



# MICROMETALS

ARNOLD POWDER CORES

SUPER-MSS™ - Sendust Powder Cores

MOLYPERMALLOY - MPP Powder Cores

FLUXSAN™ - Silicon Iron Alloy Powder Cores

HI-FLUX™ - Nickel Iron Powder Cores

OPTILLOY™ - Optimized Alloy Powder Cores

2012



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Arnold Technologies (Shenzhen) Ltd., doing business as **Micrometals Arnold Powder Cores** is a division of Micrometals Incorporated. The Micrometals Arnold Powder Core factory is located in Shenzhen, China with a sales office in Hong Kong. Micrometals Inc. acquired the powder core division from Arnold Magnetic Technologies in January 2010. Micrometals Inc. is headquartered in Anaheim, California.

### Warranty

Parts are warranted to conform to the specifications in the latest issue of this catalog. Micrometals Arnold Powder Core liability is limited to return of parts and repayment of price; or replacement of nonconforming parts. Notice of nonconformance must be made within 30 days after delivery. Before using these products, buyer agrees to determine suitability of the product for their intended use or application. Micrometals Arnold Powder Core shall not be liable for any other loss or damage, including but not limited to incidental or consequential damages.

### Introduction to Powder Cores

Powder Cores are made from discrete particles of ferromagnetic powder. Prior to being formed into a core, the particles are covered in a thin layer of electrically insulated material to ensure electrical isolation of each particle. The particles are then compacted under high pressure to form the core geometry. The electrical insulation between particles enables the materials to be used at high frequency. The insulation also forms a distributed air gap throughout the core material, giving the material the ability to maintain inductance linearity with a DC biasing field.

Micrometals Arnold Powder Cores manufactures 5 different classes of materials: Super-MSS™ Sendust (MS), Molypermalloy (MP), FluxSan™ Iron Silicon (FS), Hi-Flux™ (HF), and the newly introduced Optilloy™ (OP). The following table describes size and permeability ranges available for each material class, and also describes the characteristics and applications for these material classes.

### Super-MSS™ Sendust

- Iron, Silicon, Aluminum alloy powder material
- Permeabilities: 14 $\mu$ , 26 $\mu$ , 40 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$  and 125 $\mu$
- Low Magnetostriction for audibly quiet applications
- Cost effective low loss material
- Operating frequencies to MHz
- No thermal aging
- Wide selection of toroids, E-cores and blocks

### MPP Molypermalloy

- Nickel, Iron Molybdenum alloy powder material
- Permeabilities: 14 $\mu$ , 26 $\mu$ , 60 $\mu$ , 125 $\mu$ , 147 $\mu$ , 160 $\mu$ , 173 $\mu$ , 205 $\mu$  and 250 $\mu$
- Very low loss powder material
- Operating frequencies  $\leq$ 200kHz
- No thermal aging
- Wide selection of toroids up to 154mm

### FluxSan™ Silicon Iron

- 6.5% Silicon, Iron alloy powder material
- Permeabilities: 14 $\mu$ , 26 $\mu$ , 40 $\mu$ , 60 $\mu$ , 75 $\mu$  and 90 $\mu$
- High saturation characteristics
- Low losses  $\leq$ 200kHz
- No thermal aging
- Wide selection of toroids, E-cores and blocks

### Hi-Flux™ Nickel Iron

- 50/50 Nickel, Iron alloy powder material
- Permeabilities: 14 $\mu$ , 26 $\mu$ , 60 $\mu$ , 125 $\mu$ , 147 $\mu$  and 160 $\mu$
- High saturation characteristics
- Moderate losses  $\leq$ 200kHz
- No thermal aging

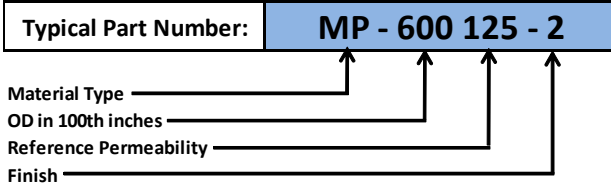
### Optilloy™ Optimized Alloy

- Hybrid alloy powder material
- Permeabilities: 14 $\mu$ , 26 $\mu$ , 40 $\mu$ , 60 $\mu$ , 75 $\mu$ , 90 $\mu$  and 125 $\mu$
- Moderate losses  $\leq$ 200kHz
- No thermal aging
- Toroids up to 154mm

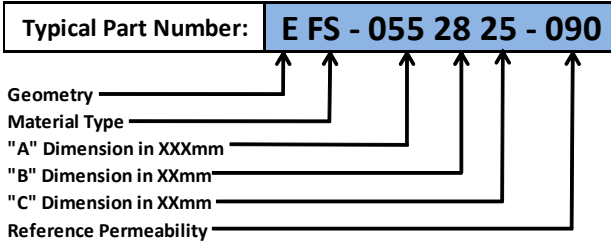
## Part Numbers

Micrometals Arnold Powder Core part numbers are constructed as shown below.

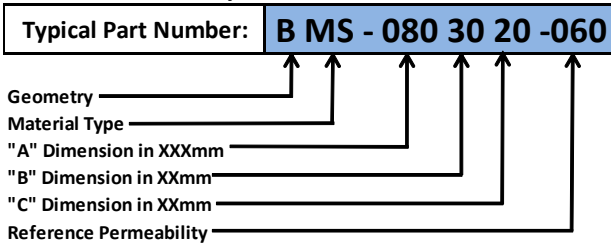
### Toroidal Core Geometry



### E-Core Geometry



### Block Core Geometry



Materials
<b>MS</b> = Super-MSS™ Sendust
<b>MP</b> = MPP Molypermalloy
<b>FS</b> = FluxSan™ Silicon Iron
<b>HF</b> = Hi-Flux™ Nickel Iron
<b>OP</b> = Optilloy™ Optimized Alloy

Finish
<b>2</b> = Blue Epoxy
<b>8</b> = Parylene N (Standard)
<b>8C</b> = Parylene C

## Inductance Rating

In this catalog the inductance ratings, also known as  $A_L$  values, are expressed in nanohenries ( $10^{-9}$  Henries) per turn (N) squared ( $nH/N^2$ ).

To calculate the number of turns required for a desired inductance (L) in nanohenries (nH) use the following formula:

$$\text{Required turns} = \left[ \frac{\text{desired } L \text{ (nH)}}{A_L \text{ (nH/N}^2\text{)}} \right]^{\frac{1}{2}}$$

## Inductance Tolerance

The cores are manufactured to the  $A_L$  values listed in this catalog with a  $\pm 8\%$  inductance tolerance with the exception of small (0.14 to 0.44 inches) toroidal cores with Super-MSS™ material. Refer to catalog part page for details.

## Inductance Grading

Binning and marking in 1% grades is possible upon request.

## Core Finishes

Standard toroidal cores are all furnished with an isolation coating. Coating type and dielectric strength vary with part sizes, details and test conditions are offered on the part pages. Finished are tested for dielectric strength with conductive foam pads pressed against the two flat surfaces and around the OD/ID corners of the core.

Epoxy coated parts are **UL approved** for Flame Class UL94V-0 per files #OCDT2.E350791, QMFZ2.E257126.

Part numbers are labeled on individual parts on toroid sizes 0.40 in. (10.2mm) and larger. Toroid part sizes less than 0.40 in. (10.2mm) are coated with Parylene N. Parylene C is available upon request but is not RoHS compliant.

## Engineering Kits

Engineering kits and evaluation samples are available; please refer to Micrometals Arnold Powder Cores website ([www.MicrometalsArnoldPowderCores.com](http://www.MicrometalsArnoldPowderCores.com)) for distributor or local sales contact for details.

## Engineering Assistance

Micrometals Arnold will gladly extend engineering and design assistance to aid in your core selection. Please refer questions to [Applications@Micrometals.com](mailto:Applications@Micrometals.com). In addition Micrometals Arnold Powder Cores offers Induction Design Software which can be downloaded at no charge. Please refer to pages 95 to 96 for details.

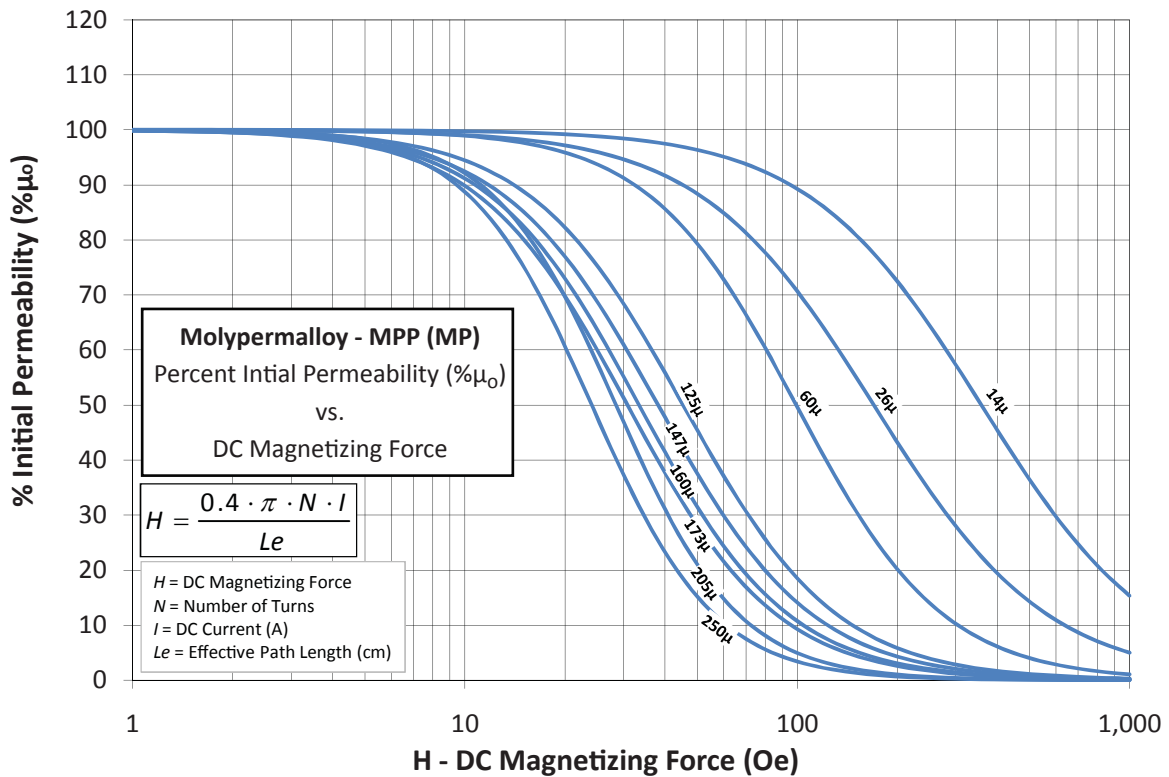
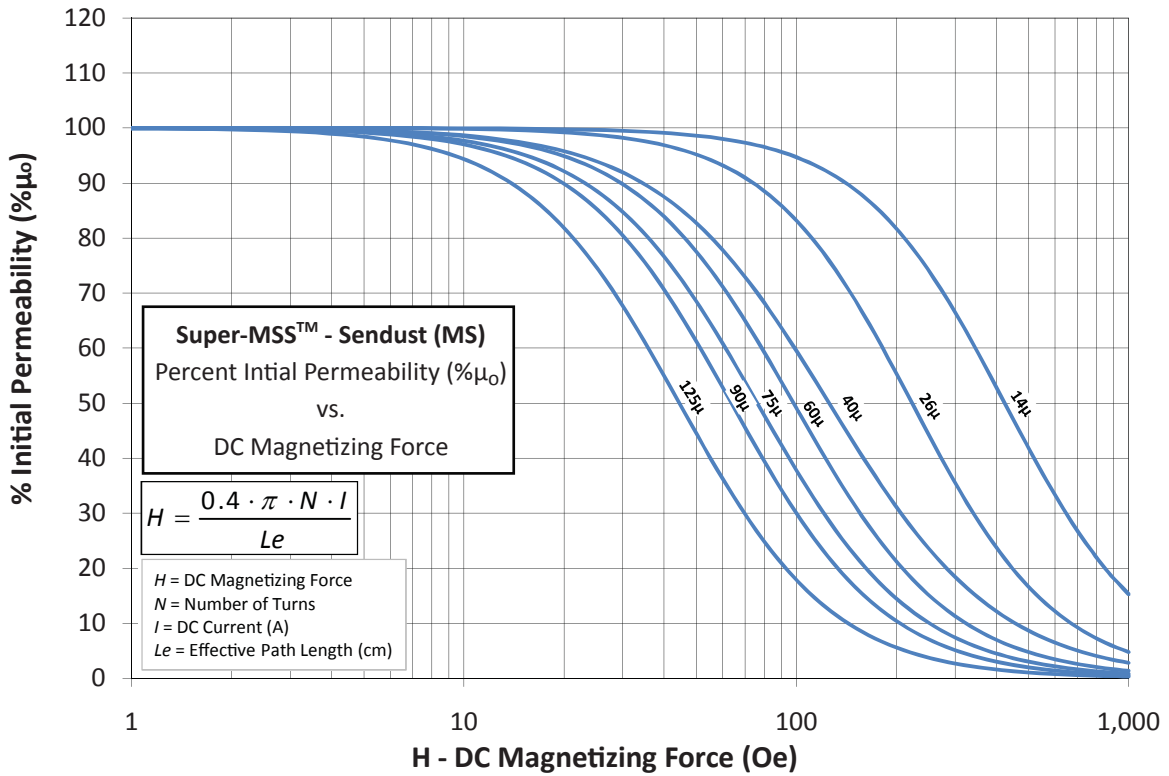
## Custom Shapes and Sizes

In addition to the items shown in this catalog, Micrometals Arnold Powder Cores will gladly produce custom shapes and sizes.

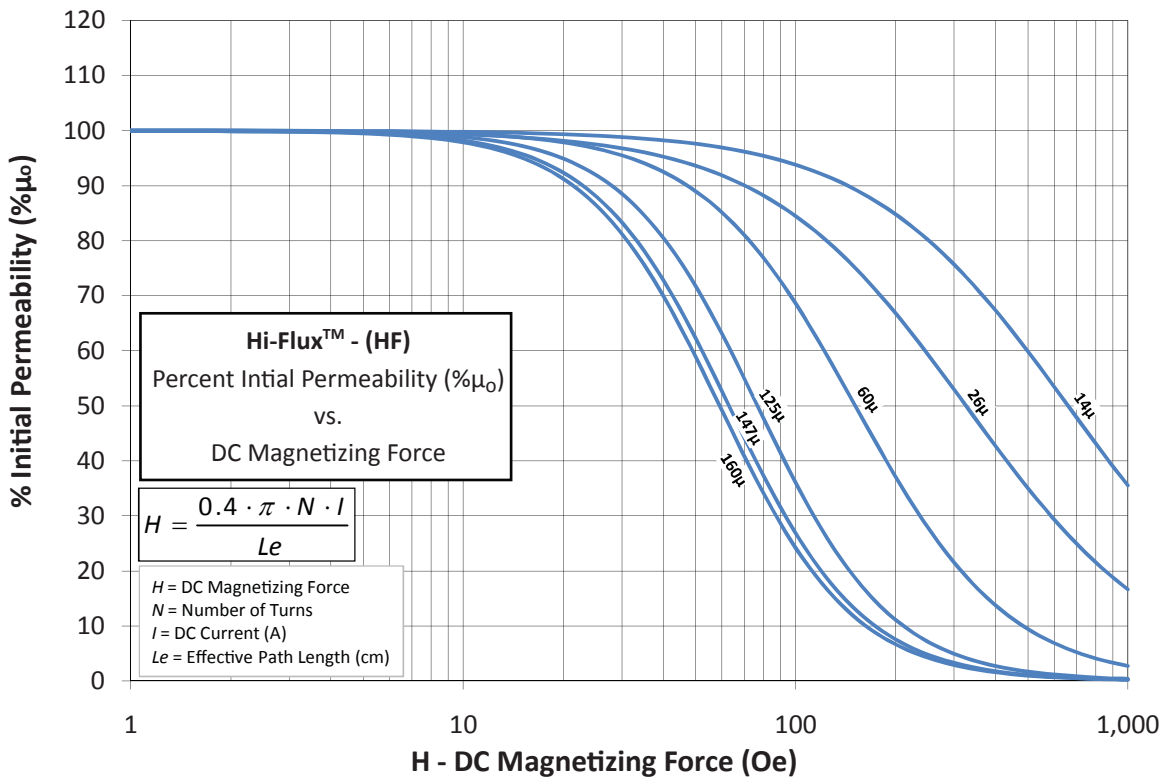
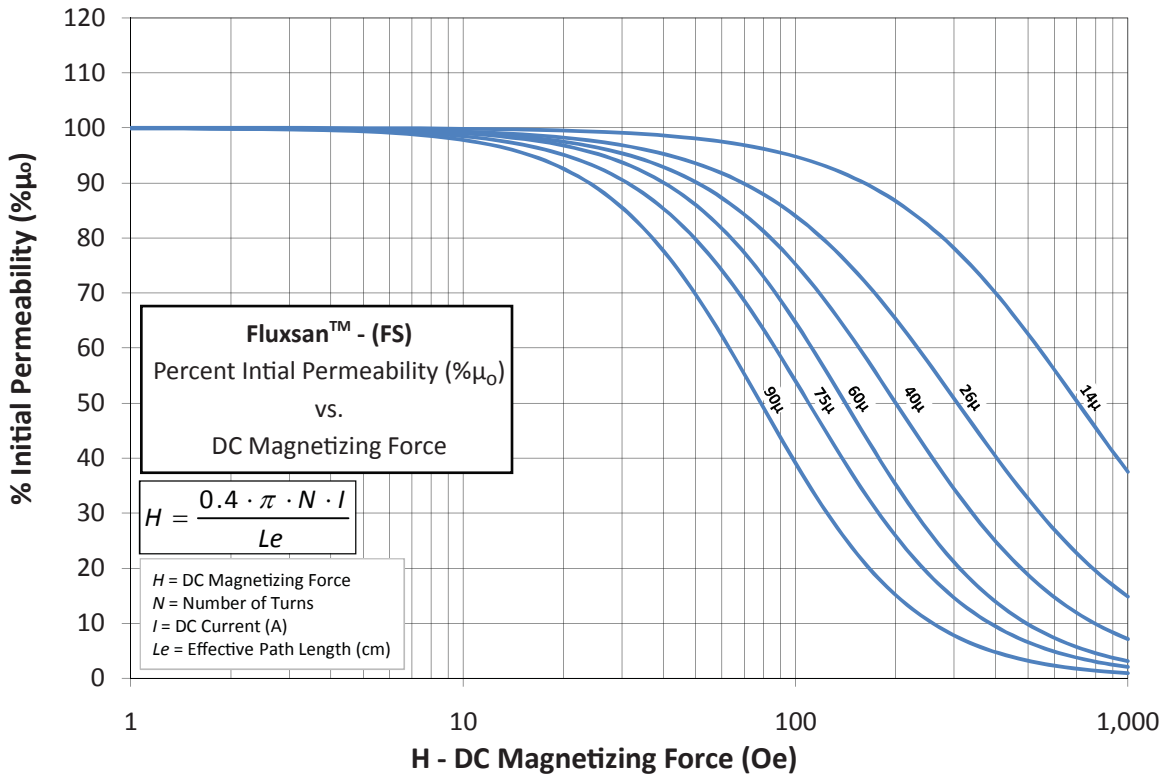
## Packing Information

The standard box dimensions are 30.5 x 30.5 x 12.7cm (12 x 12 x 5in.) Part quantity per box can be located on part detail pages.

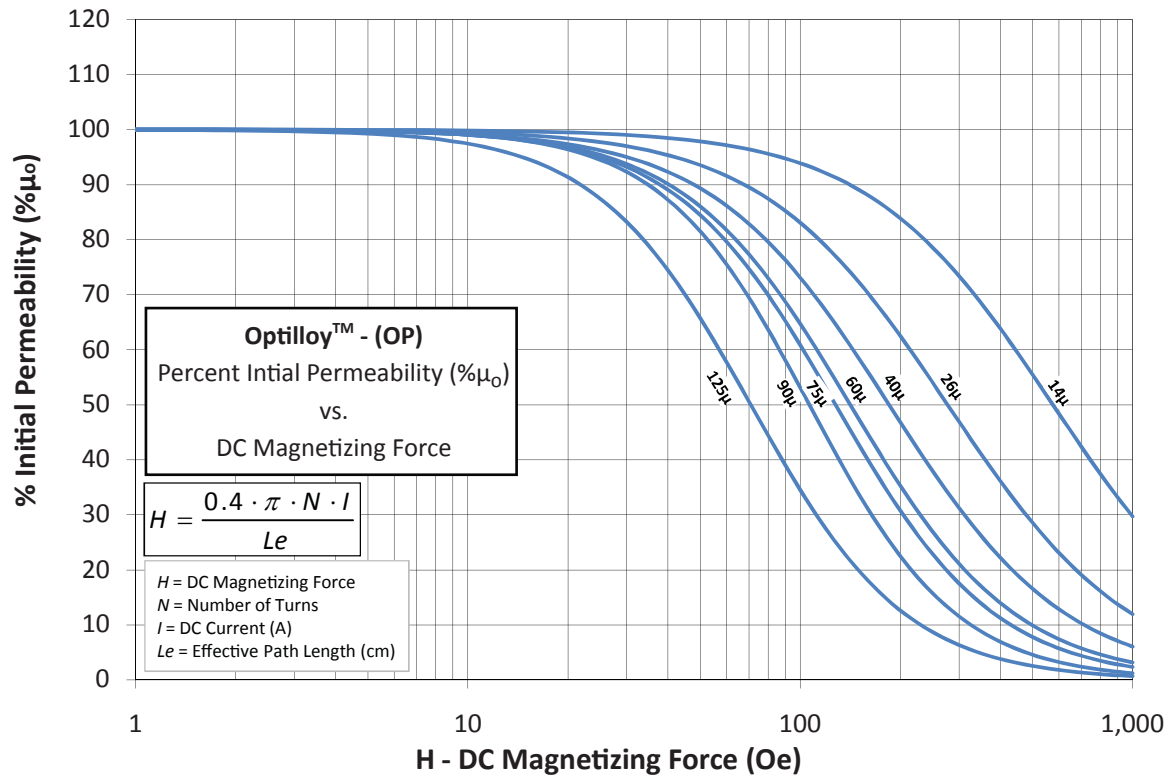
## Percent Initial Permeability vs. DC Magnetizing Force

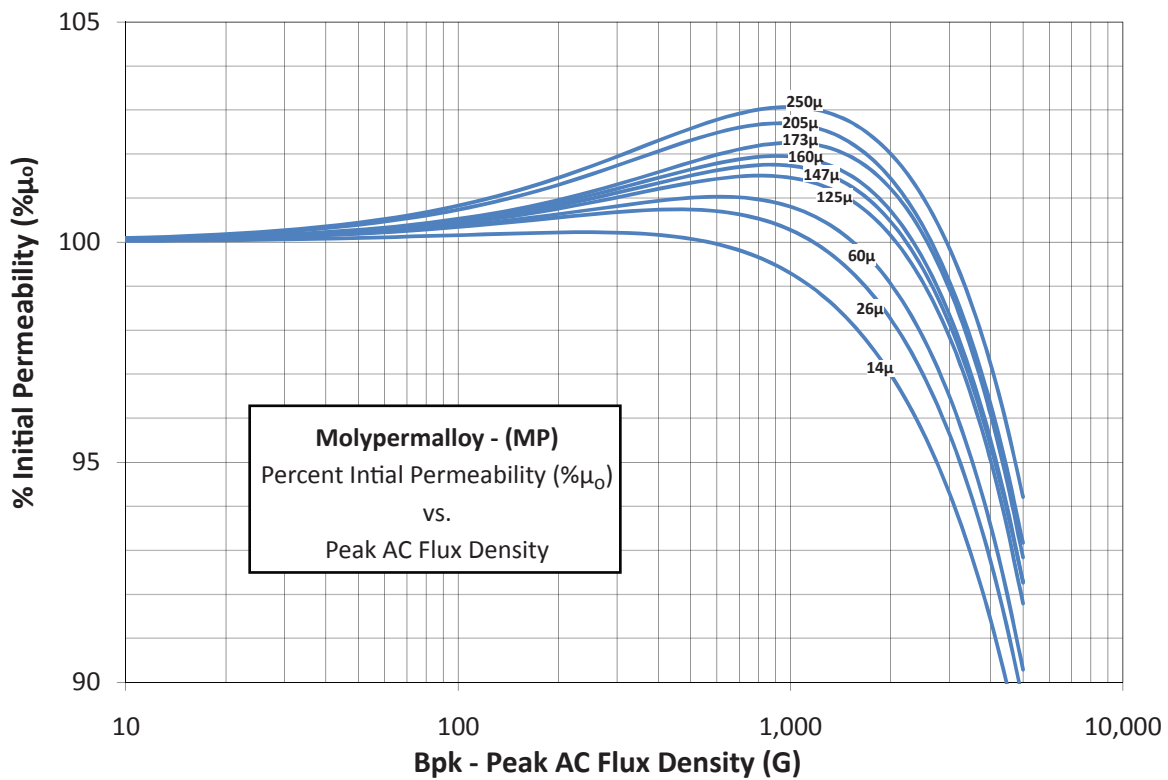
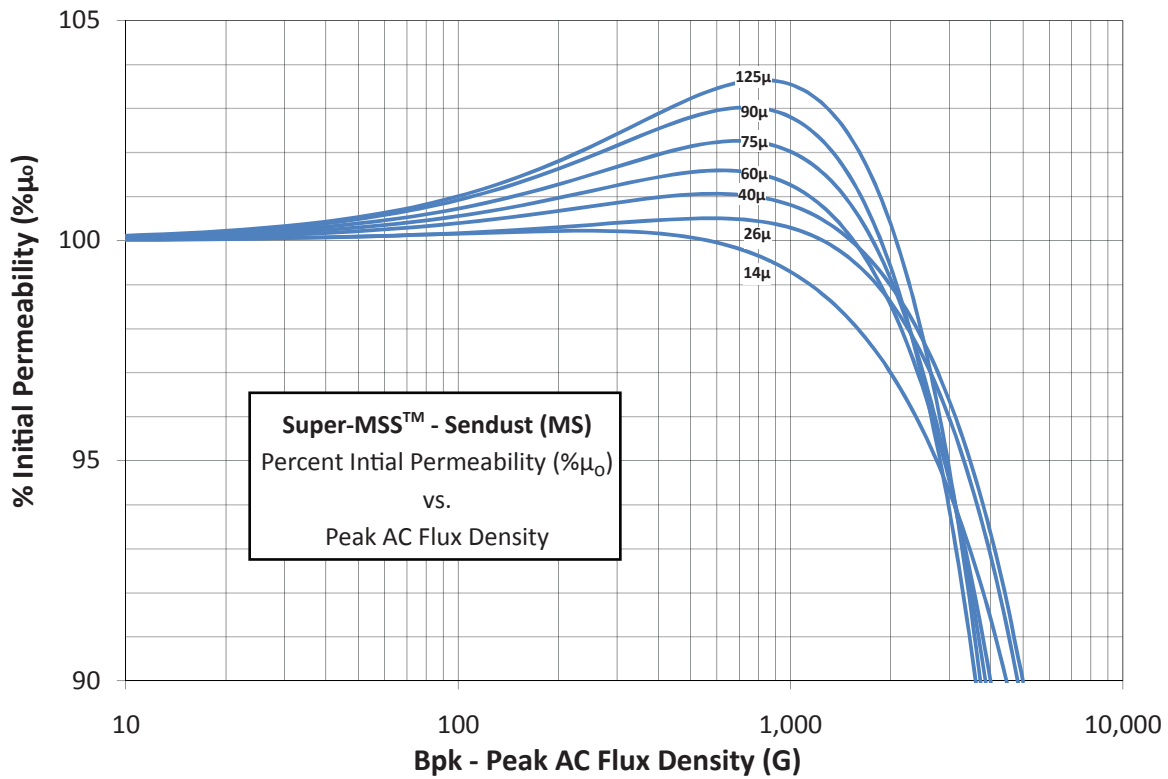


