hysteresis, and residual losses for a frequency of 800 Hz and measured at a specified frequency, field and temperature.

For gapped cores, with μe effective permeability, the preceding formula becomes :

$$R_t = \frac{F}{\mu_i} \bullet \mu_e \bullet \frac{f^2}{800^2} \bullet L + \frac{h}{\mu_i^2} \bullet \mu_e^2 \bullet \frac{N_i}{l} \bullet \frac{f}{800} \bullet L + \frac{r}{\mu_i} \bullet \mu_e \bullet \frac{f}{800} \bullet L \qquad (20)$$

4.1 LOSSES AT LOW INDUCTION LEVEL

Loss angle δ and loss angle tangent

The phase shift angle between induction and field within a closed magnetic circuit is designated by δ . This applies to low values of the magnetic field, assumed to be sinusoidal.

$$tg\delta = \frac{R_{ts}}{L_s \omega} \qquad (21)$$

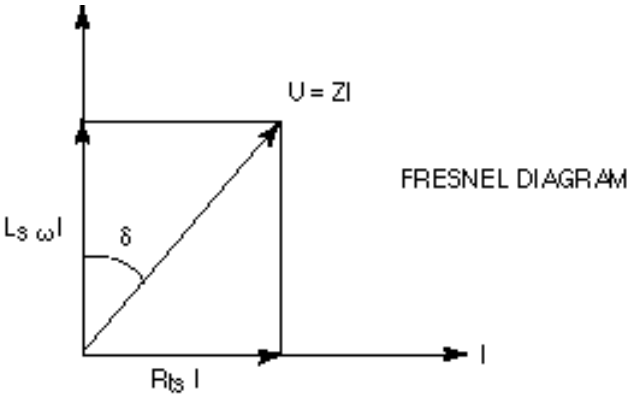


Fig. 6

Considering the series configuration (fig. 6), a coil including a ferrite core may be represented by an ideal inductance L_s (without losses) and by a resistance R_{ts} corresponding to the total losses in the core.

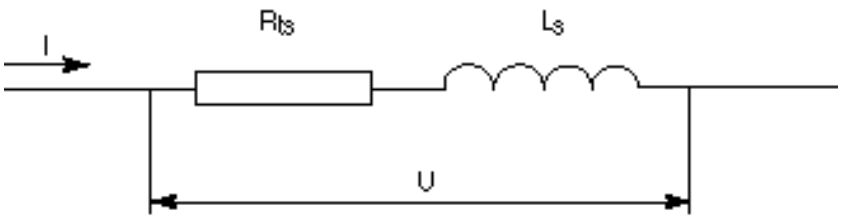


Fig. 7

This representation suggests that the material permeability must be considered as a complex value called complex permeability $\bar{\mu}$:

$$\bar{\mu} = \mu'_s - j\mu''_s \qquad (22)$$

with
μ'_s = real permeability (μ_i or μ_e)
μ''_s = imaginary permeability due to loss resistance.

For each FERRINOX material dedicated to filtering applications, μ'_s and μ''_s curves versus frequency are given in the FERRINOX MATERIALS section.

Consequently the resulting impedance of the coil may be expressed by the following formula (if copper losses negligible) :

$$Z = R_{ts} + jL_s\,\omega = j\,\omega\,\bar{\mu}\,c\,N^2 \quad (23)$$

$$= J\,c\,N^2\,\omega\,(\mu'_s - j\,\mu''_s) \quad (24)$$

$$= \mu''_s\,c\,N^2\,\omega + j\,\mu'_s\,c\,N^2\,\omega \quad (25)$$

thus

$$Ls = \mu'_s\,c\,N^2 \quad (26)$$

$$R_{ts} = \mu''_s\,c\,N^2\,\omega \quad (27)$$

($\omega = 2\,\pi\,f$ = pulsation)

Fig. 8 shows an example of Z curve versus frequency.

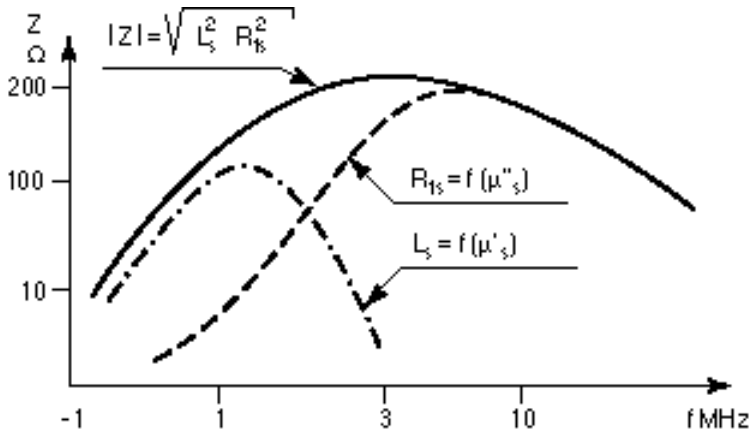


Fig. 8

Loss factor : tgδ/μ

The loss factor is reduced by an airgap based on the ratio of permeabilities before and after airgap presence : consequently for small airgap cores, the ratio tgδ/μ factor or loss factor does not depend on the airgap (under constant magnetic induction).

Depending on frequency, tgδ/μ versus f curves are given for each FERRINOX material in FERRINOX MATERIALS section. The maximum practical operating frequency of a selected material is almost entirely controlled by the rapid increase of the loss factor.

This factor is, therefore, ideal for assessing a material under high frequencies.

Calculation of the loss factor of a gapped circuit is done merely by multiplying the material loss factor by the actual permeability of the circuit.

$$tg\delta_e = \frac{tg\delta}{\mu} \bullet \mu_e \quad (28)$$

Quality factor : Q

It is given by the inverse of the loss angle tangent :

$$Q = \frac{1}{tg\delta} \qquad (29)$$

It should be noted that this quality factor is only equal to that measured on the system including a winding associated to a ferrite magnetic circuit if the losses resulting from the winding itself (ohmic resistance, eddy currents in the wire, distributed capacity) are negligible, conversely, the latter should be taken into account.

4.2 LOSSES AT HIGH FLUX DENSITY LEVEL

In SMPS application, mainly for power transformer design, approximate total ferrite losses at the working point need to be known by the designer in order to :

- integrate them into the efficiency coefficient calculation,
- take into consideration for heat dissipation (i.e. cooling systems).

Generally, power losses are characterized by three parameters :

- peak induction level $\hat{B}$
- frequency f
- temperature T

Approximate P_L may be obtained by the following formula (valid only for specified typical operating range) :

$$P_L = K \bullet f^m \bullet B^n$$

where K is the material factor (depending on temperature T)

$$1.3 < m < 1.6$$
$$2 < n < 2.6$$

Notes for designers :

The total losses curves (in Watts) of the magnetic circuit are given at different temperature, frequency and flux density for E, U, RM and FM cores. Please refer to CORE DATA in CORES FOR POWER APPLICATION section.

The power losses curves (in mW/cm^3) of power ferrite materials are given at various temperature, frequency and flux density in the FERRINOX MATERIALS section.

5 – OTHER CHARACTERISTICS

Density

Between 4 and 5 depending on the material grades. FERRINOX A and B materials generally have values between 4.7 and 4.9 (see materials characteristics tables).

Specific heat

From 20°C to 300°C, specific heat ranges between 0.5 and 0.8 J/g/°C (0.12 and 0.2 cal/g/°C). For example, FERRINOX B1 specific heat is about 0.75 J/g/°C.

Linear expansion factor

From 20°C to 300°C, the increase of any of the core dimensions by unit of length and by the ratio $\frac{\Delta l}{l_{\theta}}$ ranges between 7.5 to 10 x $10^{-6}K^{-1}$.

Mechanical properties

Young's modulus of elasticity	80 to 150.10^9 N/m^2
Ultimate tensile strength	30 to 70.10^6 N/m^2
Ultimate compressive strength	200 to 800.10^6 N/m^2

Resistivity

FERRINOX materials are high resistivity, non metallic, ferromagnetic substances which are developed in response to the unacceptably high losses due to eddy currents, occurring at high frequencies in ferromagnetic materials.

This resistivity varies with applied field, temperature, and frequency. Generally, for FERRINOX materials B, it decreases slightly as frequency increases.

In practice, FERRINOX cores behave like semiconductors. With D.C. current, their resistivity varies with the measuring voltage (decreases slightly under constant voltage).

An accurate measurement of a core resistivity cannot be done without prior metallization (with silver, or preferably, with indium-gallium alloy) due to the difficulty in achieving a perfect contact between the electrodes and the core.

It is also recommended to carefully lap the faces before metallization in order to lay bare the core of the material before depositing the metal layer. Actually, after noticeable firing in some case, the resistivity of the rough surface of a core differs from that of the inside. This is particularly true for FERRINOX B due to slight superficial oxidation.

The characteristic tables of the materials indicate the mean resistivity values for the various FERRINOX materials measured at low frequency and with a low field.

Dielectric constant (or permittivity)

The relative permittivity value for FERRINOX B materials is high at low frequencies and generally decreases as frequency increases. Thus for these materials permittivity is between 1 - 1.5 x 10^5 at 1 kHz ; at 1 MHz its value can still exceed 0.5 x 10^5. At high frequency for all materials, it reaches a value between 10 and 20.

Magnetostriction

Magnetostriction is an elastic deformation phenomenon which accompanies magnetization.

Linear magnetostriction is defined as the relative variation of the part length under the influence of magnetic field. When the variation is measured in the magnetization direction, we have longitudinal magnetostriction.

$$\lambda = \frac{\Delta l}{l}$$

Generally, this coefficient is negative for all FERRINOX materials, i.e. these materials contact in the magnetization direction. The absolute value increase with magnetization (at the beginning λ is more or less proportional to the square of magnetization) up to a maximum value λ_s corresponding to saturation.

The value of λ_s for the various FERRINOX materials is generally very low, between 0 and -1 x 10^6 for B materials. Magnetostriction effects appear in power transformer as an audible hum, particularly in U shaped cores without airgaps. It is, therefore, recommended to secure the cores tightly and to use cores with airgaps whenever possible.

Thermal conductivity

It is equal to about 10 x 10^3 cal/cm/s/°C or 4 W/m/°C.

APPLICATIONS

Shapes of magnetic cores depend on applications :

– E cores and RM cores :

They are used in computer, radio-communication, interference suppression, SMPS for wide-band transformers, power transformers, pulse transformers.

– U cores :

They are used in TV applications, industrial and professional applications for wide-band transformers and high voltage transformer.

Soft ferrite cores are used in a large band of applications, with different shapes and adapted materials. Today the main application areas are :

POWER

FILTERING

POWER APPLICATION

1 - HIGH POWER

A power transformer transmits energy, transforms voltage to the required level and provides galvanic separation. It operates under conditions which require special power ferrites with low losses and high saturation levels.

2 - SMPS

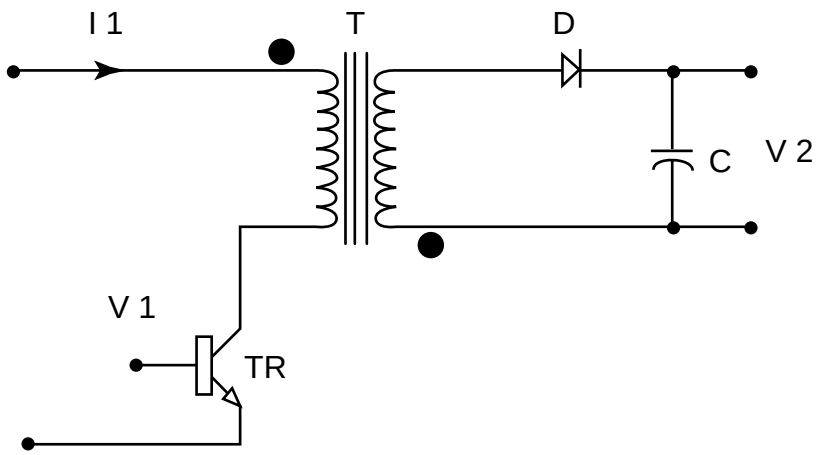
Three principle structures of a switched mode power supply circuits are :

Flyback converters - Forward converters - Push-Pull converters.

Flyback converters

In a flyback converter, all the energy to be transfered to the output capacitor and load is, at first, stored in the inductor.

HOW DOES IT WORK ?



During "TR" on : "D" is blocked and primary energy is stored in the transformer "T".

During "TR" off : "D" is opened and energy is returned to the load.

Remark : an important airgap is needed in the magnetic circuit in order to prevent from saturation.

APPLICATIONS

Low power range (< 200 W)
Output current < 10 A

ADVANTAGES

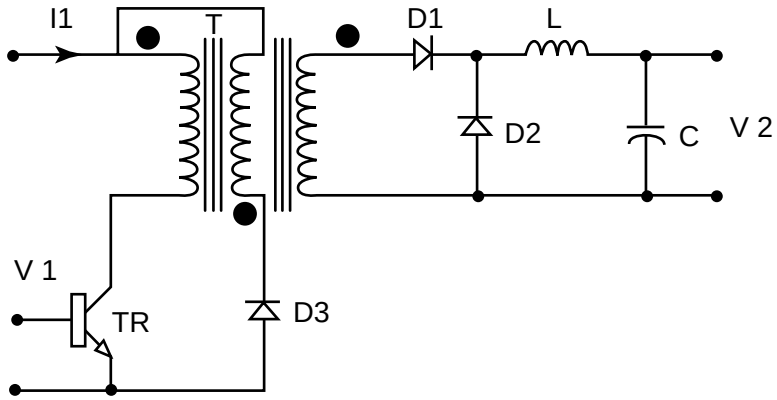
Simple topology / low cost
Multi-output capability

DRAWBACKS

Poor current form factor
Max operating frequency : 80 kHz
Typ. efficiency : 65 to 80 %

Forward converters

HOW DOES IT WORK ?



During "TR" on : "D1" is opened and the primary energy is directly transfered to the secondary through the transformer "T" and stored in choke "L".

During "TR" off : "D2" is opened and energy stored in "L" is returned to load.

Remark : an important airgap is needed in the choke but low or no airgap is required in the transformer (low magnetizing energy returned to the input by the way of the auxiliary winding and "D3").

APPLICATIONS

Typ. power range : 100 to 300 W
Output current > 7 A

ADVANTAGES

Low ripple output (built in filter LC)
High frequency capability
High efficiency : up to 90 %

DRAWBACKS

Not optimized for multi-outputs.

Push-Pull converters

The push-pull converter is an arrangement of two forward converters operating in antiphase. For the same operating conditions and power throughput, this design can use a smaller transformer core.

3 - BALLAST

Ballast are used for fluorescent-lamps. It limits the current and works like coil. Ballast resistance is calculated to obtain the arc voltage of the lamp and the right current to run with right conditions.

For the best efficiency, dimensional and electromagnetic parameters of ferrite cores transmit the exact value of cathode current, lamp voltage and lamp current.

FILTERING APPLICATION

High permeability materials represent soft ferrites used in the filtering application like EMI suppression, telecommunication, tunning, etc.

1 - EMI SUPPRESSION

Excess of electronic equipment pollutes the environment of electromagnetic waves. For the best working of devices, laws have become more stringent lately.

To avoid this problem, inductive components are very efficient, especially at high frequency. With high permeability materials, inductors have high impedance for the interfering unwanted signal.

2 - TELECOMMUNICATION

Most important applications in telecommunication, are filter coils and "pulse and signal transformer". For those applications, a high quality factor (Q) is needed. Good wideband characteristics transmit analog signals or digital pulses without much distortion.

AVERAGE POWER HANDLING CAPABILITY

The power throughput of a magnetic component is related not only to electrical winding characteristics but also to other parameters such as :

- operating temperature,
- number of secondary outputs,
- insulation constraints.

Quick core type selection may be done with the following tables :

Table 1 : Forward 25 kHz : B1 material
Table 2 : Forward 100 kHz : B2/F1 materials
Table 3 : Forward and Push Pull at 300 kHz
Push Pull at 500 kHz } F2 material

NOTE :
For each core, the average power throughput is given at different working conditions for Forward and Push Pull configurations.

TABLE 1 - FORWARD 25 kHz : B1 MATERIAL

TROUGHPUT POWER (W)	E -	EI	EC	ET	FM
5	1304A				
10	1905A	2206A			
15	1907/2006	2506C			
20	2506A				
30	2507A				
35	3007B				
40	3008A	3011B			
50	3509A			2910A	
60	3213A		3510A		
70	3611A			3411A	
80		4012A			
90			4112A		
100	4113A			3913A	
130	4215A				
150	4916A			4415A	
160	4220A		5214A		
200				4916A	FM5039A
270	5521A			5419A	
300	5525A				
350					
400			7017A		
450	6527A				
900					FM8770A

TABLE 2 - FORWARD 100 kHz : B2 / F1 MATERIALS				
TROUGHPUT POWER (W)	E -	ET	EF	RM
15			1505A	RM5
25	1905A			RM6
40	2006A		2007A	
55	2506A			RM8
85	2507A		2509A	RM10
100	3007B		3009A	
150	3509A	2910A		
180	3213A			
200	3611A	3411A		RM14
275	4113A			
300		3913A		
360	4215A			
400	4916A	4415A		
450	4220A			
550		4916A		
750	5521A	5419A		
850	5525A			
1000				
1200	6527A			

TABLE 3 - TROUGHPUT POWER (W) F2 MATERIAL				
FAMILY	MODEL	300 kHz		500 kHz P.Pull
		FWD	P.Pull	
E -	1905A	30	50	55
	2006A	50	80	90
	2506A	70	100	120
	2507A	100	160	180
	3007B	130	200	220
	3509A	180	250	280
	3213A	220	350	380
ET	2910A	180	250	280
	3411A	250	350	380
	3913A	360	500	550
EF	1505A	20	40	50
	2007A	50	80	90
	2509A	100	160	180
	3009A	130	200	220
RM	RM5	20	30	35
	RM6	30	50	55
	RM8	70	120	130
	RM10	100	180	200

FERRINOX MATERIAL : QUICK SELECTION GUIDE

A complete description of power ferrite materials is presented pages 46 and 48 to 63.

The following table summarizes the typical applications.

MATERIAL FOR POWER APPLICATIONS

MATERIAL	MAIN FEATURES	APPLICATION	CORE TYPE
A8	Medium permeability High flux density	Noise suppression Chokes Broadband transformers Drivers	small E and U cores
B1	Low losses for low frequency (10 to 70 kHz)	General purpose power transformers Drivers	E and U cores, toroids
B2	Low losses for medium frequency (70 to 150 kHz) and medium temperature	Power transformers DC/DC converters	E, U and RM cores, toroids
F1	Very low losses for medium frequency (25 to 250 kHz) and high flux density	Power transformers DC/DC converters	E and U cores
F2	Very low losses for high frequency (100 to 500 kHz)	Power transformers DC/DC converters	E, U and RM cores

MATERIAL FOR TV TRANSFORMERS AND FLYBACK TRANSFORMERS

MATERIAL	MAIN FEATURES	APPLICATIONS	CORE TYPE
B3	High flux density and negative power loss temperature slope at high temperature	B&W and colour SMTs and FBTs for 1H TV sets	E and U cores
B5	High flux density at high temperature	SMTs and FBTs for 2H TV sets	E and U cores
B7	High flux density and low losses at high temperature (32 kHz)	SMTs and FBTs for large tube 2H TV sets and monitors	E and U cores

DC BIAS CORE SELECTION CURVES LI^2 Vs A_L

To prevent saturation of the magnetic circuit in a choke, the following curves provide the A_L limit before saturation of most E, U, RM and FM cores (corresponding to a 20 % inductance drop) at 25°C and 100°C operating temperatures.

- Draw a horizontal line at the Y axis coordinate corresponding to the required LI^2 max value :

  L : inductance required (mH)

  Imax : peak current

- Any core whose line intersects with this horizontal line may be used.
- Draw a vertical line at this intersection to get the A_L value.

In the same way, the following curves provide the maximum applicable ampere turns on a core before saturation :

- Draw a vertical line at the X axis coordinate corresponding to the required A_L value
- The intersection with the LI^2 line of the required core indicates the NI max value by calculating

$$NI\ max = \sqrt{\frac{LI^2}{A_L}}$$

The air gap dimensions can be determined on the A_L Vs Air gap curves of the selected core.

NOTES:

1. These graphs are valid for B1, B2, F1.
2. Increase by about 10% the LI 2 max value for B3, B5, B7.
3. The lower and upper core limits correspond to the optimum effective permeability range : 50 μe 300.

DC BIASED INDUCTANCE

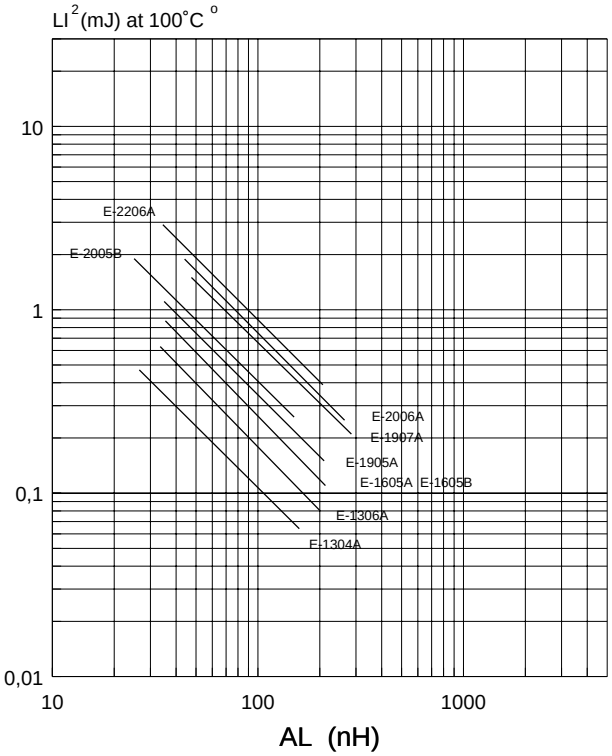
- A_L versus N x I_s curves are given for the following cores in the U-core section :

  UR3513B - UR3513D - UR3513H - UR3915A

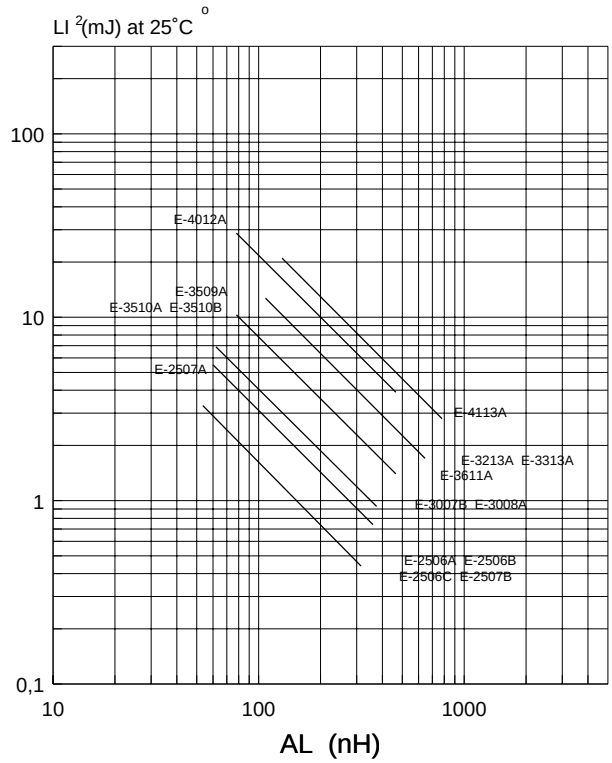
  UR4014A - UR4022A - UR4316A - UR4916A

NOTE : These graphs are valid with a specific coil for each core only.

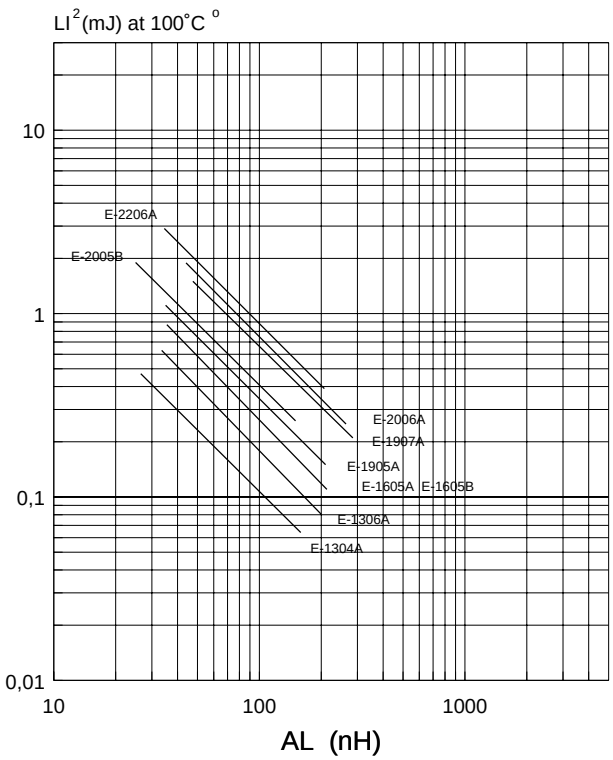
E- CORES



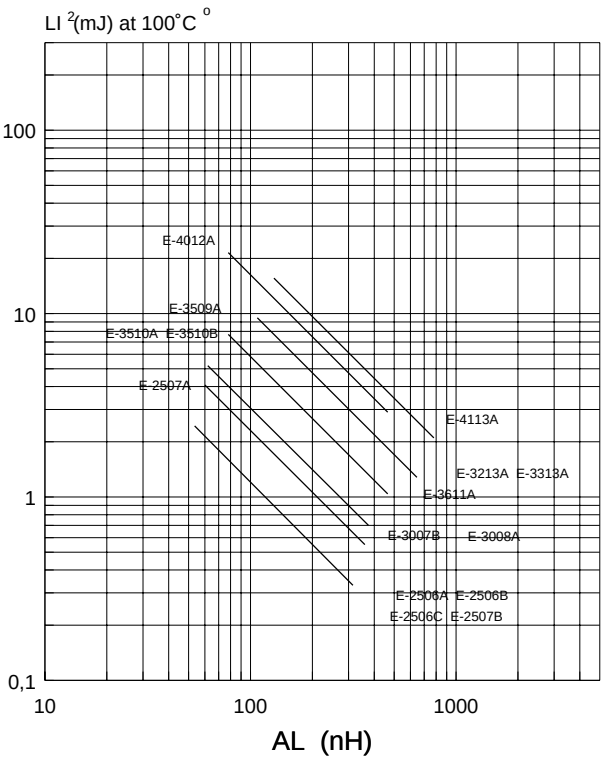
E- CORES



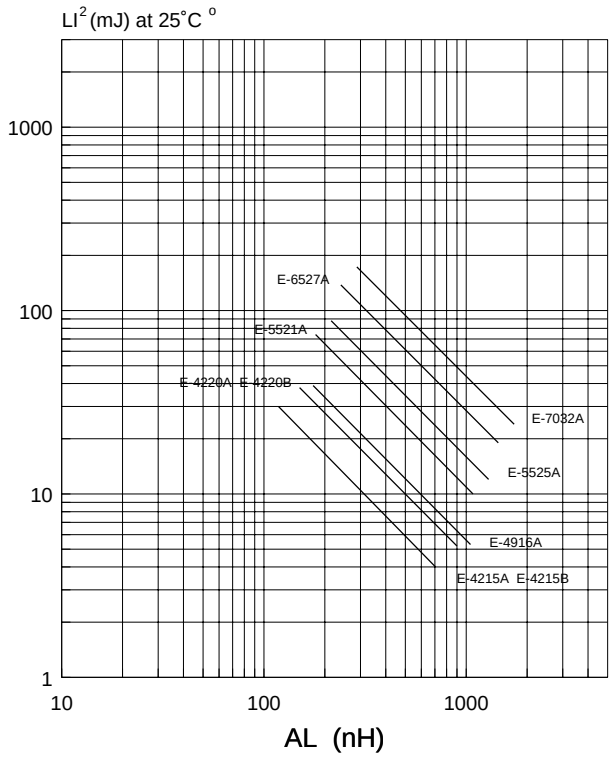
E- CORES



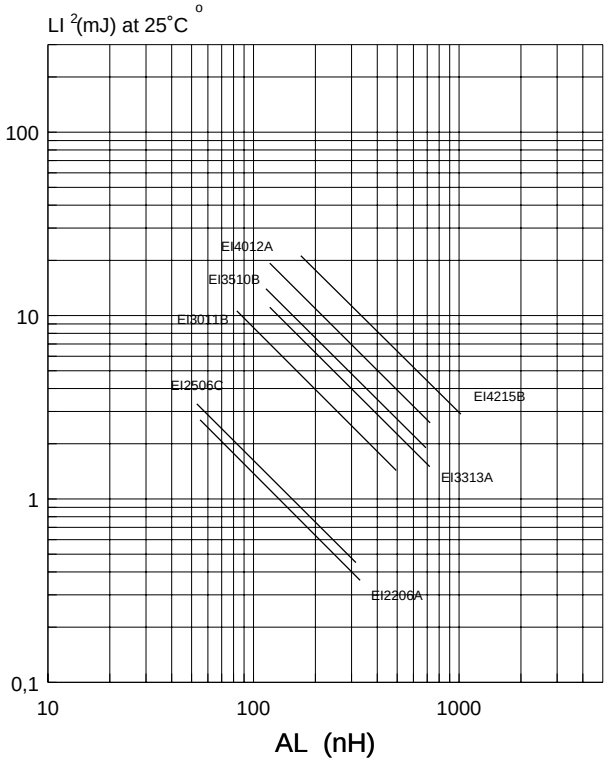
E- CORES



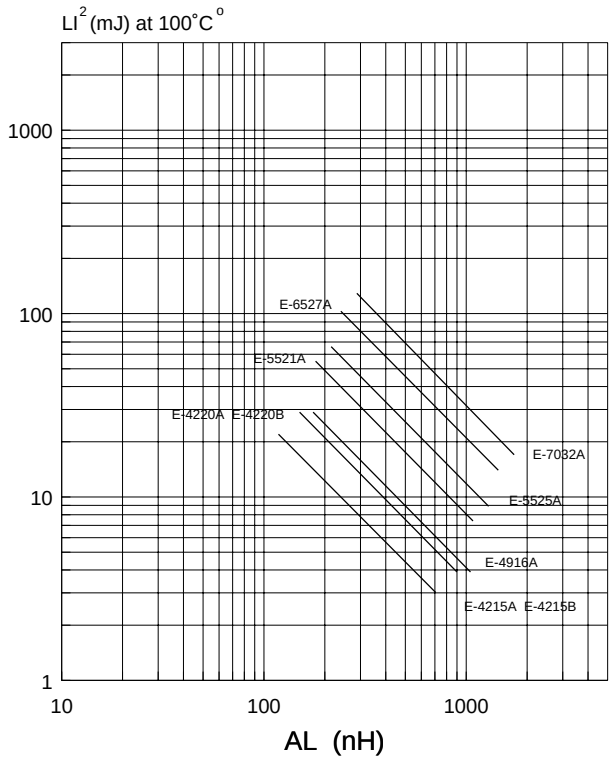
E- CORES



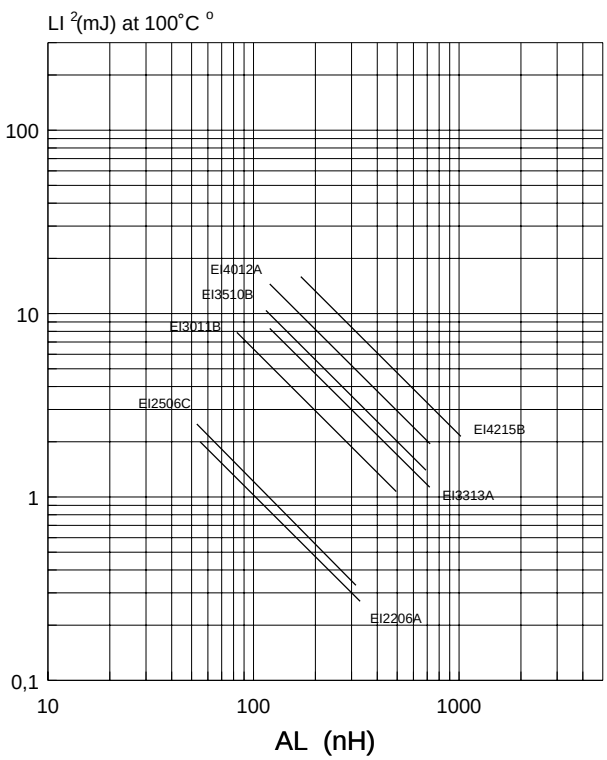
EI CORES



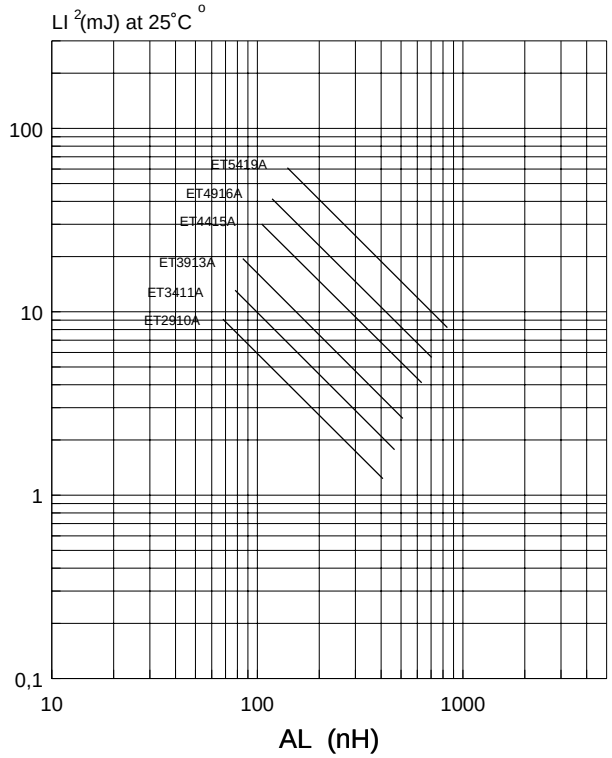
E- CORES



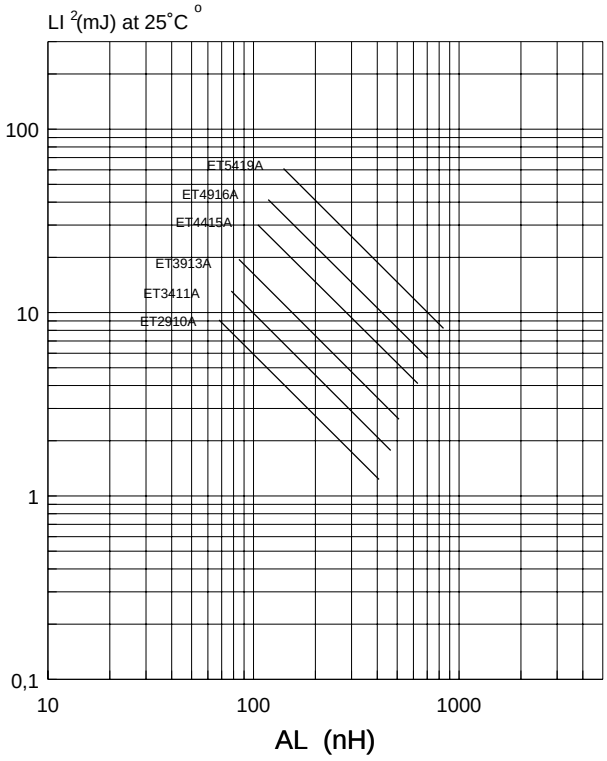
EI CORES



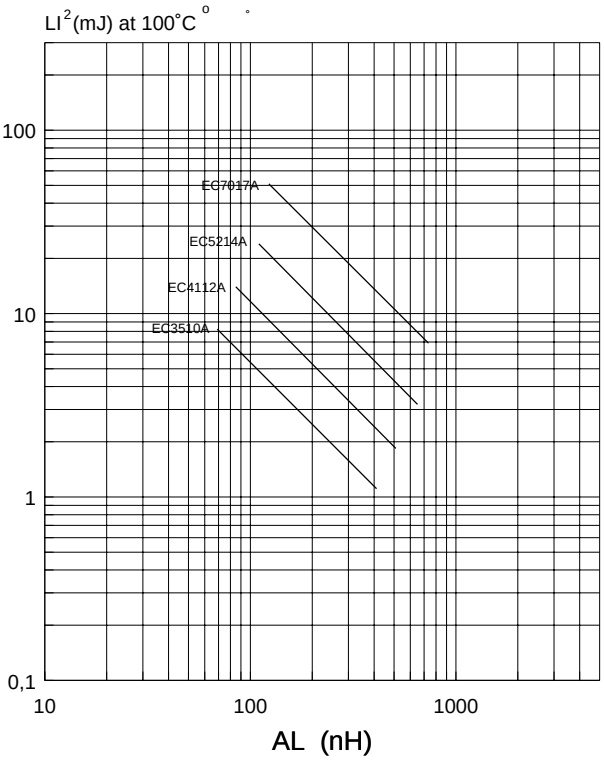
ET CORES



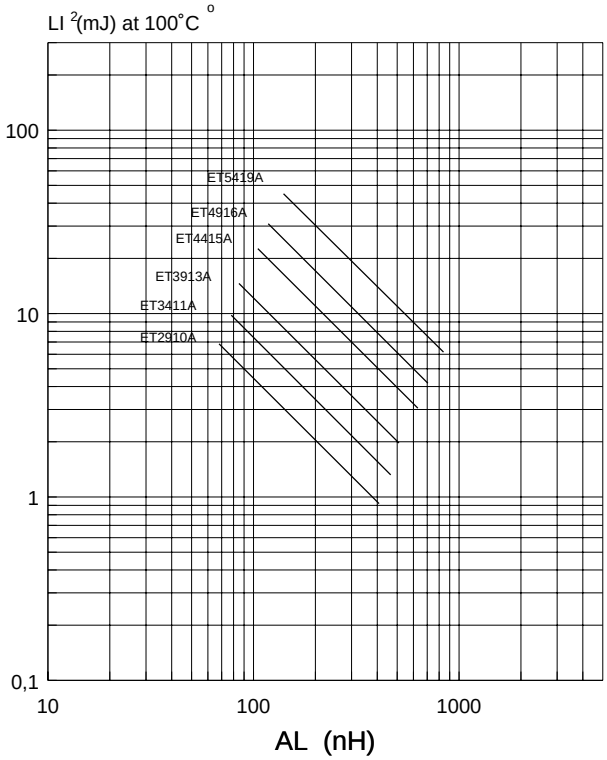
ET CORES



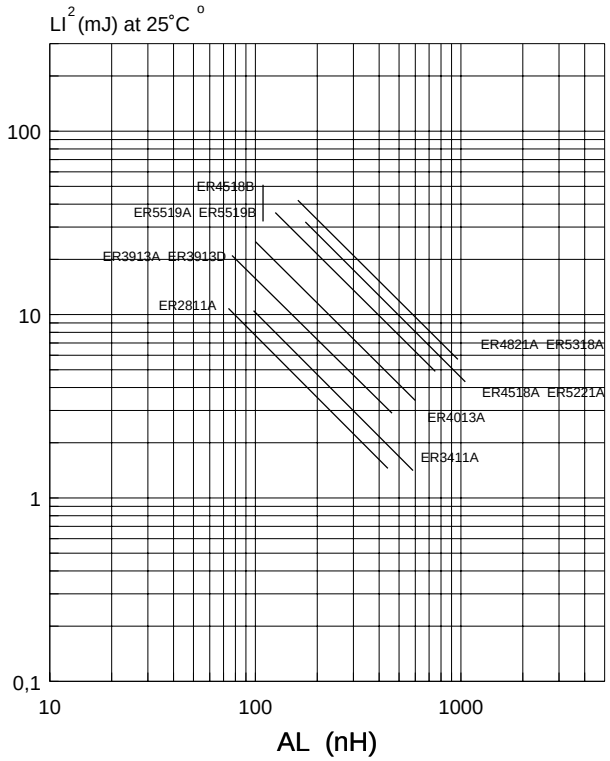
EC CORES



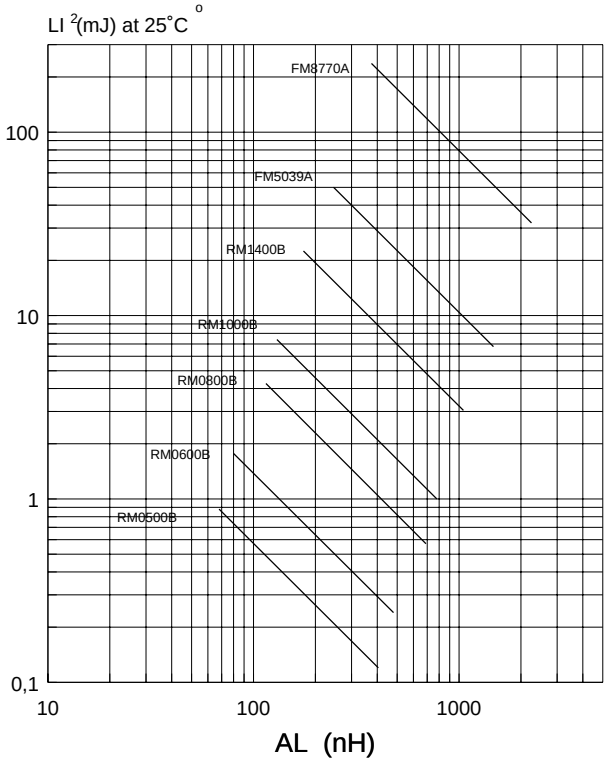
ET CORES



ER CORES

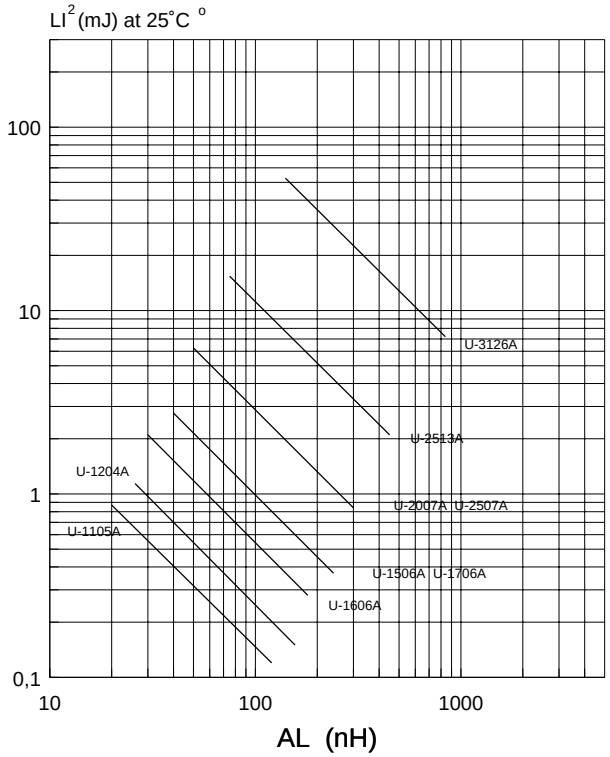


RM and FM CORES

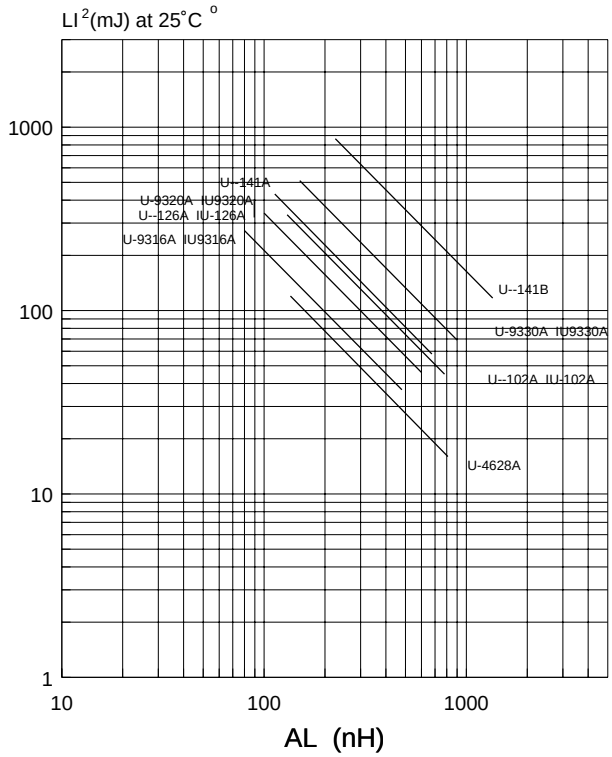


ImagePostScript
100LI2ER

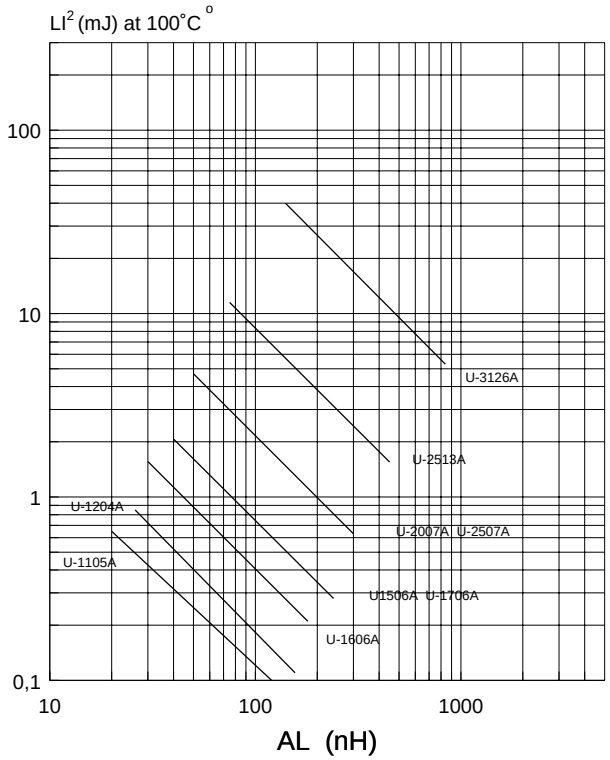
U- CORES



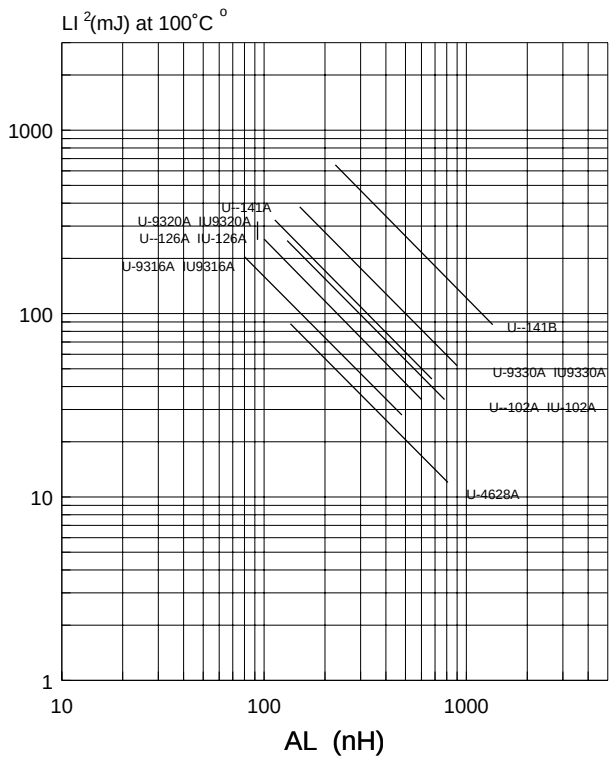
U- CORES



U- CORES



U- CORES



QUALITY

The mass production of high quality ferrite cores requires a fundamental knowledge of processing rules dedicated to each material and the use of advanced production techniques.

Existing product specifications are achieved mainly by the implementation of a reliable Quality Assurance System using Statistical Process Control (SPC).

At each manufacturing step, the capability of process can be demonstrated through numerous tests performed on relevant CQC (Capability Qualifying Components).

1 – STANDARDS and SPECIFICATIONS

Most of our ferrite cores are manufactured and tested in accordance with CECC (CENELEC Electronic Components Committee / European Level), IEC (International Electrotechnical Commission) available standards and MMPA (Magnetic Materials' Producers Association).

- CECC System (CENELEC Norms)

  EN125500 (SS/BDS) : Magnetic oxide ring cores for interference suppression and low signal transformer applications.

- IEC System

  IEC431 : Dimensions of square cores (RM cores) made of magnetic oxides and associated parts.
  IEC647 : Dimensions for magnetic oxide cores intended for use in power supplies (EC cores).
  IEC1185 : Magnetic oxide cores (ETD cores) intended for use in power supply applications - Dimensions.
  IEC1246 : Magnetic oxide cores (E cores) of rectangulor cross-section and associated parts - Dimensions.
  IEC1247 : PM cores (FM cores) made of magnetic oxides and associated parts - Dimentions.

- MMPA System

  UEI310 : Standard specifications for ferrite U, E and I cores.
  UEI410 : Standard specifications for ferrite toroid cores.

2 – QUALITY ASSURANCE

2.1 QUALITY SYSTEM AND ISO 9000 CERTIFICATION

Since 1992, a quality assurance system has been implemented in accordance with ISO 9000 requirements. Therefore, T.P.C. quality policy is defined in every quality manual available in each production site.

In the ferrite product line, both production sites have been certified since 1994 by LRQA (Lloyd's Register Quality Assurance) :

- T.P.C. Beaune / ISO 9001 applicable to the design and manufacturing of ready to press powders and ferrite cores E, U, toroids made of Mn-Zn materials.
- T.P.C. FT (Thomson Passive Components Ferrites Taïwan Ltd) / ISO 9002 applicable to the manufacturing of ferrite cores.

Since certification, each production sites has been followed every six months by LRQA according to a surveillance programme.

T.P.C. quality system monitoring is based on the 6 following guidelines :

2.2 PRODUCT QUALITY PLAN

Our general control plan is split into three major parts :

A - Incoming inspection of raw materials

In case of qualified supplier, a Lot Approval Sheet (LAS) is checked by QA people at incoming inspection. Only statistical controls are carried out on critical parameters defined for each type of raw material.

B - Process monitoring / capability follow-up

For each process step, QA controls performed on Capability Qualifying Components are defined. The relevant test vehicles could be powder samples or test cores designed especially for quality assessment or semi-finished ferrite parts in production.

Each important process step is followed by a Quality Control Approval (QCA) where the decision is taken to continue or stop the batch if unacceptable distortion is found on some parameters (non conformity management procedures).

Or other hand, results from one step can be used in order to monitor the following one i.e. results on powder could be used to monitor the pressing conditions of relevant batch ; see as exemple typical flow chart relevant to U and I core (table 4).

C - Outgoing inspection

Each lot must pass through a final outgoing inspection before entrance into the finished product warehouse. During this inspection, all results collected on relevant lot are checked, some samples are tested and the Lot Acceptance Sheet is printed. (See "U and E core typical flow chart" on the following page).

3 – QUALITY ASSESSMENT

3.1 CLASSIFICATION OF DEFECTS

A ferrite core set is considered defective if it does not comply with relevant T.P.C. standard specification. Two levels of defects have been defined :

– Major defects : may lead to an operating malfunction in the final wound component or mounting problems.

– Minor defects : do not affect the operation or mounting of the wound component. They are generally mechanical and visual defects such as cracks and chips.

Table 1 : Major or Minor defects
(versus the type of product and applications)

CORE TYPE	APPLICATION	PARAMETERS	
		Major defects	Minor defects
E-cores U-cores RM-cores Toroids FM/FP	Power conversion : - High power - SMPS - Consumer TV - Electronic ballast	• AL or airgap • Primary dimensions	• Power loss • Amplitude permeability • Secondary dimensions • Tensile Strength
Toroids Rods Beads E-cores U-cores	Filtering : - EMI suppression	• AL • Primary dimensions • Z min (if required)	• Loss factor • Secondary dimensions • Breakdown voltage on coated parts

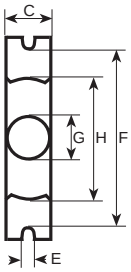
Table 2 : Major and Minor defects related to primary and secondary dimensions :

Please refer to the core drawing for the coding of dimensions

E-Cores

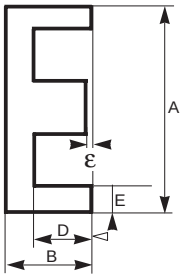
EF

EC



E-

ET/ER



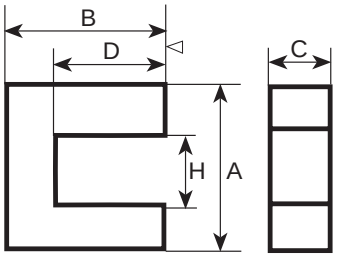
U-Cores

UR

U-

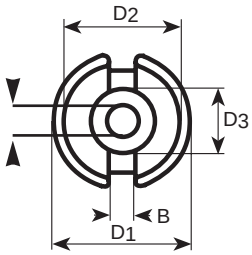
E and U cores

Major defects	Minor defects
A max	A min
B max	B min
C max	C min
D min	D max
ε (gap) tolerances	
X G max	G min
H min	H max
I max	I min

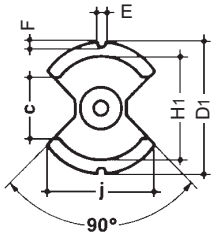


RM cores

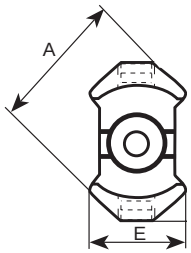
FP

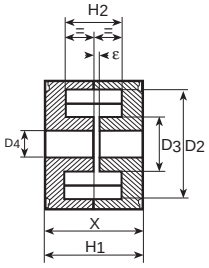


FM



RM

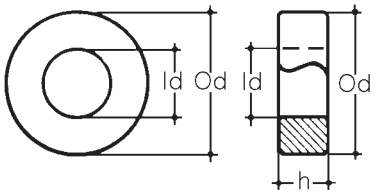




RM cores

Major defects	Minor defects
H1 tolerances	
H2 min	H2 max
D1 max	D1 min
D2 min	D2 max
D3 max	D3 min
X D4 tolerances	
A tolerances	
X tolerances	
ε (gap) tolerances	

Toroids (T- or TR)



Major	Minor
Od max	Od min
Id min	Id max
h max	h min

- AQL values

  – For major parameters : AQL : 0.25 % Inspection level I
  – For minor parameters : AQL : 1.0 % Inspection level I or S2 (depending on tested parameters).

Remarks : - For sampling inspection data please refer to standards IEC 410 or MIL-STD-105D (similar to NF X 06-022 and DIN 40080).
- For any specific requirements, our quality department can provide complete information about our standard test specifications.

3.2 MAGNETIC PROPERTIES / TEST CONDITIONS

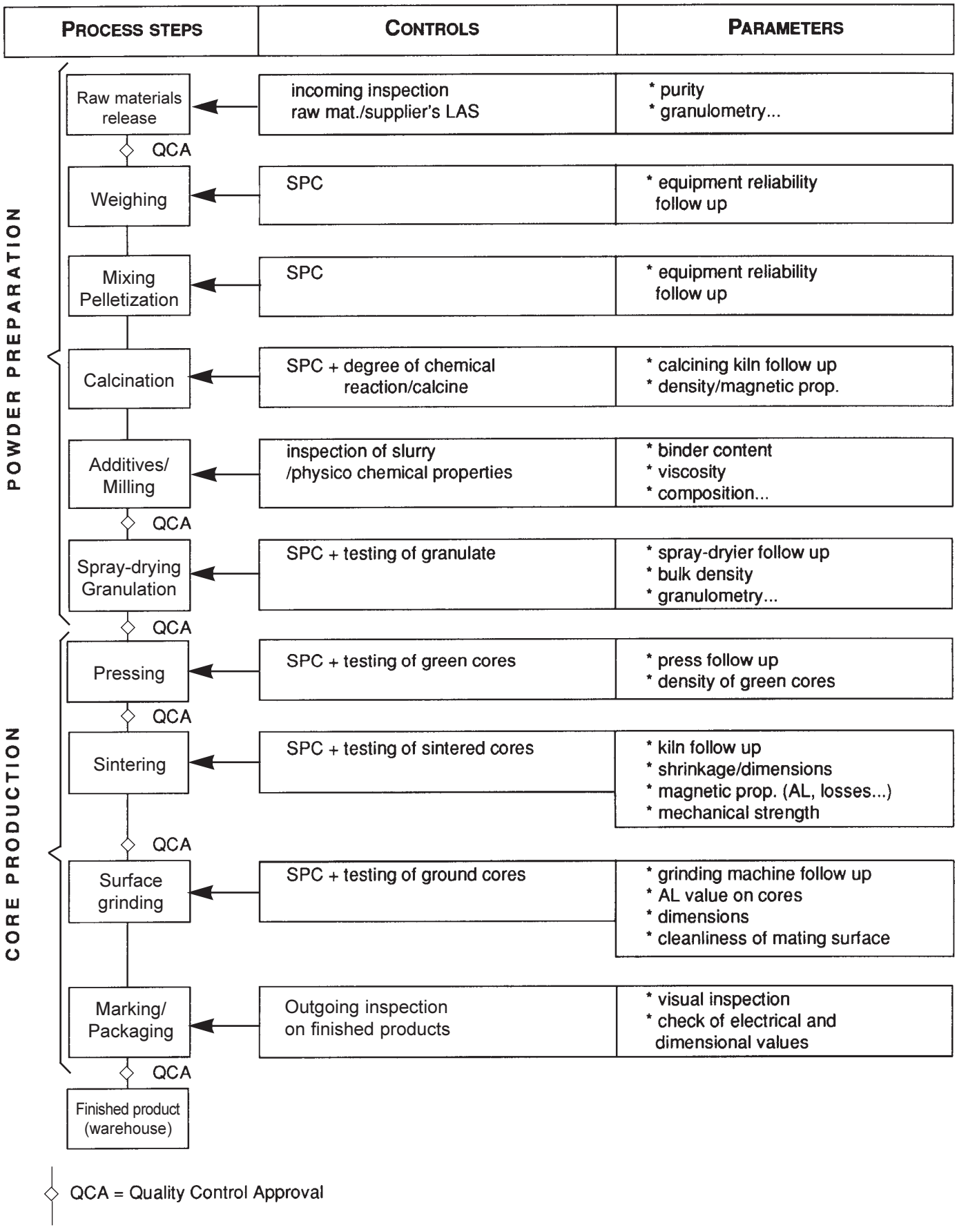
The following typical test conditions relevant to magnetic parameters checked by Quality Control are summarized in the following table :

Table 3 : Typical test conditions

	TEST CONDITIONS			
TESTED PARAMETERS	FREQUENCY (kHz)	FLUX DENSITY (mT)	TEMPERATURE (°C)	NUMBER OF TURNS
A_L value	10 (or 1)	1 mT max (RMS value)	25 ± 3	100 or 10 or single turn (when applicable)
tg δ/μ	10 to 10000 depending on mat.	1 mT (RMS value)	25 ± 3	15/ pot cores 10/ toroids
η_B	10	. 4 and 2 (RMS value)	25 ± 3	15
μ_a	1	320/330/340/360 depending on mat. (peak value)	100 ± 3	40
Power Loss P_L	16-300 (according to material)	50 to 200 (peak value)	(25 ± 3) 100 ± 3	10 to 40

Remark : A_L value measurement is performed under :
- a constant clamping force of 10 N in case of U and E-cores,
- a variable clamping force from 20 to 100 N for pot-cores. The respective values applied to each core size are given in the existing detail specifications.

Table 4 : U and E core typical
Flow chart



MATERIALS

KEY-APPLICATIONS :

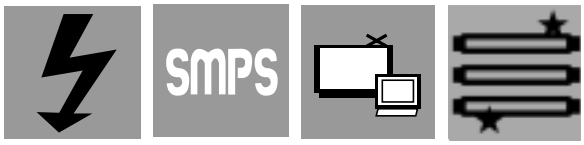
– EMI SUPPRESSION 

– HIGH POWER 

– SMPS 

– TV & MONITORS 

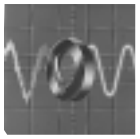
– LIGHTING 



FERRITE MATERIALS FOR POWER APPLICATIONS

Symbols	Units	Test conditions		B1	B2	B3	B5	B7	F1	F2	F4 *
				Class							
				PW1a/ PW1b	PW3b	PW1b	PW2a/ PW2b	PW2b	PW3b	PW4b	PW5b
μ_i (± 25 %)		25°C		2500	1900	1900	1800	2000	2300	1900	1100
$\hat{B}$ at $\hat{H}$ (nominal values)	mT	400 A/m	25°C	450	460	470	470	470	450	420	390
			100°C	340	360	380	380	380	340	320	310
		1600 A/m	25°C	480	490	500	500	500	480	450	420
			100°C	370	380	400	400	400	370	350	330
H_C	A/m	25°C		12	16	16	16	16	16	15	15
		100°C		10	10	10	10	10	10	10	10
T_C	°C			> 200	> 250	> 250	> 250	> 250	> 230	> 200	> 200
P_L	mW/cm³	16 kHz - 100°C 200 mT		< 100		< 80					
		25 kHz - 100°C 200 mT		< 180		< 150					
		32 kHz - 100°C 200 mT		< 250		< 200	< 140	< 120			
		60 kHz - 100°C 200 mT			< 340		< 350	< 330	< 280		
		100 kHz - 100°C 100 mT			< 150						
		100 kHz - 100°C 200 mT					< 700	< 680	< 580		
		300 kHz - 100°C 50 mT			< 120					< 100	< 80
		1000 kHz - 100°C 25 mT								< 130	< 100
ρ	□ x m			1	6	6	6	6	6	6	6
Density	g/cm³			4.8	4.8	4.8	4.8	4.8	4.8	4.6	4.8
Core shapes				E, U cores large toroids	E, U, RM cores	E, U cores for consumer application	ER, UR cores	ER, UR cores	UR cores E cores	EFD, ETD, FP and RM cores	Upon request

Values measured on Ø 35 x Ø 12 x 18 reference toroid
* Values measured on Ø 21.7 x Ø 13.8 x 11 reference toroid



EMI SUPPRESSION

FERRITE MATERIALS FOR FILTERING APPLICATIONS

Symbols	Units	Test conditions	A2	A4	A5	A6	A8	A9
			Class					
			CL11	CL9	CL9	CL9	CL8	CL7
μ_i		25°C	10000 ± 30 %	6000 ± 25 %	5000 ± 25 %	4000 ± 25 %	3500 ± 25 %	2500 ± 25 %
$\hat{B}$ at $\hat{H}$ (nominal values)	mT	25°C	330	350	350	410	480	480
		100°C	200	250	250	310	370	370
	A/m		800	800	800	800	1600	1600
H_c	A/m	25°C	6.2	6.4	6.4	12	12	12
		100°C	3.1	4.8	4.8	8	10	10
T_c	°C		> 120	> 140	> 140	> 160	> 200	> 200
f_c	MHz	25°C	0.3	0.3	0.5	0.6	1	1.5
$tg\delta/\mu$	x 10^{-6}	25°C	< 7	< 9	< 6	< 9		< 8
at f	kHz		10	10	10	10		100
ρ	□ x m		0.3	0.5	0.5	0.5	2	1
Density			4.9	4.8	4.8	4.7	4.8	4.8
Core shapes			Toroids	Toroids E and U cores	Toroids	Toroids E and U cores	E and U cores	Toroids

Values measured on Ø 21 x Ø 14 x 10 reference toroid.
For special shape or application, please refer to individual core specification.
Due to technical enhancement, data subject to change whithout notice.

$\hat{}$

μ_i	initial permeability	f_c	cutt-off frequency
B	flux density (RMS value)	T_c	Curie point
$\hat{B}$	flux density (peak value)	P_L	power losses
H	magnetic field strength (peak value)	ρ	resistivity
H_c	coercitive force	1 mT = 10 G	
		1 A/m = 1.26 x 10 œ	

B1 MATERIAL

HIGH POWER | S.M.P.S. | TV & MONITORS | LIGHTING

• APPLICATION

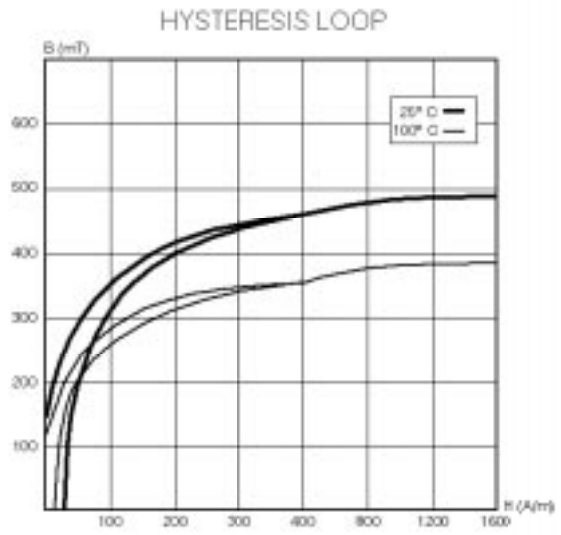
B1 is a low/medium loss power material designed for low frequency applications (black and white or color TV transformers/flyback transformers).
Losses have been optimized in medium temperature range, 50 to 80°C.

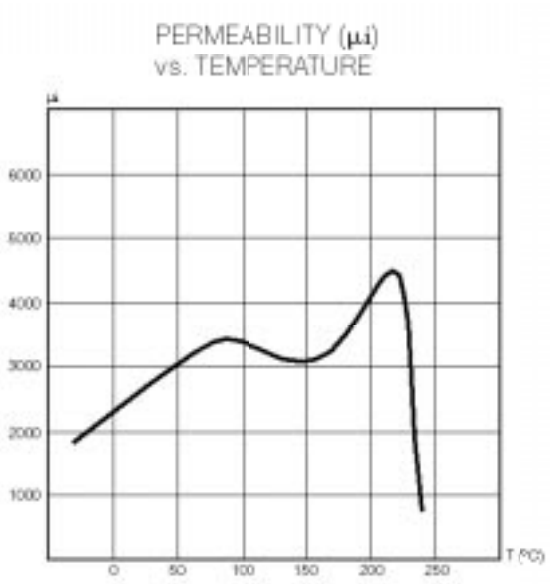
• MAIN CHARACTERISTICS

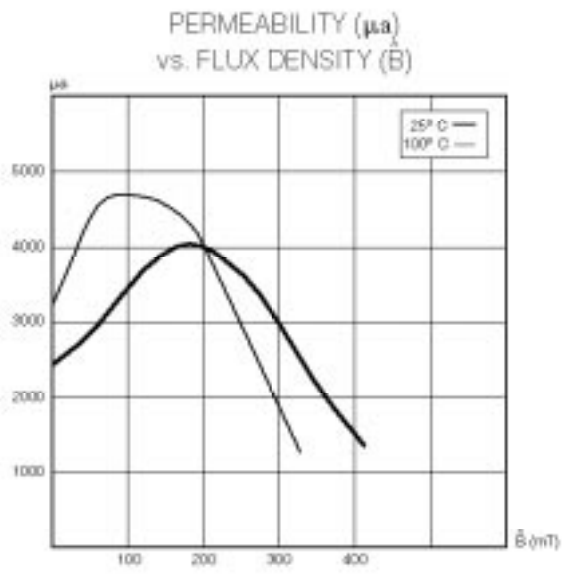
μ_i	25°C	:	2 500 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	450 mT
	100°C	:	340 mT
Losses P_L 200 mT, 100°C,	16 kHz	:	< 100 mW/cm³
	25 kHz	:	< 180 mW/cm³
Curie temperature		:	> 200°C

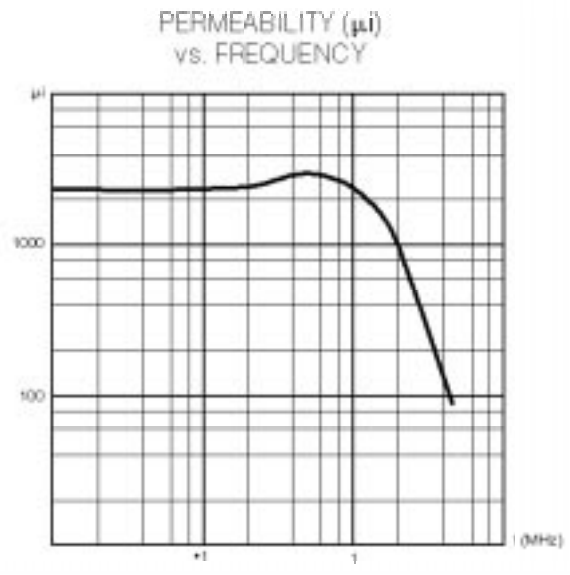
• AVAILABLE CORE SHAPES

E, U, FM cores, large toroids.





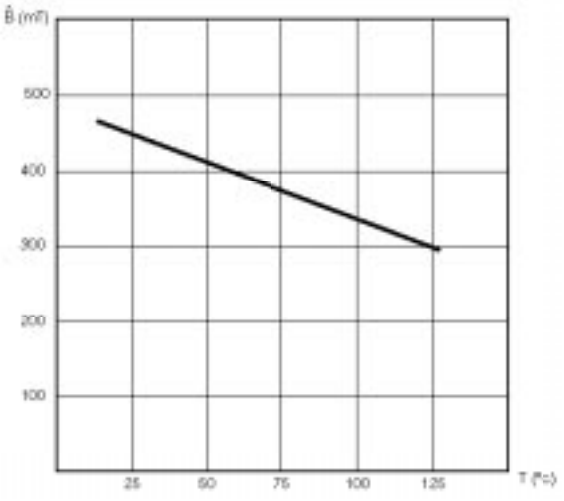




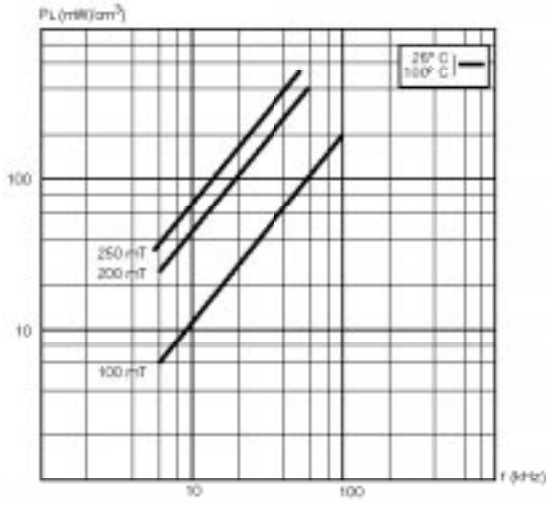
B1 MATERIAL

HIGH POWER | S.M.P.S. | TV & MONITORS | LIGHTING

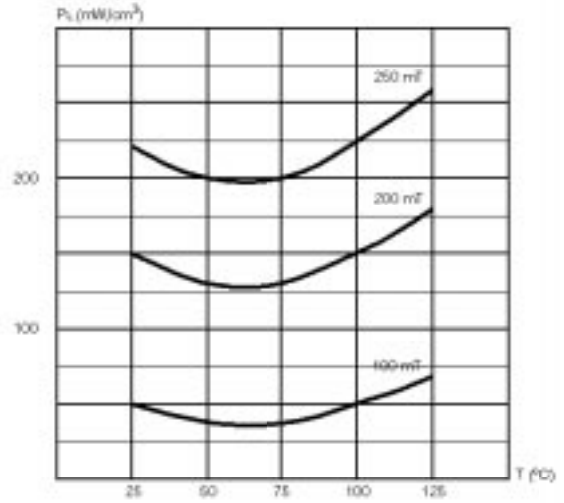
FLUX DENSITY (B̂) at 400 A/m
vs. TEMPERATURE



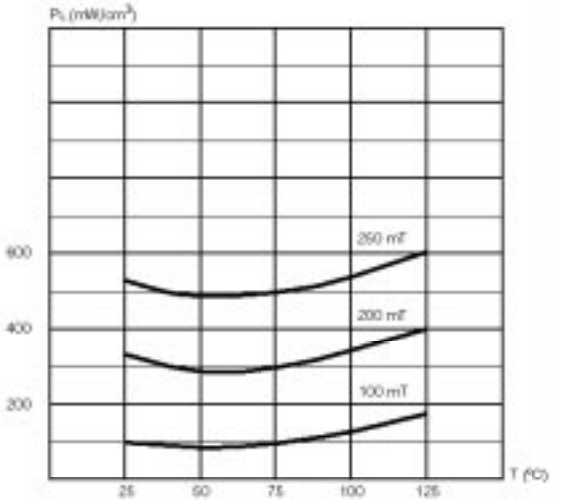
POWER LOSSES (PL)
vs FREQUENCY



POWER LOSSES (PL)
vs. TEMPERATURE at 25 kHz



POWER LOSSES (PL)
vs. TEMPERATURE at 50 kHz



B2 MATERIAL

HIGH POWER | S.M.P.S. | TV & MONITORS | LIGHTING

• APPLICATION

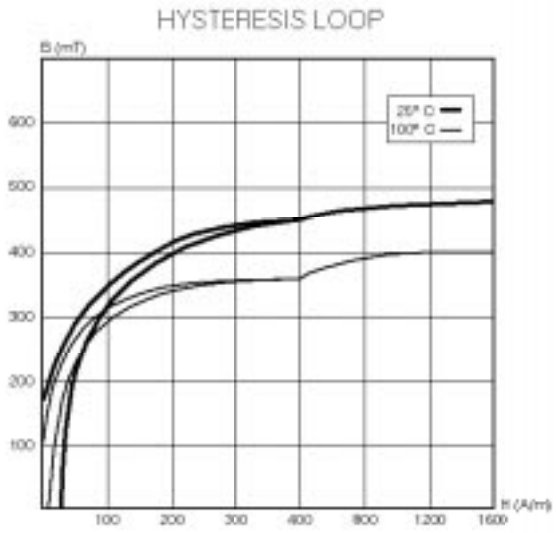
B2 is a "low loss power material". It offers low losses above 70°C. This characteristic makes it particularly suitable for modern designs up to 250 kHz frequency.

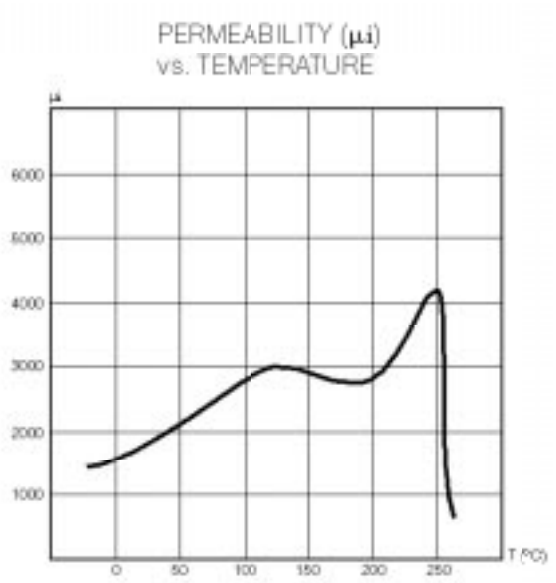
• MAIN CHARACTERISTICS

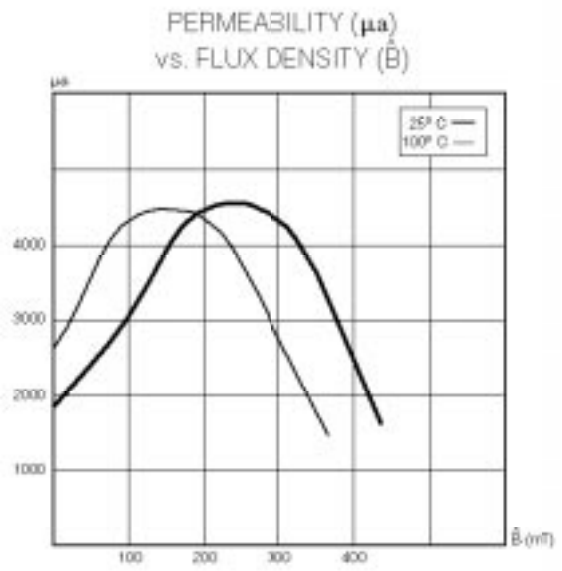
μ_i	25°C	:	1 900 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	460 mT
	100°C	:	360 mT
Losses P_L 100 mT, 100°C, 100 kHz		:	< 150 mW/cm³
200 mT, 100°C, 60 kHz		:	< 340 mW/cm³
Curie temperature		:	> 250°C

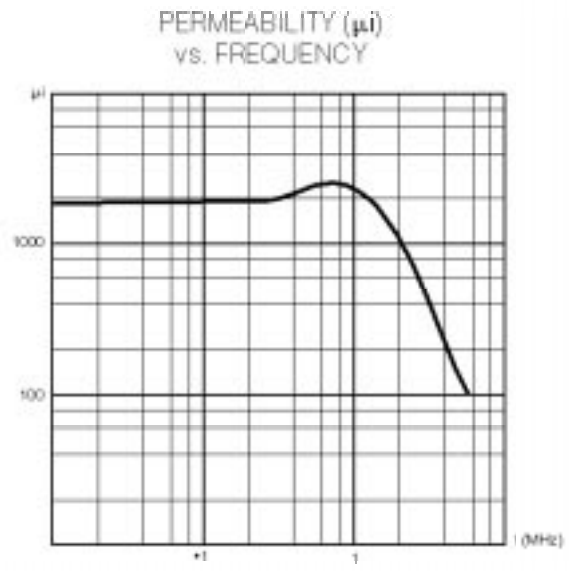
• AVAILABLE CORE SHAPES

E, U, RM cores.



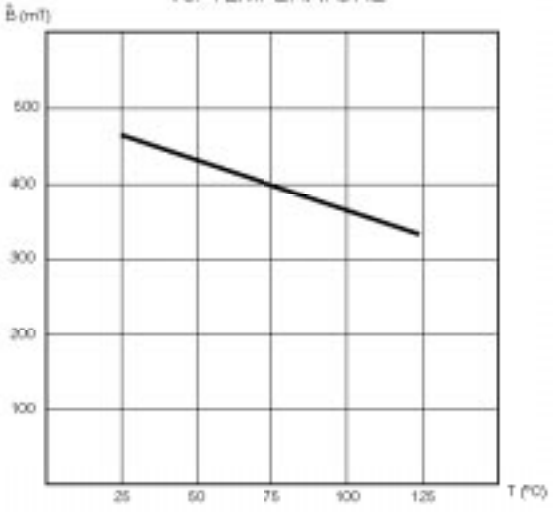




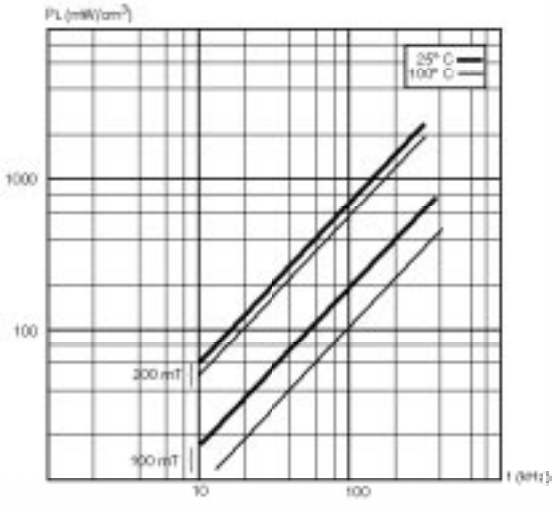


HIGH POWER | S.M.P.S. | TV & MONITORS | LIGHTING

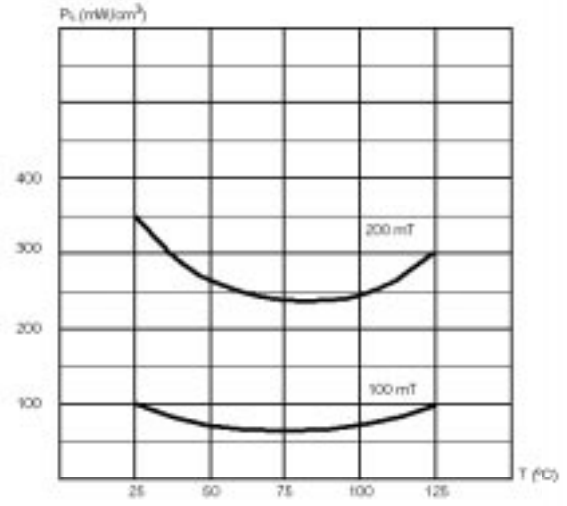
FLUX DENSITY ($\hat{B}$) at 400 A/m
vs. TEMPERATURE



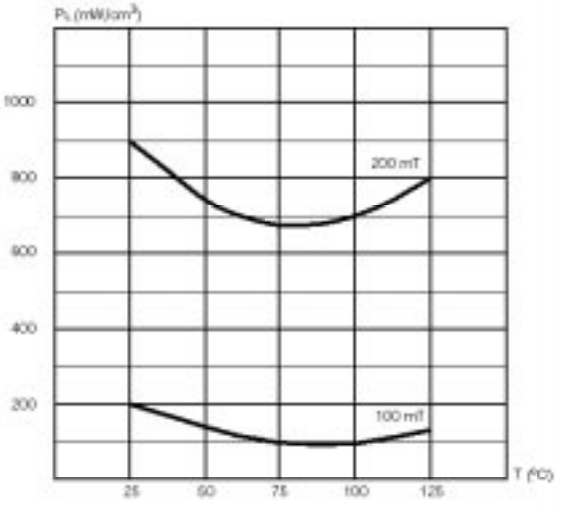
POWER LOSSES (P_L)
vs. FREQUENCY



POWER LOSSES (P_L)
vs. TEMPERATURE at 50 kHz



POWER LOSSES (P_L)
vs. TEMPERATURE at 100 kHz



B3 MATERIAL

TV & MONITORS

• APPLICATION

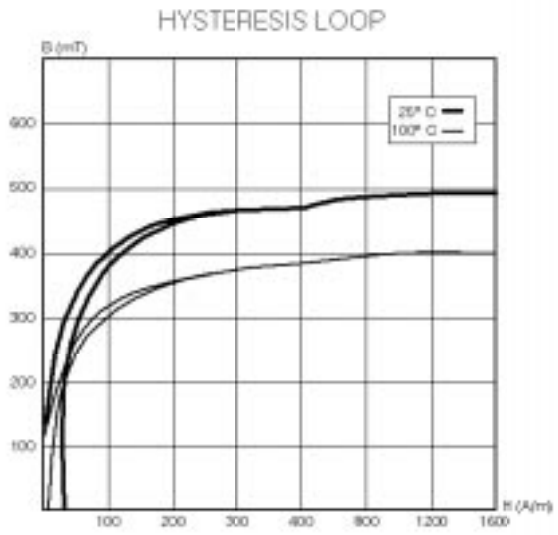
B3 is a "low frequency and high flux density" power material. It offers superior saturation flux density at high temperature. This characteristic makes it particularly suitable for high saturation applications including flyback applications for 1H TV sets.

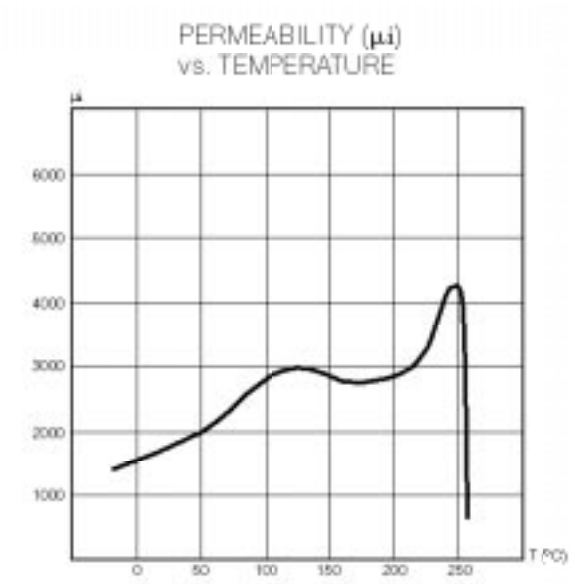
• MAIN CHARACTERISTICS

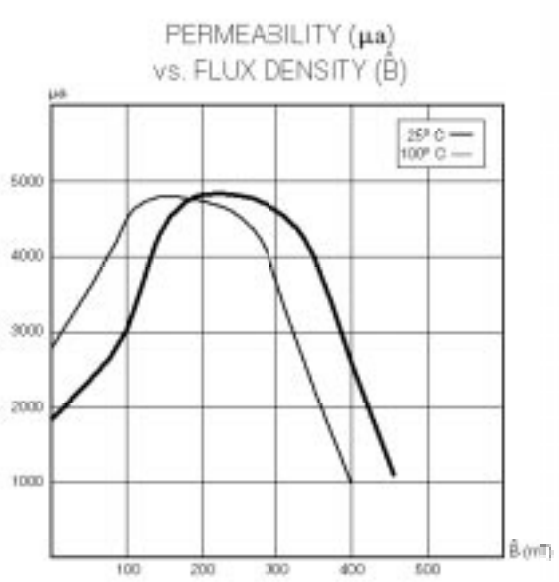
μ_i	25°C	:	1 900 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	470 mT
	100°C	:	380 mT
Losses P_L 200 mT, 100°C,	16 kHz	:	< 80 mW/cm³
	25 kHz	:	< 150 mW/cm³
	32 kHz	:	< 200 mW/cm³
Curie temperature		:	> 250°C

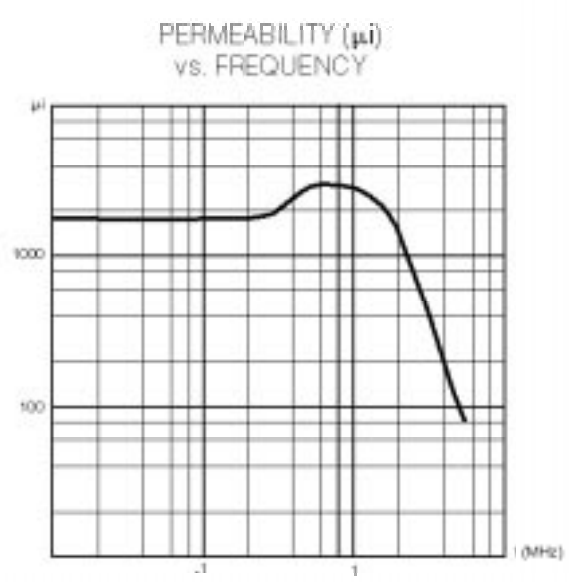
• AVAILABLE CORE SHAPES

E, U cores.

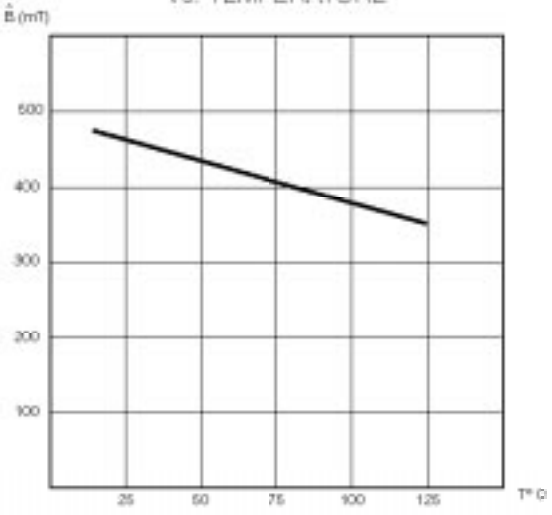




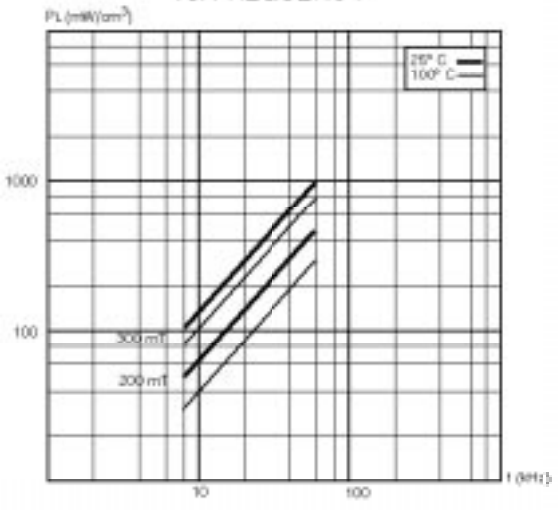




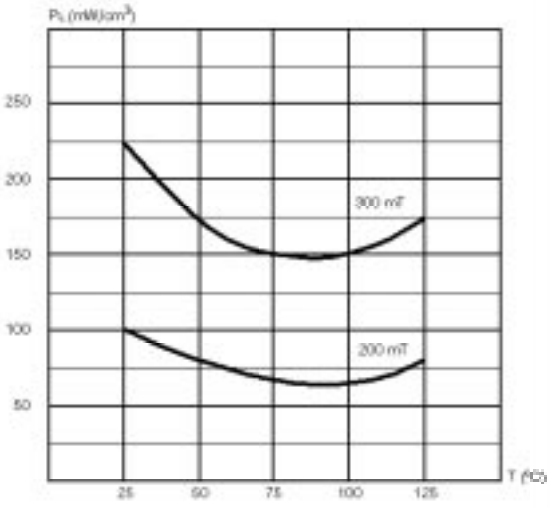
FLUX DENSITY ($\hat{B}$) at 400 A/m
vs. TEMPERATURE



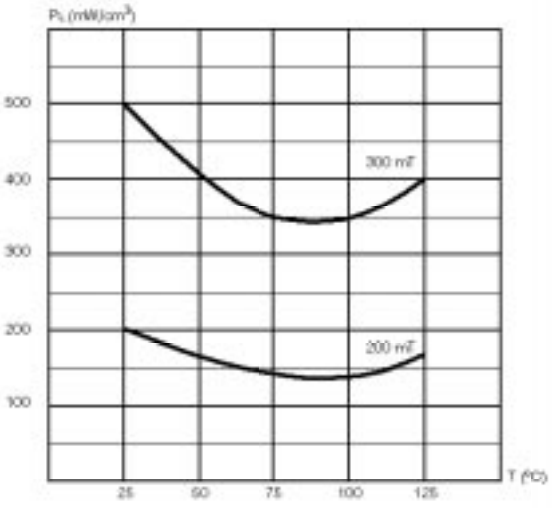
POWER LOSSES (P_L)
vs. FREQUENCY



POWER LOSSES (P_L)
vs. TEMPERATURE at 16 kHz



POWER LOSSES (P_L)
vs. TEMPERATURE at 32 kHz



B5 MATERIAL

TV & MONITORS

• APPLICATION

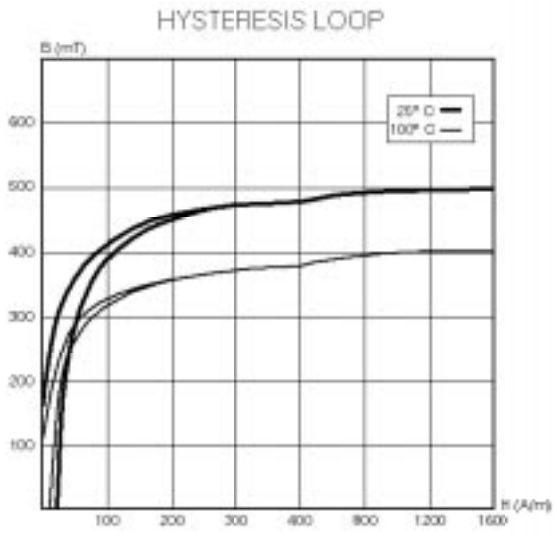
B5 is a "low frequency, very high flux density" and low loss power material. It offers superior saturation flux density at high temperature. This characteristic makes it particularly suitable for high saturation applications including flyback applications for 2H TV sets.

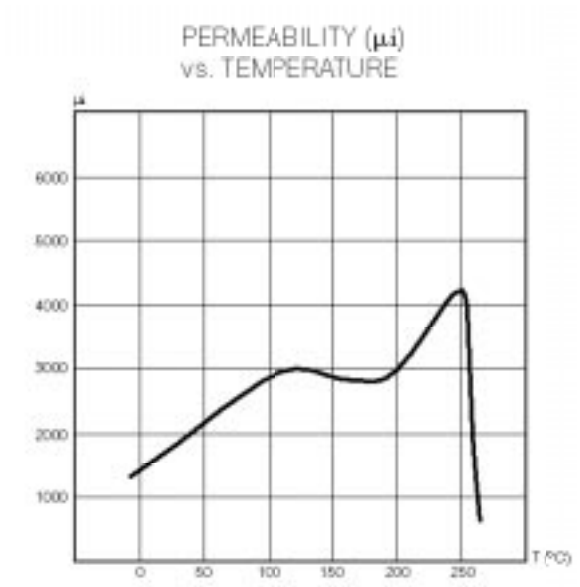
• MAIN CHARACTERISTICS

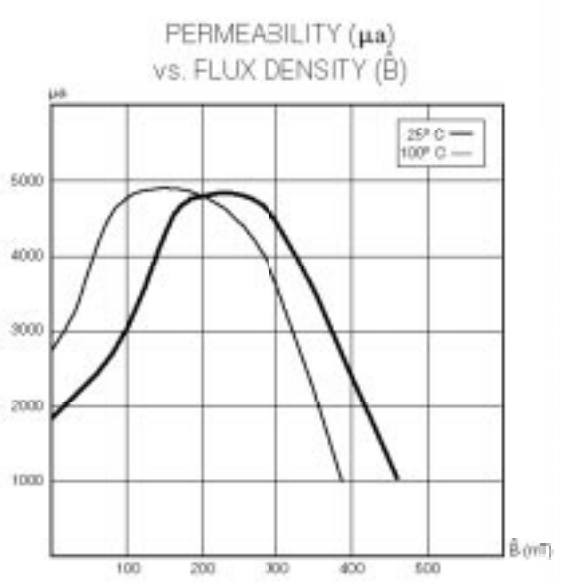
μ_i	25°C	:	1 800 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	470 mT
	100°C	:	380 mT
Losses P_L 200 mT, 100°C,	32 kHz	:	< 140 mW/cm³
	60 kHz	:	< 350 mW/cm³
	100 kHz	:	< 700 mW/cm³
Curie temperature		:	> 250°C

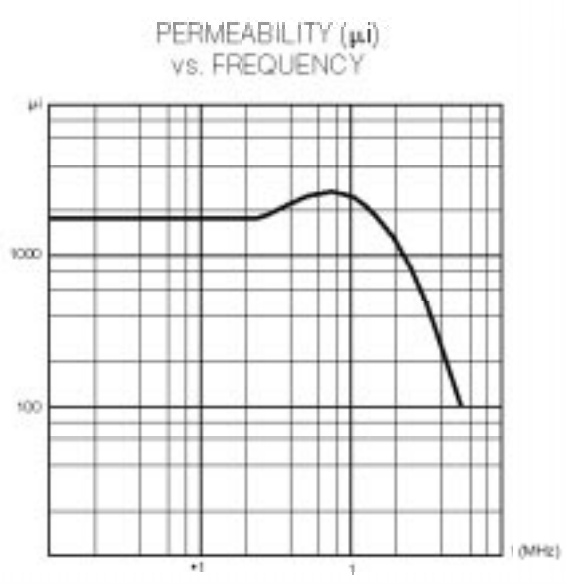
• AVAILABLE CORE SHAPES

E, U cores

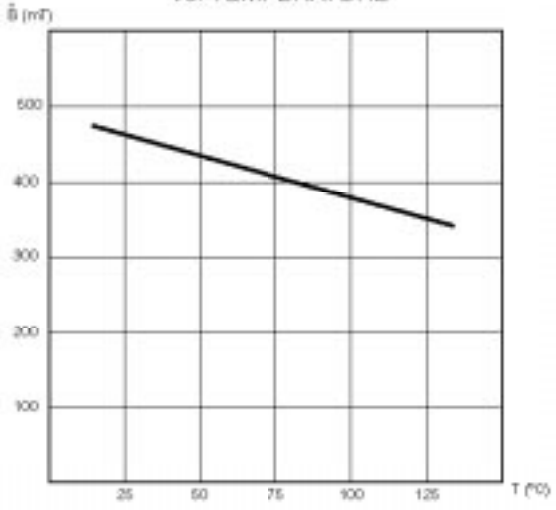




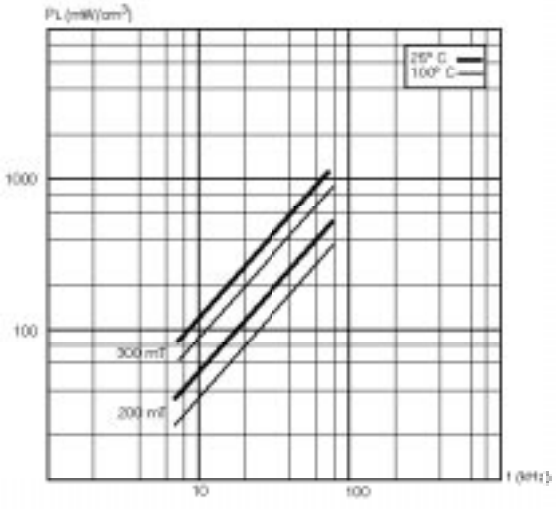




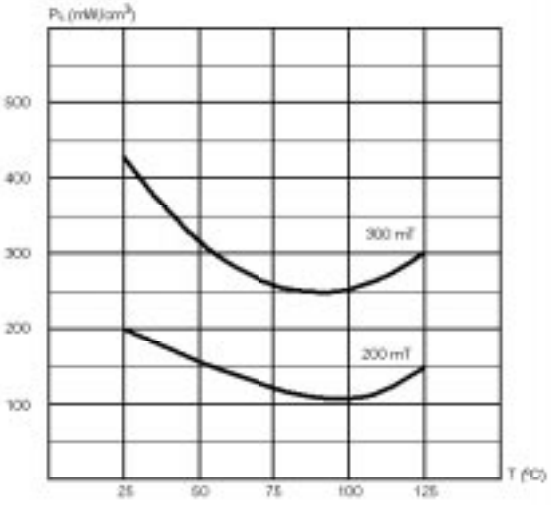
FLUX DENSITY ($\hat{B}$) at 400 A/m
vs. TEMPERATURE



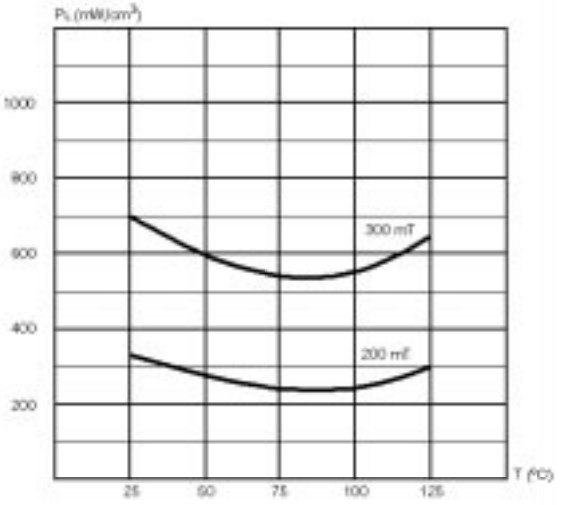
POWER LOSSES (P_L)
vs. FREQUENCY



POWER LOSSES (P_L)
vs. TEMPERATURE at 32 kHz



POWER LOSSES (P_L)
vs. TEMPERATURE at 50 kHz



B7 MATERIAL

TV & MONITORS

• APPLICATION

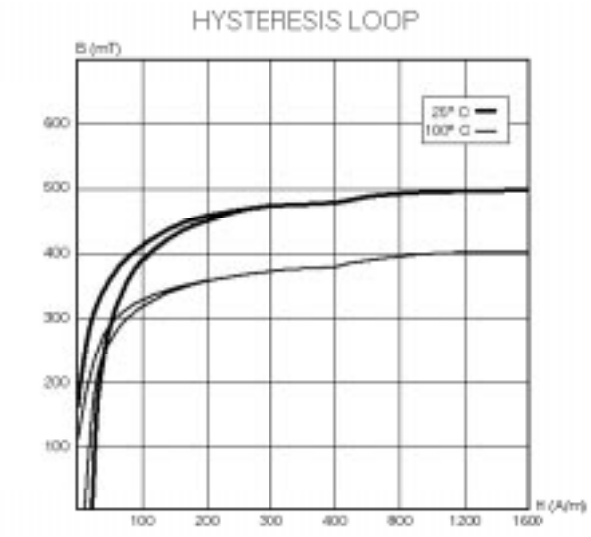
B7 is a "low frequency, very high flux density" and low loss power material. It offers superior saturation flux density at high temperature. This characteristic makes it particularly suitable for high saturation applications including flyback applications for large tube 2H TV sets and monitors.

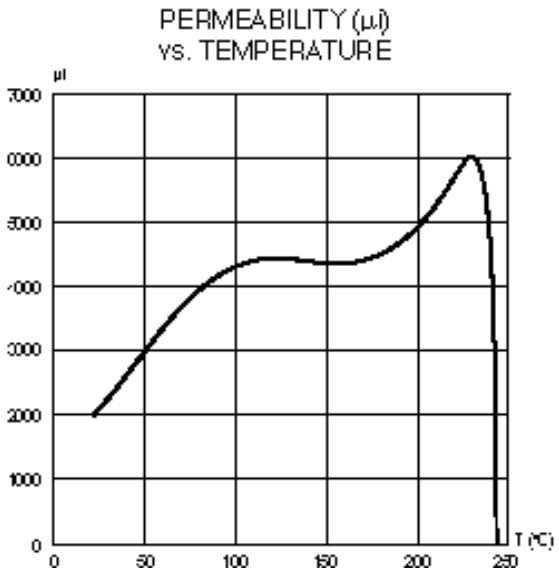
• MAIN CHARACTERISTICS

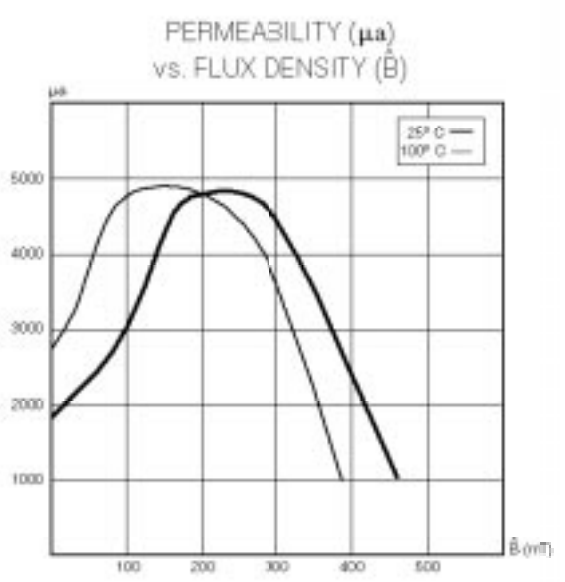
μ_i	25°C	:	2 000 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	470 mT
	100°C	:	380 mT
Losses P_L 200 mT, 100°C,	32 kHz	:	< 120 mW/cm³
	60 kHz	:	< 330 mW/cm³
	100 kHz	:	< 680 mW/cm³
Curie temperature		:	> 250°C

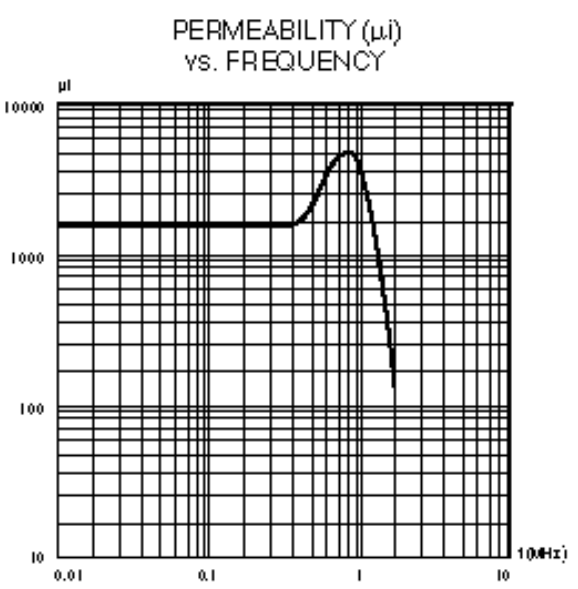
• AVAILABLE CORE SHAPES

E, U cores

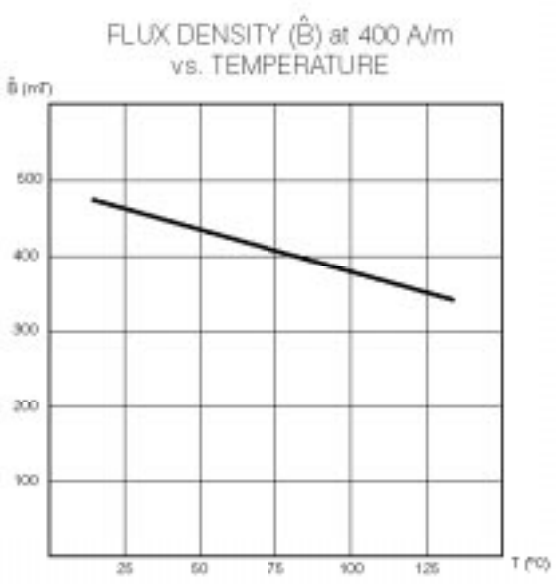


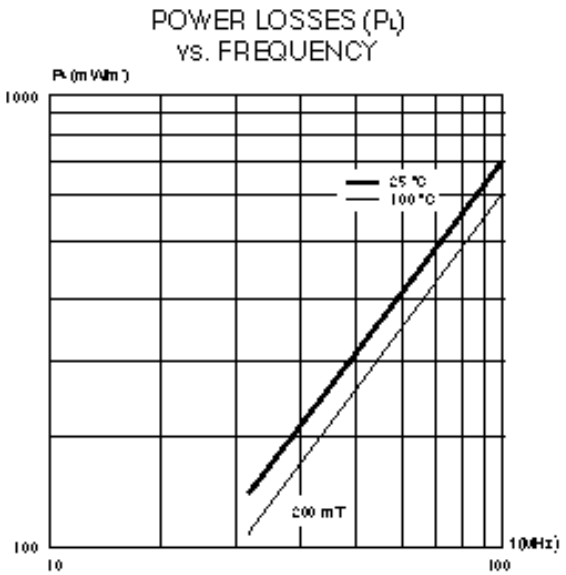


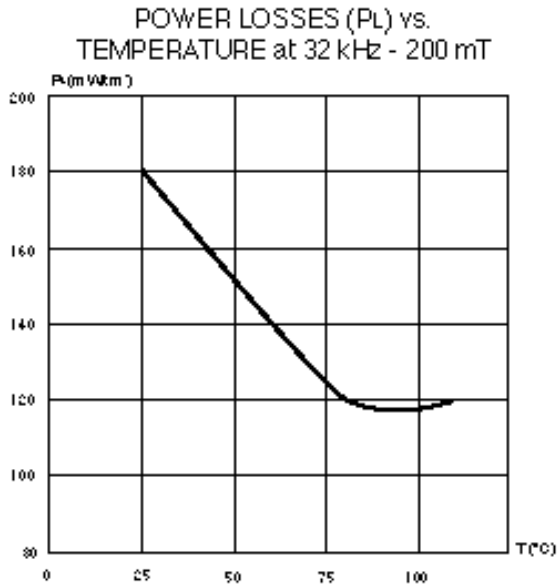


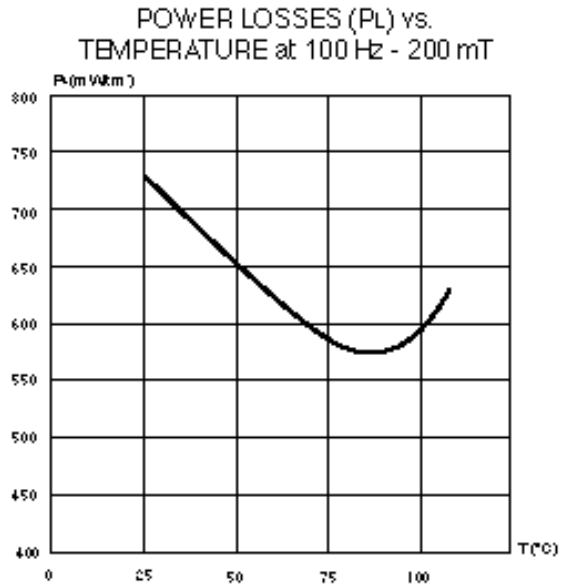


B7 MATERIAL


FLUX DENSITY (B̂) at 400 A/m
vs. TEMPERATURE
B̂ (mT)
500
400
300
200
100
25
50
75
100
125
T (°C)


POWER LOSSES (PL)
vs. FREQUENCY
PL (mW/cm³)
1000
100
25 °C
100 °C
200 mT
10
100
f (kHz)


POWER LOSSES (PL) vs.
TEMPERATURE at 32 kHz - 200 mT
PL (mW/cm³)
200
180
160
140
120
100
80
0
25
50
75
100
T(°C)


POWER LOSSES (PL) vs.
TEMPERATURE at 100 Hz - 200 mT
PL (mW/cm³)
800
750
700
650
600
550
500
450
400
0
25
50
75
100
T(°C)

F1 MATERIAL

S.M.P.S. | TV & MONITORS | LIGHTING

• APPLICATION

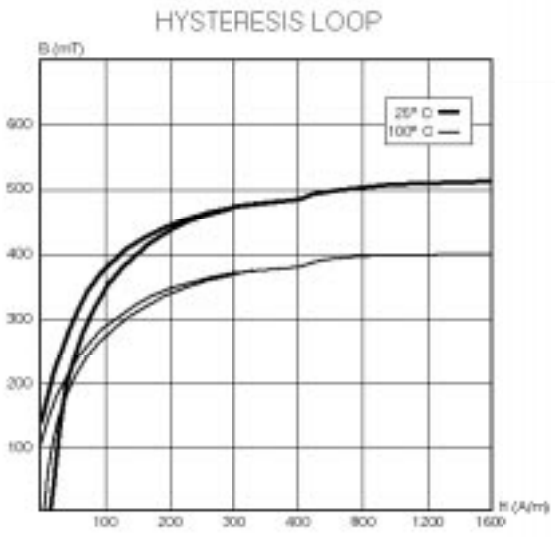
F1 is a very low loss power material for frequencies up to 250 kHz. Losses have been optimized in high temperature range, 80 to 100°C.

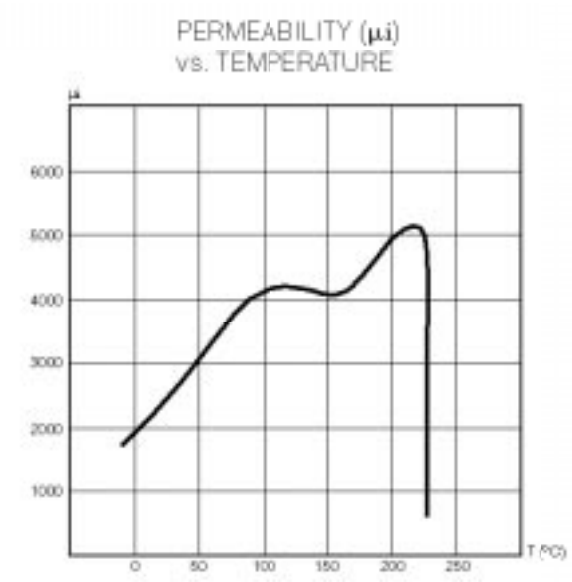
• MAIN CHARACTERISTICS

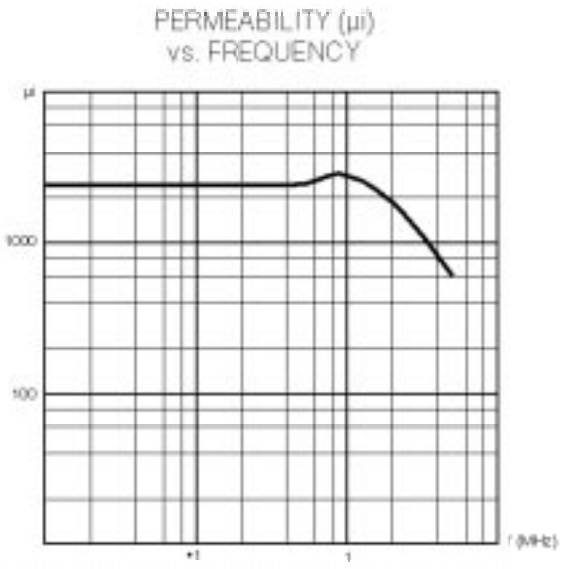
μ_i	25°C	: 2 300 ± 25 %
$\hat{B}$ at 400 A/m	25°C	: 450 mT
	100°C	: 340 mT
Losses P_L 200 mT, 100°C,	60 kHz	: < 280 mW/cm³
	100 kHz	: < 580 mW/cm³
Curie temperature		: > 230°C

• AVAILABLE CORE SHAPES

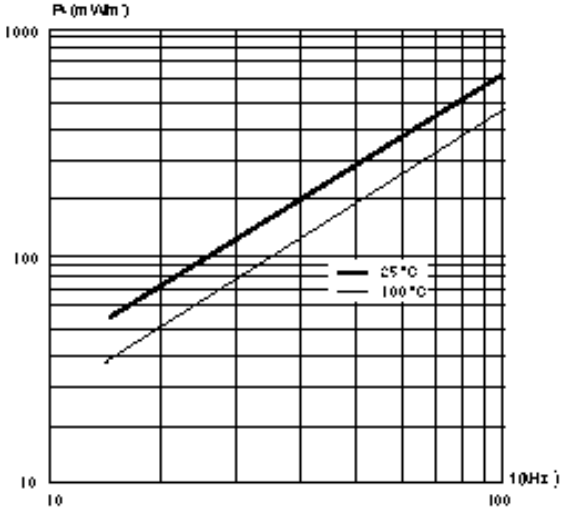
E, U cores.



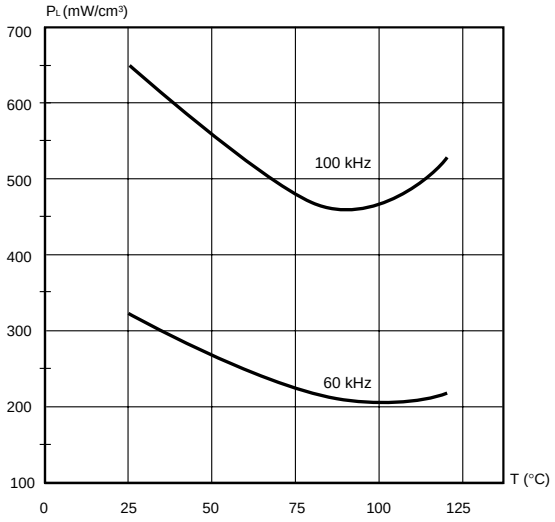




POWER LOSSES (P_L)
vs. FREQUENCY at 200 mT



POWER LOSSES (P_L)
vs. TEMPERATURE at 200 mT



F2 MATERIAL

S.M.P.S.

• APPLICATION

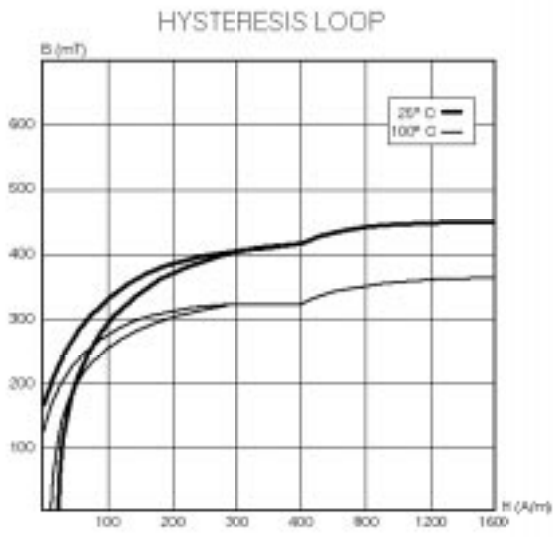
F2 is a high frequency application power material for 100 to 500 kHz frequency range. Losses have been optimized in temperature range, 80 to 100°C.

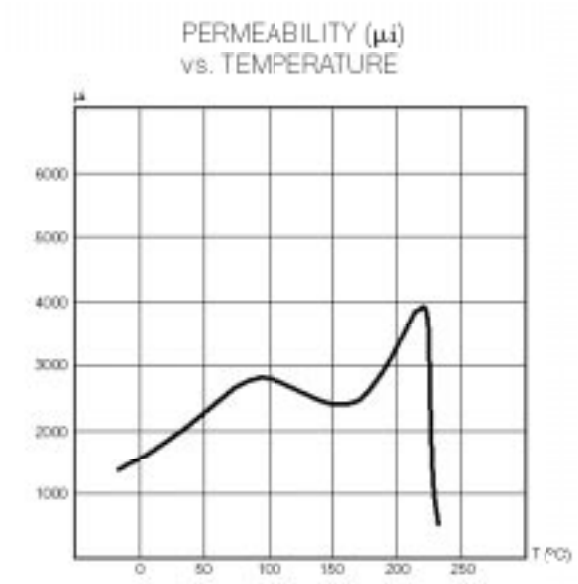
• MAIN CHARACTERISTICS

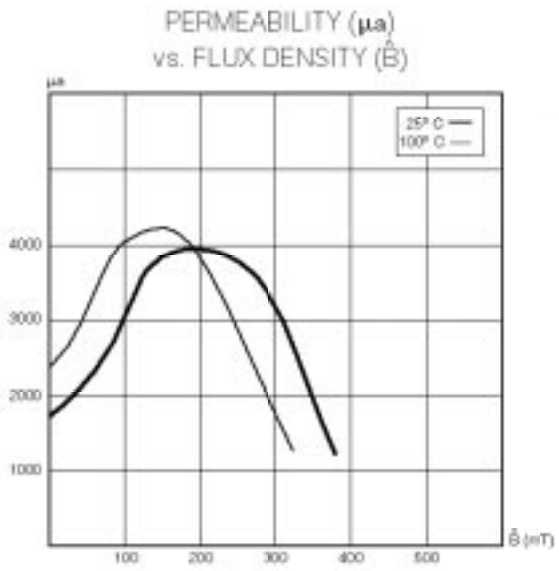
μ_i	25°C	:	1 900 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	420 mT
	100°C	:	320 mT
Losses P_L 25 mT, 100°C,	1000 kHz	:	< 130 mW/cm³
50 mT, 100°C, 300 kHz		:	< 100 mW/cm³
Curie temperature		:	> 200°C

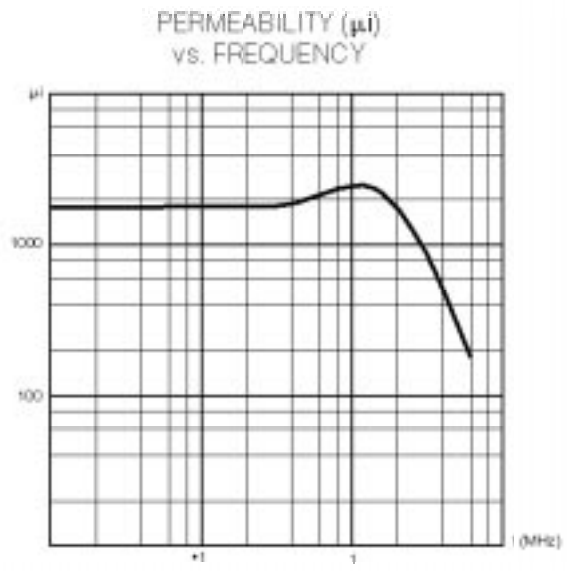
• AVAILABLE CORE SHAPES

E, U, RM and FP cores.



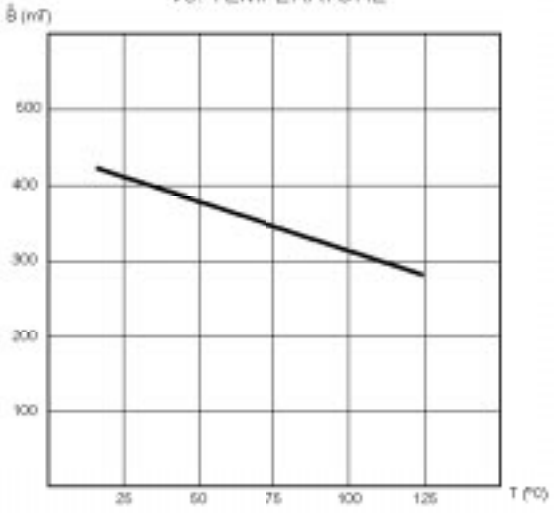




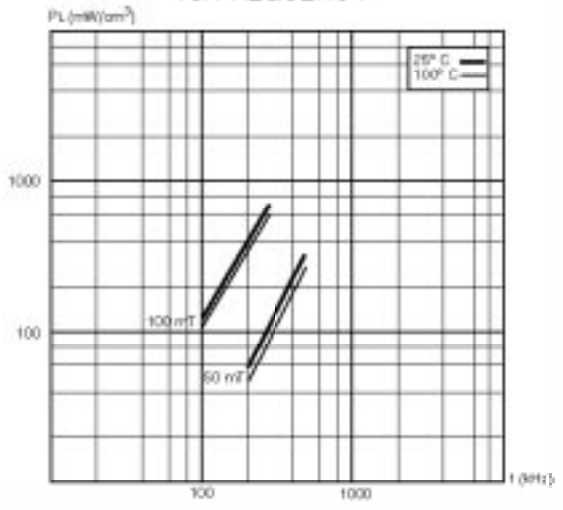


F2 MATERIAL

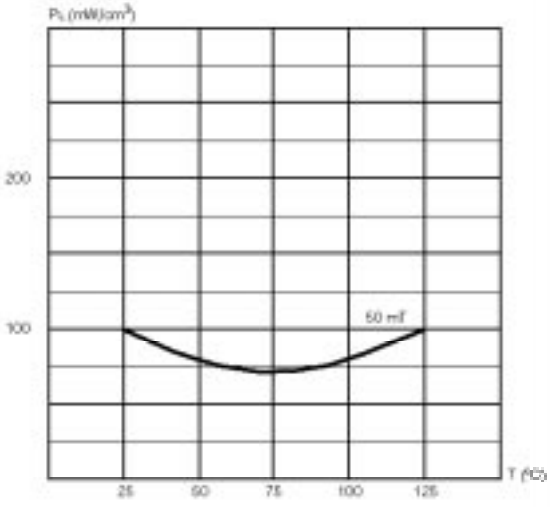
FLUX DENSITY ($\hat{B}$) at 400 A/m
vs. TEMPERATURE



POWER LOSSES (P_L)
vs. FREQUENCY



POWER LOSSES (P_L)
vs. TEMPERATURE at 300 kHz



F4 MATERIAL

S.M.P.S.

• APPLICATION

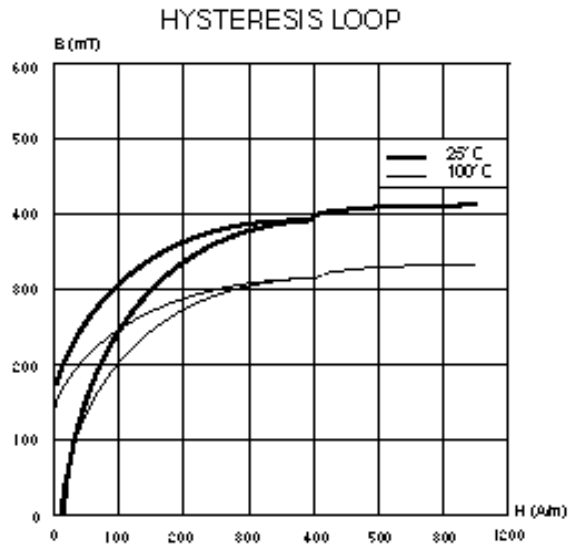
F4 is a very low loss power material for 300 to 1.5 MHz frequency range.

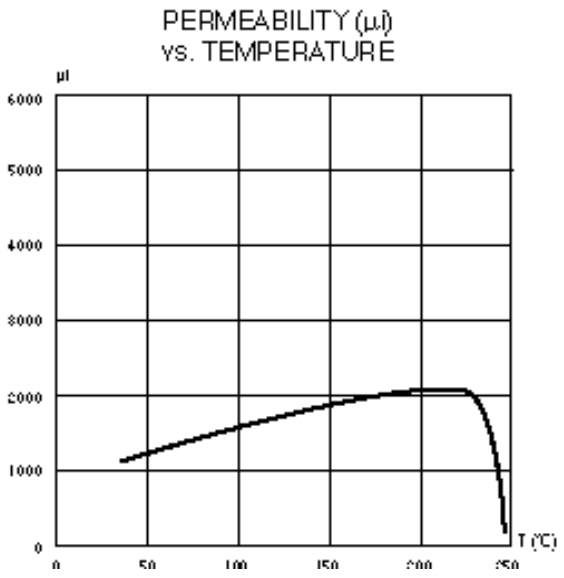
• MAIN CHARACTERISTICS

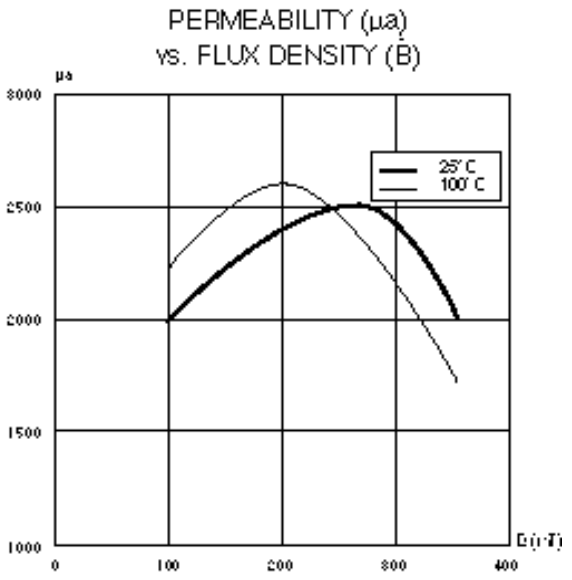
μ_i	25°C	:	1 100 ± 25 %
$\hat{B}$ at 400 A/m	25°C	:	390 mT
	100°C	:	310 mT
Losses P_L 50 mT, 100°C,	300 kHz	:	< 80 mW/cm³
	50 mT, 100°C, 1 MHz	:	< 600 mW/cm³
	25 mT, 100°C, 1 MHz	:	< 100 mW/cm³
Curie temperature		:	> 200°C

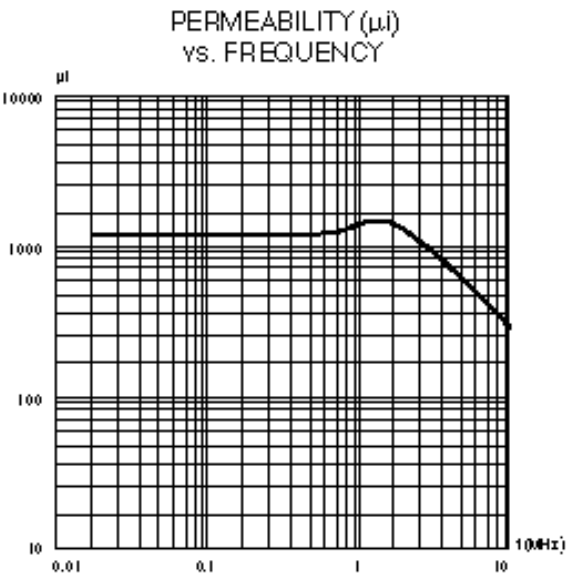
• AVAILABLE CORE SHAPES

Upon request.

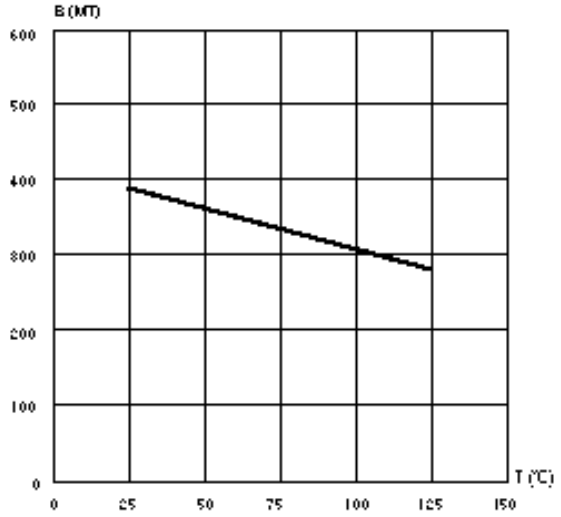




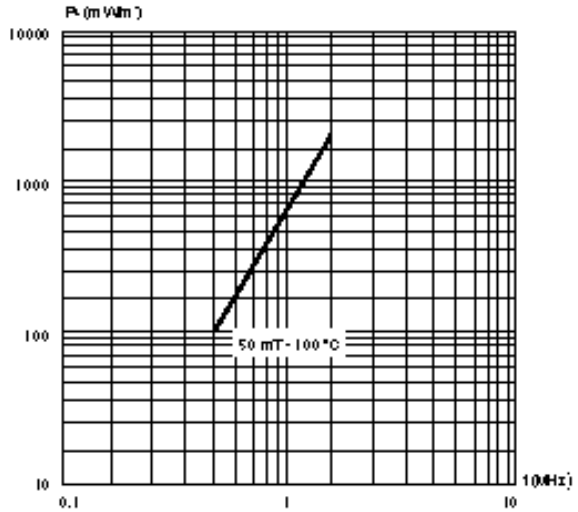




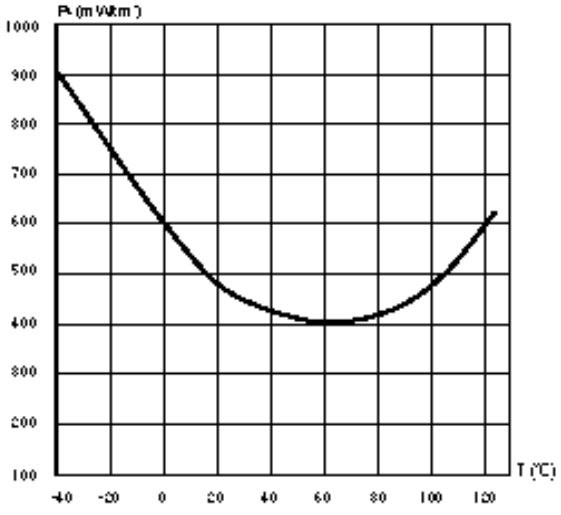
FLUX DENSITY ($\hat{B}$) at 400 A/m
vs TEMPERATURE



POWER LOSSES (P_L)
vs. FREQUENCY



POWER LOSSES (P_L) vs.
TEMPERATURE at 1 MHz - 50 mT



A2 MATERIAL

• APPLICATION

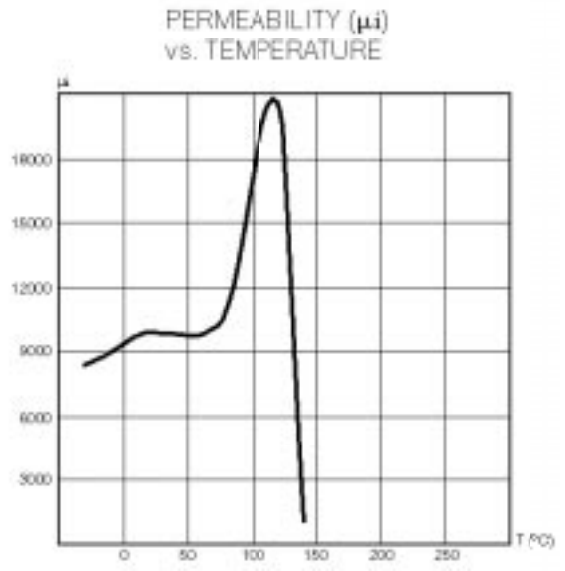
A2 is a high permeability material especially designed for noise suppression applications.

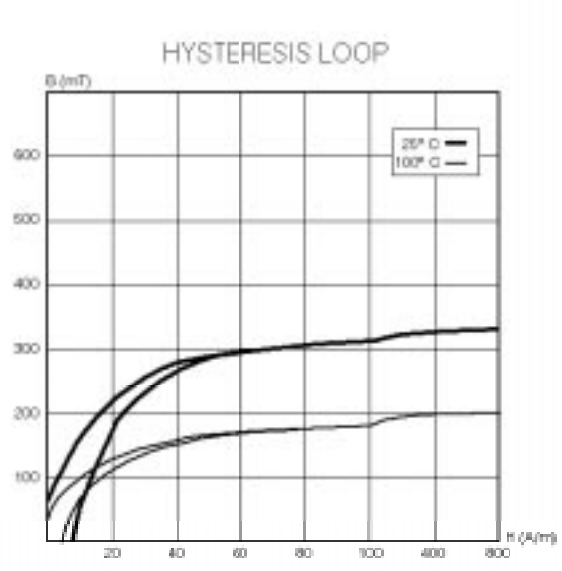
• MAIN CHARACTERISTICS

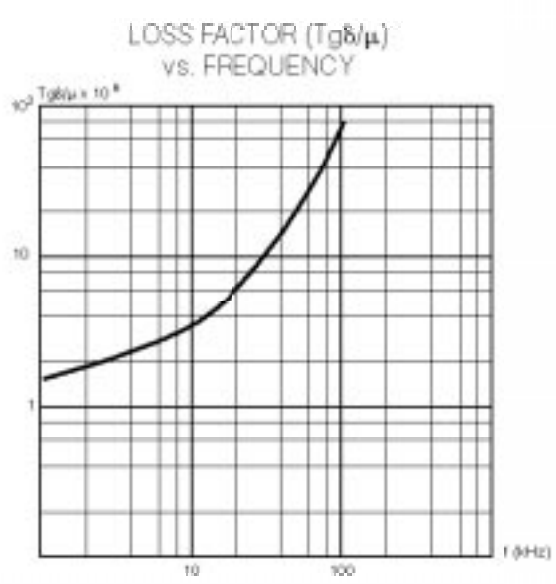
μ_i	25°C	:	10 000 ± 30 %
$\hat{B}$ at 800 A/m	25°C	:	330 mT
	100°C	:	200 mT
Curie temperature		:	> 120°C

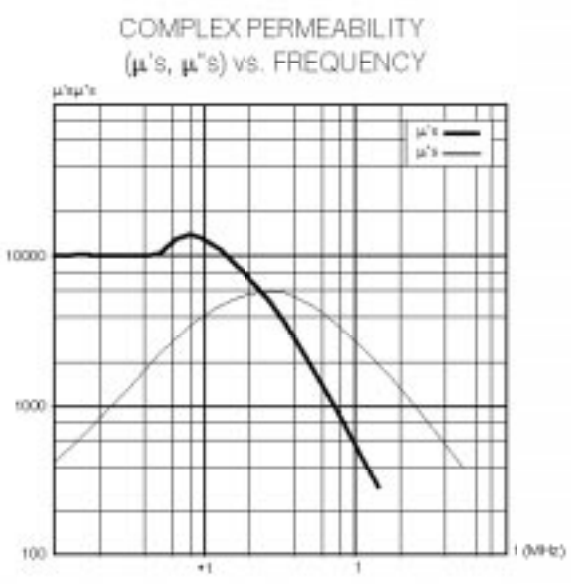
• AVAILABLE CORE SHAPES

Small toroids.









A4 MATERIAL

• APPLICATION

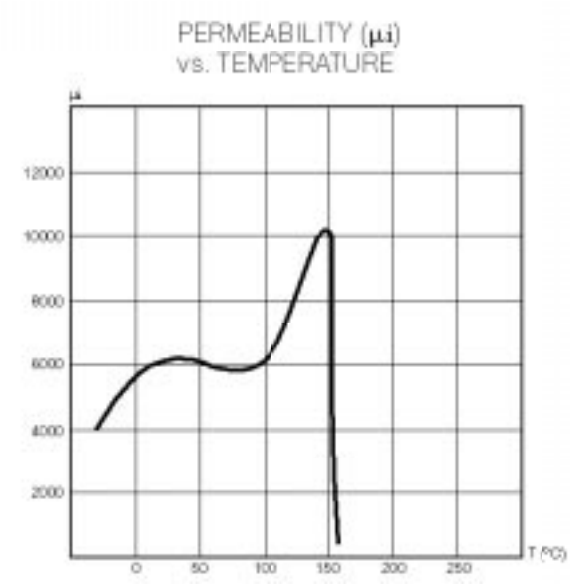
A4 is a high permeability material especially designed for noise suppression applications.

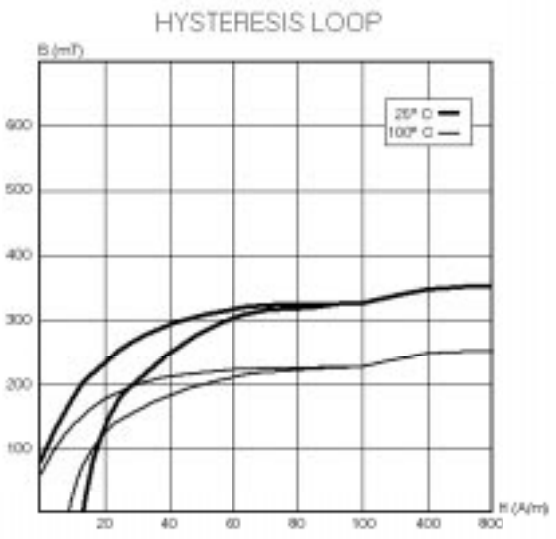
• MAIN CHARACTERISTICS

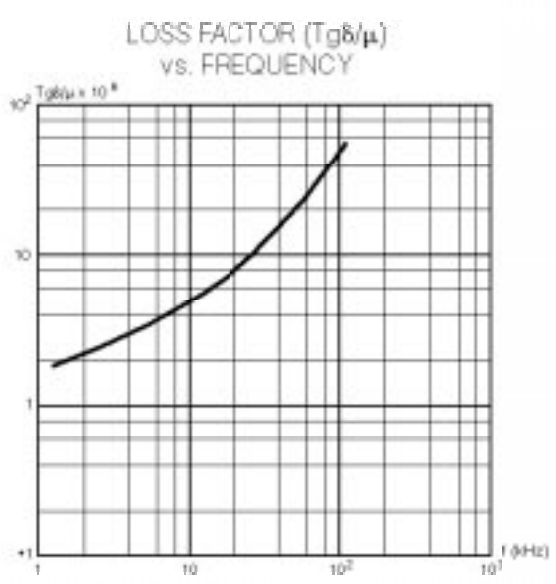
μ_i	25°C	:	6 000 ± 25 %
$\hat{B}$ at 800 A/m	25°C	:	350 mT
	100°C	:	250 mT
Curie temperature		:	> 140°C

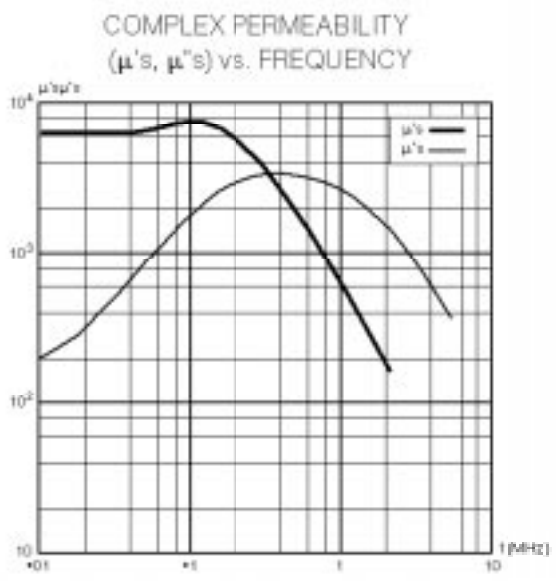
• AVAILABLE CORE SHAPES

Toroids and small E and U cores.

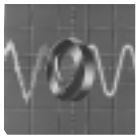








A5 MATERIAL



EMI SUPPRESSION

• APPLICATION

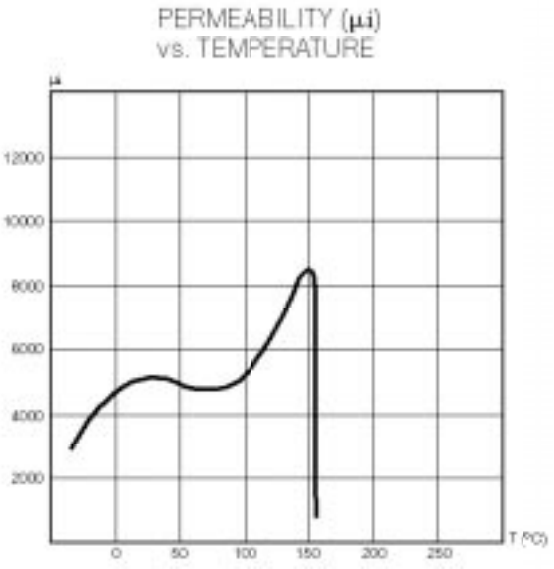
A5 is a high permeability material especially designed for noise suppression applications.

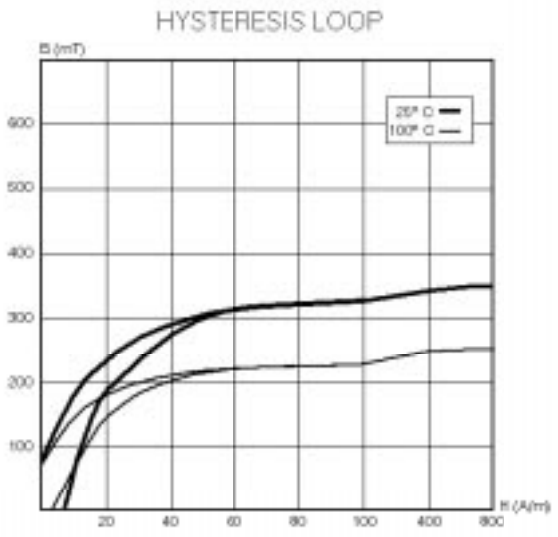
• MAIN CHARACTERISTICS

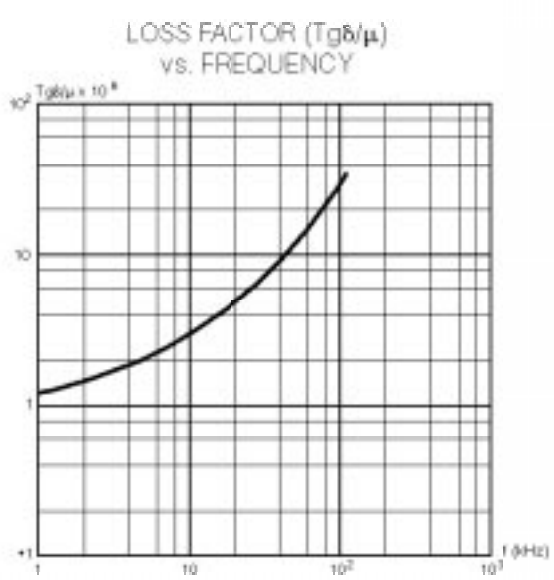
μ_i	25°C	:	5 000 ± 25 %
$\hat{B}$ at 800 A/m	25°C	:	350 mT
	100°C	:	250 mT
Curie temperature		:	> 140°C

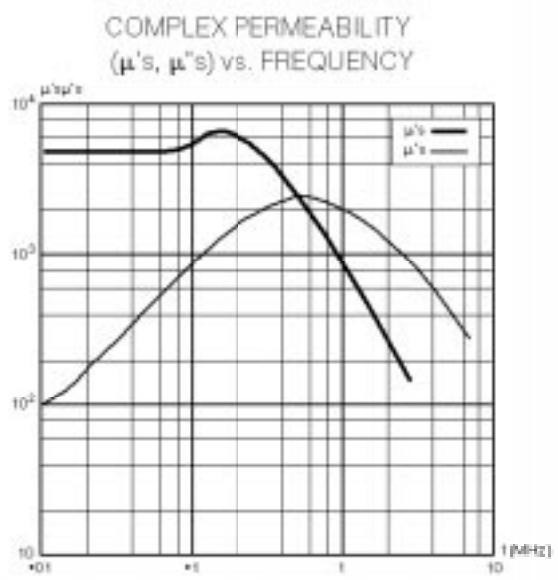
• AVAILABLE CORE SHAPES

Toroids.









A6 MATERIAL

• APPLICATION

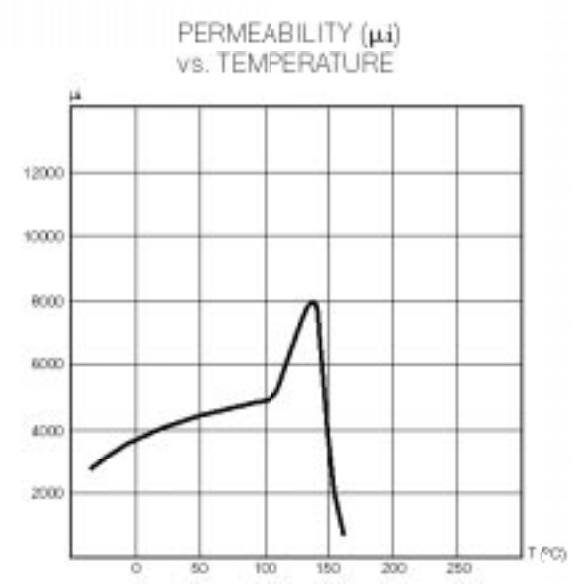
A6 is a high permeability material especially designed for noise suppression applications.

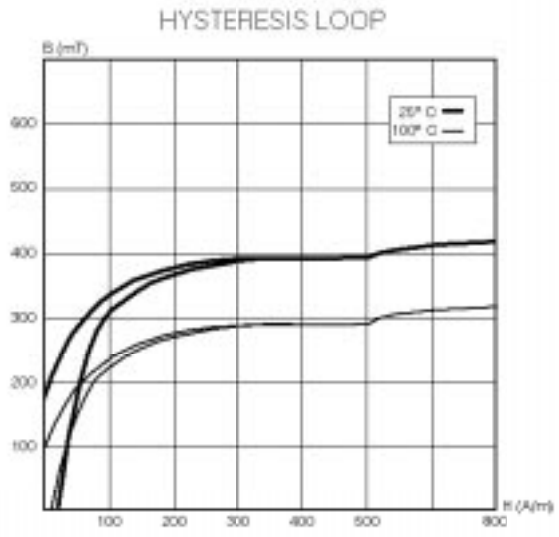
• MAIN CHARACTERISTICS

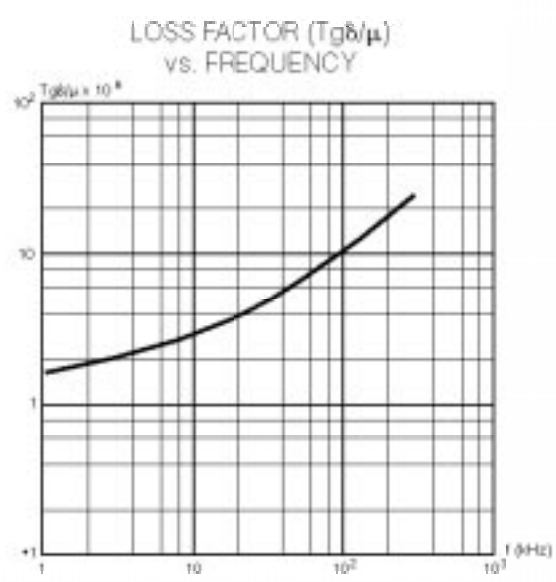
μ_i	25°C	:	4 000 ± 25 %
$\hat{B}$ at 800 A/m	25°C	:	410 mT
	100°C	:	310 mT
Curie temperature		:	> 140°C

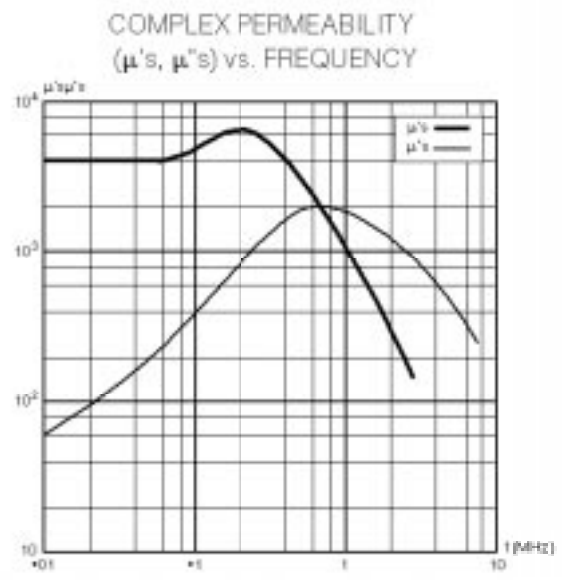
• AVAILABLE CORE SHAPES

Toroids and small E and U cores.

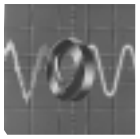








A8 MATERIAL



EMI SUPPRESSION

• APPLICATION

A8 is a "high permeability high flux density" material for professional filtering application. It has been especially d esigned for filter chokes which require high inductance together with power handling capability.

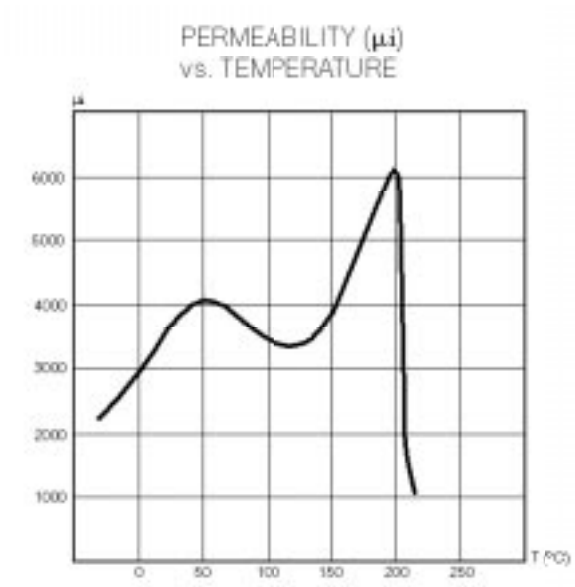
• MAIN CHARACTERISTICS

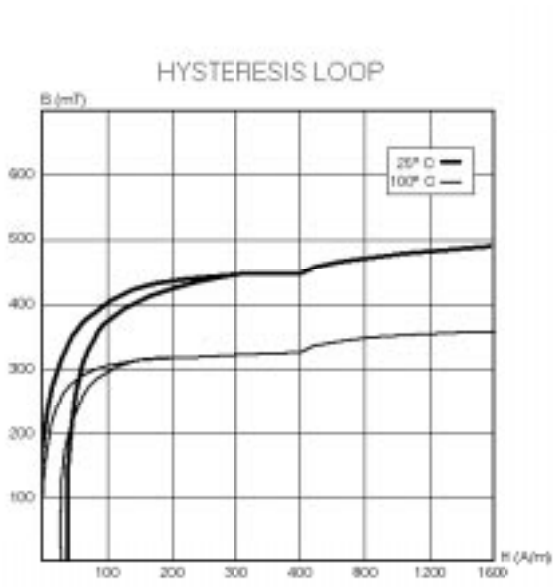
μ_i	25°C	:	3 500 ± 25 %
$\hat{B}$ at 1600 A/m	25°C	:	480 mT
	100°C	:	370 mT

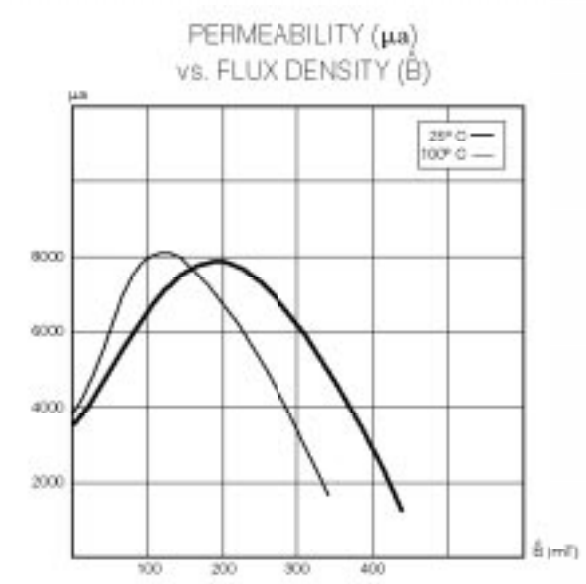
Curie temperature : > 200°C

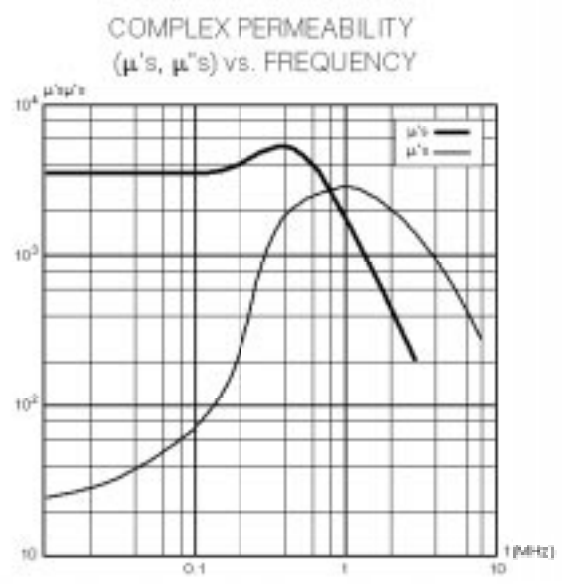
• AVAILABLE CORE SHAPES

E and U cores.

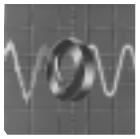








A9 MATERIAL



EMI SUPPRESSION

• APPLICATION

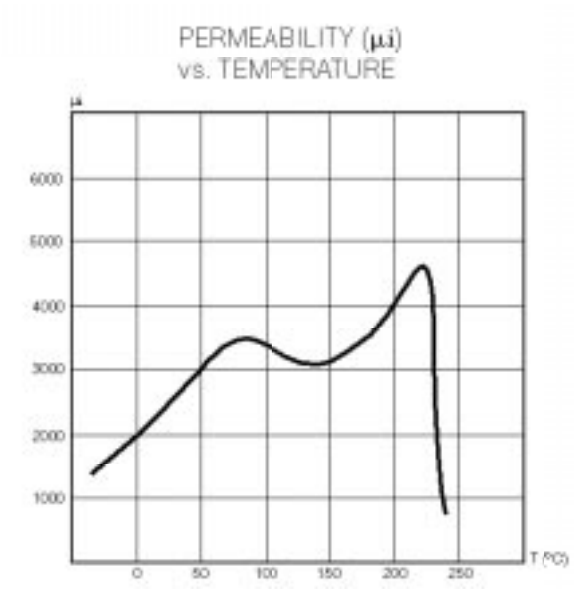
A9 is designed for noise suppression. Maximum frequency application is greater than 3.5 MHz. Other applications include sensors and cross-sover networks in HI-FI systems.

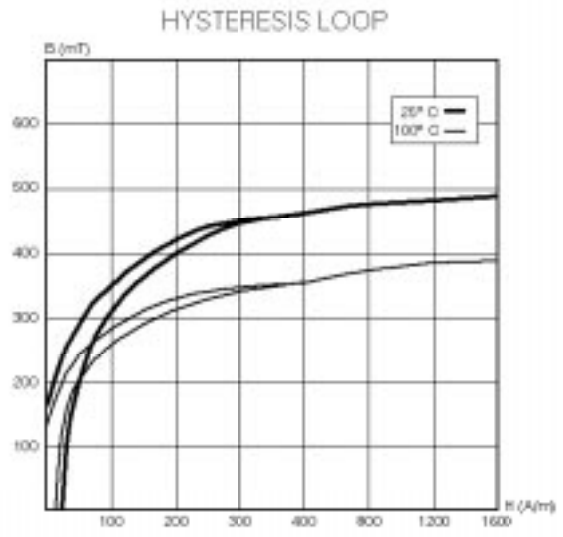
• MAIN CHARACTERISTICS

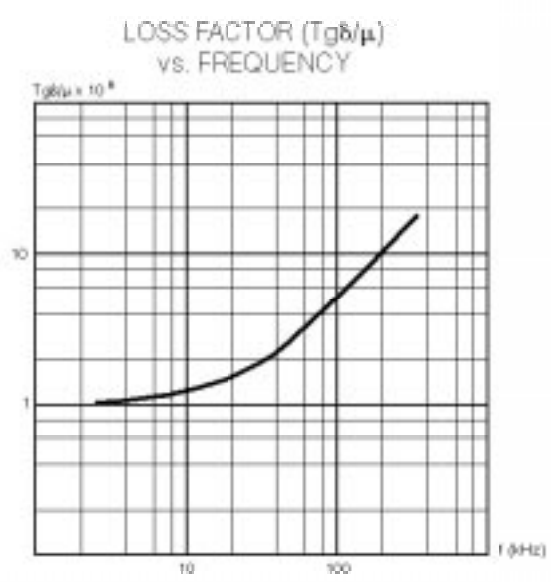
μ_i	25°C	:	2 500 ± 25 %
$\hat{B}$ at 1600 A/m	25°C	:	480 mT
	100°C	:	370 mT
Curie temperature		:	> 200°C

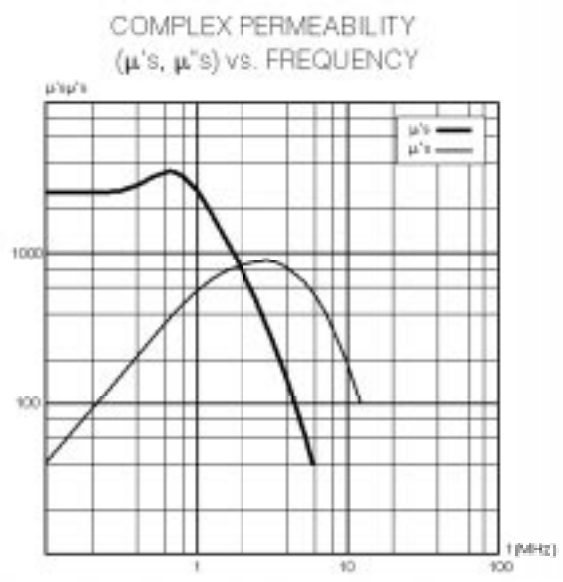
• AVAILABLE CORE SHAPES

Toroids.

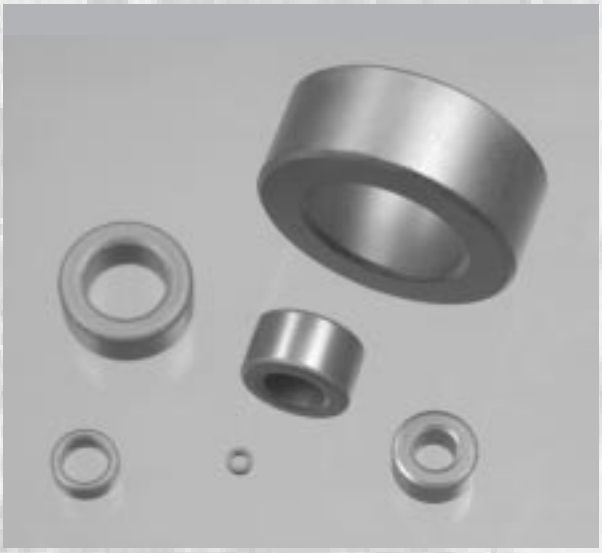








TOROIDS



KEY-APPLICATIONS :

– EMI SUPPRESSION

– HIGH POWER

– LIGHTING

HOW TO ORDER TOROIDS ?

Toroids' part number structure :

A	4	T	R	1	9	0	0	A	-	-	-	-	-	-

Material

Model

Coating :
• Uncoated core : -
• Coated core : R - Polyamide
E - Epoxy
P - Parylene

Shape code

FERRINOX ® toroids provide high inductance values in the minimum volume. The magnetic circuit with no airgap offers minimum leakage inductance and optimal coupling. The uniform cross section area along the magnetic path allows operation at maximum flux density therefore preventing any local saturation and supplementary losses.

APPLICATIONS

The toroids may be used in a wide range of applications including noise suppression, chokes, wide band transformers, converter transformer, pulse transformers, delay lines, ground fault interruptor.

Material selection for noise suppression is facilitated by the addition of cut-off frequency data and permeability versus frequency curves.

TOROID COATINGS

In order to improve insulation between windings and ferrite toroids, several coatings are available :

PROCESS	Code	Thickness	Toroids sizes	Breakdown voltage VDC	Colour
Standard polyamide	R	200 to 400 µm 8 to 16 mils	From 6.3 to 40 included	> 2000	Neutral
Parylene C	P	5 to 26 µm 2 to 1 mil	Only upon request > 12 mm	> 500	Neutral
Epoxy	E	200 to 400 µm	From 10 to 31.5	> 2000	White

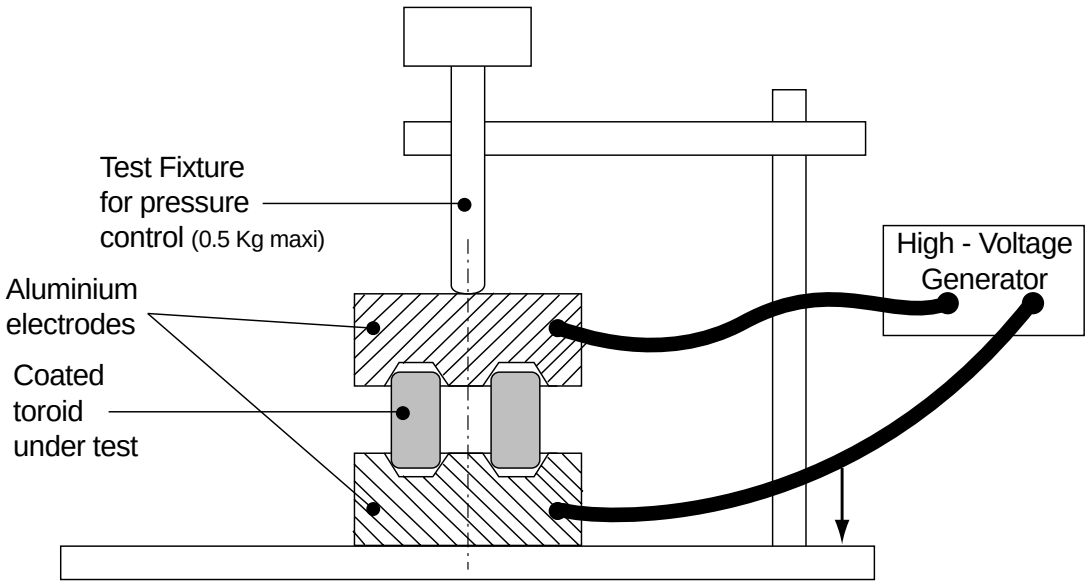
STANDARD POLYAMIDE PROCESS

Coating of these toroids is carried out by a patented process (without grip marks), which deposits a polyamide coating guaranteeing :

- very good dielectric rigidity,
- excellent resistance to the main solvents and liquid or gaseous chemical agents,
- a melting point > 175°C,
- a self-extinguishing product (conforming to UL 94 V2),
- coating thickness 200 µm typical value,
- single color : clear natural.

VOLTAGE BREAKDOWN MEASUREMENT

Coated toroids are tested with the following device (According to the CECC method : SS25500/Annex A/Method A).



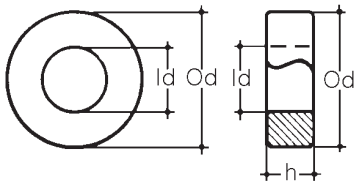
T - 0400A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	4 ± 0.15	2.4 ± 0.15	1.6 ± 0.15			
in.	0.157 ± 0.006	0.094 ± 0.006	0.063 ± 0.006			

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1600	960	800	640	400
	Coated	25°C	-	-	-	-	-
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-0400A	A4T-0400A	A5T-0400A	A6T-0400A	A9T-0400A

* for A2 material A_L (nH) ± 30 %

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.16	nH
Core constant	c_1	7.7 195.58	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	10 0.394	mm in.
Effective core area	A_e	1.3 0.0020	mm^2 $in.^2$
Effective core volume	V_e	13 0.0008	mm^3 $in.^3$
Weight per piece	W	0.07 0.0025	g oz.

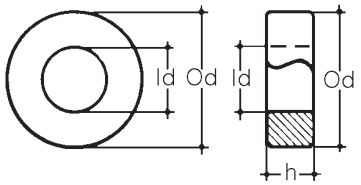


T - 0480A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	4.84 ± 0.20	2.28 ± 0.10	1.28 ± 0.10			
in.	0.191 ± 0.008	0.090 ± 0.004	0.050 ± 0.004			

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1150	950	760	475
	Coated	25°C	-	-	-	-
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-0480A	A5T-0480A	A6T-0480A	A9T-0480A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.19	nH
Core constant	c_1	6.52 165.51	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	10.20 0.402	mm in.
Effective core area	A_e	1.56 0.0024	mm^2 $in.^2$
Effective core volume	V_e	15.9 0.0010	mm^3 $in.^3$
Weight per piece	W	0.09 0.0032	g oz.

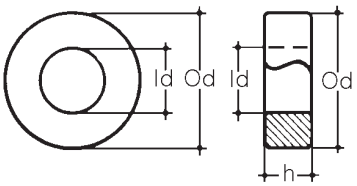


T - 0500A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	5 ± 0.20	3 ± 0.10	2 ± 0.15			
in.	0.197 ± 0.008	0.118 ± 0.004	0.079 ± 0.006			

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1200	1000	800	500
	Coated	25°C	-	-	-	-
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-0500A	A5T-0500A	A6T-0500A	A9T-0500A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.20	nH
Core constant	c_1	6.15 156.21	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	12 0.472	mm in.
Effective core area	A_e	1.96 0.0030	mm^2 $in.^2$
Effective core volume	V_e	23.6 0.0014	mm^3 $in.^3$
Weight per piece	W	0.12 0.0042	g oz.



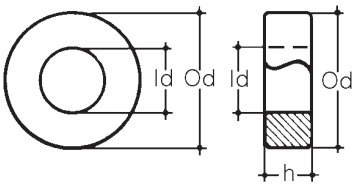
T - 0630A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	6.3 ± 0.20	3.8 ± 0.15	2.5 ± 0.15	7.20 maxi	2.80 mini	3.25 maxi
in.	0.248 ± 0.008	0.150 ± 0.006	0.098± 0.006	0.283 maxi	0.110 mini	0.128 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2500	1500	1250	1000	560
	Coated	25°C	2200	1300	1000	880	520
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-0630A	A4T-0630A	A5T-0630A	A6T-0630A	A9T-0630A
	P/N coated			A4TR0630A	A5TR0630A	A6TR0630A	A9TR0630A

* for A2 material A_L (nH) ± 30 %

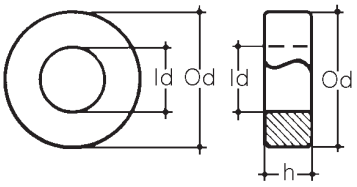
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.25	nH
Core constant	c_1	5 127.00	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	16 0.630	mm in.
Effective core area	A_e	3.2 0.0050	mm^2 $in.^2$
Effective core volume	V_e	51 0.0031	mm^3 $in.^3$
Weight per piece	W	0.25 0.0088	g oz.



T - 0800B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	8 ± 0.25	3.9 ± 0.15	2.5 ± 0.15	9.05 maxi	2.95 mini	3.45 maxi
in.	0.315 ± 0.010	0.154 ± 0.006	0.098 ± 0.006	0.357 maxi	0.0116 mini	0.136 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2150	1800	1450	900
	Coated	25°C	1900	1600	1250	790
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-0800B	A5T-0800B	A6T-0800B	A9T-0800B
	P/N coated		A4TR0800B	A5TR0800B	A6TR0800B	A9TR0800B



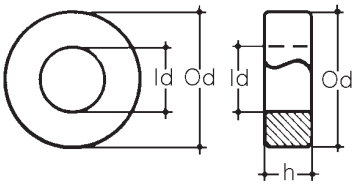
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.36	nH
Core constant	c_1	3.5 88.90	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	17.2 0.677	mm in.
Effective core area	A_e	4.91 0.0076	mm^2 $in.^2$
Effective core volume	V_e	84.3 0.0051	mm^3 $in.^3$
Weight per piece	W	0.46 0.016	g oz.

T - 0950A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	9.52 ± 0.25	4.75 ± 0.13	3.17 ± 0.25	10.62 maxi	3,8 mini	4.17 maxi
in.	0.375 ± 0.010	0.187 ± 0.005	0.125 ± 0.010	0.418 maxi	0.150 mini	0,164 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	4400	2650	2100	1750	1050
	Coated	25°C	3850	2300	1800	1550	925
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-0950A	A4T-0950A	A5T-0950A	A6T-0950A	A9T-0950A
	P/N coated			A4TR0950A	A5TR0950A	A6TR0950A	A9TR0950A

* for A2 material A_L (nH) ± 30 %



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.44	nH
Core constant	c_1	2.85 72.39	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	20.7 0.815	mm in.
Effective core area	A_e	7.26 0.011	mm^2 $in.^2$
Effective core volume	V_e	150 0.0092	mm^3 $in.^3$
Weight per piece	W	0.81 0.029	g oz.

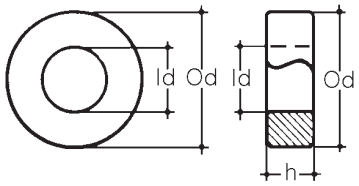
T - 1000A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	10 ± 0.30	6 ± 0.20	4 ± 0.15	11.1 maxi	5 mini	4.95 maxi
in.	0.394 ± 0.012	0.236 ± 0.008	0.157 ± 0.006	0.437 maxi	0.197 mini	0.195 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	4000	2400	2000	1600	900
	Coated	25°C	3500	2100	1750	1400	840
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-1000A	A4T-1000A	A5T-1000A	A6T-1000A	A9T-1000A
	P/N coated			A4TR1000A	A5TR1000A	A6TR1000A	A9TR1000A

* for A2 material A_L (nH) ± 30 %

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.40	nH
Core constant	c_1	3.1 78.74	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	25 0.984	mm in.
Effective core area	A_e	8 0.012	mm^2 $in.^2$
Effective core volume	V_e	200 0.012	mm^3 $in.^3$
Weight per piece	W	0.9 0.032	g oz.

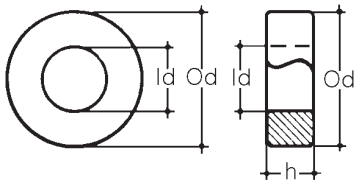


T - 1000C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	10 ± 0.30	6 ± 0.20	3 ± 0.15	11.1 maxi	5 mini	3.95 maxi
in.	0.394 ± 0.012	0.236 ± 0.008	0.118 ± 0.006	0.437 maxi	0.197 mini	0.156 maxi

			MATERIAL			
			A4	A5	A6	A9
AL (nH) ±25 %	Uncoated	25°C	1800	1550	1250	775
	Coated	25°C	1650	1350	1100	680
$tg\delta/\mu i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1000C	A5T-1000C	A6T-1000C	A9T-1000C
	P/N coated		A4TR1000C	A5TR1000C	A6TR1000C	A9TR1000C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.31	nH
Core constant	c_1	4.1 104.14	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	24.1 0.949	mm in.
Effective core area	A_e	5.87 0.0091	mm^2 $in.^2$
Effective core volume	V_e	141 0.0086	mm^3 $in.^3$
Weight per piece	W	0.72 0.025	g oz.

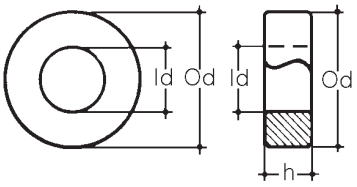


T - 1250A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	12.35± 0.35	5.8 ± 0.20	12 ± 0.35	13.55 maxi	4.8 mini	13.15 maxi
in.	0.486 ± 0.014	0.228 ± 0.008	0.472 ± 0.014	0.533 maxi	0.189 mini	0.518 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	10000	9000	7200	4500
	Coated	25°C	9600	7900	6350	3950
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1250A	A5T-1250A	A6T-1250A	A9T-1250A
	P/N coated		A4TR1250A	A5TR1250A	A6TR1250A	A9TR1250A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.80	nH
Core constant	c_1	0.72 18.29	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	28.6 1.126	mm in.
Effective core area	A_e	39.6 0.061	mm^2 $in.^2$
Effective core volume	V_e	1132 0.069	mm^3 $in.^3$
Weight per piece	W	5.38 0.190	g oz.



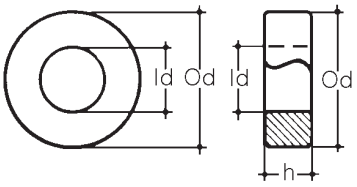
T - 1270A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	12.7 ± 0.40	7.14 ± 0.25	4.7 ± 0.20	13.9 maxi	6.09 mini	5.7 maxi
in.	0.500 ± 0.016	0.281 ± 0.010	0.185 ± 0.008	0.547 maxi	0.240 mini	0.224 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	5400	3100	2700	2150	1350
	Coated	25°C	4750	2800	2400	1900	1200
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-1270A	A4T-1270A	A5T-1270A	A6T-1270A	A9T-1270A
	P/N coated			A4TR1270A	A5TR1270A	A6TR1270A	A9TR1270A

* for A2 material A_L (nH) ± 30 %

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.54	nH
Core constant	c_1	2.32 58.93	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	29.5 1.161	mm in.
Effective core area	A_e	12.7 0.020	mm^2 $in.^2$
Effective core volume	V_e	380 0.023	mm^3 $in.^3$
Weight per piece	W	2 0.071	g oz.



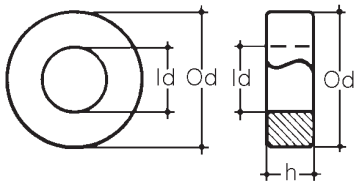
T - 1270B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	12.7 ± 0.40	7.14 ± 0.25	6.35 ± 0.25	13.9 maxi	6.09 mini	7.4 maxi
in.	0.500 ± 0.016	0.281 ± 0.010	0.250 ± 0.010	0.547 maxi	0.240 mini	0.291 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	7300	4400	3650	2900	1850
	Coated	25°C	6400	3850	3200	2600	1600
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-1270B	A4T-1270B	A5T-1270B	A6T-1270B	A9T-1270B
	P/N coated			A4TR1270B	A5TR1270B	A6TR1270B	A9TR1270B

* for A2 material A_L (nH) ± 30 %

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.73	nH
Core constant	c_1	1.72 43.69	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	30 1.181	mm in.
Effective core area	A_e	17 0.026	mm^2 $in.^2$
Effective core volume	V_e	507 0.031	mm^3 $in.^3$
Weight per piece	W	2.4 0.085	g oz.



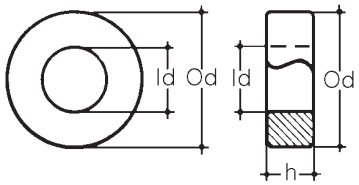
T - 1270C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	12.7 ± 0.40	7.92 ± 0.25	6.35 ± 0.25	13.9 maxi	6.87 mini	7.4 maxi
in.	0.500 ± 0.016	0.312 ± 0.010	0.250 ± 0.010	0.547 maxi	0.270 mini	0.291 maxi

			MATERIALS				
			A2*	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	6000	3500	3000	2400	1500
	Coated	25°C	5300	3100	2650	2100	1300
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 7	< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		A2T-1270C	A4T-1270C	A5T-1270C	A6T-1270C	A9T-1270C
	P/N coated			A4TR1270C	A5TR1270C	A6TR1270C	A9TR1270C

* for A2 material A_L (nH) ± 30 %

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.60	nH
Core constant	c_1	2.1 53.34	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	31.2 1.228	mm in.
Effective core area	A_e	14.9 0.023	mm^2 $in.^2$
Effective core volume	V_e	465 0.028	mm^3 $in.^3$
Weight per piece	W	2.36 0.083	g oz.

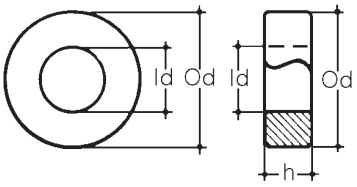


T - 1300A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	13.35 ± 0.40	7.3 ± 0.20	3.2 ± 0.30	14.55 maxi	6.3 mini	4.3 maxi
in.	0.526 ± 0.016	0.287 ± 0.008	0.126 ± 0.012	0.573 maxi	0.248 mini	0.169 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2200	1900	1500	950
	Coated	25°C	2000	1650	1350	835
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1300A	A5T-1300A	A6T-1300A	A9T-1300A
	P/N coated		A4TR1300A	A5TR1300A	A6TR1300A	A9TR1300A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.38	nH
Core constant	c_1	3.35 85.09	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	32 1.261	mm in.
Effective core area	A_e	10 0.016	mm^2 $in.^2$
Effective core volume	V_e	314 0.019	mm^3 $in.^3$
Weight per piece	W	1.5 0.053	g oz.

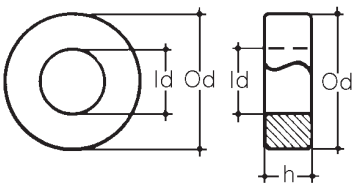


T - 1300C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	13.35 ± 0.45	7.3 ± 0.25	5 ± 0.20	14.6 maxi	6.25 mini	6 mini
in.	0.526 ± 0.018	0.287 ± 0.010	0.197 ± 0.008	0.575 maxi	0.246 mini	0.236 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3600	3000	2400	1500
	Coated	25°C	3150	2650	2100	1300
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1300C	A5T-1300C	A6T-1300C	A9T-1300C
	P/N coated		A4TR1300C	A5TR1300C	A6TR1300C	A9TR1300C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.60	nH
Core constant	c_1	2.08 52.83	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	31 1.220	mm in.
Effective core area	A_e	15 0.023	mm^2 $in.^2$
Effective core volume	V_e	448 0.027	mm^3 $in.^3$
Weight per piece	W	2.2 0.078	g oz.

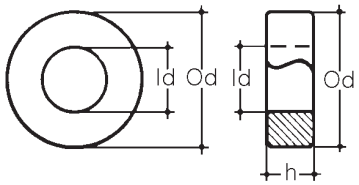


T - 1400A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	14 ± 0.40	9 ± 0.40	5 ± 0.30	15.20 maxi	7.8 mini	6.1 maxi
in.	0.551 ± 0.016	0.354 ± 0.016	0.197 ± 0.012	0.598 maxi	0.307 mini	0.240 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2400	2200	1770	1250
	Coated	25°C	2100	1950	1500	1100
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1400A	A5T-1400A	A6T-1400A	A9T-1400A
	P/N coated		A4TR1400A	A5TR1400A	A6TR1400A	A9TR1400A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.44	nH
Core constant	c_1	2.84 72.14	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	35 1.378	mm in.
Effective core area	A_e	12 0.019	mm^2 $in.^2$
Effective core volume	V_e	430 0.026	mm^3 $in.^3$
Weight per piece	W	2.1 0.074	g oz.

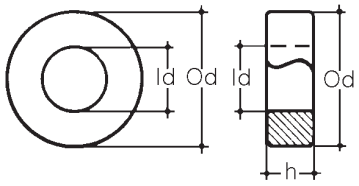


T - 1400B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	14 ± 0.45	9 ± 0.30	9 ± 0.35	15.25 maxi	7.9 mini	10.15 maxi
in.	0.551 ± 0.018	0.354 ± 0.012	0.354 ± 0.014	0.600 maxi	0.311 mini	0.400 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	4800	4000	3150	2000
	Coated	25°C	4100	3500	2700	1750
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1400B	A5T-1400B	A6T-1400B	A9T-1400B
	P/N coated		A4TR1400B	A5TR1400B	A6TR1400B	A9TR1400B

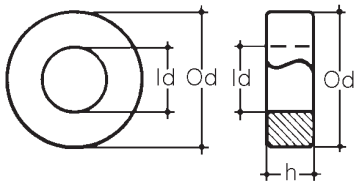
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.80	nH
Core constant	c_1	1.58 40.13	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	35 1.378	mm in.
Effective core area	A_e	22 0.034	mm^2 $in.^2$
Effective core volume	V_e	774 0.047	mm^3 $in.^3$
Weight per piece	W	3.7 0.131	g oz.



T - 1600A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	16 ± 0.50	9.6 ± 0.30	6.3 ± 0.20	17.3 maxi	8.5 mini	7.35 maxi
in.	0.630 ± 0.020	0.378 ± 0.012	0.248 ± 0.008	0.681 mini	0.335 mini	0.289 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3800	3200	2500	1600
	Coated	25°C	3300	2600	2200	1400
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1600A	A5T-1600A	A6T-1600A	A9T-1600A
	P/N coated		A4TR1600A	A5TR1600A	A6TR1600A	A9TR1600A

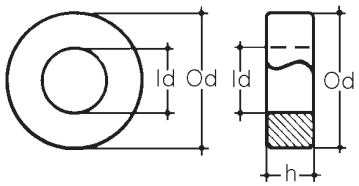


EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.64	nH
Core constant	c_1	1.95 49.53	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	38.5 1.516	mm in.
Effective core area	A_e	19.7 0.031	mm^2 $in.^2$
Effective core volume	V_e	760 0.046	mm^3 $in.^3$
Weight per piece	W	3.89 0.137	g oz.