# Percent Initial Permeability vs. DC Magnetizing Force



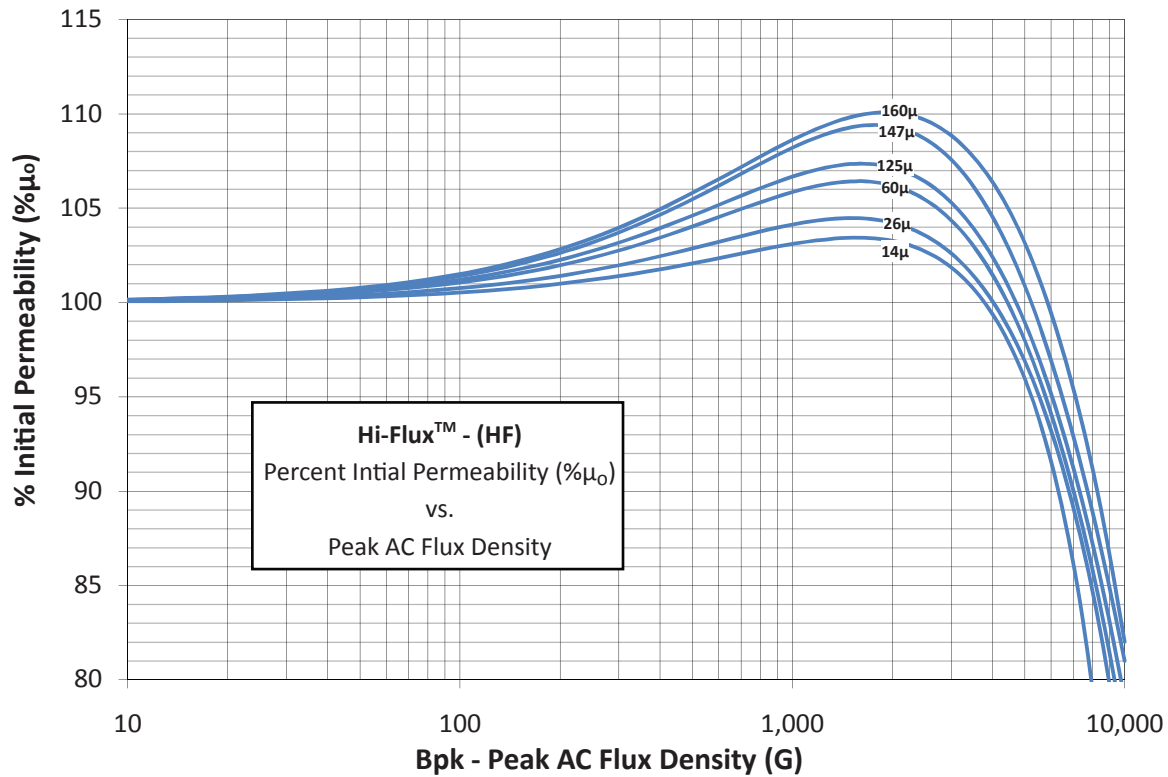
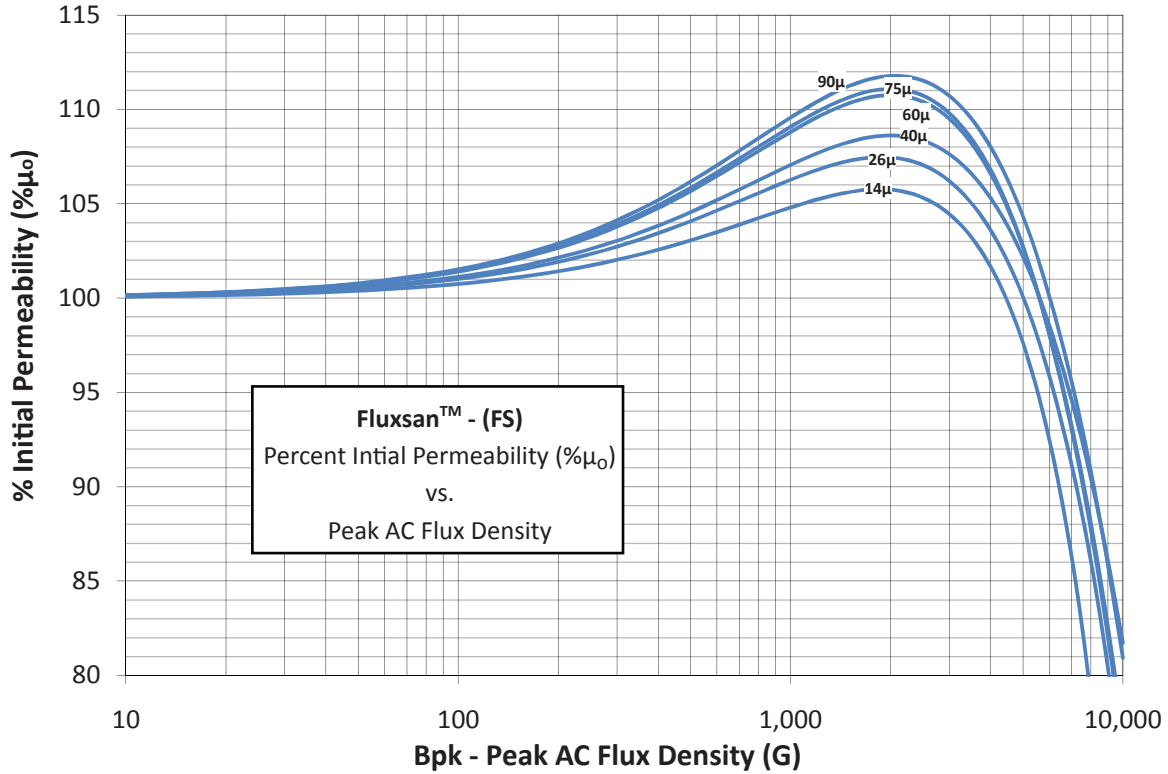
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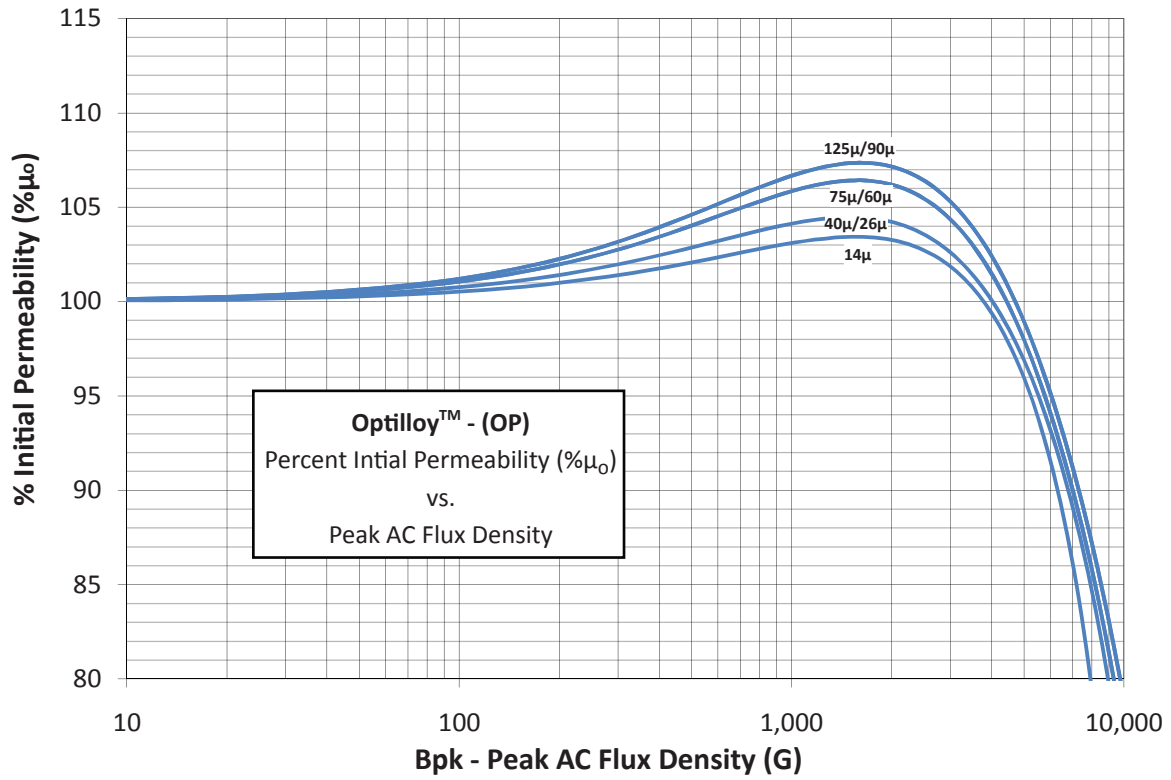


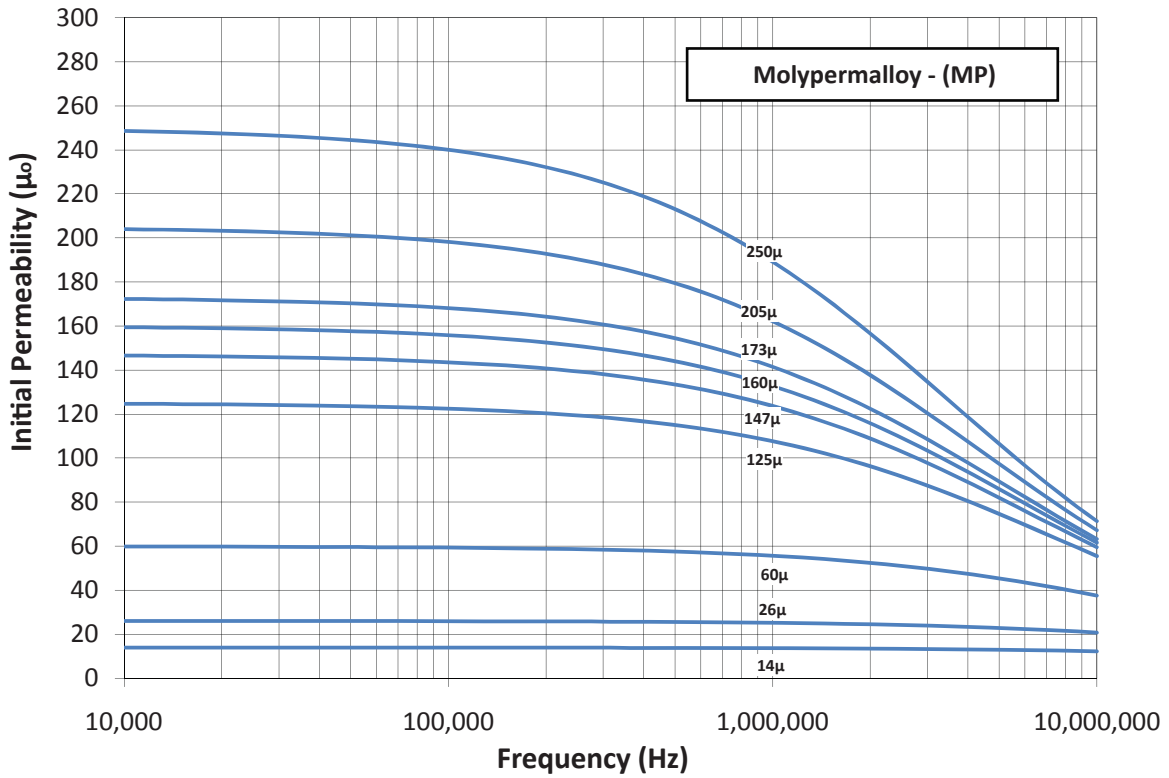
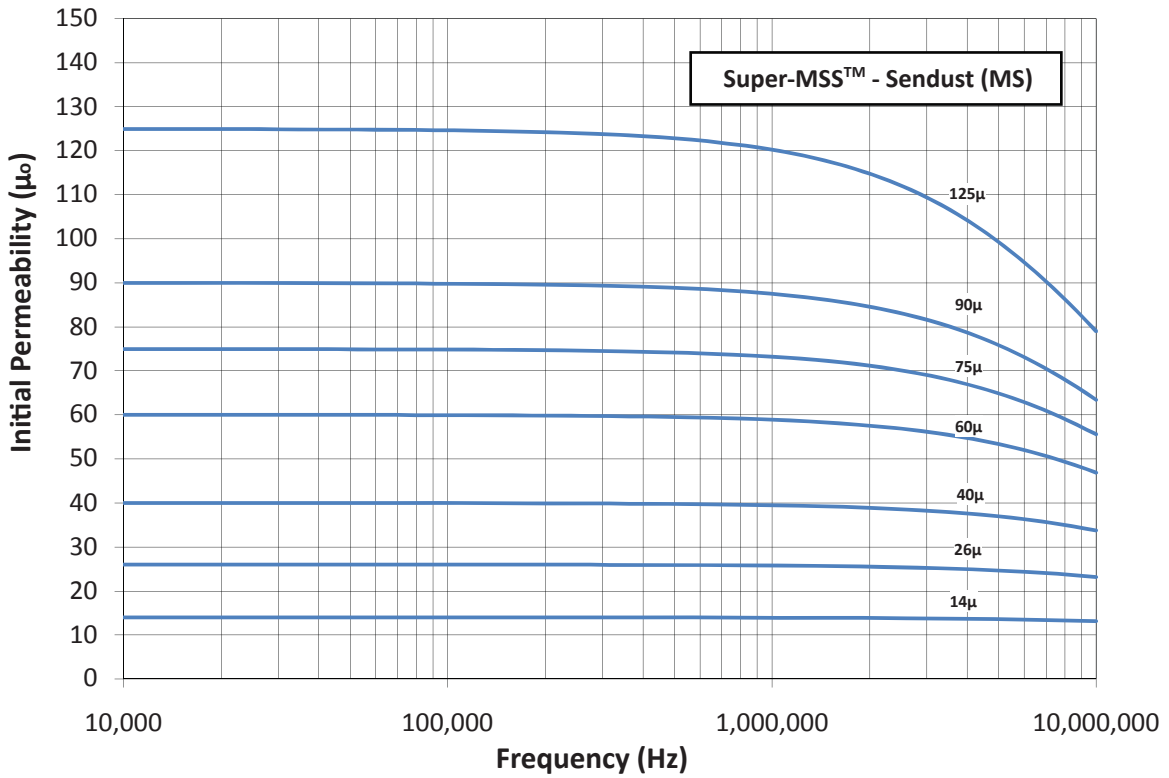


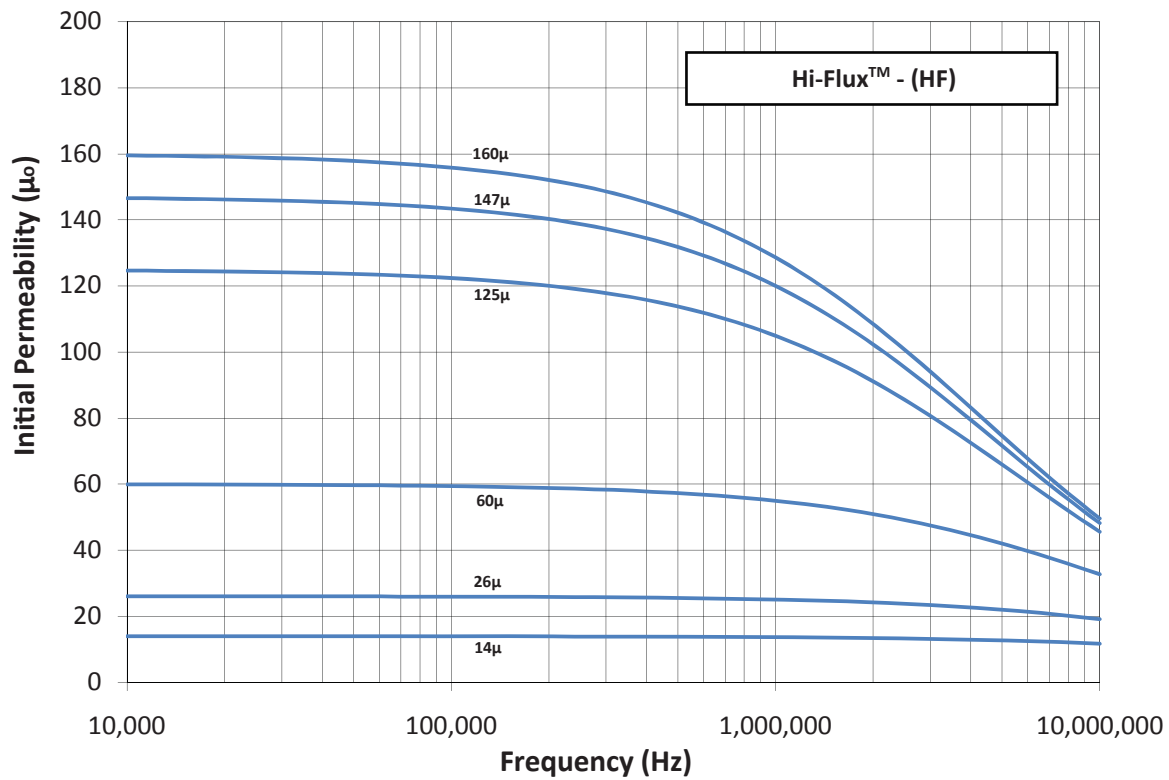
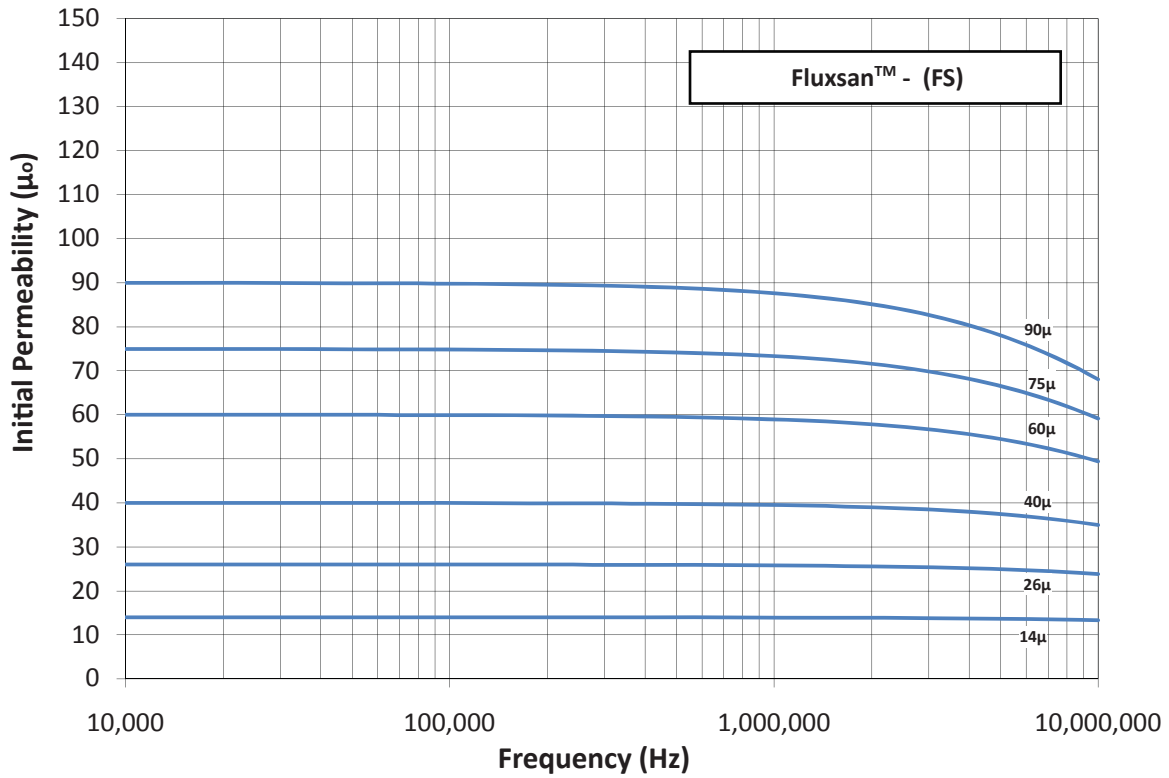
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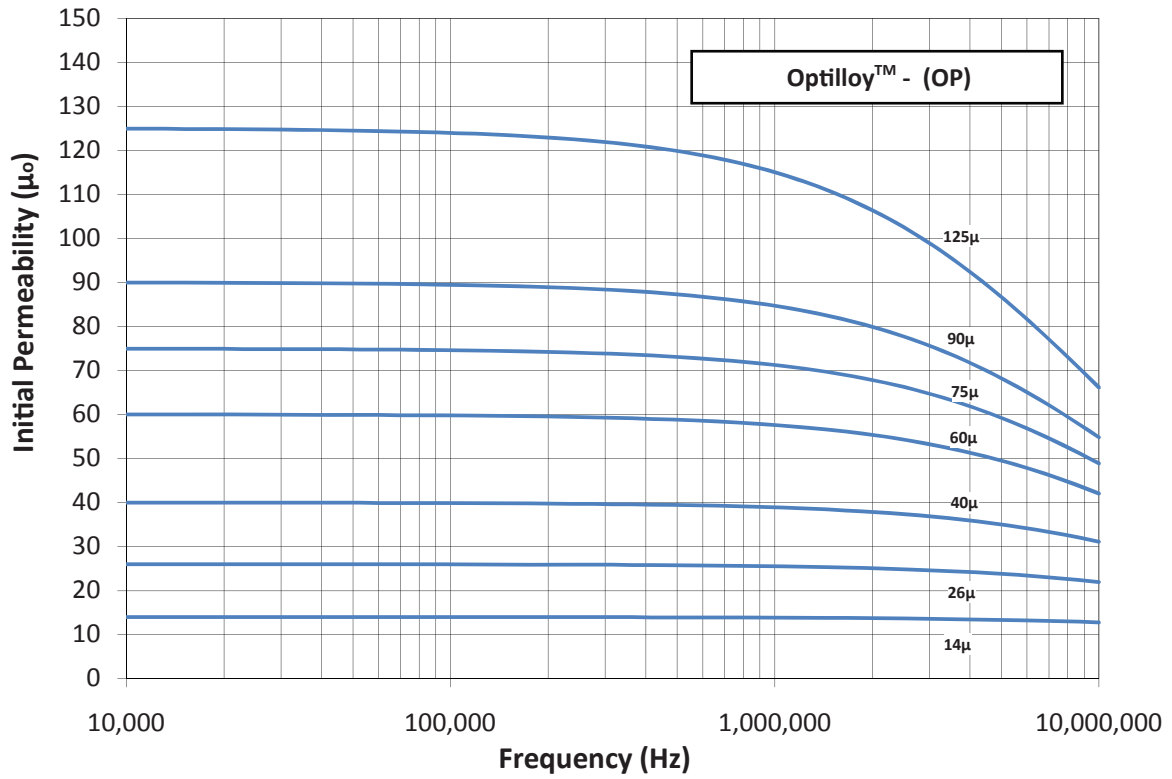


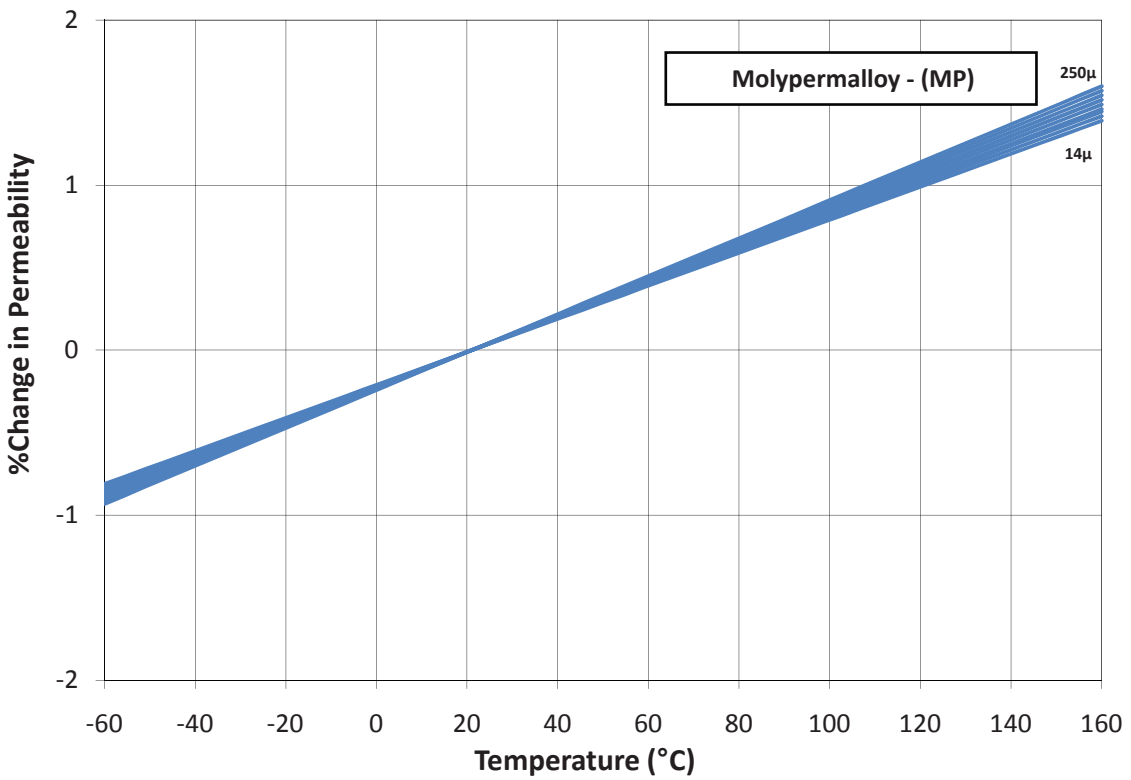
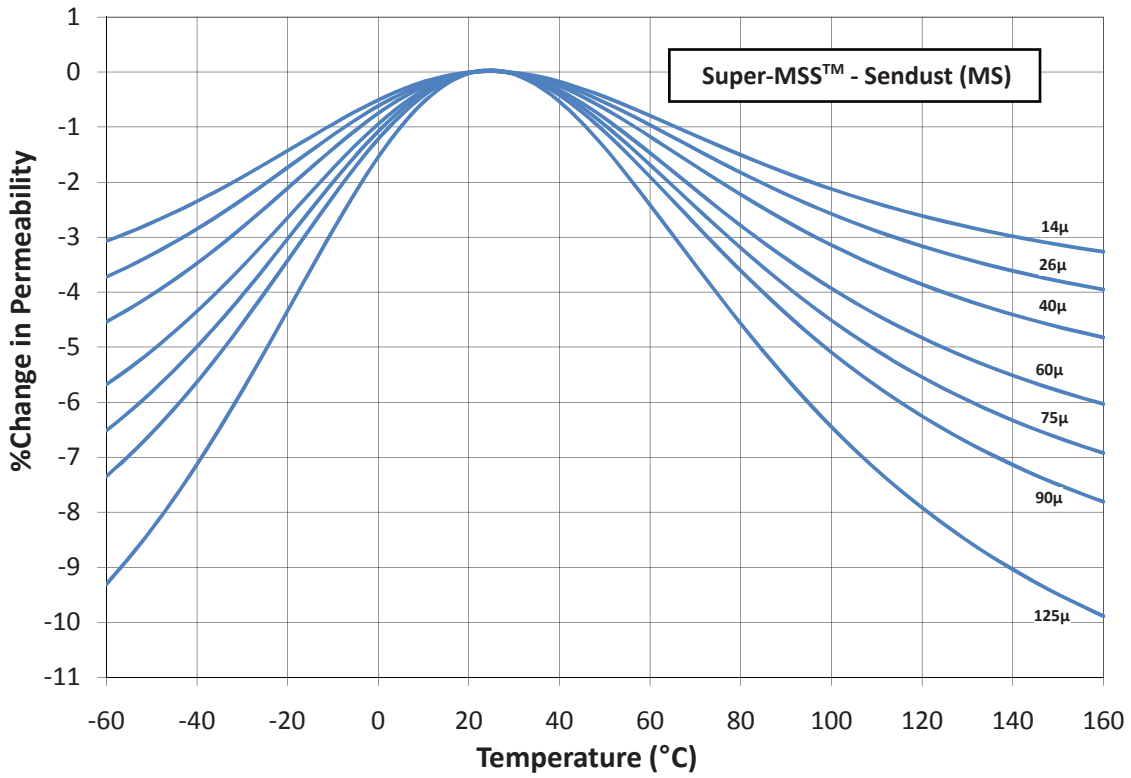
# Percent Initial Permeability vs. Peak AC Flux Density

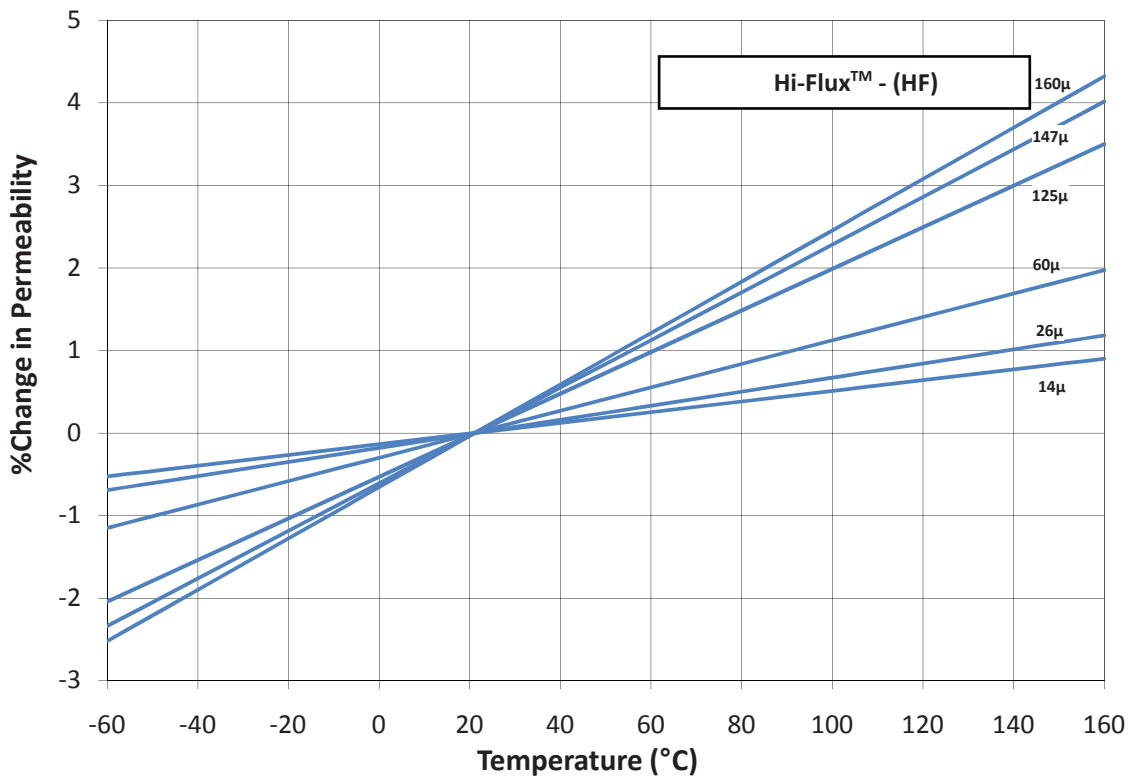
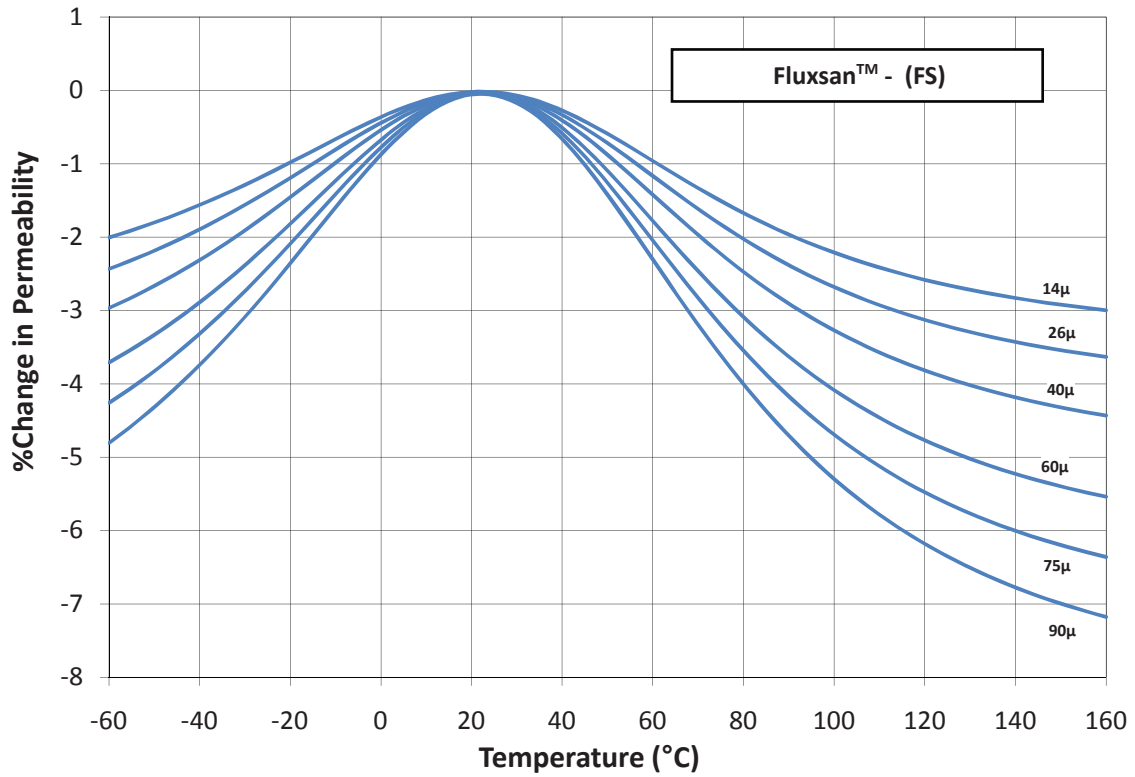