T - 1600B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	15.9 ± 0.50	11 ± 0.35	6.25 ± 0.25	17.2 maxi	9.85 mini	7.3 maxi
in.	0.626 ± 0.020	0.433 ± 0.014	0.246 ± 0.010	0.677 maxi	0.388 mini	0.287 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2800	2300	1850	1150
	Coated	25°C	2450	2000	1600	1000
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1600B	A5T-1600B	A6T-1600B	A9T-1600B
	P/N coated		A4TR1600B	A5TR1600B	A6TR1600B	A9TR1600B



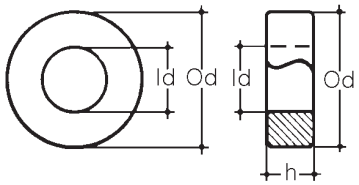
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.46	nH
Core constant	c_1	2.73 69.34	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	41 1.614	mm in.
Effective core area	A_e	15 0.023	mm^2 $in.^2$
Effective core volume	V_e	626 0.038	mm^3 $in.^3$
Weight per piece	W	3 0.106	g oz.

T - 1600C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	15.5 ± 0.50	7.2 ± 0.25	5 ± 0.20	16.8 maxi	6.15 mini	6 maxi
in.	0.610 ± 0.020	0.283 ± 0.010	0.197 ± 0.08	0.661 maxi	0.242 mini	0.236 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	4600	3860	3100	1950
	Coated	25°C	4050	3400	2700	1700
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1600C	A5T-1600C	A6T-1600C	A9T-1600C
	P/N coated		A4TR1600C	A5TR1600C	A6TR1600C	A9TR1600C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.77	nH
Core constant	c_1	1.64 41.66	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	32 1.260	mm in.
Effective core area	A_e	20 0.031	mm^2 $in.^2$
Effective core volume	V_e	640 0.039	mm^3 $in.^3$
Weight per piece	W	3.1 0.109	g oz.

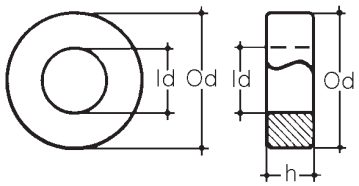


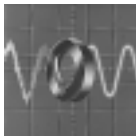
T - 1900A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	19 ± 0.60	11.4 ± 0.35	15 ± 0.55	20.4 maxi	10.05 mini	16.35 maxi
in.	0.748 ± 0.024	0.449 ± 0.014	0.591 ± 0.022	0.803 maxi	0.396 mini	0.644 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	9200	7650	6100	3850
	Coated	25°C	8000	6750	5400	3350
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1900A	A5T-1900A	A6T-1900A	A9T-1900A
	P/N coated		A4TR1900A	A5TR1900A	A6TR1900A	A9TR1900A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.53	nH
Core constant	c_1	0.82 20.83	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	46 1.811	mm in.
Effective core area	A_e	56 0.087	mm^2 $in.^2$
Effective core volume	V_e	2551 0.156	mm^3 $in.^3$
Weight per piece	W	12.2 0.430	g oz.





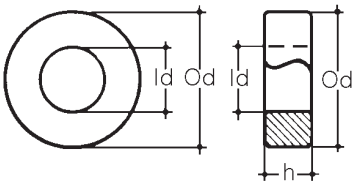
EMI SUPPRESSION

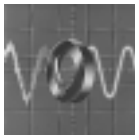
T - 1900C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	18.8 ± 0.40	11 ± 0.30	8 ± 0.25	20 maxi	9.9 mini	9.05 maxi
in.	0.740 ± 0.016	0.433 ± 0.012	0.315 ± 0.010	0.787 maxi	0.390 mini	0.356 maxi

			MATERIAL			
			A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	5100	4250	3400	2150
	Coated	25°C	4500	3750	3000	1850
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C	< 9	< 6		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		A4T-1900C	A5T-1900C	A6T-1900C	A9T-1900C
	P/N coated		A4TR1900C	A5TR1900C	A6TR1900C	A9TR1900C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.85	nH
Core constant	c_1	1.5 38.10	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	46.8 1.843	mm in.
Effective core area	A_e	31.2 0.048	mm^2 $in.^2$
Effective core volume	V_e	1460 0.089	mm^3 $in.^3$
Weight per piece	W	7.1 0.250	g oz.





EMI SUPPRESSION

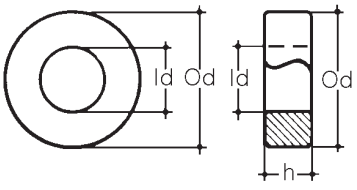
LIGHTING

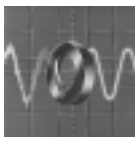
T - 2000A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	20 ± 0.60	10 ± 0.30	10 ± 0.35	21.4 maxi	8.9 mini	11.15 maxi
in.	0.787 ± 0.024	0.394 ± 0.012	0.394 ± 0.014	0.843 maxi	0.350 mini	0.439 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2650	8360	6950	5550	3450
	Coated	25°C	2300	7200	6100	4850	3050
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.32				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2000A	A4T-2000A	A5T-2000A	A6T-2000A	A9T-2000A
	P/N coated		B2TR2000A	A4TR2000A	A5TR2000A	A6TR2000A	A9TR2000A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.39	nH
Core constant	c_1	0.91 23.11	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	43.6 1.717	mm in.
Effective core area	A_e	48 0.074	mm^2 $in.^2$
Effective core volume	V_e	2090 0.128	mm^3 $in.^3$
Weight per piece	W	11.3 0.399	g oz.




EMI SUPPRESSION

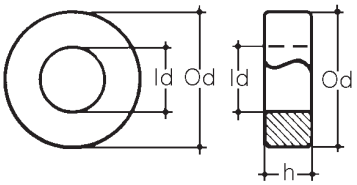

LIGHTING

T - 2000B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	20 ± 0.60	10 ± 0.30	7 ± 0.25	21.4 maxi	8.9 mini	8.05 maxi
in.	0.787 ± 0.024	0.394 ± 0.012	0.276 ± 0.010	0.843 maxi	0.350 mini	0.317 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1850	5400	4850	3900	2450
	Coated	25°C	1600	5000	4100	3400	2100
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.22				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2000B	A4T-2000B	A5T-2000B	A6T-2000B	A9T-2000B
	P/N coated		B2TR2000B	A4TR2000B	A5TR2000B	A6TR2000B	A9TR2000B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.97	nH
Core constant	c_1	1.29 32.77	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	43.6 1.717	mm in.
Effective core area	A_e	33.6 0.052	mm^2 $in.^2$
Effective core volume	V_e	1460 0.089	mm^3 $in.^3$
Weight per piece	W	7.9 0.279	g oz.

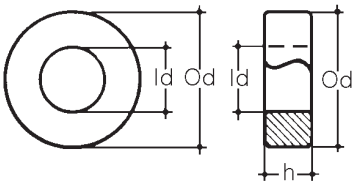


T - 2000C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	20 ± 0.60	10 ± 0.30	8 ± 0.30	21.3 maxi	8.65 mini	9.2 maxi
in.	0.787 ± 0.024	0.394 ± 0.012	0.315 ± 0.012	0.839 maxi	0.341 mini	0.362 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2100	6650	5550	4450	2800
	Coated	25°C	1850	5500	4900	3900	2450
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.26				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2000C	A4T-2000C	A5T-2000C	A6T-2000C	A9T-2000C
	P/N coated		B2TR2000C	A4TR2000C	A5TR2000C	A6TR2000C	A9TR2000C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.11	nH
Core constant	c_1	1.13 28.70	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	43.6 1.717	mm in.
Effective core area	A_e	38.4 0.060	m^2 $in.^{-2}$
Effective core volume	V_e	1670 0.102	mm^3 $in.^3$
Weight per piece	W	9.05 0.319	g oz.

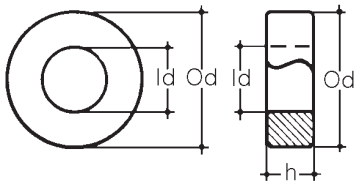


T - 2000D

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	20 ± 0.60	10.5 ± 0.35	15 ± 0.55	21.4 maxi	9 mini	16.35 maxi
in.	0.787 ± 0.024	0.413 ± 0.014	0.591 ± 0.022	0.843 maxi	0.354 mini	0.644 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3650	11500	9650	7700	4850
	Coated	25°C	3100	10000	8500	6800	4250
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.46				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2000D	A4T-2000D	A5T-2000D	A6T-2000D	A9T-2000D
	P/N coated		B2TR2000D	A4TR2000D	A5TR2000D	A6TR2000D	A9TR2000D

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.93	nH
Core constant	c_1	0.65 16.51	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	44.7 1.760	mm in.
Effective core area	A_e	68.8 0.107	mm^2 $in.^2$
Effective core volume	V_e	3080 0.188	mm^3 $in.^3$
Weight per piece	W	16.4 0.578	g oz.

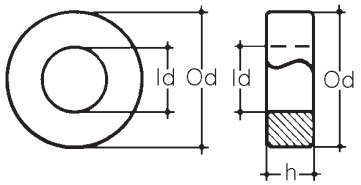


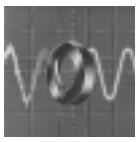
T - 2100A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	20.6 ± 0.60	14 ± 0.50	5 ± 0.30	22 maxi	12.7 mini	6.1 maxi
in.	0.811 ± 0.024	0.551 ± 0.020	0.197 ± 0.012	0.866 maxi	0.500 mini	0.240 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	740	2350	1950	1350	975
	Coated	25°C	650	2050	1700	1200	860
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.13				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2100A	A4T-2100A	A5T-2100A	A6T-2100A	A9T-2100A
	P/N coated		B2TR2100A	A4TR2100A	A5TR2100A	A6TR2100A	A9TR2100A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.39	nH
Core constant	c_1	3.25 82.55	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	53 2.087	mm in.
Effective core area	A_e	16.3 0.025	mm^2 $in.^2$
Effective core volume	V_e	864 0.053	mm^3 $in.^3$
Weight per piece	W	4.3 0.152	g oz.




EMI SUPPRESSION

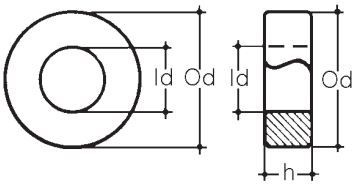

LIGHTING

T - 2210A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	22.1 ± 0.65	13.72 ± 0.40	12.7 ± 0.45	23.55 maxi	12.52 mini	13.95 maxi
in.	0.870 ± 0.026	0.540 ± 0.016	0.500 ± 0.018	0.927 maxi	0.493 mini	0.549 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2300	7200	6050	4800	3000
	Coated	25°C	2000	6400	5300	4200	2500
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.45				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2210A	A4T-2210A	A5T-2210A	A6T-2210A	A9T-2210A
	P/N coated		B2TR2210A	A4TR2210A	A5TR2210A	A6TR2210A	A9TR2210A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.21	nH
Core constant	c_1	1.04 26.42	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	54.2 2.134	mm in.
Effective core area	A_e	52.2 0.081	mm^2 $in.^2$
Effective core volume	V_e	2830 0.173	mm^3 $in.^3$
Weight per piece	W	14.4 0.508	g oz.

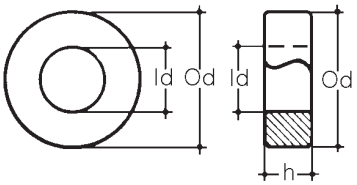


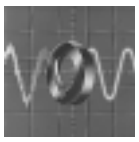
T - 2210B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	22.1 ± 0.65	13.72 ± 0.40	6.35 ± 0.20	23.33 maxi	12.64 mini	7.4 maxi
in.	0.870 ± 0.026	0.540 ± 0.016	0.250 ± 0.008	0.919 maxi	0.498 mini	0.291 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1150	3650	3050	2450	1650
	Coated	25°C	1000	3100	2700	2150	1350
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.22				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2210B	A4T-2210B	A5T-2210B	A6T-2210B	A9T-2210B
	P/N coated		B2TR2210B	A4TR2210B	A5TR2210B	A6TR2210B	A9TR2210B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.61	nH
Core constant	c_1	2.08 52.83	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	54.2 2.134	mm in.
Effective core area	A_e	26.1 0.040	mm^2 $in.^2$
Effective core volume	V_e	1410 0.086	mm^3 $in.^3$
Weight per piece	W	7.12 0.254	g oz.





EMI SUPPRESSION

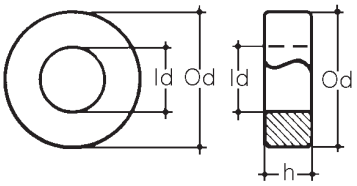
LIGHTING

T - 2500A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	25 ± 0.75	15 ± 0.45	10 ± 0.35	26.55 maxi	13.75 mini	11.15 maxi
in.	0.984 ± 0.030	0.591 ± 0.018	0.394 ± 0.014	1.045 maxi	0.541 mini	0.439 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1950	6000	5100	4000	2500
	Coated	25°C	1750	5200	4500	3500	2200
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.45				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2500A	A4T-2500A	A5T-2500A	A6T-2500A	A9T-2500A
	P/N coated		B2TR2500A	A4TR2500A	A5TR2500A	A6TR2500A	A9TR2500A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.02	nH
Core constant	c_1	1.23 31.24	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	60.2 2.370	mm in.
Effective core area	A_e	48.9 0.076	mm^2 $in.^2$
Effective core volume	V_e	2950 0.180	mm^3 $in.^3$
Weight per piece	W	15.1 0.533	g oz.

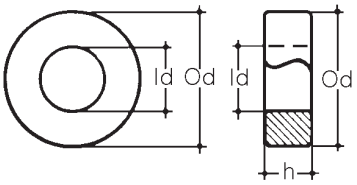


T - 2500B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	25 ± 0.75	15 ± 0.45	15 ± 0.55	26.55 maxi	13.75 mini	16.35 maxi
in.	0.984 ± 0.030	0.591 ± 0.018	0.591 ± 0.022	1.045 maxi	0.541 mini	0.644 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2900	9200	7650	6100	3850
	Coated	25°C	2550	8000	6750	5600	3350
μ_a	340 mT	100°C	> 1500				
Total losses(W)	100 kHz-100mT	100°C	< 0.66				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2500B	A4T-2500B	A5T-2500B	A6T-2500B	A9T-2500B
	P/N coated		B2TR2500B	A4TR2500B	A5TR2500B	A6TR2500B	A9TR2500B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.53	nH
Core constant	c_1	0.82 20.83	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	60.2 2.370	mm in.
Effective core area	A_e	73.4 0.114	mm^2 $in.^2$
Effective core volume	V_e	4420 0.270	mm^3 $in.^3$
Weight per piece	W	22.6 0.797	g oz.

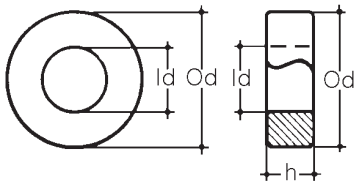


T - 2540A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	25.4 ± 0.75	15 ± 0.45	7.93 ± 0.3	26.95 maxi	14.25 mini	9.03 maxi
in.	1.000 ± 0.030	0.610 ± 0.018	0.312 ± 0.012	1.061 maxi	0.561 mini	0.356 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1500	4700	3900	3100	1950
	Coated	25°C	1300	4100	3450	2750	1700
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.36				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-2540A	A4T-2540A	A5T-2540A	A6T-2540A	A9T-2540A
	P/N coated		B2TR2540A	A4TR2540A	A5TR2540A	A6TR2540A	A9TR2540A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.78	nH
Core constant	c_1	1.6 40.64	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	61.7 2.429	mm in.
Effective core area	A_e	38.5 0.060	mm^2 $in.^2$
Effective core volume	V_e	2370 0.145	mm^3 $in.^3$
Weight per piece	W	12.1 0.427	g oz.

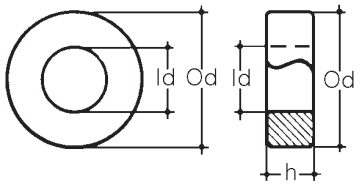


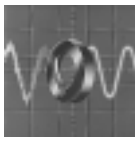
T - 2600A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	26 ± 0.80	14.5 ± 0.45	10 ± 0.35	27.6 maxi	13.25 mini	11.15 maxi
in.	1.024 ± 0.31	0.571 ± 0.018	0.394 ± 0.012	1.087 maxi	0.522 mini	0.439 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2200	6900	4600	2900
	Coated	25°C	1900	6100	4000	2500
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.55			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2600A	A4T-2600A	A6T-2600A	A9T-2600A
	P/N coated		B2TR2600A	A4TR2600A	A6TR2600A	A9TR2600A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.15	nH
Core constant	c_1	1.1 27.94	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	63.6 2.504	mm in.
Effective core area	A_e	57.5 0.089	mm^2 $in.^2$
Effective core volume	V_e	3660 0.223	mm^3 $in.^3$
Weight per piece	W	17 0.600	g oz.





EMI SUPPRESSION

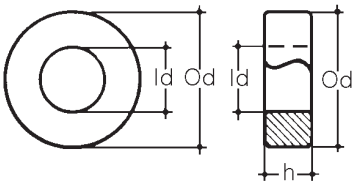
LIGHTING

T - 2600B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	26 ± 0.80	14.5 ± 0.45	14.95 ± 0.50	27.6 maxi	13.25 mini	16.3 maxi
in.	1.024 ± 0.031	0.571 ± 0.018	0.589 ± 0.02	1.087 maxi	0.522 mini	0.642 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3350	9900	7000	4400
	Coated	25°C	2950	9200	6150	3850
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.76			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2600B	A4T-2600B	A6T-2600B	A9T-2600B
	P/N coated		B2TR2600B	A4TR2600B	A6TR2600B	A9TR2600B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.75	nH
Core constant	c_1	0.72 18.24	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	60.1 2.366	mm in.
Effective core area	A_e	83.6 0.130	mm^2 $in.^2$
Effective core volume	V_e	5030 0.307	mm^3 $in.^3$
Weight per piece	W	26.2 0.924	g oz.

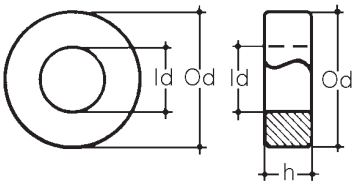


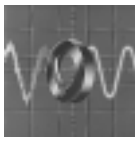
T - 2600C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	26 ± 0.80	14.5 ± 0.45	20 ± 0.70	27.6 maxi	13.25 mini	21.5 maxi
in.	1.024 ± 0.031	0.571 ± 0.018	0.787 ± 0.028	1.087 maxi	0.522 mini	0.846 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	4450	13200	9350	5850
	Coated	25°C	3900	12000	8250	5150
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 1.10			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2600C	A4T-2600C	A6T-2600C	A9T-2600C
	P/N coated		B2TR2600C	A4TR2600C	A6TR2600C	A9TR2600C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.34	nH
Core constant	c_1	0.54 13.72	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	60.1 2.366	mm in.
Effective core area	A_e	112 0.174	mm^2 $in.^2$
Effective core volume	V_e	6720 0.410	mm^3 $in.^3$
Weight per piece	W	35.1 1.24	g oz.




EMI SUPPRESSION

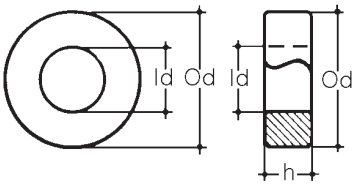

LIGHTING

T - 2800A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	27.6 ± 0.85	17.6 ± 0.55	19 ± 0.70	29.25 maxi	16.25 mini	20.5 maxi
in.	1.087 ± 0.033	0.693 ± 0.022	0.748 ± 0.028	1.152 maxi	0.640 mini	0.807 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3250	10500	6800	4300
	Coated	25°C	2850	8700	6200	3600
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.97			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2800A	A4T-2800A	A6T-2800A	A9T-2800A
	P/N coated		B2TR2800A	A4TR2800A	A6TR2800A	A9TR2800A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.71	nH
Core constant	c_1	0.74 18.80	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	68.7 2.705	mm in.
Effective core area	A_e	93.4 0.145	mm^2 $in.^2$
Effective core volume	V_e	6410 0.391	mm^3 $in.^3$
Weight per piece	W	32.4 1.14	g oz.

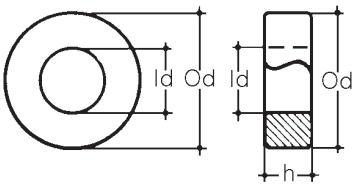


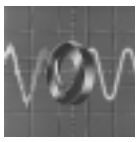
T - 2800B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	27.6 ± 0.60	17.6 ± 0.40	15.4 ± 0.3	29 maxi	16.4 mini	16.5 maxi
in.	1.087 ± 0.024	0.693 ± 0.016	0.606 ± 0.012	1.142 maxi	0.646 mini	0.650 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2550	8100	5400	3400
	Coated	25°C	2050	7150	4750	2950
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.81			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2800B	A4T-2800B	A6T-2800B	A9T-2800B
	P/N coated		B2TR2800B	A4TR2800B	A6TR2800B	A9TR2800B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.35	nH
Core constant	c_1	0.93 23.62	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	71 2.795	mm in.
Effective core area	A_e	76 0.118	mm^2 $in.^2$
Effective core volume	V_e	5400 0.330	mm^3 $in.^3$
Weight per piece	W	26 0.917	g oz.





FILTERING

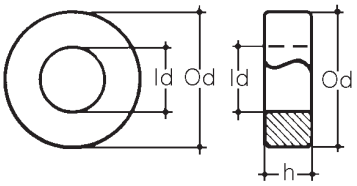
LIGHTING

T - 2800C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	27.6 ± 0.60	17.6 ± 0.40	7 ± 0.20	29 maxi	16.4 mini	8 maxi
in.	1.087 ± 0.024	0.693 ± 0.016	0.276 ± 0.008	1.142 maxi	0.646 mini	0.315 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1200	3800	2500	1600
	Coated	25°C	1000	3350	2200	1400
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.40			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-2800C	A4T-2800C	A6T-2800C	A9T-2800C
	P/N coated		B2TR2800C	A4TR2800C	A6TR2800C	A9TR2800C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.63	nH
Core constant	c_1	2.03 51.56	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	71 2.795	mm in.
Effective core area	A_e	35 0.054	mm^2 $in.^2$
Effective core volume	V_e	2485 0.152	mm^3 $in.^3$
Weight per piece	W	11.7 0.413	g oz.

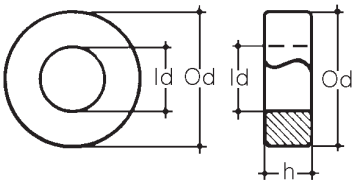


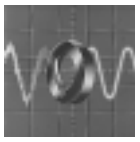
T - 3150A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	31.5 ± 0.95	19 ± 0.60	12.5 ± 0.45	33.25 maxi	17.65 mini	13.75 maxi
in.	1.240 ± 0.037	0.748 ± 0.024	0.492 ± 0.018	1.309 maxi	0.695 mini	0.541 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2400	7550	5000	3200
	Coated	25°C	2100	6600	4400	2650
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 0.93			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-3150A	A4T-3150A	A6T-3150A	A9T-3150A
	P/N coated		B2TR3150A	A4TR3150A	A6TR3150A	A9TR3150A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.26	nH
Core constant	c_1	0.99 25.15	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	76 2.992	mm in.
Effective core area	A_e	76.5 0.119	mm^2 $in.^2$
Effective core volume	V_e	5820 0.355	mm^3 $in.^3$
Weight per piece	W	29.7 1.05	g oz.




EMI SUPPRESSION

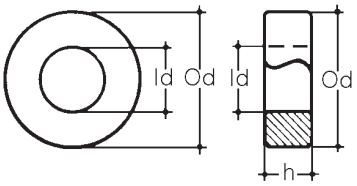

LIGHTING

T - 3150C

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	31.5 ± 0.95	19 ± 0.60	20 ± 0.70	33.25 maxi	17.65 mini	21.5 maxi
in.	1.240 ± 0.037	0.748 ± 0.024	0.787 ± 0.028	1.309 maxi	0.695 mini	0.846 maxi

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3850	12000	8100	5050
	Coated	25°C	3400	10500	7100	4450
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 1.50			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-3150C	A4T-3150C	A6T-3150C	A9T-3150C
	P/N coated		B2TR3150C	A4TR3150 C	A6TR3150C	A9TR3150C

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.02	nH
Core constant	c_1	0.62 15.75	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	76 2.992	mm in.
Effective core area	A_e	122.4 0.190	mm^2 $in.^2$
Effective core volume	V_e	9306 0.568	mm^3 $in.^3$
Weight per piece	W	47.6 1.68	g oz.

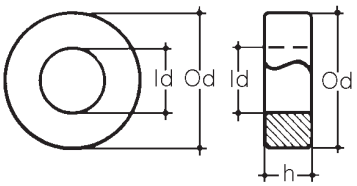


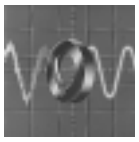
T - 3600A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	36 ± 1.10	23 ± 0.70	15 ± 0.55	37.9 maxi	21.5 mini	16.35 mini
in.	1.417 ± 0.043	0.906 ± 0.028	0.591 ± 0.022	1.492 maxi	0.846 mini	0.644 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	2550	7700	6750	5350	3350
	Coated	25°C	2200	7200	5950	4700	2950
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 1.29				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-3600A	A4T-3600A	A5T-3600A	A6T-3600A	A9T-3600A
	P/N coated		B2TR3600A	A4TR3600A	A5TR3600A	A6TR3600A	A9TR3600A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.34	nH
Core constant	c_1	0.93 23.62	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	89.6 3.528	mm in.
Effective core area	A_e	95.9 0.149	mm^2 $in.^2$
Effective core volume	V_e	8600 0.525	mm^3 $in.^3$
Weight per piece	W	43.40 1.53	g oz.





EMI SUPPRESSION

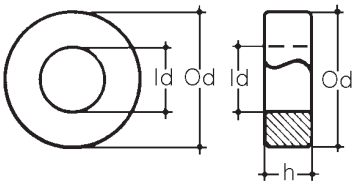
LIGHTING

T - 3600B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	36 ± 1.10	23 ± 0.70	20 ± 0.70	37.9 maxi	21.5 mini	21.5 maxi
in.	1.417 ± 0.043	0.906 ± 0.028	0.787 ± 0.028	1.492 maxi	0.846 mini	0.846 mini

			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3400	10500	7150	4500
	Coated	25°C	3000	9450	6300	3800
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 1.80			
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-3600B	A4T-3600B	A6T-3600B	A9T-3600B
	P/N coated		B2TR3600B	A4TR3600B	A6TR3600B	A9TR3600B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.79	nH
Core constant	c_1	0.7 17.78	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	90 3.543	mm in.
Effective core area	A_e	128 0.198	mm^2 $in.^2$
Effective core volume	V_e	11461 0.699	mm^3 $in.^3$
Weight per piece	W	55 1.94	g oz.

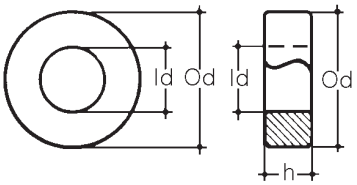


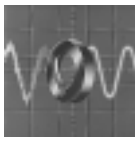
T - 3800A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	38.1 ± 0.76	19.05 ± 0.38	12.7 ± 0.25	39.66 maxi	17.87 mini	13.75 maxi
in.	1.500 ± 0.030	0.750 ± 0.015	0.500 ± 0.010	1.561 maxi	0.704 mini	0.541 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3350	10500	8750	7050	4400
	Coated	25°C	2950	9300	7700	6200	3850
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 1.70				
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-3800A	A4T-3800A	A5T-3800A	A6T-3800A	A9T-3800A
	P/N coated		B2TR3800A	A4TR3800A	A5TR3800A	A6TR3800A	A9TR3800A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.76	nH
Core constant	c_1	0.71 18.03	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	83 3.268	mm in.
Effective core area	A_e	116 0.180	mm^2 $in.^2$
Effective core volume	V_e	9644 0.589	mm^3 $in.^3$
Weight per piece	W	46.3 1.63	g oz.




EMI SUPPRESSION

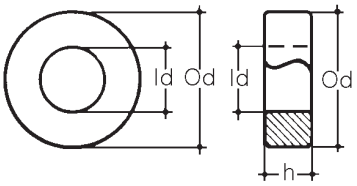

LIGHTING

T - 3800B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	38.1 ± 0.76	19.05 ± 0.38	6.4 ± 0.25	39.66 maxi	17.87 mini	7.4 maxi
in.	1.500 ± 0.030	0.750 ± 0.015	0.252 ± 0.010	1.561 maxi	0.704 mini	0.291 maxi

			MATERIAL				
			B2	A4	A5	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	1650	5200	4350	3500	2200
	Coated	25°C	1450	4600	3850	3100	1980
μ_a	340 mT	100°C	> 1500				
Total losses (W)	100 kHz-100mT	100°C	< 0.82				
$tg\delta/\mu_i$ x 10^{-6}	10 kHz	25°C		< 9	< 6		
	30 kHz	25°C				< 9	
	100 kHz	25°C					< 8
Codification	P/N uncoated		B2T-3800B	A4T-3800B	A5T-3800B	A6T-3800B	A9T-3800B
	P/N coated		B2TR3800B	A4TR3800B	A5TR3800B	A6TR3800B	A9TR3800B

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.87	nH
Core constant	c_1	1.5 38.10	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	89.8 3.535	mm in.
Effective core area	A_e	60.5 0.094	mm^2 $in.^2$
Effective core volume	V_e	5430 0.331	mm^3 $in.^3$
Weight per piece	W	25.5 0.899	g oz.

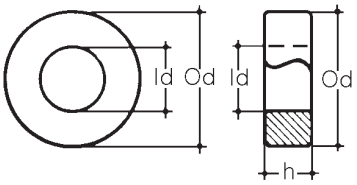


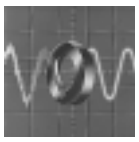
T - 4000A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	40 ± 1.20	24.0 ± 0.70	16 ± 0.50	42 maxi	22.45 mini	17.4 maxi
in.	1.575 ± 0.047	0.945 ± 0.028	0.630 ± 0.020	1.654 maxi	0.884 mini	0.685 maxi

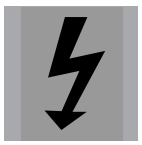
			MATERIAL			
			B2	A4	A6	A9
A_L (nH) ±25 %	Uncoated	25°C	3050	9600	6300	4000
	Coated	25°C	2750	8400	5500	3850
μ_a	340 mT	100°C	> 1500			
Total losses (W)	100 kHz-100mT	100°C	< 2.00			
$tg\delta/\mu_i$ x 10^{-6}	10 kHz	25°C		< 9		
	30 kHz	25°C			< 9	
	100 kHz	25°C				< 8
Codification	P/N uncoated		B2T-4000A	A4T-4000A	A6T-4000A	A9T-4000A
	P/N coated		B2TR4000A	A4TR4000A	A6TR4000A	A9TR4000A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.63	nH
Core constant	c_1	0.77 19.56	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	96.3 3.791	mm in.
Effective core area	A_e	125.3 0.194	mm^2 $in.^2$
Effective core volume	V_e	12100 0.738	mm^3 $in.^3$
Weight per piece	W	61.8 2.18	g oz.





EMI SUPPRESSION



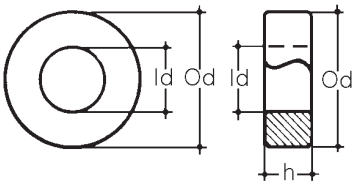
HIGH POWER

T - 5000A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	50 ± 1.50	15 ± 0.45	10 ± 0.35			
in.	1.969 ± 0.059	0.591 ± 0.018	0.394 ± 0.014			

			MATERIAL			
			B1	B2	A4	A6
A_L (nH) ± 25%	Uncoated	25°C	6050	4600	14500	9650
μ_a	320 mT	100°C	> 1000			
	340 mT	100°C		> 1500		
Total losses (W)	25 kHz-200 mT	100°C	< 2.60			
	100 kHz-100 mT	100°C		< 1.90		
$tg\delta/\mu_i$ x 10^{-6}	10 kHz	25°C			< 9	
	30 kHz	25°C				< 9
Codification	P/N uncoated		B1T-5000A	B2T-5000A	A4T-5000A	A6T-5000A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.41	nH
Core constant	c_1	0.52	mm^{-1}
		13.21	$in.^{-1}$
Effective magnetic path length	l_e	81.1	mm
		3.193	in.
Effective core area	A_e	155.3	mm^2
		0.241	$in.^2$
Effective core volume	V_e	12590	mm^3
		0.768	$in.^3$
Weight per piece	W	85.8	g
		3.03	oz.

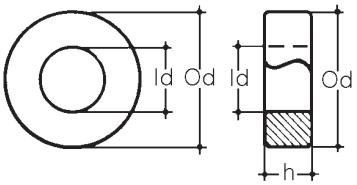


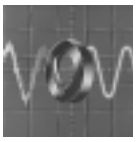
T - 5600A

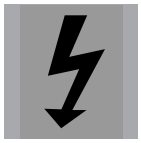
	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	55.4 ± 1.95	32.35 ± 1.15	18 ± 0.75			
in.	2.181 ± 0.077	1.274 ± 0.045	0.709 ± 0.030			

			MATERIAL			
			B1	B2	A4	A6
A_L (nH) ± 25%	Uncoated	25°C	4850	3700	9700	7700
μ_a	320 mT	100°C	> 1000			
	340 mT	100°C		> 1500		
Total losses (W)	25 kHz-200 mT	100°C	< 5.40			
	100 kHz-100 mT	100°C		< 4		
$tg\delta/\mu_i$ x 10^{-6}	10 kHz	25°C			< 18	
	30 kHz	25°C				< 9
Codification	P/N uncoated		B1T-5600A	B2T-5600A	A4T-5600A	A6T-5600A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.94	nH
Core constant	c_1	0.65	mm^{-1}
		16.51	$in.^{-1}$
Effective magnetic path length	l_e	131.4	mm
		5.173	in.
Effective core area	A_e	202.5	mm^2
		0.314	$in.^2$
Effective core volume	V_e	26610	mm^3
		1.624	$in.^3$
Weight per piece	W	137.3	g
		4.84	oz.




EMI SUPPRESSION

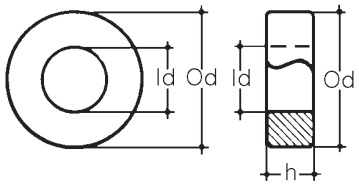

HIGH POWER

T - 6300A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	63 ± 2.00	38 ± 1.20	25 ± 0.80			
in.	2.480 ± 0.079	1.496 ± 0.047	0.984 ± 0.031			

			MATERIAL			
			B1	B2	A4	A6
A_L (nH) ± 25%	Uncoated	25°C	6300	4750	12500	10000
μ_a	320 mT	100°C	> 1000			
	340 mT	100°C		> 1500		
Total losses (W)	16 kHz-200 mT	100°C	< 5.8			
	100 kHz-100 mT	100°C		< 7.50		
$tg\delta/\mu_i \times 10^{-6}$	10 kHz	25°C			< 18	
	30 kHz	25°C				< 9
Codification	P/N uncoated		B1T-6300A	B2T-6300A	A4T-6300A	A6T-6300A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.50	nH
Core constant	c_1	0.51 12.95	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	160 6.299	mm in.
Effective core area	A_e	315 0.488	mm^2 $in.^2$
Effective core volume	V_e	50000 3.05	mm^3 $in.^3$
Weight per piece	W	240 8.47	g oz.

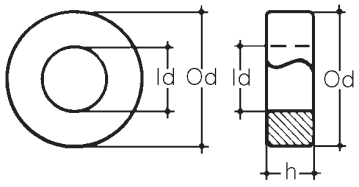


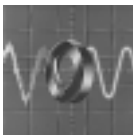
T - 6700A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	67 ± 2.00	15 ± 0.50	20 ± 0.60			
in.	2.638 ± 0.079	0.591 ± 0.020	0.787 ± 0.024			

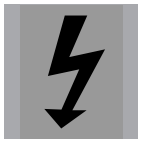
			MATERIAL		
			B1	B2	A6
A_L (nH) ±25 %	Uncoated	25°C	12500	11500	24000
μ_a	320 mT	100°C	> 1000		
	340 mT	100°C		> 1500	
Total losses (W)	16 kHz - 200 mT	100°C	< 7.7		
	100 kHz - 100 mT	100°C		< 11	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C			< 9
Codification	P/N uncoated		B1T-6700A	B2T-6700A	B6T-6700A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	6.00	nH
Core constant	c_1	0.21 5.33	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	129 5.079	mm in.
Effective core area	A_e	520 0.806	mm^2 $in.^2$
Effective core volume	V_e	67080 4.09	mm^3 $in.^3$
Weight per piece	W	320 11.29	g oz.





EMI SUPPRESSION



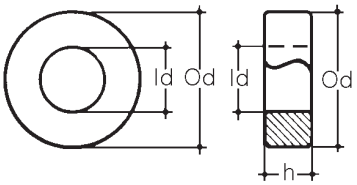
HIGH POWER

T - 7500A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	75 ± 2.00	23 ± 0.50	20 ± 0.70			
in.	2.953 ± 0.079	0.906 ± 0.020	0.787 ± 0.028			

			MATERIAL		
			B1	B2	A6
A_L (nH) ±25 %	Uncoated	25°C	11000	8950	19000
μ_a	320 mT	100°C	> 1000		
	340 mT	100°C		> 1500	
Total losses (W)	16 kHz - 200 mT	100°C	< 10		
	100 kHz - 100 mT	100°C		< 13	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C			< 9
Codification	P/N uncoated		B1T-7500A	B2T-7500A	A6T-7500A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.72	nH
Core constant	c_1	0.26 6.60	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	154 6.063	mm in.
Effective core area	A_e	520 0.806	mm^2 $in.^2$
Effective core volume	V_e	80080 4.89	mm^3 $in.^3$
Weight per piece	W	395 13.93	g oz.

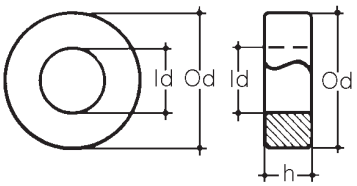


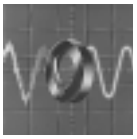
T - 8000A

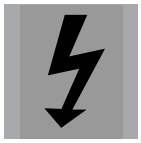
	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	80 ± 2.80	40 ± 1.40	15 ± 0.60			
in.	3.150 ± 0.110	1.575 ± 0.055	0.591 ± 0.024			

			MATERIAL		
			B1	B2	A6
A_L (nH) ±25 %	Uncoated	25°C	5000	3950	8000
μ_a	320 mT	100°C	> 1000		
	340 mT	100°C		> 1500	
Total losses (W)	16 kHz - 200 mT	100°C	< 7		
	100 kHz - 100 mT	100°C		< 7.60	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C			< 9
Codification	P/N uncoated		B1T-8000A	B2T-8000A	A6T-8000A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.08	nH
Core constant	c_1	0.6 15.24	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	174.2 6.858	mm in.
Effective core area	A_e	288.3 0.447	mm^2 $in.^2$
Effective core volume	V_e	50220 3.06	mm^3 $in.^3$
Weight per piece	W	271.4 9.57	g oz.



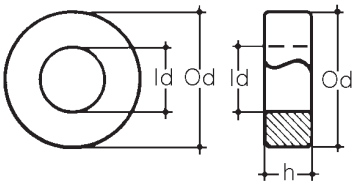

EMI SUPPRESSION


HIGH POWER

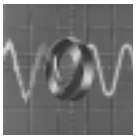
T - - 100B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	100 ± 3.50	55 ± 1.95	20 ± 0.80			
in.	3.937 ± 0.138	2.165 ± 0.077	0.787 ± 0.031			

			MATERIAL	
			B1	A6
A_L (nH) ±25 %	Uncoated	25°C	5000	9550
μ_a	320 mT	100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 13	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C		< 9
Codification	P/N uncoated		B1T- -100B	A6T- -100B



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.39	nH
Core constant	c_1	0.53 13.46	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	230 9.055	mm in.
Effective core area	A_e	437 0.677	mm^2 $in.^2$
Effective core volume	V_e	100276 6.12	mm^3 $in.^3$
Weight per piece	W	481 16.97	g oz.



EMI SUPPRESSION

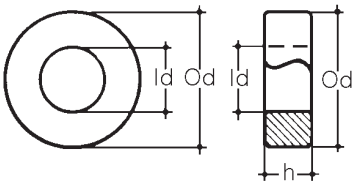
HIGH POWER

T - - 124A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	124.5 ± 3.50	42 ± 1.50	16 ± 1.00			
in.	4.902 ± 0.138	1.654 ± 0.059	0.630 ± 0.038			

			MATERIAL	
			B1	A6
A_L (nH) ±25 %	Uncoated	25°C	8600	14000
μ_a	320 mT	100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 25	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C		< 9
Codification	P/N uncoated		B1T- -124A	A6T- -124A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.50	nH
Core constant	c_1	0.4 10.16	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	262 10.315	mm in.
Effective core area	A_e	660 1.023	mm^2 $in.^2$
Effective core volume	V_e	173000 10.56	mm^3 $in.^3$
Weight per piece	W	825 29.10	g oz.

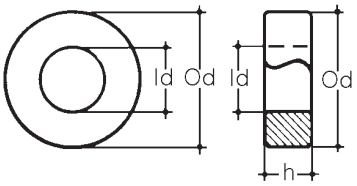


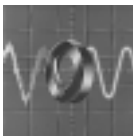
T - - 152A

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	152 ± 5.00	68.5 ± 2.00	19 ± 0.50			
in.	5.984 ± 0.197	2.697 ± 0.079	0.748 ± 0.020			

			MATERIAL	
			B1	A6
A_L (nH) ±25 %	Uncoated	25°C	6600	12000
μ_a	320 mT	100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 47	
$Tg\delta/\mu i \times 10^{-6}$	30 kHz	25°C		< 9
Codification	P/N uncoated		B1T- -152A	A6T- -152A

EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.03	nH
Core constant	c_1	0.41 10.41	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	312 12.283	mm in.
Effective core area	A_e	753 1.167	mm^2 $in.^2$
Effective core volume	V_e	235000 14.34	mm^3 $in.^3$
Weight per piece	W	1320 46.56	g oz.



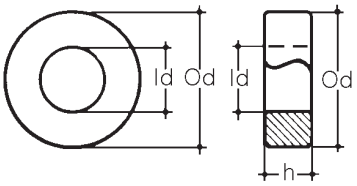

EMI SUPPRESSION


HIGH POWER

T - - 152B

	Uncoated			Coated		
	Od	Id	h	Od	Id	h
mm	152 ± 5.00	68.5 ± 2.00	18.5 ± 0.50			
in.	5.984 ± 0.197	2.697 ± 0.079	0.728 ± 0.020			

			MATERIAL	
			B1	A6
A_L (nH) ±25 %	Uncoated	25°C	6400	12000
μ_a	320 mT	100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 27	
$Tg\delta/\mu_i \times 10^{-6}$	30 kHz	25°C		< 9
Codification	P/N uncoated		B1T- -152B	A6T- -152B



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.95	nH
Core constant	c_1	0.43 10.92	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	312 12.283	mm in.
Effective core area	A_e	733 1.136	mm^2 $in.^{-2}$
Effective core volume	V_e	229000 13.97	mm^3 $in.^{-3}$
Weight per piece	W	1280 45.15	g oz.

E CORES

KEY-APPLICATIONS :

– EMI SUPPRESSION

– HIGH POWER

– SMPS

SMPS

– TV & MONITORS

– LIGHTING

HOW TO ORDER E CORES ?

E core' part number structure :

B	1	E	-	4	2	1	5	A	E	1	0	0	-	-

Material — Model — Shape code — Finishing

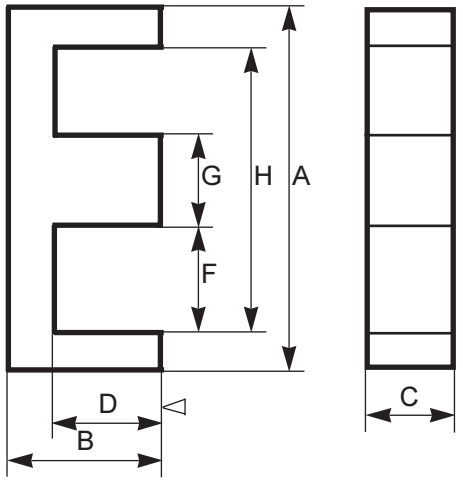
Gapped cores can be ordered as :
- mechanical gap (gap value + tol. in mm)
- electrical gap (A_L value + tol. in %)

, contact your local representative

E - 1304 A

DIMENSIONS

A	12.8 ± 0.20	mm
	0.504 ± 0.008	in.
B	6.4 ± 0.1	mm
	0.252 ± 0.004	in.
C	3.55 ± 0.15	mm
	0.140 ± 0.006	in.
D	4.65 ± 0.15	mm
	0.183 ± 0.006	in.
F	2.6 min	mm
	0.102	in.
G	3.55 ± 0.15	mm
	0.140 ± 0.006	in.
H	9.2 ± 0.30	mm
	0.362 ± 0.012	in.



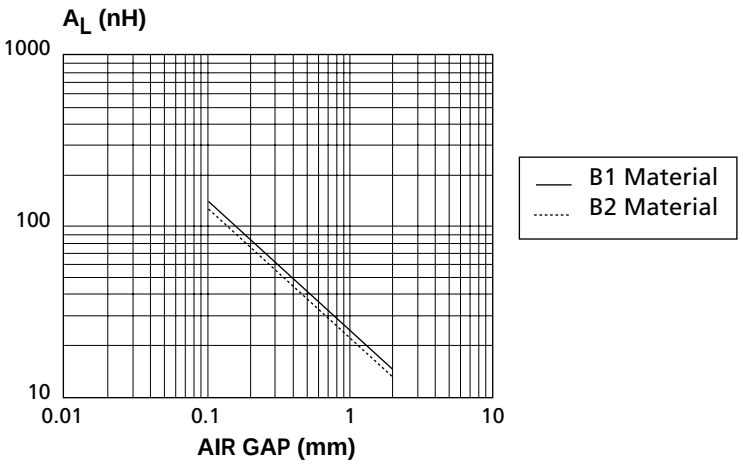
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.53	nH
Core constant	c_1	2.4	mm^{-1}
		60.96	$in.^{-1}$
Effective magnetic path length	l_e	29.8	mm
		1.173	in.
Effective core area	A_e	12.6	mm^2
		0.020	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	376	mm^3
		0.023	$in.^3$
Weight per set	W	1.8	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	840	720	1250	1150	960	900
μ_e	Approx.	25°C	1600	1350	1350	2150	1840	1700
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.08					
	100 kHz - 100 mT	100°C		< 0.06				
	100 kHz - 200 mT	100°C			< 0.22			
Codification	P/N		B1E-1304A	B2E-1304A	F1E-1304A	A4E-1304A	A6E-1304A	A8E-1304A

DESIGN CURVES FOR A CORE SET

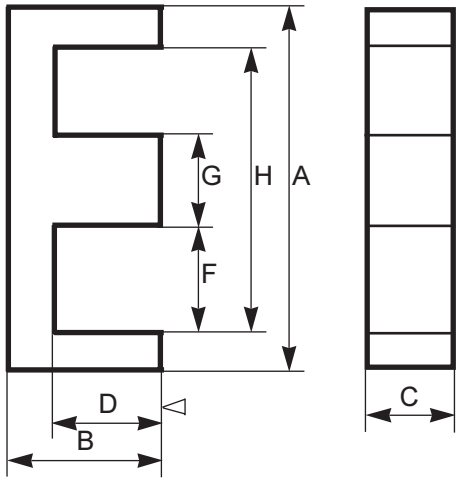
A_L vs. AIR GAP (ℰ).



E - 1306 A

DIMENSIONS

A	13 ± 0.45	mm
	0.512 ± 0.018	in.
B	6 ± 0.20	mm
	0.236 ± 0.008	in.
C	615 ± 0.20	mm
	0.242 ± 0.008	in.
D	4.65 ± 0.15	mm
	0.183 ± 0.006	in.
F	0.3.64	mm
	0.143	in.
G	2.78 ± 0.18	mm
	0.109 ± 0.007	in.
H	10.48 ± 0.25	mm
	0.413 ± 0.010	in.



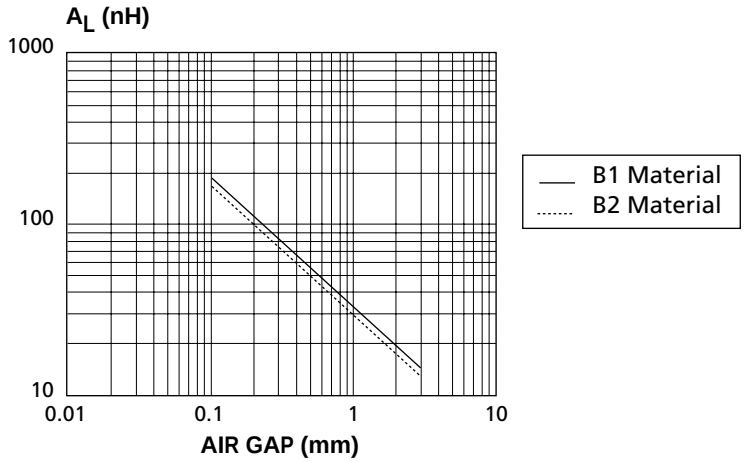
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.67	nH
Core constant	c_1	1.87	mm^{-1}
		47.50	$in.^{-1}$
Effective magnetic path length	l_e	30.5	mm
		1.201	in.
Effective core area	A_e	16.3	mm^2
		0.025	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	498	mm^3
		0.030	$in.^3$
Weight per set	W	2.3	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1040	850	920	2200	1840	1200
μ_e	Approx.	25°C	1550	1250	1350	3300	2750	1800
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.1					
	100 kHz - 100 mT	100°C		< 0.08				
	100 kHz - 200 mT	100°C			< 0.29			
Codification	P/N		B1E-1306A	B2E-1306A	F1E-1306A	A4E-1306A	A6E-1306A	A8E-1306A

DESIGN CURVES FOR A CORE SET

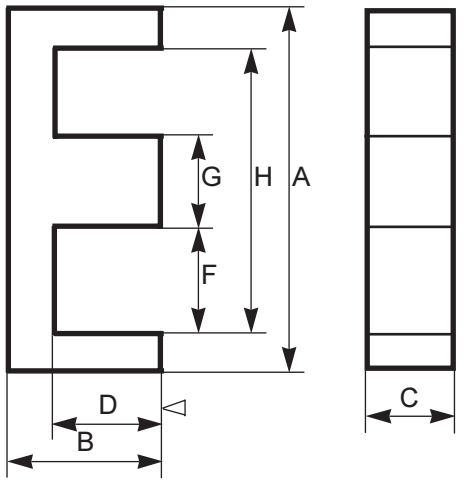
A_L vs. AIR GAP (ℰ).



E - 1605 A

DIMENSIONS

A	16 ± 0.50	mm
	0.630 ± 0.020	in.
B	7.15 ± 0.2	mm
	0.281 ± 0.0078	in.
C	4.9 ± 0.20	mm
	0.193 ± 0.008	in.
D	5.1 ± 0.20	mm
	0.201 ± 0.008	in.
F	3.8 min	mm
	0.150	in.
G	4 ± 0.15	mm
	0.157 ± 0.006	in.
H	12 ± 025	mm
	0.472 ± 0.010	in.



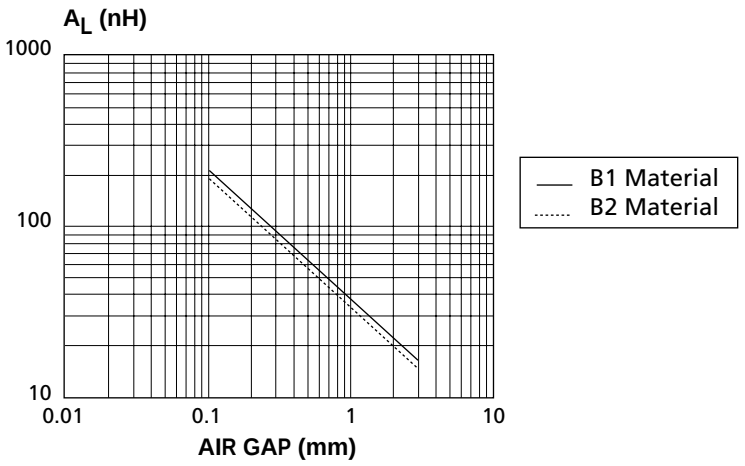
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.71	nH
Core constant	c_1	1.76	mm^{-1}
		44.70	$in.^{-1}$
Effective magnetic path length	l_e	34.8	mm
		1.370	in.
Effective core area	A_e	19.8	mm^2
		0.031	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	687	mm^3
		0.042	$in.^3$
Weight per set	W	3.3	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1150	1000	1000	2560	2400	14000
μ_e	Approx.	25°C	1600	1400	1450	3600	3400	1950
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.14					
	100 kHz - 100 mT	100°C		< 0.12				
	100 kHz - 200 mT	100°C			< 0.40			
Codification	P/N		B1E-1605A	B2E-1605A	F1E-1605A	A4E-1605A	A6E-1605A	A8E-1605A

DESIGN CURVES FOR A CORE SET

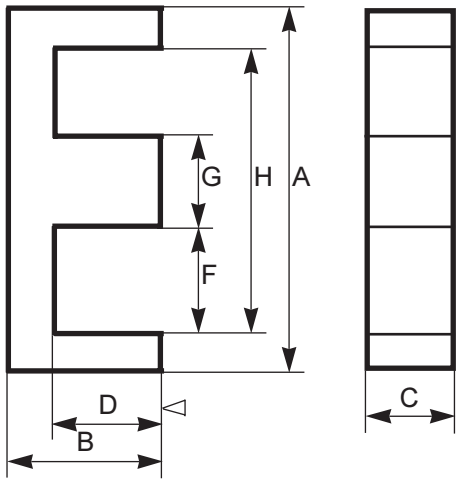
A_L vs. AIR GAP (ℰ).



E - 1605 B

DIMENSIONS

A	16 ± 0.50	mm
	*0.*630 ± 0.020	in.
B	12.25 ± 0.20	mm
	*0.*482 ± 0.008	in.
C	4.85 ± 0.2	mm
	*0.*191 ± 0.008	in.
D	10.25 ± 0.25	mm
	*0.*404 ± 0.010	in.
F	3.75 min	mm
	*0.*148	in.
G	4 ± 0.20	mm
	*0.*157 ± 0.008	in.
H	12 ± 0.30	mm
	*0.*472 ± 0.012	in.



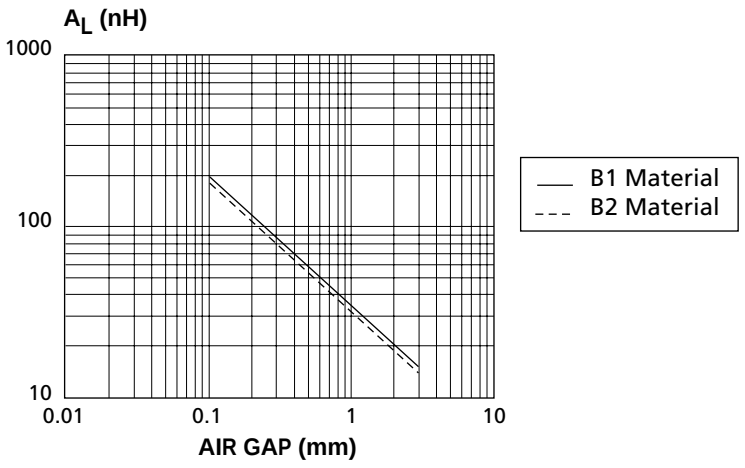
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.44	nH
Core constant	c_1	2.85	mm^{-1}
		72.39	$in.^{-1}$
Effective magnetic path length	l_e	55.3	mm
		2.177	in.
Effective core area	A_e	19.4	mm^2
		*0.*030	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1072	mm^3
		0.065	$in.^3$
Weight per set	W	6.1	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	700	640	1580	1400	950
μ_e	Approx.	25°C	1600	1450	3600	3200	2150
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.21				
(W)	100 kHz - 100 mT	100°C		< 0.17			
Codification	P/N		B1E-1605B	B2E-1605B	A4E-1605B	A6E-1605B	A8E-1605B

DESIGN CURVES FOR A CORE SET

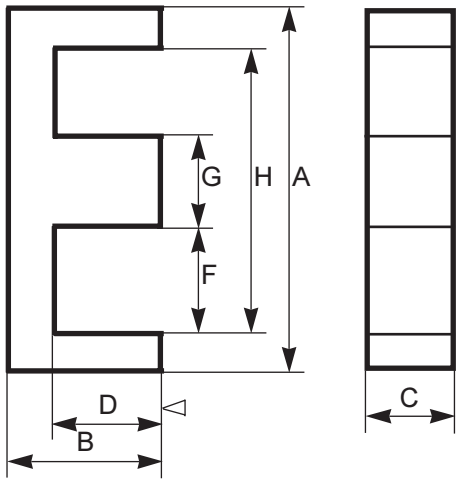
A_L vs. AIR GAP (ℰ).



E - 1605 C

DIMENSIONS

A	16.1 ± 0.60	mm
	0.634 ± 0.024	in.
B	8.05 ± 0.15	mm
	0.317 ± 0.006	in.
C	4.5 ± 0.20	mm
	0.177 ± 0.008	in.
D	5.9 ± 020	mm
	0.232 ± 0.008	in.
F	3.3 mini	mm
	0.130 mini	in.
G	4.55 ± 0.15	mm
	0.179 ± 0.006	in.
H	11.6 ± 0.30	mm
	0.457 ± 0.012	in.



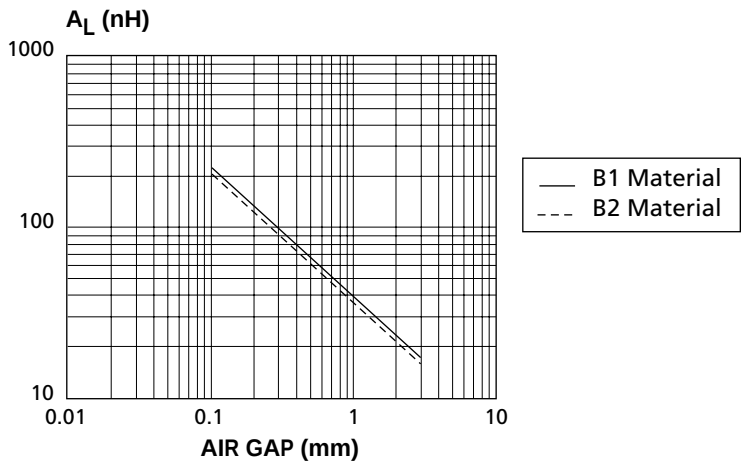
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.67	nH
Core constant	c_1	1.87	mm^{-1}
		47.50	$in.^{-1}$
Effective magnetic path length	l_e	37.6	mm
		1.480	in.
Effective core area	A_e	20.1	mm^2
		0.031	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	753	mm^3
		0.046	$in.^3$
Weight per set	W	3.9	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1240	875	1700	1490
μ_e	Approx.	25°C	1850	1300	2550	2200
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 0.15			
(W)	100 kHz - 100 mT	100°C		< 0.12		
Codification	P/N		B1E-1605C	B2E-1605C	A6E-1605C	A8E-1605C

DESIGN CURVES FOR A CORE SET

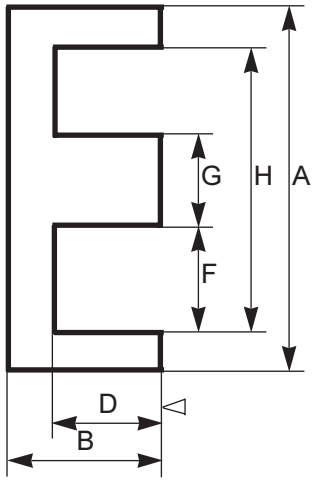
A_L vs. AIR GAP (ℰ).



E - 1905 A

DIMENSIONS

A	19.15 ± 0.75	mm
	0.754 ± 0.030	in.
B	7.9 ± 0.25	mm
	0.311 ± 0.010	in.
C	4.8 ± 0.20	mm
	0.189 ± 0.008	in.
D	5.6 ± 0.15	mm
	0.220 ± 0.006	in.
F	4.82 min	mm
	0.190	in.
G	4.65 ± 0.15	mm
	0.183 ± 0.006	in.
H	14.75 ± 0.30	mm
	0.581 ± 0.012	in.



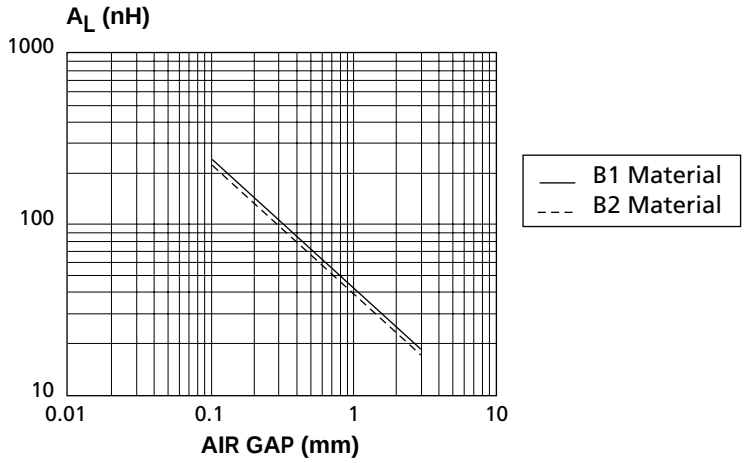
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.7	nH
Core constant	c_1	1.82	mm^{-1}
		46.23	$in.^{-1}$
Effective magnetic path length	l_e	39.6	mm
		1.559	in.
Effective core area	A_e	21.8	mm^2
		0.034	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	870	mm^3
		0.053	$in.^3$
Weight per set	W	4.6	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1140	900	1050	2600	2100	1300
μ_e	Approx.	25°C	1650	1300	1500	3700	3000	1850
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.18					
	100 kHz - 100 mT	100°C		< 0.17				
	100 kHz - 200 mT	100°C			< 0.51			
Codification	P/N		B1E-1905A	B2E-1905A	F1E-1905A	A4E-1905A	A6E-1905A	A8E-1905A

DESIGN CURVES FOR A CORE SET

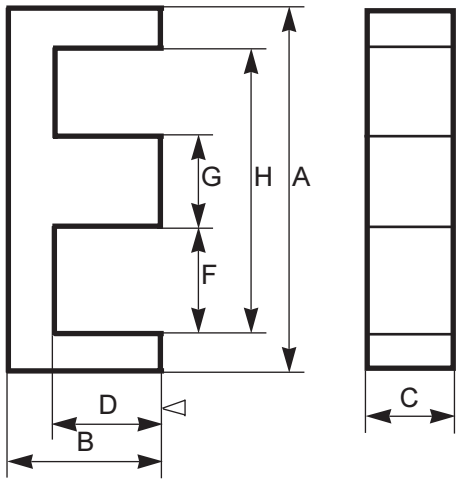
A_L vs. AIR GAP (ℰ).



E - 1907 A

DIMENSIONS

A	19.15± 0.75	mm
	0.754 ± 0.030	in.
B	7.9 ± 0.25	mm
	0.311 ± 0.010	in.
C	6.65 ± 0.25	mm
	0.262 ± 0.010	in.
D	5.6 ± 0.15	mm
	0.220 ± 0.006	in.
F	4.82 min	mm
	0.190	in.
G	4.65 ± 0.15	mm
	0.183 ± 0.006	in.
H	14.75 ± 0.30	mm
	0.581 ± 0.012	in.



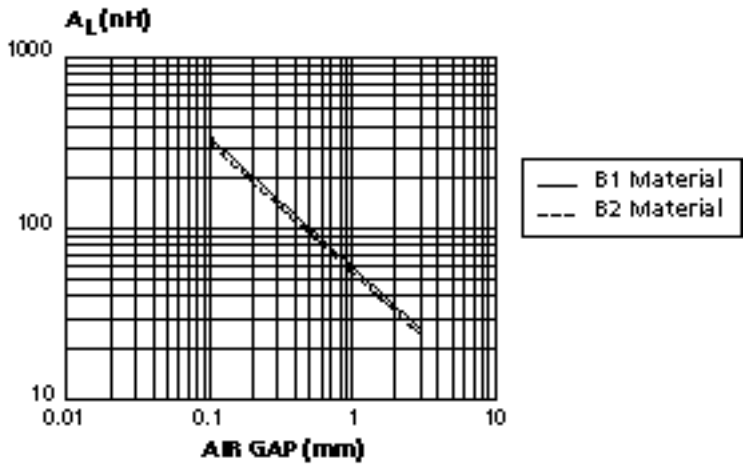
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.95	nH
Core constant	c_1	1.33	mm^{-1}
		33.78	$in.^{-1}$
Effective magnetic path length	l_e	40	mm
		1.575	in.
Effective core area	A_e	30	mm^2
		0.047	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1200	mm^3
		0.0732	$in.^3$
Weight per set	W	6.4	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1600	1300	2450	2000	1850
μ_e	Approx.	25°C	1700	1350	2550	2100	1950
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.2				
(W)	100 kHz - 100 mT	100°C		< 0.2			
Codification	P/N		B1E-1907A	B2E-1907A	A4E-1907A	A6E-1907A	A8E-1907A

DESIGN CURVES FOR A CORE SET

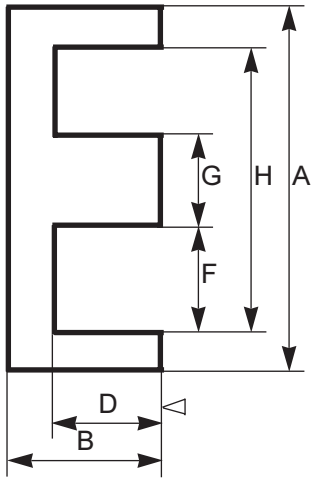
A_L vs. AIR GAP (ℰ).



E - 2005 B

DIMENSIONS

A	19.5 ± 0.40	mm
	0.768 ± 0.016	in.
B	13.55 ± 0.20	mm
	0.533 ± 0.008	in.
C	5 ± 0.25	mm
	0.197 ± 0.010	in.
D	11.15 ± 0.20	mm
	0.439 ± 0.008	in.
F	4.5 min	mm
	0.177	in.
G	4.55 ± 0.15	mm
	0.179 ± 0.006	in.
H	14 ± 0.30	mm
	0.551 ± 0.012	in.



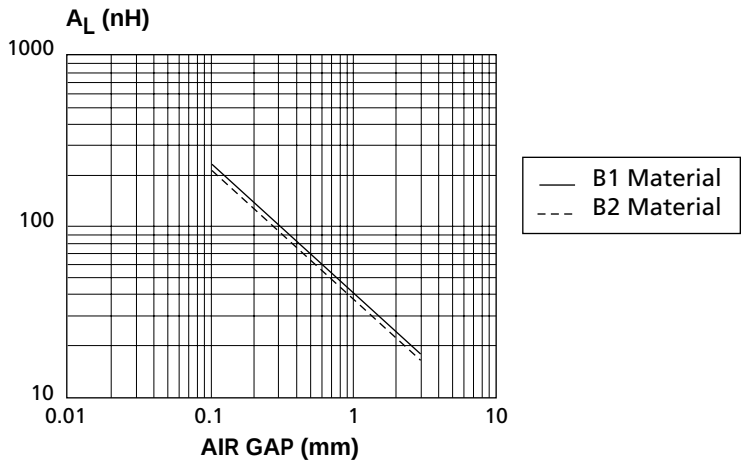
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.5	nH
Core constant	c_1	2.5	mm^{-1}
		63.50	$in.^{-1}$
Effective magnetic path length	l_e	61.3	mm
		2.413	in.
Effective core area	A_e	24.5	mm^2
		0.038	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1506	mm^3
		0.0919	$in.^3$
Weight per set	W	7.1	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	920	745	1850	1600	1200
μ_e	Approx.	25°C	1850	1500	3700	3200	2400
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.2				
(W)	100 kHz - 100 mT	100°C		< 0.25			
Codification	P/N		B1E-2005B	B2E-2005B	A4E-2005B	A6E-2005B	A8E-2005B

DESIGN CURVES FOR A CORE SET

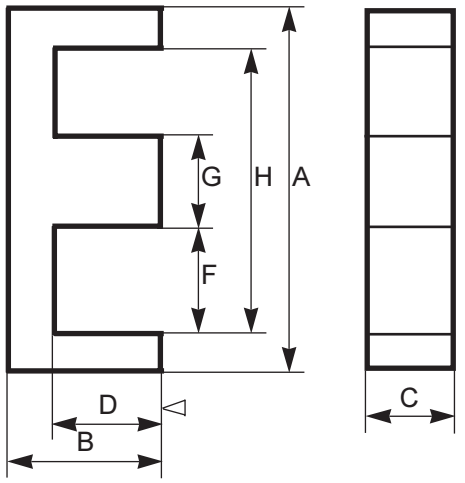
A_L vs. AIR GAP (ℰ).



E - 2006 A

DIMENSIONS

A	20 ± 0.40	mm
	0.787 ± 0.016	in.
B	9.95 ± 0.15	mm
	0.392 ± 0.006	in.
C	5.7 ± .20	mm
	0.224 ± 0.008	in.
D	7.15 ± .15	mm
	0.281 ± .006	in.
F	4.1 min	mm
	0.161	in.
G	5.75 ± 0.15	mm
	0.226 ± .006	in.
H	14.4 ± 0.30	mm
	0.567 ± 0.012	in.



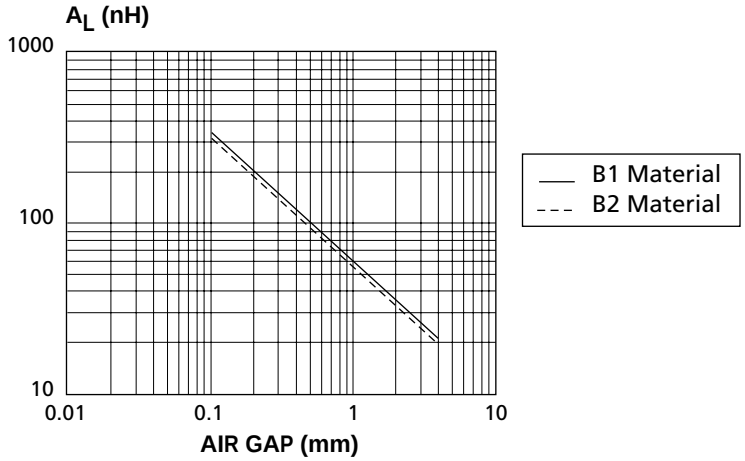
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.88	nH
Core constant	c_1	1.43	mm^{-1}
		36.32	$in.^{-1}$
Effective magnetic path length	l_e	46.1	mm
		1.815	in.
Effective core area	A_e	32.2	mm^2
		0.050	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1500	mm^3
		0.0915	$in.^3$
Weight per set	W	7.4	g

ELECTRICAL DATA

				MATERIAL					
				B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	1450	1160	1250	3000	2500	2000
μ_e	Approx.		25°C	1650	1300	1600	3400	2850	2250
μ_a	Flux density at	320 mT 100°C	> 1000		> 1000				
		340 mT	100°C		> 1500				
Total losses (W)	25 kHz	200 mT	100°C	< 0.3					
	100 kHz	100 mT	100°C		< 0.27				
	100 kHz	200 mT	100°C			< 0.27			
Codification	P/N			B1E-2006A	B2E-2006A	F1E-2006A	A4E-2006A	A6E-2006A	A8E-2006A

DESIGN CURVES FOR A CORE SET

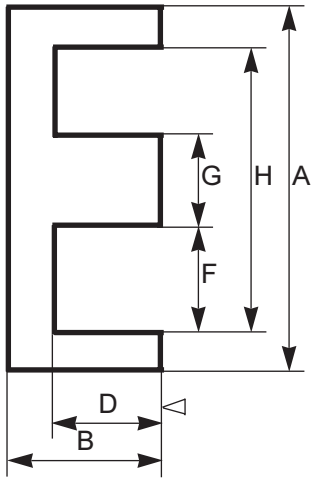
A_L vs. AIR GAP (ℰ).



E - 2206 A

DIMENSIONS

A	22 ± 0.45	mm
	0.866 ± 0.018	in.
B	15 ± 0.20	mm
	0.591 ± 0.008	in.
C	5.75 ± 0.25	mm
	0.226 ± 0.010	in.
D	11 ± 0.25	mm
	0.433 ± 0.010	in.
F	4.98 min	mm
	0.196	in.
G	5.75 ± 0.25	mm
	0.226 ± 0.010	in.
H	16.3 ± 0.35	mm
	0.642 ± 0.014	in.



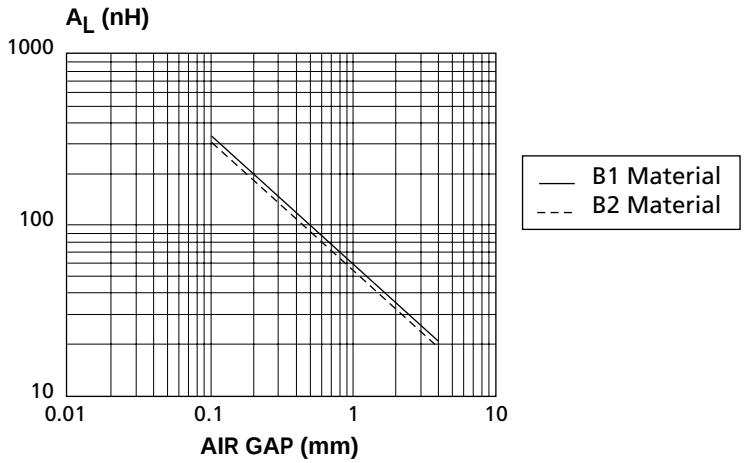
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.68	nH
Core constant	c_1	1.84	mm^{-1}
		46.74	$in.^{-1}$
Effective magnetic path length	l_e	64.4	mm
		2.535	in.
Effective core area	A_e	35	mm^2
		0.054	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	2256	mm^3
		0.138	$in.^3$
Weight per set	W	10.8	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1250	1000	2200	2180	1650
μ_e	Approx.	25°C	1850	1500	3250	3200	2450
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.45				
(W)	100 kHz - 100 mT	100°C		< 0.37			
Codification	P/N		B1E-2206A	B2E-2206A	A4E-2206A	A6E-2206A	A8E-2206A

DESIGN CURVES FOR A CORE SET

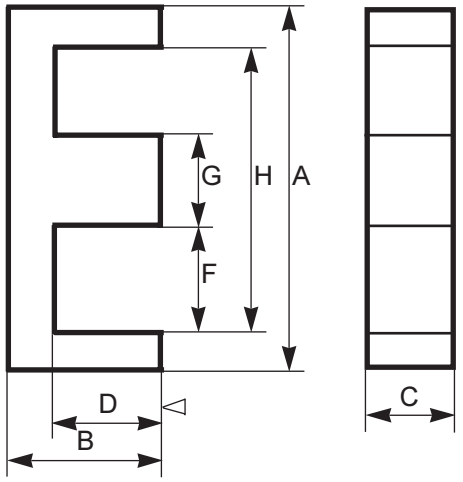
A_L vs. AIR GAP (ℇ).



E - 2506 A

DIMENSIONS

A	25.3 ± 0.50	mm
	0.996 ± 0.020	in.
B	9.5 ± 0.25	mm
	0.374 ± 0.10	in.
C	6.35 ± 0.25	mm
	0.250 ± 0.010	in.
D	6.35 ± 0.25	mm
	0.250 ± 0.10	in.
F	6.1 min	mm
	0.240	in.
G	6.32 ± 0.125	mm
	0.249 ± 0.005	in.
H	19.02 ± 0.38	mm
	0.749 ± 0.015	in.



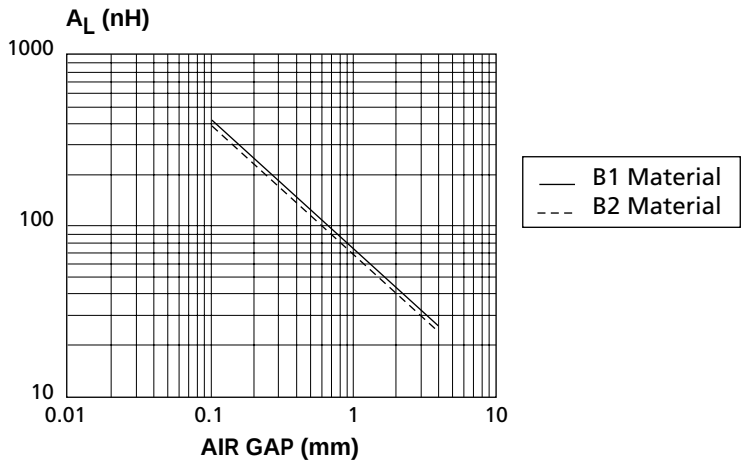
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.05	nH
Core constant	c_1	1.20	mm^{-1}
		30.48	$in.^{-1}$
Effective magnetic path length	l_e	48	mm
		1.890	in.
Effective core area	A_e	40	mm^2
		0.062	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1920	mm^3
		0.117	$in.^3$
Weight per set	W	10	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1950	1540	1650	4000	3500	2500
μ_e	Approx.	25°C	1850	1450	1600	3800	3350	2400
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.39					
	100 kHz - 100 mT	100°C		< 0.32				
	100 kHz - 200 mT	100°C			< 1.2			
Codification	P/N		B1E-2506A	B2E-2506A	F1E-2506A	A4E-2506A	A6E-2506A	A8E-2506A

DESIGN CURVES FOR A CORE SET

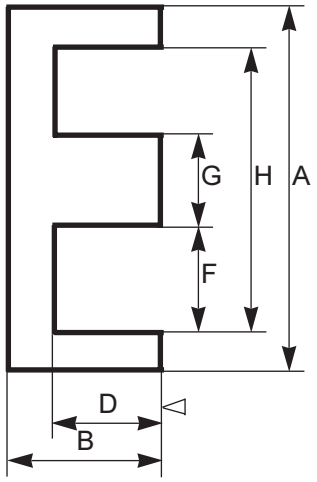
A_L vs. AIR GAP (ℰ).



E - 2506 B

DIMENSIONS

A	25.3 ± 0.50	mm
	0.996 ± 0.020	in.
B	9.9 ± 0.25	mm
	0.390 ± 0.010	in.
C	6.35 ± 0.25	mm
	0.250 ± 0.010	in.
D	6.75 ± 0.25	mm
	0.266 ± 0.010	in.
F	6.1 min	mm
	0.240	in.
G	6.32 ± 0.13	mm
	0.249 ± 0.005	in.
H	19.02 ± 0.38	mm
	0.749 ± 0.015	in.



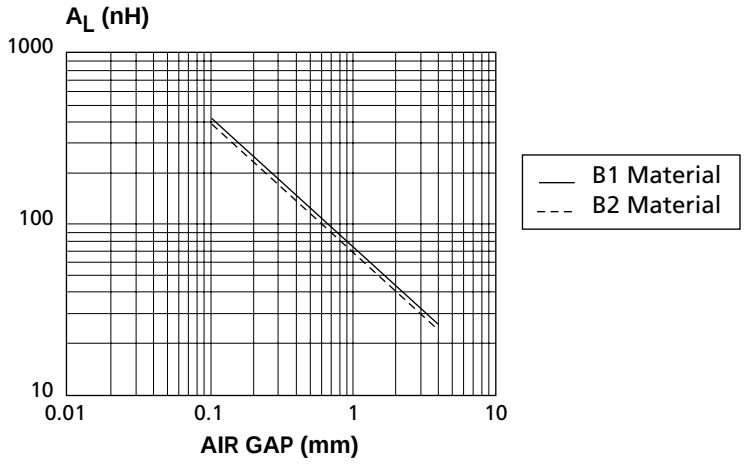
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.01	nH
Core constant	c_1	1.25	mm^{-1}
		31.75	$in.^{-1}$
Effective magnetic path length	l_e	49.6	mm
		1.953	in.
Effective core area	A_e	40	mm^2
		0.062	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1984	mm^3
		0.121	$in.^3$
Weight per set	W	9.4	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2000	1600	4000	3300	2400
μ_e	Approx.	25°C	2000	1600	3950	3250	2400
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.4				
(W)	100 kHz - 100 mT	100°C		< 0.3			
Codification	P/N		B1E-2506B	B2E-2506B	A4E-2506B	A6E-2506B	A8E-2506B

DESIGN CURVES FOR A CORE SET

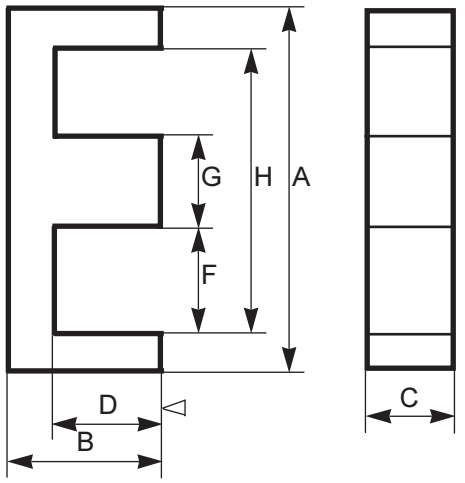
A_L vs. AIR GAP (ℰ).



E - 2506 C

DIMENSIONS

A	25.4 ± 0.50	mm
	1.000 ± 0.020	in.
B	16 ± 0.25	mm
	0.630 ± 0.010	in.
C	6.35 ± 0.25	mm
	*0.*250 ± 0.010	in.
D	12.83 ± 0.25	mm
	*0.*505 ± 0.010	in.
F	6.07 min	mm
	0.239	in.
G	6.35 ± 0.15	mm
	*0.*250 ± 0.006	in.
H	19.04 ± 0.40	mm
	*0.*750 ± 0.016	in.



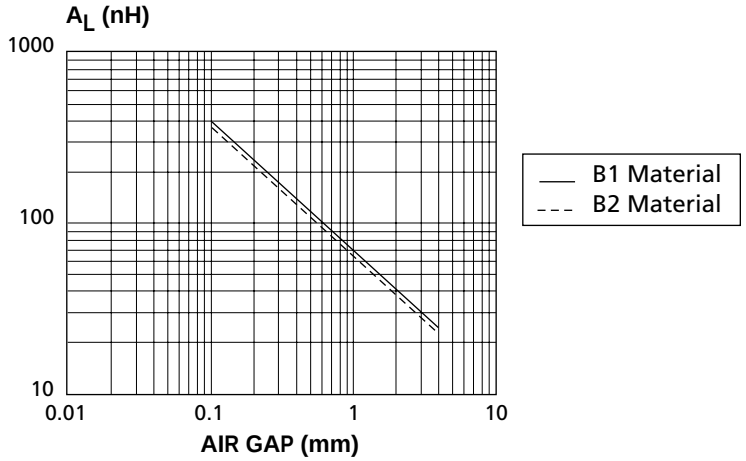
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.69	nH
Core constant	c_1	1.82	mm^{-1}
		46.26	$in.^{-1}$
Effective magnetic path length	l_e	74	mm
		2.913	in.
Effective core area	A_e	40.3	mm^2
		*0.*062	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	2984	mm^3
		*0.*182	$in.^3$
Weight per set	W	15	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1350	1150	1250	2750	2150	1750
μ_e	Approx.	25°C	1950	1650	1800	4000	3100	2550
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.6					
	100 kHz - 100 mT	100°C		< 0.50				
	100 kHz - 200 mT	100°C			< 1.8			
Codification	P/N		B1E-2506C	B2E-2506C	F1E-2506C	A4E-2506C	A6E-2506C	A8E-2506C

DESIGN CURVES FOR A CORE SET

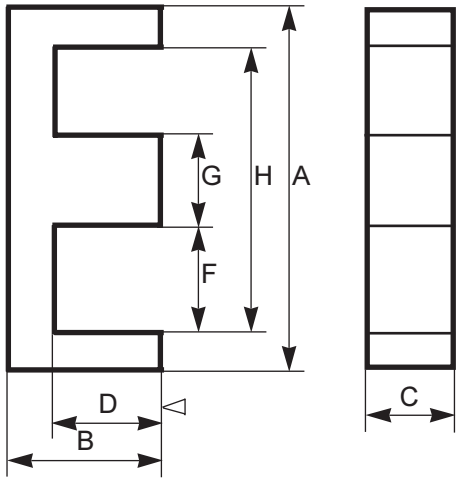
A_L vs. AIR GAP (ℰ).



E - 2507 A

DIMENSIONS

A	25.4 ± 0.40	mm
	1.000 ± 0.016	in.
B	12.6 ± 0.20	mm
	0.496 ± 0.008	in.
C	7.28 ± 0.22	mm
	0.287 ± 0.009	in.
D	8.9 ± 0.20	mm
	0.350 ± 0.008	in.
F	4.87 min	mm
	0.192	in.
G	7.5 ± 0.15	mm
	0.295 ± 0.006	in.
H	17.65 ± 0.25	mm
	0.695 ± 0.010	in.



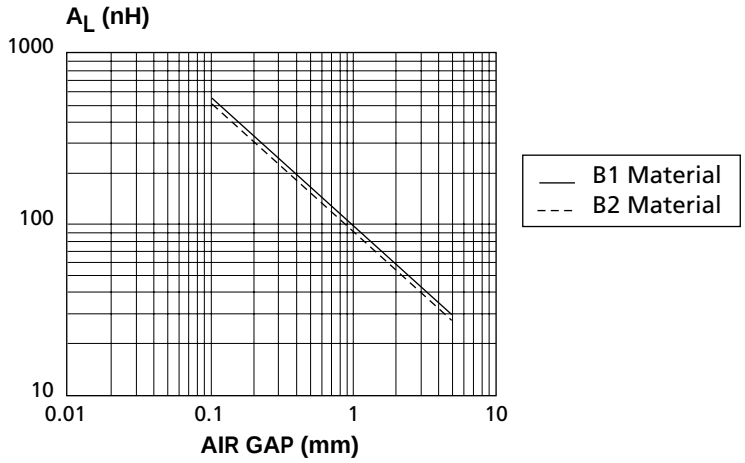
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.2	nH
Core constant	c_1	1.05	mm^{-1}
		26.67	$in.^{-1}$
Effective magnetic path length	l_e	58	mm
		2.283	in.
Effective core area	A_e	55	mm^2
		0.085	$in.^2$
Minimum core area	A mini	55	mm^2
		0.085	$in.^2$
Effective core volume	V_e	3200	mm^3
		0.195	$in.^3$
Weight per set	W	16	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2200	1760	2050	4800	4000	3100
μ_e	Approx.	25°C	1850	1450	1700	4000	3350	2600
μa	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.64					
	100 kHz - 100 mT	100°C		< 0.55				
	100 kHz - 200 mT	100°C			< 1.9			
Codification	P/N		B1E-2507A	B2E-2507A	F1E-2507A	A4E-2507A	A6E-2507A	A8E-2507A

DESIGN CURVES FOR A CORE SET

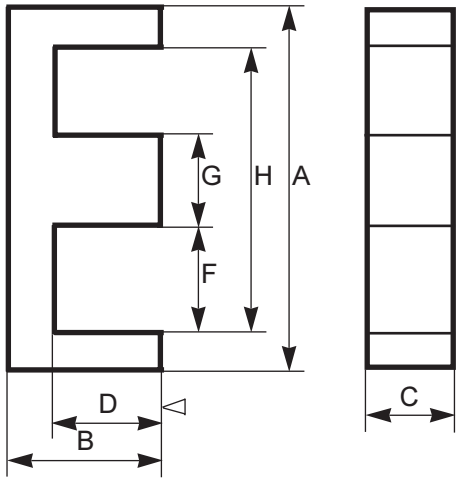
A_L vs. AIR GAP (ℰ).



E - 2507 B

DIMENSIONS

A	25.4 ± 0.50	mm
	1.000 ± 0.020	in.
B	16 ± 0.26	mm
	0.630 ± 0.010	in.
C	6.5 ± 0.25	mm
	0.256 ± 0.010	in.
D	12.83 ± 0.25	mm
	0.505 ± 0.010	in.
F	6.07 min	mm
	0.239	in.
G	6.35 ± 0.15	mm
	0.250 ± 0.006	in.
H	19.04 ± 0.40	mm
	0.750 ± 0.016	in.



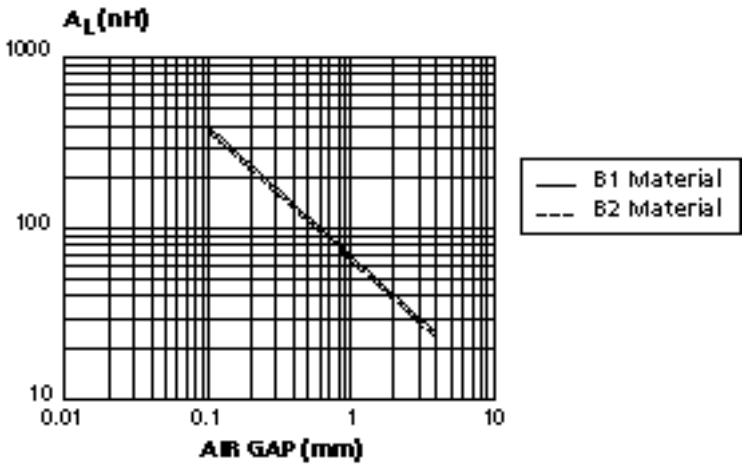
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.7	nH
Core constant	c_1	1.83	mm^{-1}
		46.48	$in.^{-1}$
Effective magnetic path length	l_e	74	mm
		2.913	in.
Effective core area	A_e	41.3	mm^2
		0.064	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	3054	mm^3
		0.186	$in.^3$
Weight per set	W	13.8	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1300	1200	2450	2350	1750
μ_e	Approx.	25°C	1850	1700	3450	3350	2500
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.61				
(W)	100 kHz - 100 mT	100°C		< 0.50			
Codification	P/N		B1E-2507B	B2E-2507B	A4E-2507B	A6E-2507B	A8E-2507B

DESIGN CURVES FOR A CORE SET

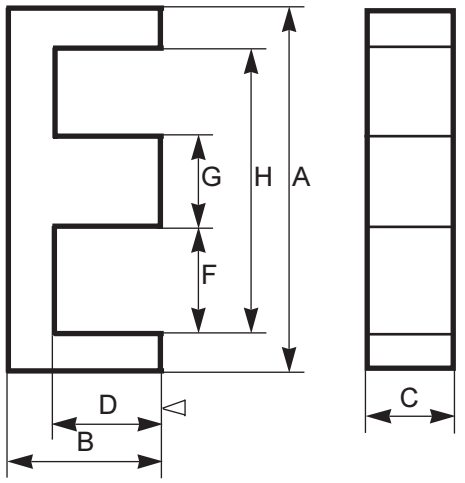
A_L vs. AIR GAP (Ɛ).



E - 2811 A

DIMENSIONS

A	28 ± 0.55	mm
	1.102 ± 0.022	in.
B	17 ± 0.20	mm
	0.669 ± 0.008	in.
C	10.75 ± 0.20	mm
	0.423 ± 0.01	in.
D	12.5 ± 0.30	mm
	0.492 ± 0.012	in.
F	5.55 min	mm
	0.219	in.
G	7.25 ± 0.25	mm
	0.285 ± 0.010	in.
H	18.85 ± 0.25	mm
	0.742 ± 0.010	in.



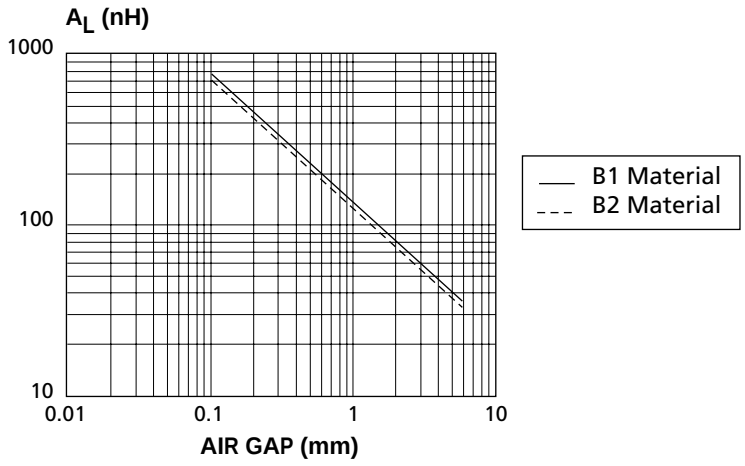
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.49	nH
Core constant	c_1	0.84	mm^{-1}
		21.42	$in.^{-1}$
Effective magnetic path length	l_e	74.3	mm
		2.923	in.
Effective core area	A_e	88.29	mm^2
		0.137	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	6556	mm^3
		0.400	$in.^3$
Weight per set	W	34	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2700	2400	5200	4950	4200
μ_e	Approx.	25°C	1800	1600	3450	3300	2800
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.85				
(W)	100 kHz - 100 mT	100°C		< 1.08			
Codification	P/N		B1E-2811A	B2E-2811A	A4E-2811A	A6E-2811A	A8E-2811A

DESIGN CURVES FOR A CORE SET

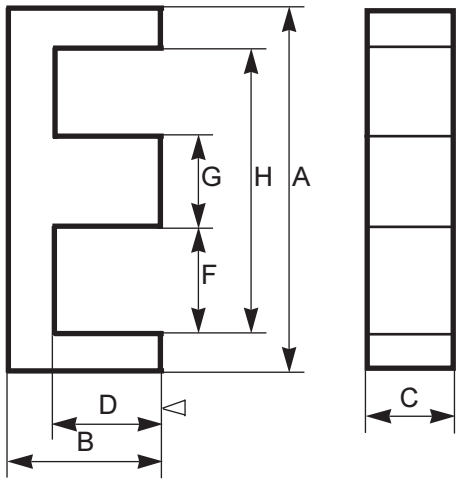
A_L vs. AIR GAP (Ɛ).



E - 3007 B

DIMENSIONS

A	30.1 ± 0.70	mm
	1.185 ± 0.028	in.
B	15 ± 0.20	mm
	0.591 ± 0.008	in.
C	7.05 ± 0.25	mm
	0.278 ± 0.010	in.
D	10 ± 0.30	mm
	0.394 ± 0.012	in.
F	6.15 min	mm
	0.242	in.
G	6.95 ± 0.25	mm
	0.274 ± 0.010	in.
H	19.9 ± 0.40	mm
	0.783 ± 0.016	in.



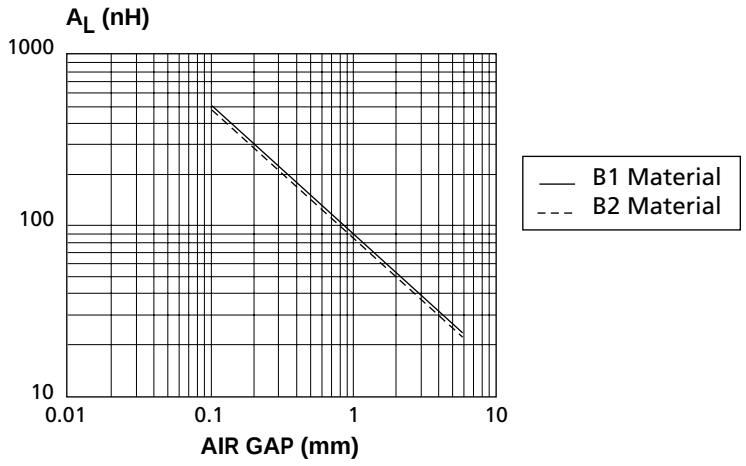
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.15	nH
Core constant	c_1	1.09	mm^{-1}
		27.69	$in.^{-1}$
Effective magnetic path length	l_e	65.5	mm
		2.579	in.
Effective core area	A_e	60	mm^2
		.093	$in.^2$
Minimum core area	A mini	49	mm^2
		0.076	$in.^2$
Effective core volume	V_e	3900	mm^3
		0.238	$in.^3$
Weight per set	W	22	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2000	1600	2000	4600	3800	3200
μ_e	Approx.	25°C	1750	1400	1750	4000	3300	2800
μ_a	Flux density at 320 mT	100°C	> 1000		> 1000			
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 0.85					
	100 kHz - 100 mT	100°C		< 0.65				
	100 kHz - 200 mT	100°C			< 2.30			
Codification	P/N		B1E-3007B	B2E-3007B	F1E-3007B	A4E-3007B	A6E-3007B	A8E-3007B

DESIGN CURVES FOR A CORE SET

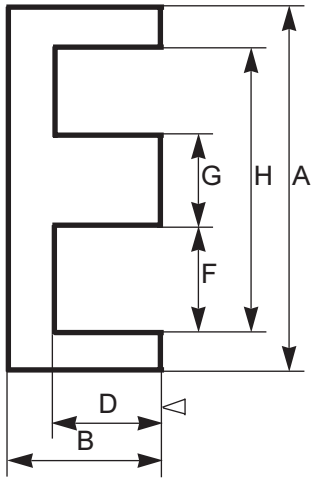
A_L vs. AIR GAP (Ɛ).



E - 3008 A

DIMENSIONS

A	30.25 ± 0.95	mm
	1.191 ± 0.037	in.
B	13 ± 0.40	mm
	0.512 ± 0.016	in.
C	7.85 ± 0.25	mm
	0.309 ± 0.010	in.
D	9.15 ± 0.25	mm
	0.360 ± 0.010	in.
F	7 min	mm
	0.276	in.
G	7.85 ± 0.25	mm
	0.309 ± 0.010	in.
H	22.25 ± 0.65	mm
	0.876 ± 0.026	in.



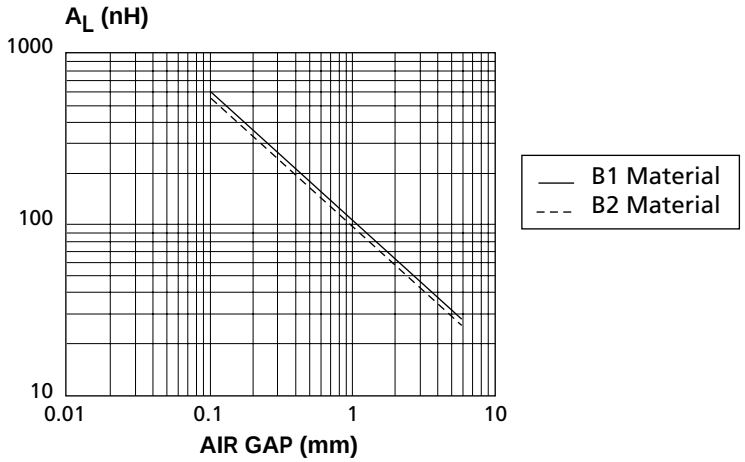
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.25	nH
Core constant	c_1	1.00	mm^{-1}
		25.40	$in.^{-1}$
Effective magnetic path length	l_e	64	mm
		2.520	in.
Effective core area	A_e	64	mm^2
		0.099	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	4100	mm^3
		0.250	$in.^3$
Weight per set	W	20	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2250	1850	4050	3200	2950
μ_e	Approx.	25°C	1800	1500	3250	2550	2350
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.82				
(W)	100 kHz - 100 mT	100°C		< 0.62			
Codification	P/N		B1E-3008A	B2E-3008A	A4E-3008A	A6E-3008A	A8E-3008A

DESIGN CURVES FOR A CORE SET

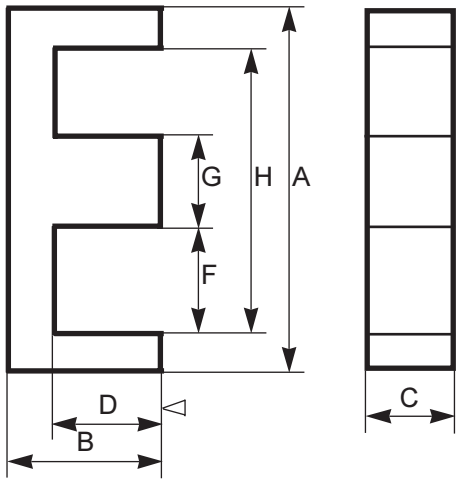
A_L vs. AIR GAP (ℰ).



E - 3011 A

DIMENSIONS

A	30 ± 0.60	mm
	1.181 ± 0.024	in.
B	13.15 ± 0.2	mm
	0.518 ± 0.008	in.
C	10.7 ± 0.30	mm
	0.421 ± 0.012	in.
D	8.15 ± 0.15	mm
	0.321 ± 0.006	in.
F	4.38 mini	mm
	0.172 mini	in.
G	10.7 ± 0.25	mm
	0.421 ± 0.010	in.
H	20 ± 0.30	mm
	0.787 ± 0.012	in.



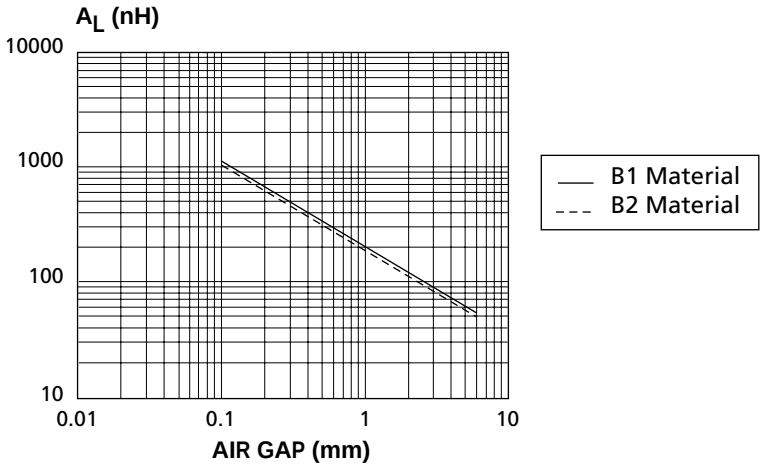
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.38	nH
Core constant	c_1	0.53	mm^{-1}
		13.41	$in.^{-1}$
Effective magnetic path length	l_e	57.8	mm
		2.276	in.
Effective core area	A_e	109.4	mm^2
		0.170	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	6329	mm^3
		0.386	$in.^3$
Weight per set	W	30.3	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4700	3500	7850	6600
μ_e	Approx.	25°C	1950	1450	3300	2750
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 0.25			
(W)	100 kHz - 100 mT	100°C		< 1.04		
Codification	P/N		B1E-3011A	B2E-3011A	A6E-3011A	A8E-3011A

DESIGN CURVES FOR A CORE SET

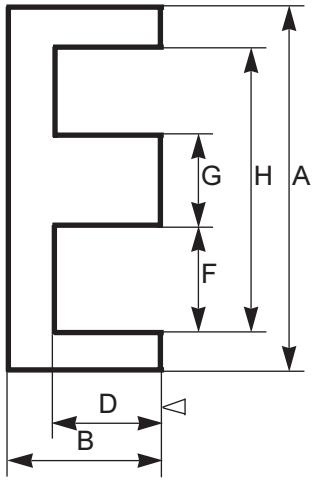
A_L vs. AIR GAP (ℰ).



E - 3109 A

DIMENSIONS

A	30.6 ± 0.60	mm
	1.205 ± 0.024	in.
B	13.1 ± 0.15	mm
	0.516 ± 0.006	in.
C	9.4 ± 0.30	mm
	.0.370 ± 0.012	in.
D	8.75 ± 0.15	mm
	0.344 ± 0. 006	in.
F	5.85 min	mm
	0.230 mini	in.
G	9.4 ± 0.30	mm
	0.370 ± 0.012	in.
H	22.0 ± 0.60	mm
	0.866 ± 0.024	in.



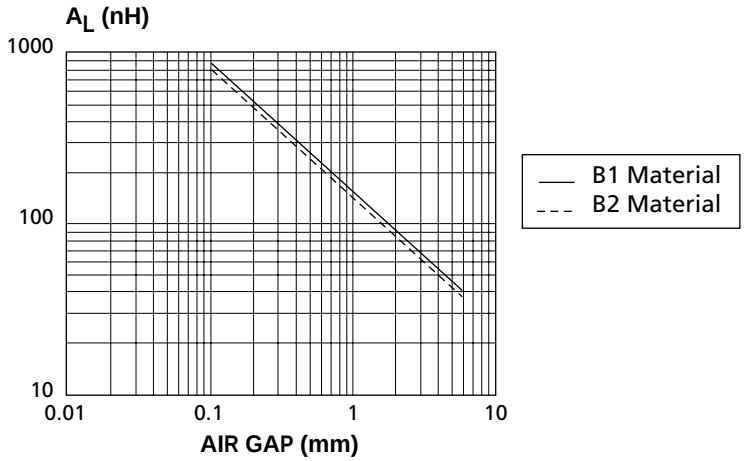
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.71	nH
Core constant	c_1	0.73	mm^{-1}
		18.67	$in.^{-1}$
Effective magnetic path length	l_e	61.4	mm
		2.417	in.
Effective core area	A_e	5127	mm^2
		7.95	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	5127	mm^3
		0.313	$in.^3$
Weight per set	W	24.2	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3000	2600	5450	4300	3950
μ_e	Approx.	25°C	1750	1500	3200	2500	2300
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 1.02				
(W)	100 kHz - 100 mT	100°C		< 0.85			
Codification	P/N		B1E-3109A	B2E-3109A	A4E-3109A	A6E-3109A	A8E-3109A

DESIGN CURVES FOR A CORE SET

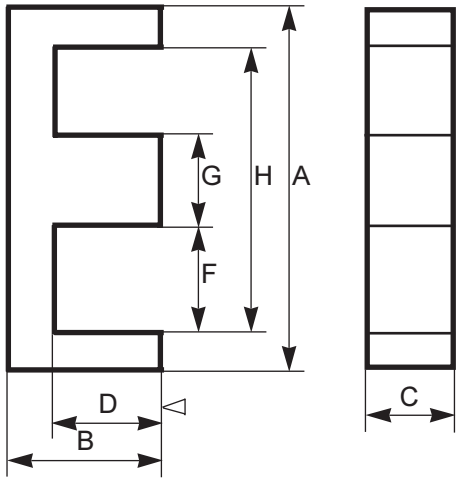
A_L vs. AIR GAP (Ɛ).



E - 3109 B

DIMENSIONS

A	30.5 ± 0.60	mm
	1.201 ± 0.024	in.
B	13.4 ± 0.15	mm
	0.528 ± 0.006	in.
C	9.1 ± 0.30	mm
	0.358 ± 0.012	in.
D	9.05 ± 0.15	mm
	0.356 ± 0.006	in.
F	6.2 min	mm
	0.244	in.
G	9.1 ± 0.30	mm
	0.358 ± 0.012	in.
H	22.2 ± 0.40	mm
	0.874 ± 0.016	*in.*



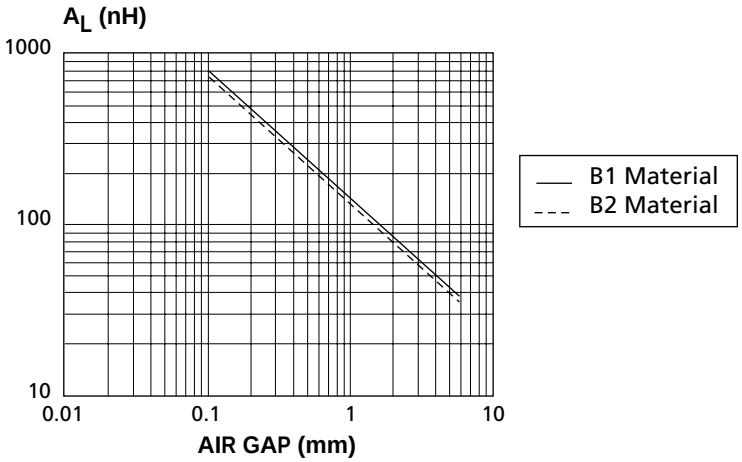
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.58	nH
Core constant	c_1	0.8	mm^{-1}
		20.20	$in.^{-1}$
Effective magnetic path length	l_e	63	mm
		2.480	in.
Effective core area	A_e	79	mm^2
		0.122	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	4970	mm^3
		0.303	$in.^3$
Weight per set	W	26	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2900	2600	2600	5100	4000	3700
μ_e	Approx.	25°C	1850	1650	1750	3250	2550	2350
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 1.00					
	100 kHz - 100 mT	100°C		< 0.70				
	100 kHz - 200 mT	100°C			< 3.23			
Codification	P/N		B1E-3109B	B2E-3109B	F1E-3109B	A4E-3109B	A6E-3109B	A8E-3109B

DESIGN CURVES FOR A CORE SET

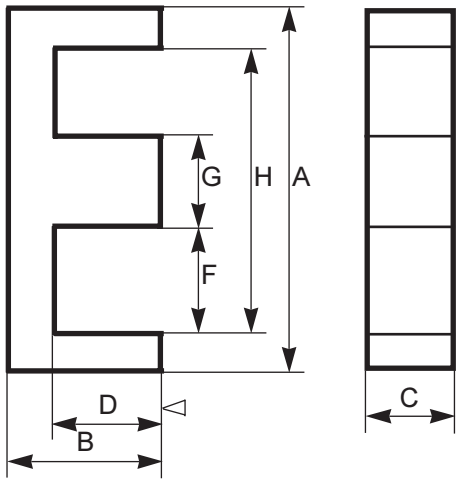
A_L vs. AIR GAP (ℰ).



E - 3213 A

DIMENSIONS

A	31.9 ± 1.00	mm
	1.256 ± 0.039	in.
B	14 ± 0.40	mm
	0.551 ± 0.016	in.
C	12.7 ± 0.30	mm
	0.500 ±.0.012	in.
D	9.65 ± 0.25	mm
	0.380 ± 0.010	in.
F	6.4 min	mm
	0.252	in.
G	8.9 ± 0.25	mm
	0.350 ± 0.010	in.
H	22.77 ± 0.77	mm
	0.896 ± 0.030	in.



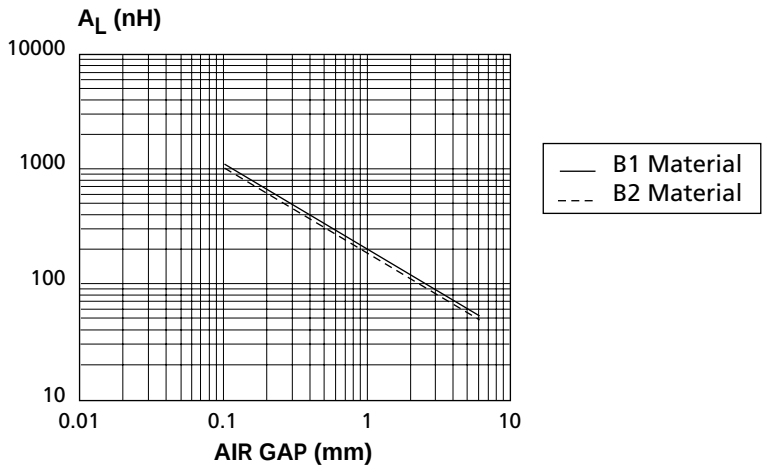
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.15	nH
Core constant	c_1	0.58	mm^{-1}
		14.73	$in.^{-1}$
Effective magnetic path length	l_e	66	mm
		2.598	in.
Effective core area	A_e	113	mm^2
		0.175	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	7500	mm^3
		0.458	$in.^3$
Weight per set	W	37	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4000	3200	3750	7100	5550	5100
μ_e	Approx.	25°C	1850	1500	1750	3300	2600	2350
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 1.50					
	100 kHz - 100 mT	100°C		< 1.20				
	100 kHz - 200 mT	100°C			< 4.40			
Codification	P/N		B1E-3213A	B2E-3213A	F1E-3213A	A4E-3213A	A6E-3213A	A8E-3213A

DESIGN CURVES FOR A CORE SET

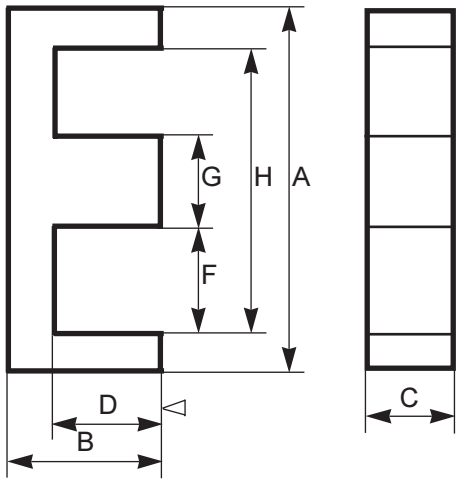
A_L vs. AIR GAP (ℰ).



E - 3509 A

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	14.4 ± 0.25	mm
	0.567 ± 0.010	in.
C	9.15 ± 0.25	mm
	0.360 ± 0.010	in.
D	9.9 ± 0.25	mm
	0.390 ± 0.010	in.
F	8 mini	mm
	0.315	in.
G	9.2 ± 0.25	mm
	0.362 ± 0.010	in.
H	26 ± 0.50	mm
	1.024 ± 0.020	in.



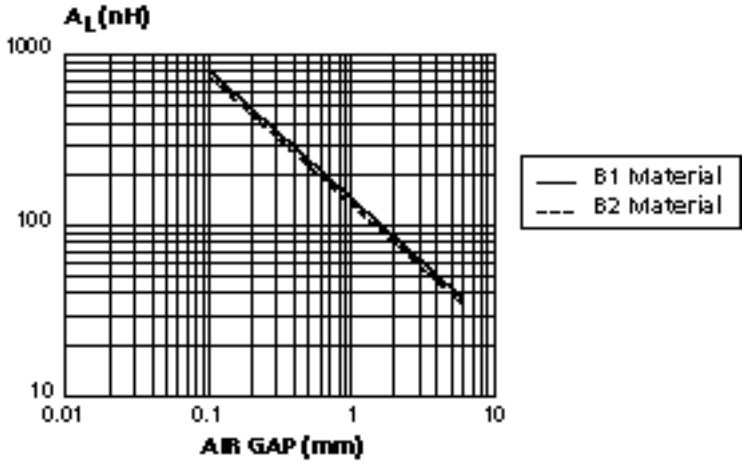
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.47	nH
Core constant	c_1	0.85	mm^{-1}
		21.59	$in.^{-1}$
Effective magnetic path length	l_e	70.6	mm
		2.780	in.
Effective core area	A_e	82.6	mm^2
		0.128	$in.^2$
Minimum core area	A mini	81.4	mm^2
		0.126	$in.^2$
Effective core volume	V_e	5830	mm^3
		0.356	$in.^3$
Weight per set	W	30	g

ELECTRICAL DATA

			MATERIAL					
			B1	B2	F1	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3000	2400	2600	5300	4700	4000
μ_e	Approx.	25°C	2050	1650	1800	3600	3200	2700
μ_a	Flux density at320 mT 100°C	> 1000		> 1000				
	340 mT	100°C		> 1500				
Total losses (W)	25 kHz - 200 mT	100°C	< 1.20					
	100 kHz - 100 mT	100°C		< 1.00				
	100 kHz - 200 mT	100°C			< 3.40			
Codification	P/N		B1E-3509A	B2E-3509A	F1E-3509A	A4E-3509A	A6E-3509A	A8E-3509A

DESIGN CURVES FOR A CORE SET

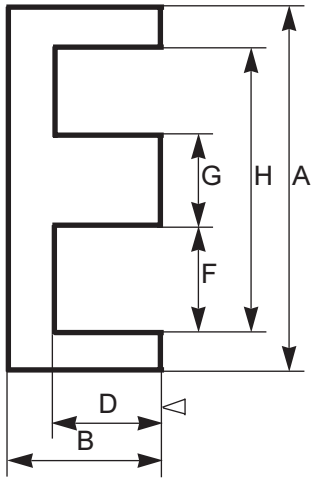
A_L vs. AIR GAP (Ɛ).



E - 3509 B

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	14.4 ± 0.25	mm
	0.567 ± 0.010	in.
C	9.15 ± 0.25	mm
	0.360 ± 0.010	in.
D	9.8 ± 0.25	mm
	0.386 ± 0.010	in.
F	7.9 min	mm
	0.311	in.
G	9.2 ± 0.25	mm
	0.362 ± 0.010	in.
H	25.75 ± 0.50	mm
	1.014 ± 0.020	in.



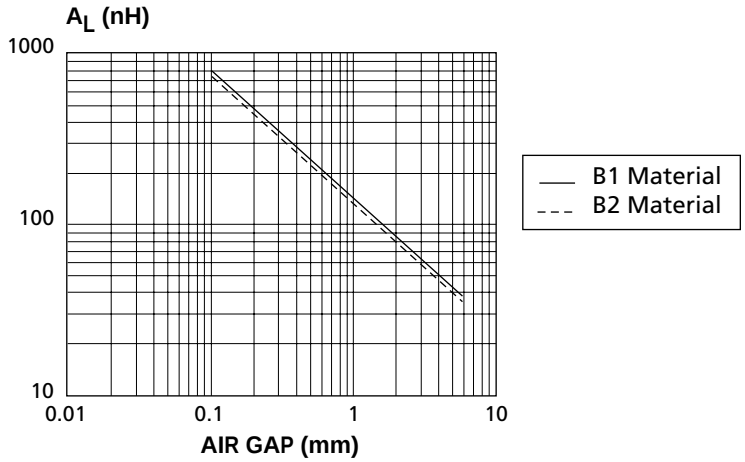
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.5	nH
Core constant	c_1	0.84	mm^{-1}
		21.28	$in.^{-1}$
Effective magnetic path length	l_e	70.2	mm
		2.764	in.
Effective core area	A_e	84	mm^2
		0.130	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	5889	mm^3
		0.359	$in.^3$
Weight per set	W	27.5	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3000	2500	5300	4700	4000
μ_e	Approx.	25°C	2000	1650	3600	3150	2650
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 1.17				
(W)	100 kHz - 100 mT	100°C		< 0.89			
Codification	P/N		B1E-3509B	B2E-3509B	A4E-3509B	A6E-3509B	A8E-3509B

DESIGN CURVES FOR A CORE SET

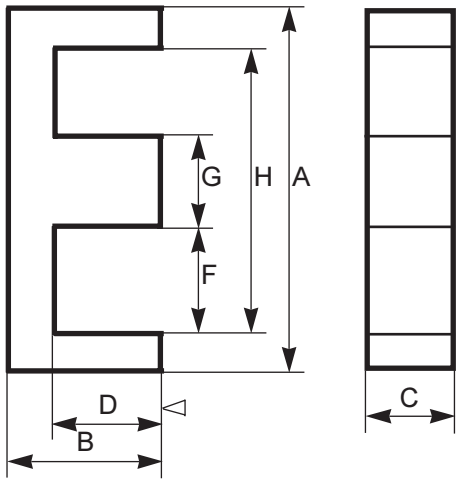
A_L vs. AIR GAP (ℰ).



E - 3510 A

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	14.4 ± .25	mm
	0.567 ± 0.010	in.
C	9.7 ± 0.20	mm
	0.382 ± 0.008	in.
D	9.9 ± 0.25	mm
	0.390 ± 0.010	in.
F	8.03 min	mm
	0.316	in.
G	9.2 ± 0.25	mm
	0.362 ± 0.010	in.
H	26 ± 0.50	mm
	1.024 ± 0.020	in.



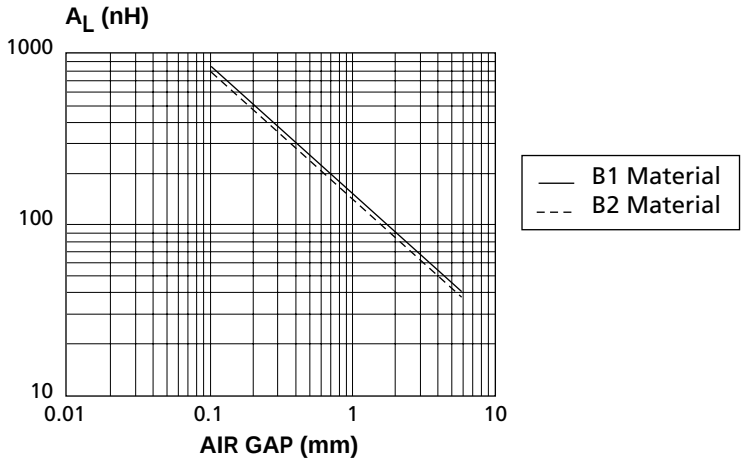
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.56	nH
Core constant	c_1	0.81	mm^{-1}
		20.46	$in.^{-1}$
Effective magnetic path length	l_e	70.6	mm
		2.780	in.
Effective core area	A_e	87.6	mm^2
		0.136	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	6181	mm^3
		0.377	$in.^3$
Weight per set	W	29	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3000	2500	6300	4900	4100
μ_e	Approx.	25°C	1900	1600	4050	3150	2650
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 1.23				
(W)	100 kHz - 100 mT	100°C		< 0.93			
Codification	P/N		B1E-3510A	B2E-3510A	A4E-3510A	A6E-3510A	A8E-3510A

DESIGN CURVES FOR A CORE SET

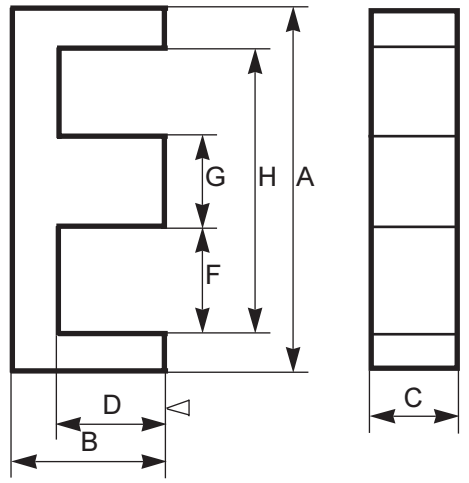
A_L vs. AIR GAP (ℰ).



E - 3510 B

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	23.8 ± 0.25	mm
	0.937 ± 0.010	in.
C	9.52 ± 0.40	mm
	0.375 ± 0.016	in.
D	19.05 ± 0.40	mm
	0.750 ± 0.016	in.
F	7.61 min	mm
	0.300	in.
G	9.52 ± 0.20	mm
	0.375 ± 0.008	in.
H	25.43 ± 0.50	mm
	1.001 ± 0.020	in.



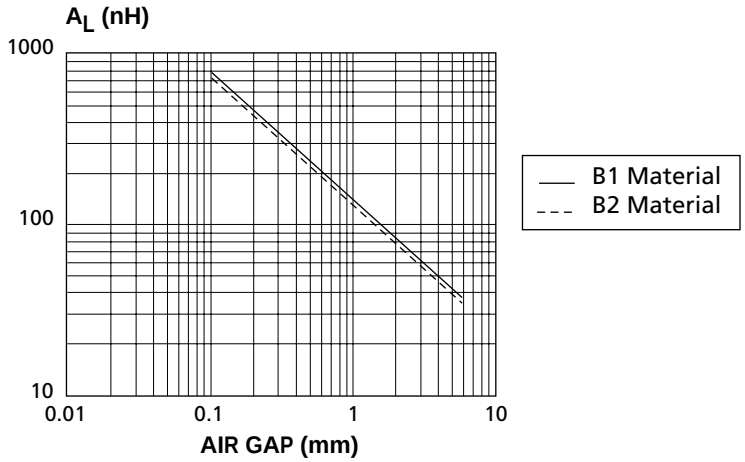
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.06	nH
Core constant	c_1	1.19	mm^{-1}
		30.11	$in.^{-1}$
Effective magnetic path length	l_e	107	mm
		4.213	in.
Effective core area	A_e	90.4	mm^2
		0.140	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	9676	mm^3
		0.590	$in.^3$
Weight per set	W	43.6	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2100	1750	4250	3150	2950
μ_e	Approx.	25°C	2000	1650	4000	3000	2800
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 1.93				
(W)	100 kHz - 100 mT	100°C		< 1.50			
Codification	P/N		B1E-3510B	B2E-3510B	A4E-3510B	A6E-3510B	A8E-3510B

DESIGN CURVES FOR A CORE SET

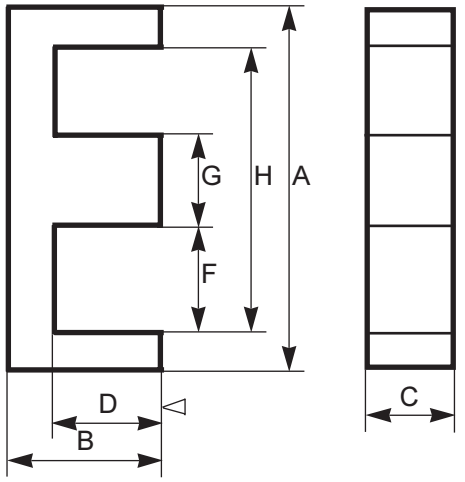
A_L vs. AIR GAP (ℰ).



E - 3512 A

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	14.4 ± 0.25	mm
	0.567 ± 0.010	in.
C	12.0 ± 0.25	mm
	0.472 ± 0.010	in.
D	9.8 ± 0.25	mm
	0.386 ± 0.01	in.
F	7.9 min	mm
	0.311	in.
G	9.2 ± 0.25	mm
	0.362 ± 0.010	in.
H	25.75 ± 0.50	mm
	1.014 ± 0.020	in.



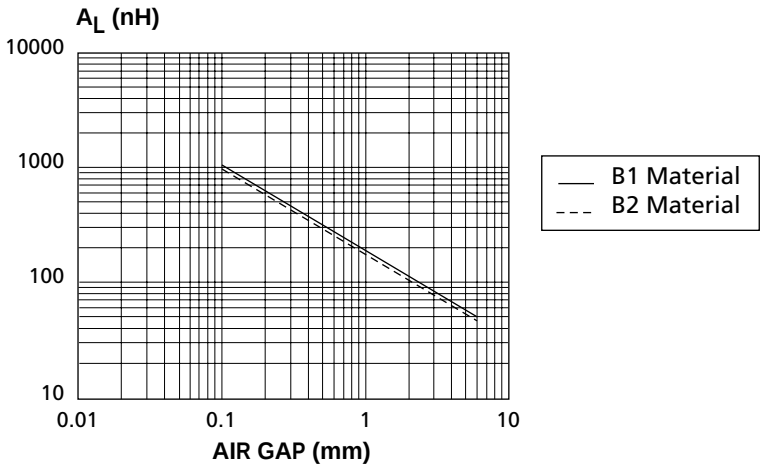
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.97	nH
Core constant	c_1	0.64	mm^{-1}
		16.20	$in.^{-1}$
Effective magnetic path length	l_e	70.2	mm
		2.764	in.
Effective core area	A_e	110.2	mm^2
		0.171	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	7734	mm^3
		0.472	$in.^3$
Weight per set	W	36.2	g

ELECTRICAL DATA

			MATERIAL		
			B1	B2	A8
A_L (nH) ± 25 %	Without airgap	25°C	3750	3000	5250
μ_e	Approx.	25°C	1900	1550	2650
μ_a	Flux density at320 mT 100°C	> 1000			
	340 mT	100°C		> 1500	
Total losses	25 kHz - 200 mT	100°C	< 1.54		
(W)	100 kHz - 100 mT	100°C		< 1.20	
Codification	P/N		B1E-3512A	B2E-3512A	A8E-3512A

DESIGN CURVES FOR A CORE SET

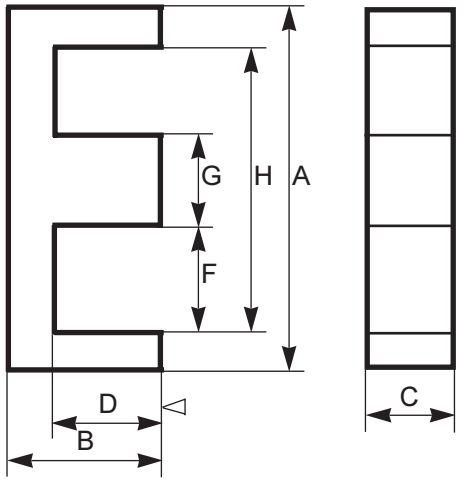
A_L vs. AIR GAP.



E - 3512 B

DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	in.
B	23.8 ± 0.25	mm
	0.937 ± 0.010	in.
C	12 ± 0.4	mm
	0.472 ± 0.016	in.
D	19.05 ± 0.40	mm
	0.750 ± 0.010	in.
F	7.61 min	mm
	0.300 mini	in.
G	9.52 ± 0.20	mm
	0.375 ± 0.008	in.
H	25.43 ± 0.50	mm
	1.001 ± 0.020	in.



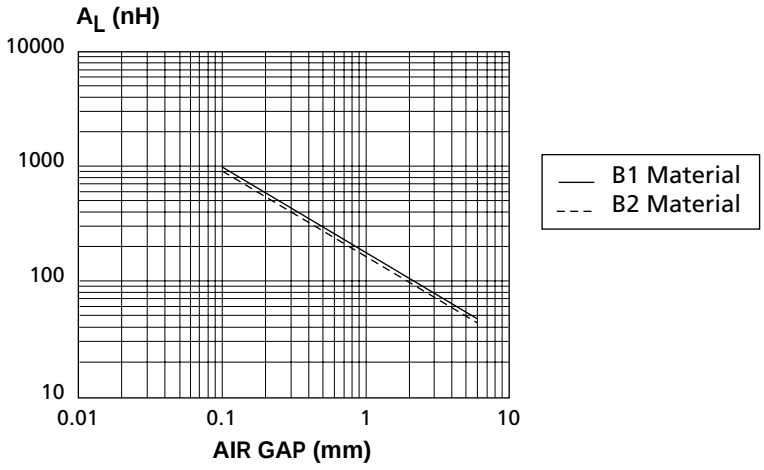
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.34	nH
Core constant	c_1	0.94	mm^{-1}
		23.82	$in.^{-1}$
Effective magnetic path length	l_e	107	mm
		4.213	in.
Effective core area	A_e	114	mm^2
		0.177	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	12196	mm^3
		0.744	$in.^3$
Weight per set	W	54.1	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2100	2200	4000	3600
μ_e	Approx.	25°C	1550	1650	3000	2700
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 2.43			
(W)	100 kHz - 100 mT	100°C		< 1.90		
Codification	P/N		B1E-3512B	B2E-3512B	A6E-3512B	A8E-3512B

DESIGN CURVES FOR A CORE SET

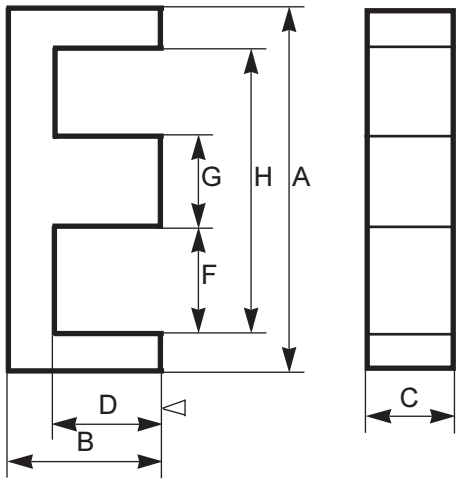
A_L vs. AIR GAP.



E - 3512 C

DIMENSIONS

A	35.15 ± 0.65	mm
	1.384 ± 0.026	in.
B	23.45 ± 0.35	mm
	0.923 ± 0.014	in.
C	11.7 ± 0.30	mm
	0.461 ± 0.012	in.
D	18.3 ± 0.30	mm
	0.720 ± 0.012	in.
F	7.15 min	mm
	0.281 mini	in.
G	10 ± 0.30	mm
	0.394 ± 0.012	in.
H	24.6 mini	mm
	0.969 mini	in.



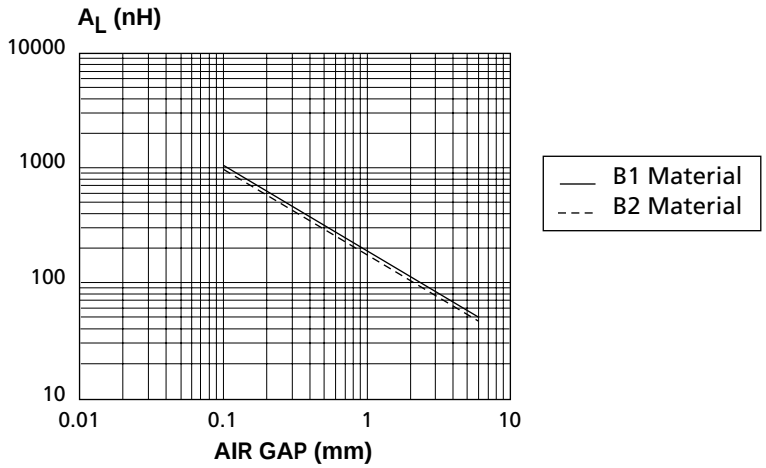
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.45	nH
Core constant	c_1	0.86	mm^{-1}
		21.84	$in.^{-1}$
Effective magnetic path length	l_e	104	mm
		4.094	in.
Effective core area	A_e	120	mm^2
		0.186	$in.^2$
Minimum core area	A mini	117	mm^2
		0.181	$in.^2$
Effective core volume	V_e	12500	mm^3
		0.763	$in.^3$
Weight per set	W	62.6	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2100	2350	4300	2950
μ_e	Approx.	25°C	1450	1650	2950	2700
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 2.43			
(W)	100 kHz - 100 mT	100°C		< 1.90		
Codification	P/N		B1E-3512C	B2E-3512C	A6E-3512C	A8E-3512C

DESIGN CURVES FOR A CORE SET

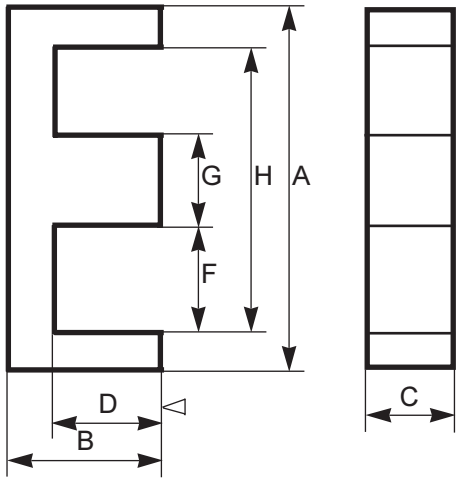
A_L vs. AIR GAP.



E - 3611 A

DIMENSIONS

A	35.9 ± 1.00	mm
	1.413 ± 0.039	in.
B	17.8 ± 0.20	mm
	0.701 ± 0.008	in.
C	11.25 ± 0.25	mm
	0.443 ± 0.010	in.
D	12.3 ± 0.30	mm
	0.484 ± 0.012	in.
F	7.4 min	mm
	0.291	in.
G	9.45 ± 0.25	mm
	0.372 ± 0.010	in.
H	25.2 ± 0.70	mm
	0.992 ± 0.028	in.



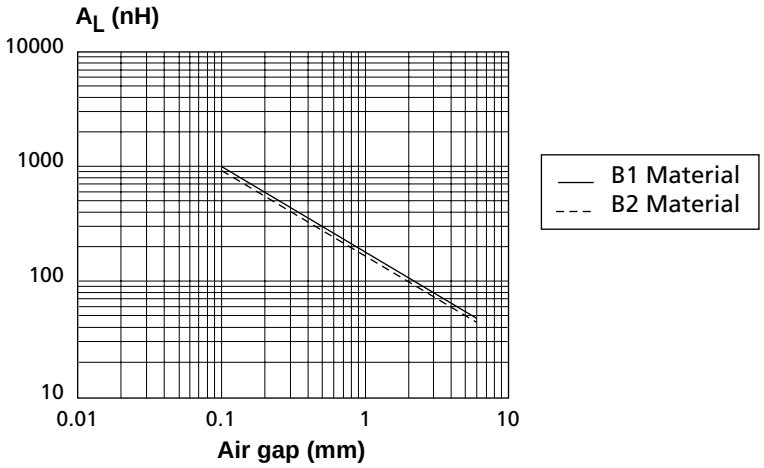
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.8	nH
Core constant	c_1	0.70	mm^{-1}
		17.78	$in.^{-1}$
Effective magnetic path length	l_e	81	mm
		3.189	in.
Effective core area	A_e	116	mm^2
		0.180	$in.^2$
Minimum core area	A mini	106	mm^2
		0.164	$in.^2$
Effective core volume	V_e	9400	mm^3
		0.574	$in.^3$
Weight per set	W	54	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3600	2800	5000	4550
μ_e	Approx.	25°C	2000	1550	2750	2500
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 1.90			
(W)	100 kHz - 100 mT	100°C		< 1.50		
Codification	P/N		B1E-3611A	B2E-3611A	A6E-3611A	A8E-3611A

DESIGN CURVES FOR A CORE SET

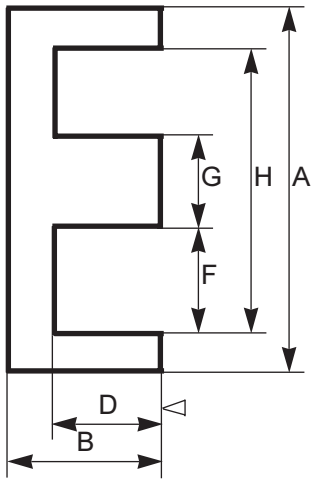
A_L vs. AIR GAP (Ɛ).



E - 4012 B

DIMENSIONS

A	40.5 ± 0.40	mm
	1.594 ± 0.016	in.
B	27.25 ± 0.25	mm
	1.073 ± 0.010	in.
C	11.65 ± 0.35	mm
	0.459 ± 0.014	in.
D	20.25 ± 0.40	mm
	0.797 ± 0.016	in.
F	7.78 min	mm
	0.306	in.
G	11.65 ± .25	mm
	0.459 ± 0.010	in.
H	28 ± 0.55	mm
	1.102 ± 0.022	in.



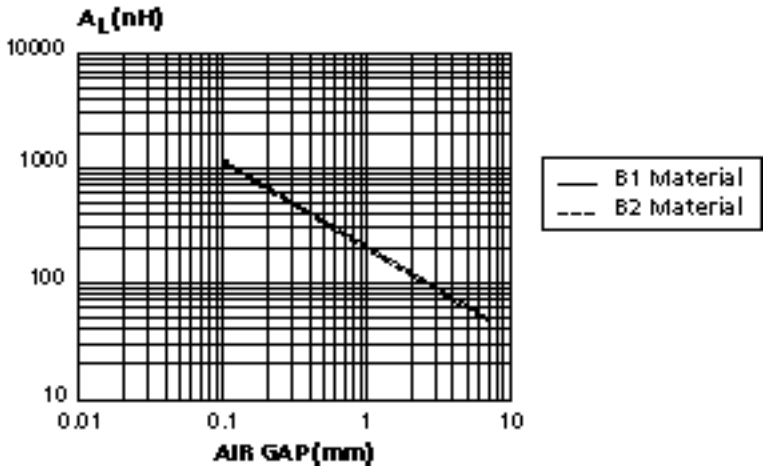
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.55	nH
Core constant	c_1	0.81	mm^{-1}
		20.59	$in.^{-1}$
Effective magnetic path length	l_e	117	mm
		4.622	in.
Effective core area	A_e	144.6	mm^2
		0.224	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	16980	mm^3
		1.036	$in.^3$
Weight per set	W	79.9	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3250	2550	4750	4500
μ_e	Approx.	25°C	2100	1650	3050	2900
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 3.40			
(W)	100 kHz - 100 mT	100°C		< 2.60		
Codification	P/N		B1E-4012B	B2E-4012B	A6E-4012B	A8E-4012B

DESIGN CURVES FOR A CORE SET

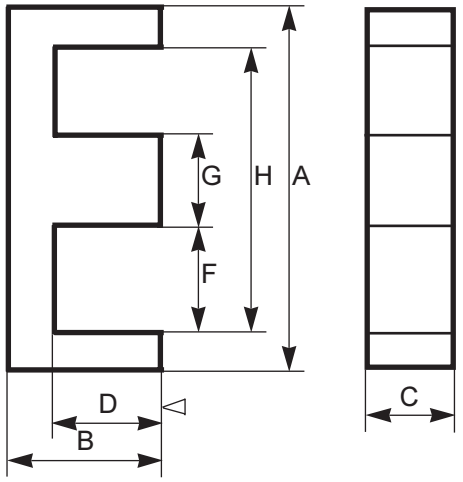
A_L vs. AIR GAP (ℇ).



E - 4012 C

DIMENSIONS

A	39.9 ± 0.80	mm
	1.571 ± 0.031	in.
B	17.3 ± 0.15	mm
	0.681 ± 0.006	in.
C	11.87 ± 0.20	mm
	0.467+.0.008	in.
D	10.2 ± 0.20	mm
	0.402 ± 0.008	in.
F	7.8 min	mm
	0.307 mini	in.
G	11.65 ± 0.25	mm
	0.459 ± 0.010	in.
H	28.05 ± 0.55	mm
	1.104 ± 0.022	in.



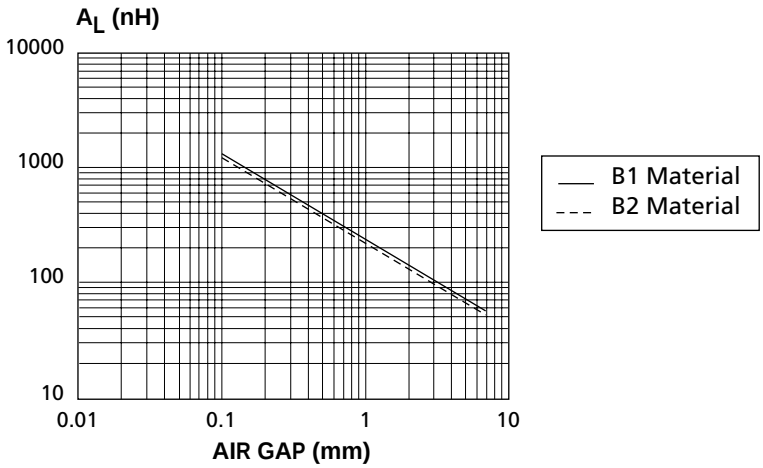
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.41	nH
Core constant	c_1	0.52	mm^{-1}
		13.24	$in.^{-1}$
Effective magnetic path length	l_e	77.1	mm
		3.035	in.
Effective core area	A_e	148	mm^2
		0.229	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	11398	mm^3
		0.696	$in.^3$
Weight per set	W	54.5	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4900	3750	6550	6000
μ_e	Approx.	25°C	2050	1550	2750	2500
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 2.28			
(W)	100 kHz - 100 mT	100°C		< 1.80		
Codification	P/N		B1E-4012C	B2E-4012C	A6E-4012C	A8E-4012C

DESIGN CURVES FOR A CORE SET

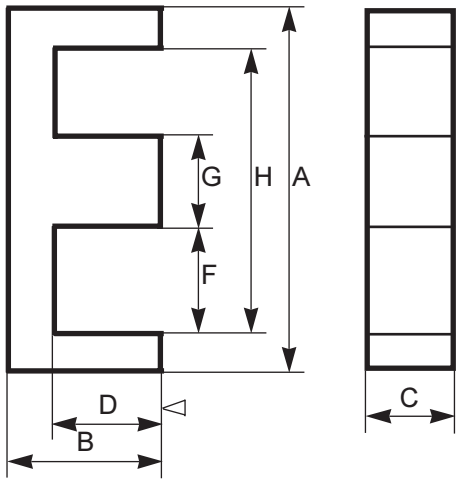
A_L vs. AIR GAP.



E - 4012 D

DIMENSIONS

A	40 ± 0.50	mm
	1.575 ± 0.020	in.
B	27.25 ± 0.25	mm
	1.073 ± 0.010	in.
C	11.65 ± 0.35	mm
	0.459 ± 0.014	in.
D	20.25 ± 0.25	mm
	0.797 ± 0.010	in.
F	8.25 min	mm
	0.325	in.
G	11.65 ± 0.35	mm
	0.459 ± 0.014	in.
H	29 ± 0.50	mm
	1.142 ± 0.020	in.



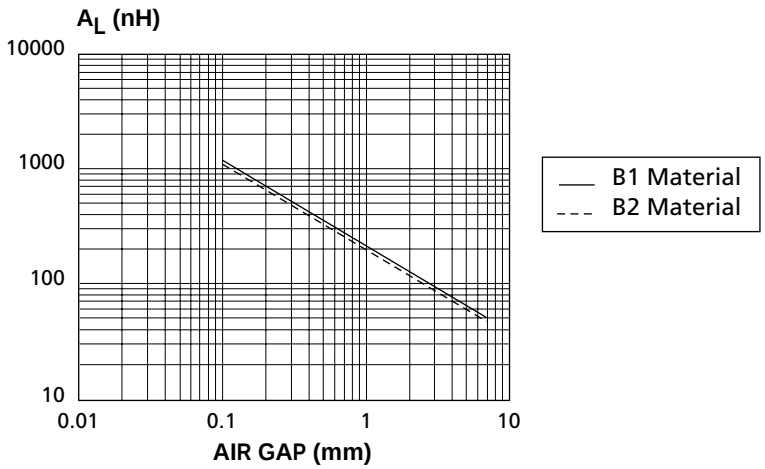
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.47	nH
Core constant	c_1	0.85	mm^{-1}
		21.71	$in.^{-1}$
Effective magnetic path length	l_e	117.5	mm
		4.626	in.
Effective core area	A_e	137.3	mm^2
		0.213	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	16134	mm^3
		0.985	$in.^3$
Weight per set	W	79.3	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3250	2450	4500	4050
μ_e	Approx.	25°C	2200	1650	3050	2750
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 3.22			
(W)	100 kHz - 100 mT	100°C		< 2.50		
Codification	P/N		B1E-4012D	B2E-4012D	A6E-4012D	A8E-4012D

DESIGN CURVES FOR A CORE SET

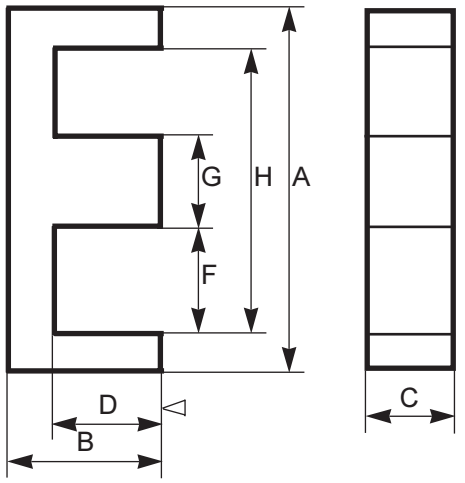
A_L vs. AIR GAP (ℰ).



E - 4112 A

DIMENSIONS

A	40.7 ± 0.80	mm
	1.602 ± 0.031	in.
B	16.48 ± 0.25	mm
	0.646 ± 0.010	in.
C	12.45 ± 0.25	mm
	0.490 ± 0.010	in.
D	10.5 ± 0.25	mm
	0.413 ± 0.010	in.
F	7.95 min	mm
	0.313	in.
G	12.45 ± 0.25	mm
	0.490 ± 0.010	in.
H	29.1 ± 0.50	mm
	1.146 ± 0.020	in.



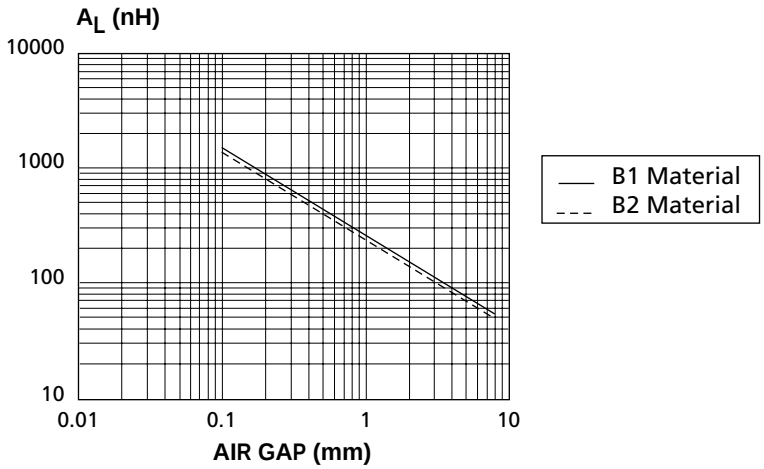
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.42	nH
Core constant	c_1	0.52	mm^{-1}
		13.21	$in.^{-1}$
Effective magnetic path length	l_e	77	mm
		3.031	in.
Effective core area	A_e	149	mm^2
		0.231	$in.^2$
Minimum core area	A mini	144	mm^2
		0.223	$in.^2$
Effective core volume	V_e	11562	mm^3
		0.706	$in.^3$
Weight per set	W	64	g

ELECTRICAL DATA

			MATERIAL				
			B1	B2	F1	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4700	4000	4400	6600	6000
μ_e	Approx.	25°C	1950	1650	1800	2750	2500
μ_a	Flux density at320 mT 100°C	> 1000		> 1000			
	340 mT	100°C		> 1500			
Total losses (W)	25 kHz - 200 mT	100°C	< 2.40				
	100 kHz - 100 mT	100°C		< 1.75			
	100 kHz - 200 mT	100°C			< 6.80		
Codification	P/N		B1E-4112A	B2E-4112A	F1E-4112A	A6E-4112A	A8E-4112A

DESIGN CURVES FOR A CORE SET

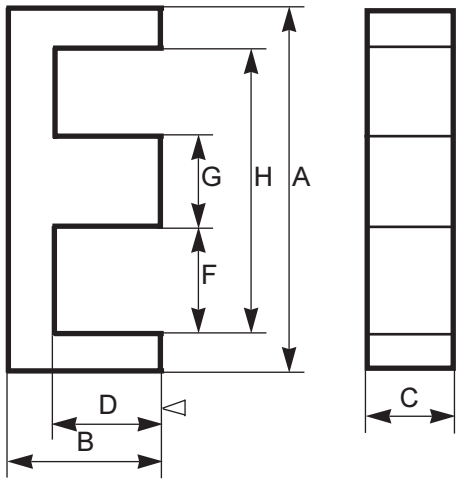
A_L vs. AIR GAP (ℰ).



E - 4113 A

DIMENSIONS

A	41 ± 0.80	mm
	1.614 ± 0.031	in.
B	16.65 ± 0.15	mm
	0.656 ± 0.006	in.
C	12.6 ± 0.30	mm
	0.496 ± 0.012	in.
D	10.45 ± 0.25	mm
	0.411 ± 0.010	in.
F	7.54 min	mm
	0.297	in.
G	12.7 ± 0.25	mm
	0.500 ± 0.010	in.
H	28.54 ± 0.50	mm
	1.124 ± 0.020	in.



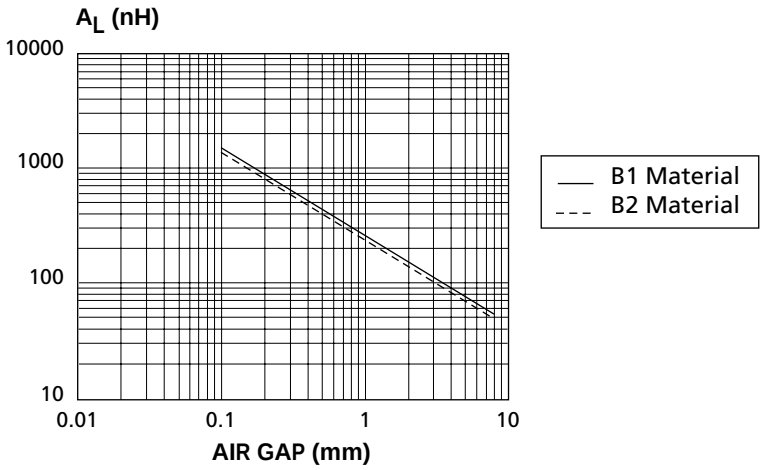
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.6	nH
Core constant	c_1	0.49	mm^{-1}
		12.45	$in.^{-1}$
Effective magnetic path length	l_e	77	mm
		3.031	in.
Effective core area	A_e	158	mm^2
		0.245	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	12200	mm^3
		0.744	$in.^3$
Weight per set	W	64	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	5000	2800	8800	7800
μ_e	Approx.	25°C	1900	1450	3400	3000
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 2.45			
(W)	100 kHz - 100 mT	100°C		< 1.85		
Codification	P/N		B1E-4113A	B2E-4113A	A6E-4113A	A8E-4113A

DESIGN CURVES FOR A CORE SET

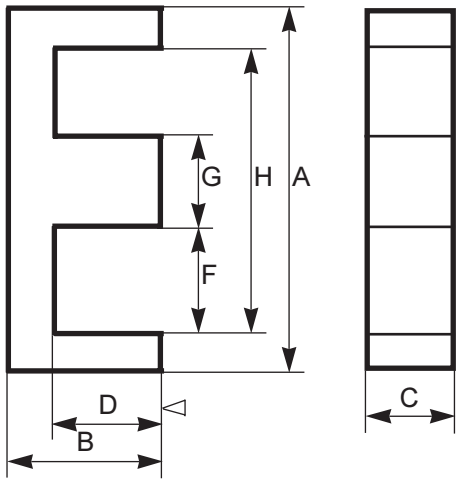
A_L vs. AIR GAP (ℰ).



E - 4215 A

DIMENSIONS

A	42.15 ± 0.85	mm
	1.659 ± 0.033	in.
B	21 ± 0.20	mm
	0.827 ± 0.008	in.
C	14.95 ± 0.25	mm
	0.589 ± 0.010	in.
D	15.15 ± 0.35	mm
	0.596 ± 0.014	in.
F	8.65 min	mm
	0.341	in.
G	11.95 ± 0.25	mm
	0.470 ± 0.010	in.
H	30.1 ± 0.60	mm
	1.185 ± 0.024	in.



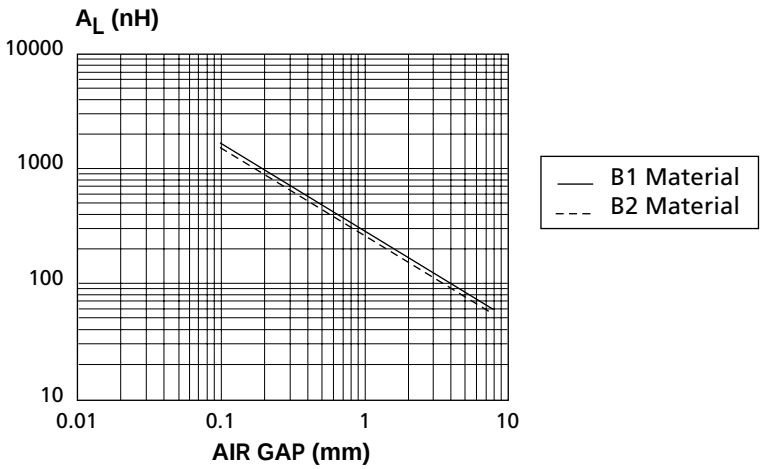
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.35	nH
Core constant	c_1	0.54	mm^{-1}
		13.72	$in.^{-1}$
Effective magnetic path length	l_e	97	mm
		3.819	in.
Effective core area	A_e	180	mm^2
		0.279	$in.^2$
Minimum core area	A mini	180	mm^2
		0.279	$in.^2$
Effective core volume	V_e	17500	mm^3
		1.068	$in.^3$
Weight per set	W	90	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	5000	3750	8800	7000
μ_e	Approx.	25°C	2150	1600	3400	3000
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 3.50			
(W)	100 kHz - 100 mT	100°C		< 2.65		
Codification	P/N		B1E-4215A	B2E-4215A	A6E-4215A	A8E-4215A

DESIGN CURVES FOR A CORE SET

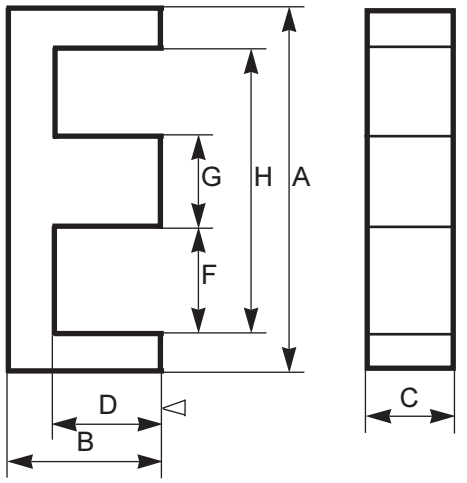
A_L vs. AIR GAP (ℰ).



E - 4215 B

DIMENSIONS

A	42.8 ± 0.85	mm
	1.685 ± 0.033	in.
B	21.1 ± 0.20	mm
	0.831 ± 0.008	in.
C	15.47 ± 0.25	mm
	0.609 ± 0.010	in.
D	15.11 ± 0.35	mm
	0.595 ± 0.014	in.
F	9.11 min	mm
	0.359	in.
G	11.9 ± 0.25	mm
	0.469 ± 0.010	in.
H	30.97 ± 0.60	mm
	1.219 ± 0.024	in.



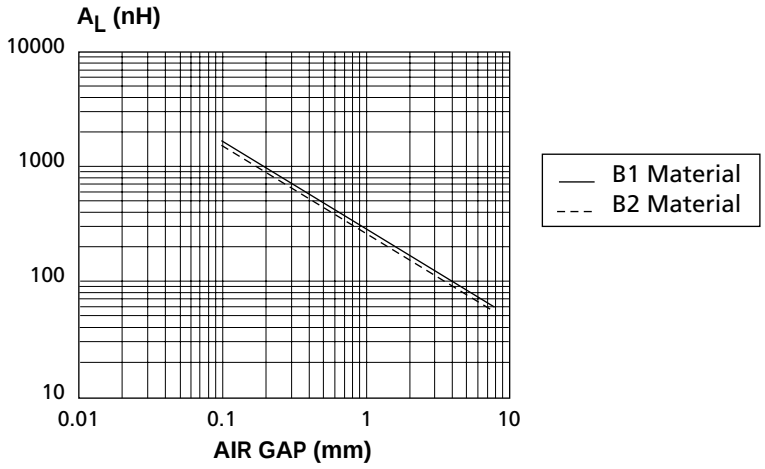
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.36	nH
Core constant	c_1	0.53	mm^{-1}
		13.52	$in.^{-1}$
Effective magnetic path length	l_e	98	mm
		3.858	in.
Effective core area	A_e	184	mm^2
		0.285	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	18000	mm^3
		1.098	$in.^3$
Weight per set	W	89.6	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	5000	3800	8000	7000
μ_e	Approx.	25°C	2100	1600	3400	2950
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 3.60			
(W)	100 kHz - 100 mT	100°C		< 2.70		
Codification	P/N		B1E-4215B	B2E-4215B	A6E-4215B	A8E-4215B

DESIGN CURVES FOR A CORE SET

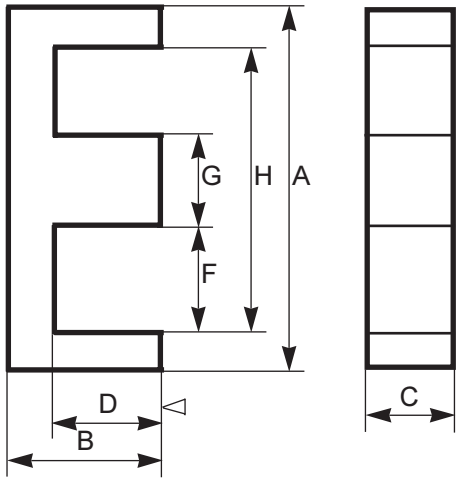
A_L vs. AIR GAP (ℰ).



E - 4215 H

DIMENSIONS

A	42.3 ± 0.85	mm
	1.665 ± 0.033	in.
B	21.4 ± 0.20	mm
	0.843 ± 0.008	in.
C	15 ± 0.25	mm
	0.591 ± 0.010	in.
D	15.4 ± 0.35	mm
	0.606 ± 0.014	in.
F	8.75 min	mm
	0.344	in.
G	12 ± 0.25	mm
	0.472 ± 0.010	in.
H	30.3 ± 0.60	mm
	1.193 ± 0.024	in.



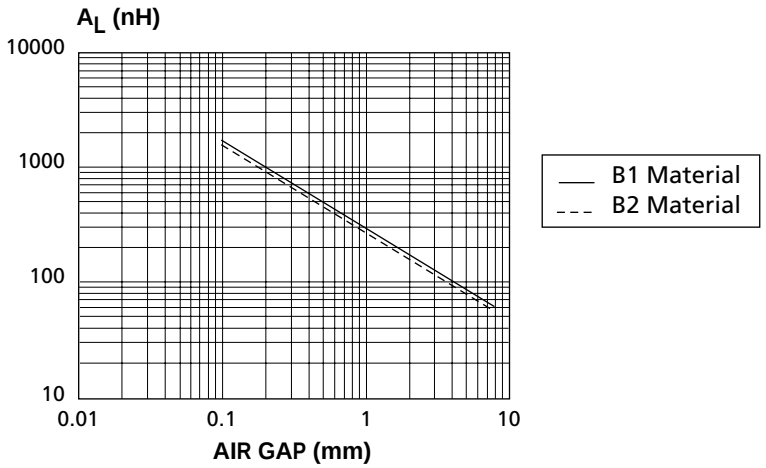
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.29	nH
Core constant	c_1	0.55	mm^{-1}
		13.97	$in.^{-1}$
Effective magnetic path length	l_e	99	mm
		3.898	in.
Effective core area	A_e	180	mm^2
		0.279	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	17770	mm^3
		1.084	$in.^3$
Weight per set	W	90	g

ELECTRICAL DATA

			MATERIAL			
			B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4875	3650	6700	6100
μ_e	Approx.	25°C	2150	1600	2950	2650
μ_a	Flux density at320 mT 100°C	> 1000				
	340 mT	100°C		> 1500		
Total losses	25 kHz - 200 mT	100°C	< 3.50			
(W)	100 kHz - 100 mT	100°C		< 2.60		
Codification	P/N		B1E-4215H	B2E-4215H	A6E-4215H	A8E-4215H

DESIGN CURVES FOR A CORE SET

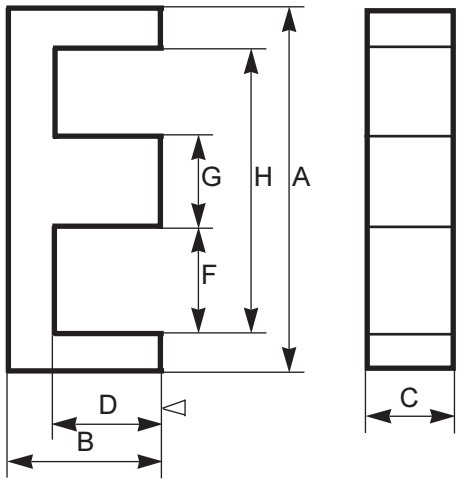
A_L vs. AIR GAP (ℰ).



E - 4220 A

DIMENSIONS

A	42.15 ± 0.85	mm
	1.659 ± 0.033	in.
B	21 ± 0.20	mm
	0.827 ± 0.008	in.
C	19.5 ± 0.50	mm
	0.768 ± 0.020	in.
D	15.15 ± 0.35	mm
	0.596 ± 0.014	in.
F	8.65 min	mm
	0.341	in.
G	11.95 ± 0.25	mm
	0.470 ± 0.010	in.
H	30.1 ± 0.60	mm
	1.185 ± 0.024	in.



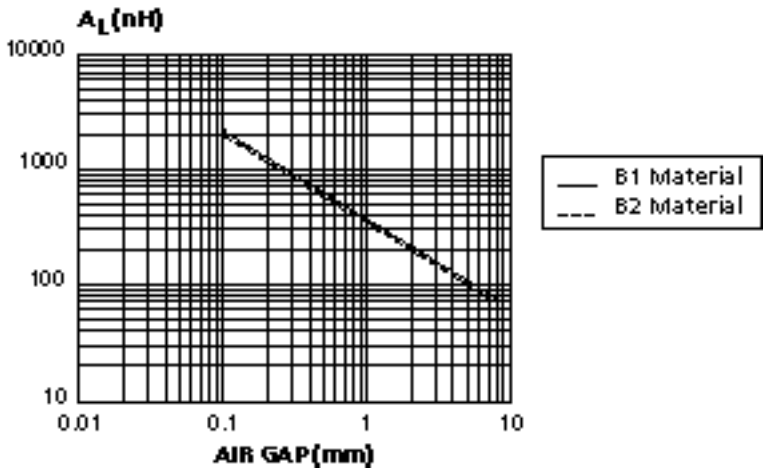
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3	nH
Core constant	c_1	0.42	mm^{-1}
		10.67	$in.^{-1}$
Effective magnetic path length	l_e	97	mm
		3.819	in.
Effective core area	A_e	233	mm^2
		0.361	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	22600	mm^3
		1.38	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

			MATERIAL		
			B1	B2	A8
A_L (nH) ± 25 %	Without airgap	25°C	6500	4875	7950
μ_e	Approx.	25°C	2150	1650	2650
μ_a	Flux density at320 mT 100°C	> 1000			
	340 mT	100°C		> 1500	
Total losses	25 kHz - 200 mT	100°C	< 4.50		
(W)	100 kHz - 100 mT	100°C		< 3.40	
Codification	P/N		B1E-4220A	B2E-4220A	A8E-4220A

DESIGN CURVES FOR A CORE SET

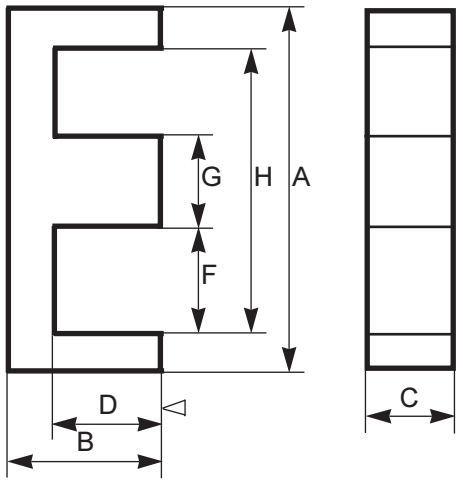
A_L vs. AIR GAP (Ɛ).



E - 4220 B

DIMENSIONS

A	42.8 ± 0.85	mm
	1.685 ± 0.033	in.
B	21.1 ± 0.20	mm
	0.831 ± 0.008	in.
C	19.6 ± 0.40	mm
	0.772 ± 0.016	in.
D	15.11 ± 0.35	mm
	0.595 ± 0.014	in.
F	9.11 min	mm
	0.359	in.
G	11.9 ± 0.25	mm
	0.469 ± 0.010	in.
H	30.97 ± 0.60	mm
	1.219 ± 0.024	in.



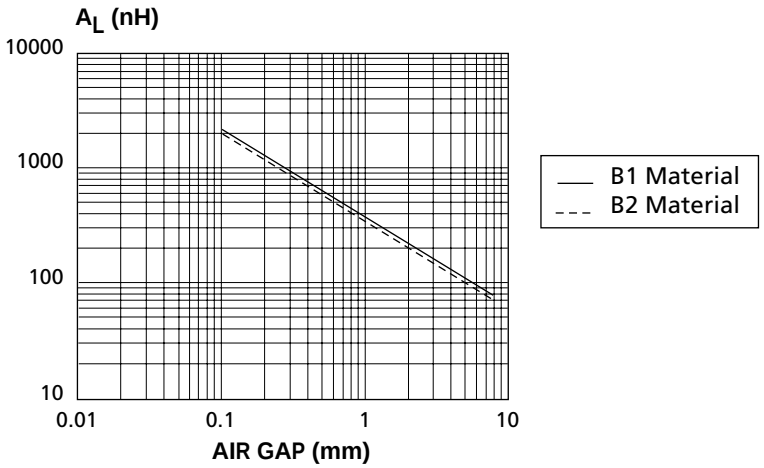
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3	nH
Core constant	c_1	0.42	mm^{-1}
		10.64	$in.^{-1}$
Effective magnetic path length	l_e	98	mm
		3.858	in.
Effective core area	A_e	233	mm^2
		0.361	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	22900	mm^3
		1.40	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

			MATERIAL		
			B1	B2	A8
A_L (nH) ± 25 %	Without airgap	25°C	6500	4850	9000
μ_e	Approx.	25°C	2150	1600	3000
μ_a	Flux density at320 mT 100°C	> 1000			
	340 mT	100°C		> 1500	
Total losses	25 kHz - 200 mT	100°C	< 4.58		
(W)	100 kHz - 100 mT	100°C		< 3.50	
Codification	P/N		B1E-4220B	B2E-4220B	A8E-4220B

DESIGN CURVES FOR A CORE SET

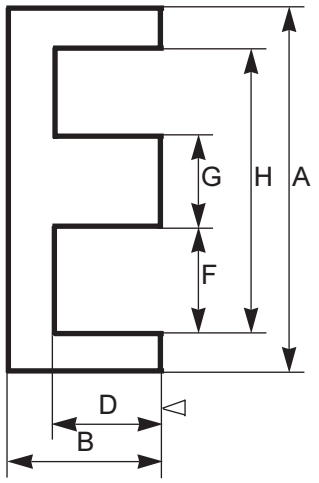
A_L vs. AIR GAP (ℰ).



E - 4220 H

DIMENSIONS

A	42.3 ± 0.85	mm
	1.665 ± 0.033	in.
B	21.4 ± 0.2	mm
	0.843 ± 0.008	in.
C	19.6 ± 0.40	mm
	0.772 ± 0.016	in.
D	15.4 ± 0.35	mm
	0.606 ± 0.014	in.
F	8.75 min	mm
	0.344	in.
G	12 ± 0.25	mm
	0.472 ± 0.010	in.
H	30.3 ± 0.60	mm
	1.193 ± 0.024	in.



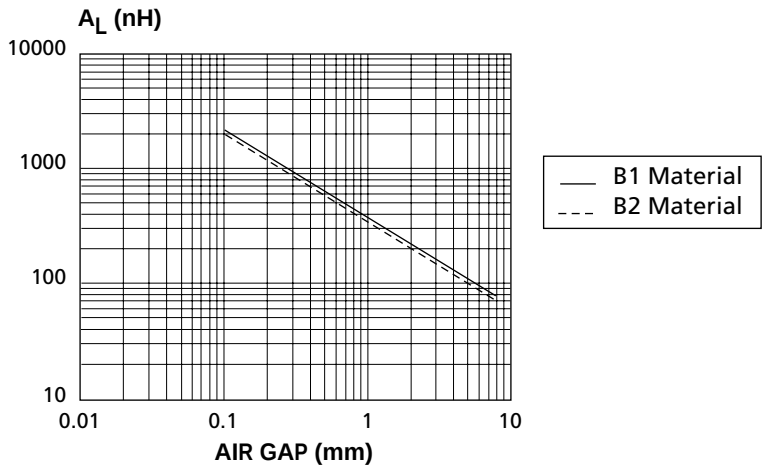
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.99	nH
Core constant	c_1	0.42	mm^{-1}
		10.67	$in.^{-1}$
Effective magnetic path length	l_e	99	mm
		3.898	in.
Effective core area	A_e	235	mm^2
		0.364	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	23220	mm^3
		1.42	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

			MATERIAL		
			B1	B2	A8
A_L (nH) ± 25 %	Without airgap	25°C	6475	4875	7950
μ_e	Approx.	25°C	2150	1650	2650
μ_a	Flux density at320 mT 100°C	> 1000			
	340 mT	100°C		> 1500	
Total losses	25 kHz - 200 mT	100°C	< 4.60		
(W)	100 kHz - 100 mT	100°C		< 3.50	
Codification	P/N		B1E-4220H	B2E-4220H	A8E-4220H

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℇ).

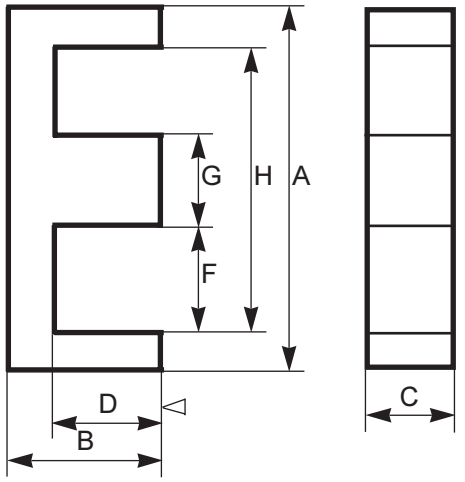


HIGH POWER

E - 4916 A

DIMENSIONS

A	48.85 ± 0.75 1.923 ± 0.030	mm in.
B	20.6 ± 0.20 0.811 ± 0.008	mm in.
C	15.6 ± 0.25 0.614 ± 0.010	mm in.
D	12.11 ± 0.20 0.477 ± 0.008	mm in.
F	7.95 min 0.313	mm in.
G	15.6 ± 0.25 0.614 ± 0.010	mm in.
H	32.4 ± 0.65 1.276 ± 0.026	mm in.



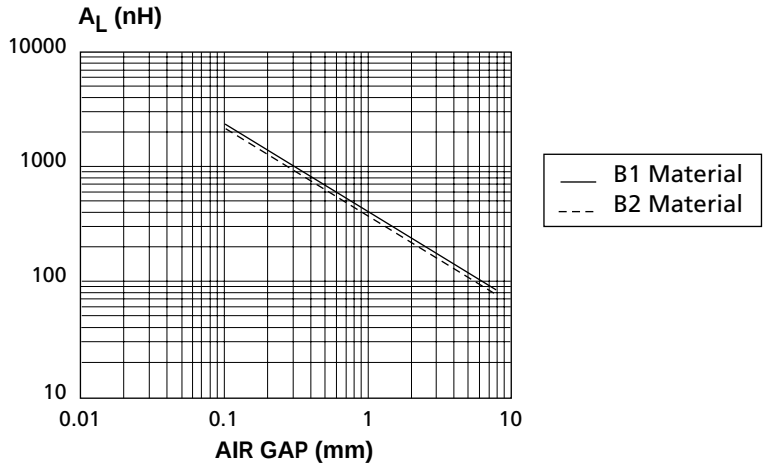
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.5	nH
Core constant	c_1	0.36 9.14	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	91 3.583	mm in.
Effective core area	A_e	254 0.394	mm^2 $in.^2$
Minimum core area	A mini	243 0.377	mm^2 $in.^2$
Effective core volume	V_e	23200 1.42	mm^3 $in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	7000	5600
μ_e	Approx.	25°C	2000	1600
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	25 kHz - 200 mT	100°C	< 4.70	
(W)	100 kHz - 100 mT	100°C		< 3.60
Codification	P/N		B1E-4916A	B2E-4916A

DESIGN CURVES FOR A CORE SET

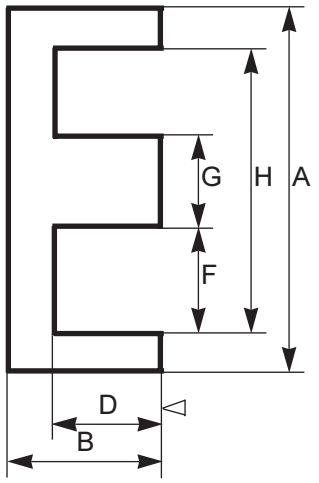
A_L vs. AIR GAP (ℰ).



E - 5521 A

DIMENSIONS

A	55.15 ± 1.05	mm
	2.171 ± 0.041	in.
B	27.5 ± 0.30	mm
	1.083 ± 0.012	in.
C	20.7 ± 0.30	mm
	0.815 ± 0.012	in.
D	18.8 ± 0.30	mm
	0.740 ± 0.012	in.
F	10.15 min	mm
	0.400	in.
G	16.95 ± 0.25	mm
	0.667 ± 0.010	in.
H	38.1 ± 0.60	mm
	1.500 ± 0.024	in.



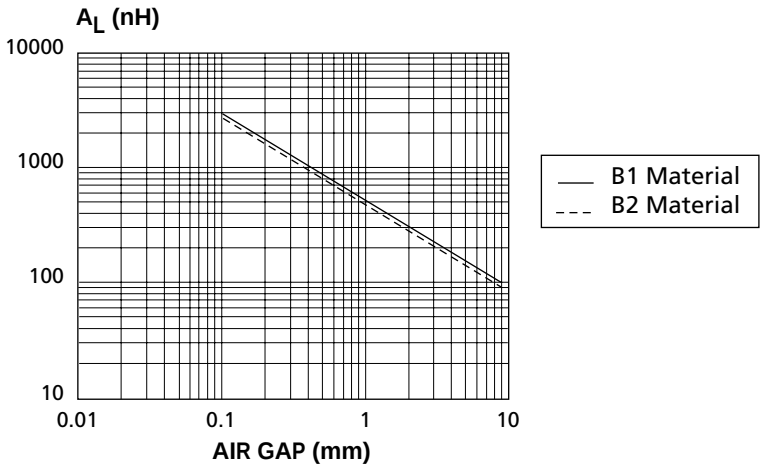
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.6	nH
Core constant	c_1	0.35	mm^{-1}
		8.89	$in.^{-1}$
Effective magnetic path length	l_e	123	mm
		4.843	in.
Effective core area	A_e	357	mm^2
		0.553	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	43700	mm^3
		2.67	$in.^3$
Weight per set	W	230	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	7200	5400
μ_e	Approx.	25°C	2000	1500
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses (W)	25 kHz - 200 mT	100°C	< 8.75	< 6.10
Codification	P/N		B1E-5521A	B2E-5521A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).

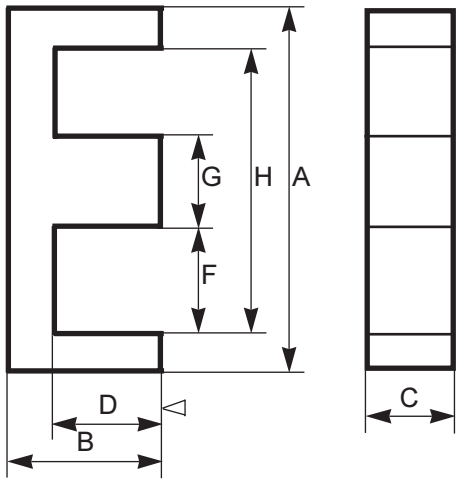


HIGH POWER

E - 5525 A

DIMENSIONS

A	55.15 ± 1.05	mm
	2.171 ± 0.041	in.
B	27.5 ± 0.30	mm
	1.083 ± 0.012	in.
C	24.7 ± 0.30	mm
	0.972 ± 0.012	in.
D	18.8 ± 0.30	mm
	0.740 ± 0.012	in.
F	10.15 min	mm
	0.400	in.
G	16.95 ± 0.25	mm
	0.667 ± 0.010	in.
H	38.1 ± 0.60	mm
	1.500 ± 0.024	in.



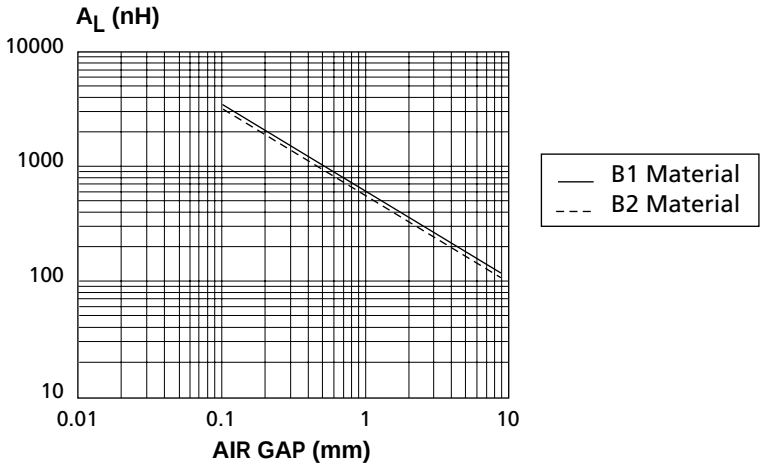
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.3	nH
Core constant	c_1	0.29	mm^{-1}
		7.37	$in.^{-1}$
Effective magnetic path length	l_e	123	mm
		4.843	in.
Effective core area	A_e	420	mm^2
		0.651	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	52000	mm^3
		3.17	$in.^3$
Weight per set	W	270	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	8600	6880
μ_e	Approx.	25°C	2000	1600
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses (W)	25 kHz - 200 mT	100°C	< 10.40	< 7.30
Codification	P/N		B1E-5525A	B2E-5525A

DESIGN CURVES FOR A CORE SET

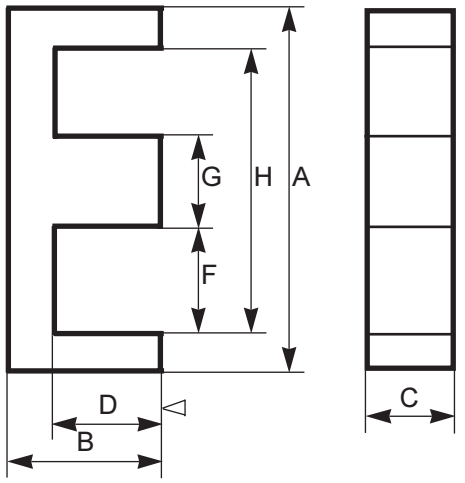
A_L vs. AIR GAP (ℇ).



E - 6527 A

DIMENSIONS

A	65.15 ± 1.35	mm
	2.565 ± 0.053	in.
B	32.5 ± 0.30	mm
	1.280 ± 0.012	in.
C	27.1 ± 0.30	mm
	1.067 ± 0.012	in.
D	22.6 ± 0.40	mm
	0.890 ± 0.016	in.
F	12.1 min	mm
	0.476	in.
G	19.65 ± 0.35	mm
	0.774 ± 0.014	in.
H	44.95 ± 0.75	mm
	1.770 ± 0.030	in.