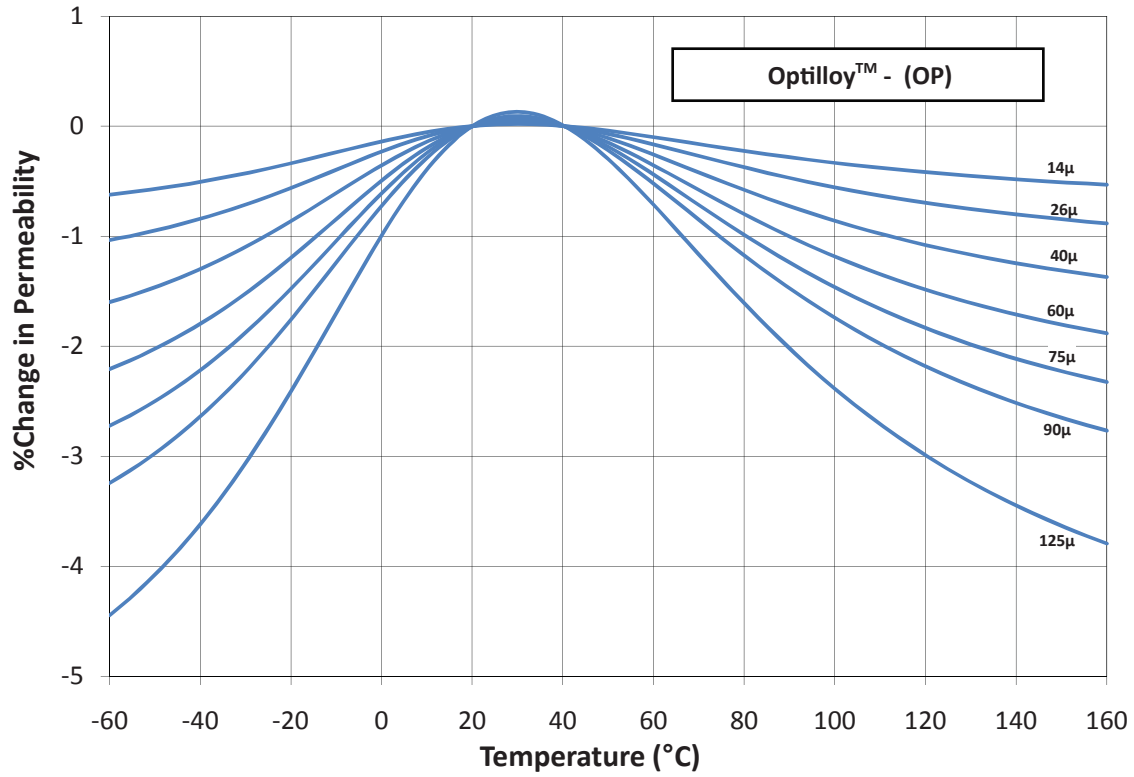




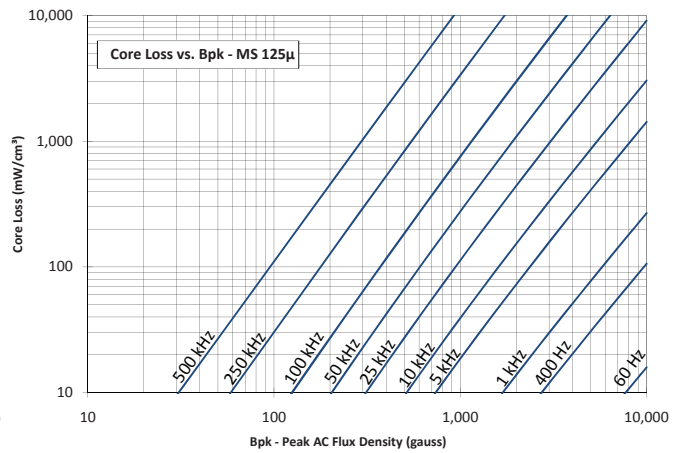
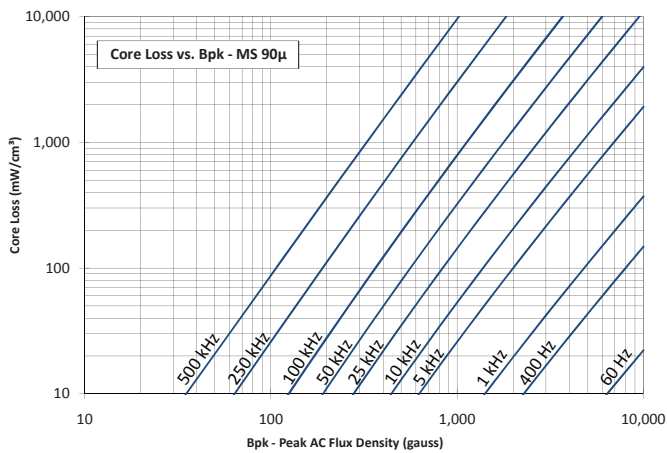
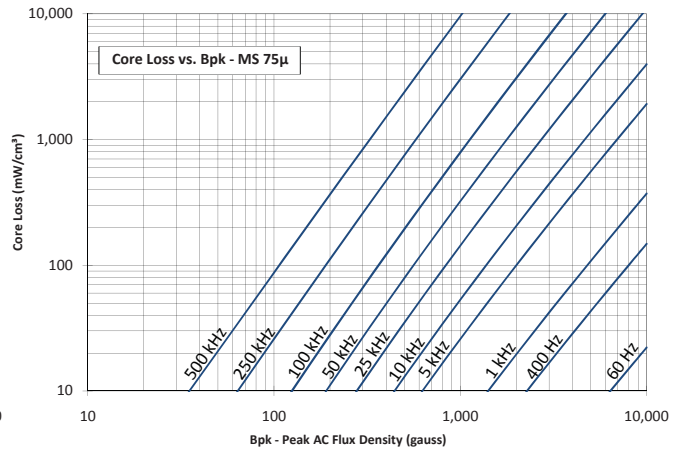
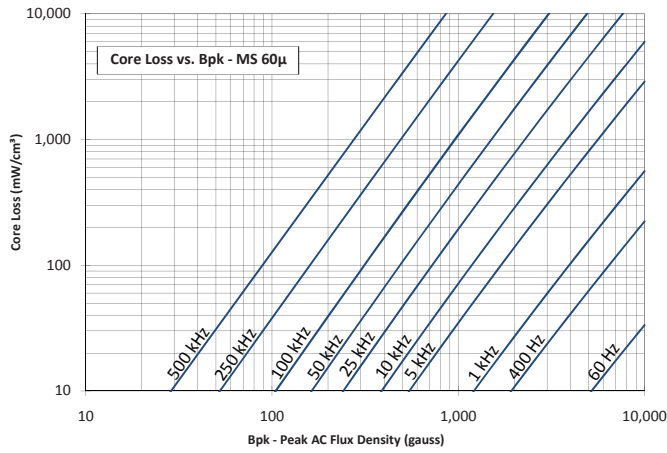
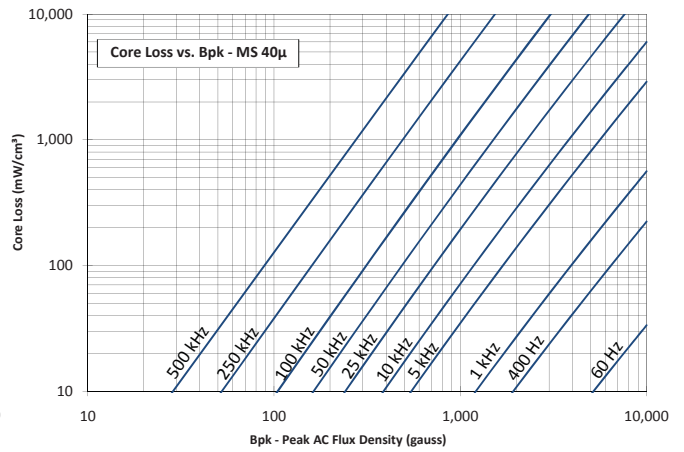
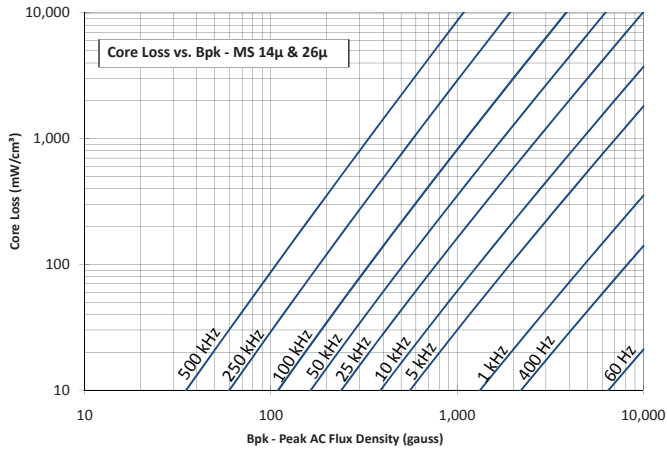




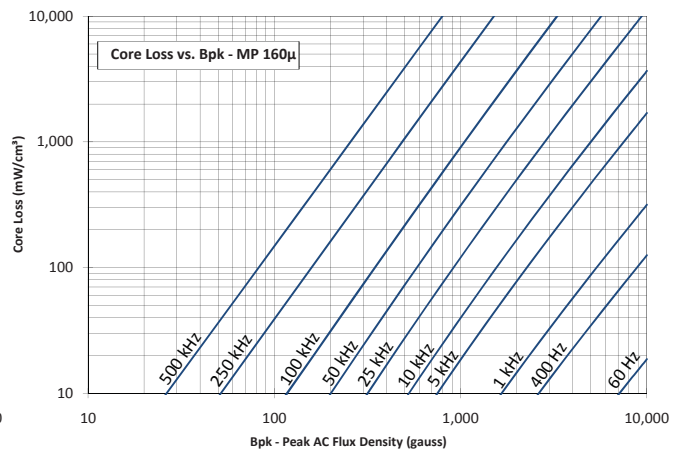
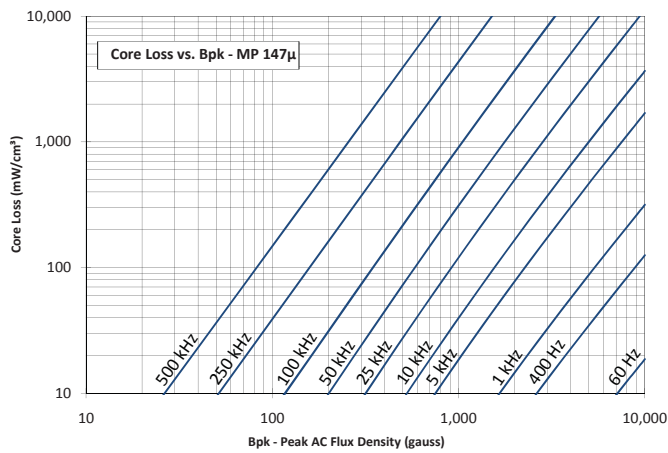
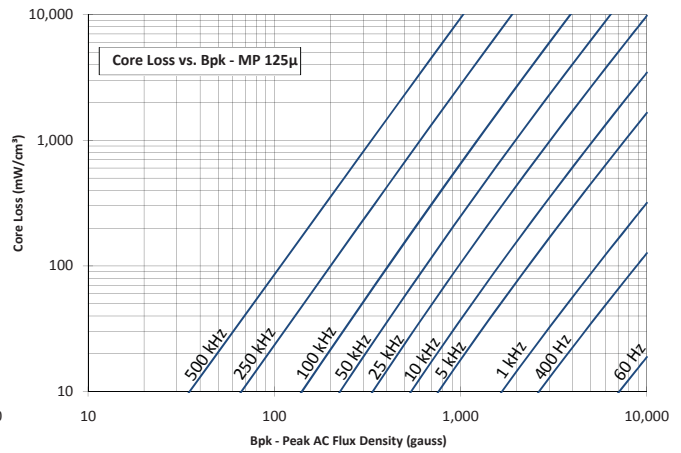
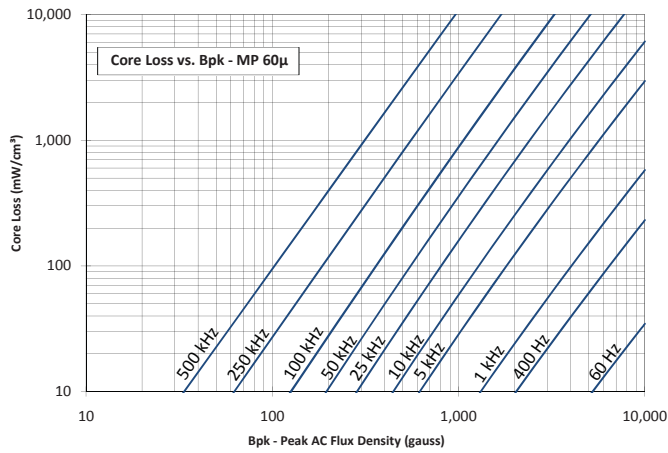
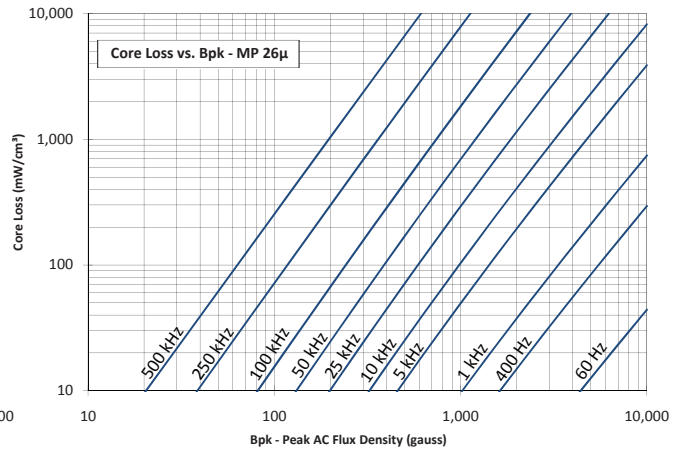
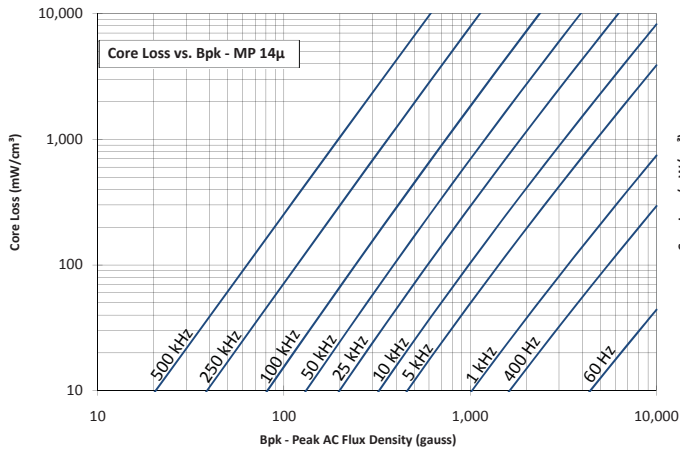
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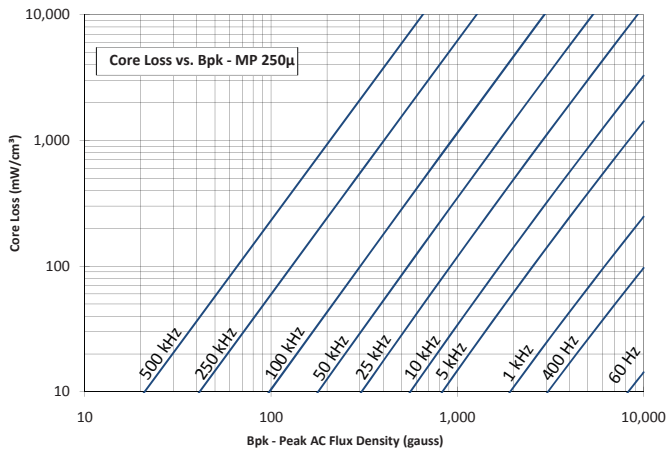
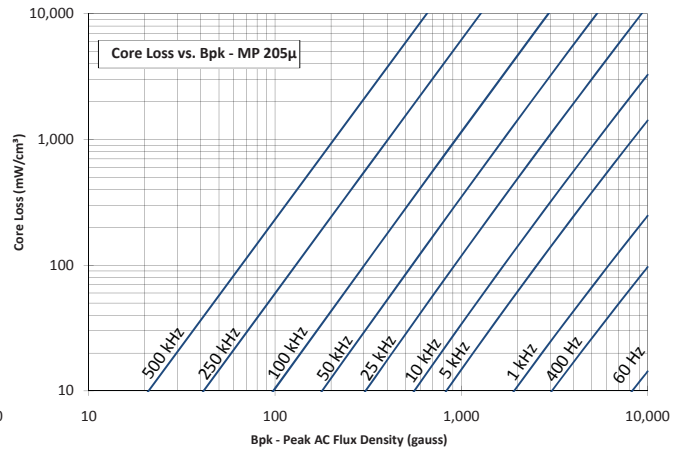
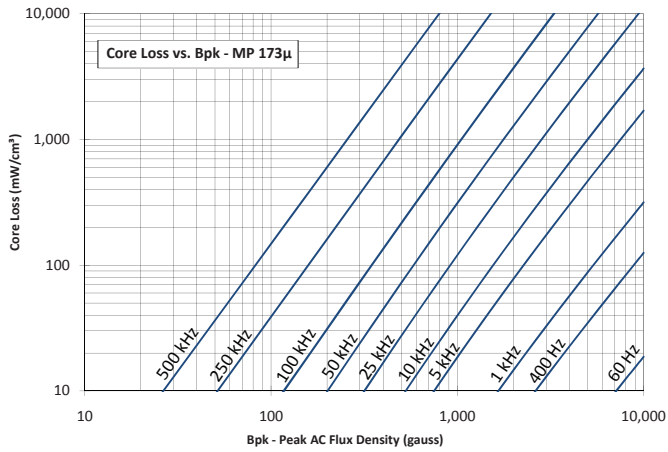


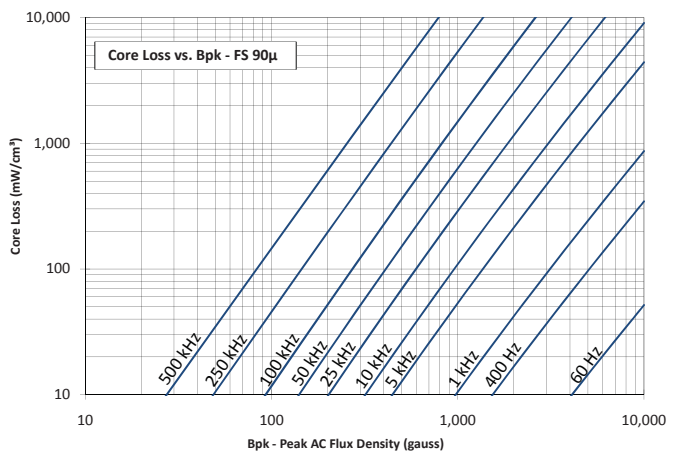
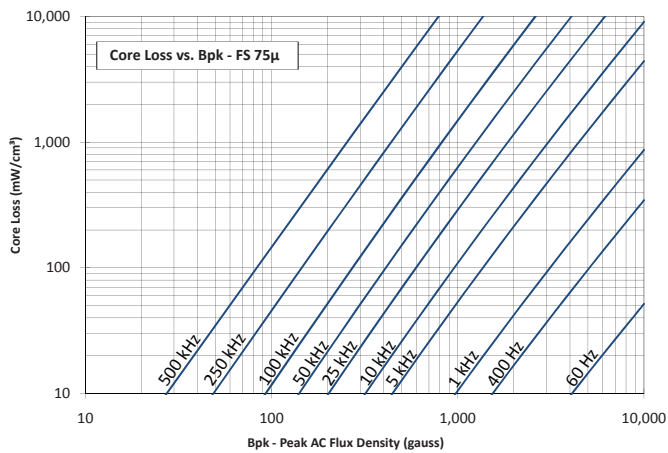
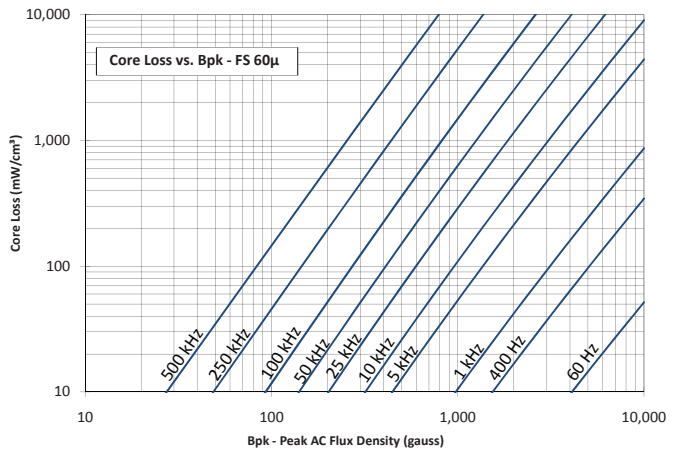
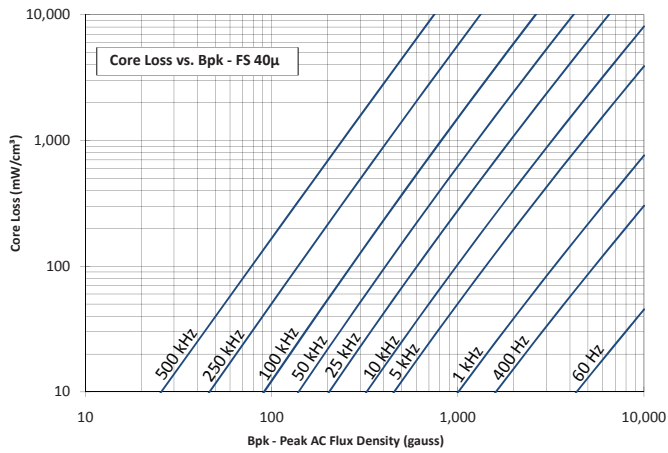
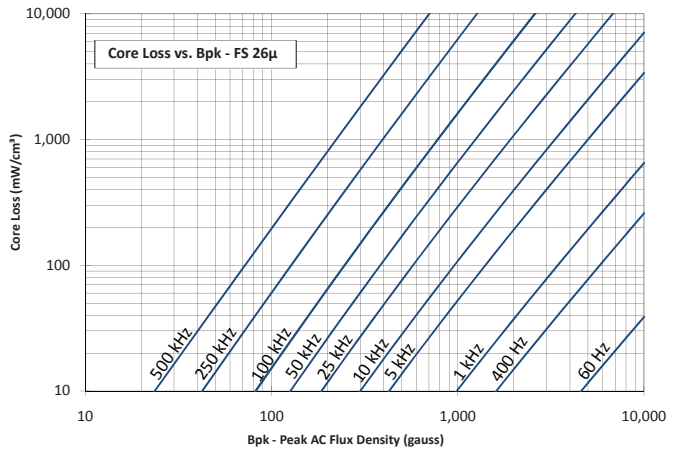
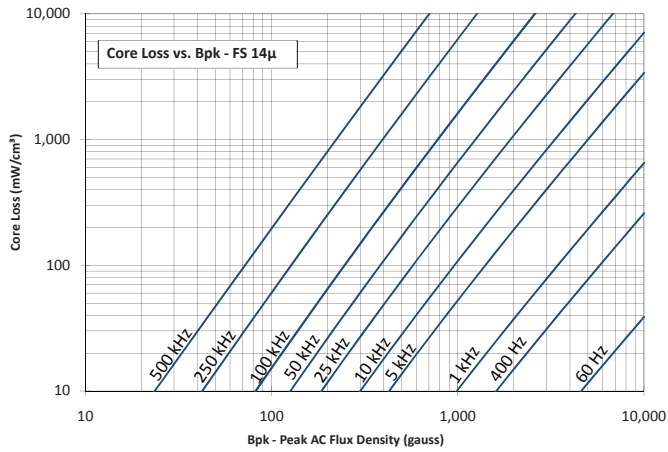


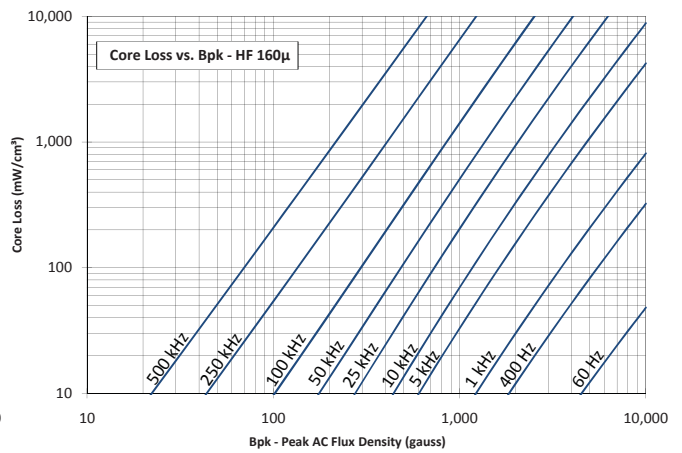
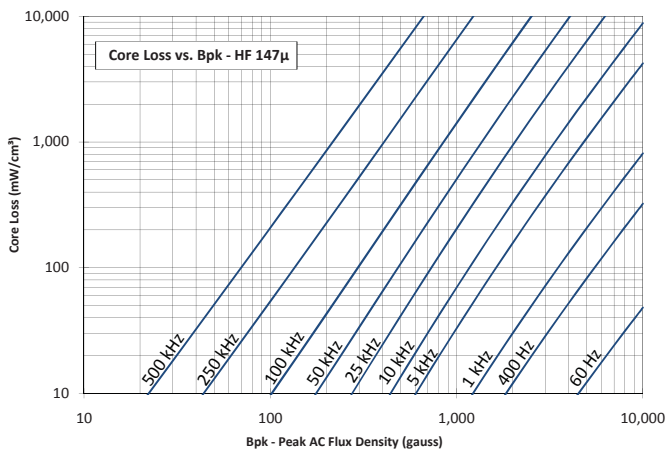
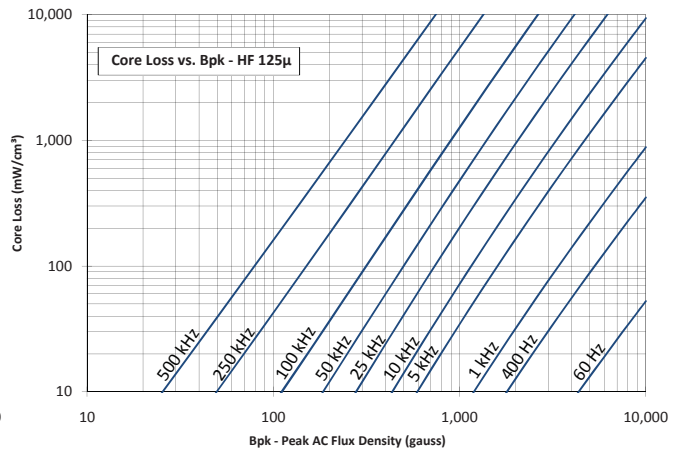
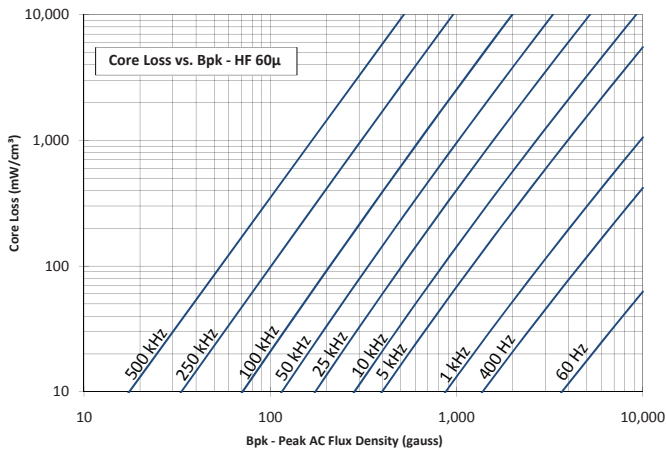
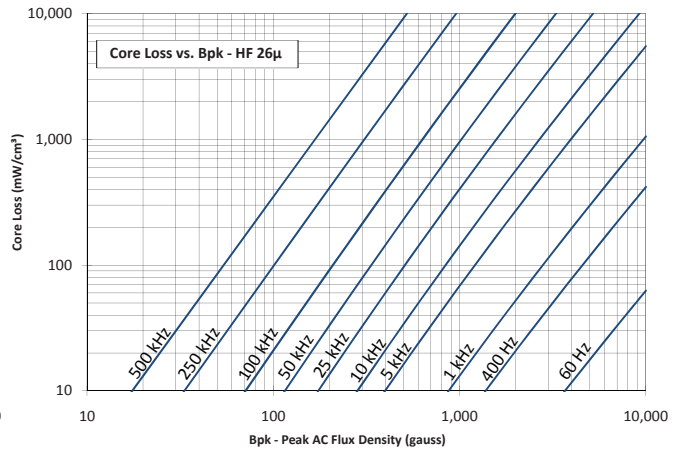
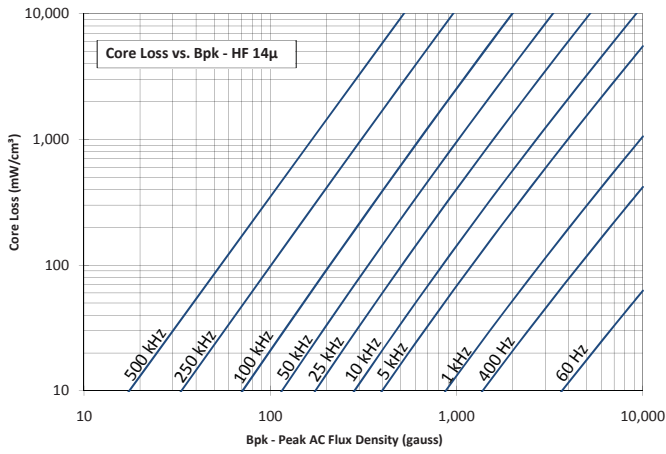


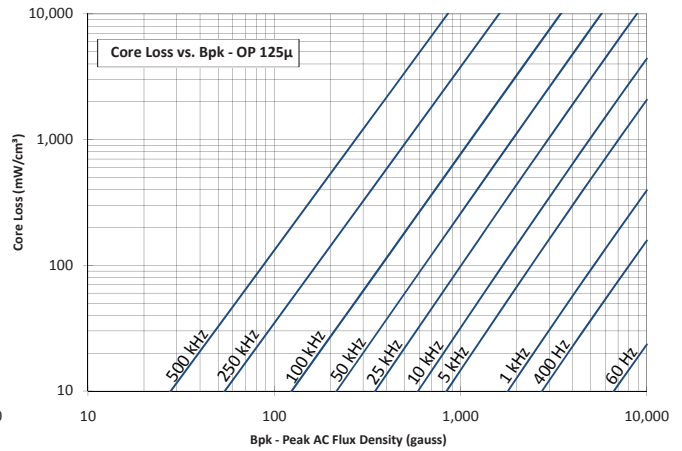
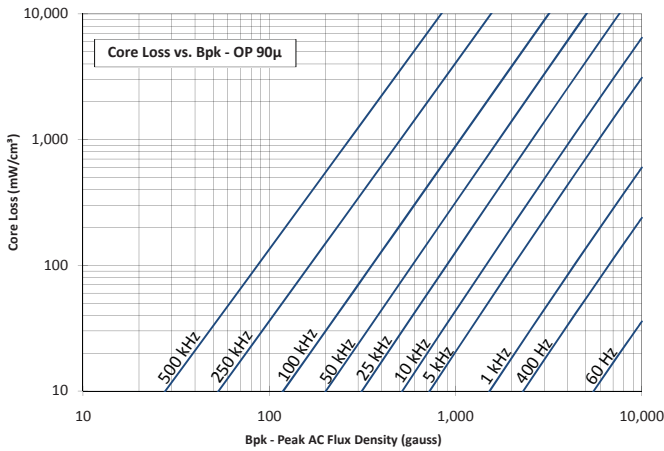
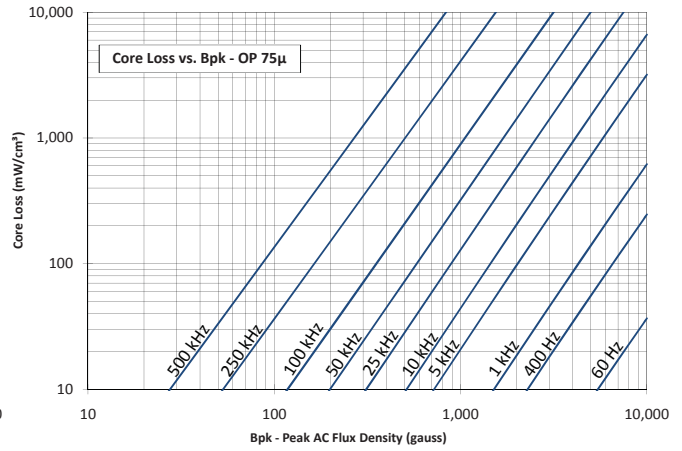
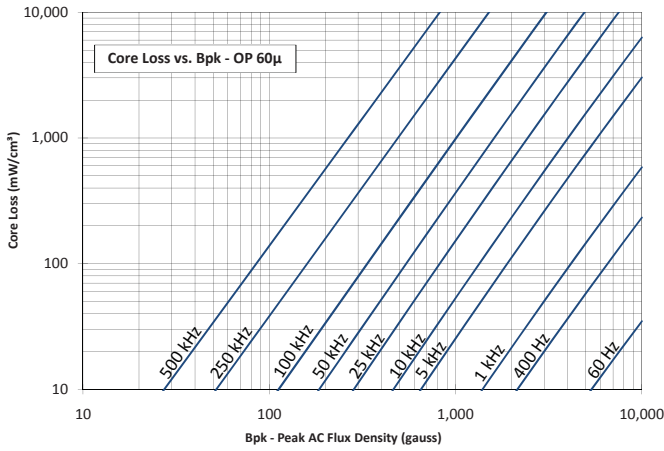
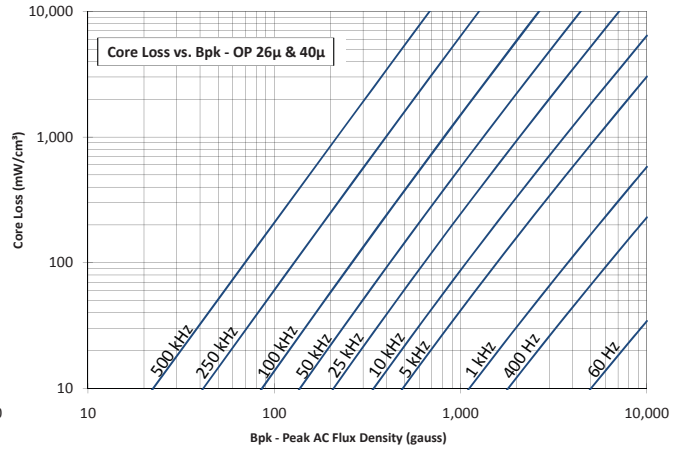
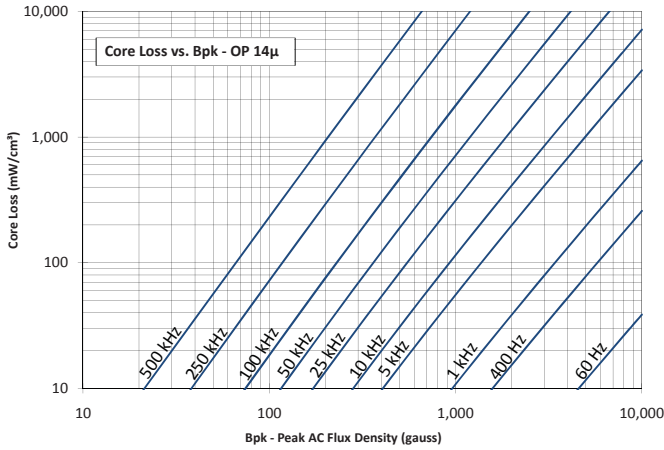
# Molypermalloy - MPP (MP) Core Loss