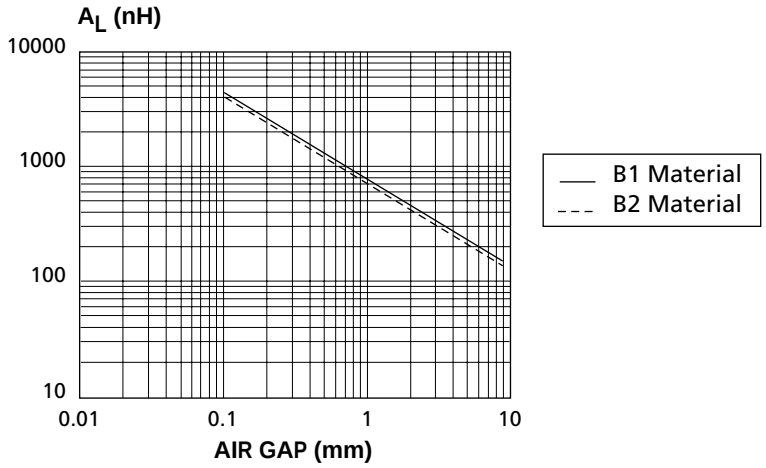
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.8	nH
Core constant	c_1	0.27	mm^{-1}
		6.73	$in.^{-1}$
Effective magnetic path length	l_e	146	mm
		5.748	in.
Effective core area	A_e	550	mm^2
		0.853	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	80400	mm^3
		4.91	$in.^3$
Weight per set	W	470	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	10000	7700
μ_e	Approx.	25°C	2100	1600
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 9.50	< 7.00
Codification	P/N		B1E-6527A	B2E-6527A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).

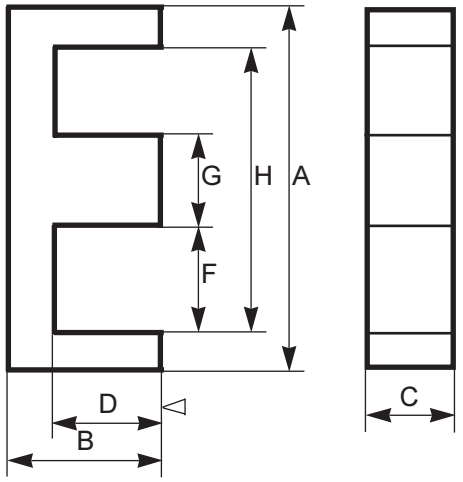


HIGH POWER

E - 7032 A

DIMENSIONS

A	70.5 ± 1.00	mm
	2.776 ± 0.039	in.
B	32.95 ± 0.25	mm
	1.297 ± 0.010	in.
C	31.6 ± 0.40	mm
	1.244 ± 0.016	in.
D	22.25 ± 0.35	mm
	0.876 ± 0.014	in.
F	13 min	mm
	0.512	in.
G	21.65 ± 0.35	mm
	0.852 ± 0.014	in.
H	48.75 ± 0.75	mm
	1.919 ± 0.030	in.



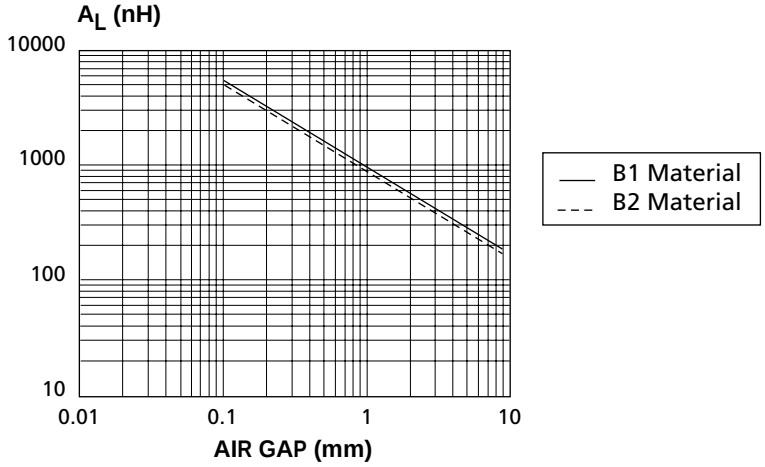
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	5.75	nH
Core constant	c_1	0.22	mm^{-1}
		5.59	$in.^{-1}$
Effective magnetic path length	l_e	149	mm
		5.866	in.
Effective core area	A_e	683	mm^2
		1.059	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	102000	mm^3
		6.22	$in.^3$
Weight per set	W	510	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	11500	9800
μ_e	Approx.	25°C	2000	17000
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses (W)	25 kHz - 200 mT	100°C	< 20.40	< 15.00
Codification	P/N		B1E-7032A	B2E-7032A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).

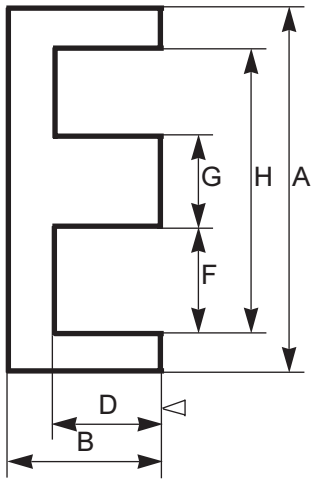


HIGH POWER

E - 8020 A

DIMENSIONS

A	80 ± 1.80	mm
	3.150 ± 0.071	in.
B	38.1 ± 0.40	mm
	1.500 ± 0.016	in.
C	19.8 ± 0.40	mm
	0.780 ± 0.016	in.
D	28.3 ± 0.40	mm
	1.114 ± 0.016	in.
F	19.35 min	mm
	0.762	in.
G	19.8 ± 0.40	mm
	0.780 ± 0.016	in.
H	60.2 ± 1.30	mm
	2.370 ± 0.051	in.



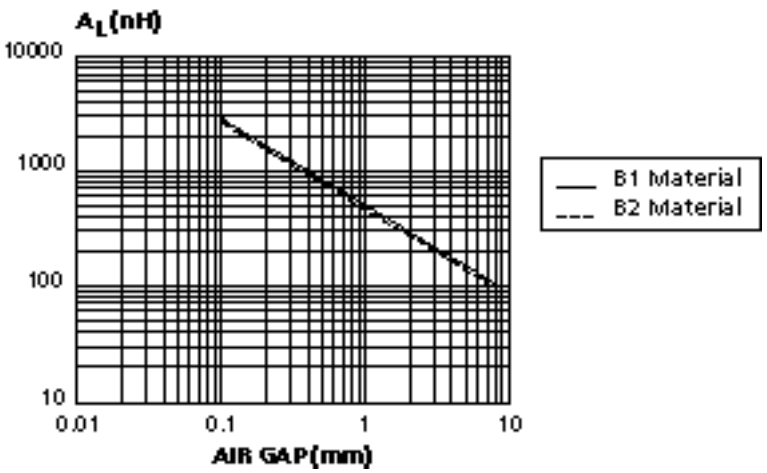
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.65	nH
Core constant	c_1	0.47	mm^{-1}
		11.94	$in.^{-1}$
Effective magnetic path length	l_e	185	mm
		7.283	in.
Effective core area	A_e	391	mm^2
		0.606	$in.^2$
Minimum core area	A mini	388	mm^2
		0.601	$in.^2$
Effective core volume	V_e	72120	mm^3
		4.40	$in.^3$
Weight per set	W	354	g

ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	5300	4600
μ_e	Approx.	25°C	2000	1750
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses (W)	25 kHz - 200 mT	100°C	< 8.30	< 6.30
Codification	P/N		B1E-8020A	B2E-8020A

DESIGN CURVES FOR A CORE SET

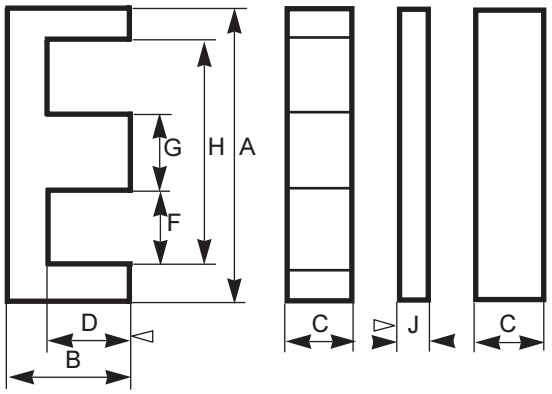
A_L vs. AIR GAP (Ɛ).



EI 2206 A

DIMENSIONS

A	22 ± 0.45 *0.866 ± 0.018*	mm *in.*
B	15 ± 0.20 *0.591 ± 0.008*	mm *in.*
C	5.75 ± 0.25 *0.226 ± 0.010*	mm *in.*
D	11 ± .0 25 *0.433 ± 0.010*	mm *in.*
F	4.98 min *0.196 mini*	mm *in.*
G	5.75 ± 0.25 *0.226 ± 0.010*	mm *in.*
H	16.3 ± 0.35 0.642 ± 0.014	mm in.
J	4 ± 0.20 *0.157 ± 0.008*	mm *in.*



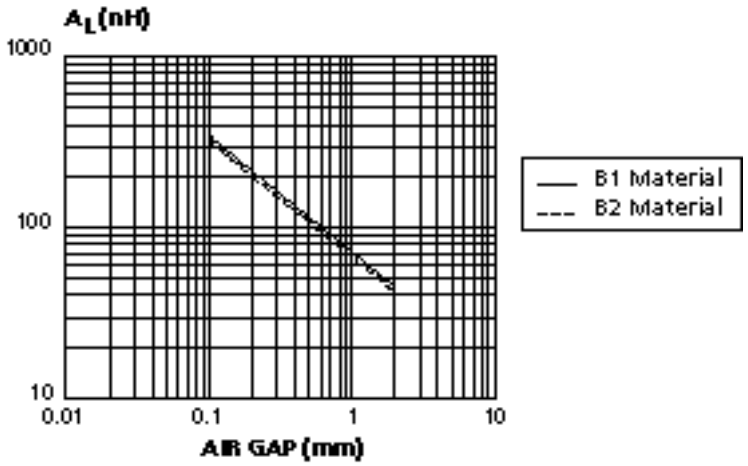
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.07	nH
Core constant	c_1	1.17 29.72	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	42.6 1.677	mm in.
Effective core area	A_e	36.6 *0.057*	mm^2 $in.^2$
Minimum core area	A mini	32.8 *0.051*	mm^2 $in.^2$
Effective core volume	V_e	1547 *0.0944*	mm^3 $in.^3$
Weight per set	W	8.6	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	A4	A8
A_L (nH) ± 25 %	Without airgap		25°C	1760	1400	3000	2350
μ_e	Approx.		25°C	1650	1300	2800	2200
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 0.31			
(W)	100 kHz	100 mT	100°C		< 0.255		
Codification	P/N			B1EI2206A	B2EI2206A	A4EI2206A	A8EI2206A

DESIGN CURVES FOR A CORE SET

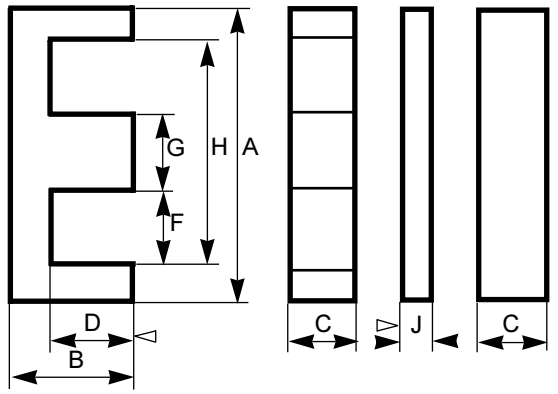
A_L vs. AIR GAP (℮).



EI 2506 C

DIMENSIONS

A	25.4 ± 0.50 *1 000± 0.020*	mm *in.*
B	16 ± 0.26 *0.630 ± 0.010*	mm *in.*
C	6.35 ± 0.25 *0.250 ± 0.010*	mm *in.*
D	12.83 ± 0 25 *0.505 ± 0.010*	mm *in.*
F	6.07 min *0.239 mini*	mm *in.*
G	6.35 ± 0.15 *0.250 ± 0.006*	mm *in.*
H	19.04 ± 0.40 *0.750 ± 0.016*	mm *in.*
J	3.18 ± 0.20 *0.125 ± 0.008*	mm *in.*



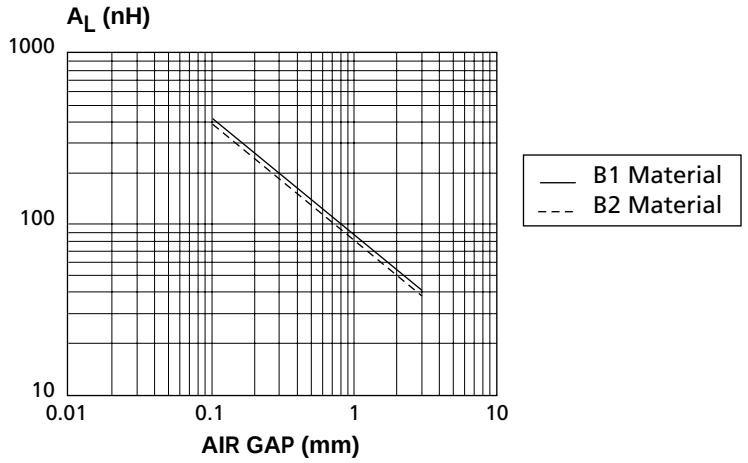
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.05	nH
Core constant	c_1	1.20 30.48	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	48.3 1.902	mm in.
Effective core area	A_e	40.3 *0.062*	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	1950 *0.119*	mm^3 $in.^3$
Weight per set	W	10	g

ELECTRICAL DATA

				MATERIAL				
				B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	1900	1450	3800	3400	2350
μ_e	Approx.		25°C	1800	1400	3600	3250	2250
μ_a	Flux density at320 mT	100°C	> 1000					
		340 mT	100°C		> 1500			
Total losses	25 kHz	200 mT	100°C	< 0.39				
(W)	100 kHz	100 mT	100°C		< 0.32			
Codification	P/N			B1EI2506C	B2EI2506C	A4EI2506C	A6EI2506C	A8EI2506C

DESIGN CURVES FOR A CORE SET

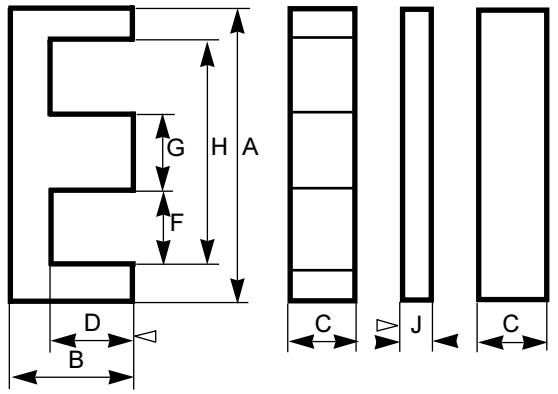
A_L vs. AIR GAP (Ɛ).



EI 2506 D

● DIMENSIONS

A	25 ± 0.50 *0.984 ± 0.020*	mm *in.*
B	17 ± 0.30 *0.669 ± 0.012*	mm *in.*
C	6.2 ± 0.20 *0.244 ± 0.008*	mm *in.*
D	13.5 ± 0.30 *0.531 ± 0.012*	mm *in.*
F	5.85 min *0.230 mini*	mm *in.*
G	6.35 ± 0.25 *0.250 ± 0.010*	mm *in.*
H	18.6 ± 0.30 *0.732 ± 0.012*	mm *in.*
J	3.45 ± 0.20 *0.136 ± 0.008*	mm *in.*



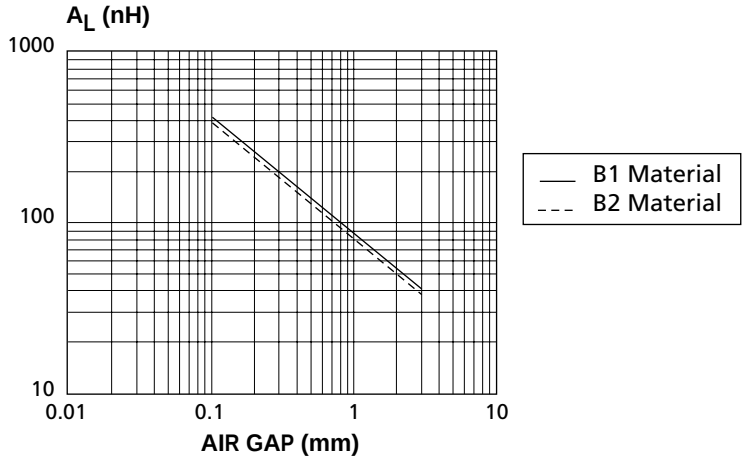
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.03	nH
Core constant	c_1	1.22 30.99	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	49.7 1.957	mm in.
Effective core area	A_e	40.7 *0.063*	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	2020 *0.123*	mm^3 $in.^3$
Weight per set	W	10.3	g

● ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	1900	1700	3400	2350
μ_e	Approx.		25°C	1850	1650	3300	2300
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 0.40			
(W)	100 kHz	100 mT	100°C		< 0.33		
Codification	P/N			B1EI2506D	B2EI2506D	A6EI2506D	A8EI2506D

● DESIGN CURVES FOR A CORE SET

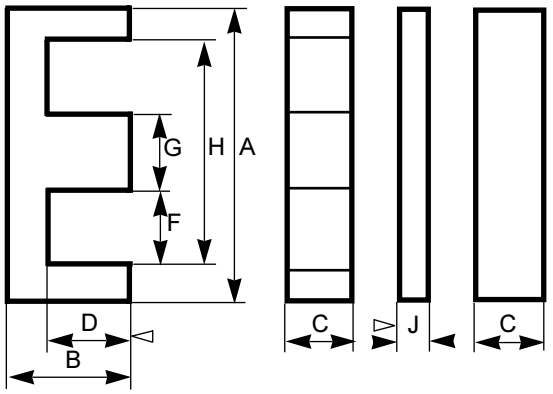
A_L vs. AIR GAP (Ɛ).



EI 2811 A

DIMENSIONS

A	28 ± 0.55	mm
	1.102 ± 0.022	*in.*
B	17 ± 0.20	mm
	0.669 ± 0.008	*in.*
C	10.75 ± 0.20	mm
	0.423 ± 0.008	*in.*
D	12.5 ± 0.30	mm
	0.492 ± 0.012	*in.*
F	0.55 min	mm
	0.219 mini	*in.*
G	7.25 ± 0.25	mm
	0.285 ± 0.010	*in.*
H	18.85 ± 0.25	mm
	0.742 ± 0.010	*in.*
J	3.5 ± 0.20	mm
	0.138 ± .0008	*in.*



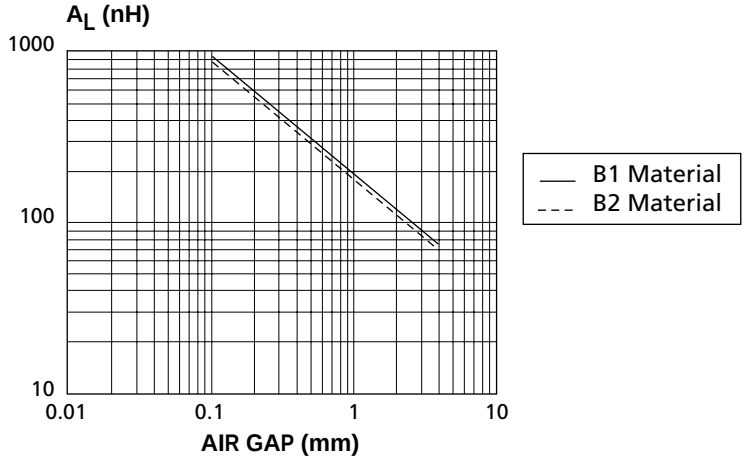
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.51	nH
Core constant	c_1	0.5	mm^{-1}
		12.70	$in.^{-1}$
Effective magnetic path length	l_e	48.9	mm
		1.925	in.
Effective core area	A_e	86.1	mm^2
		0.133	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	4215	mm^3
		0.257	$in.^3$
Weight per set	W	22.5	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	3960	3200	7350	5500
μ_e	Approx.		25°C	1600	1250	2900	2200
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 0.84			
(W)	100 kHz	100 mT	100°C		< 0.695		
Codification	P/N			B1EI2811A	B2EI2811A	A6EI2811A	A8EI2811A

DESIGN CURVES FOR A CORE SET

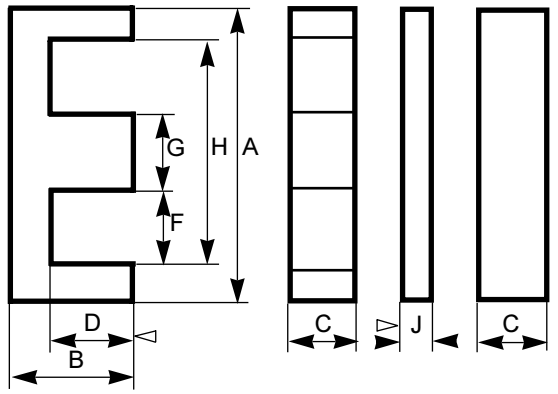
A_L vs. AIR GAP (Ɛ).



EI 3011 B

DIMENSIONS

A	30.25 ± 0.60 *1.191 ± 0.024*	mm *in.*
B	21.3 ± 0.20 *0.839 ± 0.008*	mm *in.*
C	10.65 ± 0.35 *0.419 ± 0.014*	mm *in.*
D	16.3 ± 0.30 *0.642 ± 0.012*	mm *in.*
F	4.55 min *0.179 mini*	mm *in.*
G	10.65 ± 0.25 *0.419 ± 0.010*	mm *in.*
H	20.35 ± 0.35 *0.801 ± 0.014*	mm *in.*
J	5.5 ± 0.20 *0.217 ± 0.008*	mm *in.*



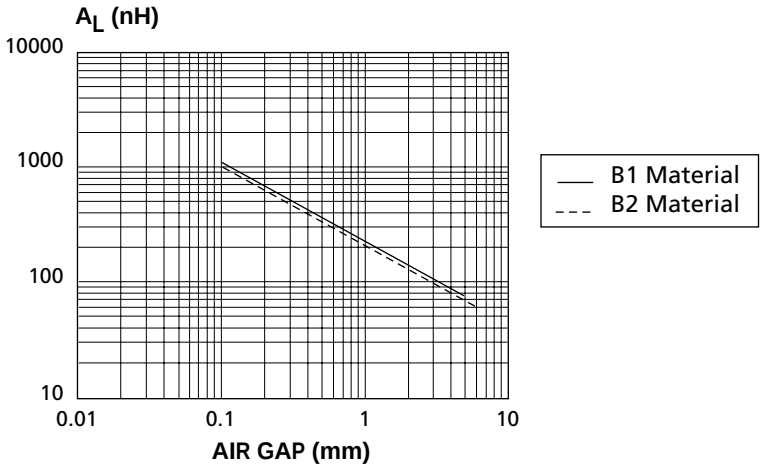
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.36	nH
Core constant	c_1	0.53 13.46	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	56.8 2.336	mm in.
Effective core area	A_e	110 *0.171*	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	6440 *0.393*	mm^3 $in.^3$
Weight per set	W	34.3	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	4230	3600	7850	5900
μ_e	Approx.		25°C	1800	1550	3350	2500
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 1.28			
(W)	100 kHz	100 mT	100°C		< 1.06		
Codification	P/N			B1EI3011B	B2EI3011B	A6EI3011B	A8EI3011B

DESIGN CURVES FOR A CORE SET

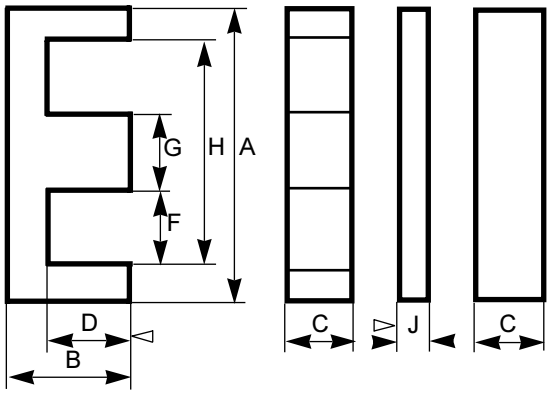
A_L vs. AIR GAP (Ɛ).



EI 3313 A

DIMENSIONS

A	33 ± 0.65	mm
	1.299 ± 0.026	*in.*
B	23.3 ± 0.30	mm
	0.917 ± 0.012	*in.*
C	12.7 ± 0.30	mm
	0.500 ± 0.012	*in.*
D	19.05 ± 0.40	mm
	0.750 ± 0.016	*in.*
F	6.59 min	mm
	0.259 mini	*in.*
G	9.55 ± 0.20	mm
	0.376 ± 0.008	*in.*
H	23.5 ± 0.58	mm
	0.925 ± 0.023	*in.*
J	5 ± 0.20	mm
	0.197 ± 0.008	*in.*



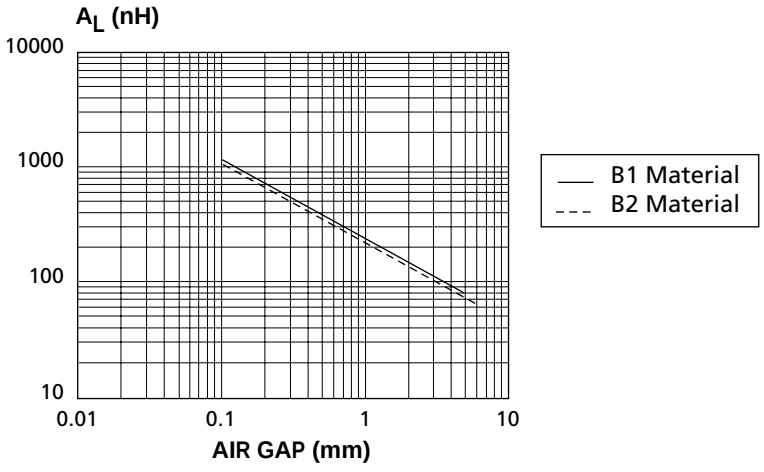
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.25	nH
Core constant	c_1	0.56	mm^{-1}
		14.22	$in.^{-1}$
Effective magnetic path length	l_e	67	mm
		2.630	in.
Effective core area	A_e	120	mm^2
		0.186	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	8000	mm^3
		0.488	$in.^3$
Weight per set	W	42	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	4200	3190	5850	5200
μ_e	Approx.		25°C	1850	1400	2600	2300
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 1.60			
(W)	100 kHz	100 mT	100°C		< 1.32		
Codification	P/N			B1EI3313A	B2EI3313A	A6EI3313A	A8EI3313A

DESIGN CURVES FOR A CORE SET

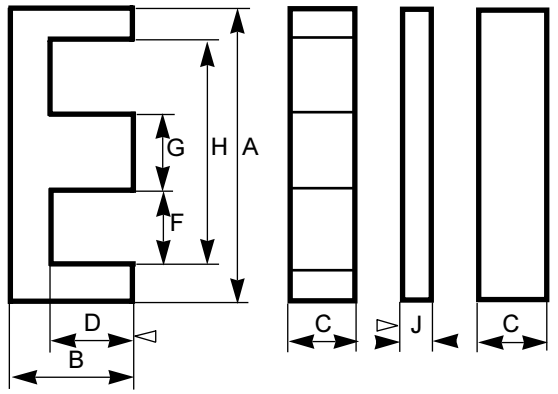
A_L vs. AIR GAP (Ɛ).



EI 3510 B

● DIMENSIONS

A	34.9 ± 0.70	mm
	1.374 ± 0.028	*in.*
B	23.8 ± 0.25	mm
	0.937 ± 0.010	*in.*
C	9.52 ± 0.40	mm
	0.375 ± 0.016	*in.*
D	19.05 ± 0.40	mm
	0.750 ± 0.016	*in.*
F	7.61 min	mm
	0.300 mini	*in.*
G	9.52 ± 0.20	mm
	0.375 ± 0.008	*in.*
H	25.43 ± 0.50	mm
	1.001 ± 0.020	*in.*
J	4.75 ± 0.20	mm
	0.187 ± 0.008	*in.*



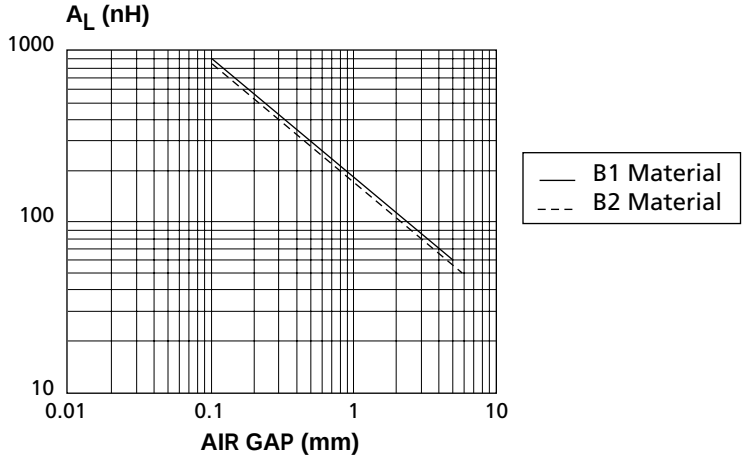
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.65	nH
Core constant	c_1	0.76 19.30	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	68.9 2.713	mm in.
Effective core area	A_e	90.4 *0.*140	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	6232 *0.*380	mm^3 $in.^3$
Weight per set	W	32.3	g

● ELECTRICAL DATA

				MATERIAL		
				B1	B2	A8
A_L (nH) ± 25 %	Without airgap		25°C	3150	2500	4600
μ_e	Approx.		25°C	1900	1500	2800
μ_a	Flux density at320 mT	100°C	> 1000			
		340 mT	100°C		> 1500	
Total losses	25 kHz	200 mT	100°C	< 1.24		
(W)	100 kHz	100 mT	100°C		< 0.94	
Codification	P/N			B1EI3510B	B2EI3510B	A8EI3510B

● DESIGN CURVES FOR A CORE SET

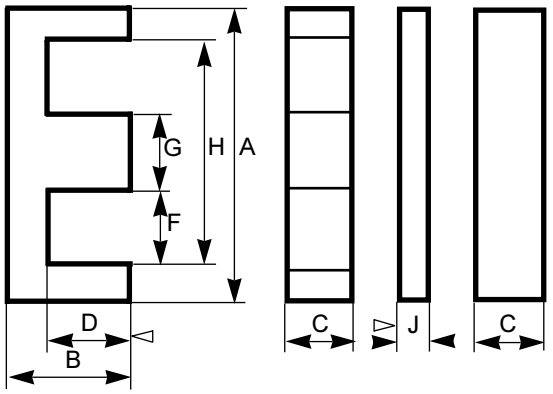
A_L vs. AIR GAP (Ɛ).



EI 3512 C

DIMENSIONS

A	35.15 ± 0.65	*1.384 ± 0.026*	mm *in.*
B	23.45 ± 0.35	*0.922 ± 0.014*	mm *in.*
C	11.7 ± 0.30	*0.461 ± 0.012*	mm *in.*
D	18.3 ± 0.30	*0.720 ± 0.012*	mm *in.*
F	7.15 min	*0.281 mini*	mm *in.*
G	10 ± 0.30	*0.394 ± 0.012*	mm *in.*
H	24.6 mini	0.969 mini	mm in.
J	5.5 ± 0.20	*0.217 ± 0.008*	mm *in.*



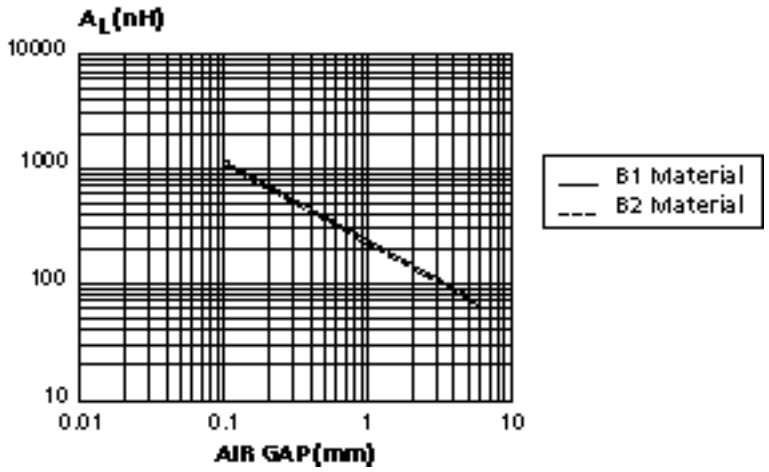
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.26	nH
Core constant	c_1	0.56 14.12	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	68 2.677	mm in.
Effective core area	A_e	122 0.189	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	8215 0.501	mm^3 $in.^3$
Weight per set	W	44	g

ELECTRICAL DATA

				MATERIAL		
				B1	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	3400	5900	4800
μ_e	Approx.		25°C	1500	2600	2100
μ_a	Flux density at320 mT	100°C	> 1000			
Total losses (W)	25 kHz	200 mT	100°C	< 1.64		
Codification	P/N			B1EI3512C	A6EI3512C	A8EI3512C

DESIGN CURVES FOR A CORE SET

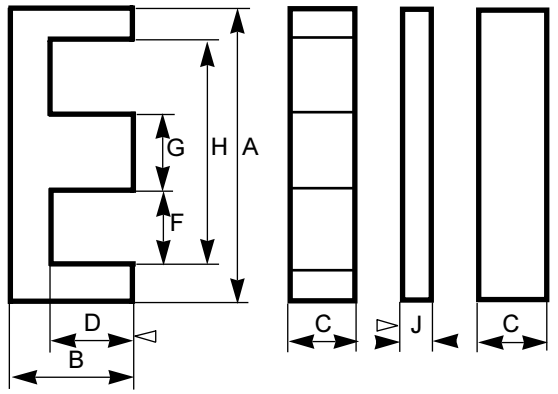
A_L vs. AIR GAP (Ɛ).



EI 4012 D

● DIMENSIONS

A	40 ± 0.50 *1.57 ± 0.020*	mm *in.*
B	27.25 ± 0.25 *1.072 ± 0.010*	mm *in.*
C	11.65 ± 0.35 *0.459 ± 0.014*	mm *in.*
D	20.25 ± 0.25 *0.797 ± 0.010*	mm *in.*
F	8.25 min *0.325 mini*	mm *in.*
G	11.65 ± 0.35 *0.459 ± 0.014*	mm *in.*
H	29 ± 0.50 *1.142 ± 0.020*	mm *in.*
J	7.5 ± 0.30 *0.295 ± 0.012*	mm *in.*



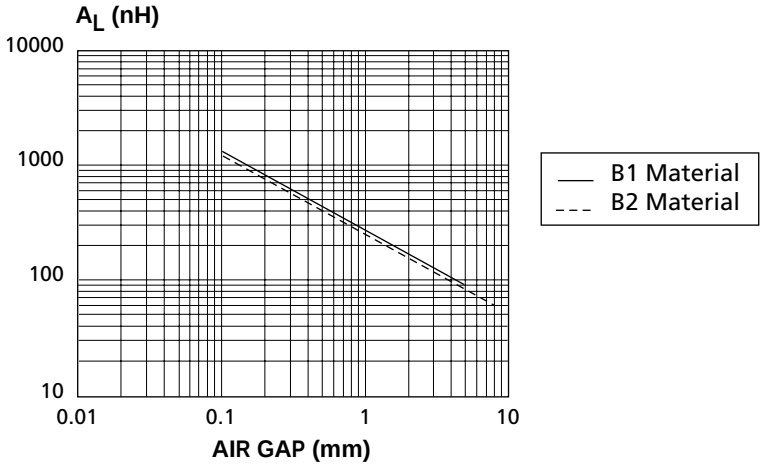
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.31	nH
Core constant	c_1	0.54 13.72	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	77.3 3.043	mm in.
Effective core area	A_e	142 0.220	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	10982 0.670	mm^3 $in.^3$
Weight per set	W	60.1	g

● ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	5000	4000	6300	5750
μ_e	Approx.		25°C	2150	1750	2750	2500
μ_a	Flux density at320 mT	100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 2.20			
(W)	100 kHz	100 mT	100°C		< 1.70		
Codification	P/N			B1EI4012D	B2EI4012D	A6EI4012D	A8EI4012D

● DESIGN CURVES FOR A CORE SET

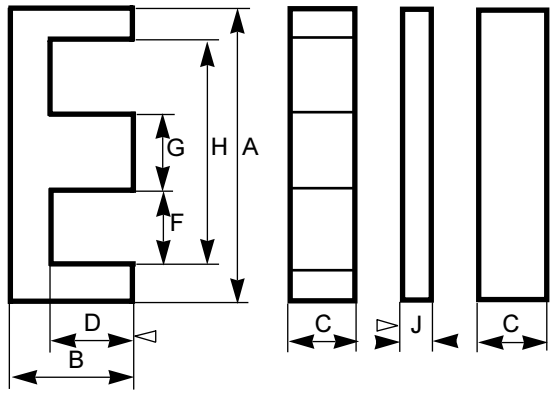
A_L vs. AIR GAP (Ɛ).



EI 4215 B

DIMENSIONS

A	42.8 ± 0.85 *1.685 ± 0.033*	mm *in.*
B	21.1 ± 0.20 *0.831 ± 0.008*	mm *in.*
C	15.47 ± 0.25 *0.609 ± 0.010*	mm *in.*
D	15.11 ± 0.35 *0.595 ± 0.014*	mm *in.*
F	9.11 min *0.359 mini*	mm *in.*
G	11.9 ± 0.25 *0.469 ± 0.010*	mm *in.*
H	30.97 ± 0.60 *1.219 ± 0.024*	mm *in.*
J	5.97 ± 0.20 *0.235 ± 0.008*	mm *in.*



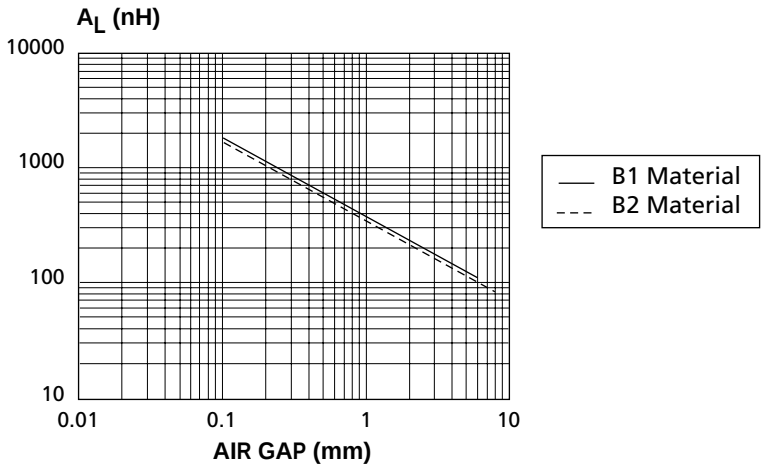
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.4	nH
Core constant	c_1	0.37 9.39	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	68 2.677	mm in.
Effective core area	A_e	184 *0.286*	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	12500 *0.764*	mm^3 $in.^3$
Weight per set	W	65	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	7100	5150	8900	8150
μ_e	Approx.		25°C	2100	1500	2600	2400
μ_a	Flux density at	320 mT 100°C	> 1000				
		340 mT	100°C		> 1500		
Total losses	25 kHz	200 mT	100°C	< 2.50			
(W)	100 kHz	100 mT	100°C		< 1.90		
Codification	P/N			B1EI4215B	B2EI4215B	A6EI4215B	A8EI4215B

DESIGN CURVES FOR A CORE SET

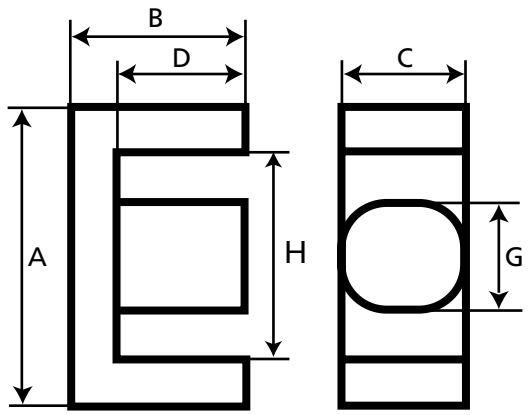
A_L vs. AIR GAP (ℰ).



ED 2912 B

DIMENSIONS

A	29.3 ± 0.80	mm
	1.154 ± 0.031	in.
B	14.6 ± 0.25	mm
	0.575 ± 0.010	in.
C	11.9 ± 0.25	mm
	0.469 ± 0.010	in.
D	11 ± 0.20	mm
	0.433 ± 0.008	in.
G	8.4 ± 0.20	mm
	0.331 ± 0.008	in.
H	22 ± 0.40	mm
	0.866 ± 0.016	in.



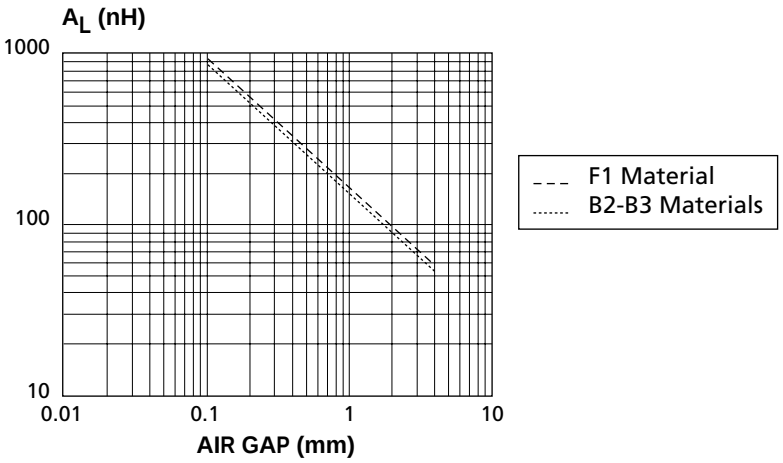
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.56	nH
Core constant	c_1	0.81	mm^{-1}
		20.57	$in.^{-1}$
Effective magnetic path length	l_e	69.7	mm
		2.744	in.
Effective core area	A_e	86.5	mm^2
		0.034	$in.^2$
Minimum core area	A mini	82.2	mm^2
		0.127	$in.^2$
Effective core volume	V_e	6030	mm^3
		0.368	$in.^3$
Weight per set	W	28	g

ELECTRICAL DATA

				MATERIAL		
				B2	B3	F1
A_L (nH) ± 25 %	Without airgap		25°C	2200	2400	2750
μ_e	Approx.		25°C	1400	1550	1750
μ_a	Flux density at	320 mT	100°C			> 1000
		340 mT	100°C	> 1500		
		360 mT	100°C		> 1500	
Total losses (W)	16 kHz	200 mT	100°C		< 0.61	
	100 kHz	100 mT	100°C	< 1.20		
	100 kHz	200 mT	100°C			< 3.50
Codification	P/N			B2ED2912B	B3ED2912B	F1ED2912B

DESIGN CURVES FOR A CORE SET

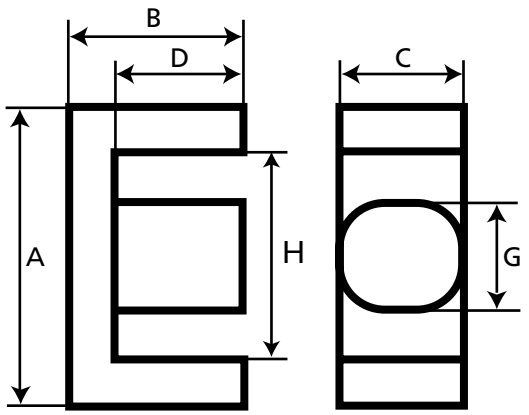
A_L vs. AIR GAP (ℰ).



ED 2912 C

DIMENSIONS

A	29.3 ± 0.80	mm
	1.154 ± 0.031	in.
B	10.2 ± 0.25	mm
	0.402 ± 0.010	in.
C	11.9 ± 0.25	mm
	0.469 ± 0.010	in.
D	6.6 ± 0.20	mm
	0.260 ± 0.008	in.
G	8.4 ± 0.20	mm
	0.331 ± 0.008	in.
H	22 ± 0.40	mm
	0.866 ± 0.016	in.



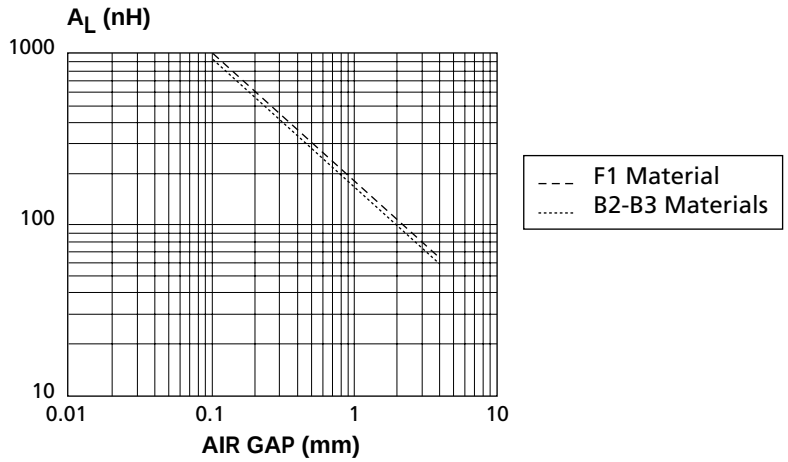
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.07	nH
Core constant	c_1	0.61	mm^{-1}
		15.49	$in.^{-1}$
Effective magnetic path length	l_e	52.2	mm
		2.055	in.
Effective core area	A_e	86	mm^2
		0.133	$in.^2$
Minimum core area	A mini	82.2	mm^2
		0.127	$in.^2$
Effective core volume	V_e	4490	mm^3
		0.274	$in.^3$
Weight per set	W	23	g

ELECTRICAL DATA

				MATERIAL		
				B2	B3	F1
A_L (nH) ± 25 %	Without airgap		25°C	2950	2950	3400
μ_e	Approx.		25°C	1450	1450	1650
μ_a	Flux density at	320 mT	100°C			> 1000
		340 mT	100°C	> 1500		
		360 mT	100°C		> 1500	
Total losses (W)	16 kHz	200 mT	100°C		< 0.45	
	100 kHz	100 mT	100°C	< 0.72		
	100 kHz	200 mT	100°C			< 2.70
Codification	P/N			B2ED2912C	B3ED2912C	F1ED2912C

DESIGN CURVES FOR A CORE SET

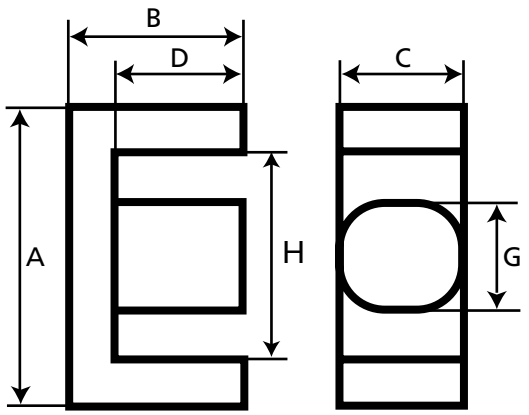
A_L vs. AIR GAP (ℰ).



ED 2912 D

DIMENSIONS

A	29.3 ± 0.80	mm
	1.154 ± 0.031	in.
B	12.2 ± 0.25	mm
	0.480 ± 0.010	in.
C	11.9 ± 0.25	mm
	0.469 ±.0.010	in.
D	8.6 ± 0.20	mm
	0.339 ± 0.008	in.
G	8.4 ± 0.20	mm
	0.331 ± 0.008	in.
H	22 ± 0.40	mm
	0.866 ± 0.016	in.



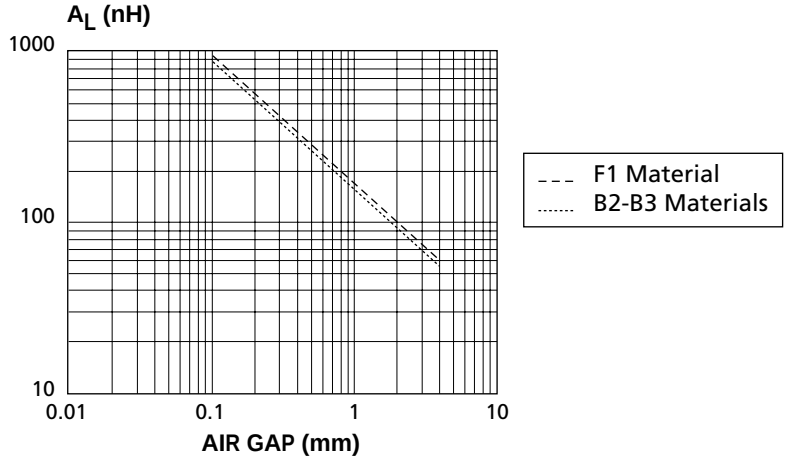
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.80	nH
Core constant	c_1	0.70	mm^{-1}
		17.78	$in.^{-1}$
Effective magnetic path length	l_e	60.12	mm
		2.367	in.
Effective core area	A_e	86.2	mm^2
		0.134	$in.^2$
Minimum core area	A mini	85.2	mm^2
		0.132	*$in.^2$*
Effective core volume	V_e	5184	mm^3
		0.316	$in.^3$
Weight per set	W	25	g

ELECTRICAL DATA

				MATERIAL		
				B2	B3	F1
A_L (nH) ± 25 %	Without airgap		25°C	2650	2500	3100
μ_e	Approx.		25°C	1500	1400	1700
μ_a	Flux dendity at	320 mT	100°C			> 1000
		340 mT	100°C	> 1500		
		360 mT	100°C		> 1500	
Total losses (W)	16 kHz	200 mT	100°C		< 0.52	
	100 kHz	100 mT	100°C	< 0.83		
	100 kHz	200 mT	100°C			< 3.10
Codification	P/N			B2ED2912D	B3ED2912D	F1ED2912D

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).

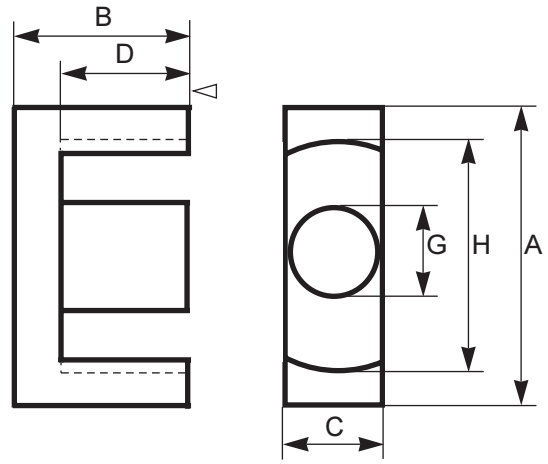


NOTES

ET 2910 A

DIMENSIONS

A	29.8 ± 0.80	mm
	1.173 ± 0.031	in.
B	15.8 ± 0.20	mm
	0.622 ± 0.008	in.
C	9.5 ± 0.30	mm
	0.374 ± 0.012	in.
D	11 ± 0.30	mm
	0.433 ± 0.012	in.
G	9.5 ± 0.30	mm
	0.374 ± 0.012	in.
H	22.7 ± 0.70	mm
	0.894 ± 0.028	in.



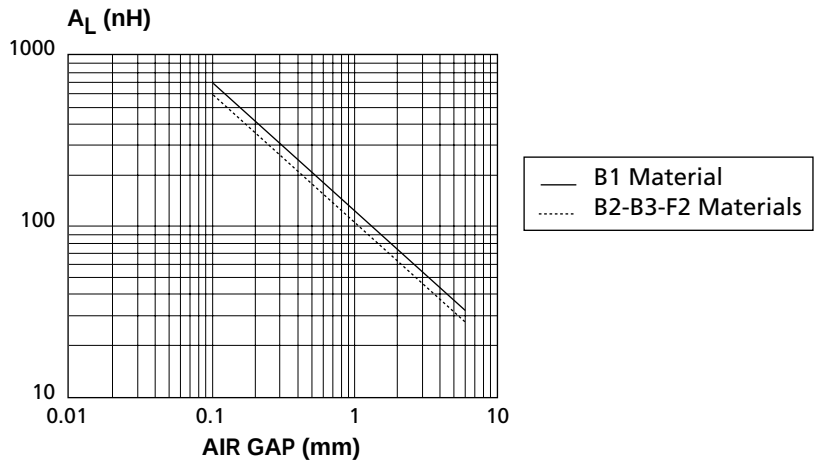
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.36	nH
Core constant	c_1	0.93	mm^{-1}
		23.62	$in.^{-1}$
Effective magnetic path length	l_e	70.4	mm
		2.772	in.
Effective core area	A_e	76	mm^2
		0.118	$in.^2$
Minimum core area	A mini	71	mm^2
		0.110	$in.^2$
Effective core volume	V_e	5376	mm^3
		0.328	$in.^3$
Weight per set	W	28	g

ELECTRICAL DATA

				MATERIAL					
				B1	B2	B3	B5	F1	F2
A_L (nH) ± 25 %	Without airgap		25°C	2350	1950	2100	2000	2400	1900
μ_e	Approx.		25°C	1750	1450	1550	1450	1800	1400
μ_a	Flux density at	300 mT	100°C						> 1000
		320 mT	100°C	> 1000					
		340 mT	100°C		> 1500				
		360 mT	100°C			>1500	>1500		
Total losses (W)	16 kHz	200 mT	100°C			< 0.54			
	25 kHz	200 mT	100°C	< 1.10					
	32 kHz	200 mT	100°C				< 0.76		
	100 kHz	100 mT	100°C		<0.90				
	100 kHz	200 mT	100°C					< 3.23	
	300 kHz	50 mT	100°C						< 0.54
Codification	P/N			B1ET2910A	B2ET2910A	B3ET2910A	B5ET2910A	F1ET2910A	F2ET2910A

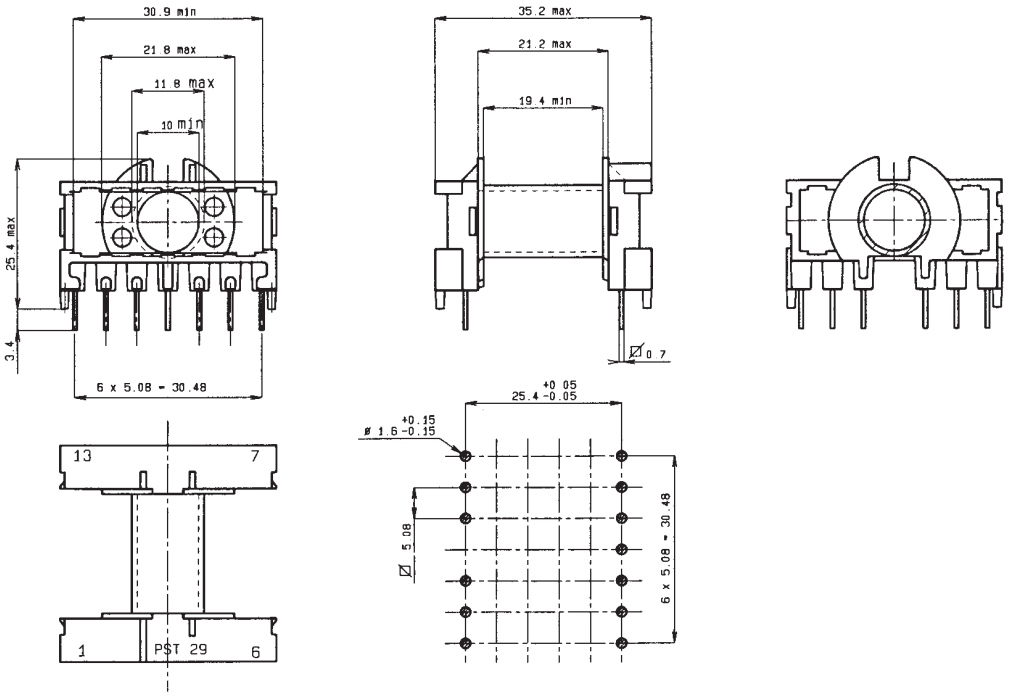
DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



● BOBBINS FOR ET2910 A

Number of pins	Fig	Material	Min. available winding space S_b mm ^{2} / in ^{2}	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
13		Polybutylene terephtalate	97/0.150	52.8/2.079	12/0.483	HC2910AR-13



in mm

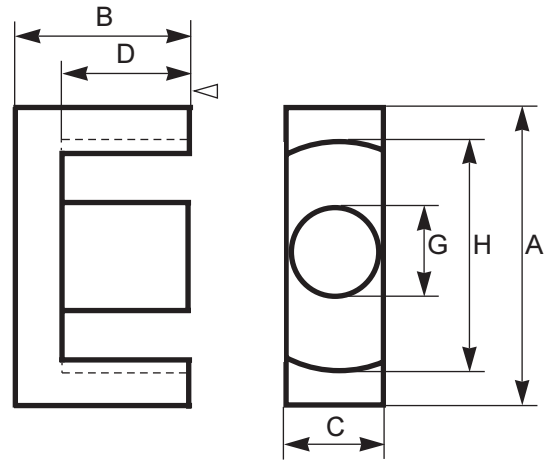
● MOUNTING

Ordering Code	Component Parts	
HA2910AP-01	HC2910AR-13	2HT2910A (clamp)

ET 3411 A

DIMENSIONS

A	34.2 ± 0.80	mm
	1.346 ± 0.031	in.
B	17.3 ± 0.20	mm
	0.681 ± 0.008	in.
C	10.8 ± 0.30	mm
	0.425 ± 0.012	in.
D	12.1 ± 0.30	mm
	0.476 ± 0.012	in.
G	10.8 ± 0.30	mm
	0.425 ± 0.012	in.
H	26.3 ± 0.70	mm
	1.035 ± 0.028	in.



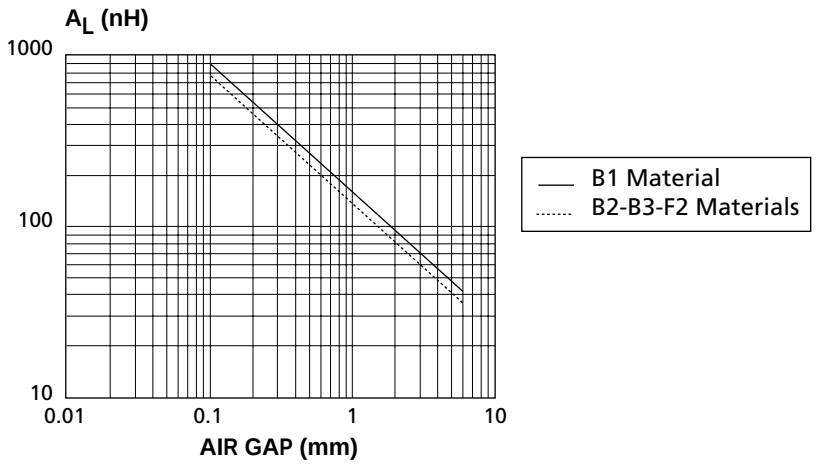
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.55	nH
Core constant	c_1	0.81	mm^{-1}
		20.57	$in.^{-1}$
Effective magnetic path length	l_e	79	mm
		3.110	in.
Effective core area	A_e	97	mm^2
		0.150	$in.^2$
Minimum core area	A mini	92	mm^2
		0.143	$in.^2$
Effective core volume	V_e	7600	mm^3
		0.464	$in.^3$
Weight per set	W	40	g

ELECTRICAL DATA

				MATERIAL					
				B1	B2	B3	B5	F1	F2
A_L (nH) ± 25 %	Without airgap		25°C	2850	2250	2400	2300	2800	2400
μ_e	Approx.		25°C	1850	1450	1550	1500	1800	1550
μ_a	Flux density at	300 mT	100°C						> 1000
		320 mT	100°C	> 1000					
		340 mT	100°C		> 1500				
		360 mT	100°C			>1500	>1500		
Total losses (W)	16 kHz	200 mT	100°C			< 0.76			
	25 kHz	200 mT	100°C	< 1.50					
	32 kHz	200 mT	100°C				< 1.10		
	100 kHz	100 mT	100°C		< 1.25				
	100 kHz	200 mT	100°C					< 4.56	
	300 kHz	50 mT	100°C						< 0.76
Codification	P/N			B1ET3411A	B2ET3411A	B3ET3411A	B5ET3411A	F1ET3411A	F2ET3411A

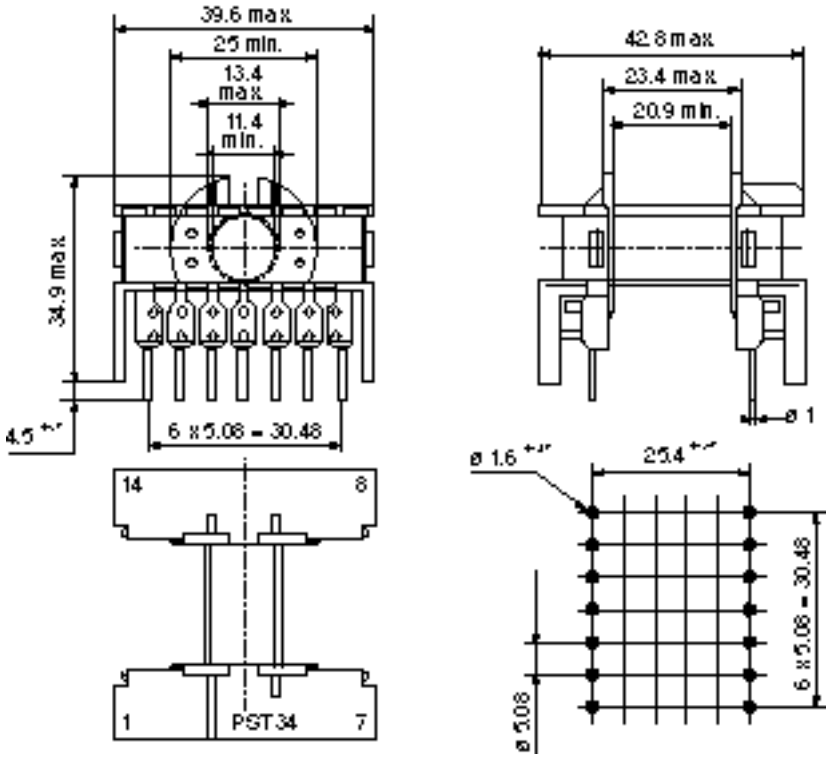
DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



BOBBINS FOR ET3411 A

Number of pins	Fig	Material	Min. available winding space S_b mm² / in²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
14		Polybutylene terephtalate	123/0.190	60/2.362	15/0.529	HC3411AR-14



in mm

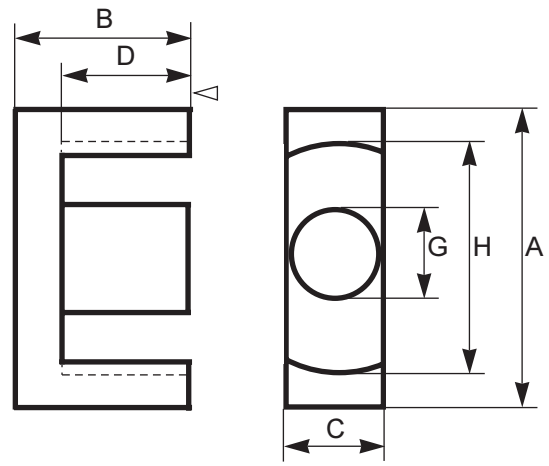
MOUNTING

Ordering Code	Component Parts	
HA3411AP-01	HC3411AR-16	2HT3411A (clamp)

ET 3913 A

DIMENSIONS

A	39.1 ± 0.90	mm
	1.539 ± 0.035	in.
B	19.8 ± 0.20	mm
	0.780 ± 0.008	in.
C	12.5 ± 0.30	mm
	0.492 ± 0.012	in.
D	14.6 ± 0.40	mm
	0.575 ± 0.016	in.
G	12.5 ± 0.30	mm
	0.492 ± 0.012	in.
H	30.1 ± 0.80	mm
	1.185 ± 0.031	in.



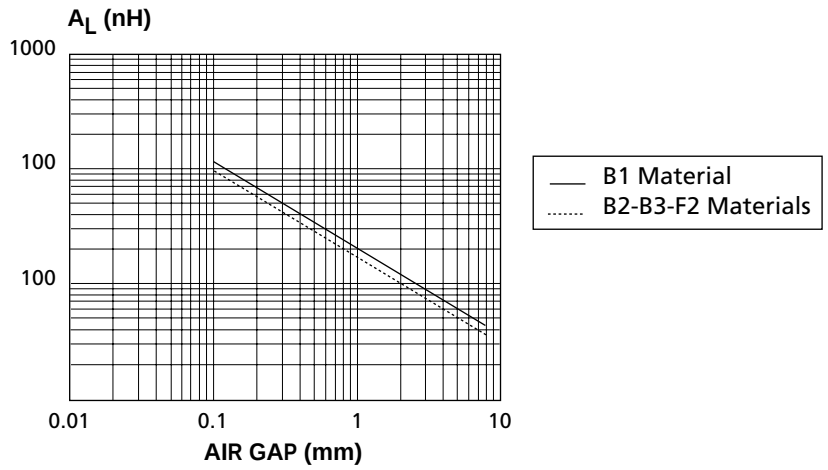
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.7	nH
Core constant	c_1	0.74	mm^{-1}
		18.80	$in.^{-1}$
Effective magnetic path length	l_e	92	mm
		3.622	in.
Effective core area	A_e	125	mm^2
		0.194	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	11500	mm^3
		0.702	$in.^3$
Weight per set	W	64	g

ELECTRICAL DATA

				MATERIAL					
				B1	B2	B3	B5	F1	F2
A_L (nH) ± 25 %	Without airgap		25°C	3150	2470	2700	2600	3200	2700
μ_e	Approx.		25°C	1850	1450	1600	1500	1900	1600
μ_a	Flux density at	300 mT	100°C						> 1000
		320 mT	100°C	> 1000					
		340 mT	100°C		> 1500				
		360 mT	100°C			>1500	>1500		
Total losses (W)	16 kHz	200 mT	100°C			< 1.20			
	25 kHz	200 mT	100°C	< 2.20					
	32 kHz	200 mT	100°C				< 1.70		
	100 kHz	100 mT	100°C		< 1.85				
	100 kHz	200 mT	100°C					< 6.7	
	300 kHz	50 mT	100°C						< 1.2
Codification	P/N			B1ET3913A	B2ET3913A	B3ET3913A	B5ET3913A	F1ET3913A	F2ET3913A

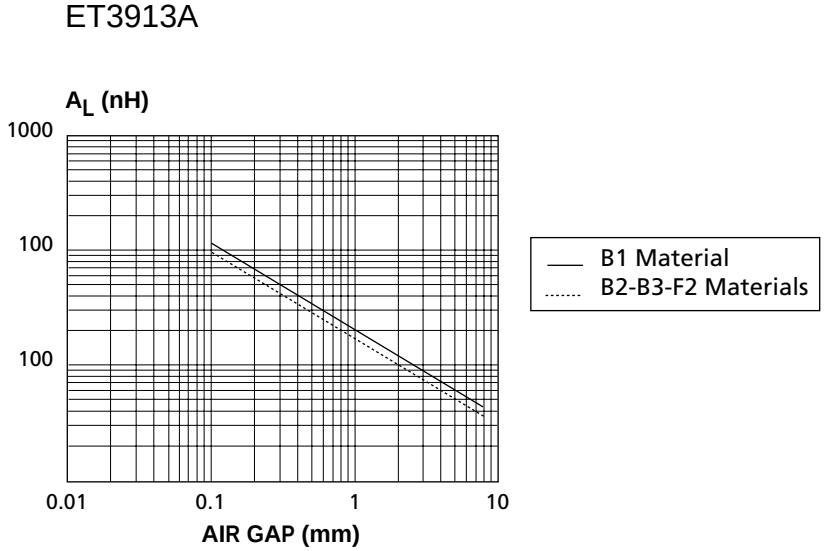
DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



BOBBINS FOR ET3913 A

Number of pins	Fig	Material	Min. available winding space S_b mm ² / in ²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
16		Polybutylene terephtalate	178/.275	69/2.716	18/.634	HC3913AR-16



in mm

MOUNTING

Ordering Code	Component Parts	
HA3913AP-01	HC3913AR-16	2HT3913A (clamp)

SMPS

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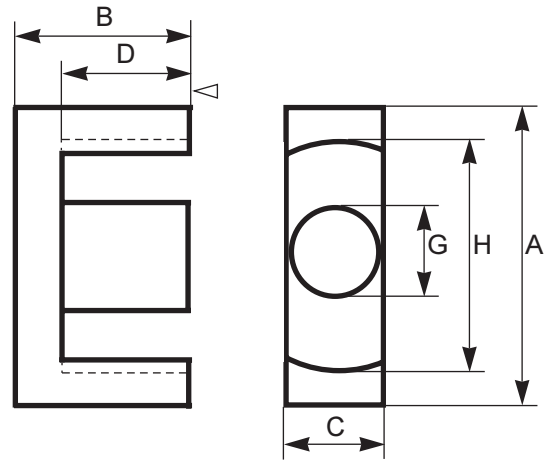
ET 4415 A

DIMENSIONS

A	44 ± 1.00	mm
	1.732 ± 0.039	in.
B	22.3 ± 0.20	mm
	0.878 ± 0.008	in.
C	14.8 ± 0.40	mm
	0.583 ± 0.016	in.
D	16.5 ± 0.40	mm
	0.650 ± 0.016	in.
G	14.8 ± 0.40	mm
	0.583 ± 0.016	in.
H	33.3 ± 0.80	mm
	1.311 ± 0.031	in.



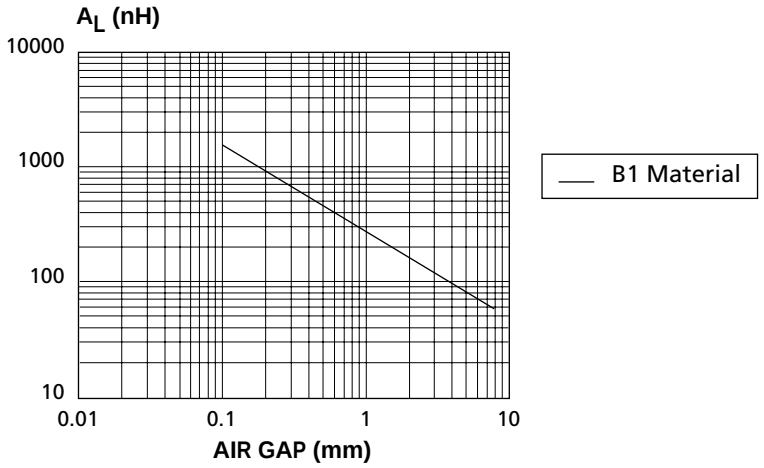
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.1	nH
Core constant	c_1	0.6	mm^{-1}
		15.24	$in.^{-1}$
Effective magnetic path length	l_e	103	mm
		4.055	in.
Effective core area	A_e	173	mm^2
		0.268	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	17800	mm^3
		1.086	$in.^3$
Weight per set	W	94	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	3900	3100	3400	3250
μ_e	Approx.		25°C	1850	1500	1650	1550
μ_a	Flux density at	320 mT	100°C	> 1000			
		340 mT	100°C		> 1500		
		360 mT	100°C			>1500	>1500
Total losses (W)	16 kHz	200 mT	100°C			< 1.80	
	25 kHz	200 mT	100°C	< 3.50			
	32 kHz	200 mT	100°C				< 2.50
	100 kHz	100 mT	100°C		< 2.75		
Codification	P/N			B1ET4415A	B2ET4415A	B3ET4415A	B5ET4415A

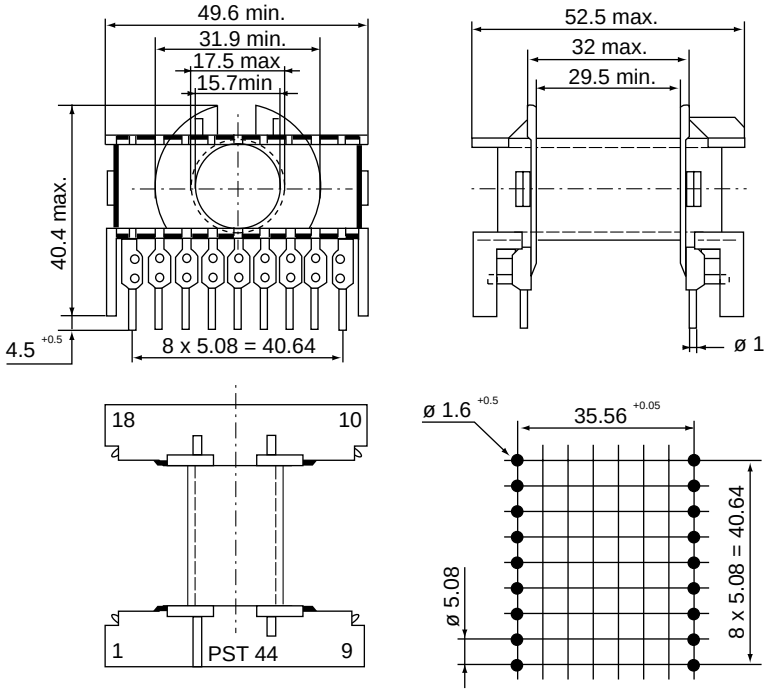
DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



BOBBINS FOR ET4415 A

Number of pins	Fig	Material	Min. available winding space S_b mm ² / in ²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
18		Polybutylene terephtalate	210/.325	78/3.070	20/.705	HC4415AR-18



in mm

MOUNTING

Ordering Code	Component Parts	
HA4415AP-01	HC4415AR-18	2HT4415A (clamp)

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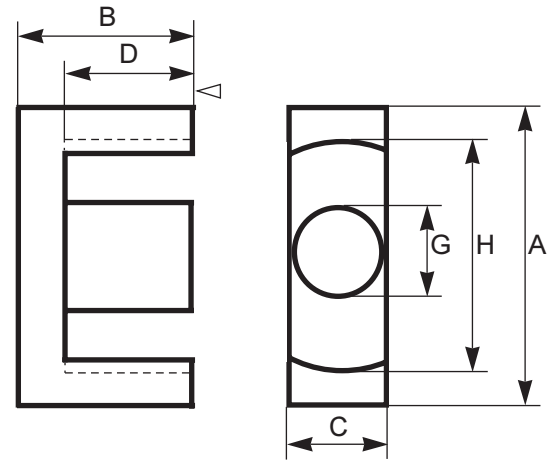
ET 4916 A

DIMENSIONS

A	48.7 ± 1.10	mm
	1.917 ± 0.043	in.
B	24.7 ± 0.20	mm
	0.972 ± 0.008	in.
C	16.3 ± 0.40	mm
	0.642 ± 0.016	in.
D	18.1 ± 0.40	mm
	0.713 ± 0.016	in.
G	16.3 ± 0.40	mm
	0.642 ± 0.016	in.
H	37 ± 0.90	mm
	1.457 ± 0.035	in.



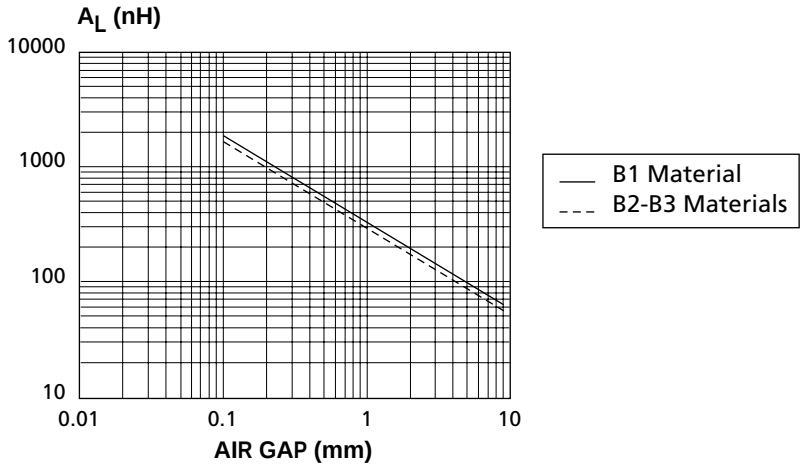
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.35	nH
Core constant	c_1	0.54	mm^{-1}
		13.72	$in.^{-1}$
Effective magnetic path length	l_e	114	mm
		4.488	in.
Effective core area	A_e	211	mm^2
		0.327	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	24000	mm^3
		1.46	$in.^3$
Weight per set	W	124	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	4500	3525	3900	3700
μ_e	Approx.		25°C	1900	1500	1650	1600
μ_a	Flux density at	320 mT	100°C	> 1000			
		340 mT	100°C		> 1500		
		360 mT	100°C			>1500	>1500
Total losses (W)	16 kHz	200 mT	100°C			< 2.40	
	25 kHz	200 mT	100°C	< 4.80			
	32 kHz	200 mT	100°C				< 3.40
	100 kHz	100 mT	100°C		< 3.60		
Codification	P/N			B1ET4916A	B2ET4916A	B3ET4916A	B5ET4916A

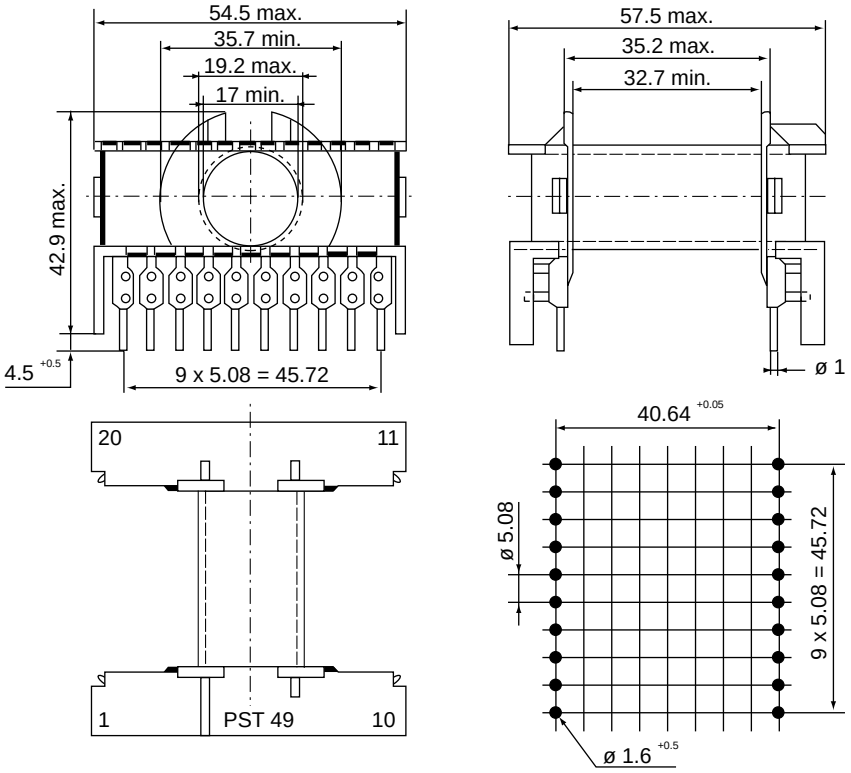
DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



BOBBINS FOR ET4916 A

Number of pins	Fig	Material	Min. available winding space S_b mm ² / in ²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
20		Polybutylene terephtalate	270/.418	86/3.385	27/.952	HC4961AR-20



in mm

MOUNTING

Ordering Code	Component Parts	
HA4916AP-01	HC4916AR-20	2HT4916A (clamp)

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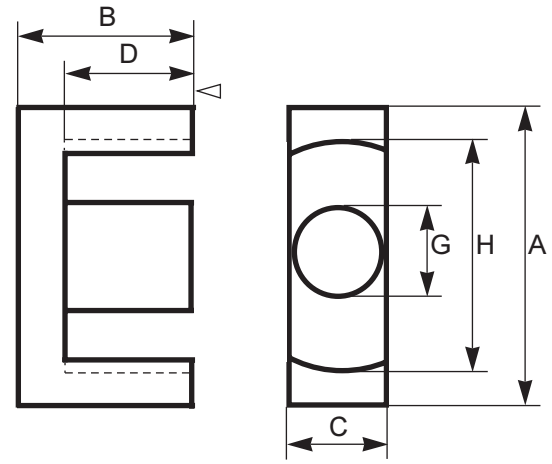
ET 5419 A

DIMENSIONS

A	54.5 ± 1.30	mm
	2.146 ± 0.051	in.
B	27.6 ± 0.20	mm
	1.087 ± 0.008	in.
C	18.9 ± 0.40	mm
	0.744 ± 0.016	in.
D	20.2 ± 0.40	mm
	0.795 ± 0.016	in.
G	18.9 ± 0.40	mm
	0.744 ± 0.016	in.
H	41.2 ± 1.10	mm
	1.622 ± 0.043	in.



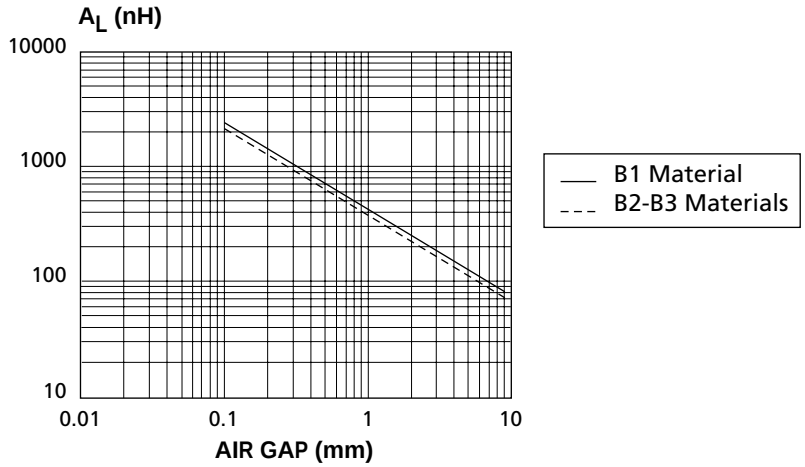
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.8	nH
Core constant	c_1	0.45	mm^{-1}
		11.43	$in.^{-1}$
Effective magnetic path length	l_e	127	mm
		5.000	in.
Effective core area	A_e	280	mm^2
		0.434	$in.^2$
Minimum core area	A mini	280	mm^2
		0.434	$in.^2$
Effective core volume	V_e	35450	mm^3
		2.16	$in.^3$
Weight per set	W	180	g

ELECTRICAL DATA

				MATERIAL			
				B1	B2	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	5900	4400	4700	4450
μ_e	Approx.		25°C	2100	1550	1650	1600
μ_a	Flux density at	320 mT	100°C	> 1000			
		340 mT	100°C		> 1500		
		360 mT	100°C			>1500	>1500
Total losses (W)	16 kHz	200 mT	100°C			< 3.60	
	25 kHz	200 mT	100°C	< 7.10			
	32 kHz	200 mT	100°C				< 5.00
	100 kHz	100 mT	100°C		< 5.40		
Codification	P/N			B1ET5419A	B2ET5419A	B3ET5419A	B5ET5419A

DESIGN CURVES FOR A CORE SET

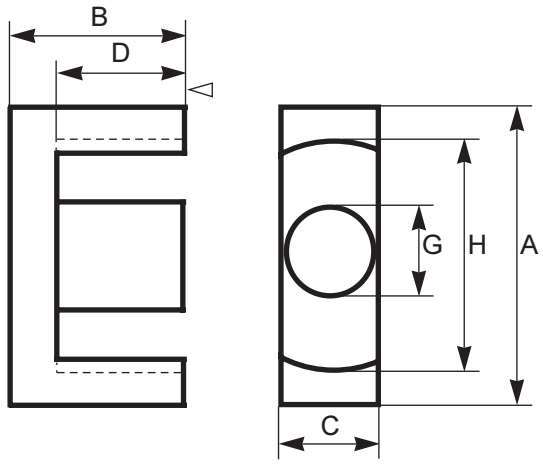
A_L vs. AIR GAP (ℰ).



ER 2811 A

DIMENSIONS

A	28.55 ± 0.55	mm
	1.124 ± 0.022	in.
B	16.9 ± 0.25	mm
	0.665 ± 0.010	in.
C	11.4 ± 0.25	mm
	0.449 ± 0.010	in.
D	12.53 ± 0.28	mm
	0.493 ± 0.011	in.
G	9.9 ± 0.25	mm
	0.390 ± 0.010	in.
H	21.6 ± 0.40	mm
	0.850 ± 0.016	in.



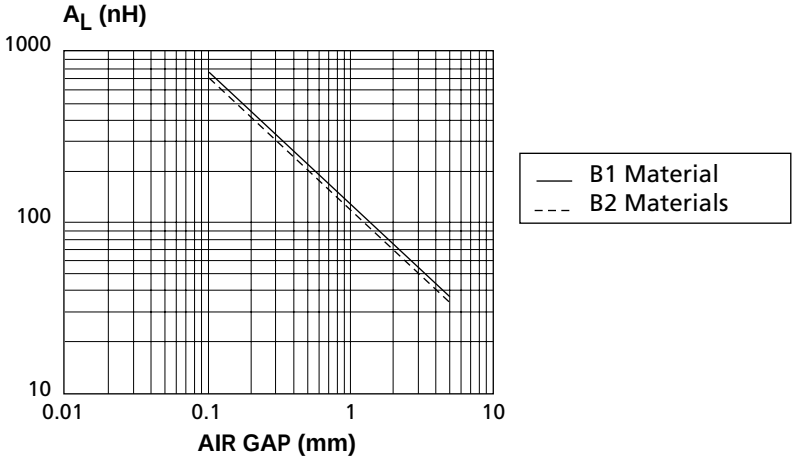
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.47	nH
Core constant	c_1	0.86	mm^{-1}
		21.84	$in.^{-1}$
Effective magnetic path length	l_e	73.7	mm
		2.902	in.
Effective core area	A_e	86	mm^2
		0.133	$in.^2$
Minimum core area	A mini	77	mm^2
		0.119	$in.^2$
Effective core volume	V_e	6350	mm^3
		0.388	$in.^3$
Weight per set	W	33.9	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	2700	2400	2650
μ_e	Approx.		25°C	1850	1650	1800
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 1.27		
	100 kHz	100 mT	100°C		< 1.05	
	100 kHz	200 mT	100°C			< 3.70
Codification	P/N			B1ER2811A	B2ER2811A	F1ER2811A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



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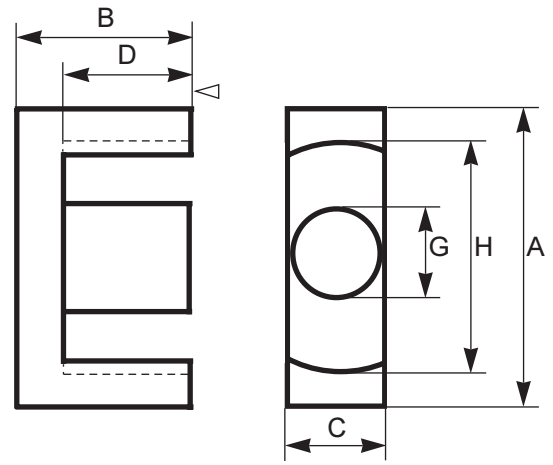
ER 2811 B

DIMENSIONS

A	28.55 ± 0.55	mm
	1.124 ± 0.022	in.
B	14 ± 0.20	mm
	0.551 ± 0.008	in.
C	11.4 ± 0.25	mm
	0.449 ± 0.010	in.
D	9.65 ± 0.20	mm
	0.380 ± 0.008	in.
G	9.9 ± 0.25	mm
	0.390 ± 0.010	in.
H	21.6 ± 0.40	mm
	0.850 ± 0.016	in.



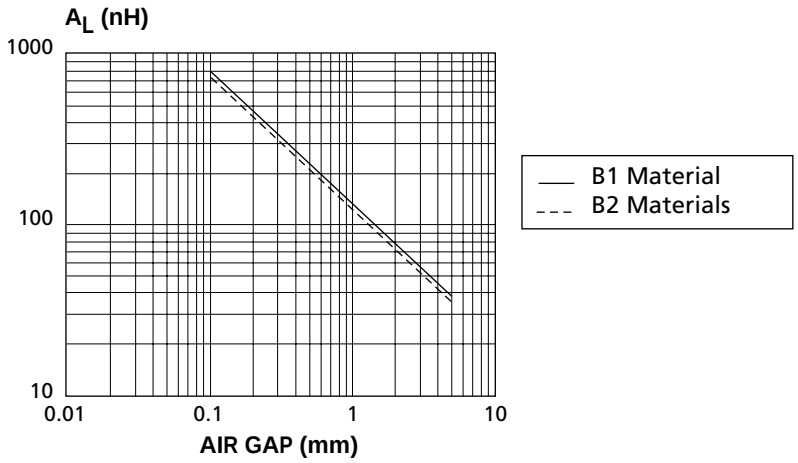
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.85	nH
Core constant	c_1	0.68	mm^{-1}
		17.25	$in.^{-1}$
Effective magnetic path length	l_e	61	mm
		2.402	in.
Effective core area	A_e	90	mm^2
		0.140	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	5500	mm^3
		0.336	$in.^3$
Weight per set	W	29.2	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	3400	2500	3200
μ_e	Approx.		25°C	1850	1350	1700
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 1.1		
	100 kHz	100 mT	100°C		< 0.91	
	100 kHz	200 mT	100°C			< 3.20
Codification	P/N			B1ER2811B	B2ER2811B	F1ER2811B

DESIGN CURVES FOR A CORE SET

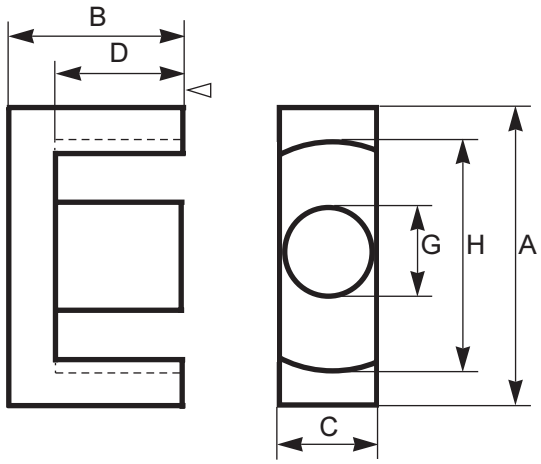
A_L vs. AIR GAP (ℰ).



ER 3411 A

DIMENSIONS

A	34.2 ± 0.80	mm
	1.346 ± 0.031	in.
B	13 ± 0.20	mm
	0.512 ± 0.008	in.
C	10.8 ± 0.30	mm
	0.425 ± 0.012	in.
D	7.8 ± 0.30	mm
	0.307 ± 0.012	in.
G	10.8 ± 0.30	mm
	0.425 ± 0.012	in.
H	26.3 ± 0.70	mm
	1 035 ± 0.028	in.



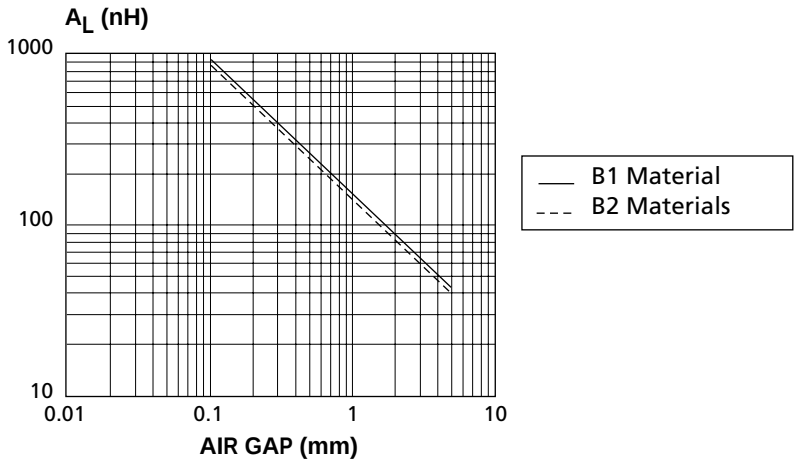
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.95	nH
Core constant	c_1	0.64	mm^{-1}
		16.26	$in.^{-1}$
Effective magnetic path length	l_e	63	mm
		2.480	in.
Effective core area	A_e	98	mm^2
		0.152	$in.^2$
Minimum core area	A mini	92	mm^2
		0.143	$in.^2$
Effective core volume	V_e	6100	mm^3
		0.372	$in.^3$
Weight per set	W	30	g

ELECTRICAL DATA

				MATERIAL				
				B1	B2	B3	B5	F1
A_L (nH) ± 25 %	Without airgap		25°C	3200	2900	2900	2800	3400
μ_e	Approx.		25°C	1650	1500	1500	1450	1750
μ_a	Flux density at	320 mT	100°C	> 1000				> 1000
		340 mT	100°C		> 1500			
		360 mT	100°C			>1500	>1500	
Total losses (W)	16 kHz	200 mT	100°C			< 0.60		
	25 kHz	200 mT	100°C	< 1.25				
	32 kHz	200 mT	100°C				< 0.86	
	100 kHz	100 mT	100°C		< 0.92			
	100 kHz	200 mT	100°C					< 3.60
Codification	P/N			B1ER3411A	B2ER3411A	B3ER3411A	B5ER3411A	F1ER3411A

DESIGN CURVES FOR A CORE SET

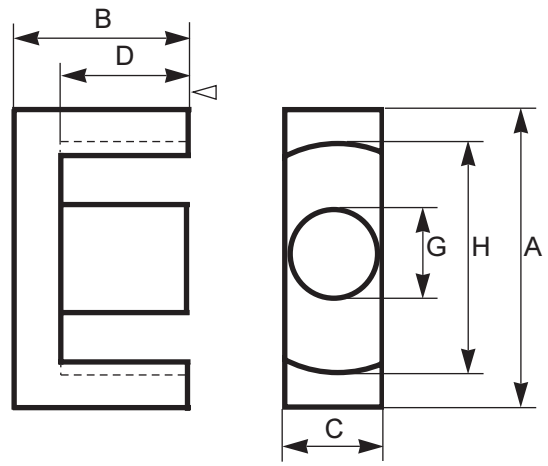
A_L vs. AIR GAP (ℰ).



ER 3511 A

DIMENSIONS

A	35 ± 0.90	mm
	1.378 ± 0.035	in.
B	20.3 ± 0.20	mm
	0.799 ± 0.008	in.
C	11.3 ± 0.40	mm
	0.445 ± 0.016	in.
D	14.8 ± 0.40	mm
	0.583 ± 0.016	in.
G	11.3 ± 0.35	mm
	0.445 ± 0.014	in.
H	26.4 ± 0.90	mm
	1.039 ± 0.035	in.



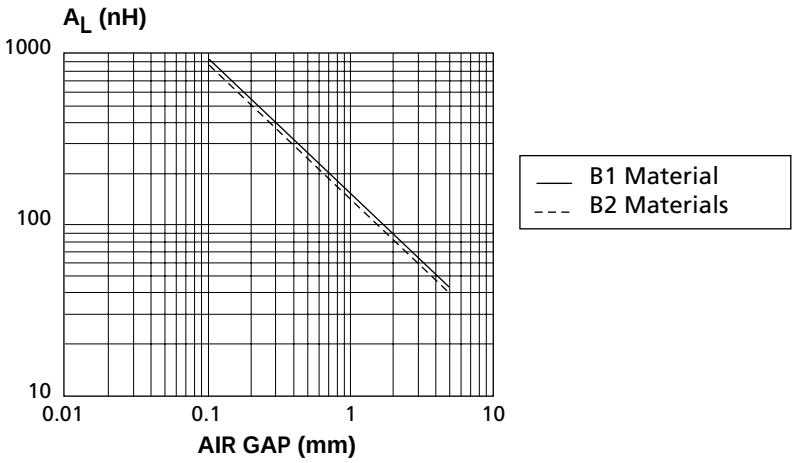
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.5	nH
Core constant	c_1	0.84 21.28	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	86 3.386	mm in.
Effective core area	A_e	107 0.166	mm^2 $in.^2$
Minimum core area	A mini		mm^2 $in.^2$
Effective core volume	V_e	9300 0.568	mm^3 $in.^3$
Weight per set	W	46.2	g

ELECTRICAL DATA

				MATERIAL				
				B1	B2	B3	B5	F1
A_L (nH) ± 25 %	Without airgap		25°C	3200	2600	2400	2250	2800
μ_e	Approx.		25°C	2150	1750	1600	1500	1850
μ_a	Flux density at	320 mT	100°C	> 1000				> 1000
		340 mT	100°C		> 1500			
		360 mT	100°C			>1500	>1500	
Total losses (W)	16 kHz	200 mT	100°C			< 0.93		
	25 kHz	200 mT	100°C	< 1.85				
	32 kHz	200 mT	100°C				< 1.40	
	100 kHz	100 mT	100°C		< 1.40			
	100 kHz	200 mT	100°C					< 5.40
Codification	P/N			B1ER3511A	B2ER3511A	B3ER3511A	B5ER3511A	F1ER3511A

DESIGN CURVES FOR A CORE SET

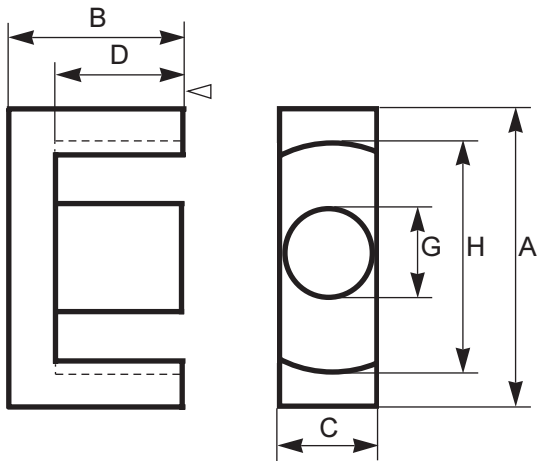
A_L vs. AIR GAP (ℰ).



ER 3511 B

DIMENSIONS

A	35 ± 0.90	mm
	1.378 ± 0.035	in.
B	21.2 ± 0.20	mm
	0.835 ± 0.008	in.
C	11.3 ± 0.40	mm
	0.445 ± 0.016	in.
D	15.5 ± 0.40	mm
	0.610 ± 0.016	in.
G	11.3 ± 0.35	mm
	0.445 ± 0.014	in.
H	26.4 ± 0.90	mm
	1.039 ± 0.035	in.



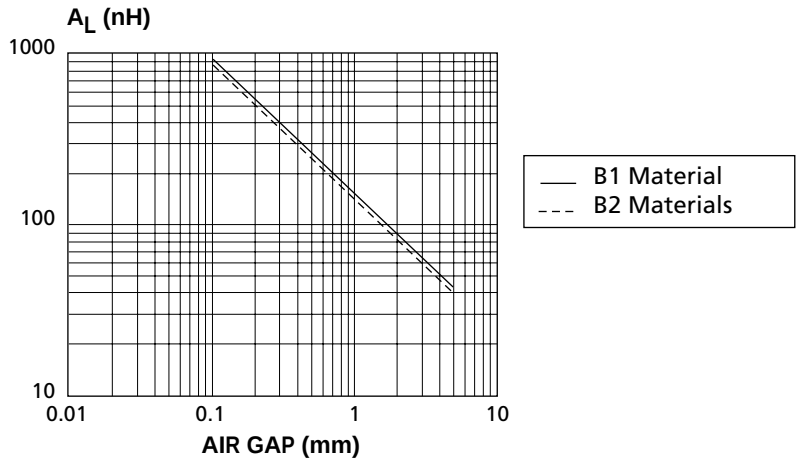
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.46	nH
Core constant	c_1	0.86	mm^{-1}
		21.86	$in.^{-1}$
Effective magnetic path length	l_e	92.8	mm
		3.654	in.
Effective core area	A_e	108	mm^2
		0.168	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	10030	mm^3
		0.612	$in.^3$
Weight per set	W	51.6	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	3200	2350	2750
μ_e	Approx.		25°C	2200	1600	1900
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 2.00		
	100 kHz	100 mT	100°C		< 1.60	
	100 kHz	200 mT	100°C			< 5.90
Codification	P/N			B1ER3511B	B2ER3511B	F1ER3511B

DESIGN CURVES FOR A CORE SET

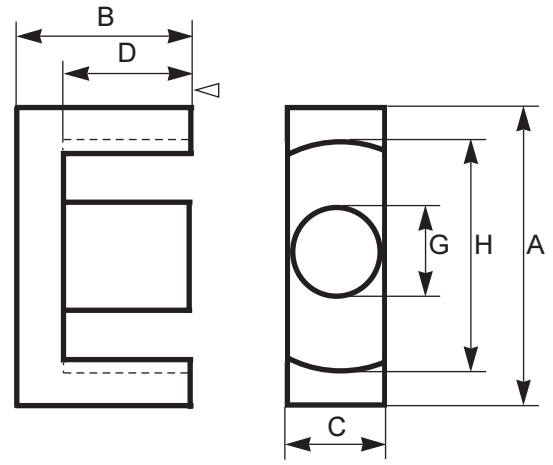
A_L vs. AIR GAP (ℰ).



ER 3913 A

DIMENSIONS

A	39.1 ± 0.90	mm
	1.539 ± .035	in.
B	17.8 ± 0.20	mm
	0.701 ± 0.008	in.
C	12.5 ± 0.30	mm
	0.492 ± 0.012	in.
D	12.6 ± 0.40	mm
	0.496 ± 0.016	in.
G	12.5 ± 0.30	mm
	0.492 ± 0.012	in.
H	30.1 ± 0.80	mm
	1.185 ± 0.031	in.



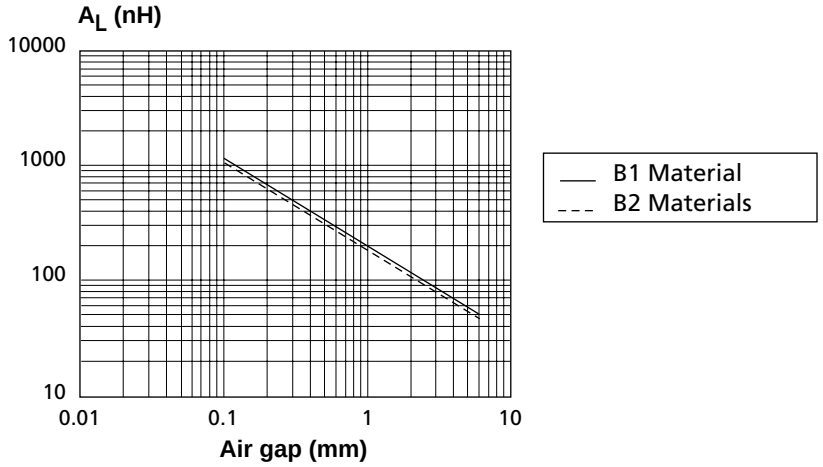
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.9	nH
Core constant	c_1	0.67	mm^{-1}
		17.02	$in.^{-1}$
Effective magnetic path length	l_e	84	mm
		3.307	in.
Effective core area	A_e	125	mm^2
		0.194	$in.^2$
Minimum core area	A mini	123	mm^2
		0.191	$in.^2$
Effective core volume	V_e	10530	mm^3
		0.643	$in.^3$
Weight per set	W	56	g

ELECTRICAL DATA

				MATERIAL				
				B1	B2	B3	B5	F1
A_L (nH) ± 25 %	Without airgap		25°C	3850	3000	2760	2850	3500
μ_e	Approx.		25°C	2050	1600	1450	1500	1850
μ_a	Flux density at	320 mT	100°C	> 1000				> 1000
		340 mT	100°C		> 1500			
		360 mT	100°C			> 1500	> 1500	
Total losses (W)	16 kHz	200 mT	100°C	< 1.20		< 1.00		
	32 kHz	200 mT	100°C				< 1.50	
	100 kHz	100 mT	100°C		<1.60			
	100 kHz	200 mT	100°C					< 6.20
Codification	P/N			B1ER3913A	B2ER3913A	B3ER3913A	B5ER3913A	F1ER3913A

DESIGN CURVES FOR A CORE SET

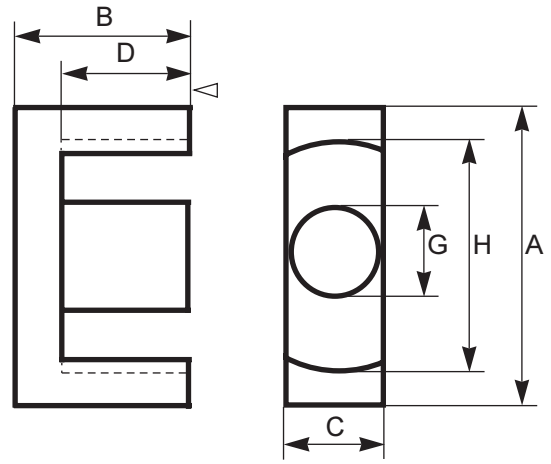
A_L vs. AIR GAP (ℰ).



ER 3913 C

DIMENSIONS

A	39.1 ± 0.90	mm	
	1.539 ± 0.035	in.	
B	21.1 ± 0.20	mm	
	0.831 ± 0.008	in.	
C	12.5 ± 0.30	mm	
	0.492 ± 0.012	in.	
D	15.9 ± 0.40	mm	
	0.626 ± 0.016	in.	
G	12.5 ± 0.30	mm	
	0.492 ± 0.012	in.	
H	30.1 ± 0.80	mm	
	1.185 ± 0.031	in.	



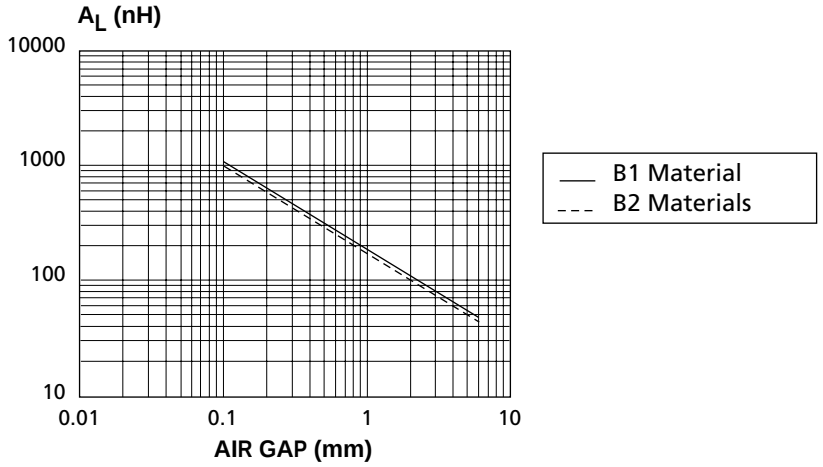
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.64	nH
Core constant	c_1	0.77	mm^{-1}
		19.46	$in.^{-1}$
Effective magnetic path length	l_e	96	mm
		3.780	in.
Effective core area	A_e	125	mm^2
		0.194	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	12000	mm^3
		0.732	$in.^3$
Weight per set	W	57.1	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	3200	2810	3100
μ_e	Approx.		25°C	1950	1700	1900
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 2.40		
	100 kHz	100 mT	100°C		< 1.80	
	100 kHz	200 mT	100°C			< 7.00
Codification	P/N			B1ER3913C	B2ER3913C	F1ER3913C

DESIGN CURVES FOR A CORE SET

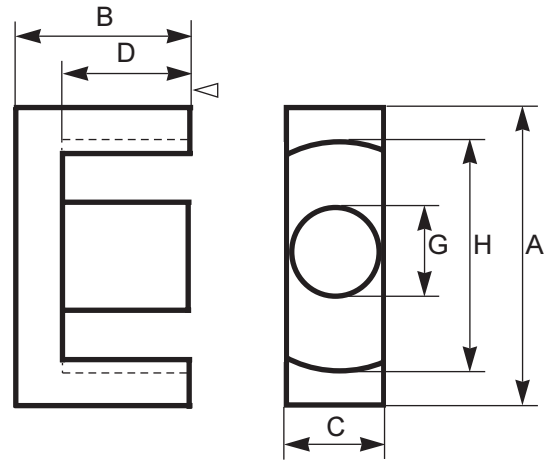
A_L vs. AIR GAP (ℰ).



ER 3913 D

DIMENSIONS

A	39.1 ± 0.90	mm	
	1.539 ± 0.035	in.	
B	22.2 ± 0.20	mm	
	0.874 ± 0.008	in.	
C	12.5 ± 0.30	mm	
	0.492 ± 0.012	in.	
D	17 ± 0.35	mm	
	0.669 ± 0.014	in.	
G	12.5 ± 0.30	mm	
	0.492 ± 0.012	in.	
H	30.1 ± 0.80	mm	
	1.185 ± 0.031	in.	



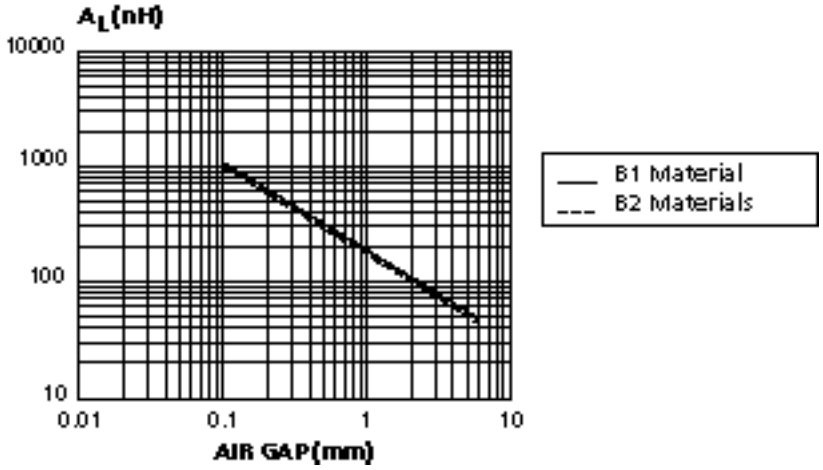
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.54	nH
Core constant	c_1	0.80	mm^{-1}
		20.32	$in.^{-1}$
Effective magnetic path length	l_e	101	mm
		3.976	in.
Effective core area	A_e	125	mm^2
		0.194	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	12700	mm^3
		0.775	$in.^3$
Weight per set	W	70	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	3000	2500	2950
μ_e	Approx.		25°C	1950	1600	1900
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 2.50		
	100 kHz	100 mT	100°C		< 2.00	
	100 kHz	200 mT	100°C			< 7.40
Codification	P/N			B1ER3913D	B2ER3913D	F1ER3913D

DESIGN CURVES FOR A CORE SET

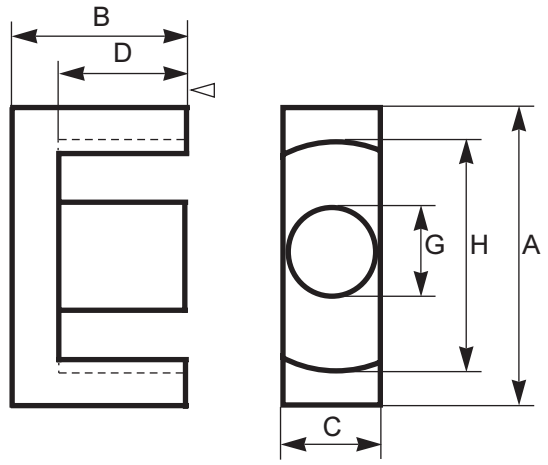
A_L vs. AIR GAP (ℰ).



ER 4013 A

DIMENSIONS

A	40 ± 0.90	mm
	1.575 ± 0.035	in.
B	22.4 ± 0.20	mm
	0.882 ± 0.008	in.
C	13.3 ± 0.25	mm
	0.524 ± 0.010	in.
D	15.45 ± 0.30	mm
	0.608 ± 0.012	in.
G	13.3 ± 0.25	mm
	0.524 ± 0.010	in.
H	29.7 ± 0.70	mm
	0.169 ± 0.028	in.



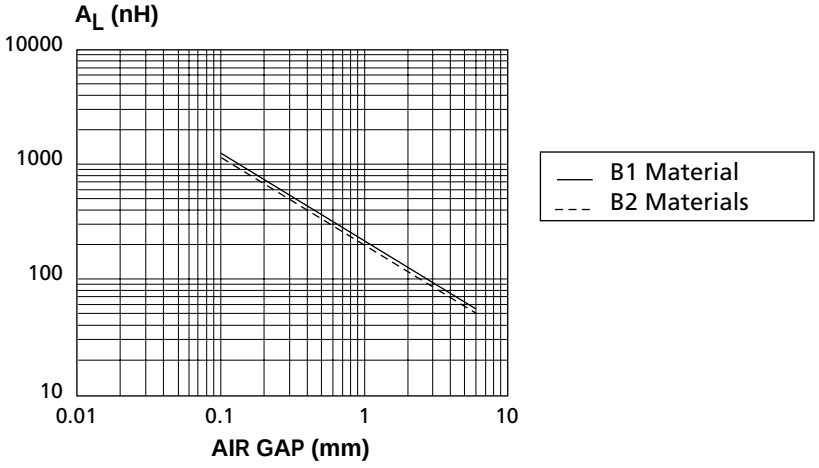
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2	nH
Core constant	c_1	0.63	mm^{-1}
		15.96	$in.^{-1}$
Effective magnetic path length	l_e	97	mm
		3.819	in.
Effective core area	A_e	152	mm^2
		0.236	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	14770	mm^3
		0.901	$in.^3$
Weight per set	W	73.3	g

ELECTRICAL DATA

				MATERIAL		
				B1	B2	F1
A_L (nH) ± 25 %	Without airgap		25°C	4200	3250	3800
μ_e	Approx.		25°C	2100	1600	1900
μ_a	Flux density at	320 mT	100°C	> 1000		> 1000
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz	200 mT	100°C	< 2.95		
	100 kHz	100 mT	100°C		< 2.30	
	100 kHz	200 mT	100°C			< 8.60
Codification	P/N			B1ER4013A	B2ER4013A	F1ER4013A

DESIGN CURVES FOR A CORE SET

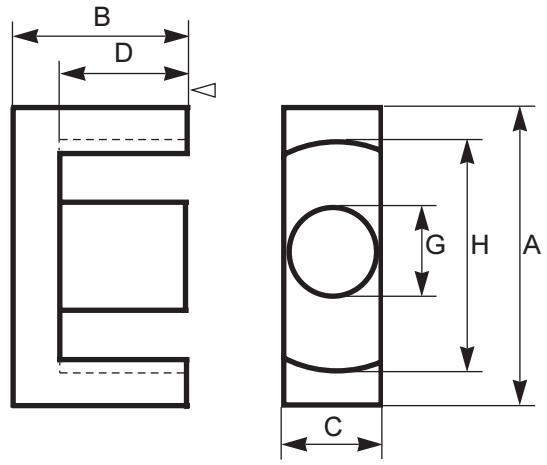
A_L vs. AIR GAP (ℰ).



ER 4215 A

DIMENSIONS

A	42 ± 0.60	mm
	1.654 ± 0.024	in.
B	21.6 ± 0.20	mm
	0.850 ± 0.008	in.
C	14.7 ± 0.30	mm
	0.579 ± 0.012	in.
D	15.9 ± 0.30	mm
	0.626 ± 0.012	in.
G	14.7 ± 0.30	mm
	0.579 ± 0.012	in.
H	31 ± 0.50	mm
	1.220 ± 0.020	in.



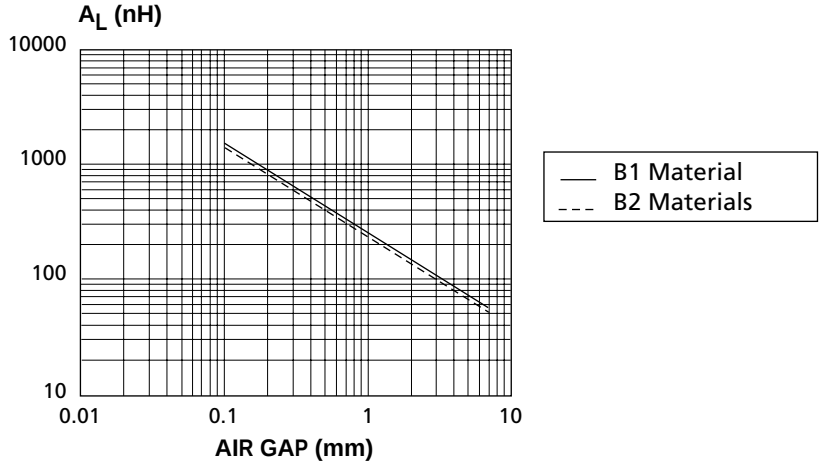
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.2	nH
Core constant	c_1	0.57	mm^{-1}
		14.51	$in.^{-1}$
Effective magnetic path length	l_e	98	mm
		3.858	in.
Effective core area	A_e	173	mm^2
		0.268	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	16940	mm^3
		1.034	$in.^3$
Weight per set	W	86.5	g

ELECTRICAL DATA

				MATERIAL				
				B1	B2	B3	B5	F1
A_L (nH) ± 25 %	Without airgap		25°C	4400	3500	3500	3400	4200
μ_e	Approx.		25°C	2000	1600	1600	1550	1900
μ_a	Flux density at	320 mT	100°C	> 1000				> 1000
		340 mT	100°C		> 1500			
		360 mT	100°C			> 1500	> 1500	
	16 kHz	200 mT	100°C			< 1.70		
Total losses (W)	25 kHz	200 mT	100°C	< 3.38				
	32 kHz	200 mT	100°C				< 2.40	
	100 kHz	100 mT	100°C		< 2.60			
	100 kHz	200 mT	100°C					< 9.90
Codification	P/N			B1ER4215A	B2ER4215A	B3ER4215A	B5ER4215A	F1ER4215A

DESIGN CURVES FOR A CORE SET

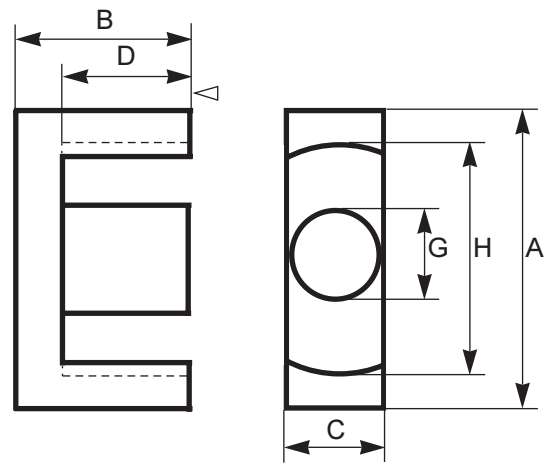
A_L vs. AIR GAP (ℰ).



ER 4215 B

DIMENSIONS

A	42 ± 0.60	mm
	1.654 ± 0.024	in.
B	21.1 ± 0.20	mm
	0.831 ± 0.008	in.
C	14.7 ± 0.30	mm
	0.579 ± 0.012	in.
D	15.4 ± 0.30	mm
	0.606 ± 0.012	in.
G	14.7 ± 0.30	mm
	0.579 ± 0.012	in.
H	31 ± 0.50	mm
	1.220 ± 0.020	in.



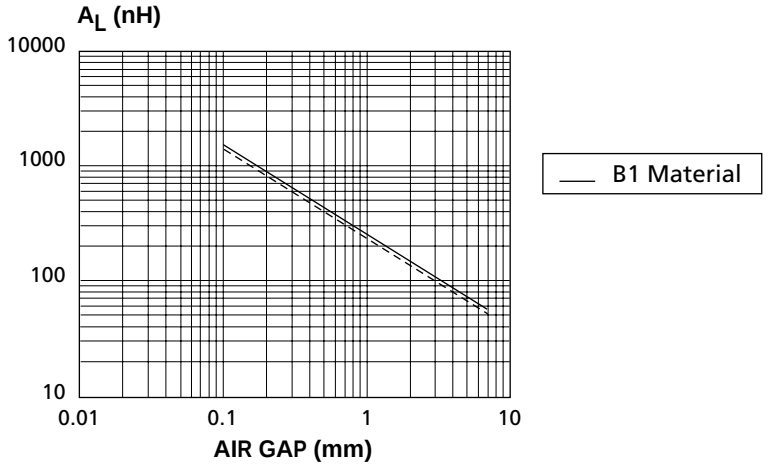
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.21	nH
Core constant	c_1	0.57	mm^{-1}
		14.44	$in.^{-1}$
Effective magnetic path length	l_e	98.1	mm
		3.862	in.
Effective core area	A_e	172.6	mm^2
		0.268	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	16939	mm^3
		1.034	$in.^3$
Weight per set	W	86.5	g

ELECTRICAL DATA

				MATERIAL
				B1
A_L (nH) ± 25 %	Without airgap		25°C	4400
μ_e	Approx.		25°C	2000
μ_a	Flux density at	320 mT	100°C	> 1000
Total losses (W)	25 kHz	200 mT	100°C	< 3.38
Codification	P/N			B1ER4215B

DESIGN CURVES FOR A CORE SET

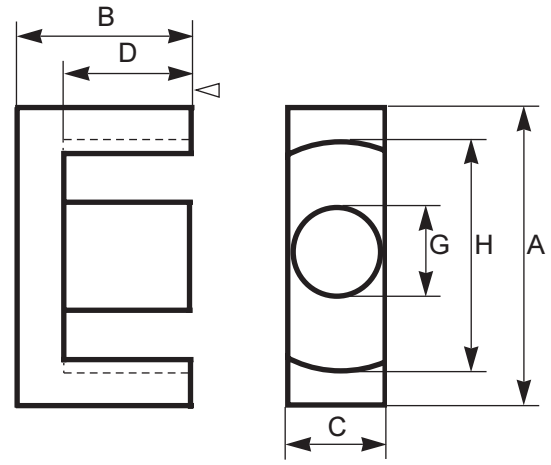
A_L vs. AIR GAP (ℰ).



ER 4415 A

DIMENSIONS

A	44 ± 1.00	mm
	1.732 ± 0.039	in.
B	17 ± 0.20	mm
	0.669 ± 0.008	in.
C	14.8 ± 0.40	mm
	0.583 ± 0.016	in.
D	11.1 ± 0.40	mm
	0.437 ± 0.016	in.
G	14.8 ± 0.40	mm
	0.583 ± 0.01	in.
H	33.3 ± 0.80	mm
	1.311 ± 0.031	in.



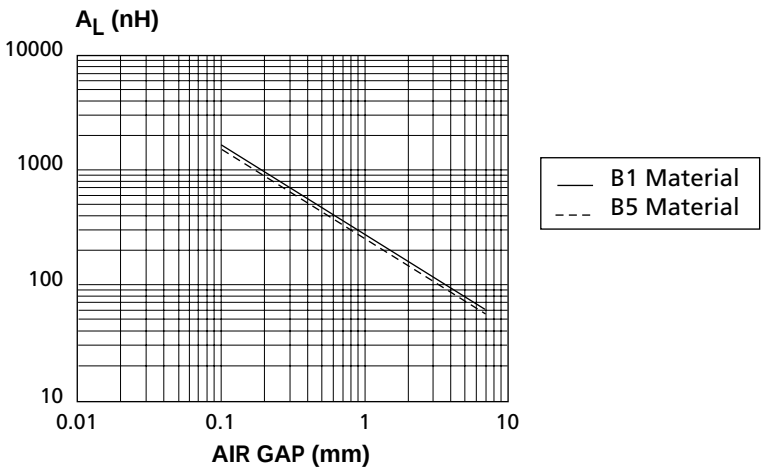
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.7	nH
Core constant	c_1	0.47	mm^{-1}
		11.94	$in.^{-1}$
Effective magnetic path length	l_e	81.6	mm
		3.211	in.
Effective core area	A_e	174	mm^2
		0.270	$in.^2$
Minimum core area	A mini	172	mm^2
		2.267	$in.^2$
Effective core volume	V_e	14191	mm^3
		0.866	$in.^3$
Weight per set	W	77	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	5400	4250	4050
μ_e	Approx.		25°C	2000	1550	1500
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz	200 mT	100°C	< 1.60	< 1.50	
	32 kHz	200 mT	100°C			< 2.00
Codification	P/N			B1ER4415A	B3ER4415A	B5ER4415A

DESIGN CURVES FOR A CORE SET

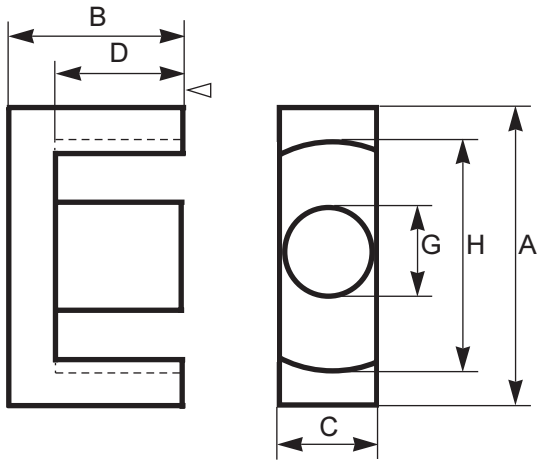
A_L vs. AIR GAP (ℰ).



ER 4518 A

DIMENSIONS

A	45.1 ± 0.90	mm	
	1.776 ± 0.035	in.	
B	17.3 ± 0.20	mm	
	*0.*681 ± 0.008	in.	
C	17.75 ± 0.25	mm	
	*0.*699 ± 0.010	in.	
D	11 ± 0.25	mm	
	*0.*433 ± .010	in.	
G	17.75 ± 0.25	mm	
	*0.*699 ± 0.010	in.	
H	33.65 ± 0.65	mm	
	1.325 ± 0.026	in.	



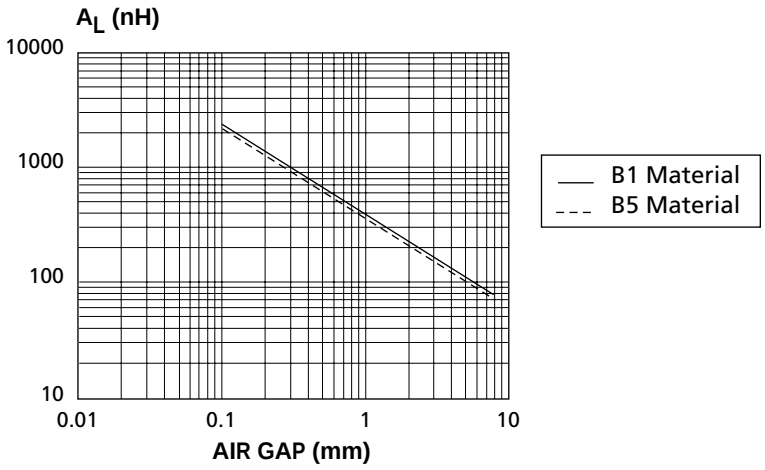
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.76	nH
Core constant	c_1	0.33	mm^{-1}
		8.38	$in.^{-1}$
Effective magnetic path length	l_e	80	mm
		3.150	in.
Effective core area	A_e	238	mm^2
		0.369	$in.^2$
Minimum core area	A mini	233	mm^2
		0.361	$in.^2$
Effective core volume	V_e	18910	mm^3
		1.15	$in.^3$
Weight per set	W	96	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	7350	5900	5650
μ_e	Approx.		25°C	1950	1550	1500
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 2.20	< 1.90	
(W)	32 kHz	200 mT	100°C			< 2.70
Codification	P/N			B1ER4518A	B3ER4518A	B5ER4518A

DESIGN CURVES FOR A CORE SET

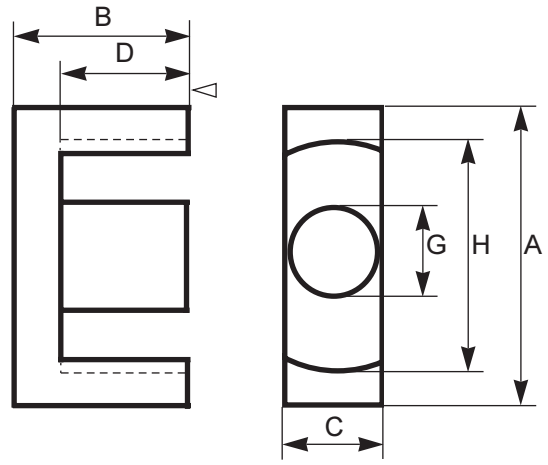
A_L vs. AIR GAP (ℰ).



ER 4518 B

DIMENSIONS

A	45.1 ± 0.90	mm
	1.776 ± 0.035	in.
B	22.3 ± 0.20	mm
	0.878 ± 0.008	in.
C	17.65 ± 0.25	mm
	0.695 ± 0.010	in.
D	16.6 ± 0.35	mm
	0.654 ± 0.014	in.
G	16.7 ± 0.30	mm
	0.657 ± 0.012	in.
H	33.65 ± 0.65	mm
	1.325 ± 0.026	in.



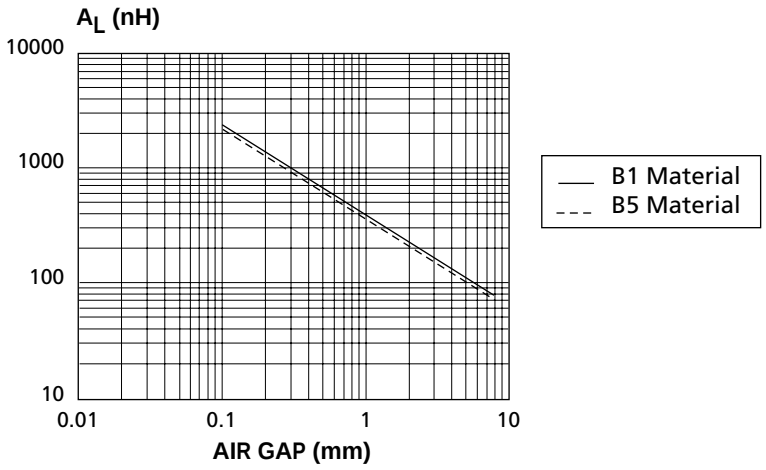
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.79	nH
Core constant	c_1	0.45	mm^{-1}
		11.43	$in.^{-1}$
Effective magnetic path length	l_e	100	mm
		3.937	in.
Effective core area	A_e	221	mm^2
		0.343	$in.^2$
Minimum core area	A mini	210	mm^2
		0.326	$in.^2$
Effective core volume	V_e	22030	mm^3
		1.34	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	5200	4550	4300
μ_e	Approx.		25°C	1850	1600	1550
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 2.53	< 2.30	
(W)	32 kHz	200 mT	100°C			< 3.10
Codification	P/N			B1ER4518B	B3ER4518B	B5ER4518B

DESIGN CURVES FOR A CORE SET

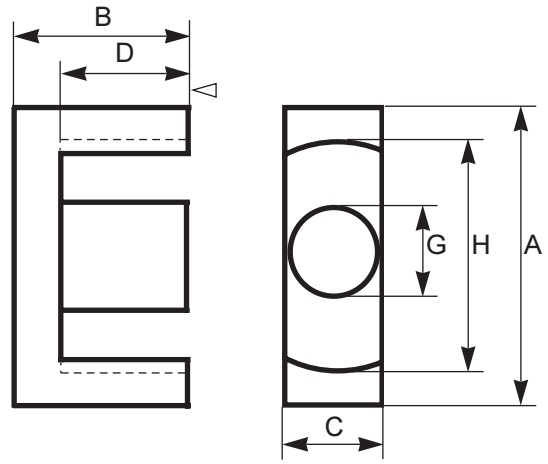
A_L vs. AIR GAP (ℰ).



ER 4821 A

DIMENSIONS

A	48 ± 1.00	mm
	1.890 ± 0.039	in.
B	21 ± 0.20	mm
	0.827 ± 0.008	in.
C	20.9 ± 0.40	mm
	0.823 ± 0.016	in.
D	15 ± 0.30	mm
	0.591 ± 0.012	in.
G	18 ± 0.030	mm
	0.709 ± 0.012	in.
H	38 ± 0.80	mm
	1.496 ± 0.031	in.



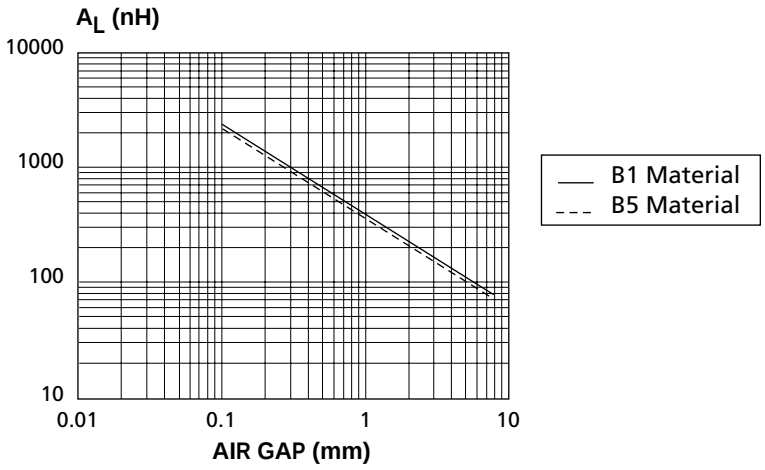
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.22	nH
Core constant	c_1	0.39	mm^{-1}
		9.91	$in.^{-1}$
Effective magnetic path length	l_e	98.6	mm
		3.882	in.
Effective core area	A_e	253	mm^2
		0.392	$in.^2$
Minimum core area	A mini	250	mm^2
		0.388	$in.^2$
Effective core volume	V_e	24935	mm^3
		1.52	$in.^3$
Weight per set	W	140	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	6400	5200	5000
μ_e	Approx.		25°C	2000	1600	1550
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 2.90	< 2.50	
(W)	32 kHz	200 mT	100°C			< 3.50
Codification	P/N			B1ER4821A	B3ER4821A	B5ER4821A

DESIGN CURVES FOR A CORE SET

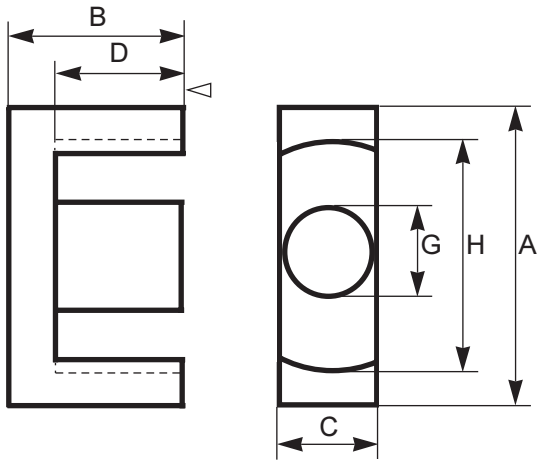
A_L vs. AIR GAP (ℰ).



ER 5318 A

DIMENSIONS

A	53.5 ± 1.00	mm
	2.106 ± 0.039	in.
B	18.3 ± 0.20	mm
	0.720 ± 0.008	in.
C	17.95 ± .35	mm
	0.707 ± 0.014	in.
D	11.4 ± 0.30	mm
	0.449 ± 0.012	in.
G	17.9 ± 0.40	mm
	0.705 ± 0.016	in.
H	40.65 ± 0.85	mm
	1.600 ± 0.033	in.



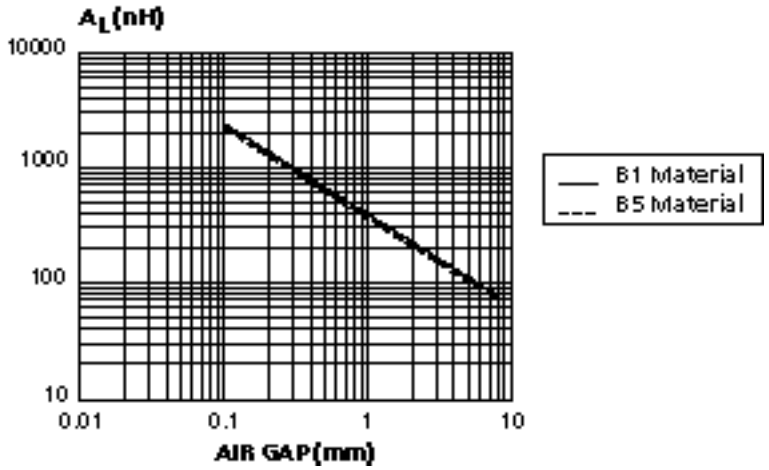
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.57	nH
Core constant	c_1	0.35	mm^{-1}
		8.89	$in.^{-1}$
Effective magnetic path length	l_e	90	mm
		3.543	in.
Effective core area	A_e	255	mm^2
		0.395	$in.^2$
Minimum core area	A mini	252	mm^2
		0.391	$in.^2$
Effective core volume	V_e	22900	mm^3
		1.40	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

				MATERIAL	
				B1	B3
A_L (nH) ± 25 %	Without airgap		25°C	6700	4800
μ_e	Approx.		25°C	1900	1350
μ_a	Flux density at	320 mT	100°C	> 1000	
		360 mT	100°C		> 1500
Total losses (W)	16 kHz	200 mT	100°C	< 2.60	< 2.20
Codification		P/N		B1ER5318A	B3ER5318A

DESIGN CURVES FOR A CORE SET

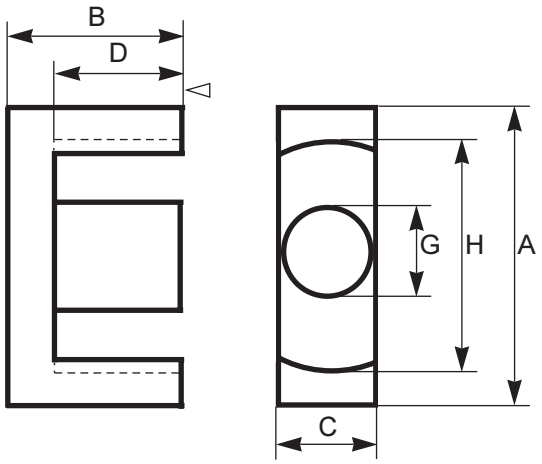
A_L vs. AIR GAP (ℰ).



ER 5519 A

DIMENSIONS

A	55 ± 1.20	mm
	2.165 ± 0.047	in.
B	15.8 ± 0.20	mm
	0.622 ± 0.008	in.
C	18.5 ± 0.40	mm
	0.728 ± 0.016	in.
D	10.05 ± 0.25	mm
	0.396 ± 0.010	in.
G	16 ± 0.40	mm
	0.630 ± .016	in.
H	43 ± 0.90	mm
	1.693 ± 0.035	in.



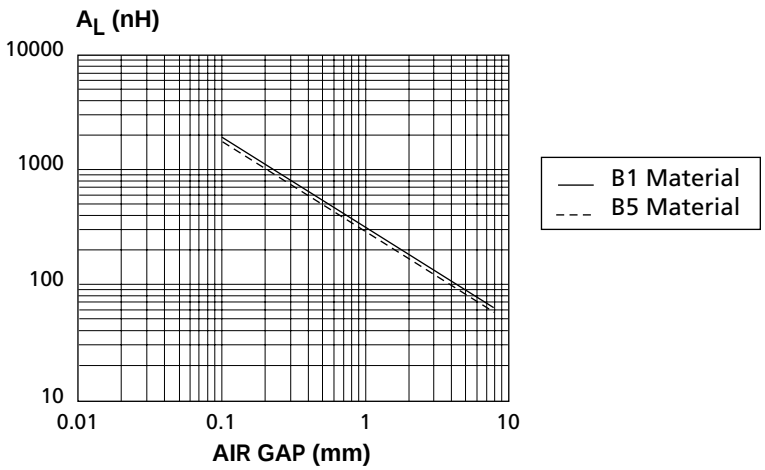
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.17	nH
Core constant	c_1	0.40	mm^{-1}
		10.16	$in.^{-1}$
Effective magnetic path length	l_e	85.8	mm
		3.378	in.
Effective core area	A_e	217	mm^2
		0.336	$in.^2$
Minimum core area	A mini	201	mm^2
		0.312	$in.^2$
Effective core volume	V_e	18600	mm^3
		1.14	$in.^3$
Weight per set	W	100	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	6500	5000	4800
μ_e	Approx.		25°C	2050	1600	1500
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 2.20	< 1.90	
(W)	32 kHz	200 mT	100°C			< 2.70
Codification	P/N			B1ER5519A	B3ER5519A	B5ER5519A

DESIGN CURVES FOR A CORE SET

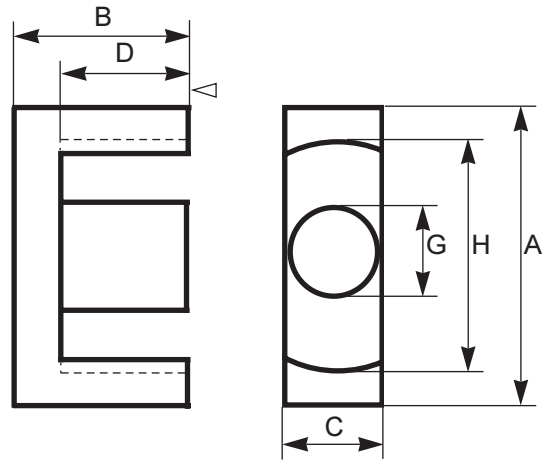
A_L vs. AIR GAP (ℰ).



ER 5519 B

DIMENSIONS

A	55 ± 1.20	mm
	2.165 ± 0.047	in.
B	18.3 ± 0.20	mm
	0.720 ± 0.008	in.
C	18.5 ± 0.40	mm
	0.728 ± 0.016	in.
D	12.55 ± 0.25	mm
	0.494 ± 0.010	in.
G	16 ± 0.40	mm
	0.630 ± 0.016	in.
H	43 ± 0.90	mm
	1.693 ± 0.035	in.



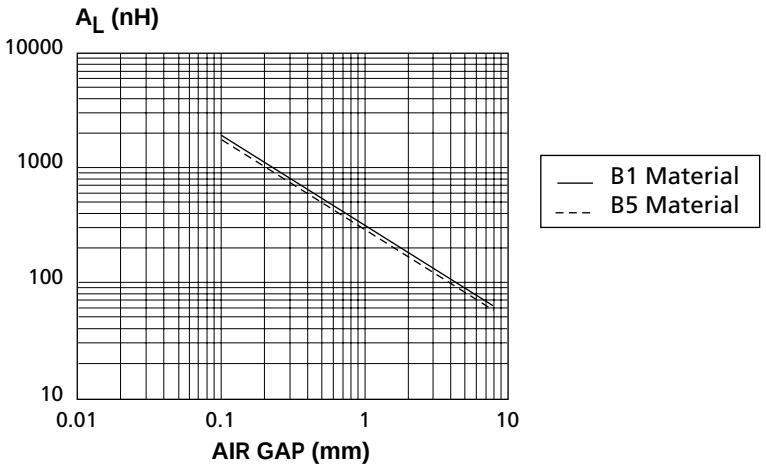
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.85	nH
Core constant	c_1	0.44	mm^{-1}
		11.28	$in.^{-1}$
Effective magnetic path length	l_e	95.7	mm
		3.768	in.
Effective core area	A_e	217	mm^2
		0.336	$in.^2$
Minimum core area	A mini	201	mm^2
		0.312	$in.^2$
Effective core volume	V_e	20800	mm^3
		1.27	$in.^3$
Weight per set	W	110	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	6000	4600	4400
μ_e	Approx.		25°C	2100	1600	1550
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 2.40	< 2.10	
(W)	32 kHz	200 mT	100°C			< 3.00
Codification	P/N			B1ER5519B	B3ER5519B	B5ER5519B

DESIGN CURVES FOR A CORE SET

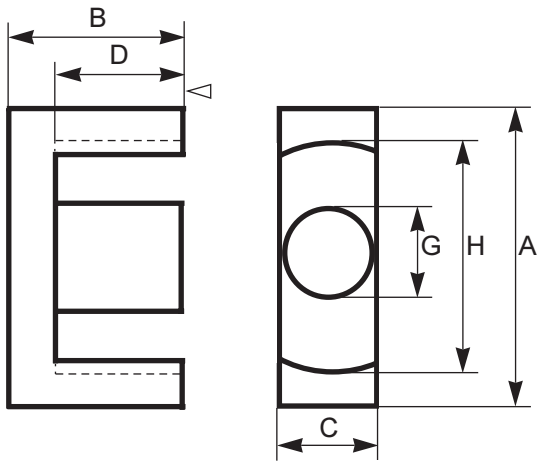
A_L vs. AIR GAP (ℰ).



ER 5525 A

DIMENSIONS

A	55 ± 0.80	mm
	2.16 ± 0.031	in.
B	28.4 ± 0.40	mm
	1.118 ± 0.016	in.
C	20.6 ± 0.40	mm
	0.811 ± 0.016	in.
D	19.3 ± 0.30	mm
	0.760 ± 0.012	in.
G	20.6 ± 0.40	mm
	0.811 ± 0.016	in.
H	42.2 ± 0.70	mm
	1.661 ± 0.028	in.



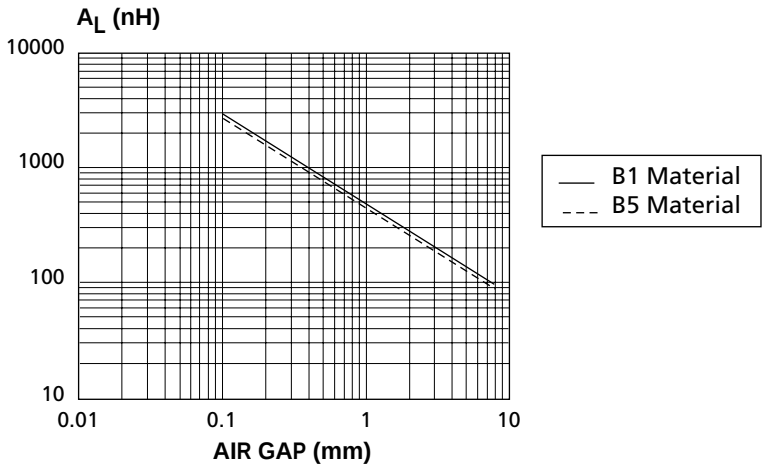
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.53	nH
Core constant	c_1	0.39	mm^{-1}
		9.91	$in.^{-1}$
Effective magnetic path length	l_e	124	mm
		4.882	in.
Effective core area	A_e	337	mm^2
		0.522	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	42800	mm^3
		2.61	$in.^3$
Weight per set	W	200	g

ELECTRICAL DATA

				MATERIAL		
				B1	B3	B5
A_L (nH) ± 25 %	Without airgap		25°C	7450	5900	5600
μ_e	Approx.		25°C	2100	1650	1600
μ_a	Flux density at	320 mT	100°C	> 1000		
		360 mT	100°C		> 1500	> 1500
Total losses	16 kHz	200 mT	100°C	< 5	< 4.6	
(W)	32 kHz	200 mT	100°C			< 6
Codification	P/N			B1ER5525A	B3ER5525A	B5ER5525A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



● BOBBINS FOR EF1505 A

Number of pins	Fig	Material	Min. available winding space S_b mm ² / in ²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
8	1	Phenoplaste	14.8/583	26.3/1.035	0.6/0.021	HC1505AR-08
8	2	Phenoplaste	14.8/583	26.3/1.035	0.6/0.021	HC1505BR-08
						(SMD)

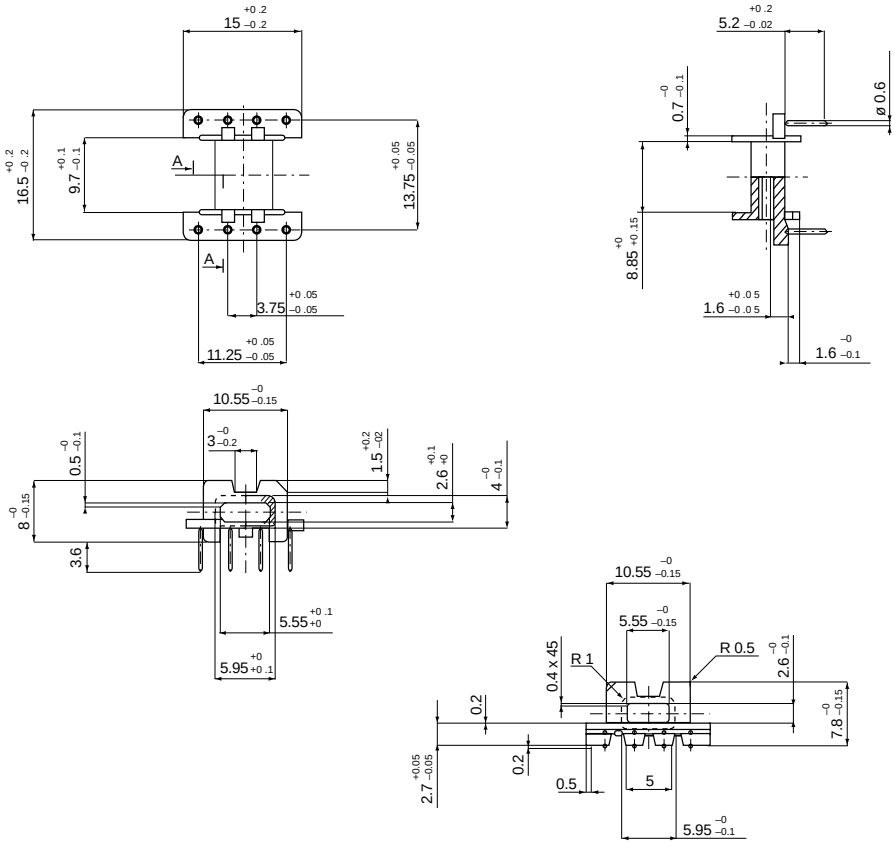
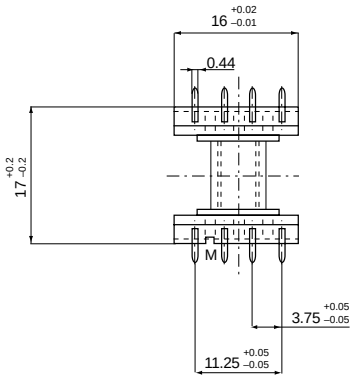


Fig. 1

Fig. 2

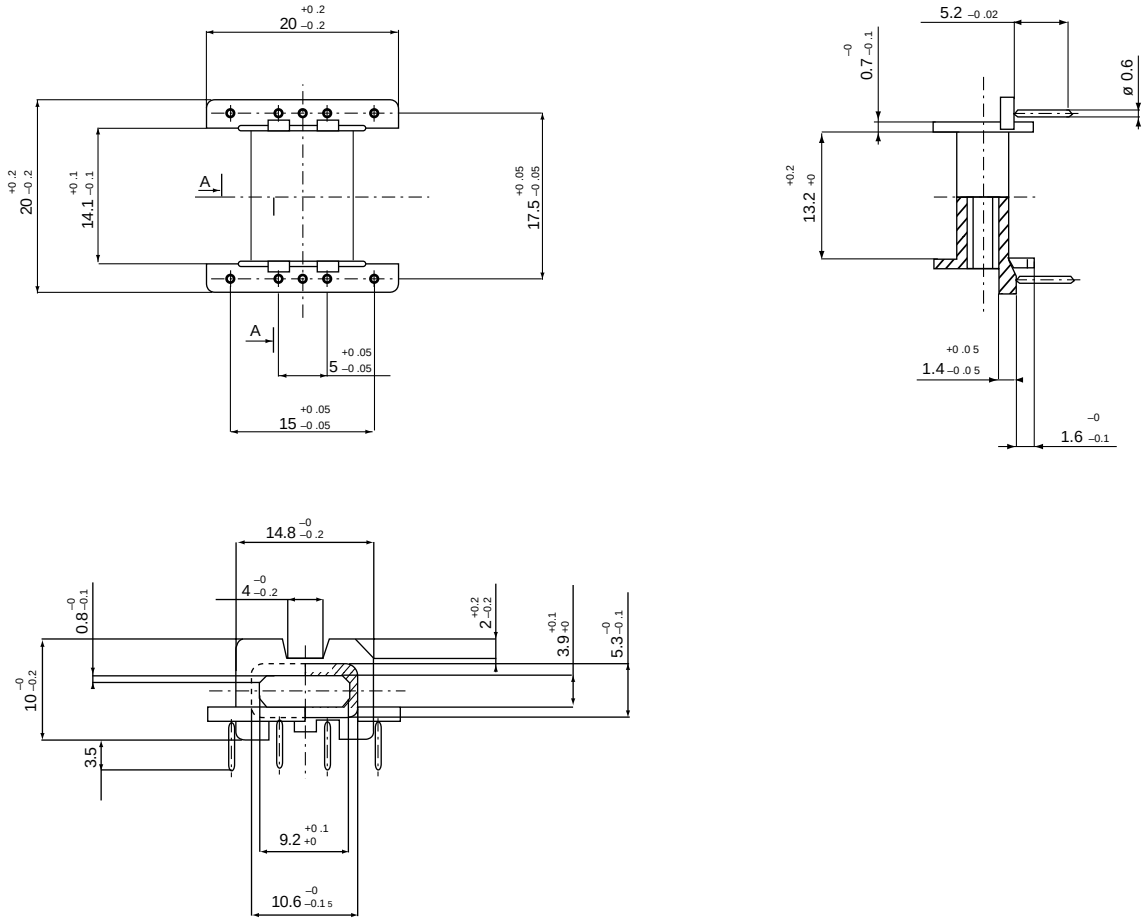


● MOUTING

Ordering Code	Component Parts	
HA1505AP-01	HC1505AR-08	2HT1505A (clamp)
HA1505AP-02	HC1505BR-08	2HT1505A (clamp)

BOBBINS FOR EF2007 A

Number of pins	Fig	Material	Min. available winding space S_b mm ² / in ²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
8		Phenoplaste	26.4/0.021	36.5/1.437	1/0.035	HC2007AR-08

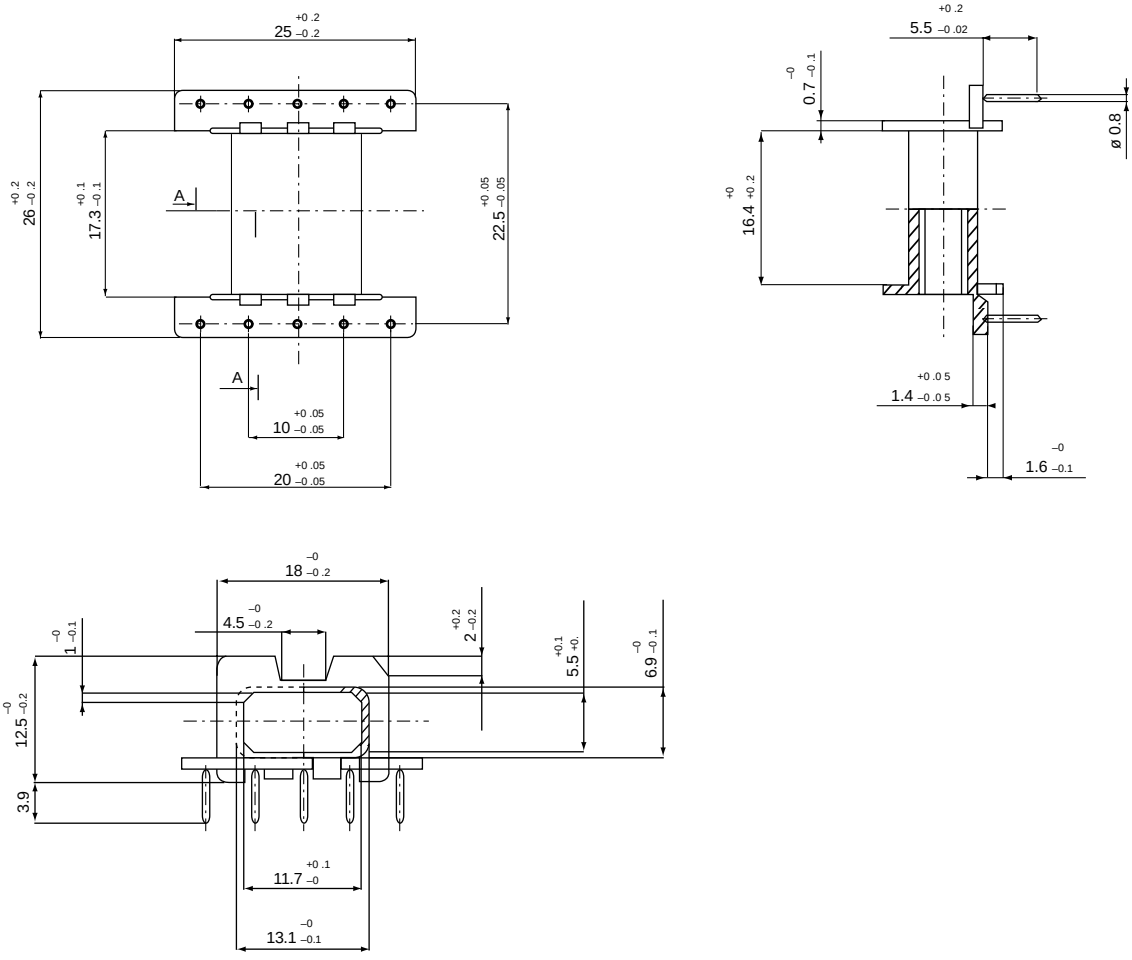


MOUTING

Ordering Code	Component Parts	
HA2007AP-01	HC2007AR-08	2HT2007A (clamp)

BOBBINS FOR EF2509 A

Number of pins	Fig	Material	Min. available winding space S_b mm² / in²	Mean turn length l_b mm / in.	Approx. weight g / oz.	Ordering code
10		Phenoplaste	40.2/0.062	46.4/1.827	1.6/0.056	HC2509AR-10



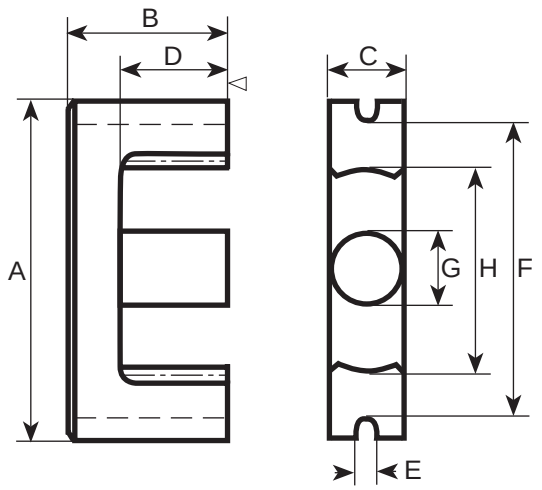
MOUTING

Ordering Code	Component Parts	
HA2509AP-01	HC2509AR-10	2HT2509A (clamp)

EC 3510 A

DIMENSIONS

A	34.5 ± 0.80	mm
	1.358 ± 0.031	in.
B	17.3 ± 0.15	mm
	0.681 ± 0.006	*in.*
C	9.5 ± 0.30	mm
	0.374 ± 0.012	*in.*
D	12.25 ± 0.35	mm
	0.482 ± 0.014	*in.*
F	28.5 ± 0.80	mm
	1.122 ± 0.031	in.
G	9.5 ± 0.30	mm
	0.374 ± 0.012	*in.*
H	22.75 ± 0.55	mm
	0.896 ± 0.022	*in.*



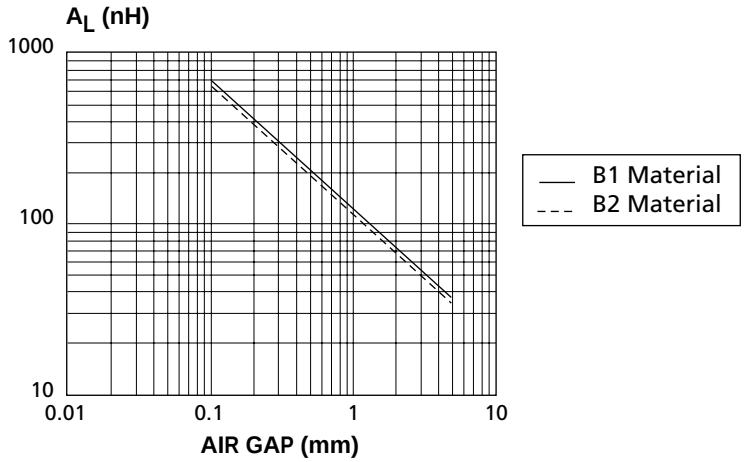
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.37	nH
Core constant	c_1	0.92	mm^{-1}
		23.37	$in.^{-1}$
Effective magnetic path length	l_e	77	mm
		3.031	in.
Effective core area	A_e	84	mm^2
		0.130	$in.^2$
Minimum core area	A mini	71	mm^2
		0.110	$in.^2$
Effective core volume	V_e	6500	mm^3
		0.397	$in.^3$
Weight per set	W	36	g

ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	2500	2170
μ_e	Approx.		25°C	1800	1500
μ_a	Flux density at	320 mT	100°C	> 1000	
		340 mT	100°C		> 1500
Total losses	25 kHz	200 mT	100°C	< 1.3	
(W)	100 kHz	100 mT	100°C		< 1.3
Codification	P/N			B1EC3510A	B2EC3510A

DESIGN CURVES FOR A CORE SET

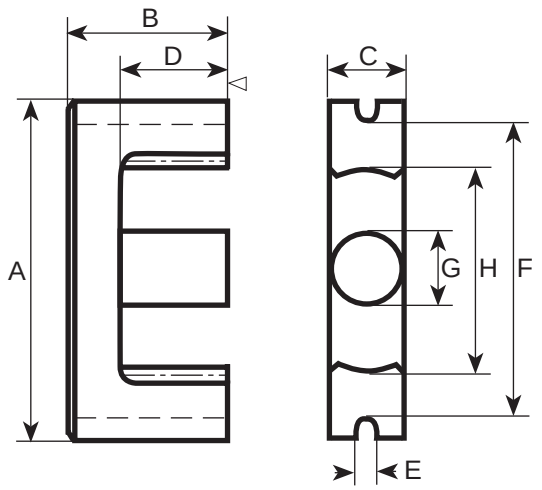
A_L vs. AIR GAP (ℰ).



EC 4112 A

DIMENSIONS

A	40.6 ± 1.00	mm
	1.598 ± 0.039	in.
B	19.5 ± 0.15	mm
	0.768 ± .006	*in.*
C	11.6 ± 0.30	mm
	0.457 ± 0.012	*in.*
D	13.9 ± 0.40	mm
	0.547 ± 0.016	*in.*
F	33.6 ± 1.00	mm
	1.323 ± 0.039	in.
G	11.6 ± 0.3	mm
	0.457 ± 0.012	*in.*
H	27.05 ± 0.75	mm
	1.065 ± 0.030	in.



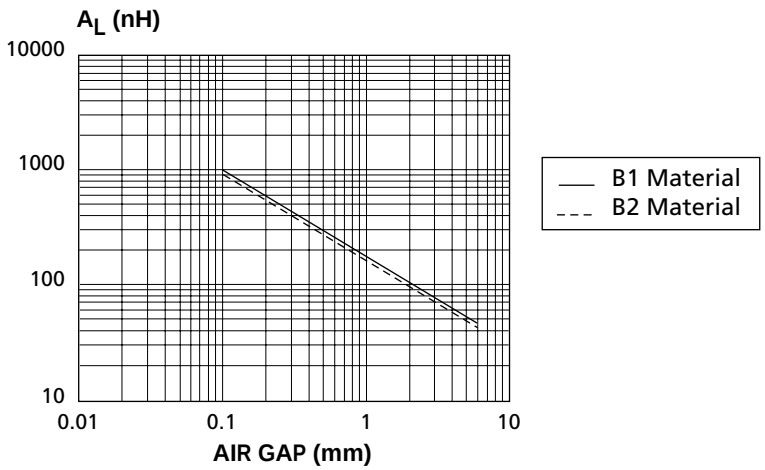
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.7	nH
Core constant	c_1	0.74	mm^{-1}
		18.80	$in.^{-1}$
Effective magnetic path length	l_e	89	mm
		3.504	in.
Effective core area	A_e	121	mm^2
		0.188	$in.^2$
Minimum core area	A mini	106	mm^2
		0.164	$in.^2$
Effective core volume	V_e	10900	mm^3
		0.665	$in.^3$
Weight per set	W	56	g

ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	3400	2790
μ_e	Approx.		25°C	2000	1650
μ_a	Flux density at	320 mT	100°C	> 1000	
		340 mT	100°C		> 1500
Total losses	25 kHz	200 mT	100°C	< 2.2	
(W)	100 kHz	100 mT	100°C		< 2.2
Codification	P/N			B1EC4112A	B2EC4112A

DESIGN CURVES FOR A CORE SET

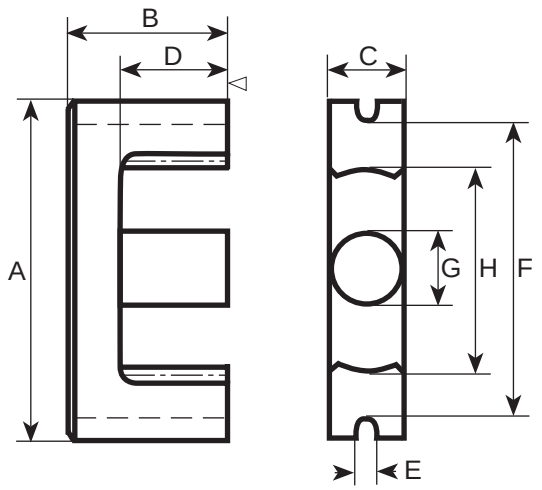
A_L vs. AIR GAP (Ɛ).



EC 5214 A

DIMENSIONS

A	52.2 ± 1.30	mm
	2.055 ± 0.051	in.
B	24.2 ± 0.15	mm
	0.953 ± 0.006	in.
C	13.4 ± 0.35	mm
	0.528 ± 0.014	in.
D	15.9 ± 0.40	mm
	0.626 ± 0.016	in.
F	44 ± 1.30	mm
	1.732 ± 0.051	in.
G	13.4 ± 0.35	mm
	0.528 ± 0.014	in.
H	33 ± 0.90	mm
	1.299 ± 0.035	in.



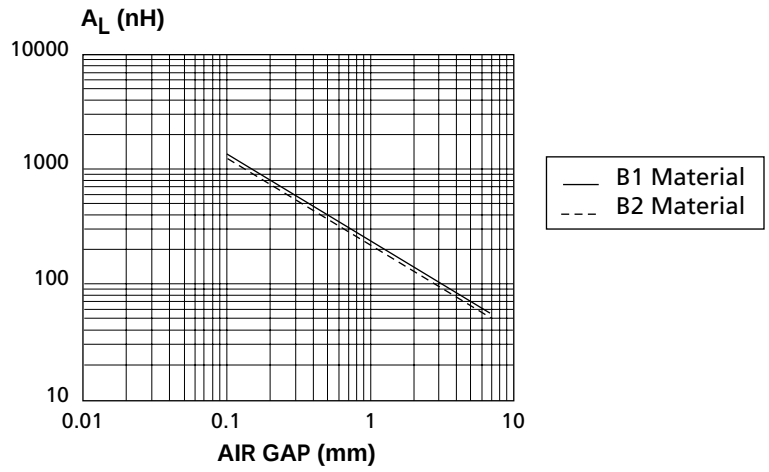
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.16	nH
Core constant	c_1	0.58	mm^{-1}
		14.73	$in.^{-1}$
Effective magnetic path length	l_e	105	mm
		4.134	in.
Effective core area	A_e	180	mm^2
		0.278	$in.^2$
Minimum core area	A mini	141	mm^2
		0.219	$in.^2$
Effective core volume	V_e	18800	mm^3
		1.15	$in.^3$
Weight per set	W	110	g

ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	4400	3600
μ_e	Approx.		25°C	2050	1650
μ_a	Flux density at	320 mT	100°C	> 1000	
		340 mT	100°C		> 1500
Total losses	25 kHz	200 mT	100°C	< 4.1	
(W)	100 kHz	100 mT	100°C		< 3.7
Codification	P/N			B1EC5214A	B2EC5214A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).

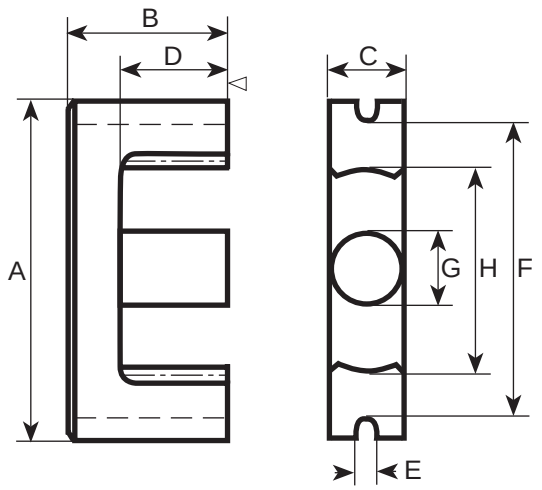


HIGH POWER

EC 7017 A

DIMENSIONS

A	70 ± 1.7	mm
	2.756 ± 0.067	in.
B	34.5 ± 0.15	mm
	1.358 ± 0.006	in.
C	16.4 ± 0.40	mm
	0.646 ± 0.016	in.
D	22.75 ± 0.45	mm
	0.896 ± 0.18	in.
F	59.6 ± 1.70	mm
	2.346 ± 0.067	in.
G	16.4 ± 0.40	mm
	0.646 ± 0.016	in.
H	44.5 ± 1.20	mm
	1.752 ± 0.047	in.



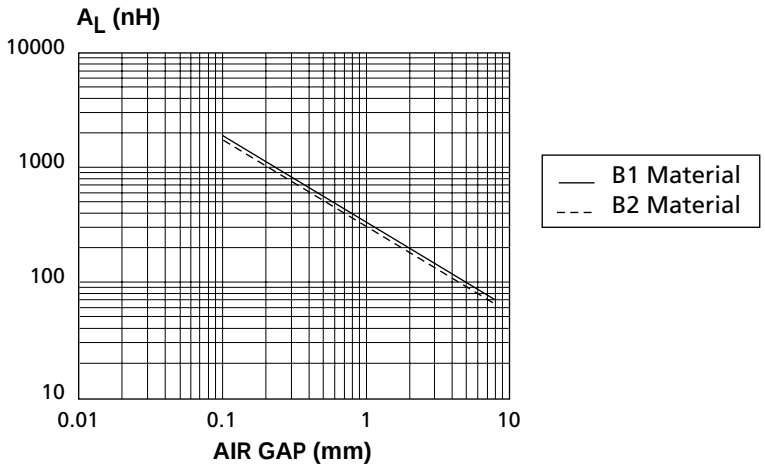
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.45	nH
Core constant	c_1	0.51	mm^{-1}
		12.95	$in.^{-1}$
Effective magnetic path length	l_e	144	mm
		5.669	in.
Effective core area	A_e	279	mm^2
		0.432	$in.^2$
Minimum core area	A mini	211	mm^2
		0.327	$in.^2$
Effective core volume	V_e	40000	mm^3
		2.44	$in.^3$
Weight per set	W	252	g

ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	5000	4200
μ_e	Approx.		25°C	2050	1700
μ_a	Flux density at	320 mT	100°C	> 1000	
		340 mT	100°C		> 1500
Total losses	25 kHz	200 mT	100°C	< 8.8	
(W)	100 kHz	100 mT	100°C		< 8
Codification	P/N			B1EC7017A	B2EC7017A

DESIGN CURVES FOR A CORE SET

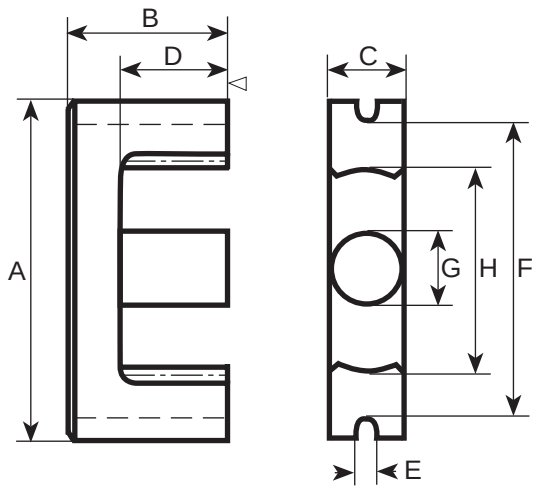
A_L vs. AIR GAP (ℰ).



EC 7017 B

DIMENSIONS

A	70 ± 1.70	mm
	2.756 ± 0.067	in.
B	29.8 ± 0.15	mm
	1.173 ± 0.006	in.
C	16.4 ± 0.40	mm
	0.646 ± 0.016	in.
D	23 ± 0.40	mm
	0.906 ± 0.016	in.
F	59.6 ± 1.70	mm
	2.346 ± 0.067	in.
G	16.4 ± 0.40	mm
	0.646 ± 0.016	in.
H	44.5 ± 1.20	mm
	1.752 ± 0.047	in.



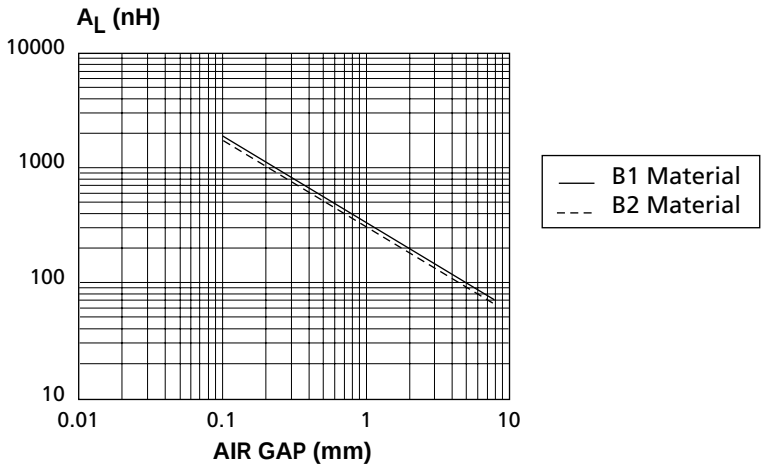
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.25	nH
Core constant	c_1	0.57	mm^{-1}
		14.48	$in.^{-1}$
Effective magnetic path length	l_e	137	mm
		5.394	in.
Effective core area	A_e	242	mm^2
		0.375	$in.^2$
Minimum core area	A mini	211	mm^2
		0.327	$in.^2$
Effective core volume	V_e	33600	mm^3
		2.05	$in.^3$
Weight per set	W	216	g

ELECTRICAL DATA

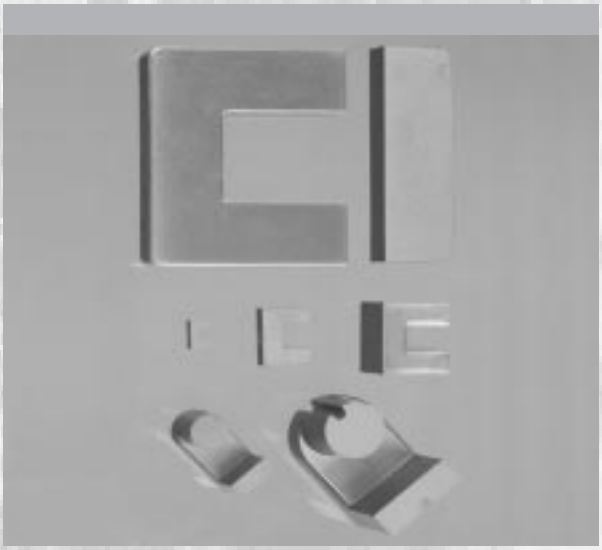
				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	4500	3800
μ_e	Approx.		25°C	2000	1700
μ_a	Flux density at	320 mT	100°C	> 1000	
		340 mT	100°C		> 1500
Total losses	25 kHz	200 mT	100°C	< 6.8	
(W)	100 kHz	100 mT	100°C		< 5.1
Codification	P/N			B1EC7017B	B2EC7017B

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP (ℰ).



U CORES



KEY-APPLICATIONS :

– TV & MONITORS

– HIGH POWER

– EMI SUPPRESSION

HOW TO ORDER U CORES ?