Percent Perm vs. DC Sat. Coef	Core Loss Coefficients
$\% \mu = \frac{1}{a + bH^c}$	$CL(mW/cm^3) = \frac{f}{\frac{a}{B^3} + \frac{b}{B^{2.3}} + \frac{c}{B^{1.65}}} + d \cdot B^2 \cdot f^2$
Where: H expressed in Oe	Where: B expressed in G, f expressed in Hz

Material	Permeability	a	b	c	a	b	c	d
FS	14	1.00E-02	6.01E-07	1.48E+00	1.09E+09	2.84E+08	5.44E+06	6.03E-14
FS	26	1.00E-02	2.07E-06	1.48E+00	1.09E+09	2.84E+08	5.44E+06	6.03E-14
FS	40	1.00E-02	2.08E-06	1.60E+00	1.76E+09	4.19E+08	4.22E+06	5.28E-14
FS	60	1.00E-02	1.71E-06	1.75E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
FS	75	1.00E-02	2.67E-06	1.75E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
FS	90	1.00E-02	3.12E-06	1.85E+00	1.00E+09	4.33E+08	3.53E+06	4.39E-14
HF	14	1.00E-02	8.81E-07	1.44E+00	2.06E+09	3.24E+08	3.00E+06	1.23E-13
HF	26	1.00E-02	2.44E-06	1.44E+00	2.06E+09	3.24E+08	3.00E+06	1.23E-13
HF	60	1.00E-02	7.65E-07	1.89E+00	8.58E+09	7.88E+08	1.65E+06	1.02E-13
HF	125	1.00E-02	7.96E-07	2.17E+00	3.54E+10	6.83E+08	2.69E+06	6.08E-14
HF	147	1.00E-02	1.25E-06	2.17E+00	4.30E+10	6.67E+08	3.11E+06	8.00E-14
HF	160	1.00E-02	1.43E-06	2.17E+00	4.30E+10	6.67E+08	3.11E+06	8.00E-14
MP	14	1.00E-02	5.68E-07	1.66E+00	1.91E+09	4.35E+08	4.33E+06	8.85E-14
MP	26	1.00E-02	1.96E-06	1.66E+00	1.91E+09	4.35E+08	4.33E+06	8.85E-14
MP	60	1.00E-02	1.21E-06	1.96E+00	9.92E+09	9.49E+08	4.49E+06	3.24E-14
MP	125	1.00E-02	7.88E-06	1.87E+00	2.19E+10	1.31E+09	9.30E+06	3.09E-14
MP	147	1.00E-02	1.09E-05	1.87E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	160	1.00E-02	1.12E-05	1.93E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	173	1.00E-02	1.31E-05	1.93E+00	3.17E+10	1.21E+09	9.66E+06	5.64E-14
MP	205	1.00E-02	3.82E-06	2.35E+00	1.14E+10	2.05E+09	1.16E+07	8.98E-14
MP	250	1.00E-02	5.68E-06	2.35E+00	1.14E+10	2.05E+09	1.16E+07	8.98E-14
MS	14	1.00E-02	5.72E-08	2.00E+00	1.00E+09	4.21E+08	1.03E+07	2.30E-14
MS	26	1.00E-02	2.06E-07	2.00E+00	1.00E+09	4.21E+08	1.03E+07	2.30E-14
MS	40	1.00E-02	2.65E-06	1.70E+00	1.00E+06	6.96E+08	5.40E+06	4.13E-14
MS	60	1.00E-02	2.15E-06	1.84E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	75	1.00E-02	3.41E-06	1.84E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	90	1.00E-02	3.99E-06	1.88E+00	7.89E+09	7.11E+08	8.98E+06	2.85E-14
MS	125	1.00E-02	7.88E-06	1.88E+00	1.39E+10	1.03E+09	1.24E+07	4.01E-14
OP	14	1.00E-02	4.95E-07	1.56E+00	1.00E+06	2.39E+08	5.60E+06	7.00E-14
OP	26	1.00E-02	1.57E-06	1.56E+00	1.00E+06	4.73E+08	5.79E+06	7.00E-14
OP	40	1.00E-02	2.04E-06	1.63E+00	3.47E+09	6.47E+08	5.24E+06	7.25E-14
OP	60	1.00E-02	1.74E-06	1.75E+00	1.00E+06	1.33E+09	3.53E+06	5.00E-14
OP	75	1.00E-02	1.57E-06	1.81E+00	1.44E+07	1.86E+09	1.82E+06	5.00E-14
OP	90	1.00E-02	1.05E-06	1.96E+00	3.71E+09	1.85E+09	2.02E+06	5.00E-14
OP	125	1.00E-02	3.54E-06	1.86E+00	3.95E+09	2.60E+09	3.65E+06	5.00E-14

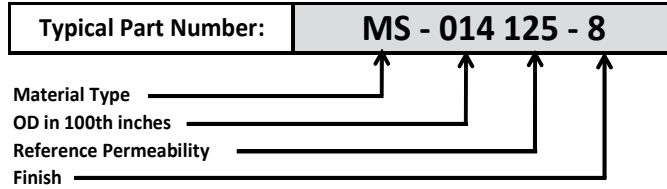
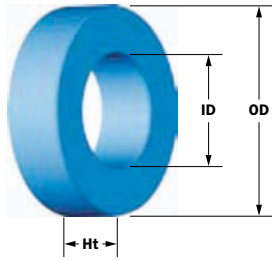
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Percent Perm vs AC Flux Density Coef	Perm vs Freq Coef
$\% \mu = \left( \frac{a + cB + eB^2}{1 + bB + dB^2} \right)^{1/2}$	$\mu = \frac{1}{a + bf^c}$
Where: B expressed in G	Where: f expressed in Hz

Material	Permeability	a	b	c	d	e	a	b	c
FS	14	1.00E+04	2.33E-04	3.89E+00	-3.31E-09	-3.84E-04	7.14E-02	1.03E-10	1.08E+00
FS	26	1.00E+04	3.25E-04	5.41E+00	5.41E-09	-3.74E-04	3.85E-02	1.03E-10	1.08E+00
FS	40	1.00E+04	3.27E-04	5.65E+00	1.32E-08	-2.91E-04	2.50E-02	1.03E-10	1.08E+00
FS	60	1.00E+04	3.10E-04	6.07E+00	1.63E-08	-3.66E-04	1.67E-02	1.03E-10	1.08E+00
FS	75	1.00E+04	3.07E-04	6.12E+00	1.68E-08	-3.76E-04	1.33E-02	1.03E-10	1.08E+00
FS	90	1.00E+04	3.35E-04	6.61E+00	1.84E-08	-3.55E-04	1.11E-02	1.03E-10	1.08E+00
HF	14	1.00E+04	3.20E-04	4.32E+00	-1.34E-08	-4.29E-04	7.14E-02	2.64E-09	9.60E-01
HF	26	1.00E+04	4.49E-04	6.11E+00	-7.22E-10	-4.10E-04	3.85E-02	2.64E-09	9.60E-01
HF	60	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.67E-02	2.64E-09	9.60E-01
HF	125	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	8.00E-03	2.64E-09	9.60E-01
HF	147	1.00E+04	3.83E-04	6.82E+00	3.07E-08	-2.63E-04	6.80E-03	2.64E-09	9.60E-01
HF	160	1.00E+04	4.96E-04	8.22E+00	1.07E-08	-4.50E-04	6.25E-03	2.64E-09	9.60E-01
MP	14	1.00E+04	1.37E-03	1.41E+01	-5.15E-09	-8.17E-04	7.14E-02	5.72E-09	8.92E-01
MP	26	1.00E+04	1.23E-03	1.32E+01	-9.57E-09	-8.11E-04	3.85E-02	5.72E-09	8.92E-01
MP	60	1.00E+04	8.54E-04	9.39E+00	-3.55E-09	-5.89E-04	1.67E-02	5.72E-09	8.92E-01
MP	125	1.00E+04	6.99E-04	7.95E+00	-7.69E-09	-5.40E-04	8.00E-03	5.72E-09	8.92E-01
MP	147	1.00E+04	6.09E-04	7.12E+00	1.01E-08	-3.60E-04	6.80E-03	5.72E-09	8.92E-01
MP	160	1.00E+04	6.00E-04	7.11E+00	9.61E-09	-3.76E-04	6.25E-03	5.72E-09	8.92E-01
MP	173	1.00E+04	5.34E-04	6.49E+00	1.01E-08	-3.45E-04	5.78E-03	5.72E-09	8.92E-01
MP	205	1.00E+04	9.16E-04	1.08E+01	2.36E-09	-6.11E-04	4.88E-03	5.72E-09	8.92E-01
MP	250	1.00E+04	1.03E-03	1.22E+01	-9.00E-09	-7.37E-04	4.00E-03	5.72E-09	8.92E-01
MS	14	1.00E+04	1.37E-03	1.41E+01	-5.15E-09	-8.17E-04	7.14E-02	3.02E-11	1.17E+00
MS	26	1.00E+04	3.26E-04	3.65E+00	1.22E-08	-1.93E-04	3.85E-02	3.02E-11	1.17E+00
MS	40	1.00E+04	9.59E-04	1.05E+01	-8.41E-09	-6.95E-04	2.50E-02	3.02E-11	1.17E+00
MS	60	1.00E+04	7.85E-04	9.14E+00	9.69E-09	-7.37E-04	1.67E-02	3.02E-11	1.17E+00
MS	75	1.00E+04	7.79E-04	9.46E+00	1.52E-09	-9.35E-04	1.33E-02	3.02E-11	1.17E+00
MS	90	1.00E+04	7.06E-04	9.17E+00	1.23E-08	-1.00E-03	1.11E-02	3.02E-11	1.17E+00
MS	125	1.00E+04	6.01E-04	8.26E+00	1.84E-08	-9.01E-04	8.00E-03	3.02E-11	1.17E+00
OP	14	1.00E+04	3.20E-04	4.32E+00	-1.34E-08	-4.29E-04	7.14E-02	6.06E-10	1.01E+00
OP	26	1.00E+04	4.49E-04	6.11E+00	-7.22E-10	-4.10E-04	3.85E-02	6.06E-10	1.01E+00
OP	40	1.00E+04	4.68E-04	6.20E+00	1.01E-08	-2.42E-04	2.50E-02	6.06E-10	1.01E+00
OP	60	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.67E-02	6.06E-10	1.01E+00
OP	75	1.00E+04	4.41E-04	6.67E+00	1.56E-08	-3.54E-04	1.33E-02	6.06E-10	1.01E+00
OP	90	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	1.11E-02	6.06E-10	1.01E+00
OP	125	1.00E+04	4.75E-04	7.36E+00	2.07E-08	-3.49E-04	8.00E-03	6.06E-10	1.01E+00

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**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	3.56 mm	0.140 in
	Coated Core (max)	3.76 mm	0.148 in
<b>ID</b>	Bare Core Nominal	1.78 mm	0.070 in
	Coated Core (min)	1.52 mm	0.060 in
<b>Ht</b>	Bare Core Nominal	1.52 mm	0.060 in
	Coated Core (max)	1.73 mm	0.068 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0137 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	0.817 cm
<b>Ve</b>	Effective Core Volume	0.0107 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0182 cm <sup>2</sup>
<b>SA</b>	Surface Area	0.523 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	0.646 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	3	MS-014014-8	MP-014014-8	FS-014014-8	HF-014014-8	OP-014014-8
26μ	5.5	MS-014026-8	MP-014026-8	FS-014026-8	HF-014026-8	OP-014026-8
40μ	9	MS-014040-8		FS-014040-8		OP-014040-8
60μ	13	MS-014060-8	MP-014060-8	FS-014060-8	HF-014060-8	OP-014060-8
75μ	16	MS-014075-8		FS-014075-8		OP-014075-8
90μ	19	MS-014090-8		FS-014090-8		OP-014090-8
125μ	26	MS-014125-8	MP-014125-8		HF-014125-8	OP-014125-8
147μ	31		MP-014147-8		HF-014147-8	
160μ	33		MP-014160-8		HF-014160-8	
173μ	36		MP-014173-8			
205μ	43		MP-014205-8			
250μ	52		MP-014250-8			
<b>Approx. Unit Weight:</b>		0.06 g	0.08 g	0.07 g	0.07 g	0.07 g

**Test Conditions**

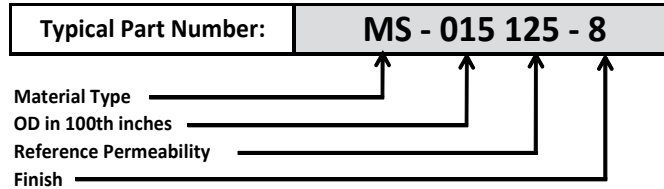
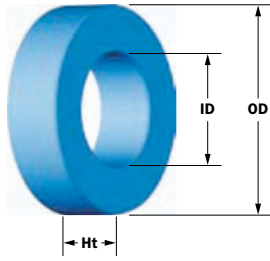
<b>Winding</b>	N=30, #36 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.002 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±15% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	36,000 Pcs/Box

**Winding Table**

Wire Size	AWG	30	32	34	36	38	40	42	44	-	-	-
	mm	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-	-
<b>Single Layer</b>	Turns	11	15	19	25	31	40	50	63	-	-	-
	Rdc(Ω)	24.1 m	52.2 m	105.1 m	219.9 m	433.7 m	890.0 m	1.8	3.5	-	-	-
<b>Full Winding</b>	Turns	12	18	28	43	67	103	159	247	-	-	-
	Rdc(Ω)	26.2 m	62.6 m	154.9 m	378.3 m	937.3 m	2.3	5.6	13.9	-	-	-



**Physical Dimensions**

Dimension	Core Type	Value	
		mm	in
OD	Bare Core Nominal	3.94	0.155
	Coated Core (max)	4.14	0.163
ID	Bare Core Nominal	2.21	0.087
	Coated Core (min)	2.01	0.079
Ht	Bare Core Nominal	2.54	0.100
	Coated Core (max)	2.74	0.108

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0211 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	0.942 cm
<b>Ve</b>	Effective Core Volume	0.0197 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0316 cm <sup>2</sup>
<b>SA</b>	Surface Area	0.776 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	0.862 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	4	MS-015014-8	MP-015014-8	FS-015014-8	HF-015014-8	OP-015014-8
26μ	7	MS-015026-8	MP-015026-8	FS-015026-8	HF-015026-8	OP-015026-8
40μ	11	MS-015040-8		FS-015040-8		OP-015040-8
60μ	17	MS-015060-8	MP-015060-8	FS-015060-8	HF-015060-8	OP-015060-8
75μ	21	MS-015075-8		FS-015075-8		OP-015075-8
90μ	25	MS-015090-8		FS-015090-8		OP-015090-8
125μ	35	MS-015125-8	MP-015125-8		HF-015125-8	OP-015125-8
147μ	41		MP-015147-8		HF-015147-8	
160μ	45		MP-015160-8		HF-015160-8	
173μ	48		MP-015173-8			
205μ	57		MP-015205-8			
250μ	70		MP-015250-8			
<b>Approx. Unit Weight:</b>		0.11 g	0.15 g	0.13 g	0.14 g	0.13 g

**Test Conditions**

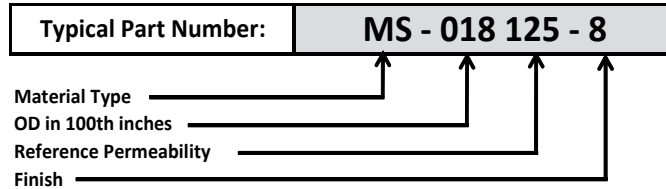
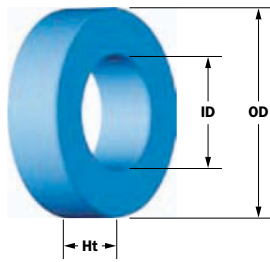
<b>Winding</b>	N=30, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.003 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±15% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	27,000 Pcs/Box

**Winding Table**

Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
	mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
Single Layer	Turns	12	16	21	26	33	42	53	67	84	-	-
	Rdc(Ω)	22.0 m	46.7 m	97.4 m	191.8 m	387.1 m	783.6 m	1.6	3.2	6.3	-	-
Full Winding	Turns	13	20	31	49	75	116	180	279	431	-	-
	Rdc(Ω)	23.8 m	58.3 m	143.8 m	361.4 m	879.8 m	2.2	5.3	13.2	32.3	-	-



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	4.65 mm	0.183 in
	Coated Core (max)	5.21 mm	0.205 in
<b>ID</b>	Bare Core Nominal	2.36 mm	0.093 in
	Coated Core (min)	1.93 mm	0.076 in
<b>Ht</b>	Bare Core Nominal	2.54 mm	0.100 in
	Coated Core (max)	3.3 mm	0.130 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0285 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.06 cm
<b>Ve</b>	Effective Core Volume	0.0302 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0293 cm <sup>2</sup>
<b>SA</b>	Surface Area	1.15 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.08 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	5	MS-018014-8	MP-018014-8	FS-018014-8	HF-018014-8	OP-018014-8
26μ	9	MS-018026-8	MP-018026-8	FS-018026-8	HF-018026-8	OP-018026-8
40μ	13	MS-018040-8		FS-018040-8		OP-018040-8
60μ	20	MS-018060-8	MP-018060-8	FS-018060-8	HF-018060-8	OP-018060-8
75μ	25	MS-018075-8		FS-018075-8		OP-018075-8
90μ	30	MS-018090-8		FS-018090-8		OP-018090-8
125μ	42	MS-018125-8	MP-018125-8		HF-018125-8	OP-018125-8
147μ	49		MP-018147-8		HF-018147-8	
160μ	53		MP-018160-8		HF-018160-8	
173μ	57		MP-018173-8			
205μ	68		MP-018205-8			
250μ	83		MP-018250-8			
<b>Approx. Unit Weight:</b>		0.17 g	0.22 g	0.20 g	0.21 g	0.20 g

**Test Conditions**

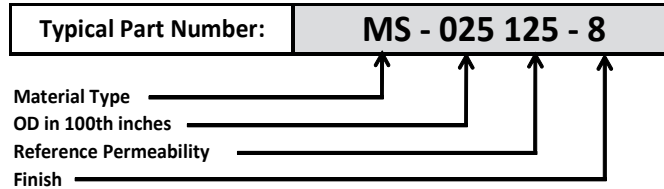
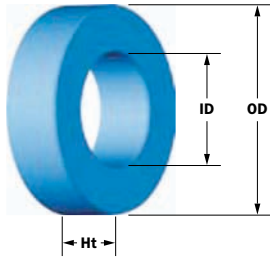
<b>Winding</b>	N=30, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.004 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±15% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	27,000 Pcs/Box

**Winding Table**

Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
	mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
<b>Single Layer</b>	Turns	12	15	20	25	32	40	51	64	81	-	-
	Rdc(Ω)	27.7 m	55.1 m	116.8 m	232.1 m	472.6 m	939.5 m	1.9	3.8	7.7	-	-
<b>Full Winding</b>	Turns	12	19	29	45	69	107	166	257	398	-	-
	Rdc(Ω)	27.7 m	69.8 m	169.3 m	417.9 m	1.0	2.5	6.2	15.3	37.6	-	-



**Physical Dimensions**

OD	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	6.99 mm	0.275 in
ID	Bare Core Nominal	2.79 mm	0.110 in
	Coated Core (min)	2.29 mm	0.090 in
Ht	Bare Core Nominal	2.79 mm	0.110 in
	Coated Core (max)	3.43 mm	0.135 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0476 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.36 cm
<b>Ve</b>	Effective Core Volume	0.0642 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0410 cm <sup>2</sup>
<b>SA</b>	Surface Area	1.80 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.27 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6	MS-025014-8	MP-025014-8	FS-025014-8	HF-025014-8	OP-025014-8
26μ	10	MS-025026-8	MP-025026-8	FS-025026-8	HF-025026-8	OP-025026-8
40μ	16	MS-025040-8		FS-025040-8		OP-025040-8
60μ	24	MS-025060-8	MP-025060-8	FS-025060-8	HF-025060-8	OP-025060-8
75μ	30	MS-025075-8		FS-025075-8		OP-025075-8
90μ	36	MS-025090-8		FS-025090-8		OP-025090-8
125μ	52	MS-025125-8	MP-025125-8		HF-025125-8	OP-025125-8
147μ	58		MP-025147-8		HF-025147-8	
160μ	64		MP-025160-8		HF-025160-8	
173μ	69		MP-025173-8			
205μ	82		MP-025205-8			
250μ	100		MP-025250-8			
<b>Approx. Unit Weight:</b>		0.37 g	0.48 g	0.42 g	0.44 g	0.43 g

**Test Conditions**

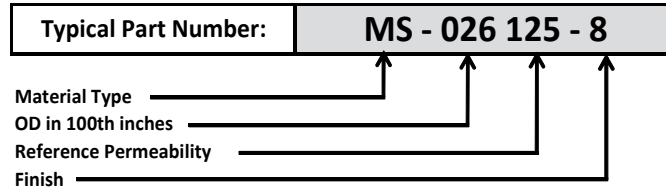
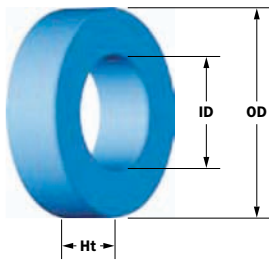
<b>Winding</b>	N=30, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.006 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	21,600 Pcs/Box

**Winding Table**

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
Single Layer	Turns	11	14	19	24	30	38	49	61	77	96	-
	Rdc(Ω)	18.7 m	37.9 m	81.7 m	164.2 m	326.3 m	657.4 m	1.3	2.7	5.4	10.6	-
Full Winding	Turns	11	17	26	41	63	98	151	234	362	560	-
	Rdc(Ω)	18.7 m	46.0 m	111.8 m	280.4 m	685.3 m	1.7	4.2	10.2	25.2	62.0	-



**Physical Dimensions**

OD	Bare Core Nominal	6.6 mm	0.260 in
	Coated Core (max)	7.32 mm	0.288 in
ID	Bare Core Nominal	2.67 mm	0.105 in
	Coated Core (min)	2.21 mm	0.087 in
Ht	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (max)	5.54 mm	0.218 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0920 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.36 cm
<b>Ve</b>	Effective Core Volume	0.125 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0384 cm <sup>2</sup>
<b>SA</b>	Surface Area	2.44 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.73 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	12	MS-026014-8	MP-026014-8	FS-026014-8	HF-026014-8	OP-026014-8
26μ	21	MS-026026-8	MP-026026-8	FS-026026-8	HF-026026-8	OP-026026-8
40μ	33	MS-026040-8		FS-026040-8		OP-026040-8
60μ	50	MS-026060-8	MP-026060-8	FS-026060-8	HF-026060-8	OP-026060-8
75μ	62	MS-026075-8		FS-026075-8		OP-026075-8
90μ	74	MS-026090-8		FS-026090-8		OP-026090-8
125μ	103	MS-026125-8	MP-026125-8		HF-026125-8	OP-026125-8
147μ	122		MP-026147-8		HF-026147-8	
160μ	132		MP-026160-8		HF-026160-8	
173μ	144		MP-026173-8			
205μ	170		MP-026205-8			
250μ	206		MP-026250-8			
<b>Approx. Unit Weight:</b>		0.72 g	0.93 g	0.83 g	0.86 g	0.83 g

**Test Conditions**

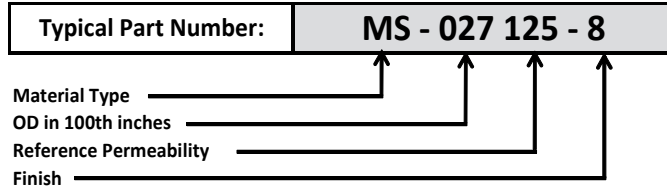
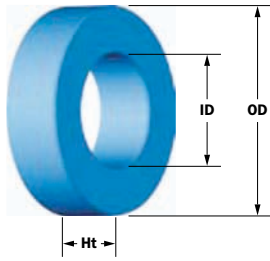
<b>Winding</b>	N=35, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.014 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	14,400 Pcs/Box

**Winding Table**

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
<b>Single Layer</b>	Turns	11	14	18	23	29	37	47	59	74	93	-
	Rdc(Ω)	25.5 m	51.5 m	105.4 m	214.2 m	429.4 m	871.4 m	1.8	3.5	7.0	14.0	-
<b>Full Winding</b>	Turns	10	16	25	38	59	91	141	218	337	522	-
	Rdc(Ω)	23.1 m	58.9 m	146.4 m	353.8 m	873.7 m	2.1	5.3	13.0	31.9	78.6	-



**Physical Dimensions**

OD	Bare Core Nominal	6.6 mm	0.260 in
	Coated Core (max)	7.24 mm	0.285 in
ID	Bare Core Nominal	2.67 mm	0.105 in
	Coated Core (min)	2.29 mm	0.090 in
Ht	Bare Core Nominal	2.54 mm	0.100 in
	Coated Core (max)	3.18 mm	0.125 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0467 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.36 cm
<b>Ve</b>	Effective Core Volume	0.0640 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0410 cm <sup>2</sup>
<b>SA</b>	Surface Area	1.83 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.25 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6.05	MS-027014-8	MP-027014-8	FS-027014-8	HF-027014-8	OP-027014-8
26μ	11	MS-027026-8	MP-027026-8	FS-027026-8	HF-027026-8	OP-027026-8
40μ	17	MS-027040-8		FS-027040-8		OP-027040-8
60μ	26	MS-027060-8	MP-027060-8	FS-027060-8	HF-027060-8	OP-027060-8
75μ	32	MS-027075-8		FS-027075-8		OP-027075-8
90μ	39	MS-027090-8		FS-027090-8		OP-027090-8
125μ	54	MS-027125-8	MP-027125-8		HF-027125-8	OP-027125-8
147μ	64		MP-027147-8		HF-027147-8	
160μ	69		MP-027160-8		HF-027160-8	
173μ	75		MP-027173-8			
205μ	89		MP-027205-8			
250μ	108		MP-027250-8			
<b>Approx. Unit Weight:</b>		0.37 g	0.48 g	0.42 g	0.44 g	0.42 g

**Test Conditions**

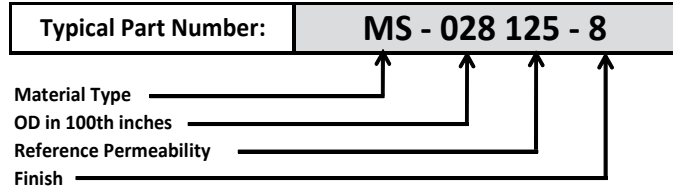
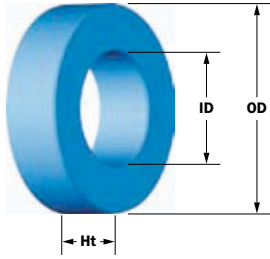
<b>Winding</b>	N=35, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.007 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	21,600 Pcs/Box

**Winding Table**

Wire Size	AWG	26	28	30	32	34	36	38	40	42	44	-
	mm	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-
Single Layer	Turns	11	14	19	24	30	38	49	61	77	96	-
	Rdc(Ω)	18.3 m	37.1 m	80.1 m	160.9 m	319.9 m	644.5 m	1.3	2.6	5.3	10.4	-
Full Winding	Turns	11	17	26	41	63	98	151	234	362	560	-
	Rdc(Ω)	18.3 m	45.1 m	109.6 m	274.9 m	671.8 m	1.7	4.1	10.0	24.7	60.8	-



**Physical Dimensions**

OD	Bare Core Nominal	7.04 mm	0.277 in
	Coated Core (max)	7.67 mm	0.302 in
ID	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (min)	3.45 mm	0.136 in
Ht	Bare Core Nominal	5.08 mm	0.200 in
	Coated Core (max)	5.72 mm	0.225 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0750 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.68 cm
<b>Ve</b>	Effective Core Volume	0.126 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0937 cm <sup>2</sup>
<b>SA</b>	Surface Area	2.80 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.74 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	8	MS-028014-8	MP-028014-8	FS-028014-8	HF-028014-8	OP-028014-8
26μ	14	MS-028026-8	MP-028026-8	FS-028026-8	HF-028026-8	OP-028026-8
40μ	22	MS-028040-8		FS-028040-8		OP-028040-8
60μ	33	MS-028060-8	MP-028060-8	FS-028060-8	HF-028060-8	OP-028060-8
75μ	42	MS-028075-8		FS-028075-8		OP-028075-8
90μ	50	MS-028090-8		FS-028090-8		OP-028090-8
125μ	70	MS-028125-8	MP-028125-8		HF-028125-8	OP-028125-8
147μ	81		MP-028147-8		HF-028147-8	
160μ	89		MP-028160-8		HF-028160-8	
173μ	95		MP-028173-8			
205μ	113		MP-028205-8			
250μ	138		MP-028250-8			
<b>Approx. Unit Weight:</b>		0.73 g	0.94 g	0.83 g	0.87 g	0.84 g

**Test Conditions**

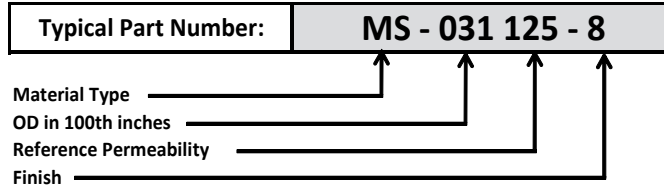
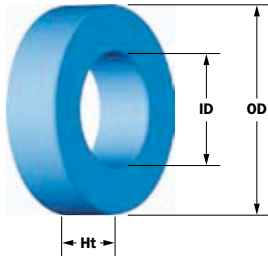
<b>Winding</b>	N=40, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.013 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	12,600 Pcs/Box

**Winding Table**

Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
<b>Single Layer</b>	Turns	11	14	18	23	29	37	47	59	75	93	117
	Rdc(Ω)	10.1 m	20.5 m	41.9 m	85.1 m	170.7 m	346.3 m	699.6 m	1.4	2.8	5.6	11.1
<b>Full Winding</b>	Turns	10	16	25	39	60	92	143	222	343	531	821
	Rdc(Ω)	9.2 m	23.4 m	58.2 m	144.3 m	353.1 m	861.1 m	2.1	5.3	12.9	31.8	78.2