U cores' part number structure :

B	1	U	-	2	0	0	7	A	E	1	0	0	-	-
	Material		Model			Shape code					Finishing			

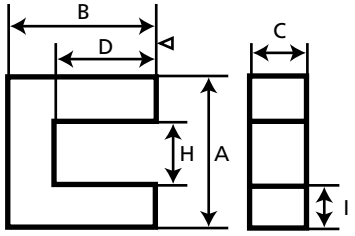
Gapped cores can be ordered as :
- mechanical gap (gap value + tol. in mm)
- electrical gap (A_L value + tol. in %)

➎ contact your local representative

U - 1105 A

DIMENSIONS

A	10.5 ± 0.4	mm
	0.415 ± 0.016	in.
B	7.8 ± 0.20	mm
	0.308 ± 0.008	in.
C	5 ± 0.15	mm
	0.198 ± 0.006	in.
D	5.25 ± 0.25	mm
	0.208 ± 0.010	in.
H	5 mini	mm
	0.198 mini	in.
I	2.5 ± 0.20	mm
	0.099 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.4	nH
Core constant	c_1	3.17	mm^{-1}
		80.52	$in.^{-1}$
Effective magnetic path length	l_e	39.9	mm
		1.571	in.
Effective core area	A_e	12.6	mm^2
		0.020	$in.^2$
Minimum core area	A mini	12.5	mm^2
		0.019	$in.^2$
Effective core volume	V_e	503	mm^3
		0.031	$in.^3$
Weight per set	W	2.59	g

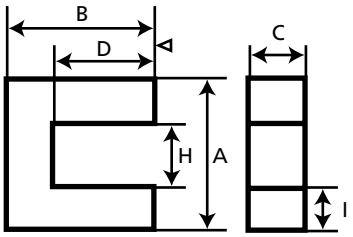
ELECTRICAL DATA

				MATERIAL				
				B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	640	530	1600	1300	1100
μ_e	Approx.		25°C	1600	1350	4000	3250	2750
μ_a	Flux density at	320 mT	100°C	> 1000				
		340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT		100°C	< 0.11				
(W)	100 kHz - 100 mT		100°C		< 0.08			
Codification	P/N			B1U-1105A	B2U-1105A	A4U-1105A	A6U-1105A	A8U-1105A

U - 1204 A

DIMENSIONS

A	12 ± 0.55	mm
	0.474 ± 0.022	in.
B	79.2 ± 0.30	mm
	0.364 ± 0.012	in.
C	3.95 ± 0.15	mm
	0.156 ± 0.006	in.
D	5.05 ± 0.15	mm
	0.200 ± 0.006	in.
H	3.45 mini	mm
	0.136 mini	in.
I	3.85 ± 0.15	mm
	0.152 ± 0.006	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.47	nH
Core constant	c_1	2.65	mm^{-1}
		67.31	$in.^{-1}$
Effective magnetic path length	l_e	41.3	mm
		1.626	in.
Effective core area	A_e	15.6	mm^2
		0.024	$in.^2$
Minimum core area	A mini	15.2	mm^2
		0.024	$in.^2$
Effective core volume	V_e	645	mm^3
		0.039	$in.^3$
Weight per set	W	3.36	g

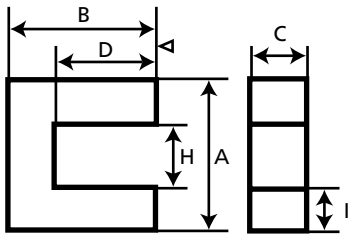
ELECTRICAL DATA

			MATERIAL		
			B1	B2	A6
A_L (nH) ± 25 %	Without airgap	25°C	950	630	1600
μ_e	Approx.	25°C	2000	1350	3400
μ_a	Flux density at320 mT 100°C	> 1000			
	340 mT	100°C		> 1500	
Total losses	25 kHz - 200 mT	100°C	< 0.13		
(W)	100 kHz - 100 mT	100°C		< 0.10	
Codification	P/N		B1U-1204A	B2U-1204A	A6U-1204A

U - 1506 A

DIMENSIONS

A	15.2 ± 0.70	mm
	0.601 ± 0.028	in.
B	11.2 ± 0.50	mm
	0.443 ± 0.020	in.
C	6.45 ± 0.25	mm
	0.255 ± 0.010	in.
D	6.05 ± 0.35	mm
	0.239 ± 0.014	in.
H	5.2 ± 0.30	mm
	0.206 ± 0.012	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.8	nH
Core constant	c_1	1.55	mm^{-1}
		39.37	$in.^{-1}$
Effective magnetic path length	l_e	50.5	mm
		1.988	in.
Effective core area	A_e	32.6	mm^2
		0.051	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	1650	mm^3
		0.101	$in.^3$
Weight per set	W	8.4	g

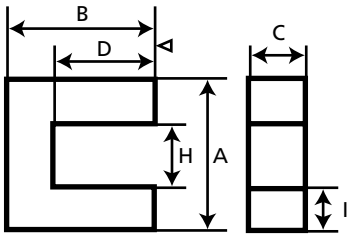
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1600	1250	3000	2400	2150
μ_e	Approx.	25°C	2000	1550	3750	3000	2700
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.33				
(W)	100 kHz - 100 mT	100°C		< 0.24			
Codification	P/N		B1U-1506A	B2U-1506A	A4U-1506A	A6U-1506A	A8U-1506A

U - 1513 A

DIMENSIONS

A	15.2 ± 0.70	mm
	0.601 ± 0.028	in.
B	11.2 ± 0.50	mm
	0.443 ± 0.020	in.
C	13 ± 0.25	mm
	0.514 ± 0.010	in.
D	6.05 ± 0.35	mm
	0.239 ± 0.014	in.
H	5.2 ± 0.30	mm
	0.206 ± 0.012	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.63	nH
Core constant	c_1	0.77	mm^{-1}
		19.56	$in.^{-1}$
Effective magnetic path length	l_e	50.5	mm
		1.988	in.
Effective core area	A_e	65.7	mm^2
		0.102	$in.^2$
Minimum core area	A mini	65	mm^2
		0.101	$in.^2$
Effective core volume	V_e	3320	mm^3
		0.203	$in.^3$
Weight per set	W	17.3	g

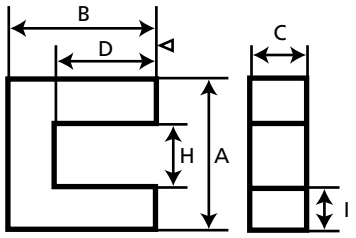
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	3260	2300	4750	3800	3500
μ_e	Approx.	25°C	2000	1400	2900	2350	2150
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.67				
(W)	100 kHz - 100 mT	100°C		< 0.5			
Codification	P/N		B1U-1513A	B2U-1513A	A4U-1513A	A6U-1513A	A8U-1513A

U - 1520 A

DIMENSIONS

A	15.2 ± 0.70	mm
	0.601 ± 0.028	in.
B	11.2 ± 0.50	mm
	0.443 ± 0.020	in.
C	19.5 ± 0.25	mm
	0.771 ± 0.010	in.
D	6.05 ± 0.35	mm
	0.239 ± 0.014	in.
H	5.2 ± 0.30	mm
	0.206 ± 0.012	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.45	nH
Core constant	c_1	0.51	mm^{-1}
		12.95	$in.^{-1}$
Effective magnetic path length	l_e	50.5	mm
		1.988	in.
Effective core area	A_e	98.5	mm^2
		0.153	$in.^2$
Minimum core area	A mini	97.5	mm^2
		0.151	$in.^2$
Effective core volume	V_e	4980	mm^3
		0.304	$in.^3$
Weight per set	W	25	g

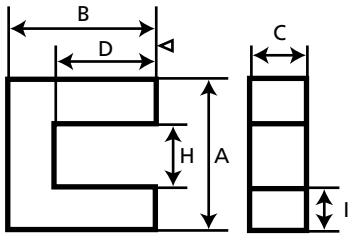
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	4900	3500	7100	5700	5300
μ_e	Approx.	25°C	2000	1400	2900	2350	2150
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 1				
(W)	100 kHz - 100 mT	100°C		< 0.75			
Codification	P/N		B1U-1520A	B2U-1520A	A4U-1520A	A6U-1520A	A8U-1520A

U - 1606 A

DIMENSIONS

A	15.7 ± 0.50	mm
	0.621 ± 0.020	in.
B	9.9 ± 0.20	mm
	0.391 ± 0.008	in.
C	6 ± 0.2	mm
	0.237 ± 0.008	in.
D	6.2 ± 0.25	mm
	0.245 ± 0.010	in.
H	6.5 mini	mm
	0.257 mini	in.
I	4.5 ± 0.20	mm
	0.178 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.61	nH
Core constant	c_1	2.05	mm^{-1}
		52.07	$in.^{-1}$
Effective magnetic path length	l_e	50.7	mm
		1.996	in.
Effective core area	A_e	24.8	mm^2
		0.038	$in.^2$
Minimum core area	A mini	22.2	mm^2
		0.034	$in.^2$
Effective core volume	V_e	1260	mm^3
		0.077	$in.^3$
Weight per set	W	6.56	g

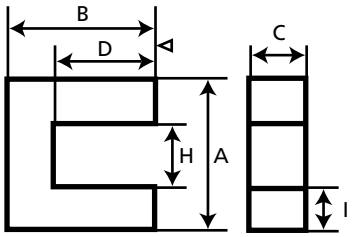
ELECTRICAL DATA

				MATERIAL				
				B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap		25°C	1200	1080	2400	2000	1700
μ_e	Approx.		25°C	1950	1750	3950	3300	2800
μ_a	Flux density at320 mT	100°C	> 1000					
		340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT		100°C	< 26				
(W)	100 kHz - 100 mT		100°C		< 0.19			
Codification	P/N			B1U-1606A	B2U-1606A	A4U-1606A	A6U-1606A	A8U-1606A

U - 1706 B

DIMENSIONS

A	17 ± 0.70	mm
	0.672 ± 0.028	in.
B	16.6 ± 0.20	mm
	0.656 ± 0.008	in.
C	5.95 ± 0.20	mm
	0.235 ± 0.008	in.
D	12.15 ± 0.40	mm
	0.480 ± 0.016	in.
H	7 mini	mm
	0.277 mini	in.
I	4.5 ± 0.15	mm
	0.178 ± 0.006	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.43	nH
Core constant	c_1	2.95	mm^{-1}
		74.93	$in.^{-1}$
Effective magnetic path length	l_e	78.7	mm
		3.098	in.
Effective core area	A_e	26.7	mm^2
		0.041	$in.^2$
Minimum core area	A mini	26.5	mm^2
		0.041	$in.^2$
Effective core volume	V_e	2100	mm^3
		0.128	$in.^3$
Weight per set	W	10.6	g

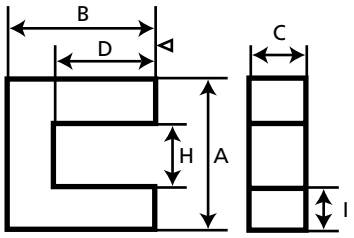
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	900	670	1920	1600	1300
μ_e	Approx.	25°C	2100	1550	4450	3700	3000
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.42				
(W)	100 kHz - 100 mT	100°C		< 0.32			
Codification	P/N		B1U-1706A	B2U-1706A	A4U-1706A	A6U-1706A	A8U-1706A

U - 2007 A

DIMENSIONS

A	21 ± 0.60	mm
	0.830 ± 0.024	in.
B	15.3 ± 0.50	mm
	0.605 ± 0.020	in.
C	7.5 ± 0.30	mm
	0.296 ± 0.012	in.
D	8.25 ± 0.25	mm
	0.326 ± 0.010	in.
H	6.3 ± 0.30	mm
	0.249 ± 0.012	in.
I	7.3 ± 0.20	mm
	0.289 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1	nH
Core constant	c_1	1.25	mm^{-1}
		31.75	$in.^{-1}$
Effective magnetic path length	l_e	68	mm
		2.677	in.
Effective core area	A_e	54.3	mm^2
		0.084	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	3700	mm^3
		0.226	$in.^3$
Weight per set	W	18	g

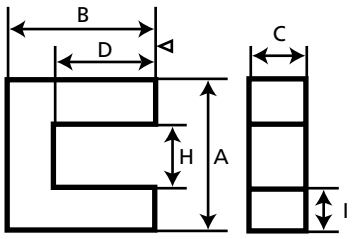
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	2000	1600	4220	3100	2800
μ_e	Approx.	25°C	2000	1600	4220	3100	2800
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.75				
(W)	100 kHz - 100 mT	100°C		< 0.6			
Codification	P/N		B1U-2007A	B2U-2007A	A4U-2007A	A6U-2007A	A8U-2007A

U - 2507 A

DIMENSIONS

A	24.5 ± 0.70	mm
	0.968 ± 0.028	in.
B	18.4 ± 0.50	mm
	0.727 ± 0.020	in.
C	7.3 ± 0.30	mm
	0.289 ± 0.012	in.
D	10.85 ± 0.25	mm
	0.429 ± 0.010	in.
H	9.9 ± 0.30	mm
	0.391 ± 0.012	in.
I	7.3 ± 0.30	mm
	0.289 ± 0.012	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.78	nH
Core constant	c_1	1.6	mm^{-1}
		40.64	$in.^{-1}$
Effective magnetic path length	l_e	86.5	mm
		3.406	in.
Effective core area	A_e	53.9	mm^2
		0.084	$in.^2$
Minimum core area	A mini	53.9	mm^2
		0.084	$in.^2$
Effective core volume	V_e	4685	mm^3
		0.286	$in.^3$
Weight per set	W	24	g

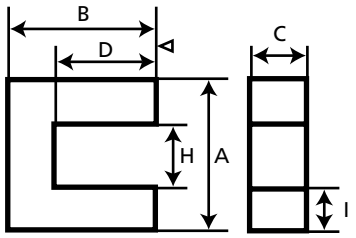
ELECTRICAL DATA

			MATERIAL				
			B1	B2	A4	A6	A8
A_L (nH) ± 25 %	Without airgap	25°C	1600	1250	2900	2200	2000
μ_e	Approx.	25°C	2050	1600	3700	2800	2550
μ_a	Flux density at320 mT 100°C	> 1000					
	340 mT	100°C		> 1500			
Total losses	25 kHz - 200 mT	100°C	< 0.94				
(W)	100 kHz - 100 mT	100°C		< 0.71			
Codification	P/N		B1U-2507A	B2U-2507A	A4U-2507A	A6U-2507A	A8U-2507A

U - 2513 A

DIMENSIONS

A	24.8 ± 0.70	mm
	0.980 ± 0.028	in.
B	19.6 ± 0.20	mm
	0.775 ± 0.008	in.
C	12.7 ± 0.30	mm
	0.502 ± 0.012	in.
D	11.4 ± 0.40	mm
	0.451 ± 0.016	in.
H	8.4 ± 0.40	mm
	0.332 ± 0.016	in.
I	8.2 ± 0.20	mm
	0.324 ± 0.008	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.5	nH
Core constant	c_1	0.83	mm^{-1}
		21.08	$in.^{-1}$
Effective magnetic path length	l_e	87	mm
		3.425	in.
Effective core area	A_e	105	mm^2
		0.163	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	9100	mm^3
		0.555	$in.^3$
Weight per set	W	44	g

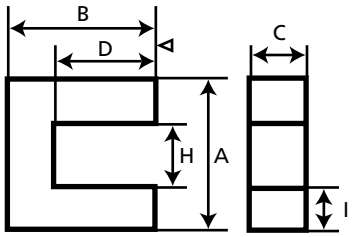
ELECTRICAL DATA

				MATERIAL		
				B1	B2	A8
A_L (nH) ± 25 %	Without airgap		25°C	3000	2500	4500
μ_e	Approx.		25°C	2000	1650	3000
μ_a	Flux density at	320 mT	100°C	> 1000		
		340 mT	100°C		> 1500	
Total losses (W)	25 kHz - 200 mT		100°C	< 1.5		
	100 kHz - 100 mT		100°C		< 2.8	
Codification	P/N			B1U-2513A	B2U-2513A	A8U-2513A

U - 2616 A

DIMENSIONS

A	25.8 ± 0.70	mm
	1.020 ± 0.028	in.
B	21.85 ± 0.35	mm
	0.864 ± 0.014	in.
C	15.7 ± 0.30	mm
	0.621 ± 0.012	in.
D	13.2 ± 0.20	mm
	0.522 ± 0.008	in.
H	9.35 ± 0.35	mm
	0.370 ± 0.014	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.68	nH
Core constant	c_1	0.75	mm^{-1}
		19.05	$in.^{-1}$
Effective magnetic path length	l_e	98	mm
		3.858	in.
Effective core area	A_e	131	mm^2
		0.203	$in.^2$
Minimum core area	A mini	129	mm^2
		0.200	$in.^2$
Effective core volume	V_e	12900	mm^3
		0.787	$in.^3$
Weight per set	W	66.4	g

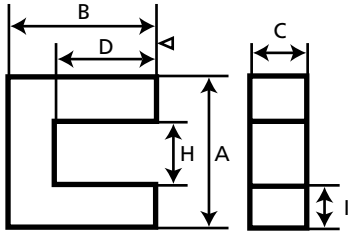
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	3400	2700
μ_e	Approx.		25°C	2050	1600
μ_a	Flux density at	320 mT 100°C	> 1000		
		340 mT	100°C		> 1500
Total losses	25 kHz - 200 mT		100°C	< 2.6	
(W)	100 kHz - 100 mT		100°C		< 2
Codification	P/N			B1U-2616A	B2U-2616A

U - 3126 A

DIMENSIONS

A	30.8 ± 1.20	mm
	1.217 ± 0.047	in.
B	26.4 ± 0.60	mm
	1.043 ± 0.024	in.
C	26.1 ± 0.40	mm
	1.032 ± 0.016	in.
D	16.25 ± 0.25	mm
	0.642 ± 0.010	in.
H	10.4 ± 0.40	mm
	0.411 ± 0.016	in.
I	10.2 ± 0.50	mm
	0.403 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.84	nH
Core constant	c_1	0.44	mm^{-1}
		11.24	$in.^{-1}$
Effective magnetic path length	l_e	117.8	mm
		4.638	in.
Effective core area	A_e	265.8	mm^2
		0.412	$in.^2$
Minimum core area	A mini	265.8	mm^2
		0.412	$in.^2$
Effective core volume	V_e	31303	mm^3
		1.91	$in.^3$
Weight per set	W	160	g

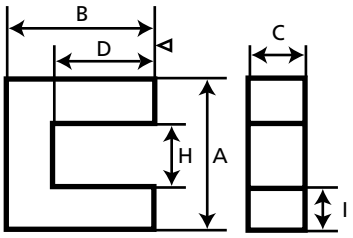
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	5600	4480
μ_e	Approx.	25°C	1950	1600
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	25 kHz - 200 mT	100°C	< 6.3	
(W)	100 kHz - 100 mT	100°C		< 4.7
Codification	P/N		B1U-3126A	B2U-3126A

U - 4628 A

DIMENSIONS

A	46 ± 1.00	mm
	1.818 ± 0.040	in.
B	39.5 ± 0.25	mm
	1.561 ± 0.010	in.
C	28 ± 0.80	mm
	1.107 ± 0.032	in.
D	25.5 ± 0.75	mm
	1.008 ± 0.030	in.
H	16 mini	mm
	0.632 mini	in.
I	14 ± 0.50	mm
	0.553 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.7	nH
Core constant	c_1	0.46	mm^{-1}
		11.68	$in.^{-1}$
Effective magnetic path length	l_e	180	mm
		7.087	in.
Effective core area	A_e	390	mm^2
		0.605	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	70000	mm^3
		4.27	$in.^3$
Weight per set	W	360	g

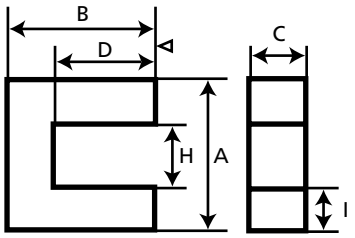
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	5600	4700
μ_e	Approx.	25°C	2050	1750
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 7.7	
(W)	100 kHz - 100 mT	100°C		< 11
Codification	P/N		B1U-4628A	B2U-4628A

U - 9316 A

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	16 ± 0.50	mm
	0.632 ± 0.020	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
I	28 ± 0.50	mm
	1.107 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.59	nH
Core constant	c_1	0.79	mm^{-1}
		20.07	$in.^{-1}$
Effective magnetic path length	l_e	354	mm
		13.937	in.
Effective core area	A_e	448	mm^2
		0.694	$in.^2$
Minimum core area	A mini	448	mm^2
		0.694	$in.^2$
Effective core volume	V_e	158580	mm^3
		9.68	$in.^3$
Weight per set	W	770	g

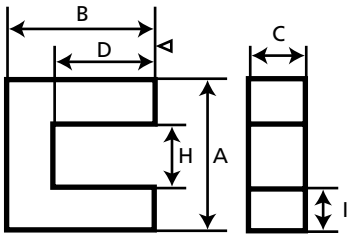
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	3200	2900
μ_e	Approx.	25°C	2000	1800
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 18.5	
(W)	100 kHz - 100 mT	100°C		< 24
Codification	P/N		B1U-9316A	B2U-9316A

U - 9320 A

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	20 ± 0.50	mm
	0.791 ± 0.020	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
I	28 ± 0.50	mm
	1.107 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.99	nH
Core constant	c_1	0.63	mm^{-1}
		16.00	$in.^{-1}$
Effective magnetic path length	l_e	354	mm
		13.937	in.
Effective core area	A_e	560	mm^2
		0.868	$in.^2$
Minimum core area	A mini	560	mm^2
		0.868	$in.^2$
Effective core volume	V_e	198220	mm^3
		12.10	$in.^3$
Weight per set	W	960	g

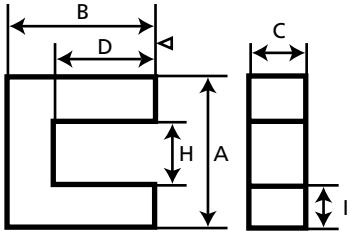
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	4000	3600
μ_e	Approx.		25°C	2000	1800
μ_a	Flux density at320 mT	100°C	> 1000		
		340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT		100°C	< 23	
(W)	100 kHz - 100 mT		100°C		< 30
Codification	P/N			B1U-9320A	B2U-9320A

U - 9330 B

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	30 ± 0.60	mm
	1.186 ± 0.024	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
I	28 ± 0.50	mm
	1.107 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3	nH
Core constant	c_1	0.42	mm^{-1}
		10.67	$in.^{-1}$
Effective magnetic path length	l_e	355	mm
		13.976	in.
Effective core area	A_e	840	mm^2
		1.302	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	300000	mm^3
		18.31	$in.^3$
Weight per set	W	1450	g

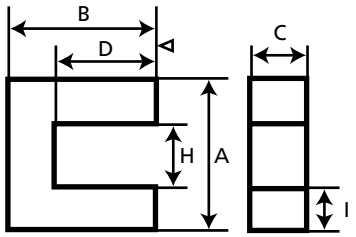
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	6000	5450
μ_e	Approx.		25°C	2000	1800
μ_a	Flux density at320 mT	100°C	> 1000		
		340 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT		100°C	< 34.5	
	100 kHz - 100 mT		100°C		< 45
Codification	P/N			B1U-9330A	B2U-9330A

U - - 102 A

DIMENSIONS

A	101.6 ± 2.00	mm
	4.016 ± 0.079	in.
B	57.1 ± 0.40	mm
	2.257 ± 0.016	in.
C	25.4 ± 0.80	mm
	1.004 ± 0.032	in.
D	31.7 ± 0.75	mm
	1.253 ± 0.030	in.
H	50.8 ± 3.60	mm
	2.008 ± 0.142	in.
I	25.4 ± 0.80	mm
	1.004 ± 0.032	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.6	nH
Core constant	c_1	0.48	mm^{-1}
		12.28	$in.^{-1}$
Effective magnetic path length	l_e	308	mm
		12.126	in.
Effective core area	A_e	645	mm^2
		1.000	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	199000	mm^3
		12.14	$in.^3$
Weight per set	W	1000	g

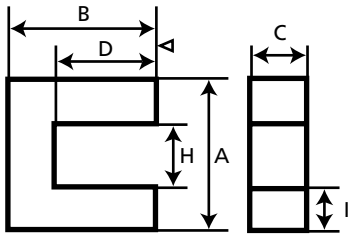
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	5200	4700
μ_e	Approx.	25°C	2000	1800
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 23	
(W)	100 kHz - 100 mT	100°C		< 30
Codification	P/N		B1U--102A	B2U--102A

U - - 126 A

DIMENSIONS

A	126 ± 4.00	mm
	4.980 ± 0.158	in.
B	91 ± 1.00	mm
	3.597 ± 0.040	in.
C	20 ± 0.60	mm
	0.791 ± 0.024	in.
D	63 ± 2.00	mm
	2.490 ± 0.079	in.
H	70 ± 2.00	mm
	2.767 ± 0.079	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.47	nH
Core constant	c_1	0.86	mm^{-1}
		21.84	$in.^{-1}$
Effective magnetic path length	l_e	480	mm
		18.898	in.
Effective core area	A_e	560	mm^2
		0.868	$in.^2$
Minimum core area	A mini	560	mm^2
		0.868	$in.^2$
Effective core volume	V_e	268800	mm^3
		16.40	$in.^3$
Weight per set	W	2078	g

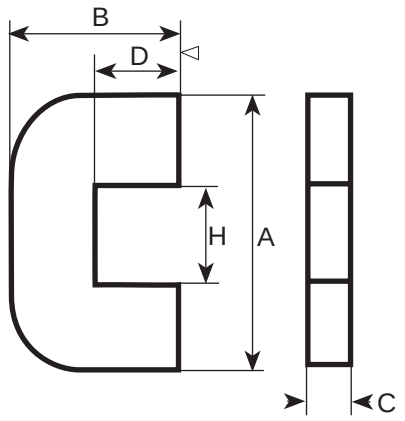
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	3000	2700
μ_e	Approx.	25°C	2050	1850
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 30	
(W)	100 kHz - 100 mT	100°C		< 41
Codification	P/N		B1U--126A	B2U--126A

U - - 141 A

DIMENSIONS

A	141 ± 5.00	mm
	5.573 ± 0.198	in.
B	78.5 ± 1.00	mm
	3.103 ± 0.040	in.
C	15 ± 1.00	mm
	0.503 ± 0.040	in.
D	33.50 ± 1.00	mm
	1.324 ± 0.040	in.
H	50 mini	mm
	1.976 mini	in.
I	45 nomi	mm
	1.779 nomi	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.25	nH
Core constant	c_1	0.56	mm^{-1}
		14.19	$in.^{-1}$
Effective magnetic path length	l_e	377.3	mm
		14.858	in.
Effective core area	A_e	675	mm^2
		1.046	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	254700	mm^3
		15.54	$in.^3$
Weight per set	W	1600	g

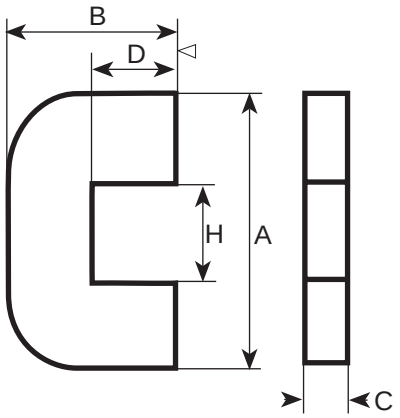
ELECTRICAL DATA

			MATERIAL
			B1
A_L (nH) ± 25 %	Without airgap	25°C	4500
μ_e	Approx.	25°C	2000
μ_a	Flux density at320 mT 100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 29
Codification	P/N		B1U--141A

U - - 141 B

DIMENSIONS

A	141 ± 5.00	mm
	5.573 ± 0.198	in.
B	78.5 ± 1.00	mm
	3.103 ± 0.040	in.
C	30 ± 1.00	mm
	1.186 ± 0.040	in.
D	33.5 ± 1.00	mm
	1.324 ± 0.040	in.
H	51 mini	mm
	2.016 mini	in.
I	45 nomi	mm
	1.779 nomi	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.5	nH
Core constant	c_1	0.28	mm^{-1}
		7.09	$in.^{-1}$
Effective magnetic path length	l_e	377	mm
		14.843	in.
Effective core area	A_e	1350	mm^2
		2.093	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	510000	mm^3
		31.12	$in.^3$
Weight per set	W	3200	g

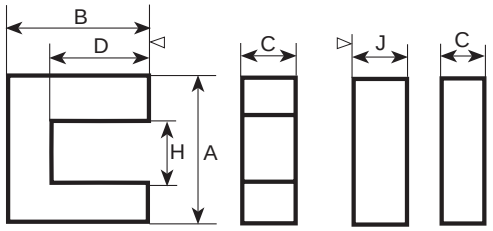
ELECTRICAL DATA

			MATERIAL
			B1
A_L (nH) ± 25 %	Without airgap	25°C	9000
μ_e	Approx.	25°C	2000
μ_a	Flux density at320 mT 100°C	> 1000	
Total losses (W)	16 kHz - 200 mT	100°C	< 59
Codification	P/N		B1U--141B

UI 9316 A

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	16 ± 0.50	mm
	0.632 ± 0.020	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
J	27.5 ± 0.50	mm
	1.087 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.18	nH
Core constant	c_1	0.58	mm^{-1}
		14.64	$in.^{-1}$
Effective magnetic path length	l_e	258	mm
		10.157	in.
Effective core area	A_e	448	mm^2
		0.694	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	115600	mm^3
		7.05	$in.^3$
Weight per set	W	580	g

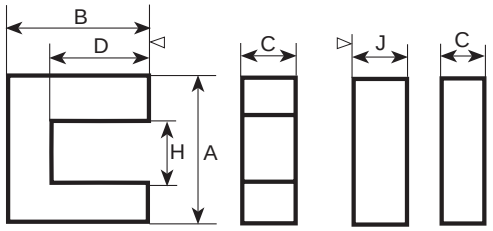
ELECTRICAL DATA

			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	4500	3900
μ_e	Approx.	25°C	2050	1800
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 13.5	
(W)	100 kHz - 100 mT	100°C		< 18
Codification	P/N		B1UI9316A	B2UI9316A

UI 9320 A

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	20 ± 0.50	mm
	0.791 ± 0.020	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
J	27.5 ± 0.50	mm
	1.087 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.73	nH
Core constant	c_1	0.46	mm^{-1}
		11.69	$in.^{-1}$
Effective magnetic path length	l_e	258	mm
		10.157	in.
Effective core area	A_e	560	mm^2
		0.868	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	144500	mm^3
		8.82	$in.^3$
Weight per set	W	750	g

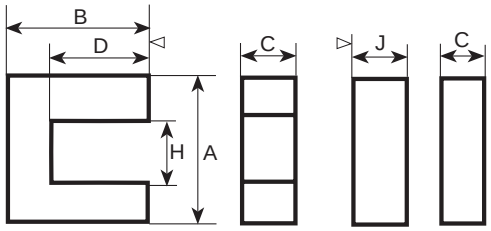
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	5600	4850
μ_e	Approx.		25°C	2050	1800
μ_a	Flux density at320 mT	100°C	> 1000		
		340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT		100°C	< 17	
(W)	100 kHz - 100 mT		100°C		< 22
Codification	P/N			B1UI9320A	B2UI9320A

UI 9330 A

DIMENSIONS

A	93 ± 1.80	mm
	3.676 ± 0.071	in.
B	76 ± 0.50	mm
	3.004 ± 0.020	in.
C	30 ± 0.60	mm
	1.186 ± 0.024	in.
D	48 ± 0.90	mm
	1.897 ± 0.036	in.
H	34.6 mini	mm
	1.368 mini	in.
J	27.5 ± 0.60	mm
	1.087 ± 0.024	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.2	nH
Core constant	c_1	0.30	mm^{-1}
		7.60	$in.^{-1}$
Effective magnetic path length	l_e	255	mm
		10.039	in.
Effective core area	A_e	856	mm^2
		1.327	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	218000	mm^3
		13.30	$in.^3$
Weight per set	W	1100	g

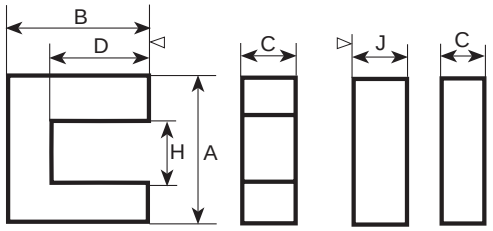
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	8400	7500
μ_e	Approx.		25°C	2000	1800
μ_a	Flux density at320 mT	100°C	> 1000		
		340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT		100°C	< 25	
(W)	100 kHz - 100 mT		100°C		< 33
Codification	P/N			B1UI9330A	B2UI9330A

UI - 102 A

DIMENSIONS

A	101.6 ± 2.00	mm
	4.016 ± 0.079	in.
B	57.1 ± 0.40	mm
	2.257 ± 0.016	in.
C	25.4 ± 0.80	mm
	1.004 ± 0.032	in.
D	31.7 ± 0.75	mm
	1.253 ± 0.030	in.
H	50.8 ± 3.60	mm
	2.008 ± 0.142	in.
J	25.3 ± 0.50	mm
	1.000 ± 0.020	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.3	nH
Core constant	c_1	0.38	mm^{-1}
		9.67	$in.^{-1}$
Effective magnetic path length	l_e	245	mm
		9.646	in.
Effective core area	A_e	645	mm^2
		1.000	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	157700	mm^3
		9.62	$in.^3$
Weight per set	W	810	g

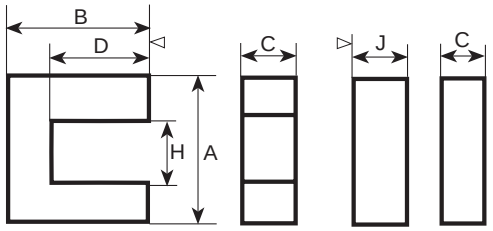
ELECTRICAL DATA

				MATERIAL	
				B1	B2
A_L (nH) ± 25 %	Without airgap		25°C	6600	5850
μ_e	Approx.		25°C	2000	1800
μ_a	Flux density at320 mT	100°C	> 1000		
		340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT		100°C	< 18	
(W)	100 kHz - 100 mT		100°C		< 24
Codification	P/N			B1UI-102A	B2UI-102A

UI - 126 A

DIMENSIONS

A	126 ± 4.00	mm
	4.980 ± 0.158	in.
B	91 ± 1.00	mm
	3.597 ± 0.040	in.
C	20 ± 0.60	mm
	0.791 ± 0.024	in.
D	63 ± 2.00	mm
	2.490 ± 0.079	in.
H	70 ± 2.00	mm
	2.767 ± 0.079	in.
J	28 ± 1.00	mm
	1.107 ± 0.040	in.



EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.99	nH
Core constant	c_1	0.63	mm^{-1}
		16.04	$in.^{-1}$
Effective magnetic path length	l_e	354	mm
		13.937	in.
Effective core area	A_e	560	mm^2
		0.868	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	198200	mm^3
		12.09	$in.^3$
Weight per set	W	750	g

ELECTRICAL DATA

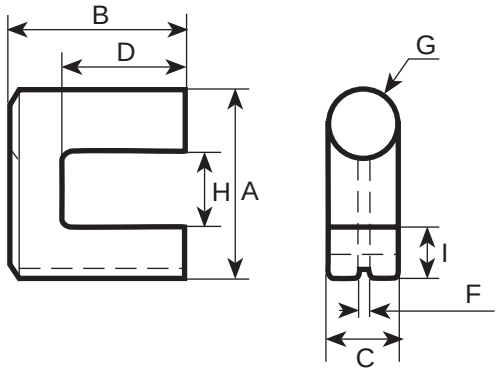
			MATERIAL	
			B1	B2
A_L (nH) ± 25 %	Without airgap	25°C	4000	3600
μ_e	Approx.	25°C	2000	1800
μ_a	Flux density at320 mT 100°C	> 1000		
	340 mT	100°C		> 1500
Total losses	16 kHz - 200 mT	100°C	< 22.8	
(W)	100 kHz - 100 mT	100°C		< 30
Codification	P/N		B1UI-126A	B2UI-126A

NOTES

UR 2810 A

DIMENSIONS

A	28 ± 0.60	mm
	1.107 ± 0.024	*in.*
B	15.75 ± 0.25	mm
	0.623 ± 0.010	*in.*
C	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
D	11 ± 0.30	mm
	0.435 ± 0.012	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	13 ± 0.30	mm
	0.514 ± 0.012	in.
I	5 ± 0.10	mm
	0.198 ± 0.004	*in.*



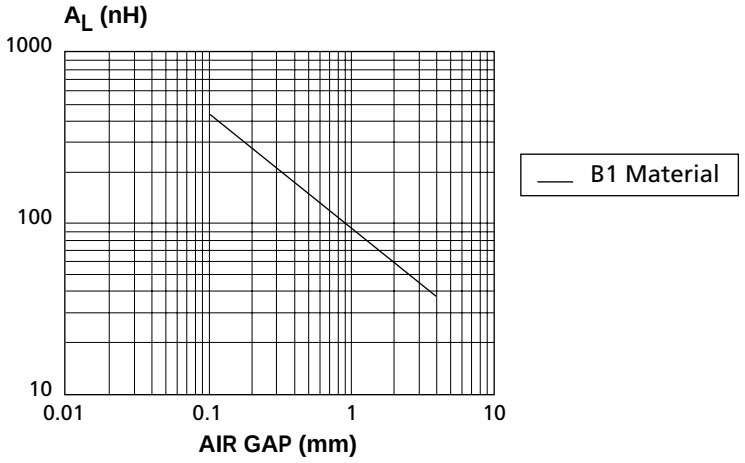
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.74	nH
Core constant	c_1	1.7	mm^{-1}
		43.18	$in.^{-1}$
Effective magnetic path length	l_e	85	mm
		3.346	in.
Effective core area	A_e	50	mm^2
		0.078	$in.^2$
Minimum core area	A mini	44.6	mm^2
		0.069	$in.^2$
Effective core volume	V_e	4230	mm^3
		0.258	$in.^3$
Weight per set	W	24	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 0.45
Codification	P/N		B1UR2810A

DESIGN CURVES FOR A CORE SET

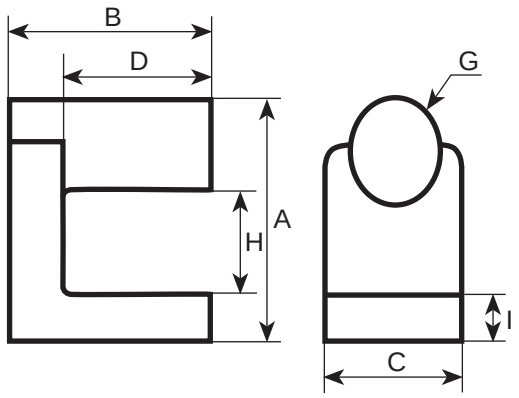
A_L vs. AIR GAP



UR 2814 A

DIMENSIONS

A	28.80 maxi *1.138 maxi*	mm *in.*
B	20.25 ± 0.25 *0.800 ± 0.010*	mm *in.*
C	13.5 ± 0.30 *0.534 ± 0.012*	mm *in.*
D	13.25 ± 0.25 *0.524 ± 0.010*	mm *in.*
G	11.2 ± 0.30 *0.443 ± 0.012*	mm *in.*
H	9 ± 0.50 0.356 ± 0.020	mm in.
I	7.5 ± 0.30 *0.296 ± 0.012*	mm *in.*



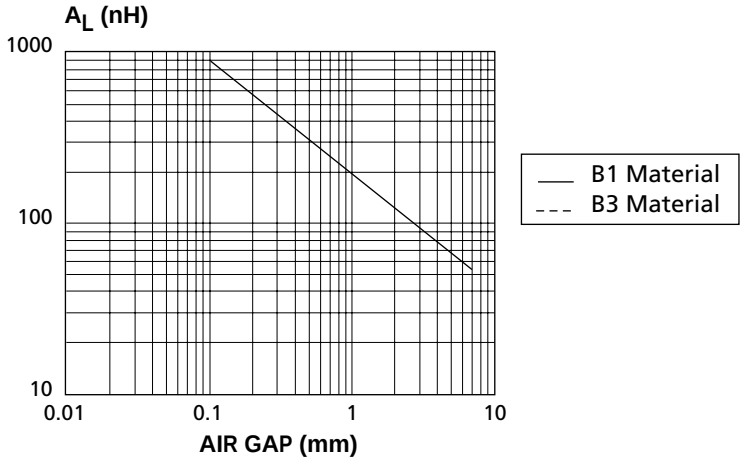
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.27	nH
Core constant	c_1	0.99 25.15	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	97 3.819	mm in.
Effective core area	A_e	98 0.152	mm^2 $in.^2$
Minimum core area	A mini	94.5 *0.146*	mm^2 $in.^2$
Effective core volume	V_e	9500 0.580	mm^3 $in.^3$
Weight per set	W	50	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 1.10	< 0.95
Codification	P/N		B1UR2814A	B3UR2814A

DESIGN CURVES FOR A CORE SET

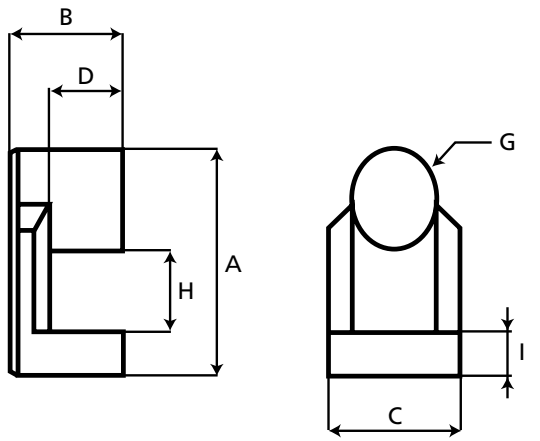
A_L vs. AIR GAP



UR 2820 A

DIMENSIONS

A	28.45 ± 0.60	mm
	1.125 ± 0.024	*in.*
B	16.2 ± 0.20	mm
	0.640 ± 0.008	*in.*
C	19.6 ± 0.40	mm
	0.775 ± 0.016	*in.*
D	11 ± 0.40	mm
	0.435 ± 0.016	*in.*
G	12.5 ± 0.30	mm
	0.494 ± 0.012	*in.*
H	10.6 ± 0.40	mm
	0.419 ± 0.016	in.
I	5.35 ± 0.15	mm
	0.211 ± 0.006	*in.*



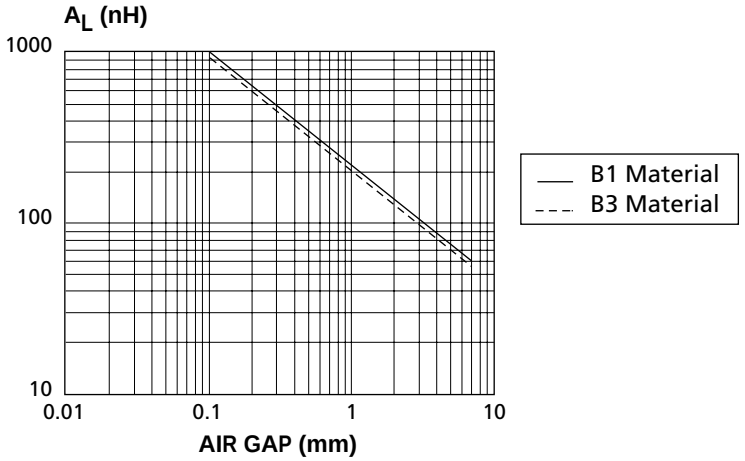
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.6	nH
Core constant	c_1	0.82	mm^{-1}
		20.83	$in.^{-1}$
Effective magnetic path length	l_e	87	mm
		3.425	in.
Effective core area	A_e	109	mm^2
		0.169	$in.^2$
Minimum core area	A mini	102	mm^2
		0.158	$in.^2$
Effective core volume	V_e	9440	mm^3
		0.576	$in.^3$
Weight per set	W	50	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 1.1	< 0.95
Codification	P/N		B1UR2820A	B3UR2820A

DESIGN CURVES FOR A CORE SET

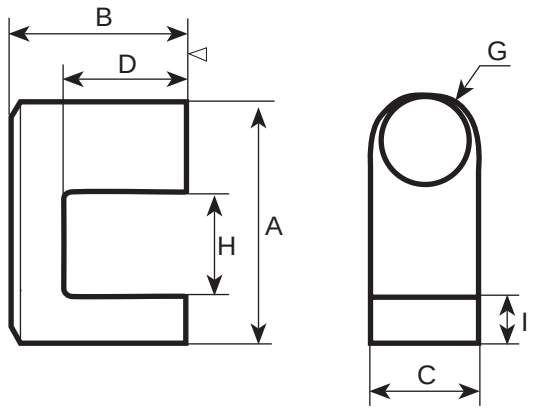
A_L vs. AIR GAP



UR 3012 A

DIMENSIONS

A	30 ± 0.80	mm
	1.186 ± 0.032	*in.*
B	19 ± 0.20	mm
	0.751 ± 0.008	*in.*
C	12 ± 0.40	mm
	0.474 ± 0.016	*in.*
D	12.9 mini	mm
	0.510 mini	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	15 ± 0.70	mm
	0.593 ± 0.028	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	*in.*



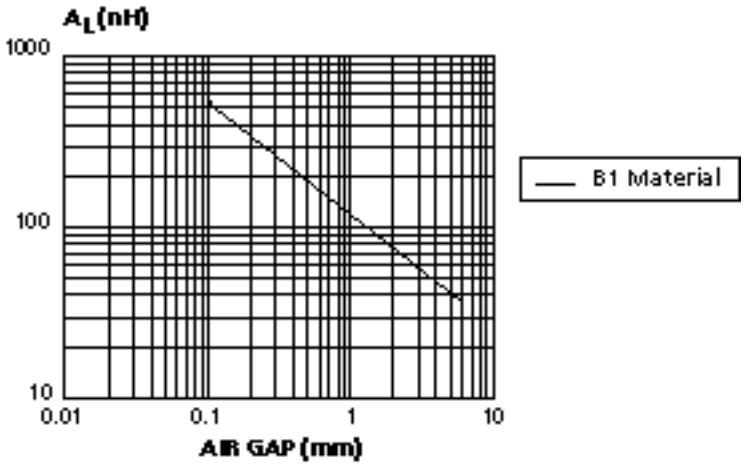
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.83	nH
Core constant	c_1	1.51	mm^{-1}
		38.46	$in.^{-1}$
Effective magnetic path length	l_e	103	mm
		4.055	in.
Effective core area	A_e	68	mm^2
		0.105	$in.^2$
Minimum core area	A mini	60	mm^2
		0.093	$in.^2$
Effective core volume	V_e	7000	mm^3
		0.427	$in.^3$
Weight per set	W	38	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 0.80
Codification	P/N		B1UR3012A

DESIGN CURVES FOR A CORE SET

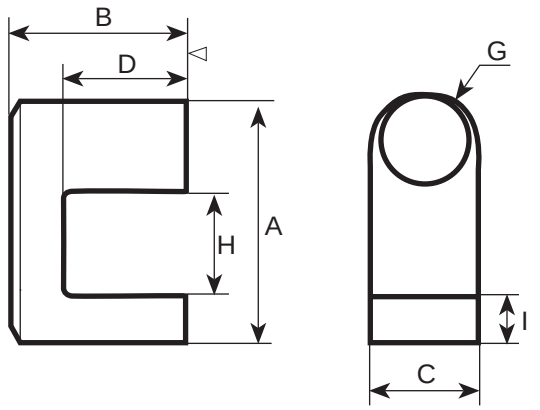
A_L vs. AIR GAP



UR 3012 C

DIMENSIONS

A	30 ± 0.80	mm
	1.186 ± 0.032	*in.*
B	21.7 ± 0.20	mm
	0.858 ± 0.008	*in.*
C	12 ± 0.40	mm
	0.474 ± 0.016	*in.*
D	15.6 mini	mm
	0.617 mini	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	15 ± 0.70	mm
	0.593 ± 0.028	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	*in.*



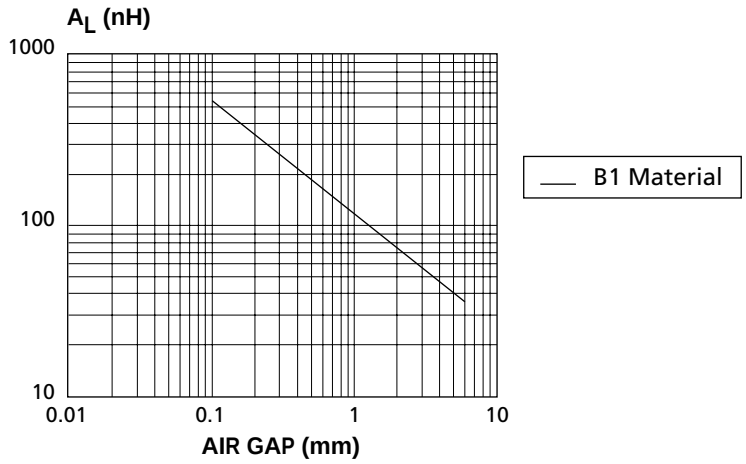
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.75	nH
Core constant	c_1	1.68	mm^{-1}
		42.56	$in.^{-1}$
Effective magnetic path length	l_e	113	mm
		4.449	in.
Effective core area	A_e	68	mm^2
		0.105	$in.^2$
Minimum core area	A mini	60	mm^2
		0.093	$in.^2$
Effective core volume	V_e	7675	mm^3
		0.468	$in.^3$
Weight per set	W	40	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 0.89
Codification	P/N		B1UR3012C

DESIGN CURVES FOR A CORE SET

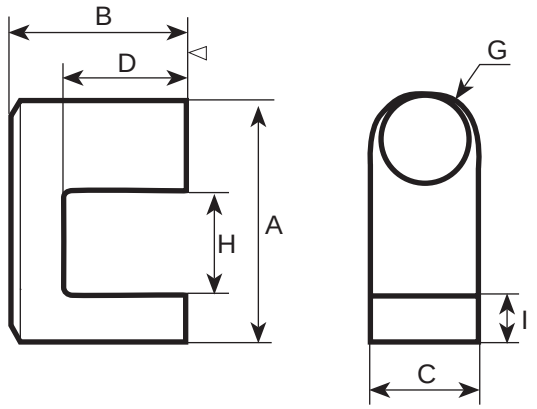
A_L vs. AIR GAP



UR 3012 D

DIMENSIONS

A	30 ± 0.80	mm
	1.186 ± 0.032	*in.*
B	25.9 ± 0.20	mm
	1.024 ± *0.008*	*in.*
C	12 ± 0.40	mm
	0.474 ± *0.016*	*in.*
D	20.2 ± 0.45	mm
	0.798 ± *0.018*	*in.*
G	10 ± 0.30	mm
	0.395 ± *0.012*	*in.*
H	15 ± 0.70	mm
	0.593 ± 0.028	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	*in.*



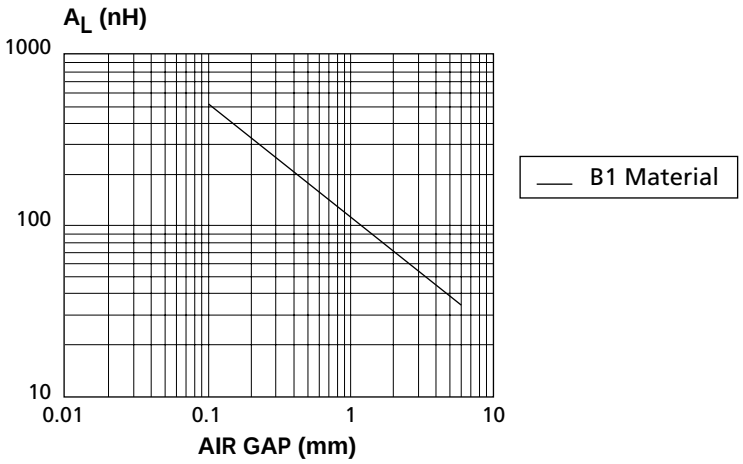
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.65	nH
Core constant	c_1	1.91	mm^{-1}
		48.51	$in.^{-1}$
Effective magnetic path length	l_e	130	mm
		5.118	in.
Effective core area	A_e	68	mm^2
		0.105	$in.^2$
Minimum core area	A mini	60	mm^2
		0.093	$in.^2$
Effective core volume	V_e	8800	mm^3
		0.537	$in.^3$
Weight per set	W	45	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1
Codification	P/N		B1UR3012D

DESIGN CURVES FOR A CORE SET

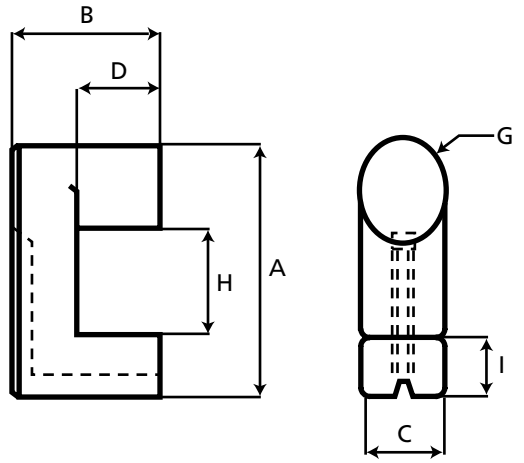
A_L vs. AIR GAP



UR 3110 A

DIMENSIONS

A	31.5 ± 0.80	mm
	1.245 ± 0.032	*in.*
B	20.8 ± 0.25	mm
	0.822 ± 0.010	*in.*
C	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
D	11.7 ± 0.25	mm
	0.462 ± 0.010	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	13.5 ± 0.50	mm
	0.534 ± 0.020	in.
I	8 ± nomi	mm
	0.316 nomi	*in.*



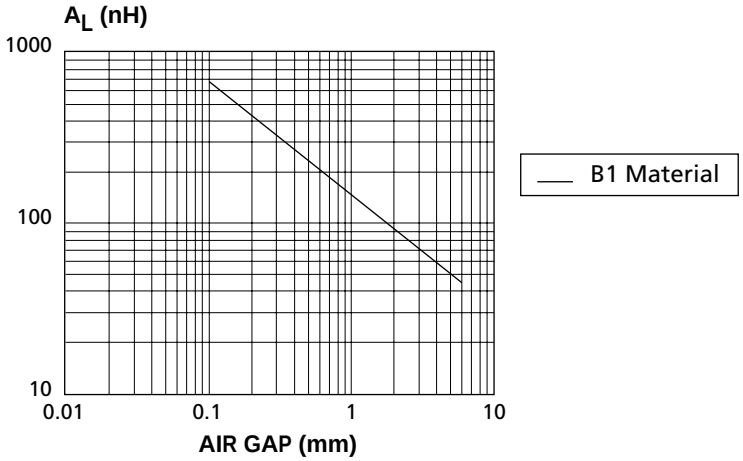
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1	nH
Core constant	c_1	1.27	mm^{-1}
		32.26	$in.^{-1}$
Effective magnetic path length	l_e	100	mm
		3.937	in.
Effective core area	A_e	79	mm^2
		0.122	$in.^2$
Minimum core area	A mini	73	mm^2
		0.113	$in.^2$
Effective core volume	V_e	7940	mm^3
		0.485	$in.^3$
Weight per set	W	40	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 0.90
Codification	P/N		B1UR3110A

DESIGN CURVES FOR A CORE SET

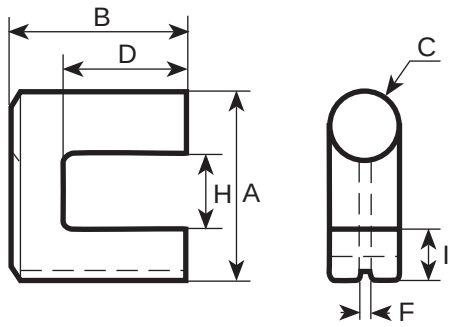
A_L vs. AIR GAP



UR 3110 B

DIMENSIONS

A	31.5 ± 0.80	mm
	1.245 ± 0.032	*in.*
B	22.5 ± 0.30	mm
	0.889 ± 0.012	*in.*
C	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
D	14 ± 0.25	mm
	0.553 ± 0.010	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	13.5 ± 0.50	mm
	0.534 ± 0.020	in.
I	8 nomi	mm
	0.316 nomi	*in.*



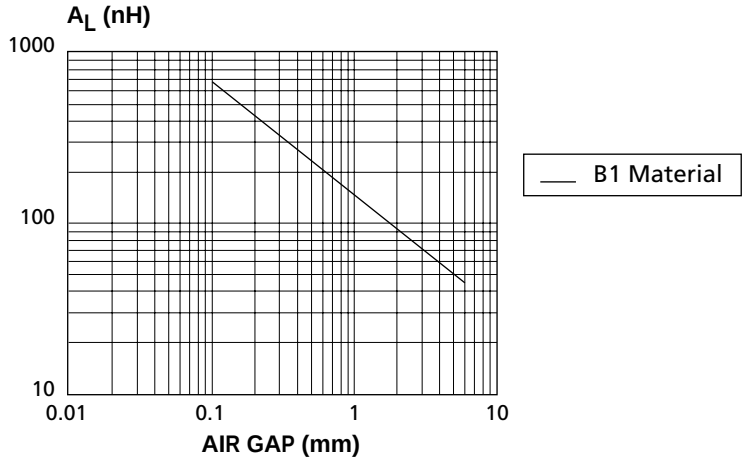
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.9	nH
Core constant	c_1	1.55	mm^{-1}
		39.37	$in.^{-1}$
Effective magnetic path length	l_e	109	mm
		4.291	in.
Effective core area	A_e	78	mm^2
		0.121	$in.^2$
Minimum core area	A mini	78	mm^2
		0.121	$in.^2$
Effective core volume	V_e	8500	mm^3
		0.519	$in.^3$
Weight per set	W	44	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1
Codification	P/N		B1UR3110B

DESIGN CURVES FOR A CORE SET

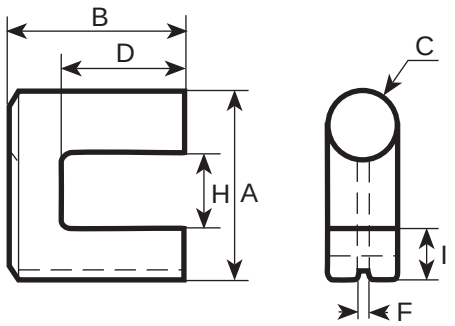
A_L vs. AIR GAP



UR 3110 C

DIMENSIONS

A	31.5 ± 0.80	mm
	1.245 ± 0.032	*in.*
B	25.5 ± 0.30	mm
	1.008 ± 0.012	*in.*
C	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
D	17 ± 0.30	mm
	0.672 ± 0.012	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	13.5 ± 0.50	mm
	0.534 ± 0.020	in.
I	8 nomi	mm
	0.316 nomi	*in.*



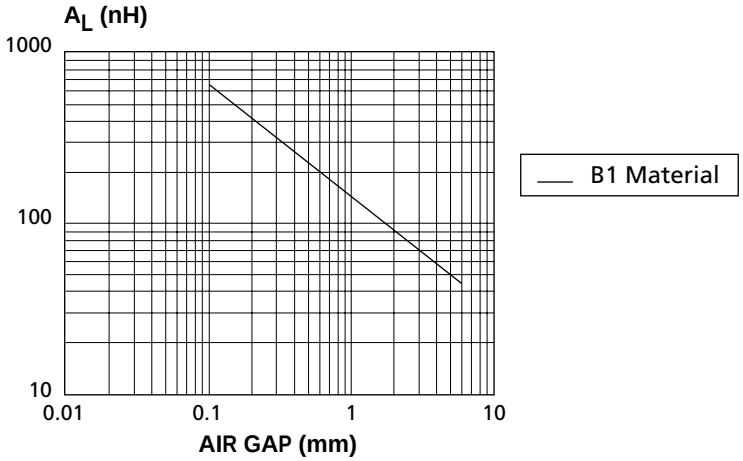
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.8	nH
Core constant	c_1	1.55	mm^{-1}
		39.37	$in.^{-1}$
Effective magnetic path length	l_e	121	mm
		4.764	in.
Effective core area	A_e	78	mm^2
		0.121	$in.^2$
Minimum core area	A mini	78	mm^2
		0.121	$in.^2$
Effective core volume	V_e	9400	mm^3
		0.574	$in.^3$
Weight per set	W	52	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1
Codification	P/N		B1UR3110C

DESIGN CURVES FOR A CORE SET

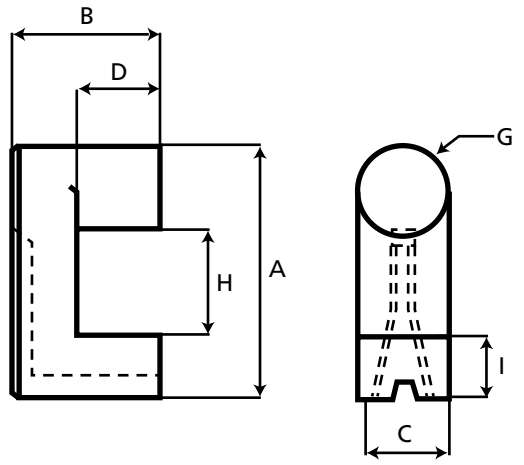
A_L vs. AIR GAP



UR 3110 D

DIMENSIONS

A	31.5 ± 0.80	mm
	1.245 ± .0.032	*in.*
B	20.2 ± 0.25	mm
	0.798 ± 0.010	*in.*
C	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
D	11.7 ± 0.25	mm
	0.462 ± 0.010	*in.*
G	10 ± 0.30	mm
	0.395 ± 0.012	*in.*
H	13.5 ± 0.50	mm
	0.534 ± 0.020	in.
I	8 nomi	mm
	0.316 nomi	*in.*



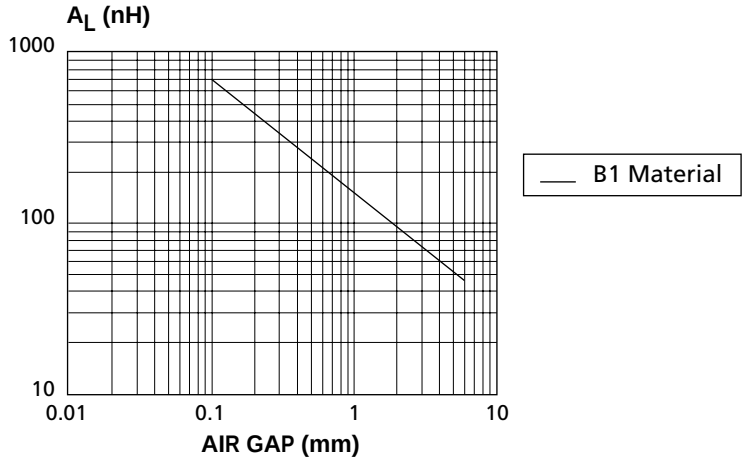
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1	nH
Core constant	c_1	1.28	mm^{-1}
		32.51	$in.^{-1}$
Effective magnetic path length	l_e	100	mm
		3.937	in.
Effective core area	A_e	78	mm^2
		0.121	$in.^2$
Minimum core area	A mini	75	mm^2
		0.116	$in.^2$
Effective core volume	V_e	7820	mm^3
		0.477	$in.^3$
Weight per set	W	44	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 0.9
Codification	P/N		B1UR3110D

DESIGN CURVES FOR A CORE SET

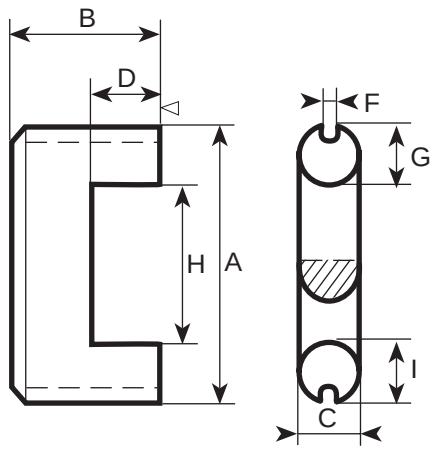
A_L vs. AIR GAP



UR 3511 A

DIMENSIONS

A	35 nomi *1.383 nomi*	mm *in.*
B	22.8 ± 0.20 *0.901 ± 0.008*	mm *in.*
C	11 ± 0.30 *0.435 ± 0.012*	mm *in.*
D	13.2 ± 0.40 *0.522 ± 0.016*	mm *in.*
F	3 ± 0.20 *0.119 ± 0.008*	mm *in.*
H	14.1 ± 0.60 0.557 ± 0.024	mm in.



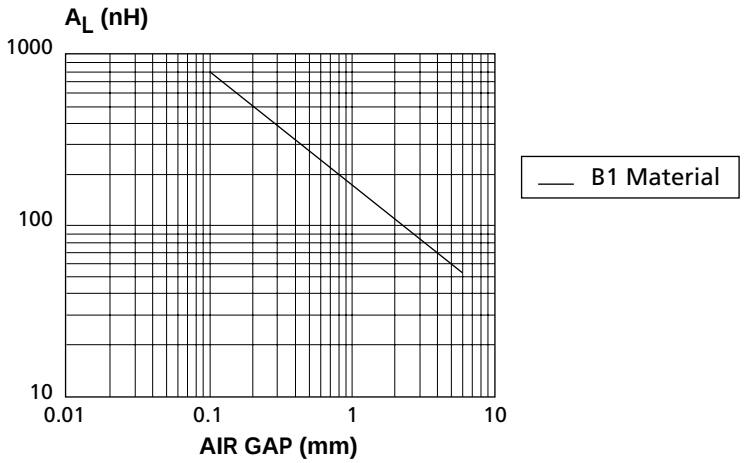
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1	nH
Core constant	c_1	1.27 32.26	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	114 4.488	mm in.
Effective core area	A_e	90 0.140	mm^2 $in.^2$
Minimum core area	A mini	88 *0.136*	mm^2 $in.^2$
Effective core volume	V_e	10300 0.629	mm^3 $in.^3$
Weight per set	W	52	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1.15
Codification	P/N		B1UR3511A

DESIGN CURVES FOR A CORE SET

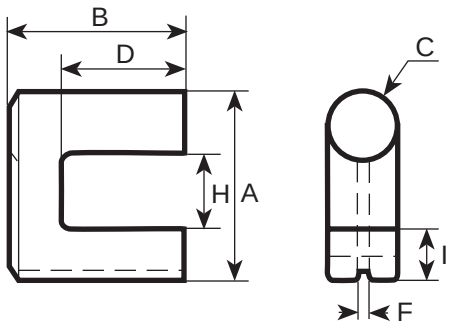
A_L vs. AIR GAP



UR 3513 A

DIMENSIONS

A	35.4 ± 1.00 *1.399 ± 0.040*	mm *in.*
B	27.5 ± 0.30 *1.087 ± 0.012*	mm *in.*
C	13.1 ± 0.40 *0.518 ± 0.016*	mm *in.*
D	17.5 ± 0.30 *0.692 ± 0.012*	mm *in.*
H	12 mini *0.474 mini*	mm *in.*
I	10 ± 0.30 0.395 ± 0.012	mm in.



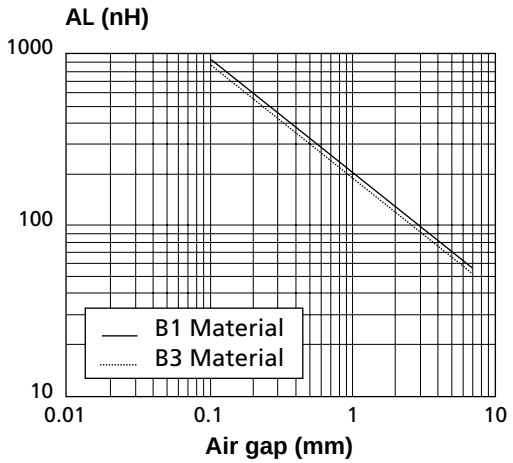
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.3	nH
Core constant	c_1	0.98 24.89	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	127 5.000	mm in.
Effective core area	A_e	129 0.200	mm^2 $in.^2$
Minimum core area	A mini	129 *0.200*	mm^2 $in.^2$
Effective core volume	V_e	16400 1.001	mm^3 $in.^3$
Weight per set	W	85	g

ELECTRICAL DATA

			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 1.9	< 1.7	
	32 kHz - 200 mT	100°C			< 2.00
Codification	P/N		B1UR3513A	B3UR3513A	B7UR3513A

DESIGN CURVES FOR A CORE SET

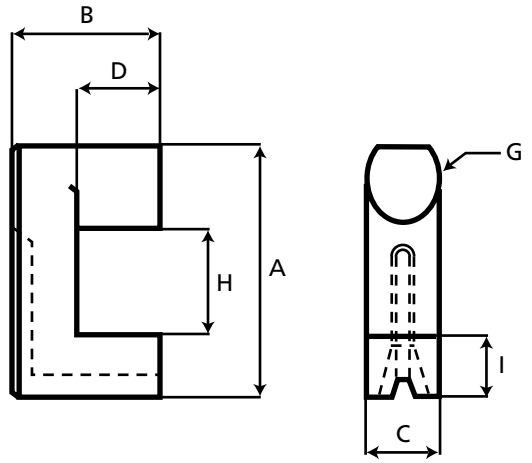
A_L vs. AIR GAP



UR 3513 B

DIMENSIONS

A	35.15 ± 1	mm
	1.389 ± 0.040	*in.*
B	30.8 ± 0.30	mm
	1.217 ± 0.012	*in.*
C	12.8 ± 0.30	mm
	0.506 ± 0.012	*in.*
D	20.5 ± 0.50	mm
	0.810 ± 0.020	*in.*
G	12.7 ± 0.30	mm
	0.502 ± 0.012	*in.*
H	13.05 mini	mm
	0.516 mini	in.
I	9.3 ± 0.30	mm
	0.368 ± 0.012	*in.*



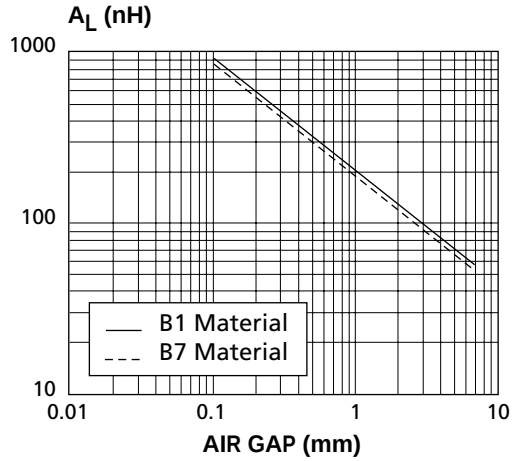
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.08	nH
Core constant	c_1	1.16	mm^{-1}
		29.46	$in.^{-1}$
Effective magnetic path length	l_e	141	mm
		5.551	in.
Effective core area	A_e	121	mm^2
		0.188	$in.^2$
Minimum core area	A mini	112	mm^2
		0.174	$in.^2$
Effective core volume	V_e	17000	mm^3
		1.037	$in.^3$
Weight per set	W	75	g

ELECTRICAL DATA

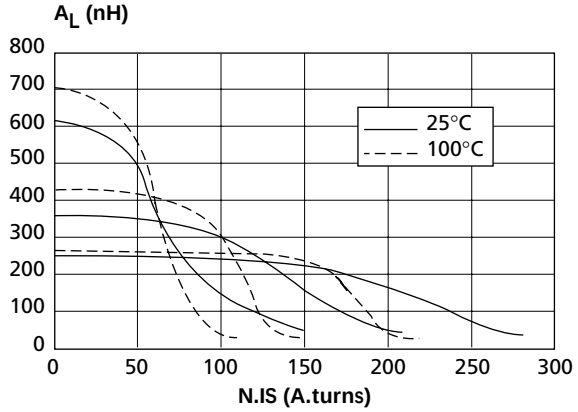
			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2	< 1.7
Codification	P/N		B1UR3513B	B3UR3513B

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



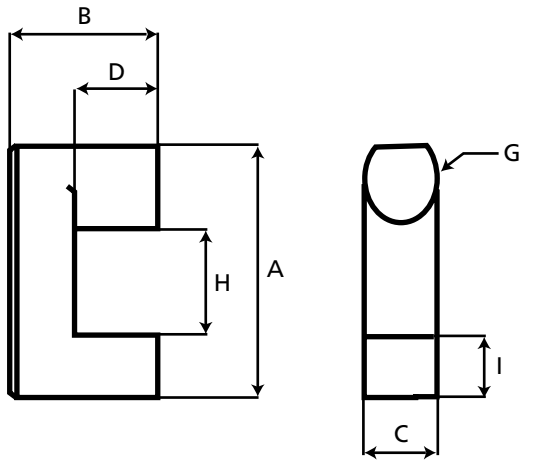
A_L vs N.IS.



UR 3513 D

DIMENSIONS

A	35.15 ± 1.00	mm
	1.389 ± 0.040	*in.*
B	34.3 ± 0.50	mm
	1.356 ± 0.020	*in.*
C	12.8 ± 0.30	mm
	0.506 ± 0.012	*in.*
D	24 ± 0.50	mm
	0.949 ± 0.020	*in.*
G	12.7 ± 0.30	mm
	0.502 ± 0.012	*in.*
H	13.05 mini	mm
	0.516 mini	in.
I	9.3 ± 0.30	mm
	0.368 ± 0.012	*in.*



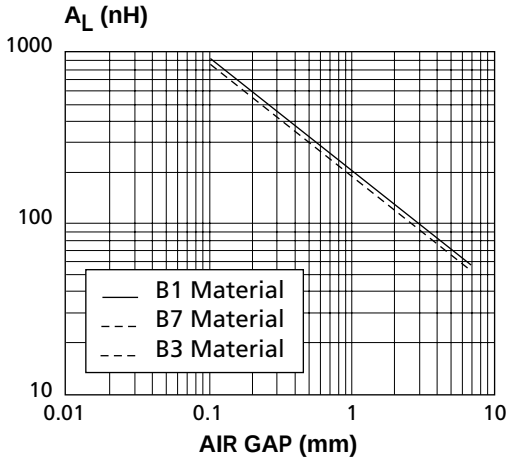
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1	nH
Core constant	c_1	1.27	mm^{-1}
		32.26	$in.^{-1}$
Effective magnetic path length	l_e	156	mm
		6.142	in.
Effective core area	A_e	124	mm^2
		0.192	$in.^2$
Minimum core area	A mini	118	mm^2
		0.183	$in.^2$
Effective core volume	V_e	19350	mm^3
		1.181	$in.^3$
Weight per set	W	86	g

ELECTRICAL DATA

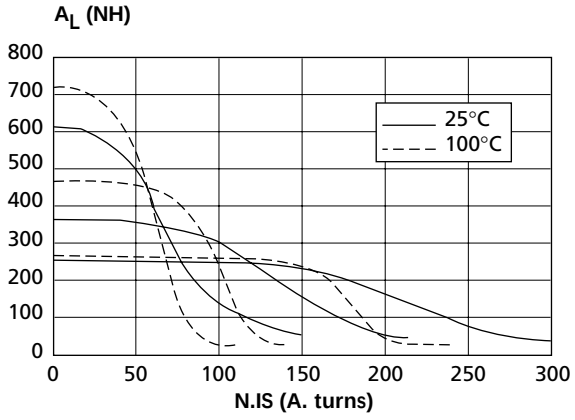
			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.3	< 2.00	
	32 kHz - 200 mT	100°C			< 2.40
Codification	P/N		B1UR3513D	B3UR3513D	B7UR3513D

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



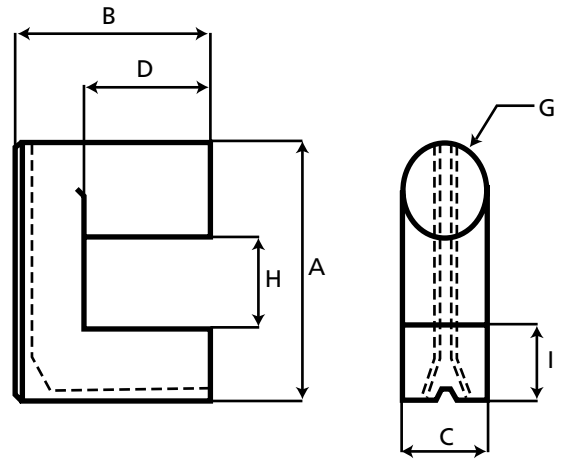
A_L vs N.IS



UR 3513 H

DIMENSIONS

A	35.4 ± 1.00	mm
	1.399 ± 0.040	*in.*
B	29.4 ± 0.30	mm
	1.162 ± 0.012	*in.*
C	13.1 ± 0.40	mm
	0.518 ± 0.016	*in.*
D	19.4 ± 0.30	mm
	0.767 ± 0.012	*in.*
G	13 ± 0.30	mm
	0.514 ± 0.012	*in.*
H	12 mini	mm
	0.474 mini	in.



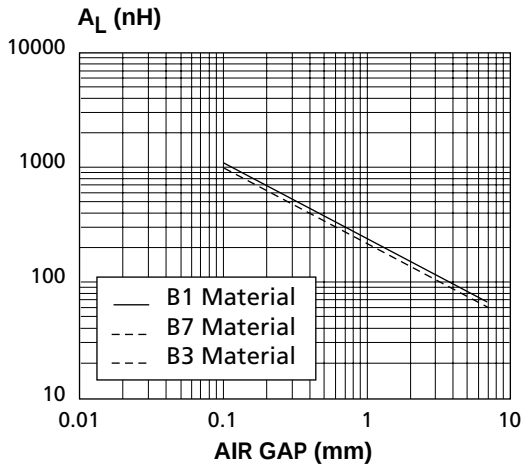
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.21	nH
Core constant	c_1	1.04	mm^{-1}
		26.42	$in.^{-1}$
Effective magnetic path length	l_e	136	mm
		5.354	in.
Effective core area	A_e	131	mm^2
		0.203	$in.^2$
Minimum core area	A mini	131	mm^2
		0.203	$in.^2$
Effective core volume	V_e	17800	mm^3
		1.086	$in.^3$
Weight per set	W	90	g

ELECTRICAL DATA

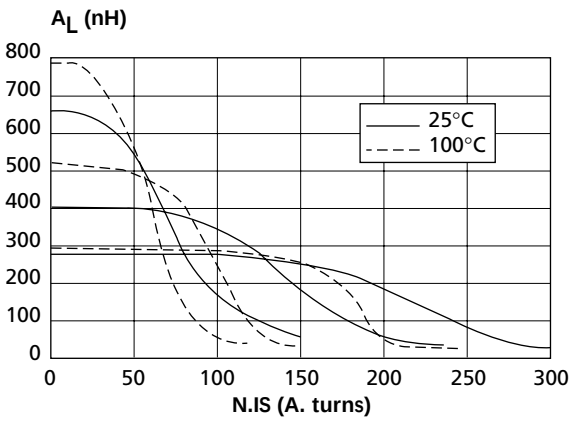
			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.10	< 1.80	
	32 kHz - 200 mT	100°C			< 2.20
Codification	P/N		B1UR3513H	B3UR3513H	B7UR3513H

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



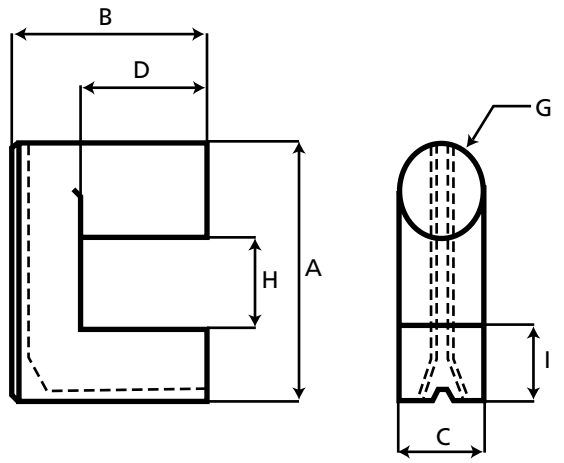
A_L vs N.IS



UR 3713 A

DIMENSIONS

A	37.2 ± 1.00	mm
	1.470± 0.040	*in.*
B	29.4 ± 0.30	mm
	1.162 ± 0.012	*in.*
C	13.1 ± 0.40	mm
	0.518 ± 0.016	*in.*
D	18.9 ± 0.30	mm
	0.747 ± 0.012	*in.*
G	13 ± 0.30	mm
	0.514 ± 0.012	*in.*
H	13.2 mini	mm
	0.522 mini	in.
I	10.5 ± 0.20	mm
	0.415 ± 0.008	*in.*



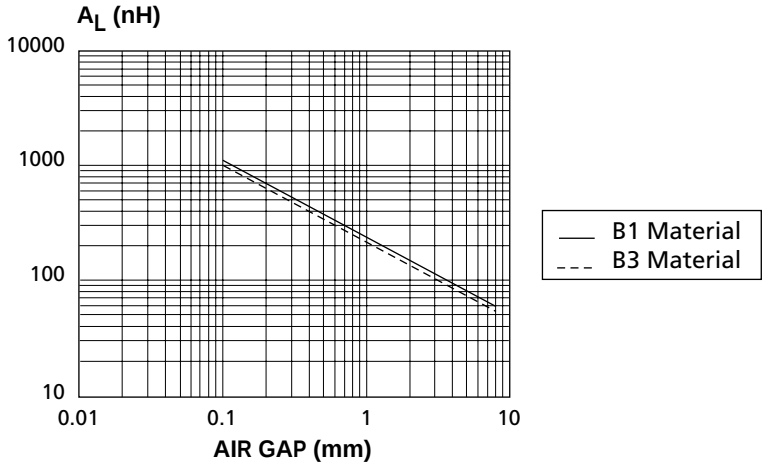
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.23	nH
Core constant	c_1	1.02	mm^{-1}
		25.95	$in.^{-1}$
Effective magnetic path length	l_e	136	mm
		5.354	in.
Effective core area	A_e	133	mm^2
		0.206	$in.^2$
Minimum core area	A mini	133	mm^2
		0.206	$in.^2$
Effective core volume	V_e	18000	mm^3
		1.098	$in.^3$
Weight per set	W	108	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.1	< 1.60
Codification	P/N		B1UR3713A	B3UR3713A

DESIGN CURVES FOR A CORE SET

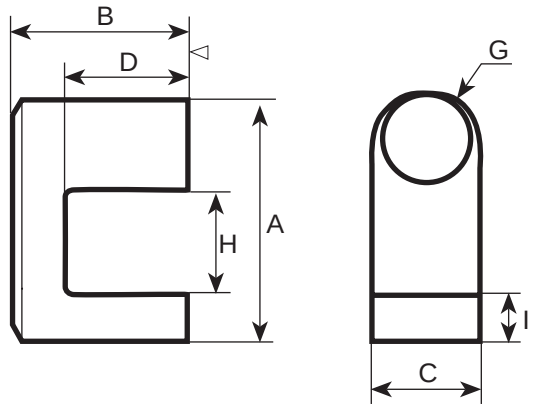
A_L vs. AIR GAP



UR 3718 B

DIMENSIONS

A	36.9 ± 0.80	mm
	1.458 ± 0.032	*in.*
B	25.5 ± 0.40	mm
	1.008 ± 0.016	*in.*
C	18 ± 0.40	mm
	0.711 ± 0.016	*in.*
D	16.8 mini	mm
	0.664 mini	*in.*
G	14.7 ± 0.30	mm
	0.581 ± 0.012	*in.*
H	14.9 ± 1.00	mm
	0.589 ± 0.040	in.
I	7.3 ± 0.20	mm
	0.289 ± 0.008	*in.*



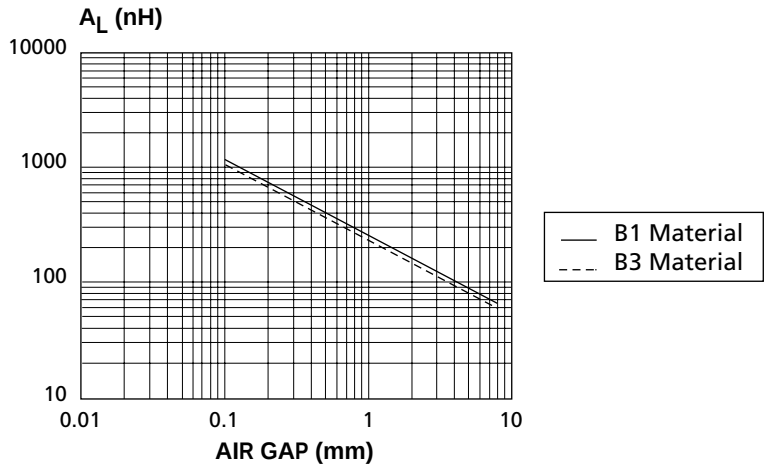
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.47	nH
Core constant	c_1	0.85	mm^{-1}
		21.71	$in.^{-1}$
Effective magnetic path length	l_e	127	mm
		5.000	in.
Effective core area	A_e	149	mm^2
		0.231	$in.^2$
Minimum core area	A mini	131	mm^2
		0.203	$in.^2$
Effective core volume	V_e	18900	mm^3
		1.153	$in.^3$
Weight per set	W	100	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.15	< 1.9
Codification	P/N		B1UR3718B	B3UR3718B

DESIGN CURVES FOR A CORE SET

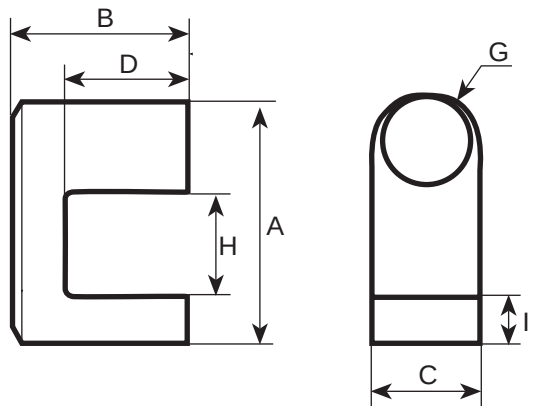
A_L vs. AIR GAP



UR 3718 C

DIMENSIONS

A	36.9 ± 0.80	mm
	1.458 ± 0.032	*in.*
B	28.8 ± 0.20	mm
	1.138 ± 0.008	*in.*
C	18 ± 0.40	mm
	0.711 ± 0.016	*in.*
D	20.3 ± 0.40	mm
	0.802 ± 0.016	*in.*
G	14.7 ± 0.30	mm
	0.581 ± 0.012	*in.*
H	14.90 ± 1.00	mm
	0.589 ± 0.040	in.
I	7.3 ± 0.20	mm
	0.289 ± 0.008	*in.*



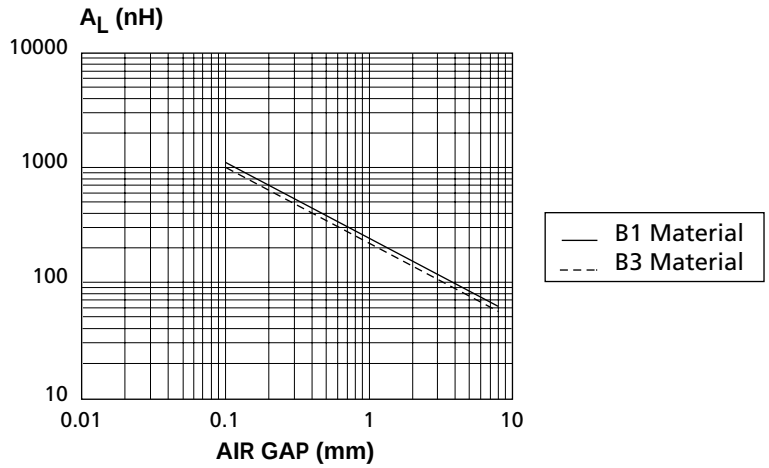
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.33	nH
Core constant	c_1	0.94	mm^{-1}
		24.00	$in.^{-1}$
Effective magnetic path length	l_e	140	mm
		5.512	in.
Effective core area	A_e	149	mm^2
		0.231	$in.^2$
Minimum core area	A mini	131	mm^2
		0.203	$in.^2$
Effective core volume	V_e	20820	mm^3
		1.271	$in.^3$
Weight per set	W	100	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.4	< 2.10
Codification	P/N		B1UR3718C	B3UR3718C

DESIGN CURVES FOR A CORE SET

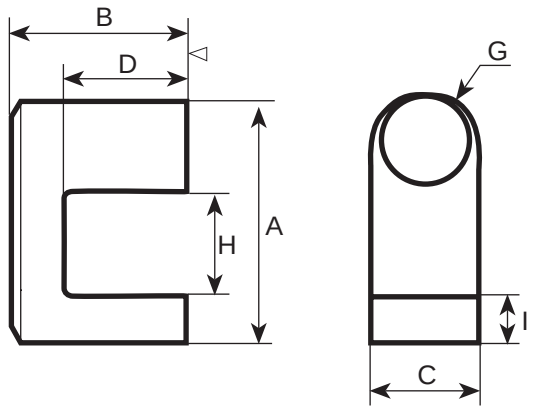
A_L vs. AIR GAP



UR 3718 D

DIMENSIONS

A	36.9 ± 0.80	mm
	1.458 ± 0.032	*in.*
B	22.45 ± 0.45	mm
	0.887 ± 0.018	*in.*
C	18 ± 0.40	mm
	0.711 ± 0.016	*in.*
D	13.7 mini	mm
	0.542 mini	*in.*
G	14.7 ± 0.30	mm
	0.581 ± 0.012	*in.*
H	14.9 ± 1.00	mm
	0.589 ± 0.040	in.
I	7.3 ± 0.20	mm
	0.289 ± 0.008	*in.*



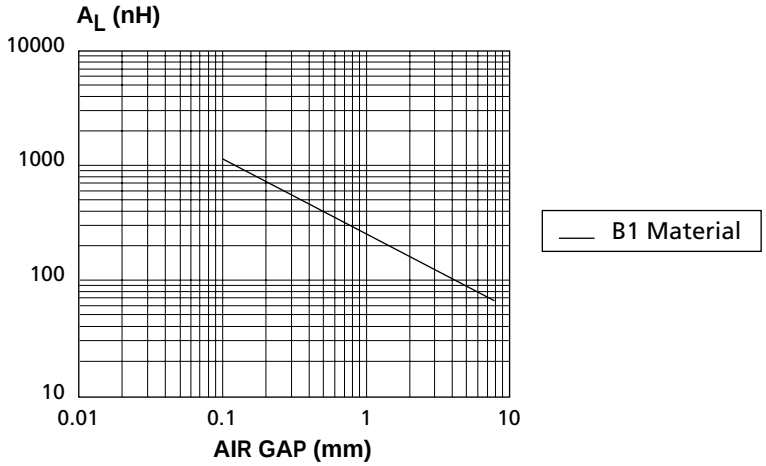
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.6	nH
Core constant	c_1	0.77	mm^{-1}
		19.56	$in.^{-1}$
Effective magnetic path length	l_e	115	mm
		4.528	in.
Effective core area	A_e	149	mm^2
		0.231	$in.^2$
Minimum core area	A mini	131	mm^2
		0.203	$in.^2$
Effective core volume	V_e	17200	mm^3
		1.050	$in.^3$
Weight per set	W	96	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 2
Codification	P/N		B1UR3718D

DESIGN CURVES FOR A CORE SET

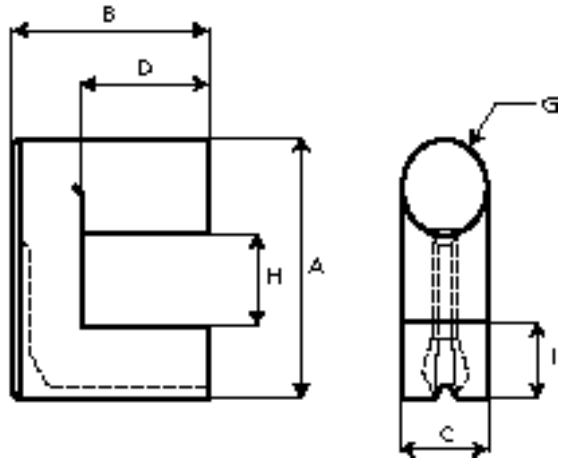
A_L vs. AIR GAP



UR 3814 A

DIMENSIONS

A	37.5 ± 0.80	mm
	1.482 ± 0.032	*in.*
B	31.8 ± 0.30	mm
	1.257 ± 0.012	*in.*
C	14.1 ± 0.30	mm
	0.557 ± 0.012	*in.*
D	21.3 ± 0.40	mm
	0.842 ± 0.016	*in.*
G	14 ± 0.30	mm
	0.553 ± 0.012	*in.*
H	13 ± 0.50	mm
	0.514 ± 0.020	in.
I	10.5 ± 0.30	mm
	0.415 ± 0.012	*in.*



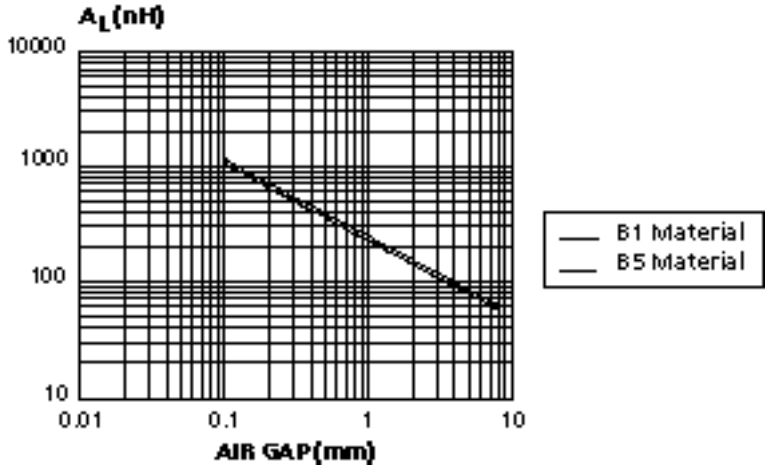
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.26	nH
Core constant	c_1	1	mm^{-1}
		25.40	$in.^{-1}$
Effective magnetic path length	l_e	145	mm
		5.709	in.
Effective core area	A_e	145	mm^2
		0.225	$in.^2$
Minimum core area	A mini	137	mm^2
		0.212	$in.^2$
Effective core volume	V_e	20950	mm^3
		1.278	$in.^3$
Weight per set	W	104	g

ELECTRICAL DATA

			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.5	< 2.1	
	32 kHz - 200 mT	100°C			< 3.00
Codification	P/N		B1UR3814A	B3UR3814A	B7UR3814A

DESIGN CURVES FOR A CORE SET

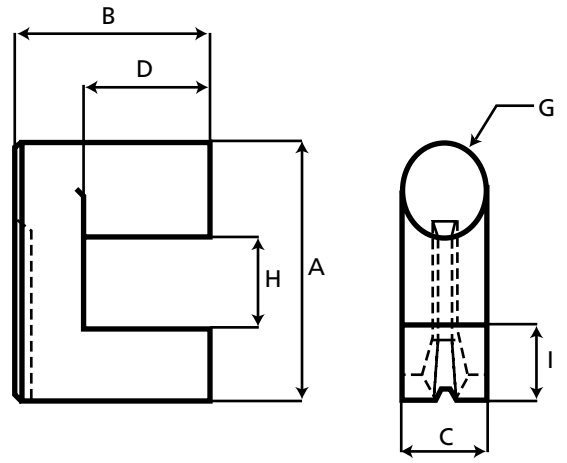
A_L vs. AIR GAP



UR 3914 A

DIMENSIONS

A	38.5 ± 1.00	mm
	1.522 ± 0.040	*in.*
B	32.8 ± 0.30	mm
	1.296 ± 0.012	*in.*
C	14.1 ± 0.30	mm
	0.557 ± 0.012	*in.*
D	21.7 ± 0.40	mm
	0.858 ± 0.016	*in.*
G	14 ± 0.30	mm
	0.553 ± 0.012	*in.*
H	14 ± 0.50	mm
	0.553 ± 0.020	in.
I	10.5 ± 0.30	mm
	0.415 ± 0.012	*in.*



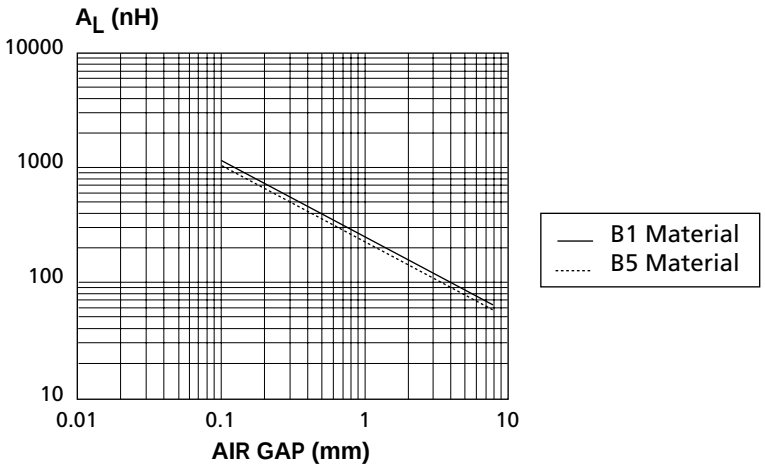
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.24	nH
Core constant	c_1	1	mm^{-1}
		25.40	$in.^{-1}$
Effective magnetic path length	l_e	150	mm
		5.906	in.
Effective core area	A_e	149	mm^2
		0.231	$in.^2$
Minimum core area	A mini	143	mm^2
		0.222	$in.^2$
Effective core volume	V_e	22360	mm^3
		1.364	$in.^3$
Weight per set	W	108	g

ELECTRICAL DATA

			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.60	< 2.30	
	32 kHz - 200 mT	100°C			< 3.20
Codification	P/N		B1UR3914A	B3UR3914A	B7UR3914A

DESIGN CURVES FOR A CORE SET

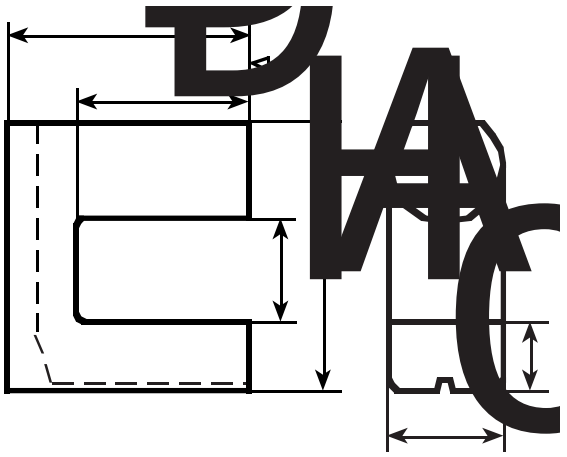
A_L vs. AIR GAP



UR 3915 A

DIMENSIONS

A	38.7 ± 1.00	mm
	1.530 ± 0.040	*in.*
B	35.2 ± 0.50	mm
	1.391 ± 0.020	*in.*
C	15.1 ± 0.40	mm
	0.597 ± 0.016	*in.*
D	24.8 ± 0.50	mm
	0.980 ± 0.020	*in.*
G	15 ± 0.40	mm
	0.593 ± 0.016	*in.*
H	15 ± 1.00	mm
	0.593 ± 0.040	in.
I	9.1 ± 0.30	mm
	0.360 ± 0.012	*in.*



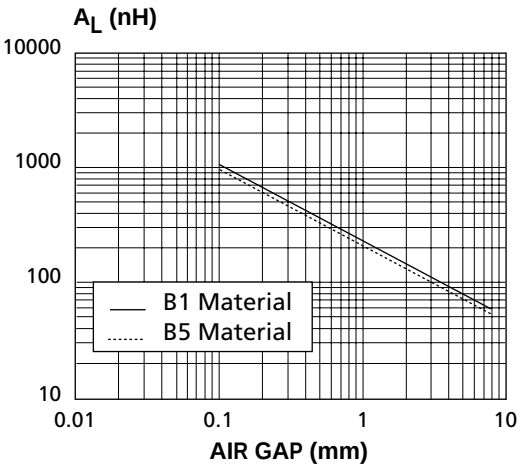
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.13	nH
Core constant	c_1	1.11	mm^{-1}
		28.19	$in.^{-1}$
Effective magnetic path length	l_e	164	mm
		6.457	in.
Effective core area	A_e	148	mm^2
		0.229	$in.^2$
Minimum core area	A mini	131	mm^2
		0.203	$in.^2$
Effective core volume	V_e	24150	mm^3
		1.474	$in.^3$
Weight per set	W	120	g

ELECTRICAL DATA

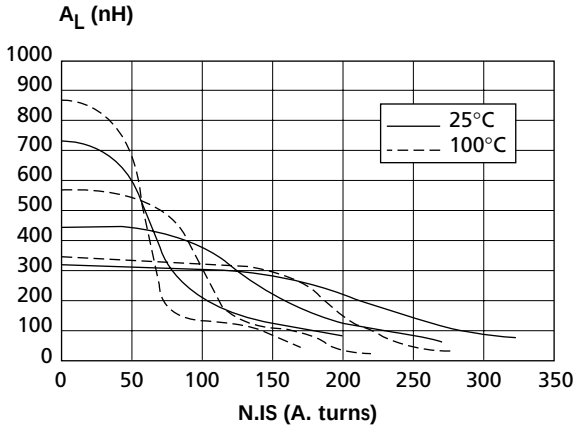
			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.70	< 2.40	
	32 kHz - 200 mT	100°C			< 3.40
Codification	P/N		B1UR3915A	B3UR3915A	B7UR3915A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



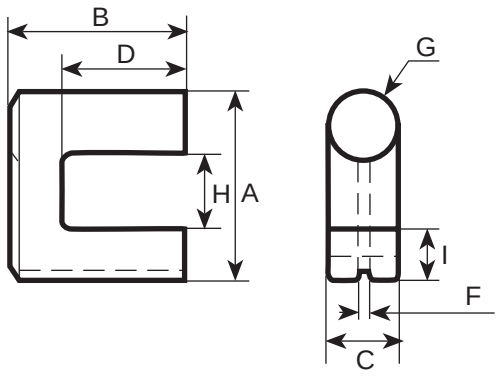
A_L vs N.IS



UR 4014 A

DIMENSIONS

A	40 ± 0.80 1.581 ± *0.032*	mm *in.*
B	30.2 ± 0.30 1.194 ± *0.012*	mm *in.*
C	14.1 ± 0.30 *0.557 ± 0.012*	mm *in.*
D	18.4 ± 0.40 *0.727 ± 0.016*	mm *in.*
F	4 ± 0.20 *0.158 ± 0.008*	mm *in.*
G	14 ± 0.30 0.553 ± 0.012	mm in.
H	14.5 ± 0.40 *0.573 ± 0.016*	mm *in.*
I	11.5 ± 0.30 0.455 ± 0.012	mm in.



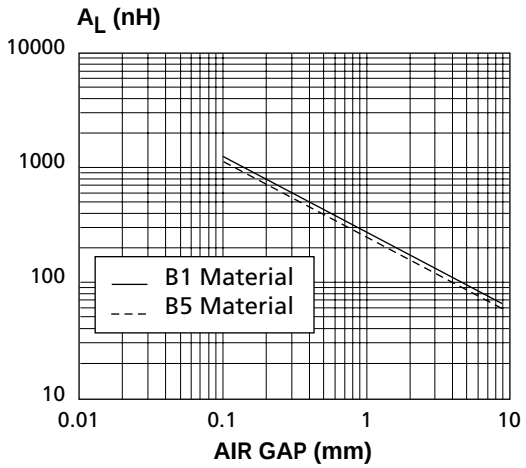
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.4	nH
Core constant	c_1	0.9 22.86	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	140 5.512	mm in.
Effective core area	A_e	156 0.242	mm^2 $in.^2$
Minimum core area	A mini	153 0.237	mm^2 $in.^2$
Effective core volume	V_e	21880 1.335	mm^3 $in.^3$
Weight per set	W	110	g

ELECTRICAL DATA

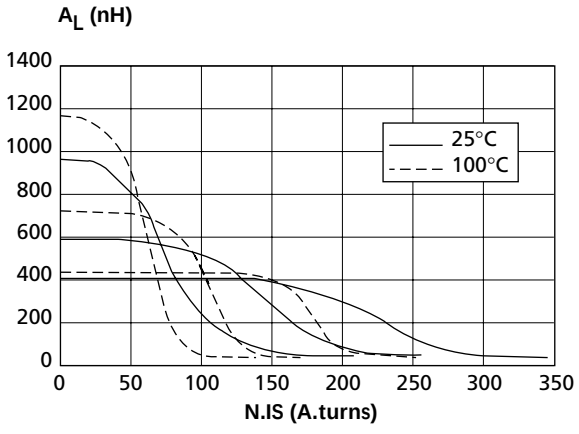
			MATERIAL			
			B1	B3	B5	B7
μ_a	Flux density 330 mT	100°C	> 1000			
	360 mT	100°C		> 1500	> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.60	< 2.20		
	32 kHz - 200 mT	100°C			< 3.10	< 2.70
Codification	P/N		B1UR4014A	B3UR4014A	B5UR4014A	B7UR4014A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



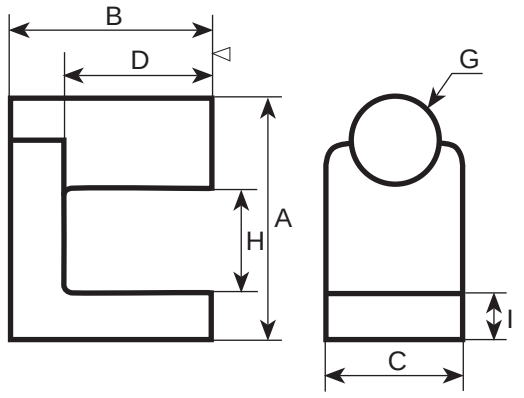
A_L vs N.IS



UR 4022 A

DIMENSIONS

A	40.1 maxi *1.585 maxi*	mm *in.*
B	31.9 ± 0.20 *1.261 ± 0.008*	mm *in.*
C	22 ± 0.50 *0.870 ± 0.020*	mm *in.*
D	23.9 ± 0.40 *0.945 ± 0.016*	mm *in.*
G	15.05 ± 0.25 *0.595 ± 0.010*	mm *in.*
H	15.6 ± 1.00 0.617 ± 0.040	mm in.
I	8 ± 0.20 *0.316 ± 0.008*	mm *in.*



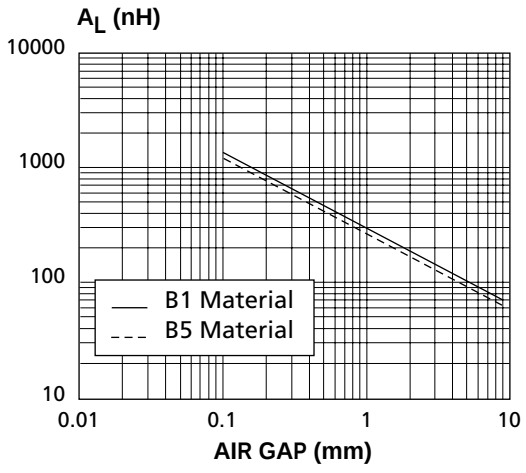
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.4	nH
Core constant	c_1	0.9 22.80	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	158 6.220	mm in.
Effective core area	A_e	177 0.274	mm^2 $in.^2$
Minimum core area	A mini	176 *0.273*	mm^2 $in.^2$
Effective core volume	V_e	27800 1.70	mm^3 $in.^3$
Weight per set	W	146	g

ELECTRICAL DATA

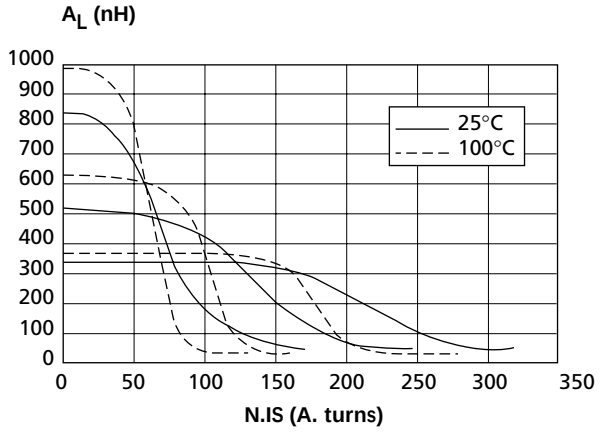
			MATERIAL		
			B1	B3	B7
μ_a	Fux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 3.2	< 2.8	
	32 kHz - 200 mT	100°C			< 3.90
Codification	P/N		B1UR4022A	B3UR4022A	B7UR4022A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



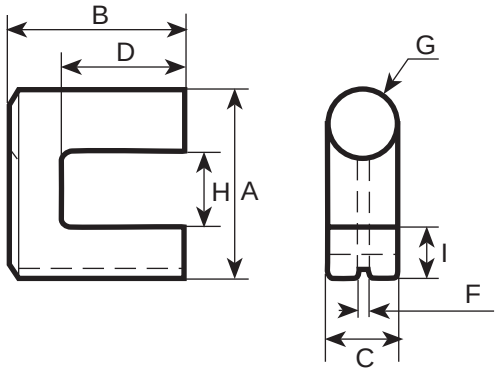
A_L vs N.IS



UR 4115 A

DIMENSIONS

A	40.8 ± 0.80	mm
	1.613 ± 0.032	*in.*
B	33.7 ± 0.30	mm
	1.332 ± 0.012	*in.*
C	14.6 ± 0.40	mm
	0.577 ± 0.016	*in.*
D	21.8 ± 0.40	mm
	0.862 ± 0.016	*in.*
G	14.5 ± 0.30	mm
	0.573 ± 0.012	*in.*
H	13.8 mini	mm
	0.545 mini	in.
I	12 ± 0.25	mm
	0.474 ± 0.010	*in.*



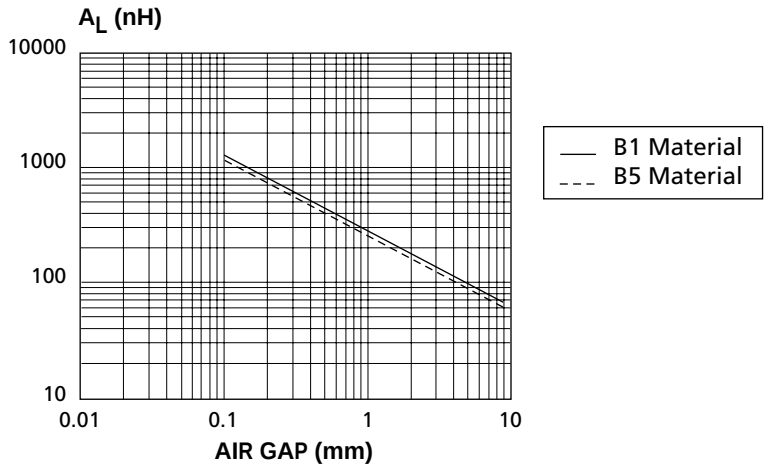
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.35	nH
Core constant	c_1	0.93	mm^{-1}
		23.64	$in.^{-1}$
Effective magnetic path length	l_e	154	mm
		6.063	in.
Effective core area	A_e	165	mm^2
		0.256	$in.^2$
Minimum core area	A mini	165	mm^2
		0.256	$in.^2$
Effective core volume	V_e	25400	mm^3
		1.55	$in.^3$
Weight per set	W	126	g

ELECTRICAL DATA

			MATERIAL			
			B1	B3	B5	B7
μ_a	Flux density 330 mT	100°C	> 1000			
	360 mT	100°C		> 1500	> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.9	< 2.6		
	32 kHz - 200 mT	100°C			< 3.60	< 3.10
Codification	P/N		B1UR4115A	B3UR4115A	B5UR4115A	B7UR4115A

DESIGN CURVES FOR A CORE SET

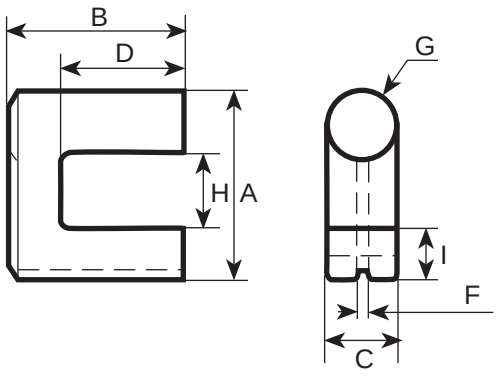
A_L vs. AIR GAP



UR 4215 A

DIMENSIONS

A	42.2 ± 0.85	mm
	1.668 ± 0.034	*in.*
B	36.3 ± 0.30	mm
	1.435 ± 0.012	*in.*
C	15.1 ± 0.30	mm
	0.597 ± 0.012	*in.*
D	24 mini	mm
	0.949 mini	*in.*
G	15 ± 0.30	mm
	0.593 ± 0.012	*in.*
H	14.50 mini	mm
	0.573 mini	in.
I	12 ± 0.25	mm
	0.474 ± 0.010	*in.*



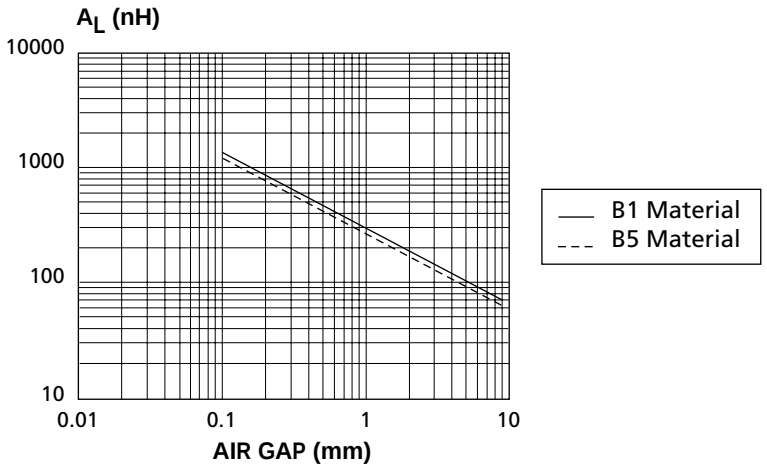
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.35	nH
Core constant	c_1	0.94	mm^{-1}
		23.88	$in.^{-1}$
Effective magnetic path length	l_e	168	mm
		6.614	in.
Effective core area	A_e	178	mm^2
		0.276	$in.^2$
Minimum core area	A mini	173	mm^2
		0.268	$in.^2$
Effective core volume	V_e	30000	mm^3
		1.83	$in.^3$
Weight per set	W	152	g

ELECTRICAL DATA

			MATERIAL		
			B1	B3	B5
μ_a	Flux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 3.30	< 3	< 4.20
Codification	P/N		B1UR4215A	B3UR4215A	B5UR4215A

DESIGN CURVES FOR A CORE SET

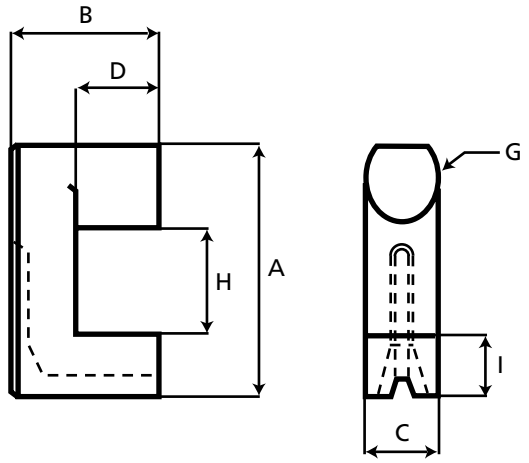
A_L vs. AIR GAP



UR 4215 C

DIMENSIONS

A	42.2 ± 0.85 *1.668 ± 0.034*	mm *in.*
B	34.4 ± 0.30 *1.360 ± 0.012*	mm *in.*
C	15.1 ± 0.30 *0.597 ± 0.012*	mm *in.*
D	22.4 ± 0.30 *0.885 ± 0.012*	mm *in.*
G	15 ± 0.30 *0.593 ± 0.012*	mm *in*
H	14.5 min *0.573 mini*	mm *in.*
I	12 ± 0.25 0.474 ± 0.010	mm in.



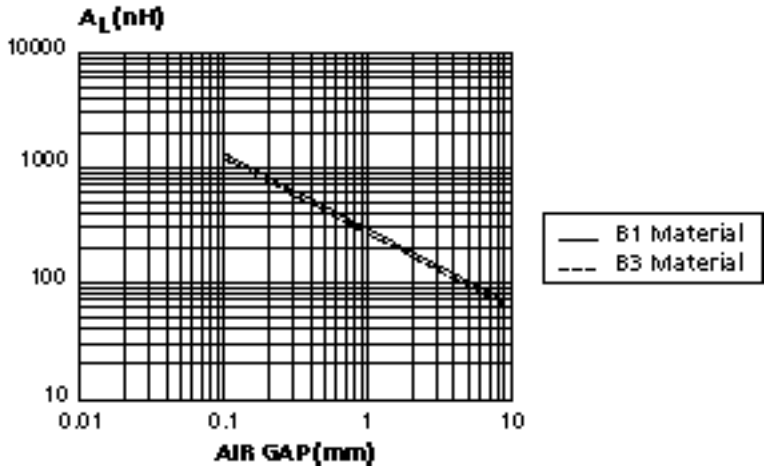
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.39	nH
Core constant	c_1	0.91 23.11	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	158 6.220	mm in.
Effective core area	A_e	175 0.271	mm^2 $in.^2$
Minimum core area	A mini	173 0.268	mm^2 $in.^2$
Effective core volume	V_e	27700 1.69	mm^3 $in.^3$
Weight per set	W	146	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 3.20	< 2.80
Codification	P/N		B1UR4215C	B3UR4215C

DESIGN CURVES FOR A CORE SET

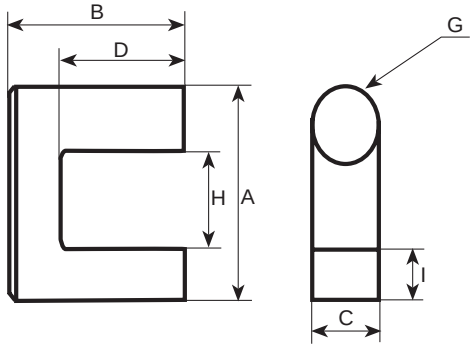
A_L vs. AIR GAP



UR 4216 B

DIMENSIONS

A	43.2 maxi	mm
	1.708 maxi	*in.*
B	34 ± 0.20	mm
	1.344 ± 0.008	*in.*
C	15.9 ± 0.40	mm
	0.628 ± 0.016	*in.*
D	24 ± 0.40	mm
	0.949 ± 0.016	*in.*
G	15.8 ± 0.25	mm
	0.625 ± 0.010	*in.*
H	16.35 ± 0.65	mm
	0.646 ± 0.026	in.
I	9.6 ± 0.30	mm
	0.379 ± 0.012	*in.*



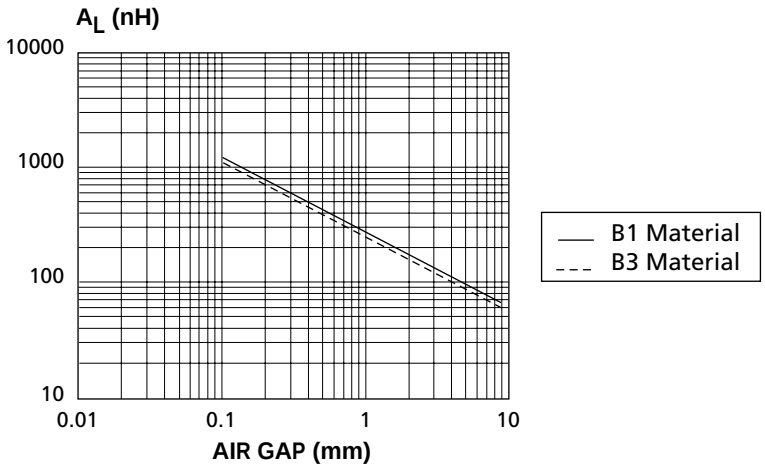
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.3	nH
Core constant	c_1	0.98	mm^{-1}
		24.89	$in.^{-1}$
Effective magnetic path length	l_e	163	mm
		6.417	in.
Effective core area	A_e	166	mm^2
		0.257	$in.^2$
Minimum core area	A mini	153	mm^2
		0.237	$in.^2$
Effective core volume	V_e	27000	mm^3
		1.65	$in.^3$
Weight per set	W	144	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 3.20	< 2.7
Codification	P/N		B1UR4216B	B3UR4216B

DESIGN CURVES FOR A CORE SET

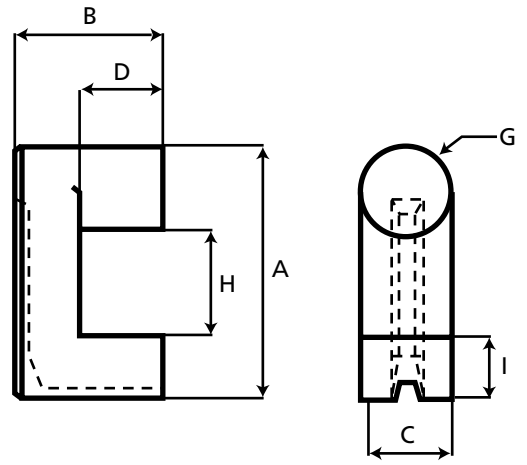
A_L vs. AIR GAP



UR 4315 A

DIMENSIONS

A	42.5 ± 1.00	mm
	1.680 ± 0.040	*in.*
B	31.8 ± 0.30	mm
	1.257 ± 0.012	*in.*
C	15.3 ± 0.30	mm
	0.605 ± 0.012	*in.*
D	19.8 ± 0.50	mm
	0.783 ± 0.020	*in.*
G	15.2 ± 0.30	mm
	0.601 ± 0.012	*in.*
H	15.3 ± 0.80	mm
	0.605 ± 0.032	in.
I	12 ± 0.30	mm
	0.474 ± 0.012	*in.*



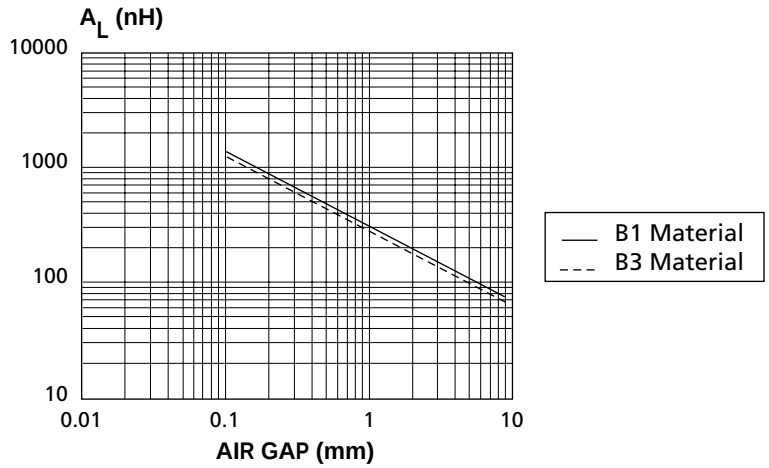
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.5	nH
Core constant	c_1	0.84	mm^{-1}
		21.34	$in.^{-1}$
Effective magnetic path length	l_e	149	mm
		5.866	in.
Effective core area	A_e	178	mm^2
		0.276	$in.^2$
Minimum core area	A mini	176	mm^2
		0.273	$in.^2$
Effective core volume	V_e	26530	mm^3
		1.62	$in.^3$
Weight per set	W	144	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 3.10	< 2.7
Codification	P/N		B1UR4315A	B3UR4315A

DESIGN CURVES FOR A CORE SET

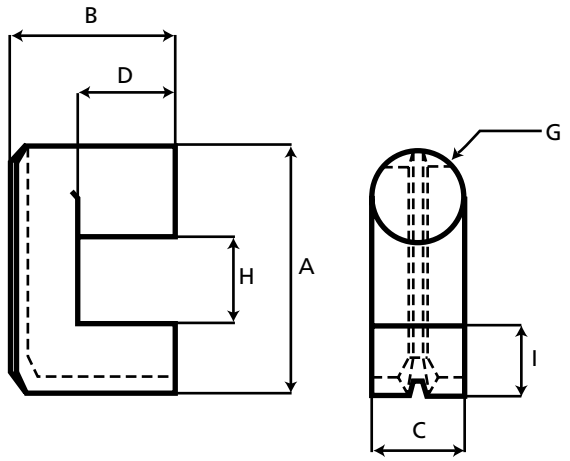
A_L vs. AIR GAP



UR 4316 A

DIMENSIONS

A	43.2 ± 0.90	mm
	1.708 ± 0.036	in.
B	29.5 ± 0.30	mm
	1.166 ± 0.012	in.
C	16.1 ± 0.30	mm
	0.636 ± 0.012	in.
D	17.5 ± 0.40	mm
	0.692 ± 0.016	in.
G	16 ± 0.30	mm
	0.632 ± 0.012	in.
H	15.2 ± 0.80	mm
	0.601 ± 0.032	in.
I	12 ± 0.30	mm
	0.474 ± 0.012	in.



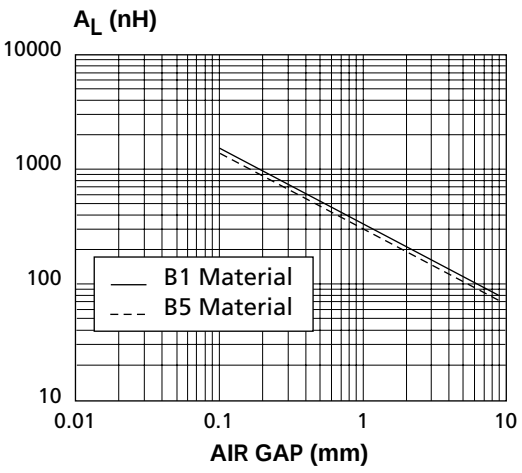
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.71	nH
Core constant	c_1	0.74	mm^{-1}
		18.80	$in.^{-1}$
Effective magnetic path length	l_e	140	mm
		5.512	in.
Effective core area	A_e	190	mm^2
		0.295	$in.^2$
Minimum core area	A mini	185	mm^2
		0.287	$in.^2$
Effective core volume	V_e	26638	mm^3
		1.63	$in.^3$
Weight per set	W	140	g

ELECTRICAL DATA

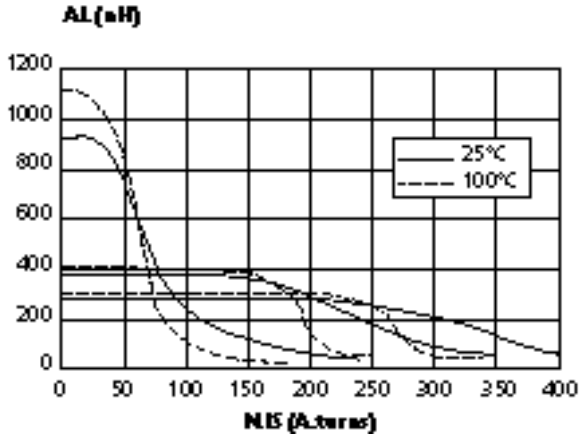
			MATERIAL			
			B1	B3	B5	B7
μ_a	Flux density 330 mT	100°C	> 1000			
	360 mT	100°C		> 1500	> 1500	> 1500
Total losses W)	16 kHz - 200 mT	100°C	< 3.10	< 2.7		
	32 kHz - 200 mT	100°C			< 3.8	< 3.20
Codification	P/N		B1UR4316A	B3UR4316A	B5UR4316A	B7UR4316A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



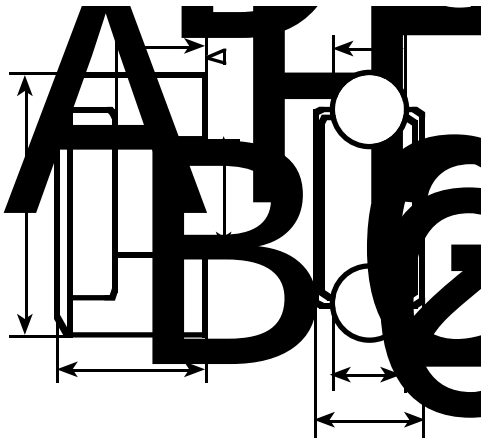
A_L vs N.IS



UR 4718 A

DIMENSIONS

A	47.4 ± 0.80	mm
	1.874 ± 0.032	*in.*
B	24.5 ± 0.20	mm
	0.968 ± 0.008	*in.*
C	18 ± 0.40	mm
	0.711 ± 0.016	*in.*
D	15.6 mini	mm
	0.617 mini	*in.*
G_1	13.2 ± 0.30	mm
	0.522 ± 0.012	*in.*
G_2	14.7 ± 0.30	mm
	0.581 ± 0.012	in.
H	19.5 ± 1.00	mm
	0.771 ± 0.040	*in.*



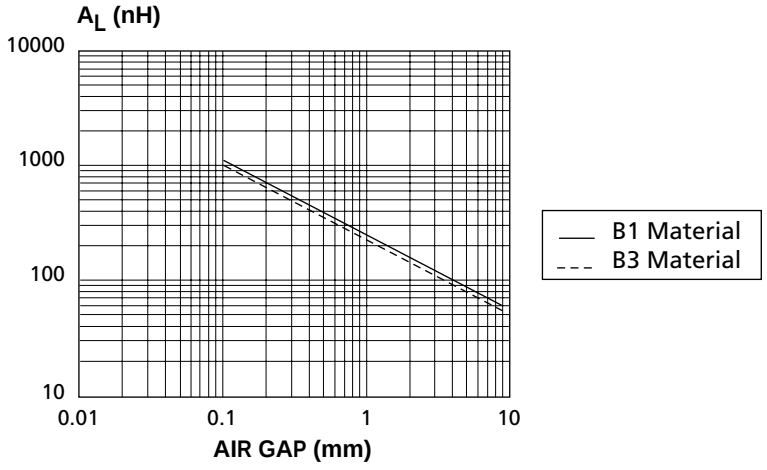
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.3	nH
Core constant	c_1	0.97	mm^{-1}
		24.55	$in.^{-1}$
Effective magnetic path length	l_e	145	mm
		5.709	in.
Effective core area	A_e	150	mm^2
		0.233	$in.^2$
Minimum core area	A mini	137	mm^2
		0.212	$in.^2$
Effective core volume	V_e	22000	mm^3
		1.343	$in.^3$
Weight per set	W	104	g

ELECTRICAL DATA

			MATERIAL	
			B1	B3
μ_a	Flux density 330 mT	100°C	> 1000	
	360 mT	100°C		> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.4	< 2.20
Codification	P/N		B1UR4718A	B3UR4718A

DESIGN CURVES FOR A CORE SET

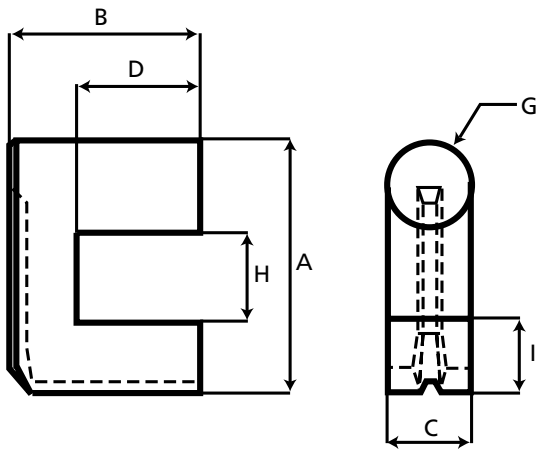
A_L vs. AIR GAP



UR 4916 A

DIMENSIONS

A	48.5 ± 1.00	mm
	1.917 ± 0.040	*in.*
B	39 ± 0.30	mm
	1.542 ± 0.012	*in.*
C	16.1 ± 0.40	mm
	0.636 ± 0.016	*in.*
D	25 ± 0.50	mm
	1.024 ± 0.020	*in.*
G	16 ± 0.30	mm
	0.632 ± 0.012	*in.*
H	18 mini	mm
	0.747 mini	in.
I	13 ± 0.25	mm
	0.514 ± 0.010	*in.*



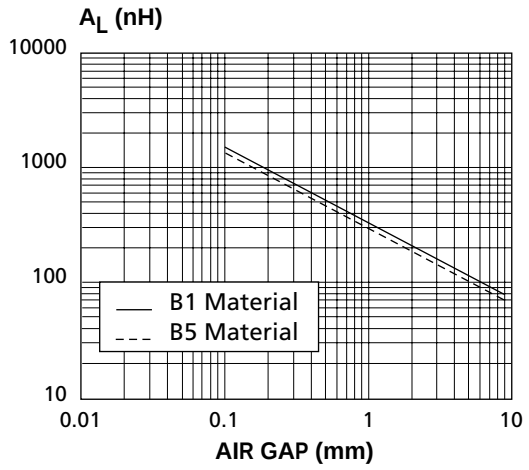
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.4	nH
Core constant	c_1	0.9	mm^{-1}
		22.86	$in.^{-1}$
Effective magnetic path length	l_e	186	mm
		7.323	in.
Effective core area	A_e	207	mm^2
		0.321	$in.^2$
Minimum core area	A mini	201	mm^2
		0.312	$in.^2$
Effective core volume	V_e	38500	mm^3
		2.35	$in.^3$
Weight per set	W	198	g

ELECTRICAL DATA

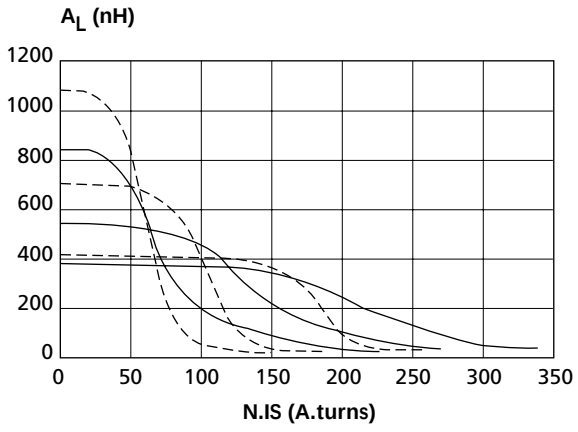
			MATERIAL		
			B1	B3	B5
μ_a	Flux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 4.50	< 3.90	
	32 kHz - 200 mT	100°C			< 5.40
Codification	P/N		B1UR4916A	B3UR4916A	B5UR4916A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



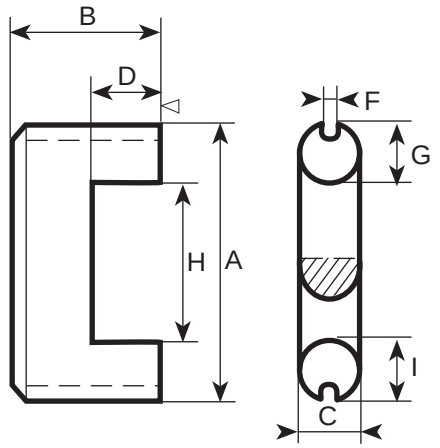
A_L vs N.IS



UR 5211 A

DIMENSIONS

A	52 ± 1.00	mm
	2.055 ± 0.040	*in.*
B	23.7 ± 0.20	mm
	0.937 ± 0.008	*in.*
C	11.15 ± 0.25	mm
	0.441 ± 0.010	*in.*
D	14.2 ± .0.50	mm
	0.561 ± 0.020	*in.*
F	3.25 ± 0.15	mm
	0.128 ± 0.006	*in.*
H	30.3 ± 0.75	mm
	1.198 ± 0.03	in.



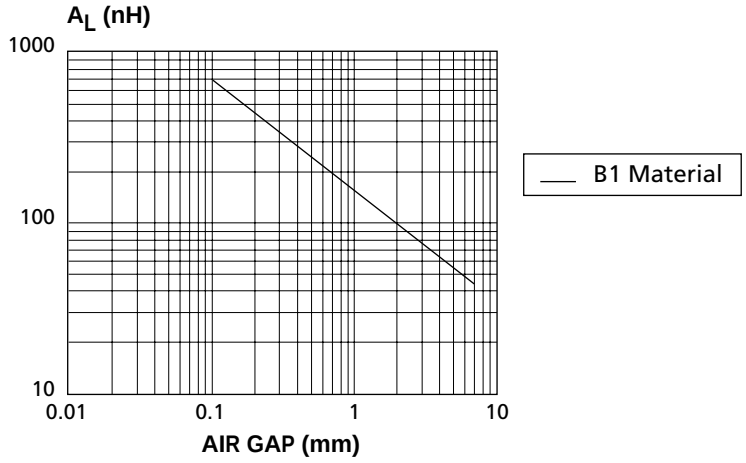
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.77	nH
Core constant	c_1	1.63	mm^{-1}
		41.45	$in.^{-1}$
Effective magnetic path length	l_e	147	mm
		5.787	in.
Effective core area	A_e	90	mm^2
		0.140	$in.^2$
Minimum core area	A mini	88	mm^2
		0.136	$in.^2$
Effective core volume	V_e	13300	mm^3
		0.812	$in.^3$
Weight per set	W	68	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1.55
Codification	P/N		B1UR5211A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP

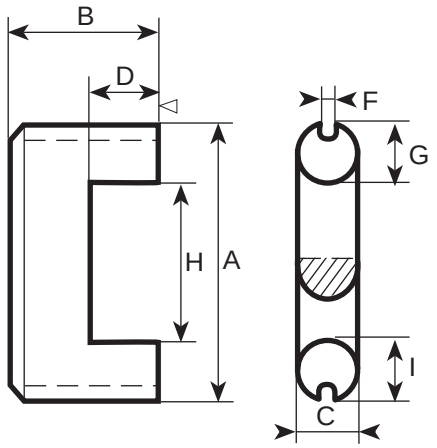


HIGH POWER

UR 5211 B

DIMENSIONS

A	52 ± 1.00	mm
	2.055 ± 0.040	*in.*
B	27.5 ± 0.20	mm
	1.087 ± 0.008	*in.*
C	11.15 ± 0.25	mm
	0.441 ± 0.010	*in.*
D	17.5 ± 0.50	mm
	0.692 ± 0.020	*in.*
F	3.25 ± 0.15	mm
	0.128 ± 0.006	*in.*
H	30.3 ± 1.00	mm
	1.198 ± 0.040	in.



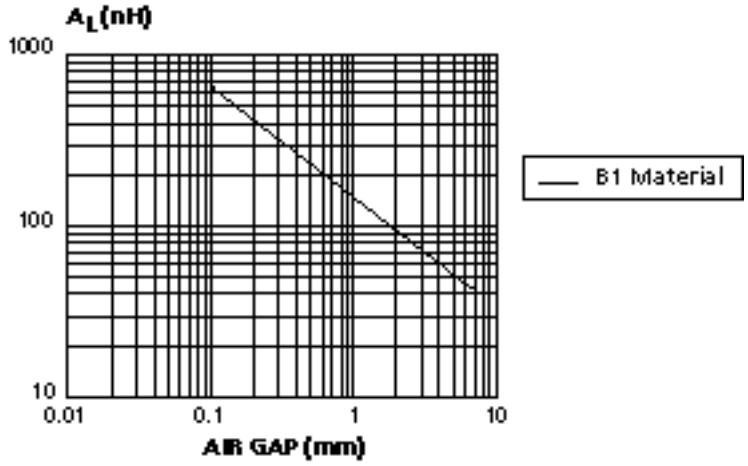
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	0.72	nH
Core constant	c_1	1.74	mm^{-1}
		44.20	$in.^{-1}$
Effective magnetic path length	l_e	161	mm
		6.339	in.
Effective core area	A_e	93	mm^2
		0.144	$in.^2$
Minimum core area	A mini	88	mm^2
		0.136	$in.^2$
Effective core volume	V_e	14880	mm^3
		0.908	$in.^3$
Weight per set	W	74	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 1.70
Codification	P/N		B1UR5211B

DESIGN CURVES FOR A CORE SET

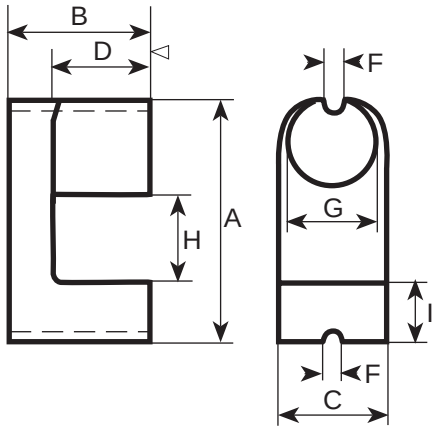
A_L vs. AIR GAP



UR 5536 A

DIMENSIONS

A	54.9 ± 1.10	mm
	2.170 ± 0.043	*in.*
B	37.5 ± 0.25	mm
	1.482 ± 0.010	*in.*
C	36 ± 0.70	mm
	1.423 ± 0.028	*in.*
D	25.5 ± 0.40	mm
	1.008 ± 0.016	*in.*
F	4.8 ± 0.20	mm
	0.190 ± 0.008	*in.*
G	23.5 ± 0.45	mm
	0.929± 0.018	in.
H	20 ± 0.40	mm
	0.791 ± 0.016	*in.*
I	12 ± 0.25	mm
	0.474 ± 0.010	in.



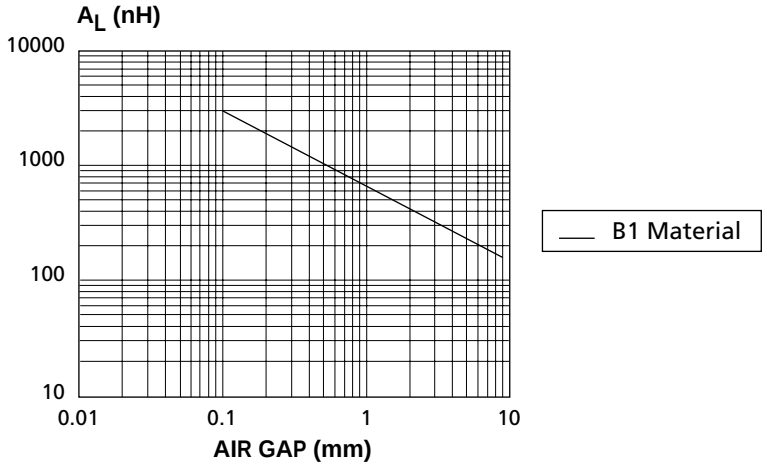
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.8	nH
Core constant	c_1	0.45	mm^{-1}
		11.40	$in.^{-1}$
Effective magnetic path length	l_e	188	mm
		7.402	in.
Effective core area	A_e	418	mm^2
		0.648	$in.^2$
Minimum core area	A mini	411	mm^2
		0.637	$in.^2$
Effective core volume	V_e	78570	mm^3
		4.79	$in.^3$
Weight per set	W	400	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (w)	16 kHz - 200 mT	100°C	< 9.50
Codification	P/N		B1UR5536A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP

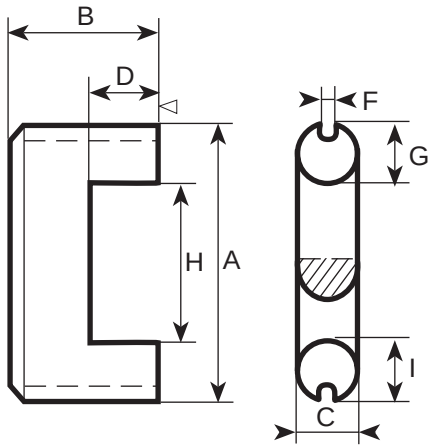


HIGH POWER

UR 5816 A

DIMENSIONS

A	57.5 ± 1.00	mm
	2.273 ± 0.040	*in.*
B	28.4 ± 0.20	mm
	1.123 ± 0.008	*in.*
C	15.5 ± 0.40	mm
	0.613 ± 0.016	*in.*
D	16.5 ± 0.40	mm
	0.652 ± 0.016	*in.*
F	4.8 ± 0.20	mm
	0.190 ± 0.008	*in.*
G	15.5 ± 0.40	mm
	0.613 ± 0.016	in.
H	27.8 ± 0.90	mm
	1.099 ± 0.036	*in.*
I	15.9 ± 0.40	mm
	0.628 ± 0.016	*in.*



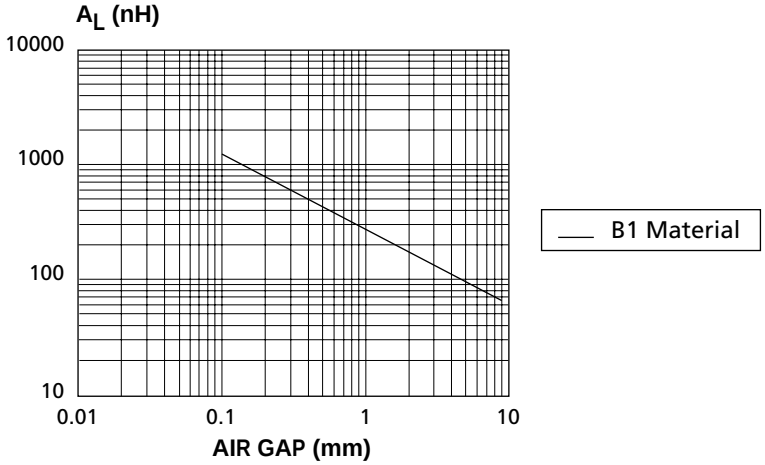
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.3	nH
Core constant	c_1	1	mm^{-1}
		25.40	$in.^{-1}$
Effective magnetic path length	l_e	166	mm
		6.535	in.
Effective core area	A_e	169	mm^2
		0.262	$in.^2$
Minimum core area	A mini	160	mm^2
		0.248	$in.^2$
Effective core volume	V_e	28000	mm^3
		1.71	$in.^3$
Weight per set	W	140	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 3
Codification	P/N		B1UR5816A

DESIGN CURVES FOR A CORE SET

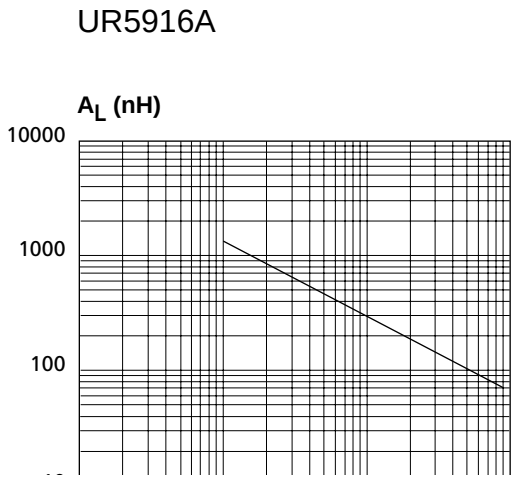
A_L vs. AIR GAP



UR 5916 A

DIMENSIONS

A	58.3 ± 1.00	mm
	2.304 ± 0.040	*in.*
B	30.15 ±0.35	mm
	1.192 ± 0.014	*in.*
C	16.2 ± 0.30	mm
	0.640 ± 0.012	*in.*
D	19 mini	mm
	0.751 mini	*in.*
G	15.85 ± 0.35	mm
	0.626 ± 0.014	*in.*
H	27.7 ± 0.80	mm
	1.095 ± 0.032	in.
I	15.3 ± 0.35	mm
	0.605 ± 0.014	*in.*



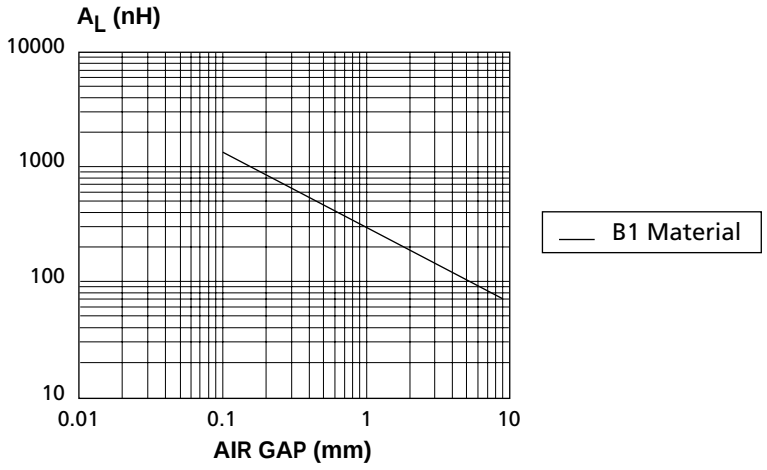
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.34	nH
Core constant	c_1	0.94	mm^{-1}
		23.88	$in.^{-1}$
Effective magnetic path length	l_e	173	mm
		6.811	in.
Effective core area	A_e	185	mm^2
		0.287	$in.^2$
Minimum core area	A mini	181	mm^2
		0.281	$in.^2$
Effective core volume	V_e	32000	mm^3
		1.95	$in.^3$
Weight per set	W	176	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 3.7
Codification	P/N		B1UR5916A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP

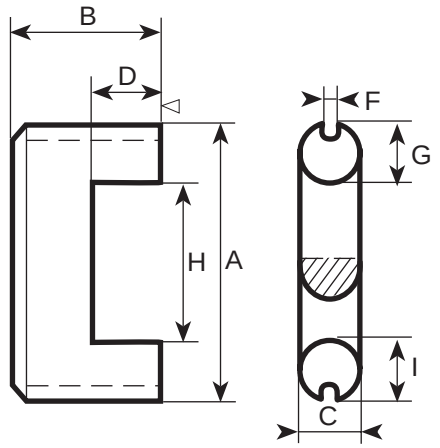


HIGH POWER

UR 5917 A

DIMENSIONS

A	59 ± 1.75 *2.332 ± 0.069*	mm *in.*
B	35.8 ± 0.20 *1.415 ± 0.008*	mm *in.*
C	17 ± 0.40 *0.672 ± 0.016*	mm *in.*
D	21.9 ± 0.40 *0.866 ± 0.016*	mm *in.*
F	4.5 nomi *0.178 nomi*	mm *in.*
H	26.5 ± 1.00 1.047 ± 0.040	mm in.



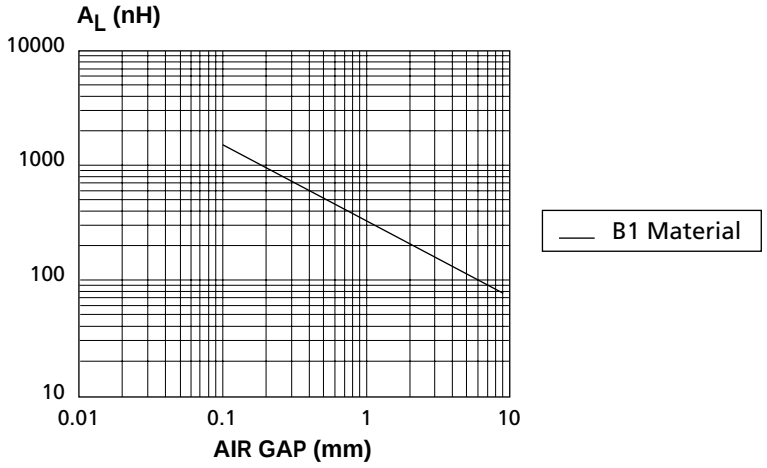
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.37	nH
Core constant	c_1	0.92 23.30	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	191 7.520	mm in.
Effective core area	A_e	208 0.322	mm^2 $in.^2$
Minimum core area	A mini	208 *0.322*	mm^2 $in.^2$
Effective core volume	V_e	39800 2.43	mm^3 $in.^3$
Weight per set	W	192	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux dendity 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 4.40
Codification	P/N		B1UR5917A

DESIGN CURVES FOR A CORE SET

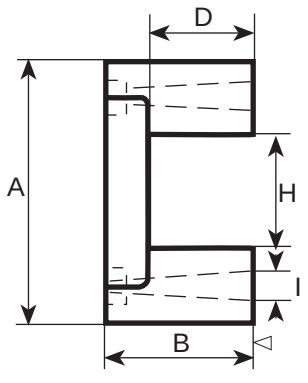
A_L vs. AIR GAP



UR 6420 A

DIMENSIONS

A	64.05 ± 1.95	mm
	2.532 ± 0.077	*in.*
B	40.5 ± 0.20	mm
	1.601 ± 0.008	*in.*
C	24 ± 0.30	mm
	0.949 ± 0.012	*in.*
D	26.5 ± 0.40	mm
	1.047 ± 0.016	*in.*
G	20.05 ± 0.20	mm
	0.792 ± 0.008	*in.*
H	23 mini	mm
	0.909 mini	in.
I	5 ± 0.20	mm
	0.198 ± 0.008	in



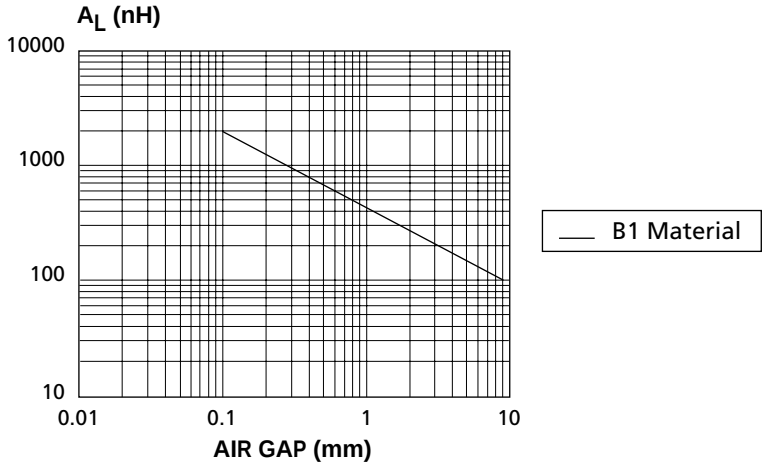
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.7	nH
Core constant	c_1	0.72	mm^{-1}
		18.29	$in.^{-1}$
Effective magnetic path length	l_e	210	mm
		8.268	in.
Effective core area	A_e	290	mm^2
		0.450	$in.^2$
Minimum core area	A mini		mm^2
			$in.^2$
Effective core volume	V_e	61000	mm^3
		3.72	$in.^3$
Weight per set	W	304	g

ELECTRICAL DATA

			MATERIAL
			B1
μ_a	Flux density 330 mT	100°C	> 1000
Total losses (W)	16 kHz - 200 mT	100°C	< 7
Codification	P/N		B1UR6420A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP

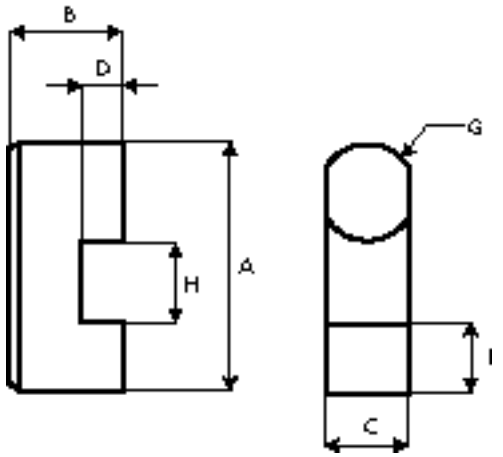


UR 4213 A & UR 4216 C

● DIMENSIONS

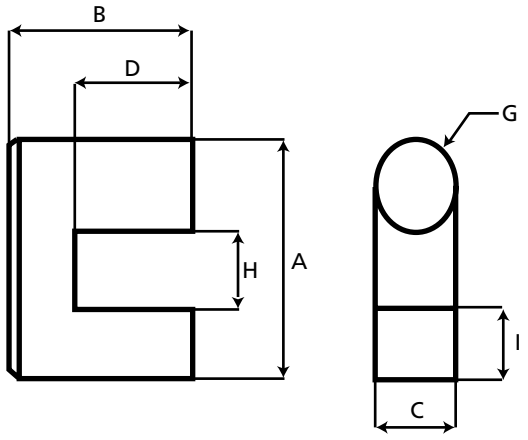
UR 4213 A

A	42.2 ± 1.00	mm
	1.668 ± 0.040	*in.*
B	19.1 ± 0.30	mm
	0.755 ± 0.012	*in.*
C	13.1 ± 0.30	mm
	0.518 ± 0.012	*in.*
D	6.1 ± 0.30	mm
	0.241 ± 0.012	*in.*
G	15.7 ± 0.30	mm
	0.621 ± 0.012	*in.*
H	14 mini	mm
	0.553 mini	in.
I	11.5 ± 0.30	mm
	0.455 ± 0.012	*in.*



UR 4216 C

A	41.6 ± 1 00	mm
	1.644 ± 0.040	*in.*
B	42.6 ± 0.30	mm
	1.684 ± 0.012	*in.*
C	15.8 ± 0.40	mm
	0.625 ± 0.016	*in.*
D	29.1 ± 0.50	mm
	1.150 ± 0.020	*in.*
G	15.7 ± 0.30	mm
	0.621 ± 0.012	*in.*
H	14 mini	mm
	0.553 mini	in.
I	10.9 ±0.30	mm
	0.431 ± 0.012	*in.*



UR 4213 A & UR 4216 C

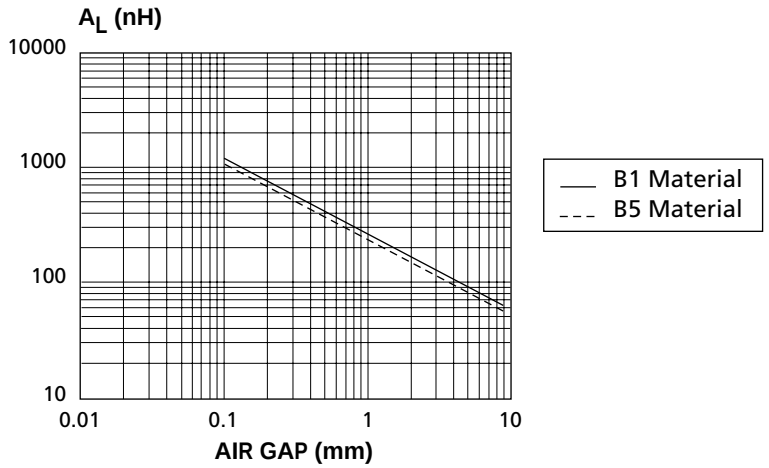
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.54	nH
Core constant	c_1	0.816 20.73	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	140 5.512	mm in.
Effective core area	A_e	172 0.267	mm^2 $in.^2$
Minimum core area	A mini	142 0.220	mm^2 $in.^2$
Effective core volume	V_e	24250 1.480	mm^3 $in.^3$
Weight per set	W	135	g

ELECTRICAL DATA

			MATERIAL		
			B1	B3	B5
μ_a	Flux density 330 mT	100°C	> 1000		
	360 mT	100°C		> 1500	> 1500
Total losses (W)	16 kHz - 200 mT	100°C	< 2.80	< 2.50	
	32 kHz - 200 mT	100°C			< 3.60
Codification	P/N		B1UR4213A	B3UR4213A	B5UR4213A
			B1UR4216C	B3UR4216C	B5UR4216C

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP

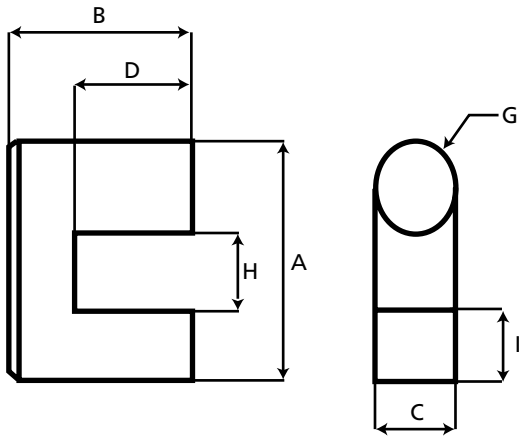


UR 4618 A & UR 4618 B

DIMENSIONS

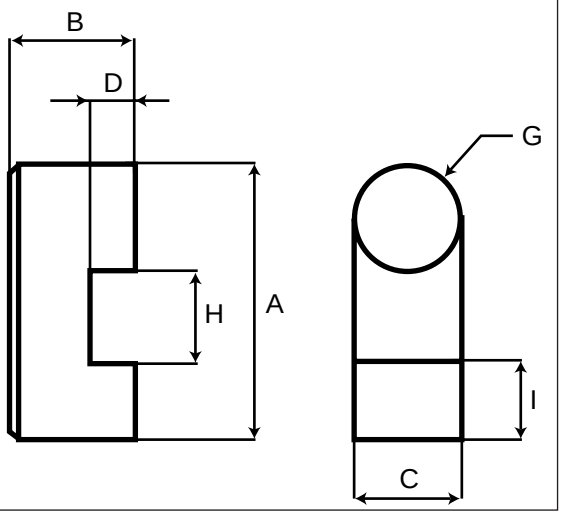
UR 4618 A

A	46 ± 1.00	mm
	1.818 ± 0.040	*in.*
B	38.8 ± 0.30	mm
	1.534 ± 0.012	*in.*
C	17.9 ± 0.40	mm
	0.708 ± 0.016	*in.*
D	25.8 ± 0.30	mm
	1.020 ± 0.012	*in.*
G	17.8 ± 0.30	mm
	0.704 ± 0.012	*in.*
H	14.65 mini	mm
	0.579 mini	in.
I	13 ± 0.30	mm
	0.514 ± 0.012	*in.*



UR 4618 B

A	46 ± 1.00	mm
	1.818 ± 0.040	*in.*
B	20.8 ± 0.30	mm
	0.822 ± 0.012	*in.*
C	17.9 ± 0.40	mm
	0.708 ± 0.016	*in.*
D	7.8 ± 0.30	mm
	0.308 ± 0.012	*in.*
G	17.8 ± 0.30	mm
	0.704 ± 0.012	*in.*
H	14.65 mini	mm
	0.579 mini	in.
I	13 ± 0.30	mm
	0.514 ± 0.012	*in.*



UR 4618 A & UR 4618 B

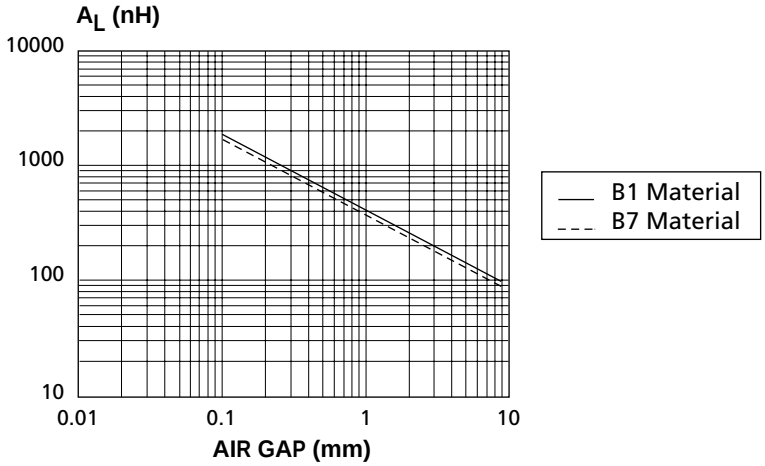
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.1	nH
Core constant	c_1	0.6 15.24	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	142 5.591	mm in.
Effective core area	A_e	238 0.369	mm^2 $in.^2$
Minimum core area	A mini	233 0.361	mm^2 $in.^2$
Effective core volume	V_e	33750 2.06	mm^3 $in.^3$
Weight per set	W	170	g

ELECTRICAL DATA

			MATERIAL			
			B1	B3	B5	B7
μ_a	Flux density 330 mT	100°C	> 1000			
	360 mT	100°C		> 1500	> 1500	> 1500
Total losses (W)	16 kHz / 200 mT	100°C	< 3.90	< 3.35		
	32 kHz / 200 mT	100°C			< 4.73	< 4.10
Codification	P/N		B1UR4618B	B3UR4618B	B5UR4618B	B7UR4618B
			B1UR4618A	B3UR4618A	B5UR4618A	B7UR4618A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP



RM & FM CORES

KEY-APPLICATIONS :

– SMPS

– HIGH POWER

RM and FM core are composed of 2 parts

HOW TO ORDER RM CORES ?

RM cores' part number structure :

T	9	R	M	0	6	0	0	A	A	1	5	0	-	-

Material | Model | Shape code | Form Factor | Finishing

A : Core to be used without adjuster
N : Cores supplied with a plastic nut (see corresponding adjusters)
V : Core supplied with a brass screw (see corresponding adjusters)
B : RM cores without center hole

Ungapped core | - | - | - | - |

Core supplied with a tolerated A_L value :

• A + A_L value in nH - For A_L value < 1000 nH

ex : A_L = 250 nH | A | 2 | 5 | 0 |

• Y + A_L value in nH (only for very low A_L values with symetrical airgap)

ex : A_L = 16 nH | Y | 0 | 1 | 6 |

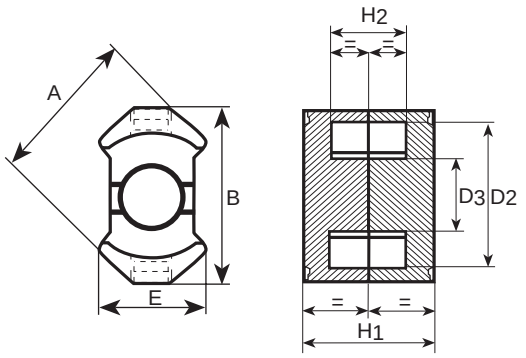
• B + A_L value * 10-1 in nH - For A_L value > 1000 nH

ex : A_L : 1000 nH | B | 1 | 0 | 0 |

RM 0500 B

DIMENSIONS

A	12.05 ± 0.25	mm
	0.476 ± 0.010	in.
B	14.3 ± 0.30	mm
	0.565 ± 0.012	in.
E	10 maxi	mm
	0.395 maxi	in.
H_1	10.4 ± 0.10	mm
	0.411 ± 0.004	in.
H_2	6.5 ± 0.20	mm
	0.257 ± 0.008	in.
D_2	10.4 ± 0.20	mm
	0.411 ± 0.008	in.
D_3	4.8 ± 0.10	mm
	0.190 ± 0.004	in.



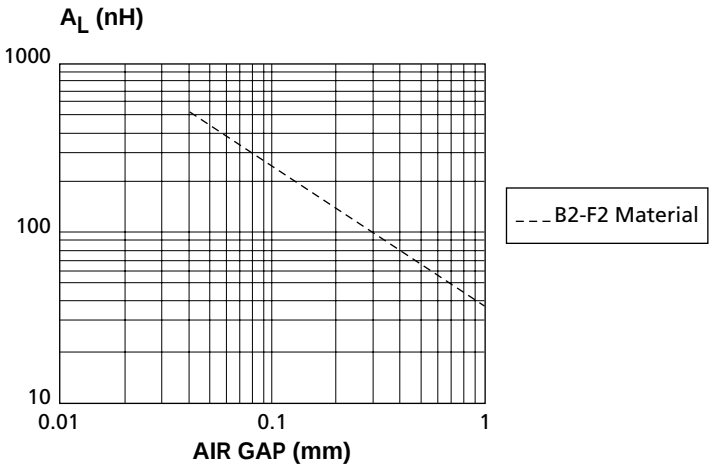
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.35	nH
Core constant	c_1	0.94	mm^{-1}
		23.88	$in.^{-1}$
Effective magnetic path length	l_e	22.3	mm
		0.878	in.
Effective core area	A_e	23.8	mm^2
		0.037	$in.^2$
Minimum core area	A mini	18.1	mm^2
		0.028	$in.^2$
Effective core volume	V_e	530	mm^3
		0.032	$in.^3$
Weight per set	W	3.1	g

ELECTRICAL DATA

				MATERIAL	
				B2	F2
A_L (nH) ± 25 %	Without airgap		25°C	1600	1450
μ_a	Flux density at300 mT	100°C		> 1000	
		340 mT	100°C	> 1000	
Total losses	100 kHz	100 mT	100°C	> 0.105	
(W)	300 kHz	50 mT	100°C		> 0.06
Codification	P/N			B2RM0500B	F2RM0500B

DESIGN CURVES FOR A CORE SET

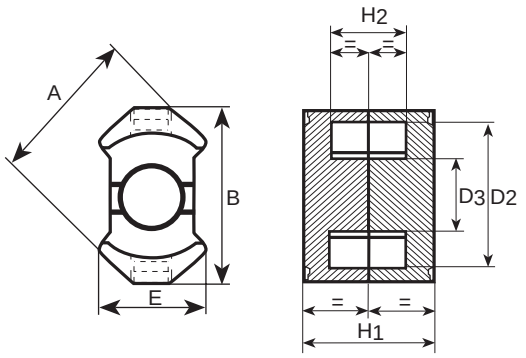
A_L vs. AIR GAP.



RM 0600 B

DIMENSIONS

A	14.4 ± 0.30	mm
	0.569 ± 0.012	in.
B	17.3 ± 0.30	mm
	0.684 ± 0.012	in.
E	10.75 maxi	mm
	0.425 maxi	in.
H_1	12.4 ± 0.10	mm
	0.490 ± 0.004	in.
H_2	8.2 ± 0.20	mm
	0.34 ± 0.008	in.
D_2	12.65 ± 0.25	mm
	0.500 ± 0.010	in.
D_3	6.3 ± 0.10	mm
	0.249 ± 0.004	in.



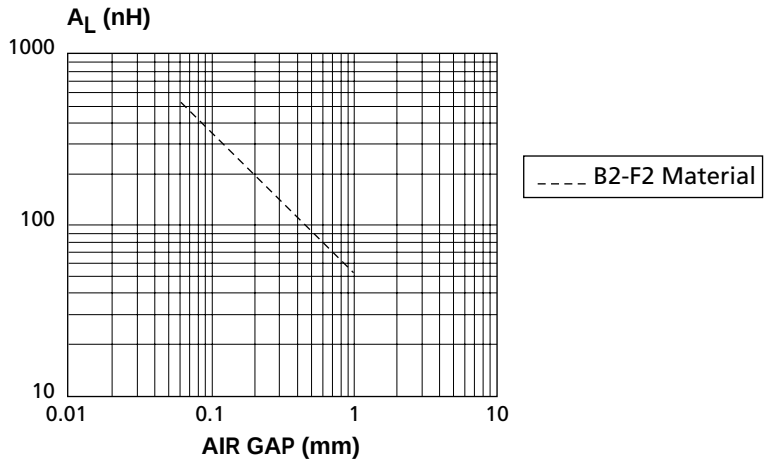
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	1.6	nH
Core constant	c_1	0.79	mm^{-1}
		20.07	$in.^{-1}$
Effective magnetic path length	l_e	28.5	mm
		1.122	in.
Effective core area	A_e	35.7	mm^2
		0.055	$in.^2$
Minimum core area	A mini	30.7	mm^2
		0.048	$in.^2$
Effective core volume	V_e	1020	mm^3
		0.062	$in.^3$
Weight per set	W	5.2	g

ELECTRICAL DATA

				MATERIAL	
				B2	F2
A_L (nH) ± 25 %	Without airgap		25°C	2000	2000
μ_a	Flux density at300 mT	100°C		> 1000	
		340 mT	100°C	> 1000	
Total losses	100 kHz	100 mT	100°C	> 0.25	
(W)	300 kHz	50 mT	100°C		> 0.11
Codification	P/N			B2RM0600B	F2RM0600B

DESIGN CURVES FOR A CORE SET

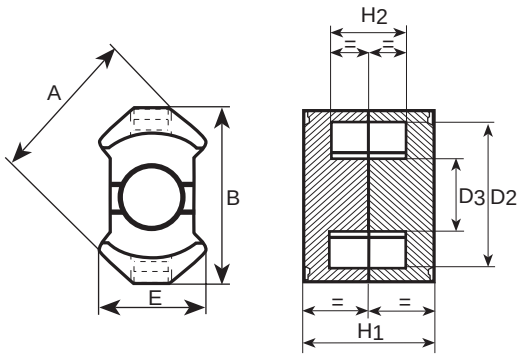
A_L vs. AIR GAP.



RM 0800 B

DIMENSIONS

A	19.25 ± 0.45	mm
	0.761 ± 0.018	in.
B	22.75 ± 0.45	mm
	0.899 ± 0.018	in.
E	15.7 maxi	mm
	0.621 maxi	in.
H_1	16.3 ± 0.20	mm
	0.644 ± 0.008	in.
H_2	11.2 ± 0.40	mm
	0.443 ± 0.016	in.
D_2	17.3 ± 0.30	mm
	0.684 ± 0.012	in.
D_3	8.4 ± 0.15	mm
	0.332 ± 0.006	in.



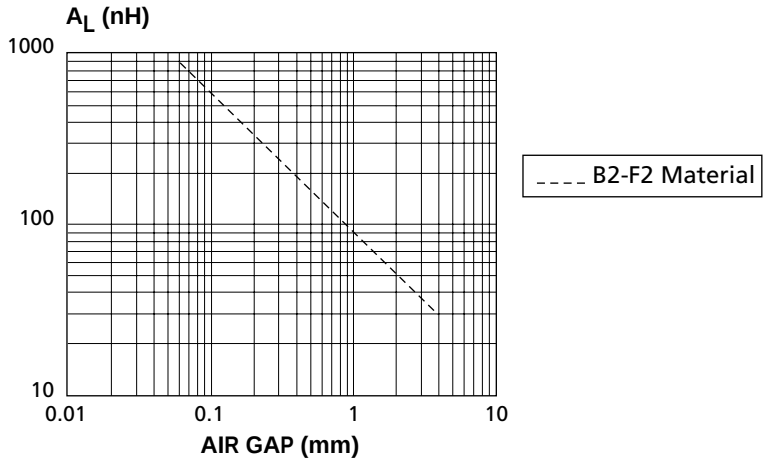
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.15	nH
Core constant	c_1	0.59	mm^{-1}
		14.99	$in.^{-1}$
Effective magnetic path length	l_e	38	mm
		1.496	in.
Effective core area	A_e	64	mm^2
		0.099	$in.^2$
Minimum core area	A mini	55	mm^2
		0.085	$in.^2$
Effective core volume	V_e	2400	mm^3
		0.146	$in.^3$
Weight per set	W	13	g

ELECTRICAL DATA

				MATERIAL	
				B2	F2
A_L (nH) ± 25 %	Without airgap		25°C	3100	2800
μ_a	Flux density at300 mT	100°C		> 1000	
		340 mT	100°C	> 1000	
Total losses	100 kHz	100 mT	100°C	< 0.55	
(W)	300 kHz	50 mT	100°C		< 0.24
Codification	P/N			B2RM0800B	F2RM0800B

DESIGN CURVES FOR A CORE SET

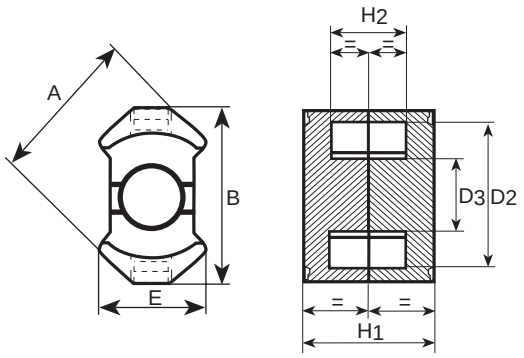
A_L vs. AIR GAP.



RM 1000 B

DIMENSIONS

A	24.155 ± 0.55	mm
	0.95 ± 0.022	in.
B	27.85 ± 0.65	mm
	1.101 ± 0.026	in.
H_1	18.6 ± 0.10	mm
	0.735 ± 0.004	in.
H_2	12.7 ± 0.30	mm
	0.502 ± 0.012	in.
D_2	21.65 ± 0.45	mm
	0.856 ± 0.018	in.
D_3	10.7 ± 0.20	mm
	0.423 ± 0.008	in.



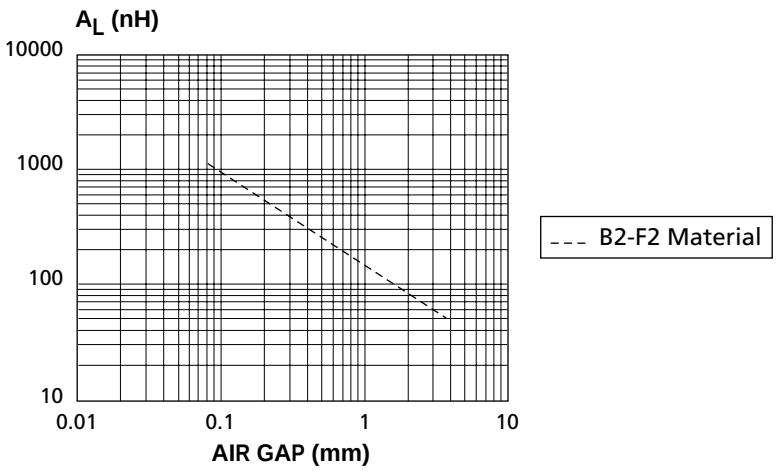
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	2.75	nH
Core constant	c_1	0.45	mm^{-1}
		11.43	$in.^{-1}$
Effective magnetic path length	l_e	45	mm
		1.772	in.
Effective core area	A_e	99	mm^2
		0.153	$in.^2$
Minimum core area	A mini	90	mm^2
		0.140	$in.^2$
Effective core volume	V_e	4500	mm^3
		0.275	$in.^3$
Weight per set	W	22	g

ELECTRICAL DATA

				MATERIAL	
				B2	F2
A_L (nH) ± 25 %	Without airgap		25°C	3800	3800
μ_a	Flux density at300 mT	100°C		> 1000	
		340 mT	100°C	> 1500	
Total losses	100 kHz	100 mT	100°C	< 0.85	
(W)	300 kHz	50 mT	100°C		< 0.45
Codification	P/N			B2RM1000B	F2RM1000B

DESIGN CURVES FOR A CORE SET

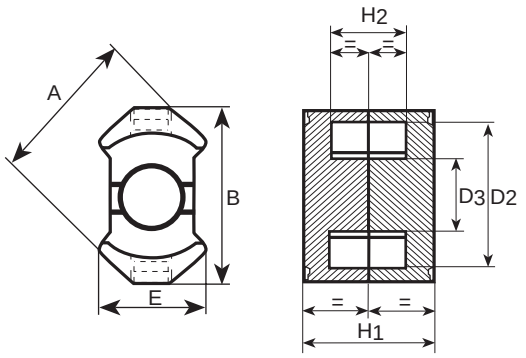
A_L vs. AIR GAP.



RM 1400 B

DIMENSIONS

A	34.10 ± 0.60	mm
	1.348 ± 0.024	in.
B	41.5 ± 0.70	mm
	1.64 ± 0.028	in.
H_1	14.45 ± 0.05	mm
	0.571 ± 0.002	in.
H_2	10.55 ± 0.15	mm
	0.417 ± 0.006	in.
D_2	29.60 ± 0.60	mm
	1.170 ± 0.024	in.
D_3	14.7 ± 0.30	mm
	0.581 ± 0.012	in.



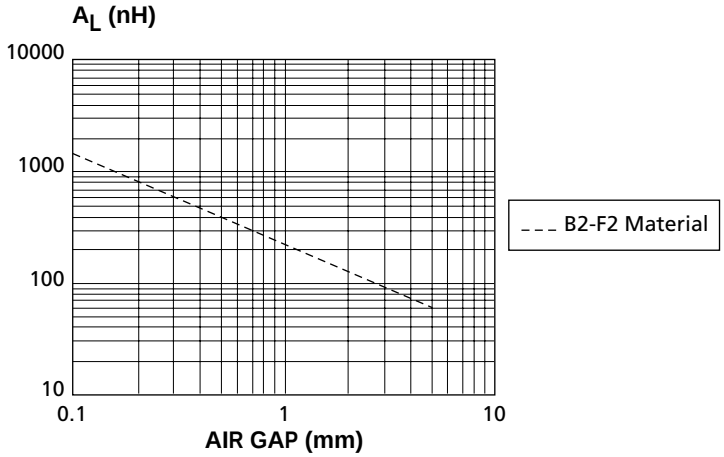
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	3.5	nH
Core constant	c_1	0.36	mm^{-1}
		9.14	$in.^{-1}$
Effective magnetic path length	l_e	69	mm
		2.717	in.
Effective core area	A_e	190	mm^2
		0.295	$in.^2$
Minimum core area	A mini	147	mm^2
		0.228	$in.^2$
Effective core volume	V_e	13100	mm^3
		0.779	$in.^3$
Weight per set	W	70	g

ELECTRICAL DATA

				MATERIAL	
				B2	F2
A_L (nH) ± 25 %	Without airgap		25°C	5200	520 0
μ_a	Flux density at300 mT	100°C		> 1000	
		340 mT	100°C	> 1500	
Total losses	100 kHz	100 mT	100°C	< 2.10	
(W)	300 kHz	50 mT	100°C		< 1.40
Codification	P/N			B2RM1400B	F2RM1400B

DESIGN CURVES FOR A CORE SET

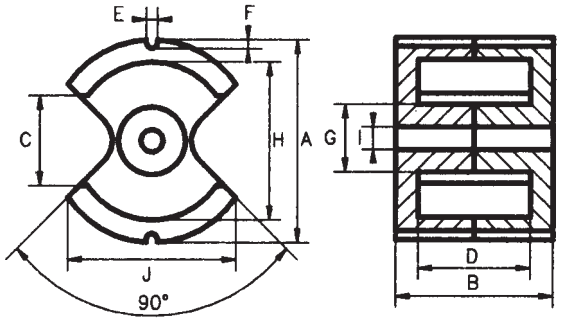
A_L vs. AIR GAP.



FM 5039 A

● DIMENSIONS

A	49.15 ± 0.85 1.943 ± 0.034	mm in.
B	38.8 ± 0.20 1.534 ± 0.008	mm in.
C	23.4 mini 0.925 mini	mm in.
D	26.8 ± 0.40 1.059 ± 0.016	mm in.
E	4.5 ± 0.20 0.178 ± 0.008	mm in.
F	1.4 ± 0.20 0.055 ± 0.008	mm in.
G	19.7 ± 0.30 0.779 ± 0.012	mm in.
H	39.65 ± 0.65 1.567 ± 0.026	mm in.
I	5.55 ± 0.15 0.219 ± 0.006	mm in.
J	37.55 maxi 1.484 maxi	mm in.



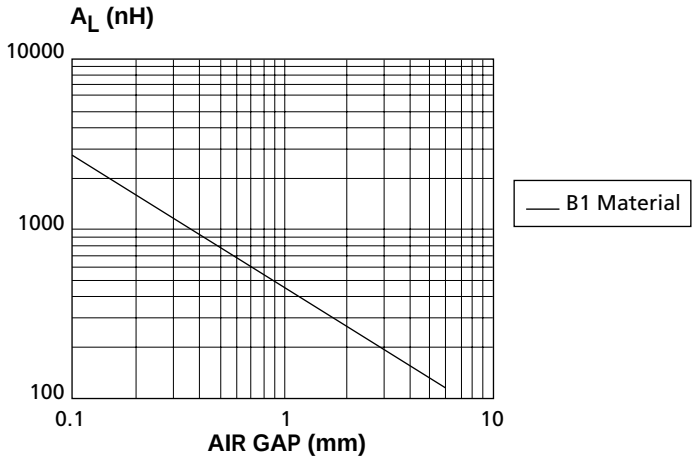
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	4.9	nH
Core constant	c_1	0.26 6.60	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	87 3.425	mm in.
Effective core area	A_e	340 0.527	mm^2 $in.^2$
Minimum core area	A mini	280 0.434	mm^2 $in.^2$
Effective core volume	V_e	29600 1.81	mm^3 $in.^3$
Weight per set	W	140	g

● ELECTRICAL DATA

			MATERIAL
			B1
A_L (nH) ± 25 %	Without airgap	25°C	8000
μ_a	320 mT	100°C	> 1000
Total losses (W)	25 kHz / 200 mT	100°C	< 5.90
Codification	P/N		B1FM5039A

● DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP.

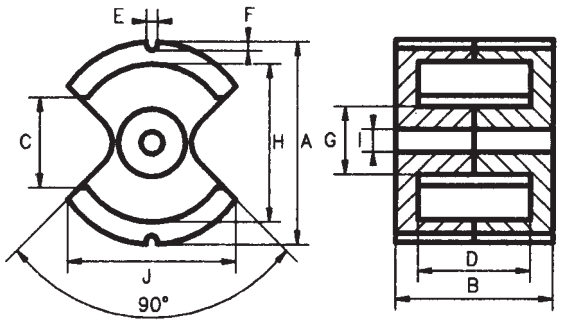


HIGH POWER

FM 8770 A

DIMENSIONS

A	85.5 ± 1.50 3.379 ± 0.059	mm in.
B	69.6 ± 0.40 2.751 ± 0.016	mm in.
C	39.4 mini 1.557 mini	mm in.
D	48.4 ± 0.40 1.913 ± 0.016	mm in.
E	4.8 ± 0.20 0.190 ± 0.008	mm in.
F	3.7 ± 0.20 0.146 ± 0.008	mm in.
G	31.4 ± 0.50 1.241 ± 0.020	mm in.
H	68.15 ± 1.05 2.694 ± 0.042	mm in.
I	8.65 ± 0.15 0.342 ± 0.006	mm in.
J	72.1 maxi 2.850 maxi	mm in.



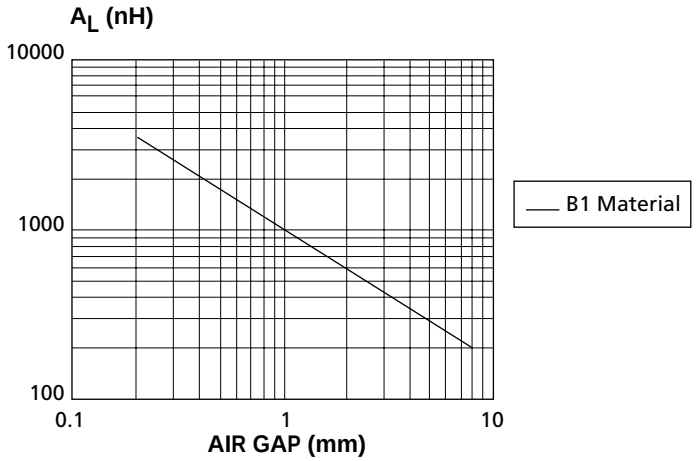
EFFECTIVE CORE PARAMETERS			
Permeance factor	c	7.5	nH
Core constant	c_1	0.17 4.32	mm^{-1} $in.^{-1}$
Effective magnetic path length	l_e	153 6.024	mm in.
Effective core area	A_e	920 1.426	mm^2 $in.^2$
Minimum core area	A mini	715 *1.108*	mm^2 $in.^2$
Effective core volume	V_e	140000 8.54	mm^3 $in.^3$
Weight per set	W	860	g

ELECTRICAL DATA

			MATERIAL
			B1
A_L (nH) ± 25 %	Without airgap	25°C	12800
μ_a	320 mT	100°C	> 1000
Total losses (W)	25 kHz / 200 mT	100°C	< 28.00
Codification	P/N		B1FM8770A

DESIGN CURVES FOR A CORE SET

A_L vs. AIR GAP.



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E-1306A	x	x				x				x		x	x					106
E-1605A	x	x				x				x		x	x					107
E-1605B	x	x								x		x	x					108
E-1605C	x	x										x	x		1246		UEI 310	109
E-1905A	x	x				x				x		x	x		<			110
E-1907A	x	x								x		x	x					111
E-2005B	x	x								x		x	x					112
E-2006A	x	x				x				x		x	x		1246		UEI 310	113
E-2206A	x	x								x		x	x					114
E-2506A	x	x				x				x		x	x					115
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E-2507A	x	x				x				x		x	x					118
E-2507B	x	x								x		x	x					119
E-2811A	x	x								x		x	x					120
E-3007B	x	x				x				x		x	x					221
E-3008A	x	x								x		x	x					222
E-3011A	x	x										x	x					223
E-3109A	x	x								x		x	x					224
E-3109B	x	x				x				x		x	x					225
E-3213A	x	x				x				x		x	x					226
E-3509A	x	x				x				x		x	x					227
E-3509B	x	x								x		x	x					228
E-3510A	x	x								x		x	x					229
E-3510B	x	x								x		x	x					230
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T-2800C		x		x		x	x				92
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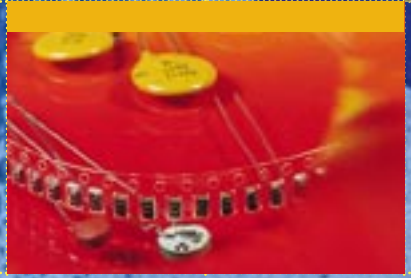

Conception réalisation : SOREGRAPH, Crédits photos : Dominique SARRAUTE, Le Square des Photographes

SPC 902 - 11/97 - Design : PILOTE image.

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