**Physical Dimensions**

OD	Bare Core Nominal	7.87 mm	0.310 in
	Coated Core (max)	8.51 mm	0.335 in
ID	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (min)	3.43 mm	0.135 in
Ht	Bare Core Nominal	3.18 mm	0.125 in
	Coated Core (max)	3.81 mm	0.150 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0615 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	1.79 cm
<b>Ve</b>	Effective Core Volume	0.110 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.0924 cm <sup>2</sup>
<b>SA</b>	Surface Area	2.65 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.44 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6	MS-031014-8	MP-031014-8	FS-031014-8	HF-031014-8	OP-031014-8
26μ	14	MS-031026-8	MP-031026-8	FS-031026-8	HF-031026-8	OP-031026-8
40μ	17	MS-031040-8		FS-031040-8		OP-031040-8
60μ	25	MS-031060-8	MP-031060-8	FS-031060-8	HF-031060-8	OP-031060-8
75μ	31	MS-031075-8		FS-031075-8		OP-031075-8
90μ	37	MS-031090-8		FS-031090-8		OP-031090-8
125μ	52	MS-031125-8	MP-031125-8		HF-031125-8	OP-031125-8
147μ	62		MP-031147-8		HF-031147-8	
160μ	66		MP-031160-8		HF-031160-8	
173μ	73		MP-031173-8			
205μ	86		MP-031205-8			
250μ	104		MP-031250-8			
<b>Approx. Unit Weight:</b>		0.64 g	0.82 g	0.73 g	0.76 g	0.73 g

**Test Conditions**

<b>Winding</b>	N=45, #32 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.012 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

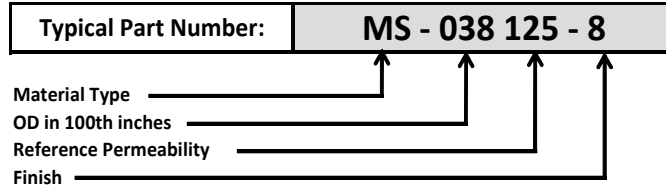
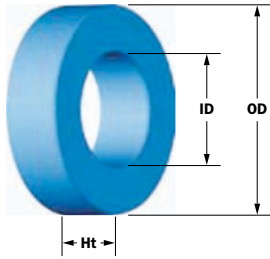
**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	14,400 Pcs/Box

**Winding Table**

Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
Single Layer	Turns	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	8.4 m	17.0 m	34.7 m	70.6 m	141.5 m	287.1 m	580.1 m	1.2	2.3	4.6	9.2
Full Winding	Turns	10	16	25	38	59	91	141	219	339	524	812
	Rdc(Ω)	7.6 m	19.4 m	48.2 m	116.6 m	287.9 m	706.2 m	1.7	4.3	10.6	26.0	64.1





**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (max)	10.29 mm	0.405 in
<b>ID</b>	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (min)	4.27 mm	0.168 in
<b>Ht</b>	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.57 mm	0.180 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0945 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	2.18 cm
<b>Ve</b>	Effective Core Volume	0.206 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.143 cm <sup>2</sup>
<b>SA</b>	Surface Area	3.88 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.73 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	7	MS-038014-8	MP-038014-8	FS-038014-8	HF-038014-8	OP-038014-8
26μ	14	MS-038026-8	MP-038026-8	FS-038026-8	HF-038026-8	OP-038026-8
40μ	21	MS-038040-8		FS-038040-8		OP-038040-8
60μ	32	MS-038060-8	MP-038060-8	FS-038060-8	HF-038060-8	OP-038060-8
75μ	40	MS-038075-8		FS-038075-8		OP-038075-8
90μ	48	MS-038090-8		FS-038090-8		OP-038090-8
125μ	66	MS-038125-8	MP-038125-8		HF-038125-8	OP-038125-8
147μ	78		MP-038147-8		HF-038147-8	
160μ	84		MP-038160-8		HF-038160-8	
173μ	92		MP-038173-8			
205μ	109		MP-038205-8			
250μ	132		MP-038250-8			
<b>Approx. Unit Weight:</b>		1.2 g	1.5 g	1.4 g	1.4 g	1.4 g

**Test Conditions**

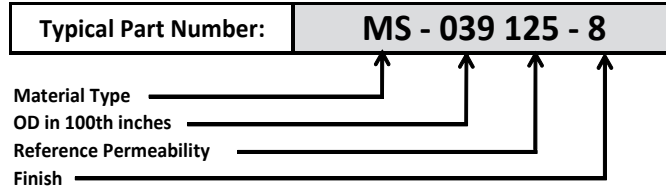
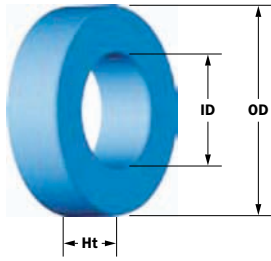
<b>Winding</b>	N=45, #30 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.019 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	9,000 Pcs/Box

**Winding Table**

Wire Size	AWG	20	22	24	26	28	30	32	34	36	38	40
	mm	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080
<b>Single Layer</b>	Turns	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	6.3 m	12.8 m	26.2 m	53.2 m	106.8 m	216.6 m	437.6 m	873.7 m	1.7	3.5	6.9
<b>Full Winding</b>	Turns	10	16	25	38	59	92	142	219	339	525	813
	Rdc(Ω)	5.8 m	14.6 m	36.4 m	88.0 m	217.2 m	538.6 m	1.3	3.2	8.0	19.7	48.4



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (max)	10.29 mm	0.405 in
<b>ID</b>	Bare Core Nominal	4.78 mm	0.188 in
	Coated Core (min)	4.27 mm	0.168 in
<b>Ht</b>	Bare Core Nominal	3.18 mm	0.125 in
	Coated Core (max)	3.81 mm	0.150 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0752 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	2.18 cm
<b>Ve</b>	Effective Core Volume	0.164 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.143 cm <sup>2</sup>
<b>SA</b>	Surface Area	3.61 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.58 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6	MS-039014-8	MP-039014-8	FS-039014-8	HF-039014-8	OP-039014-8
26μ	11	MS-039026-8	MP-039026-8	FS-039026-8	HF-039026-8	OP-039026-8
40μ	17	MS-039040-8		FS-039040-8		OP-039040-8
60μ	25	MS-039060-8	MP-039060-8	FS-039060-8	HF-039060-8	OP-039060-8
75μ	32	MS-039075-8		FS-039075-8		OP-039075-8
90μ	38	MS-039090-8		FS-039090-8		OP-039090-8
125μ	53	MS-039125-8	MP-039125-8		HF-039125-8	OP-039125-8
147μ	63		MP-039147-8		HF-039147-8	
160μ	68		MP-039160-8		HF-039160-8	
173μ	92		MP-039173-8			
205μ	109		MP-039205-8			
250μ	132		MP-039250-8			
<b>Approx. Unit Weight:</b>		0.95 g	1.2 g	1.1 g	1.1 g	1.1 g

**Test Conditions**

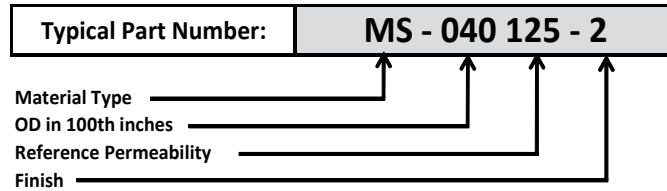
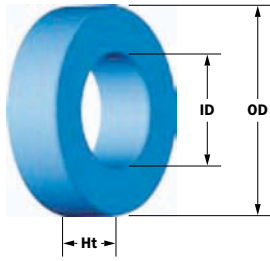
<b>Winding</b>	N=45, #30 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.015 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Parylene N
<b>Voltage Breakdown</b>	500 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	10,800 Pcs/Box

**Winding Table**

Wire Size	AWG	20	22	24	26	28	30	32	34	36	38	40
	mm	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080
<b>Single Layer</b>	Turns	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	5.8 m	11.7 m	23.9 m	48.6 m	97.4 m	197.6 m	399.2 m	796.9 m	1.6	3.2	6.3
<b>Full Winding</b>	Turns	10	16	25	38	59	92	142	219	339	525	813
	Rdc(Ω)	5.2 m	13.4 m	33.2 m	80.2 m	198.1 m	491.3 m	1.2	3.0	7.3	17.9	44.2



**Physical Dimensions**

OD	Bare Core Nominal	10.16 mm	0.400 in
	Coated Core (max)	10.8 mm	0.425 in
ID	Bare Core Nominal	5.08 mm	0.200 in
	Coated Core (min)	4.57 mm	0.180 in
Ht	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.57 mm	0.180 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.100 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	2.38 cm
<b>Ve</b>	Effective Core Volume	0.238 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.164 cm <sup>2</sup>
<b>SA</b>	Surface Area	4.20 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.77 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	7	MS-040014-2	MP-040014-2	FS-040014-2	HF-040014-2	OP-040014-2
26μ	14	MS-040026-2	MP-040026-2	FS-040026-2	HF-040026-2	OP-040026-2
40μ	21	MS-040040-2		FS-040040-2		OP-040040-2
60μ	32	MS-040060-2	MP-040060-2	FS-040060-2	HF-040060-2	OP-040060-2
75μ	40	MS-040075-2		FS-040075-2		OP-040075-2
90μ	48	MS-040090-2		FS-040090-2		OP-040090-2
125μ	66	MS-040125-2	MP-040125-2		HF-040125-2	OP-040125-2
147μ	78		MP-040147-2		HF-040147-2	
160μ	84		MP-040160-2		HF-040160-2	
173μ	92		MP-040173-2			
205μ	105		MP-040205-2			
250μ	132		MP-040250-2			
<b>Approx. Unit Weight:</b>		1.4 g	1.8 g	1.6 g	1.6 g	1.6 g

**Test Conditions**

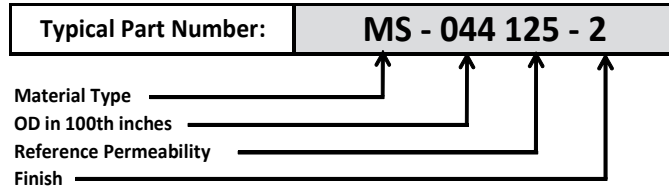
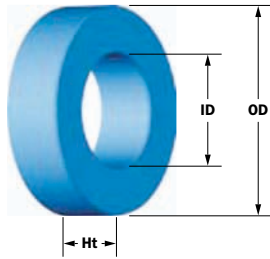
<b>Winding</b>	N=55, #30 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.024 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	5,400 Pcs/Box

**Winding Table**

Wire Size	AWG	20	22	24	26	28	30	32	34	36	38	40
	mm	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080
Single Layer	Turns	12	15	19	25	32	40	50	63	80	100	125
	Rdc(Ω)	7.0 m	14.0 m	28.2 m	59.1 m	120.3 m	239.1 m	475.2 m	952.3 m	1.9	3.8	7.6
Full Winding	Turns	12	18	28	44	68	105	162	251	389	602	931
	Rdc(Ω)	7.0 m	16.8 m	41.6 m	104.0 m	255.5 m	627.5 m	1.5	3.8	9.4	23.0	56.6



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.89 mm	0.468 in
<b>ID</b>	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (min)	5.89 mm	0.232 in
<b>Ht</b>	Bare Core Nominal	3.96 mm	0.156 in
	Coated Core (max)	4.72 mm	0.186 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.0906 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	2.69 cm
<b>Ve</b>	Effective Core Volume	0.244 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.273 cm <sup>2</sup>
<b>SA</b>	Surface Area	5.10 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	1.84 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6	MS-044014-2	MP-044014-2	FS-044014-2	HF-044014-2	OP-044014-2
26μ	11	MS-044026-2	MP-044026-2	FS-044026-2	HF-044026-2	OP-044026-2
40μ	17	MS-044040-2		FS-044040-2		OP-044040-2
60μ	26	MS-044060-2	MP-044060-2	FS-044060-2	HF-044060-2	OP-044060-2
75μ	32	MS-044075-2		FS-044075-2		OP-044075-2
90μ	38	MS-044090-2		FS-044090-2		OP-044090-2
125μ	53	MS-044125-2	MP-044125-2		HF-044125-2	OP-044125-2
147μ	63		MP-044147-2		HF-044147-2	
160μ	68		MP-044160-2		HF-044160-2	
173μ	74		MP-044173-2			
205μ	88		MP-044205-2			
250μ	106		MP-044250-2			
<b>Approx. Unit Weight:</b>		1.4 g	1.8 g	1.6 g	1.7 g	1.6 g

**Test Conditions**

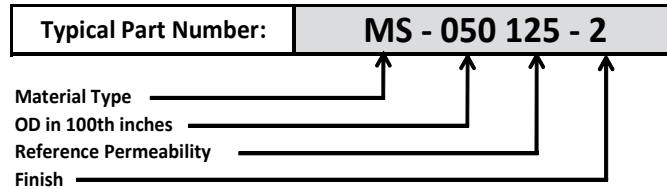
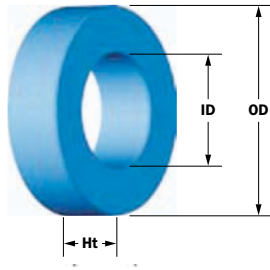
<b>Winding</b>	N=60, #30 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.024 V
<b>A<sub>L</sub> Tolerance</b>	±8% (±12% Super-MSS)

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	5,400 Pcs/Box

**Winding Table**

Wire Size	AWG	18	20	22	24	26	28	30	32	34	36	38
		mm	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
Single Layer	Turns	12	16	20	26	33	42	52	66	83	103	129
	Rdc(Ω)	4.6 m	9.8 m	19.5 m	40.2 m	81.2 m	164.4 m	323.6 m	653.3 m	1.3	2.6	5.1
Full Winding	Turns	13	20	30	47	73	113	174	270	417	646	999
	Rdc(Ω)	5.0 m	12.2 m	29.2 m	72.7 m	179.6 m	442.2 m	1.1	2.7	6.6	16.2	39.8



**Physical Dimensions**

OD	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (max)	13.46 mm	0.530 in
ID	Bare Core Nominal	7.62 mm	0.300 in
	Coated Core (min)	6.99 mm	0.275 in
Ht	Bare Core Nominal	4.75 mm	0.187 in
	Coated Core (max)	5.51 mm	0.217 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.114 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	3.12 cm
<b>Ve</b>	Effective Core Volume	0.356 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.383 cm <sup>2</sup>
<b>SA</b>	Surface Area	6.67 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	2.10 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	6.4	MS-050014-2	MP-050014-2	FS-050014-2	HF-050014-2	OP-050014-2
26μ	12	MS-050026-2	MP-050026-2	FS-050026-2	HF-050026-2	OP-050026-2
40μ	18	MS-050040-2		FS-050040-2		OP-050040-2
60μ	27	MS-050060-2	MP-050060-2	FS-050060-2	HF-050060-2	OP-050060-2
75μ	34	MS-050075-2		FS-050075-2		OP-050075-2
90μ	40	MS-050090-2		FS-050090-2		OP-050090-2
125μ	56	MS-050125-2	MP-050125-2		HF-050125-2	OP-050125-2
147μ	67		MP-050147-2		HF-050147-2	
160μ	72		MP-050160-2		HF-050160-2	
173μ	79		MP-050173-2			
205μ	93		MP-050205-2			
250μ	112		MP-050250-2			
<b>Approx. Unit Weight:</b>		2.1 g	2.6 g	2.3 g	2.4 g	2.4 g

**Test Conditions**

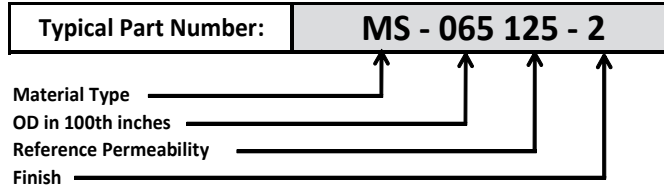
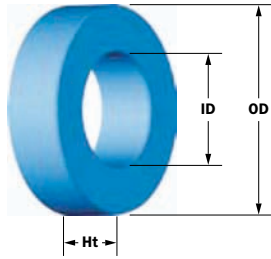
<b>Winding</b>	N=50, #28 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.025 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	4,500 Pcs/Box

**Winding Table**

Wire Size	AWG	16	18	20	22	24	26	28	30	32	34	36
	mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
Single Layer	Turns	11	15	19	24	31	39	50	63	79	98	123
	Rdc(Ω)	3.0 m	6.6 m	13.3 m	26.6 m	54.7 m	109.5 m	223.3 m	447.5 m	892.5 m	1.8	3.5
Full Winding	Turns	12	18	28	43	66	102	158	245	380	587	909
	Rdc(Ω)	3.3 m	7.9 m	19.5 m	47.7 m	116.6 m	286.5 m	705.7 m	1.7	4.3	10.5	26.0



**Physical Dimensions**

OD	Bare Core Nominal	16.64 mm	0.655 in
	Coated Core (max)	17.4 mm	0.685 in
ID	Bare Core Nominal	10.16 mm	0.400 in
	Coated Core (min)	9.53 mm	0.375 in
Ht	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.192 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	4.11 cm
<b>Ve</b>	Effective Core Volume	0.789 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.713 cm <sup>2</sup>
<b>SA</b>	Surface Area	11.2 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	2.69 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	8	MS-065014-2	MP-065014-2	FS-065014-2	HF-065014-2	OP-065014-2
26μ	15	MS-065026-2	MP-065026-2	FS-065026-2	HF-065026-2	OP-065026-2
40μ	23	MS-065040-2		FS-065040-2		OP-065040-2
60μ	35	MS-065060-2	MP-065060-2	FS-065060-2	HF-065060-2	OP-065060-2
75μ	43	MS-065075-2		FS-065075-2		OP-065075-2
90μ	52	MS-065090-2		FS-065090-2		OP-065090-2
125μ	72	MS-065125-2	MP-065125-2		HF-065125-2	OP-065125-2
147μ	88		MP-065147-2		HF-065147-2	
160μ	92		MP-065160-2		HF-065160-2	
173μ	104		MP-065173-2			
205μ	123		MP-065205-2			
250μ	144		MP-065250-2			
<b>Approx. Unit Weight:</b>		4.6 g	5.9 g	5.2 g	5.4 g	5.2 g

**Test Conditions**

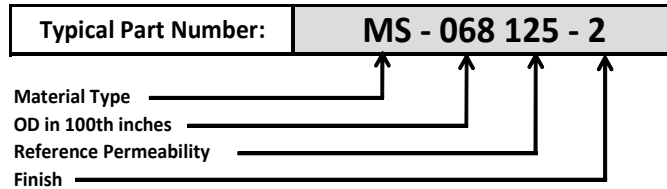
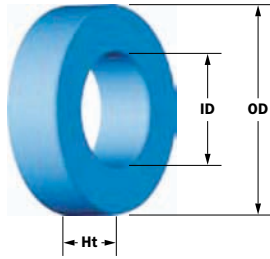
<b>Winding</b>	N=70, #28 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.060 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	2,520 Pcs/Box

**Winding Table**

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
	mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
Single Layer	Turns	10	13	17	21	27	34	44	55	69	86	108
	Rdc(Ω)	1.4 m	2.9 m	6.0 m	11.8 m	24.1 m	48.3 m	99.4 m	197.7 m	394.4 m	781.8 m	1.6
Full Winding	Turns	9	14	21	33	51	79	123	190	295	456	706
	Rdc(Ω)	1.3 m	3.1 m	7.4 m	18.5 m	45.6 m	112.3 m	278.0 m	682.9 m	1.7	4.1	10.2



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	17.27 mm	0.680 in
	Coated Core (max)	18.03 mm	0.710 in
<b>ID</b>	Bare Core Nominal	9.65 mm	0.380 in
	Coated Core (min)	9.02 mm	0.355 in
<b>Ht</b>	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.232 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	4.14 cm
<b>Ve</b>	Effective Core Volume	0.961 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.639 cm <sup>2</sup>
<b>SA</b>	Surface Area	11.7 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	2.77 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	10	MS-068014-2	MP-068014-2	FS-068014-2	HF-068014-2	OP-068014-2
26μ	19	MS-068026-2	MP-068026-2	FS-068026-2	HF-068026-2	OP-068026-2
40μ	29	MS-068040-2		FS-068040-2		OP-068040-2
60μ	43	MS-068060-2	MP-068060-2	FS-068060-2	HF-068060-2	OP-068060-2
75μ	53	MS-068075-2		FS-068075-2		OP-068075-2
90μ	64	MS-068090-2		FS-068090-2		OP-068090-2
125μ	89	MS-068125-2	MP-068125-2		HF-068125-2	OP-068125-2
147μ	105		MP-068147-2		HF-068147-2	
160μ	114		MP-068160-2		HF-068160-2	
173μ	123		MP-068173-2			
205μ	146		MP-068205-2			
250μ	178		MP-068250-2			
<b>Approx. Unit Weight:</b>		5.6 g	7.2 g	6.3 g	6.6 g	6.4 g

**Test Conditions**

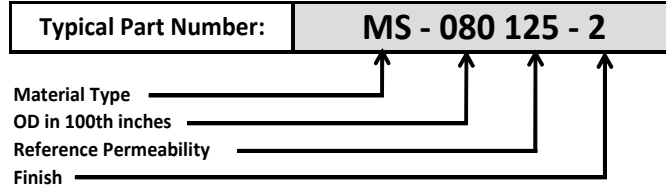
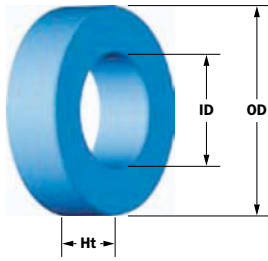
<b>Winding</b>	N=70, #28 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.072 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	1,980 Pcs/Box

**Winding Table**

Wire Size	AWG	14	16	18	20	22	24	26	28	30	32	34
	mm	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160
<b>Single Layer</b>	Turns	12	15	20	26	32	41	52	65	82	102	128
	Rdc(Ω)	2.8 m	5.5 m	11.6 m	24.0 m	47.0 m	95.7 m	193.1 m	383.8 m	770.0 m	1.5	3.0
<b>Full Winding</b>	Turns	12	19	30	46	71	110	170	264	408	632	978
	Rdc(Ω)	2.8 m	6.9 m	17.4 m	42.5 m	104.2 m	256.8 m	631.1 m	1.6	3.8	9.4	23.2



**Physical Dimensions**

OD	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.08 mm	0.830 in
ID	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (min)	12.07 mm	0.475 in
Ht	Bare Core Nominal	6.35 mm	0.250 in
	Coated Core (max)	7.11 mm	0.280 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.226 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	5.09 cm
<b>Ve</b>	Effective Core Volume	1.15 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.14 cm <sup>2</sup>
<b>SA</b>	Surface Area	15.5 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	2.93 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	7.8	MS-080014-2	MP-080014-2	FS-080014-2	HF-080014-2	OP-080014-2
26μ	14	MS-080026-2	MP-080026-2	FS-080026-2	HF-080026-2	OP-080026-2
40μ	21	MS-080040-2		FS-080040-2		OP-080040-2
60μ	32	MS-080060-2	MP-080060-2	FS-080060-2	HF-080060-2	OP-080060-2
75μ	41	MS-080075-2		FS-080075-2		OP-080075-2
90μ	49	MS-080090-2		FS-080090-2		OP-080090-2
125μ	68	MS-080125-2	MP-080125-2		HF-080125-2	OP-080125-2
147μ	81		MP-080147-2		HF-080147-2	
160μ	87		MP-080160-2		HF-080160-2	
173μ	96		MP-080173-2			
205μ	113		MP-080205-2			
250μ	136		MP-080250-2			
<b>Approx. Unit Weight:</b>		6.7 g	8.6 g	7.6 g	7.9 g	7.6 g

**Test Conditions**

<b>Winding</b>	N=90, #28 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.090 V
<b>A<sub>L</sub> Tolerance</b>	±8%

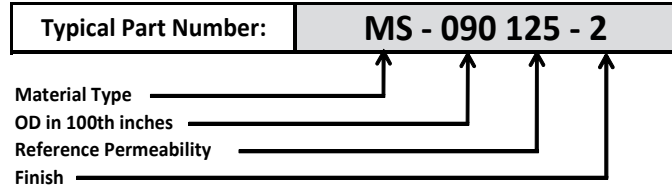
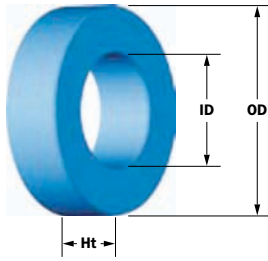
**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	900 Pcs/Box

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
<b>Single Layer</b>	Turns	10	13	17	22	28	35	44	56	70	88	110
	Rdc(Ω)	1.0 m	2.0 m	4.1 m	8.5 m	17.1 m	34.1 m	68.1 m	137.9 m	274.2 m	548.2 m	1.1
<b>Full Winding</b>	Turns	9	14	22	34	53	82	127	197	305	472	731
	Rdc(Ω)	0.9 m	2.1 m	5.3 m	13.1 m	32.4 m	79.8 m	196.7 m	485.2 m	1.2	2.9	7.2





**Physical Dimensions**

OD	Bare Core Nominal	22.86 mm	0.900 in
	Coated Core (max)	23.62 mm	0.930 in
ID	Bare Core Nominal	13.97 mm	0.550 in
	Coated Core (min)	13.39 mm	0.527 in
Ht	Bare Core Nominal	7.62 mm	0.300 in
	Coated Core (max)	8.38 mm	0.330 in

**Magnetic Dimensions**

Ae	Effective Magnetic Cross Section	0.331 cm <sup>2</sup>
Le	Effective Magnetic Path Length	5.67 cm
Ve	Effective Core Volume	1.88 cm <sup>3</sup>
WA	Minimum Effective Window Area	1.41 cm <sup>2</sup>
SA	Surface Area	19.8 cm <sup>2</sup>
MLT	Mean Length Per Turn	3.37 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	9.9	MS-090014-2	MP-090014-2	FS-090014-2	HF-090014-2	OP-090014-2
26μ	19	MS-090026-2	MP-090026-2	FS-090026-2	HF-090026-2	OP-090026-2
40μ	29	MS-090040-2		FS-090040-2		OP-090040-2
60μ	43	MS-090060-2	MP-090060-2	FS-090060-2	HF-090060-2	OP-090060-2
75μ	54	MS-090075-2		FS-090075-2		OP-090075-2
90μ	65	MS-090090-2		FS-090090-2		OP-090090-2
125μ	90	MS-090125-2	MP-090125-2		HF-090125-2	OP-090125-2
147μ	106		MP-090147-2		HF-090147-2	
160μ	115		MP-090160-2		HF-090160-2	
173μ	124		MP-090173-2			
205μ	147		MP-090205-2			
250μ	180		MP-090250-2			
<b>Approx. Unit Weight:</b>		11 g	14 g	12 g	13 g	12 g

**Test Conditions**

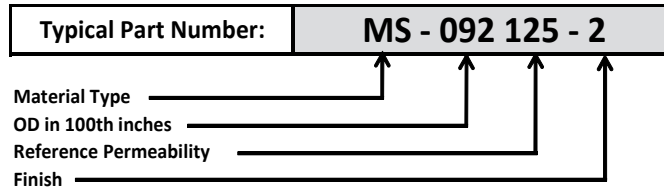
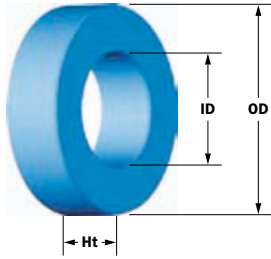
Winding	N=80, #26 AWG
Frequency	10 kHz
Voltage	0.12 V
A <sub>L</sub> Tolerance	±8%

**Coating/Packaging Information**

Coating Type	Blue Epoxy
Voltage Breakdown	1000 Vrms
Limit	0.1 mA, 5 s
Package Quantity	1,210 Pcs/Box (1,089: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	11	15	19	24	31	39	50	62	78	98	123
	Rdc(Ω)	1.2 m	2.6 m	5.3 m	10.6 m	21.8 m	43.7 m	89.1 m	175.8 m	351.6 m	702.7 m	1.4
Full Winding	Turns	11	18	27	42	65	101	157	243	376	581	900
	Rdc(Ω)	1.2 m	3.2 m	7.5 m	18.6 m	45.8 m	113.2 m	279.8 m	688.8 m	1.7	4.2	10.3



**Physical Dimensions**

OD	Bare Core Nominal	23.57 mm	0.928 in
	Coated Core (max)	24.28 mm	0.956 in
ID	Bare Core Nominal	14.4 mm	0.567 in
	Coated Core (min)	13.77 mm	0.542 in
Ht	Bare Core Nominal	8.89 mm	0.350 in
	Coated Core (max)	9.7 mm	0.382 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.388 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	5.88 cm
<b>Ve</b>	Effective Core Volume	2.28 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.49 cm <sup>2</sup>
<b>SA</b>	Surface Area	21.8 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	3.68 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	12	MS-092014-2	MP-092014-2	FS-092014-2	HF-092014-2	OP-092014-2
26μ	22	MS-092026-2	MP-092026-2	FS-092026-2	HF-092026-2	OP-092026-2
40μ	34	MS-092040-2		FS-092040-2		OP-092040-2
60μ	51	MS-092060-2	MP-092060-2	FS-092060-2	HF-092060-2	OP-092060-2
75μ	63	MS-092075-2		FS-092075-2		OP-092075-2
90μ	76	MS-092090-2		FS-092090-2		OP-092090-2
125μ	105	MS-092125-2	MP-092125-2		HF-092125-2	OP-092125-2
147μ	124		MP-092147-2		HF-092147-2	
160μ	135		MP-092160-2		HF-092160-2	
173μ	146		MP-092173-2			
205μ	173		MP-092205-2			
250μ	211		MP-092250-2			
<b>Approx. Unit Weight:</b>		13 g	17 g	15 g	16 g	15 g

**Test Conditions**

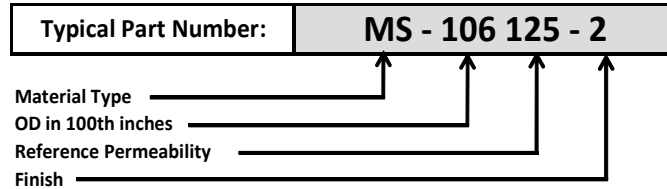
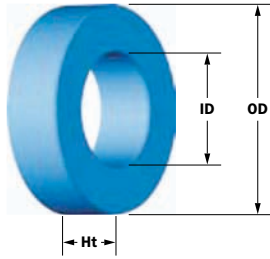
<b>Winding</b>	N=80, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.14 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	1,089 Pcs/Box (968: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Single Layer	Turns	12	15	20	25	32	40	51	64	80	101	126
	Rdc(Ω)	1.4 m	2.9 m	6.1 m	12.1 m	24.6 m	49.0 m	99.3 m	198.2 m	394.0 m	791.0 m	1.6
Full Winding	Turns	12	19	29	45	69	107	166	257	397	615	952
	Rdc(Ω)	1.4 m	3.6 m	8.8 m	21.8 m	53.1 m	131.0 m	323.2 m	795.8 m	2.0	4.8	11.9



**Physical Dimensions**

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.69 mm	1.090 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.99 mm	0.472 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.654 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.35 cm
<b>Ve</b>	Effective Core Volume	4.15 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.56 cm <sup>2</sup>
<b>SA</b>	Surface Area	28.8 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.46 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	18	MS-106014-2	MP-106014-2	FS-106014-2	HF-106014-2	OP-106014-2
26μ	32	MS-106026-2	MP-106026-2	FS-106026-2	HF-106026-2	OP-106026-2
40μ	50	MS-106040-2		FS-106040-2		OP-106040-2
60μ	75	MS-106060-2	MP-106060-2	FS-106060-2	HF-106060-2	OP-106060-2
75μ	94	MS-106075-2		FS-106075-2		OP-106075-2
90μ	113	MS-106090-2		FS-106090-2		OP-106090-2
125μ	157	MS-106125-2	MP-106125-2		HF-106125-2	OP-106125-2
147μ	185		MP-106147-2		HF-106147-2	
160μ	201		MP-106160-2		HF-106160-2	
173μ	217		MP-106173-2			
205μ	257		MP-106205-2			
250μ	314		MP-106250-2			
<b>Approx. Unit Weight:</b>		24 g	31 g	27 g	29 g	28 g

**Test Conditions**

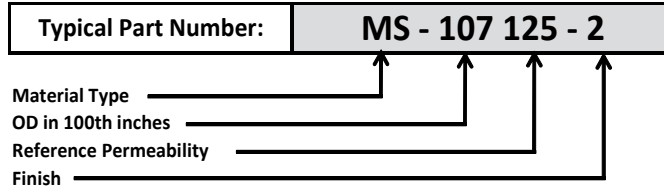
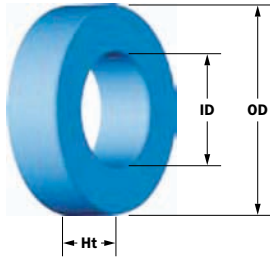
<b>Winding</b>	N=80, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.23 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	600 Pcs/Box (500: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
<b>Single Layer</b>	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	1.8 m	3.7 m	7.4 m	15.3 m	30.8 m	60.9 m	122.8 m	247.8 m	489.7 m	978.2 m	1.9
<b>Full Winding</b>	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	1.9 m	4.6 m	11.1 m	27.6 m	68.1 m	166.3 m	410.8 m	1.0	2.5	6.1	15.1



**Physical Dimensions**

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.69 mm	1.090 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	8.64 mm	0.340 in
	Coated Core (max)	9.45 mm	0.372 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.497 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.35 cm
<b>Ve</b>	Effective Core Volume	3.16 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.56 cm <sup>2</sup>
<b>SA</b>	Surface Area	26.3 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	3.95 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	13.8	MS-107014-2	MP-107014-2	FS-107014-2	HF-107014-2	OP-107014-2
26μ	25.5	MS-107026-2	MP-107026-2	FS-107026-2	HF-107026-2	OP-107026-2
40μ	39	MS-107040-2		FS-107040-2		OP-107040-2
60μ	59	MS-107060-2	MP-107060-2	FS-107060-2	HF-107060-2	OP-107060-2
75μ	73.7	MS-107075-2		FS-107075-2		OP-107075-2
90μ	88.4	MS-107090-2		FS-107090-2		OP-107090-2
125μ	123	MS-107125-2	MP-107125-2		HF-107125-2	OP-107125-2
147μ	145		MP-107147-2		HF-107147-2	
160μ	157		MP-107160-2		HF-107160-2	
173μ	170		MP-107173-2			
205μ	197		MP-107205-2			
250μ	246		MP-107250-2			
<b>Approx. Unit Weight:</b>		18 g	24 g	21 g	22 g	21 g

**Test Conditions**

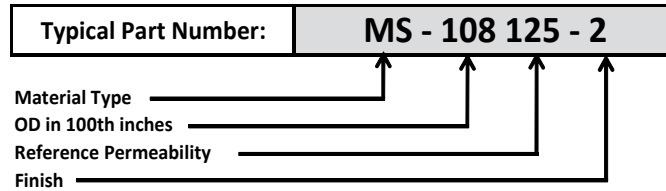
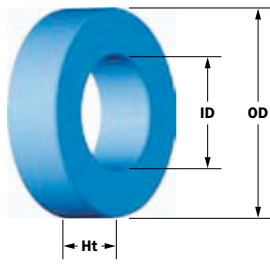
<b>Winding</b>	N=80, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.18 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	900 Pcs/Box (600: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	1.6 m	3.3 m	6.5 m	13.5 m	27.3 m	53.9 m	108.8 m	219.6 m	433.9 m	866.9 m	1.7
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	1.7 m	4.1 m	9.8 m	24.4 m	60.4 m	147.3 m	364.0 m	895.1 m	2.2	5.4	13.4



**Physical Dimensions**

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.81 mm	1.095 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	14 mm	0.551 in
	Coated Core (max)	15 mm	0.591 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.819 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.35 cm
<b>Ve</b>	Effective Core Volume	5.20 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.56 cm <sup>2</sup>
<b>SA</b>	Surface Area	31.9 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.08 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	22	MS-108014-2	MP-108014-2	FS-108014-2	HF-108014-2	OP-108014-2
26μ	40.7	MS-108026-2	MP-108026-2	FS-108026-2	HF-108026-2	OP-108026-2
40μ	62.7	MS-108040-2		FS-108040-2		OP-108040-2
60μ	94	MS-108060-2	MP-108060-2	FS-108060-2	HF-108060-2	OP-108060-2
75μ	117.5	MS-108075-2		FS-108075-2		OP-108075-2
90μ	141	MS-108090-2		FS-108090-2		OP-108090-2
125μ	195.8	MS-108125-2	MP-108125-2		HF-108125-2	OP-108125-2
147μ	230.3		MP-108147-2		HF-108147-2	
160μ	250.6		MP-108160-2		HF-108160-2	
173μ	271		MP-108173-2			
205μ	321		MP-108205-2			
250μ	392					
<b>Approx. Unit Weight:</b>		30 g	39 g	34 g	36 g	35 g

**Test Conditions**

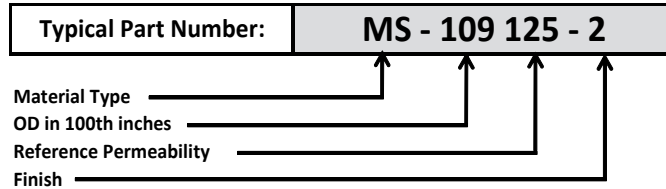
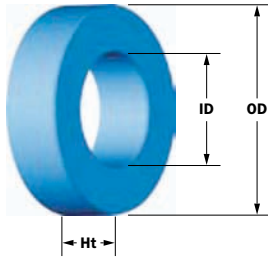
<b>Winding</b>	N=80, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.29 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	500 Pcs/Box (400: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
<b>Single Layer</b>	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	2.0 m	4.2 m	8.4 m	17.4 m	35.0 m	69.2 m	139.7 m	281.9 m	557.1 m	1.1	2.2
<b>Full Winding</b>	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	2.2 m	5.3 m	12.6 m	31.4 m	77.5 m	189.2 m	467.3 m	1.1	2.8	7.0	17.1



**Physical Dimensions**

OD	Bare Core Nominal	26.92 mm	1.060 in
	Coated Core (max)	27.81 mm	1.095 in
ID	Bare Core Nominal	14.73 mm	0.580 in
	Coated Core (min)	14.1 mm	0.555 in
Ht	Bare Core Nominal	18 mm	0.709 in
	Coated Core (max)	19 mm	0.748 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.01 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.35 cm
<b>Ve</b>	Effective Core Volume	6.43 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.56 cm <sup>2</sup>
<b>SA</b>	Surface Area	35.8 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.88 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilly™ Optimized Alloy
14μ	28	MS-109014-2	MP-109014-2	FS-109014-2	HF-109014-2	OP-109014-2
26μ	52	MS-109026-2	MP-109026-2	FS-109026-2	HF-109026-2	OP-109026-2
40μ	80	MS-109040-2		FS-109040-2		OP-109040-2
60μ	120	MS-109060-2	MP-109060-2	FS-109060-2	HF-109060-2	OP-109060-2
75μ	150	MS-109075-2		FS-109075-2		OP-109075-2
90μ	180	MS-109090-2		FS-109090-2		OP-109090-2
125μ	250	MS-109125-2	MP-109125-2		HF-109125-2	OP-109125-2
147μ	294		MP-109147-2		HF-109147-2	
160μ	320		MP-109160-2		HF-109160-2	
173μ	346		MP-109173-2			
205μ	410		MP-109205-2			
250μ	500					
<b>Approx. Unit Weight:</b>		37 g	48 g	42 g	44 g	43 g

**Test Conditions**

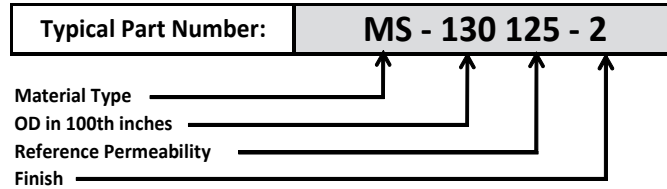
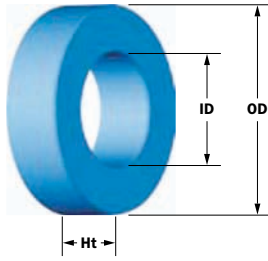
<b>Winding</b>	N=80, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.36 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	1,200 Pcs/Box (900: MP, HF, OP)

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Rdc(Ω)	2.3 m	4.9 m	9.7 m	20.1 m	40.6 m	80.2 m	161.7 m	326.4 m	644.9 m	1.3	2.6
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
	Rdc(Ω)	2.5 m	6.1 m	14.6 m	36.3 m	89.7 m	219.0 m	541.0 m	1.3	3.3	8.1	19.9



**Physical Dimensions**

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	10.67 mm	0.420 in
	Coated Core (max)	11.61 mm	0.457 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.672 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.15 cm
<b>Ve</b>	Effective Core Volume	5.48 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.93 cm <sup>2</sup>
<b>SA</b>	Surface Area	40.1 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.74 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	14	MS-130014-2	MP-130014-2	FS-130014-2	HF-130014-2	OP-130014-2
26μ	28	MS-130026-2	MP-130026-2	FS-130026-2	HF-130026-2	OP-130026-2
40μ	41	MS-130040-2		FS-130040-2		OP-130040-2
60μ	61	MS-130060-2	MP-130060-2	FS-130060-2	HF-130060-2	OP-130060-2
75μ	76	MS-130075-2		FS-130075-2		OP-130075-2
90μ	91	MS-130090-2		FS-130090-2		OP-130090-2
125μ	127	MS-130125-2	MP-130125-2		HF-130125-2	OP-130125-2
147μ	150		MP-130147-2		HF-130147-2	
160μ	163		MP-130160-2		HF-130160-2	
173μ	176		MP-130173-2			
205μ	208		MP-130205-2			
250μ	254					
<b>Approx. Unit Weight:</b>		32 g	41 g	36 g	38 g	36 g

**Test Conditions**

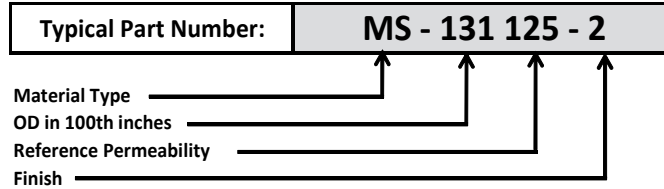
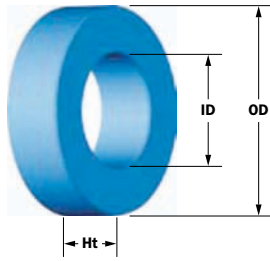
<b>Winding</b>	N=70, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.21 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	576 Pcs/Box (448: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.4 m	2.8 m	5.4 m	11.4 m	22.4 m	45.6 m	91.5 m	183.1 m	363.0 m	723.2 m	1.4
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.5 m	3.7 m	9.1 m	22.3 m	54.9 m	134.9 m	332.8 m	817.6 m	2.0	4.9	12.2



**Physical Dimensions**

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	8.76 mm	0.345 in
	Coated Core (max)	9.7 mm	0.382 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.551 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.15 cm
<b>Ve</b>	Effective Core Volume	4.49 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.93 cm <sup>2</sup>
<b>SA</b>	Surface Area	37.8 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.36 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	11.9	MS-131014-2	MP-131014-2	FS-131014-2	HF-131014-2	OP-131014-2
26μ	22.1	MS-131026-2	MP-131026-2	FS-131026-2	HF-131026-2	OP-131026-2
40μ	34	MS-131040-2		FS-131040-2		OP-131040-2
60μ	51	MS-131060-2	MP-131060-2	FS-131060-2	HF-131060-2	OP-131060-2
75μ	63.8	MS-131075-2		FS-131075-2		OP-131075-2
90μ	76.5	MS-131090-2		FS-131090-2		OP-131090-2
125μ	109	MS-131125-2	MP-131125-2		HF-131125-2	OP-131125-2
147μ	129		MP-131147-2		HF-131147-2	
160μ	136		MP-131160-2		HF-131160-2	
173μ	151		MP-131173-2			
205μ	180		MP-131205-2			
250μ	213					
<b>Approx. Unit Weight:</b>		26 g	33 g	30 g	31 g	30 g

**Test Conditions**

<b>Winding</b>	N=70, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.17 V
<b>A<sub>L</sub> Tolerance</b>	±8%

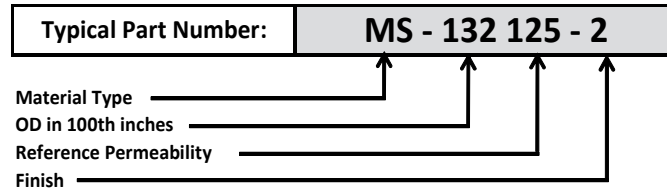
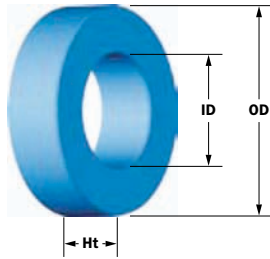
**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	512 Pcs/Box (384: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.3 m	2.6 m	5.0 m	10.5 m	20.6 m	41.9 m	84.1 m	168.3 m	333.7 m	664.9 m	1.3
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.3 m	3.4 m	8.4 m	20.5 m	50.4 m	124.0 m	305.9 m	751.8 m	1.8	4.5	11.2





**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
<b>ID</b>	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
<b>Ht</b>	Bare Core Nominal	11.18 mm	0.440 in
	Coated Core (max)	11.99 mm	0.472 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.698 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.15 cm
<b>Ve</b>	Effective Core Volume	5.69 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.93 cm <sup>2</sup>
<b>SA</b>	Surface Area	40.6 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.82 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	15	MS-132014-2	MP-132014-2	FS-132014-2	HF-132014-2	OP-132014-2
26μ	28	MS-132026-2	MP-132026-2	FS-132026-2	HF-132026-2	OP-132026-2
40μ	43	MS-132040-2		FS-132040-2		OP-132040-2
60μ	65	MS-132060-2	MP-132060-2	FS-132060-2	HF-132060-2	OP-132060-2
75μ	80.8	MS-132075-2		FS-132075-2		OP-132075-2
90μ	96.9	MS-132090-2		FS-132090-2		OP-132090-2
125μ	135	MS-132125-2	MP-132125-2		HF-132125-2	OP-132125-2
147μ	158		MP-132147-2		HF-132147-2	
160μ	172		MP-132160-2		HF-132160-2	
173μ	186		MP-132173-2			
205μ	215		MP-132205-2			
250μ	269					
<b>Approx. Unit Weight:</b>		33 g	42 g	38 g	39 g	38 g

**Test Conditions**

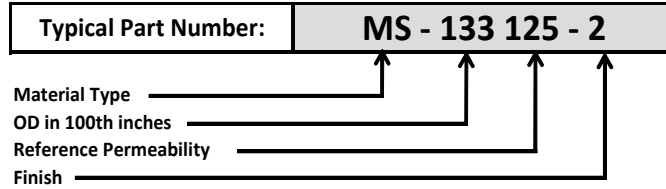
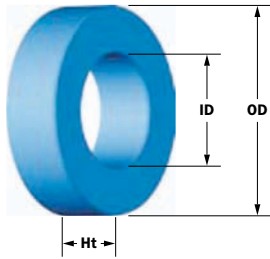
<b>Winding</b>	N=70, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.22 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	448 Pcs/Box (320: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.4 m	2.8 m	5.5 m	11.6 m	22.8 m	46.3 m	92.9 m	186.0 m	368.8 m	734.8 m	1.5
<b>Full Winding</b>	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.5 m	3.8 m	9.3 m	22.7 m	55.7 m	137.0 m	338.1 m	830.8 m	2.0	5.0	12.4



**Physical Dimensions**

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	14 mm	0.551 in
	Coated Core (max)	15 mm	0.591 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.874 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.15 cm
<b>Ve</b>	Effective Core Volume	7.12 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.93 cm <sup>2</sup>
<b>SA</b>	Surface Area	44.3 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.42 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	18.7	MS-133014-2	MP-133014-2	FS-133014-2	HF-133014-2	OP-133014-2
26μ	34.7	MS-133026-2	MP-133026-2	FS-133026-2	HF-133026-2	OP-133026-2
40μ	53.3	MS-133040-2		FS-133040-2		OP-133040-2
60μ	80	MS-133060-2	MP-133060-2	FS-133060-2	HF-133060-2	OP-133060-2
75μ	100	MS-133075-2		FS-133075-2		OP-133075-2
90μ	120	MS-133090-2		FS-133090-2		OP-133090-2
125μ	166.7	MS-133125-2	MP-133125-2		HF-133125-2	OP-133125-2
147μ	196		MP-133147-2		HF-133147-2	
160μ	213		MP-133160-2		HF-133160-2	
173μ	230.7		MP-133173-2			
205μ	266.7		MP-133205-2			
250μ	333					
<b>Approx. Unit Weight:</b>		41 g	53 g	47 g	49 g	47 g

**Test Conditions**

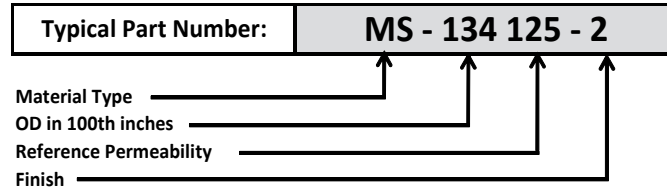
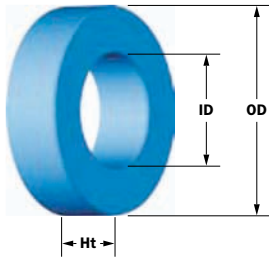
<b>Winding</b>	N=70, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.27 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	384 Pcs/Box (256: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Single Layer	Turns	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.6 m	3.2 m	6.2 m	13.0 m	25.7 m	52.1 m	104.6 m	209.3 m	414.9 m	826.6 m	1.6
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.7 m	4.3 m	10.4 m	25.5 m	62.7 m	154.2 m	380.4 m	934.6 m	2.3	5.7	13.9



**Physical Dimensions**

OD	Bare Core Nominal	33.02 mm	1.300 in
	Coated Core (max)	33.83 mm	1.332 in
ID	Bare Core Nominal	19.94 mm	0.785 in
	Coated Core (min)	19.3 mm	0.760 in
Ht	Bare Core Nominal	18 mm	0.709 in
	Coated Core (max)	19 mm	0.748 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.10 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.15 cm
<b>Ve</b>	Effective Core Volume	8.98 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.93 cm <sup>2</sup>
<b>SA</b>	Surface Area	49.1 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	6.22 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	23.8	MS-134014-2	MP-134014-2	FS-134014-2	HF-134014-2	OP-134014-2
26μ	44	MS-134026-2	MP-134026-2	FS-134026-2	HF-134026-2	OP-134026-2
40μ	68	MS-134040-2		FS-134040-2		OP-134040-2
60μ	102	MS-134060-2	MP-134060-2	FS-134060-2	HF-134060-2	OP-134060-2
75μ	127.5	MS-134075-2		FS-134075-2		OP-134075-2
90μ	153	MS-134090-2		FS-134090-2		OP-134090-2
125μ	214	MS-134125-2	MP-134125-2		HF-134125-2	OP-134125-2
147μ	250		MP-134147-2		HF-134147-2	
160μ	272		MP-134160-2		HF-134160-2	
173μ	294		MP-134173-2			
205μ	340		MP-134205-2			
250μ	424.5					
<b>Approx. Unit Weight:</b>		52 g	67 g	59 g	62 g	60 g

**Test Conditions**

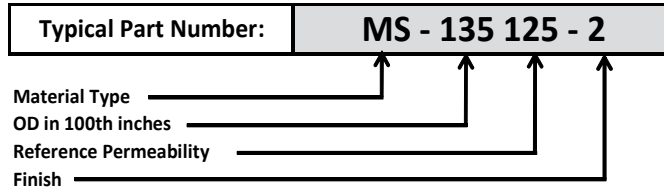
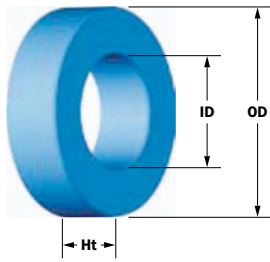
<b>Winding</b>	N=70, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.34 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	320 Pcs/Box (192: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	14	18	22	29	36	46	58	73	91	114	142
	Rdc(Ω)	1.8 m	3.7 m	7.1 m	14.9 m	29.4 m	59.8 m	120.0 m	240.2 m	476.2 m	948.7 m	1.9
<b>Full Winding</b>	Turns	15	24	37	57	88	136	211	326	504	780	1,208
	Rdc(Ω)	1.9 m	4.9 m	12.0 m	29.3 m	72.0 m	176.9 m	436.5 m	1.1	2.6	6.5	16.0



**Physical Dimensions**

OD	Bare Core Nominal	34.29 mm	1.350 in
	Coated Core (max)	35.1 mm	1.382 in
ID	Bare Core Nominal	23.37 mm	0.920 in
	Coated Core (min)	22.56 mm	0.888 in
Ht	Bare Core Nominal	8.89 mm	0.350 in
	Coated Core (max)	9.83 mm	0.387 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.454 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.95 cm
<b>Ve</b>	Effective Core Volume	4.06 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	4.00 cm <sup>2</sup>
<b>SA</b>	Surface Area	41.4 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.35 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	9	MS-135014-2	MP-135014-2	FS-135014-2	HF-135014-2	OP-135014-2
26μ	16	MS-135026-2	MP-135026-2	FS-135026-2	HF-135026-2	OP-135026-2
40μ	25	MS-135040-2		FS-135040-2		OP-135040-2
60μ	38	MS-135060-2	MP-135060-2	FS-135060-2	HF-135060-2	OP-135060-2
75μ	47	MS-135075-2		FS-135075-2		OP-135075-2
90μ	56	MS-135090-2		FS-135090-2		OP-135090-2
125μ	79	MS-135125-2	MP-135125-2		HF-135125-2	OP-135125-2
147μ	93		MP-135147-2		HF-135147-2	
160μ	101		MP-135160-2		HF-135160-2	
173μ	109		MP-135173-2			
205μ	130		MP-135205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		23 g	30 g	27 g	28 g	27 g

**Test Conditions**

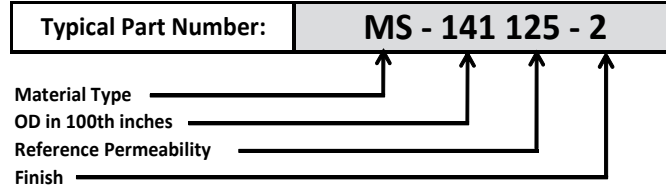
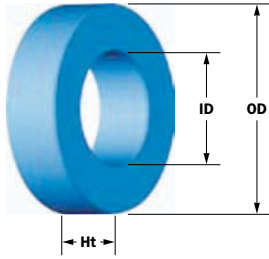
<b>Winding</b>	N=90, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.18 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	441 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	16	21	27	34	43	54	68	85	107	134	167
	Rdc(Ω)	1.4 m	3.0 m	6.1 m	12.2 m	24.6 m	49.1 m	98.4 m	195.6 m	391.5 m	779.8 m	1.5
Full Winding	Turns	21	32	50	78	120	186	288	445	689	1,066	1,651
	Rdc(Ω)	1.9 m	4.5 m	11.3 m	28.1 m	68.6 m	169.2 m	416.6 m	1.0	2.5	6.2	15.3



**Physical Dimensions**

OD	Bare Core Nominal	35.81 mm	1.410 in
	Coated Core (max)	36.63 mm	1.442 in
ID	Bare Core Nominal	22.35 mm	0.880 in
	Coated Core (min)	21.54 mm	0.848 in
Ht	Bare Core Nominal	10.46 mm	0.412 in
	Coated Core (max)	11.28 mm	0.444 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.678 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	8.98 cm
<b>Ve</b>	Effective Core Volume	6.09 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	3.64 cm <sup>2</sup>
<b>SA</b>	Surface Area	45.6 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	4.84 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	13	MS-141014-2	MP-141014-2	FS-141014-2	HF-141014-2	OP-141014-2
26μ	24	MS-141026-2	MP-141026-2	FS-141026-2	HF-141026-2	OP-141026-2
40μ	37	MS-141040-2		FS-141040-2		OP-141040-2
60μ	56	MS-141060-2	MP-141060-2	FS-141060-2	HF-141060-2	OP-141060-2
75μ	70	MS-141075-2		FS-141075-2		OP-141075-2
90μ	84.3	MS-141090-2		FS-141090-2		OP-141090-2
125μ	117	MS-141125-2	MP-141125-2		HF-141125-2	OP-141125-2
147μ	138		MP-141147-2		HF-141147-2	
160μ	150		MP-141160-2		HF-141160-2	
173μ	162		MP-141173-2			
205μ	192		MP-141205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		35 g	45 g	40 g	42 g	40 g

**Test Conditions**

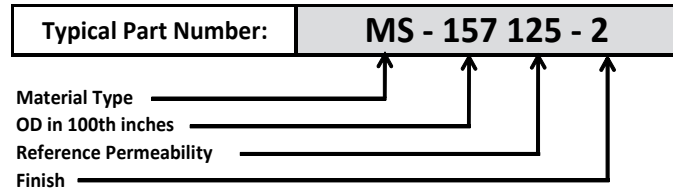
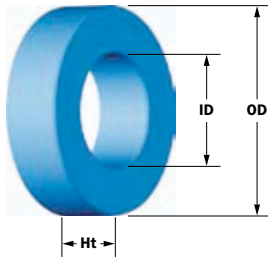
<b>Winding</b>	N=80, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.24 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	343 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	15	20	25	32	41	52	65	81	102	128	159
	Rdc(Ω)	1.5 m	3.2 m	6.3 m	12.8 m	26.1 m	52.7 m	104.7 m	207.5 m	415.6 m	829.5 m	1.6
<b>Full Winding</b>	Turns	19	30	46	71	109	169	262	406	628	972	1,505
	Rdc(Ω)	1.9 m	4.8 m	11.6 m	28.4 m	69.4 m	171.2 m	422.1 m	1.0	2.6	6.3	15.5



**Physical Dimensions**

OD	Bare Core Nominal	39.88 mm	1.570 in
	Coated Core (max)	40.69 mm	1.602 in
ID	Bare Core Nominal	24.13 mm	0.950 in
	Coated Core (min)	23.32 mm	0.918 in
Ht	Bare Core Nominal	14.48 mm	0.570 in
	Coated Core (max)	15.37 mm	0.605 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.07 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	9.85 cm
<b>Ve</b>	Effective Core Volume	10.5 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	4.27 cm <sup>2</sup>
<b>SA</b>	Surface Area	60.2 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.98 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	19	MS-157014-2	MP-157014-2	FS-157014-2	HF-157014-2	OP-157014-2
26μ	35	MS-157026-2	MP-157026-2	FS-157026-2	HF-157026-2	OP-157026-2
40μ	54	MS-157040-2		FS-157040-2		OP-157040-2
60μ	81	MS-157060-2	MP-157060-2	FS-157060-2	HF-157060-2	OP-157060-2
75μ	101	MS-157075-2		FS-157075-2		OP-157075-2
90μ	121	MS-157090-2		FS-157090-2		OP-157090-2
125μ	168	MS-157125-2	MP-157125-2		HF-157125-2	OP-157125-2
147μ	198		MP-157147-2		HF-157147-2	
160μ	215		MP-157160-2		HF-157160-2	
173μ	233		MP-157173-2			
205μ	276		MP-157205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		61 g	79 g	70 g	72 g	70 g

**Test Conditions**

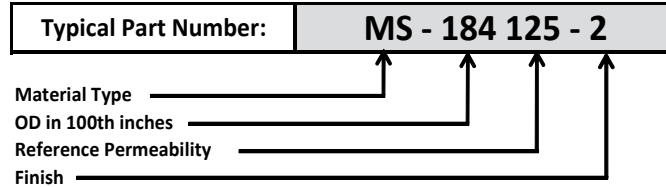
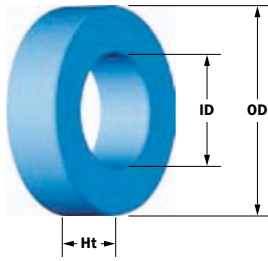
<b>Winding</b>	N=70, #20 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.33 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	216 Pcs/Box (180: MP, HF, OP)

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	17	22	28	35	45	56	70	88	111	138	173
	Rdc(Ω)	2.1 m	4.3 m	8.7 m	17.3 m	35.4 m	70.0 m	139.2 m	278.3 m	558.3 m	1.1	2.2
Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
	Rdc(Ω)	2.7 m	6.8 m	16.8 m	41.0 m	100.6 m	248.8 m	610.5 m	1.5	3.7	9.1	22.4



**Physical Dimensions**

OD	Bare Core Nominal	46.74 mm	1.840 in
	Coated Core (max)	47.63 mm	1.875 in
ID	Bare Core Nominal	24.13 mm	0.950 in
	Coated Core (min)	23.32 mm	0.918 in
Ht	Bare Core Nominal	18.03 mm	0.710 in
	Coated Core (max)	18.92 mm	0.745 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.99 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	10.743 cm
<b>Ve</b>	Effective Core Volume	21.4 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	4.27 cm <sup>2</sup>
<b>SA</b>	Surface Area	81.7 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	7.38 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	32	MS-184014-2	MP-184014-2	FS-184014-2	HF-184014-2	OP-184014-2
26μ	59	MS-184026-2	MP-184026-2	FS-184026-2	HF-184026-2	OP-184026-2
40μ	90	MS-184040-2		FS-184040-2		OP-184040-2
60μ	135	MS-184060-2	MP-184060-2	FS-184060-2	HF-184060-2	OP-184060-2
75μ	169	MS-184075-2		FS-184075-2		OP-184075-2
90μ	202	MS-184090-2		FS-184090-2		OP-184090-2
125μ	281	MS-184125-2	MP-184125-2		HF-184125-2	OP-184125-2
147μ	330		MP-184147-2		HF-184147-2	
160μ	360		MP-184160-2		HF-184160-2	
173μ	390		MP-184173-2			
205μ	462		MP-184205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		120 g	160 g	140 g	150 g	140 g

**Test Conditions**

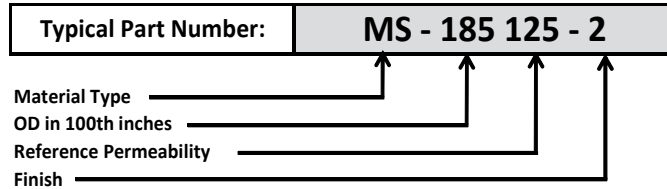
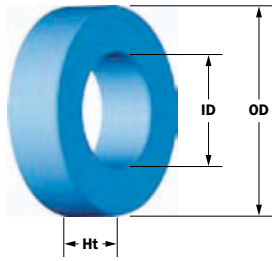
<b>Winding</b>	N=70, #20 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.62 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	100 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	17	22	28	35	45	56	70	88	111	138	173
	Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.4 m	43.7 m	86.5 m	171.9 m	343.7 m	689.5 m	1.4	2.7
<b>Full Winding</b>	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
	Rdc(Ω)	3.3 m	8.4 m	20.7 m	50.7 m	124.3 m	307.3 m	753.9 m	1.9	4.6	11.3	27.7



**Physical Dimensions**

OD	Bare Core Nominal	46.74 mm	1.840 in
	Coated Core (max)	47.63 mm	1.875 in
ID	Bare Core Nominal	28.7 mm	1.130 in
	Coated Core (min)	27.89 mm	1.098 in
Ht	Bare Core Nominal	15.24 mm	0.600 in
	Coated Core (max)	16.13 mm	0.635 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.34 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	11.62 cm
<b>Ve</b>	Effective Core Volume	15.6 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	6.11 cm <sup>2</sup>
<b>SA</b>	Surface Area	79.6 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	6.59 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	20	MS-185014-2	MP-185014-2	FS-185014-2	HF-185014-2	OP-185014-2
26μ	37	MS-185026-2	MP-185026-2	FS-185026-2	HF-185026-2	OP-185026-2
40μ	57	MS-185040-2		FS-185040-2		OP-185040-2
60μ	86	MS-185060-2	MP-185060-2	FS-185060-2	HF-185060-2	OP-185060-2
75μ	107	MS-185075-2		FS-185075-2		OP-185075-2
90μ	128	MS-185090-2		FS-185090-2		OP-185090-2
125μ	178	MS-185125-2	MP-185125-2		HF-185125-2	OP-185125-2
147μ	210		MP-185147-2		HF-185147-2	
160μ	228		MP-185160-2		HF-185160-2	
173μ	246		MP-185173-2			
205μ	292		MP-185205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		90 g	120 g	100 g	110 g	100 g

**Test Conditions**

<b>Winding</b>	N=80, #20 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.48 V
<b>A<sub>L</sub> Tolerance</b>	±8%

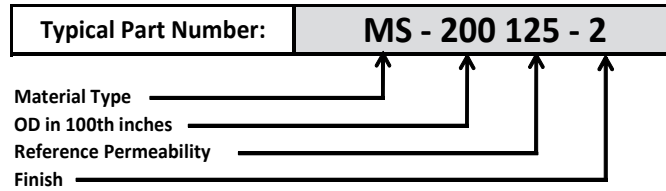
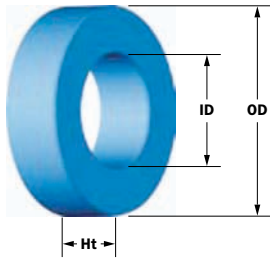
**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	125 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	21	27	34	43	54	68	85	106	133	166	207
	Rdc(Ω)	2.8 m	5.8 m	11.7 m	23.5 m	46.8 m	93.8 m	186.5 m	369.9 m	738.1 m	1.5	2.9
<b>Full Winding</b>	Turns	32	49	77	119	184	284	440	680	1,053	1,630	2,523
	Rdc(Ω)	4.3 m	10.6 m	26.4 m	64.9 m	159.6 m	391.8 m	965.4 m	2.4	5.8	14.4	35.4





**Physical Dimensions**

OD	Bare Core Nominal	50.8 mm	2.000 in
	Coated Core (max)	51.69 mm	2.035 in
ID	Bare Core Nominal	31.75 mm	1.250 in
	Coated Core (min)	30.94 mm	1.218 in
Ht	Bare Core Nominal	13.46 mm	0.530 in
	Coated Core (max)	14.35 mm	0.565 in

**Magnetic Dimensions**

Ae	Effective Magnetic Cross Section	1.25 cm <sup>2</sup>
Le	Effective Magnetic Path Length	12.733 cm
Ve	Effective Core Volume	15.9 cm <sup>3</sup>
WA	Minimum Effective Window Area	7.52 cm <sup>2</sup>
SA	Surface Area	88.2 cm <sup>2</sup>
MLT	Mean Length Per Turn	6.49 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	17	MS-200014-2	MP-200014-2	FS-200014-2	HF-200014-2	OP-200014-2
26μ	32	MS-200026-2	MP-200026-2	FS-200026-2	HF-200026-2	OP-200026-2
40μ	49	MS-200040-2		FS-200040-2		OP-200040-2
60μ	73	MS-200060-2	MP-200060-2	FS-200060-2	HF-200060-2	OP-200060-2
75μ	91	MS-200075-2		FS-200075-2		OP-200075-2
90μ	109	MS-200090-2		FS-200090-2		OP-200090-2
125μ	152	MS-200125-2	MP-200125-2		HF-200125-2	OP-200125-2
147μ	179		MP-200147-2		HF-200147-2	
160μ	195		MP-200160-2		HF-200160-2	
173μ	210		MP-200173-2			
205μ	249		MP-200205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		92 g	120 g	110 g	110 g	110 g

**Test Conditions**

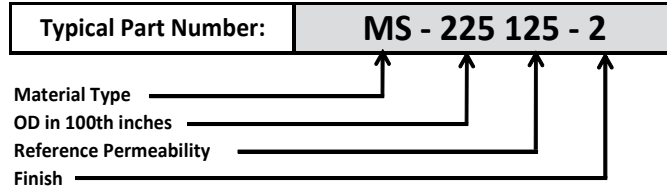
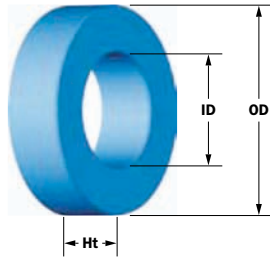
<b>Winding</b>	N=70, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.39 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	125 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Single Layer	Turns	23	30	38	48	60	75	94	118	148	184	230
	Rdc(Ω)	3.1 m	6.4 m	12.8 m	25.8 m	51.2 m	101.9 m	203.0 m	405.4 m	808.6 m	1.6	3.2
Full Winding	Turns	39	61	94	146	226	350	541	837	1,296	2,006	3,104
	Rdc(Ω)	5.2 m	12.9 m	31.7 m	78.4 m	193.0 m	475.3 m	1.2	2.9	7.1	17.4	42.9



**Physical Dimensions**

OD	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (max)	58.04 mm	2.285 in
ID	Bare Core Nominal	35.56 mm	1.400 in
	Coated Core (min)	34.75 mm	1.368 in
Ht	Bare Core Nominal	13.97 mm	0.550 in
	Coated Core (max)	14.86 mm	0.585 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.44 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	14.296 cm
<b>Ve</b>	Effective Core Volume	20.7 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	9.48 cm <sup>2</sup>
<b>SA</b>	Surface Area	109 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	7.04 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	18	MS-225014-2	MP-225014-2	FS-225014-2	HF-225014-2	OP-225014-2
26μ	33	MS-225026-2	MP-225026-2	FS-225026-2	HF-225026-2	OP-225026-2
40μ	50	MS-225040-2		FS-225040-2		OP-225040-2
60μ	75	MS-225060-2	MP-225060-2	FS-225060-2	HF-225060-2	OP-225060-2
75μ	94	MS-225075-2		FS-225075-2		OP-225075-2
90μ	112	MS-225090-2		FS-225090-2		OP-225090-2
125μ	156	MS-225125-2	MP-225125-2		HF-225125-2	OP-225125-2
147μ	185		MP-225147-2		HF-225147-2	
160μ	200		MP-225160-2		HF-225160-2	
173μ	218		MP-225173-2			
205μ	259		MP-225205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		120 g	150 g	140 g	140 g	140 g

**Test Conditions**

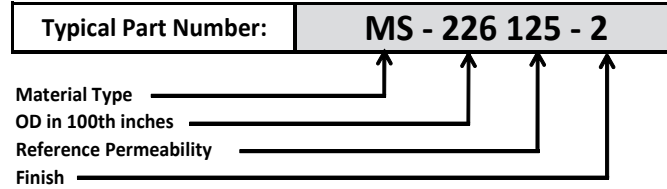
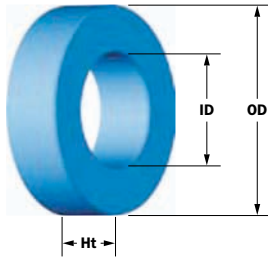
<b>Winding</b>	N=80, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.51 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	80 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	27	34	43	54	68	85	106	133	166	207	259
	Rdc(Ω)	3.9 m	7.8 m	15.7 m	31.4 m	63.0 m	125.2 m	248.2 m	495.3 m	983.2 m	1.9	3.9
Full Winding	Turns	50	77	119	184	285	441	682	1,056	1,635	2,530	3,916
	Rdc(Ω)	7.2 m	17.7 m	43.6 m	107.1 m	263.9 m	649.4 m	1.6	3.9	9.7	23.8	58.7



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (max)	58.04 mm	2.285 in
<b>ID</b>	Bare Core Nominal	26.39 mm	1.039 in
	Coated Core (min)	25.58 mm	1.007 in
<b>Ht</b>	Bare Core Nominal	15.24 mm	0.600 in
	Coated Core (max)	16.13 mm	0.635 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	2.29 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	12.506 cm
<b>Ve</b>	Effective Core Volume	28.6 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	5.14 cm <sup>2</sup>
<b>SA</b>	Surface Area	105 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	7.75 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	32	MS-226014-2	MP-226014-2	FS-226014-2	HF-226014-2	OP-226014-2
26μ	60	MS-226026-2	MP-226026-2	FS-226026-2	HF-226026-2	OP-226026-2
40μ	92	MS-226040-2		FS-226040-2		OP-226040-2
60μ	138	MS-226060-2	MP-226060-2	FS-226060-2	HF-226060-2	OP-226060-2
75μ	172	MS-226075-2		FS-226075-2		OP-226075-2
90μ	207	MS-226090-2		FS-226090-2		OP-226090-2
125μ	287	MS-226125-2	MP-226125-2		HF-226125-2	OP-226125-2
147μ	338		MP-226147-2		HF-226147-2	
160μ	368		MP-226160-2		HF-226160-2	
173μ	398		MP-226173-2			
205μ	460		MP-226205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		170 g	210 g	190 g	200 g	190 g

**Test Conditions**

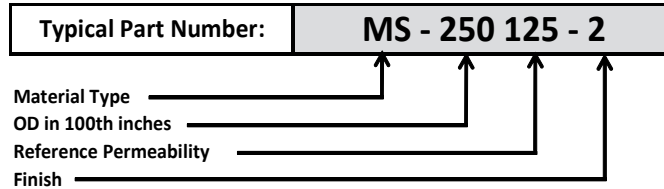
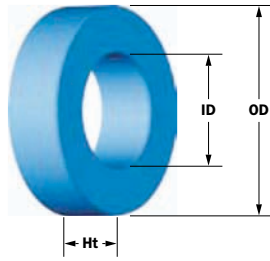
<b>Winding</b>	N=60, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.61 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	80 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	19	24	31	39	49	62	78	97	122	152	190
	Rdc(Ω)	3.0 m	6.1 m	12.5 m	25.0 m	50.0 m	100.5 m	201.2 m	397.8 m	795.8 m	1.6	3.1
<b>Full Winding</b>	Turns	27	42	64	100	154	239	370	572	886	1,371	2,122
	Rdc(Ω)	4.3 m	10.6 m	25.8 m	64.1 m	157.0 m	387.5 m	954.2 m	2.3	5.8	14.2	35.0



**Physical Dimensions**

OD	Bare Core Nominal	63.5 mm	2.500 in
	Coated Core (max)	64.77 mm	2.550 in
ID	Bare Core Nominal	31.37 mm	1.235 in
	Coated Core (min)	30.48 mm	1.200 in
Ht	Bare Core Nominal	25 mm	0.984 in
	Coated Core (max)	25.9 mm	1.020 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	3.89 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	14.314 cm
<b>Ve</b>	Effective Core Volume	55.8 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	7.73 cm <sup>2</sup>
<b>SA</b>	Surface Area	150 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	10.1 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	48	MS-250014-2	MP-250014-2	FS-250014-2	HF-250014-2	OP-250014-2
26μ	89	MS-250026-2	MP-250026-2	FS-250026-2	HF-250026-2	OP-250026-2
40μ	137	MS-250040-2		FS-250040-2		OP-250040-2
60μ	206	MS-250060-2	MP-250060-2	FS-250060-2	HF-250060-2	OP-250060-2
75μ	258	MS-250075-2		FS-250075-2		OP-250075-2
90μ	310	MS-250090-2		FS-250090-2		OP-250090-2
125μ	430	MS-250125-2	MP-250125-2		HF-250125-2	OP-250125-2
147μ	506		MP-250147-2		HF-250147-2	
160μ	550		MP-250160-2		HF-250160-2	
173μ	N/A		MP-250173-2			
205μ	705		MP-250205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		320 g	420 g	370 g	380 g	370 g

**Test Conditions**

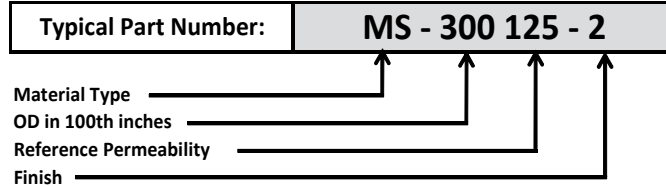
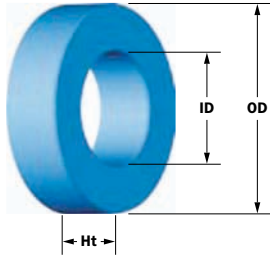
<b>Winding</b>	N=100, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.7 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	64 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	23	29	37	47	59	74	93	116	145	182	227
	Rdc(Ω)	4.8 m	9.6 m	19.5 m	39.4 m	78.6 m	156.9 m	313.5 m	622.0 m	1.2	2.5	4.9
Full Winding	Turns	38	59	91	142	219	339	525	813	1,258	1,947	3,013
	Rdc(Ω)	7.9 m	19.6 m	48.0 m	119.0 m	291.9 m	718.6 m	1.8	4.4	10.7	26.4	65.0



**Physical Dimensions**

OD	Bare Core Nominal	77.8 mm	3.063 in
	Coated Core (max)	78.94 mm	3.108 in
ID	Bare Core Nominal	49.23 mm	1.938 in
	Coated Core (min)	47.96 mm	1.888 in
Ht	Bare Core Nominal	12.7 mm	0.500 in
	Coated Core (max)	13.97 mm	0.550 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.77 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	19.612 cm
<b>Ve</b>	Effective Core Volume	34.8 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	18.1 cm <sup>2</sup>
<b>SA</b>	Surface Area	184 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	8.29 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	16	MS-300014-2	MP-300014-2	FS-300014-2	HF-300014-2	OP-300014-2
26μ	30	MS-300026-2	MP-300026-2	FS-300026-2	HF-300026-2	OP-300026-2
40μ	45	MS-300040-2		FS-300040-2		OP-300040-2
60μ	68	MS-300060-2	MP-300060-2	FS-300060-2	HF-300060-2	OP-300060-2
75μ	85	MS-300075-2		FS-300075-2		OP-300075-2
90μ	102	MS-300090-2		FS-300090-2		OP-300090-2
125μ	142	MS-300125-2	MP-300125-2		HF-300125-2	OP-300125-2
147μ	167		MP-300147-2		HF-300147-2	
160μ	182		MP-300160-2		HF-300160-2	
173μ	197		MP-300173-2			
205μ	233		MP-300205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		200 g	260 g	230 g	240 g	230 g

**Test Conditions**

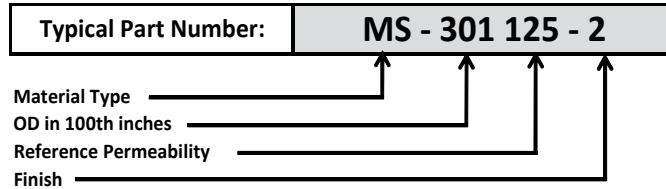
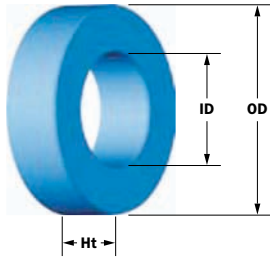
<b>Winding</b>	N=120, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.94 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	45 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	38	48	60	75	95	118	148	185	230	287	358
	Rdc(Ω)	6.5 m	13.0 m	25.9 m	51.4 m	103.6 m	204.6 m	408.2 m	811.5 m	1.6	3.2	6.3
<b>Full Winding</b>	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
	Rdc(Ω)	16.2 m	39.6 m	97.9 m	240.7 m	592.1 m	1.5	3.6	8.8	21.7	53.5	131.6



**Physical Dimensions**

OD	Bare Core Nominal	77.8 mm	3.063 in
	Coated Core (max)	78.94 mm	3.108 in
ID	Bare Core Nominal	49.23 mm	1.938 in
	Coated Core (min)	47.96 mm	1.888 in
Ht	Bare Core Nominal	15.88 mm	0.625 in
	Coated Core (max)	17.15 mm	0.675 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	2.22 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	19.612 cm
<b>Ve</b>	Effective Core Volume	43.5 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	18.1 cm <sup>2</sup>
<b>SA</b>	Surface Area	193 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	8.93 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilly™ Optimized Alloy
14μ	19.9	MS-301014-2	MP-301014-2	FS-301014-2	HF-301014-2	OP-301014-2
26μ	37	MS-301026-2	MP-301026-2	FS-301026-2	HF-301026-2	OP-301026-2
40μ	57	MS-301040-2		FS-301040-2		OP-301040-2
60μ	85	MS-301060-2	MP-301060-2	FS-301060-2	HF-301060-2	OP-301060-2
75μ	107	MS-301075-2		FS-301075-2		OP-301075-2
90μ	128	MS-301090-2		FS-301090-2		OP-301090-2
125μ	178	MS-301125-2	MP-301125-2		HF-301125-2	OP-301125-2
147μ	209		MP-301147-2		HF-301147-2	
160μ	228		MP-301160-2		HF-301160-2	
173μ	246		MP-301173-2			
205μ	284		MP-301205-2			
250μ	N/A					
<b>Approx. Unit Weight:</b>		250 g	320 g	290 g	300 g	290 g

**Test Conditions**

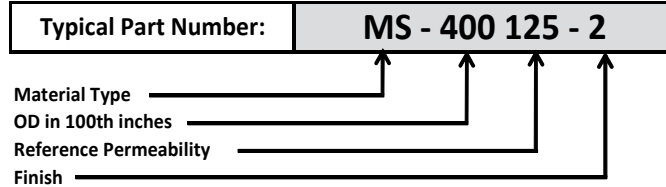
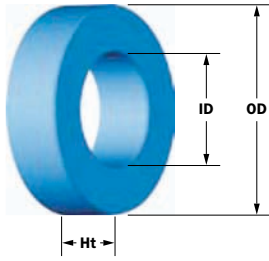
<b>Winding</b>	N=120, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.2 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	45 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	38	48	60	75	95	118	148	185	230	287	358
	Rdc(Ω)	7.0 m	14.0 m	27.9 m	55.4 m	111.5 m	220.3 m	439.5 m	873.8 m	1.7	3.4	6.8
Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
	Rdc(Ω)	17.4 m	42.6 m	105.4 m	259.1 m	637.6 m	1.6	3.9	9.5	23.4	57.6	141.7



**Physical Dimensions**

OD	Bare Core Nominal	101.6 mm	4.000 in
	Coated Core (max)	102.87 mm	4.050 in
ID	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (min)	55.75 mm	2.195 in
Ht	Bare Core Nominal	16.51 mm	0.650 in
	Coated Core (max)	17.78 mm	0.700 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	3.52 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	24.271 cm
<b>Ve</b>	Effective Core Volume	85.5 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	24.4 cm <sup>2</sup>
<b>SA</b>	Surface Area	303 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	11.1 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	25.6	MS-400014-2	MP-400014-2	FS-400014-2	HF-400014-2	OP-400014-2
26μ	47.4	MS-400026-2	MP-400026-2	FS-400026-2	HF-400026-2	OP-400026-2
40μ	75	MS-400040-2		FS-400040-2		OP-400040-2
60μ	112	MS-400060-2	MP-400060-2	FS-400060-2	HF-400060-2	OP-400060-2
75μ	137	MS-400075-2		FS-400075-2		OP-400075-2
90μ	164	MS-400090-2		FS-400090-2		OP-400090-2
125μ	228	MS-400125-2	MP-400125-2		HF-400125-2	OP-400125-2
147μ	268		MP-400147-2		HF-400147-2	
160μ	282		MP-400160-2			
173μ	316		MP-400173-2			
205μ	374					
250μ	N/A					
<b>Approx. Unit Weight:</b>		490 g	640 g	560 g	590 g	570 g

**Test Conditions**

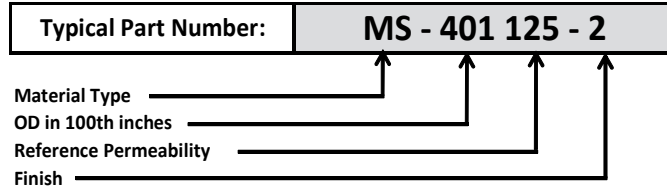
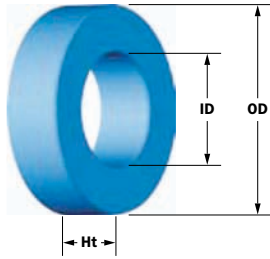
<b>Winding</b>	N=140, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	2.2 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	16 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Single Layer	Turns	44	56	70	88	110	138	172	215	268	335	417
	Rdc(Ω)	10.0 m	20.2 m	40.2 m	80.5 m	160.0 m	319.2 m	632.7 m	1.3	2.5	5.0	9.8
Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079
	Rdc(Ω)	29.1 m	71.6 m	175.9 m	433.4 m	1.1	2.6	6.5	15.9	39.1	96.4	237.2



**Physical Dimensions**

OD	Bare Core Nominal	101.6 mm	4.000 in
	Coated Core (max)	102.87 mm	4.050 in
ID	Bare Core Nominal	57.15 mm	2.250 in
	Coated Core (min)	55.75 mm	2.195 in
Ht	Bare Core Nominal	13.59 mm	0.535 in
	Coated Core (max)	14.86 mm	0.585 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	2.97 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	24.271 cm
<b>Ve</b>	Effective Core Volume	72.1 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	24.4 cm <sup>2</sup>
<b>SA</b>	Surface Area	293 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	10.5 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	21.5	MS-401014-2	MP-401014-2	FS-401014-2	HF-401014-2	OP-401014-2
26μ	40	MS-401026-2	MP-401026-2	FS-401026-2	HF-401026-2	OP-401026-2
40μ	62	MS-401040-2		FS-401040-2		OP-401040-2
60μ	92.3	MS-401060-2	MP-401060-2	FS-401060-2	HF-401060-2	OP-401060-2
75μ	115	MS-401075-2		FS-401075-2		OP-401075-2
90μ	139	MS-401090-2		FS-401090-2		OP-401090-2
125μ	192	MS-401125-2	MP-401125-2		HF-401125-2	OP-401125-2
147μ	226		MP-401147-2		HF-401147-2	
160μ	246		MP-401160-2			
173μ	266		MP-401173-2			
205μ	N/A					
250μ	N/A					
<b>Approx. Unit Weight:</b>		420 g	540 g	480 g	500 g	480 g

**Test Conditions**

<b>Winding</b>	N=140, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.8 V
<b>A<sub>L</sub> Tolerance</b>	±8%

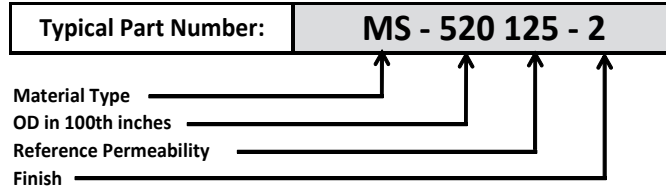
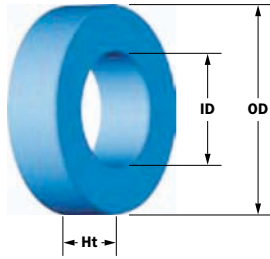
**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	16 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Single Layer	Turns	44	56	70	88	110	138	172	215	268	335	417
	Rdc(Ω)	9.5 m	19.2 m	38.1 m	76.2 m	151.5 m	302.3 m	599.2 m	1.2	2.4	4.7	9.3
Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079
	Rdc(Ω)	27.6 m	67.8 m	166.6 m	410.5 m	1.0	2.5	6.1	15.1	37.1	91.3	224.6





**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	132.54 mm	5.218 in
	Coated Core (max)	134.21 mm	5.284 in
<b>ID</b>	Bare Core Nominal	78.59 mm	3.094 in
	Coated Core (min)	77.04 mm	3.033 in
<b>Ht</b>	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.72 mm	0.855 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	5.35 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	32.429 cm
<b>Ve</b>	Effective Core Volume	173 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	46.6 cm <sup>2</sup>
<b>SA</b>	Surface Area	515 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	13.9 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	26	MS-520014-2	MP-520014-2	FS-520014-2	HF-520014-2	OP-520014-2
26μ	54	MS-520026-2	MP-520026-2	FS-520026-2	HF-520026-2	OP-520026-2
40μ	83	MS-520040-2		FS-520040-2		OP-520040-2
60μ	124	MS-520060-2	MP-520060-2	FS-520060-2	HF-520060-2	OP-520060-2
75μ	155	MS-520075-2		FS-520075-2		OP-520075-2
90μ	187	MS-520090-2		FS-520090-2		OP-520090-2
125μ	259	MS-520125-2	MP-520125-2		HF-520125-2	OP-520125-2
147μ	304		MP-520147-2		HF-520147-2	
160μ	332		MP-520160-2			
173μ	358		MP-520173-2			
205μ	N/A					
250μ	N/A					
<b>Approx. Unit Weight:</b>		1,000 g	1,290 g	1,140 g	1,190 g	1,150 g

**Test Conditions**

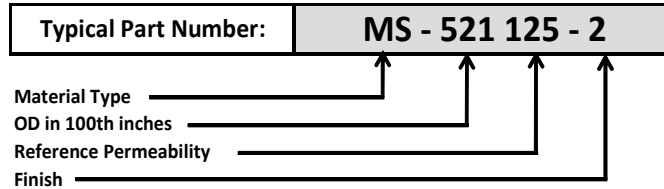
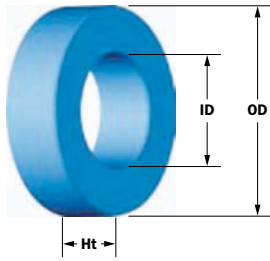
<b>Winding</b>	N=200, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	4.7 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	6 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	62	78	98	123	154	192	239	298	372	463	577
	Rdc(Ω)	17.7 m	35.5 m	70.9 m	141.5 m	281.8 m	558.8 m	1.1	2.2	4.4	8.6	17.1
<b>Full Winding</b>	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248
	Rdc(Ω)	69.8 m	172.0 m	422.6 m	1.0	2.6	6.3	15.5	38.2	94.1	231.6	570.0



**Physical Dimensions**

OD	Bare Core Nominal	132.54 mm	5.218 in
	Coated Core (max)	134.21 mm	5.284 in
ID	Bare Core Nominal	78.59 mm	3.094 in
	Coated Core (min)	77.04 mm	3.033 in
Ht	Bare Core Nominal	25.4 mm	1.000 in
	Coated Core (max)	26.8 mm	1.055 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	6.71 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	32.429 cm
<b>Ve</b>	Effective Core Volume	218 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	46.6 cm <sup>2</sup>
<b>SA</b>	Surface Area	540 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	14.9 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	36.4	MS-521014-2	MP-521014-2	FS-521014-2	HF-521014-2	OP-521014-2
26μ	67.6	MS-521026-2	MP-521026-2	FS-521026-2	HF-521026-2	OP-521026-2
40μ	104	MS-521040-2		FS-521040-2		OP-521040-2
60μ	156	MS-521060-2	MP-521060-2	FS-521060-2	HF-521060-2	OP-521060-2
75μ	195	MS-521075-2		FS-521075-2		OP-521075-2
90μ	234	MS-521090-2		FS-521090-2		OP-521090-2
125μ	325	MS-521125-2	MP-521125-2		HF-521125-2	OP-521125-2
147μ	382		MP-521147-2		HF-521147-2	
160μ	416		MP-521160-2			
173μ	450		MP-521173-2			
205μ	N/A					
250μ	N/A					
<b>Approx. Unit Weight:</b>		1,260 g	1,620 g	1,440 g	1,490 g	1,440 g

**Test Conditions**

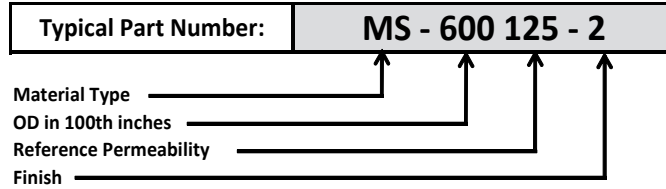
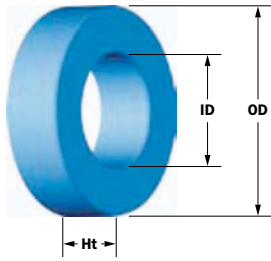
<b>Winding</b>	N=200, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	6.0 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	6 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	62	78	98	123	154	192	239	298	372	463	577
	Rdc(Ω)	19.0 m	38.1 m	76.1 m	151.9 m	302.4 m	599.6 m	1.2	2.4	4.7	9.3	18.3
<b>Full Winding</b>	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248
	Rdc(Ω)	74.9 m	184.5 m	453.4 m	1.1	2.7	6.8	16.7	41.0	100.9	248.5	611.6



**Physical Dimensions**

<b>OD</b>	Bare Core Nominal	152.4 mm	6.000 in
	Coated Core (max)	153.9 mm	6.059 in
<b>ID</b>	Bare Core Nominal	81.28 mm	3.200 in
	Coated Core (min)	79.65 mm	3.136 in
<b>Ht</b>	Bare Core Nominal	20.32 mm	0.800 in
	Coated Core (max)	21.72 mm	0.855 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	7.05 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	35.97 cm
<b>Ve</b>	Effective Core Volume	253 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	49.8 cm <sup>2</sup>
<b>SA</b>	Surface Area	646 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	15.8 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	35.3	MS-600014-2	MP-600014-2	FS-600014-2	HF-600014-2	OP-600014-2
26μ	66	MS-600026-2	MP-600026-2	FS-600026-2	HF-600026-2	OP-600026-2
40μ	102	MS-600040-2		FS-600040-2		OP-600040-2
60μ	152.5	MS-600060-2	MP-600060-2	FS-600060-2	HF-600060-2	OP-600060-2
75μ	190.5	MS-600075-2		FS-600075-2		OP-600075-2
90μ	229	MS-600090-2		FS-600090-2		OP-600090-2
125μ	318	MS-600125-2	MP-600125-2		HF-600125-2	OP-600125-2
147μ	374		MP-600147-2		HF-600147-2	
160μ	407		MP-600160-2			
173μ	440		MP-600173-2			
205μ	N/A					
250μ	N/A					
<b>Approx. Unit Weight:</b>		1,460 g	1,890 g	1,670 g	1,740 g	1,680 g

**Test Conditions**

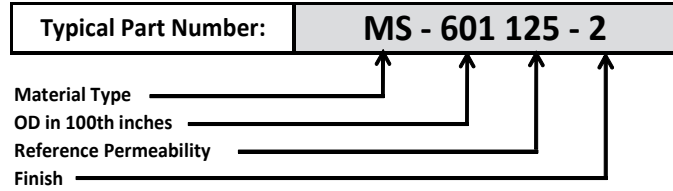
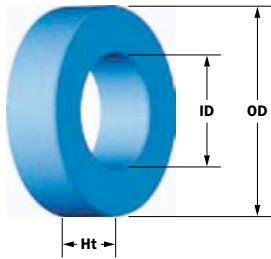
<b>Winding</b>	N=200, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	6.3 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	6 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	65	81	102	127	159	198	247	309	385	479	597
	Rdc(Ω)	21.1 m	41.7 m	83.6 m	165.5 m	329.4 m	652.5 m	1.3	2.6	5.1	10.1	20.0
<b>Full Winding</b>	Turns	261	404	625	967	1,497	2,316	3,585	5,549	8,589	13,293	20,574
	Rdc(Ω)	84.5 m	208.1 m	512.0 m	1.3	3.1	7.6	18.8	46.2	113.9	280.2	689.8



**Physical Dimensions**

OD	Bare Core Nominal	152.4 mm	6.000 in
	Coated Core (max)	153.9 mm	6.059 in
ID	Bare Core Nominal	81.28 mm	3.200 in
	Coated Core (min)	79.65 mm	3.136 in
Ht	Bare Core Nominal	25.4 mm	1.000 in
	Coated Core (max)	26.8 mm	1.055 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	8.81 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	35.97 cm
<b>Ve</b>	Effective Core Volume	317 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	49.8 cm <sup>2</sup>
<b>SA</b>	Surface Area	674 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	16.8 cm

**Permeability Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	MPP Molypermalloy	FluxSan™ Silicon Iron	Hi-Flux™ Nickel Iron	Optilloy™ Optimized Alloy
14μ	44.5	MS-601014-2	MP-601014-2	FS-601014-2	HF-601014-2	OP-601014-2
26μ	82.5	MS-601026-2	MP-601026-2	FS-601026-2	HF-601026-2	OP-601026-2
40μ	127	MS-601040-2		FS-601040-2		OP-601040-2
60μ	190.5	MS-601060-2	MP-601060-2	FS-601060-2	HF-601060-2	OP-601060-2
75μ	238	MS-601075-2		FS-601075-2		OP-601075-2
90μ	286	MS-601090-2		FS-601090-2		OP-601090-2
125μ	397	MS-601125-2	MP-601125-2		HF-601125-2	OP-601125-2
147μ	466.5		MP-601147-2		HF-601147-2	
160μ	508		MP-601160-2			
173μ	549		MP-601173-2			
205μ	N/A					
250μ	N/A					
<b>Approx. Unit Weight:</b>		1,830 g	2,360 g	2,090 g	2,180 g	2,100 g

**Test Conditions**

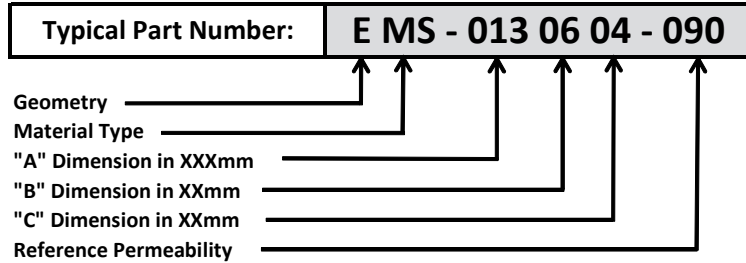
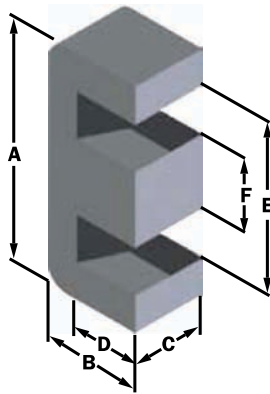
<b>Winding</b>	N=200, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	7.8 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	Blue Epoxy
<b>Voltage Breakdown</b>	1000 Vrms
<b>Limit</b>	0.1 mA, 5 s
<b>Package Quantity</b>	6 Pcs/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Single Layer</b>	Turns	65	81	102	127	159	198	247	309	385	479	597
	Rdc(Ω)	22.4 m	44.4 m	88.9 m	176.1 m	350.7 m	694.5 m	1.4	2.7	5.4	10.7	21.3
<b>Full Winding</b>	Turns	261	404	625	967	1,497	2,316	3,585	5,549	8,589	13,293	20,574
	Rdc(Ω)	90.0 m	221.5 m	545.0 m	1.3	3.3	8.1	20.0	49.2	121.2	298.3	734.3



**Physical Dimensions**

<b>A</b>	12.7 ± 0.25 mm	0.500 ± 0.010 in
<b>B</b>	6.4 ± 0.10 mm	0.252 ± 0.004 in
<b>C</b>	3.56 ± 0.15 mm	0.140 ± 0.006 in
<b>D</b>	4.42 mm (min.)	0.174 in (min.)
<b>E</b>	8.89 mm (min.)	0.350 in (min.)
<b>F</b>	3.56 ± 0.13 mm	0.140 ± 0.005 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.130 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	2.96 cm
<b>Ve</b>	Effective Core Volume	0.385 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.230 cm <sup>2</sup>
<b>SA</b>	Surface Area	6.01 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	2.49 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	13	EMS-0130604-014	EFS-0130604-014
26μ	20	EMS-0130604-026	EFS-0130604-026
40μ	28	EMS-0130604-040	EFS-0130604-040
60μ	39	EMS-0130604-060	EFS-0130604-060
75μ	47	EMS-0130604-075	EFS-0130604-075
90μ	55	EMS-0130604-090	EFS-0130604-090
<b>Approximate Unit Weight:</b>		1.1 g/half	1.3 g/half

**Test Conditions**

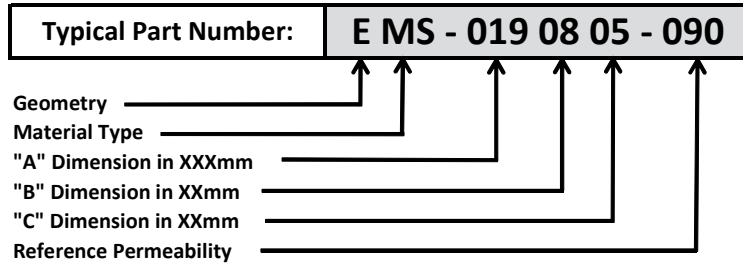
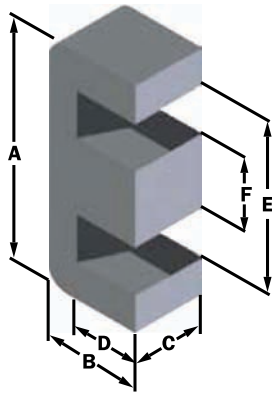
<b>Winding</b>	N=100, #28 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.058 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	1,500 Halves/Box

**Winding Table**

Wire Size	AWG	20	22	24	26	28	30	32	34	36	38	40
	mm	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080
Full Winding	Turns	17	26	41	63	98	151	234	363	561	869	1,345
	Rdc(Ω)	14.1 m	34.3 m	85.9 m	209.9 m	519.4 m	1.3	3.1	7.7	19.0	46.9	115.3



**Physical Dimensions**

<b>A</b>	19.3 ± 0.30 mm	0.760 ± 0.012 in
<b>B</b>	8.1 ± 0.18 mm	0.319 ± 0.007 in
<b>C</b>	4.78 ± 0.15 mm	0.188 ± 0.006 in
<b>D</b>	5.54 mm (min.)	0.218 in (min.)
<b>E</b>	13.9 mm (min.)	0.547 in (min.)
<b>F</b>	4.78 ± 0.13 mm	0.188 ± 0.005 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.228 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	4.01 cm
<b>Ve</b>	Effective Core Volume	0.914 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.498 cm <sup>2</sup>
<b>SA</b>	Surface Area	11.9 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	3.74 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	17	EMS-0190805-014	EFS-0190805-014
26μ	26	EMS-0190805-026	EFS-0190805-026
40μ	35	EMS-0190805-040	EFS-0190805-040
60μ	48	EMS-0190805-060	EFS-0190805-060
75μ	61	EMS-0190805-075	EFS-0190805-075
90μ	69	EMS-0190805-090	EFS-0190805-090
<b>Approximate Unit Weight:</b>		2.6 g/half	3.0 g/half

**Test Conditions**

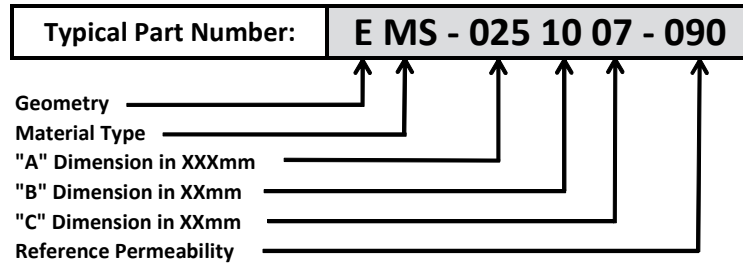
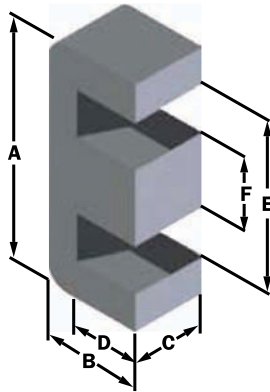
<b>Winding</b>	N=100, #26 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.10 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	1,000 Halves/Box

**Winding Table**

Wire Size	AWG	16	18	20	22	24	26	28	30	32	34	36
	mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
Full Winding	Turns	15	24	37	57	88	137	212	328	508	786	1,216
	Rdc(Ω)	7.4 m	18.8 m	46.0 m	112.7 m	276.7 m	685.0 m	1.7	4.1	10.2	25.1	61.9



**Physical Dimensions**

<b>A</b>	25.4 ± 0.38 mm	1.000 ± 0.015 in
<b>B</b>	9.5 ± 0.18 mm	0.374 ± 0.007 in
<b>C</b>	6.5 ± 0.10 mm	0.256 ± 0.004 in
<b>D</b>	6.2 mm (min.)	0.244 in (min.)
<b>E</b>	18.8 mm (min.)	0.740 in (min.)
<b>F</b>	6.2 ± 0.13 mm	0.244 ± 0.005 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.385 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	4.85 cm
<b>Ve</b>	Effective Core Volume	1.87 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	0.773 cm <sup>2</sup>
<b>SA</b>	Surface Area	19.4 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.06 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	24	EMS-0251007-014	EFS-0251007-014
26μ	39	EMS-0251007-026	EFS-0251007-026
40μ	52	EMS-0251007-040	EFS-0251007-040
60μ	70	EMS-0251007-060	EFS-0251007-060
75μ	85	EMS-0251007-075	EFS-0251007-075
90μ	100	EMS-0251007-090	EFS-0251007-090
<b>Approximate Unit Weight:</b>		5.4 g/half	6.2 g/half

**Test Conditions**

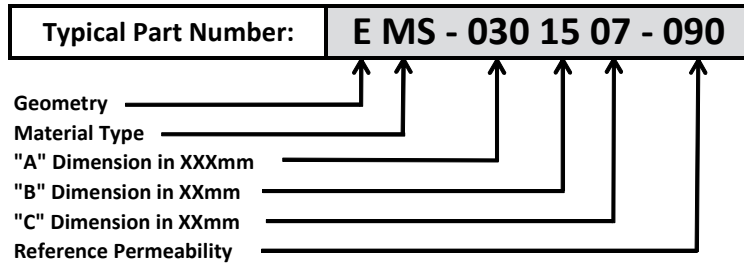
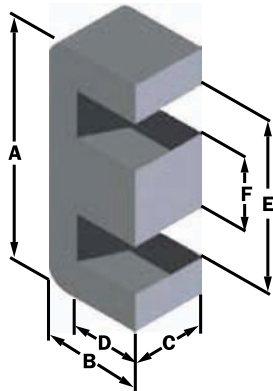
<b>Winding</b>	N=100, #24 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.17 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	1,000 Halves/Box

**Winding Table**

Wire Size	AWG	14	16	18	20	22	24	26	28	30	32	34
		mm	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
<b>Full Winding</b>	Turns	15	24	37	57	89	137	213	329	509	788	1,219
	Rdc(Ω)	6.3 m	16.0 m	39.2 m	96.0 m	238.3 m	583.4 m	1.4	3.5	8.7	21.5	52.8



**Physical Dimensions**

<b>A</b>	30.1 ± 0.46 mm	1.185 ± 0.018 in
<b>B</b>	15.01 ± 0.23 mm	0.591 ± 0.009 in
<b>C</b>	7.06 ± 0.15 mm	0.278 ± 0.006 in
<b>D</b>	9.7 mm (min.)	0.382 in (min.)
<b>E</b>	19.5 mm (min.)	0.768 in (min.)
<b>F</b>	6.96 ± 0.20 mm	0.274 ± 0.008 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.601 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.56 cm
<b>Ve</b>	Effective Core Volume	3.94 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.20 cm <sup>2</sup>
<b>SA</b>	Surface Area	31.4 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	5.31 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	28	EMS-0301507-014	EFS-0301507-014
26μ	40	EMS-0301507-026	EFS-0301507-026
40μ	54	EMS-0301507-040	EFS-0301507-040
60μ	75	EMS-0301507-060	EFS-0301507-060
75μ	98	EMS-0301507-075	EFS-0301507-075
90μ	106	EMS-0301507-090	EFS-0301507-090
<b>Approximate Unit Weight:</b>		11 g/half	13 g/half

**Test Conditions**

<b>Winding</b>	N=100, #22 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.27 V
<b>A<sub>L</sub> Tolerance</b>	±8%

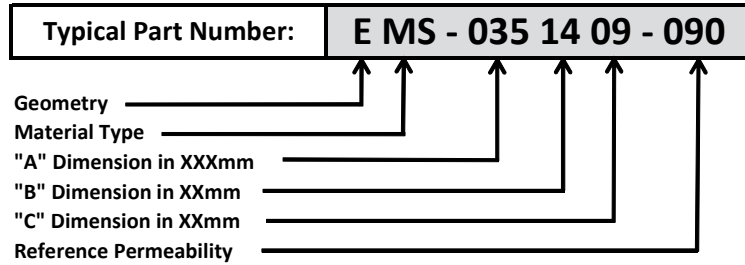
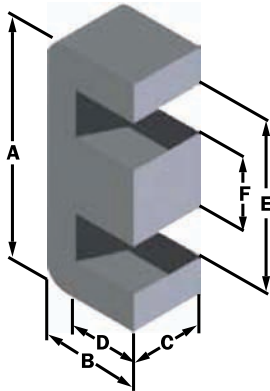
**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	500 Halves/Box

**Winding Table**

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
	mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200
<b>Full Winding</b>	Turns	15	24	37	57	89	137	212	329	509	788	1,219
	Rdc(Ω)	4.1 m	10.5 m	25.9 m	63.3 m	157.3 m	385.1 m	947.7 m	2.3	5.8	14.2	34.9





**Physical Dimensions**

<b>A</b>	34.5 ± 0.51 mm	1.358 ± 0.020 in
<b>B</b>	14.1 ± 0.23 mm	0.555 ± 0.009 in
<b>C</b>	9.4 ± 0.18 mm	0.370 ± 0.007 in
<b>D</b>	9.6 mm (min.)	0.378 in (min.)
<b>E</b>	25.3 mm (min.)	0.996 in (min.)
<b>F</b>	9.3 ± 0.20 mm	0.366 ± 0.008 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	0.840 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	6.94 cm
<b>Ve</b>	Effective Core Volume	5.83 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.52 cm <sup>2</sup>
<b>SA</b>	Surface Area	38.4 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	6.94 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	37	EMS-0351409-014	EFS-0351409-014
26μ	56	EMS-0351409-026	EFS-0351409-026
40μ	75	EMS-0351409-040	EFS-0351409-040
60μ	102	EMS-0351409-060	EFS-0351409-060
75μ	129	EMS-0351409-075	EFS-0351409-075
90μ	146	EMS-0351409-090	EFS-0351409-090
<b>Approximate Unit Weight:</b>		17 g/half	19 g/half

**Test Conditions**

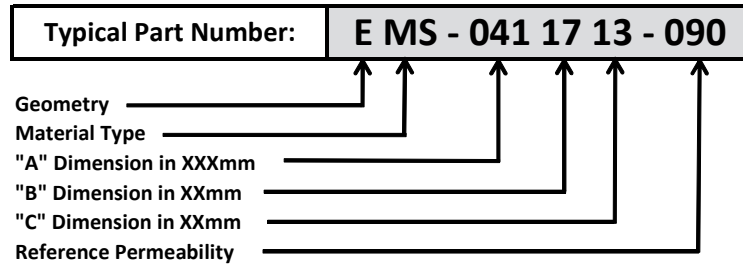
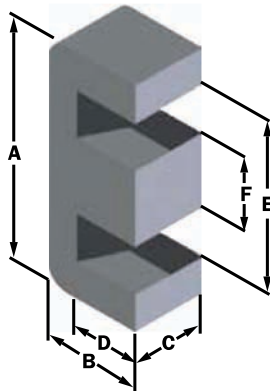
<b>Winding</b>	N=100, #20 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.37 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	500 Halves/Box

**Winding Table**

Wire Size	AWG	12	14	16	18	20	22	24	26	28	30	32
		mm	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
<b>Full Winding</b>	Turns	20	30	47	73	112	174	269	417	645	998	1,545
	Rdc(Ω)	7.2 m	17.2 m	42.9 m	106.0 m	258.6 m	639.0 m	1.6	3.9	9.5	23.4	57.7



**Physical Dimensions**

<b>A</b>	40.9 ± 0.61 mm	1.610 ± 0.024 in
<b>B</b>	16.5 ± 0.28 mm	0.650 ± 0.011 in
<b>C</b>	12.5 ± 0.18 mm	0.492 ± 0.007 in
<b>D</b>	10.4 mm (min.)	0.409 in (min.)
<b>E</b>	28.3 mm (min.)	1.114 in (min.)
<b>F</b>	12.5 ± 0.20 mm	0.492 ± 0.008 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.52 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	7.75 cm
<b>Ve</b>	Effective Core Volume	11.8 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	1.62 cm <sup>2</sup>
<b>SA</b>	Surface Area	53.2 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	8.16 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	59	EMS-0411713-014	EFS-0411713-014
26μ	88	EMS-0411713-026	EFS-0411713-026
40μ	119	EMS-0411713-040	EFS-0411713-040
60μ	163	EMS-0411713-060	EFS-0411713-060
75μ	209	EMS-0411713-075	EFS-0411713-075
90μ	234	EMS-0411713-090	EFS-0411713-090
<b>Approximate Unit Weight:</b>		34 g/half	39 g/half

**Test Conditions**

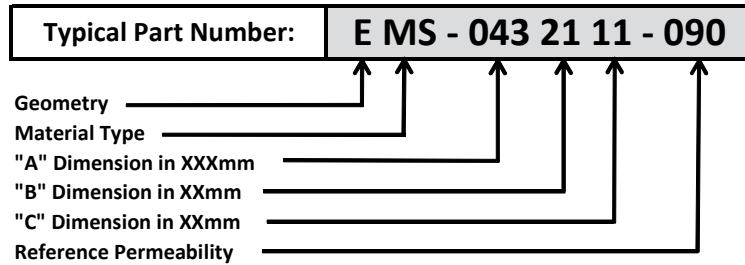
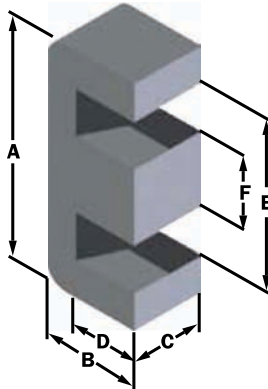
<b>Winding</b>	N=100, #20 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.67 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	250 Halves/Box

**Winding Table**

Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
	mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
Full Winding	Turns	14	21	32	50	78	120	186	288	446	690	1,068
	Rdc(Ω)	3.7 m	8.9 m	21.6 m	53.7 m	133.2 m	325.8 m	803.1 m	2.0	4.9	12.0	29.5



**Physical Dimensions**

<b>A</b>	42.8 ± 0.64 mm	1.685 ± 0.025 in
<b>B</b>	21.1 ± 0.33 mm	0.831 ± 0.013 in
<b>C</b>	10.8 ± 0.25 mm	0.425 ± 0.010 in
<b>D</b>	15 mm (min.)	0.591 in (min.)
<b>E</b>	30.4 mm (min.)	1.197 in (min.)
<b>F</b>	11.9 ± 0.25 mm	0.469 ± 0.010 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.28 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	9.84 cm
<b>Ve</b>	Effective Core Volume	12.6 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.74 cm <sup>2</sup>
<b>SA</b>	Surface Area	65.7 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	8.24 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	39	EMS-0432111-014	EFS-0432111-014
26μ	56	EMS-0432111-026	EFS-0432111-026
40μ	76	EMS-0432111-040	EFS-0432111-040
60μ	105	EMS-0432111-060	EFS-0432111-060
75μ	139	EMS-0432111-075	EFS-0432111-075
90μ	151	EMS-0432111-090	EFS-0432111-090
<b>Approximate Unit Weight:</b>		36 g/half	42 g/half

**Test Conditions**

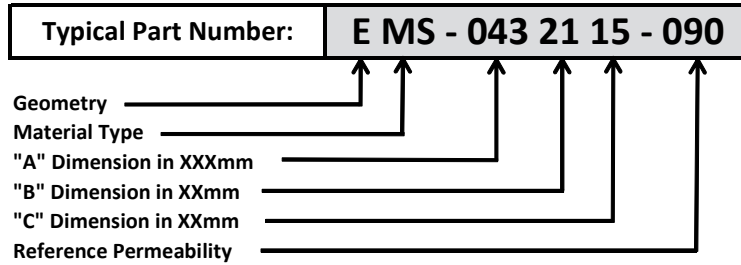
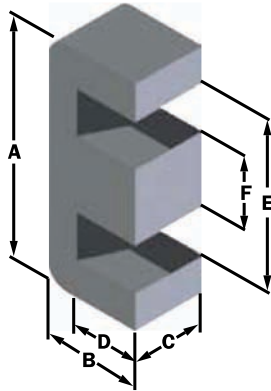
<b>Winding</b>	N=100, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.57 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	210 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
<b>Full Winding</b>	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	2.5 m	6.2 m	15.0 m	37.5 m	92.1 m	225.8 m	556.5 m	1.4	3.4	8.3	20.4



**Physical Dimensions**

<b>A</b>	42.8 ± 0.64 mm	1.685 ± 0.025 in
<b>B</b>	21.1 ± 0.33 mm	0.831 ± 0.013 in
<b>C</b>	15.4 ± 0.25 mm	0.606 ± 0.010 in
<b>D</b>	15 mm (min.)	0.591 in (min.)
<b>E</b>	30.4 mm (min.)	1.197 in (min.)
<b>F</b>	11.9 ± 0.25 mm	0.469 ± 0.010 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	1.83 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	9.84 cm
<b>Ve</b>	Effective Core Volume	18.0 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.74 cm <sup>2</sup>
<b>SA</b>	Surface Area	73.5 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	9.16 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	56	EMS-0432115-014	EFS-0432115-014
26μ	80	EMS-0432115-026	EFS-0432115-026
40μ	108	EMS-0432115-040	EFS-0432115-040
60μ	150	EMS-0432115-060	EFS-0432115-060
75μ	199	EMS-0432115-075	EFS-0432115-075
90μ	217	EMS-0432115-090	EFS-0432115-090
<b>Approximate Unit Weight:</b>		52 g/half	59 g/half

**Test Conditions**

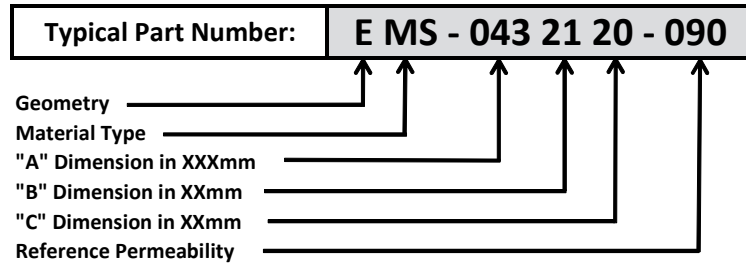
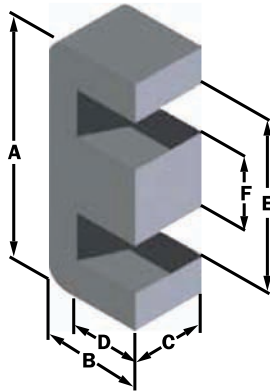
<b>Winding</b>	N=100, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	0.81 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	175 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Full Winding	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	2.8 m	6.9 m	16.7 m	41.7 m	102.4 m	251.0 m	618.7 m	1.5	3.7	9.2	22.7



**Physical Dimensions**

<b>A</b>	42.8 ± 0.64 mm	1.685 ± 0.025 in
<b>B</b>	21.1 ± 0.33 mm	0.831 ± 0.013 in
<b>C</b>	20 ± 0.25 mm	0.787 ± 0.010 in
<b>D</b>	15 mm (min.)	0.591 in (min.)
<b>E</b>	30.4 mm (min.)	1.197 in (min.)
<b>F</b>	11.9 ± 0.25 mm	0.469 ± 0.010 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	2.37 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	9.84 cm
<b>Ve</b>	Effective Core Volume	23.3 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	2.74 cm <sup>2</sup>
<b>SA</b>	Surface Area	81.3 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	10.1 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	73	EMS-0432120-014	EFS-0432120-014
26μ	104	EMS-0432120-026	EFS-0432120-026
40μ	140	EMS-0432120-040	EFS-0432120-040
60μ	194	EMS-0432120-060	EFS-0432120-060
75μ	257	EMS-0432120-075	EFS-0432120-075
90μ	281	EMS-0432120-090	EFS-0432120-090
<b>Approximate Unit Weight:</b>		67 g/half	77 g/half

**Test Conditions**

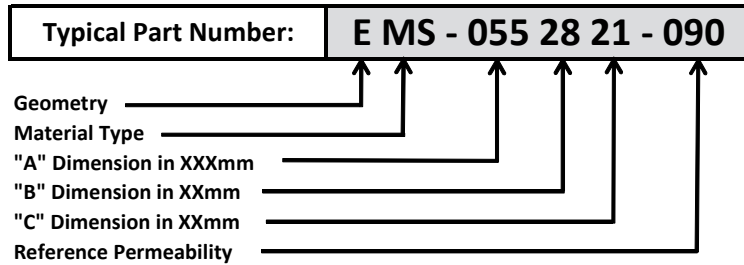
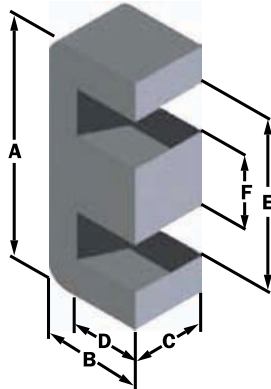
<b>Winding</b>	N=100, #18 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.1 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	140 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Full Winding</b>	Turns	15	23	35	55	85	131	203	314	486	752	1,164
	Rdc(Ω)	3.1 m	7.6 m	18.3 m	45.9 m	112.7 m	276.2 m	680.8 m	1.7	4.1	10.1	25.0



**Physical Dimensions**

<b>A</b>	54.9 ± 0.81 mm	2.161 ± 0.032 in
<b>B</b>	27.6 ± 0.41 mm	1.087 ± 0.016 in
<b>C</b>	20.6 ± 0.41 mm	0.811 ± 0.016 in
<b>D</b>	18.5 mm (min.)	0.728 in (min.)
<b>E</b>	37.5 mm (min.)	1.476 in (min.)
<b>F</b>	16.8 ± 0.33 mm	0.661 ± 0.013 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	3.50 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	12.3 cm
<b>Ve</b>	Effective Core Volume	43.1 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	3.77 cm <sup>2</sup>
<b>SA</b>	Surface Area	121 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	11.6 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	86	EMS-0552821-014	EFS-0552821-014
26μ	116	EMS-0552821-026	EFS-0552821-026
40μ	157	EMS-0552821-040	EFS-0552821-040
60μ	219	EMS-0552821-060	EFS-0552821-060
75μ	304	EMS-0552821-075	EFS-0552821-075
90μ	322	EMS-0552821-090	EFS-0552821-090
<b>Approximate Unit Weight:</b>		120 g/half	140 g/half

**Test Conditions**

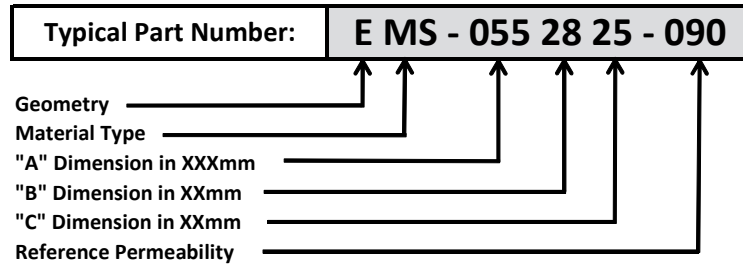
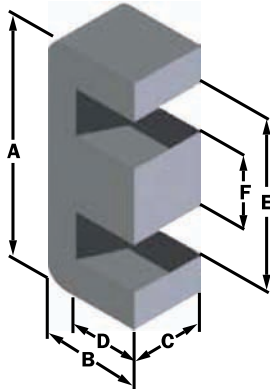
<b>Winding</b>	N=100, #16 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.6 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	96 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
<b>Full Winding</b>	Turns	20	31	49	75	117	180	279	432	669	1,036	1,603
	Rdc(Ω)	4.8 m	11.8 m	29.6 m	72.1 m	178.8 m	437.6 m	1.1	2.7	6.5	16.1	39.6



**Physical Dimensions**

<b>A</b>	54.9 ± 0.81 mm	2.161 ± 0.032 in
<b>B</b>	27.6 ± 0.41 mm	1.087 ± 0.016 in
<b>C</b>	24.61 ± 0.48 mm	0.969 ± 0.019 in
<b>D</b>	18.5 mm (min.)	0.728 in (min.)
<b>E</b>	37.5 mm (min.)	1.476 in (min.)
<b>F</b>	16.8 ± 0.33 mm	0.661 ± 0.013 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	4.17 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	12.3 cm
<b>Ve</b>	Effective Core Volume	51.4 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	3.77 cm <sup>2</sup>
<b>SA</b>	Surface Area	130 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	12.4 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	102	EMS-0552825-014	EFS-0552825-014
26μ	138	EMS-0552825-026	EFS-0552825-026
40μ	187	EMS-0552825-040	EFS-0552825-040
60μ	261	EMS-0552825-060	EFS-0552825-060
75μ	362	EMS-0552825-075	EFS-0552825-075
90μ	338	EMS-0552825-090	EFS-0552825-090
<b>Approximate Unit Weight:</b>		150 g/half	170 g/half

**Test Conditions**

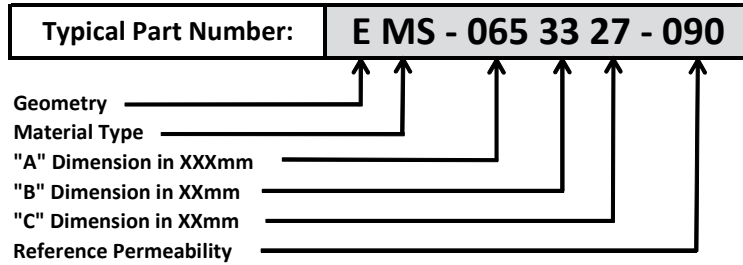
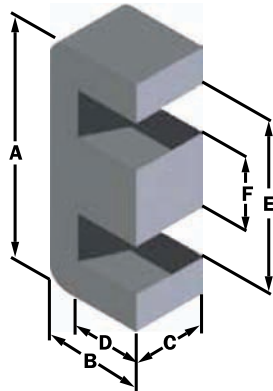
<b>Winding</b>	N=100, #16 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.9 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	72 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm		3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400
Full Winding	Turns	20	31	49	75	117	180	279	432	669	1,036	1,603
	Rdc(Ω)	5.1 m	12.6 m	31.7 m	77.1 m	191.2 m	467.8 m	1.2	2.8	7.0	17.2	42.4



**Physical Dimensions**

<b>A</b>	65.1 ± 0.97 mm	2.563 ± 0.038 in
<b>B</b>	32.5 ± 0.48 mm	1.280 ± 0.019 in
<b>C</b>	27 ± 0.53 mm	1.063 ± 0.021 in
<b>D</b>	22.2 mm (min.)	0.874 in (min.)
<b>E</b>	44.2 mm (min.)	1.740 in (min.)
<b>F</b>	19.7 ± 0.41 mm	0.776 ± 0.016 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	5.40 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	14.7 cm
<b>Ve</b>	Effective Core Volume	79.4 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	5.35 cm <sup>2</sup>
<b>SA</b>	Surface Area	177 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	14.2 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	111	EMS-0653327-014	EFS-0653327-014
26μ	162	EMS-0653327-026	EFS-0653327-026
40μ	230	EMS-0653327-040	EFS-0653327-040
60μ	300	EMS-0653327-060	EFS-0653327-060
75μ	392	EMS-0653327-075	EFS-0653327-075
90μ	462	EMS-0653327-090	EFS-0653327-090
<b>Approximate Unit Weight:</b>		230 g/half	260 g/half

**Test Conditions**

<b>Winding</b>	N=100, #16 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	2.4 V
<b>A<sub>L</sub> Tolerance</b>	±8%

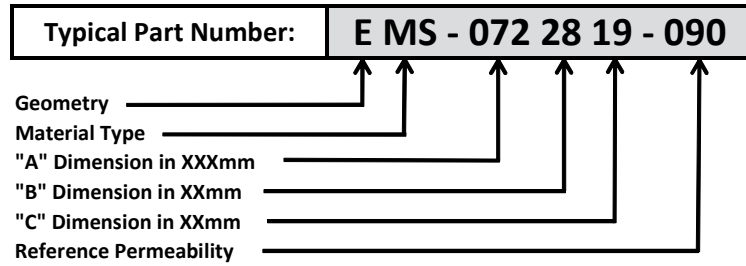
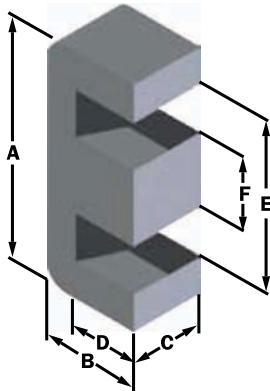
**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	54 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Full Winding	Turns	29	45	69	107	165	256	396	614	950	1,470	2,275
	Rdc(Ω)	8.5 m	21.0 m	51.1 m	126.0 m	309.1 m	762.6 m	1.9	4.6	11.4	28.0	69.0





**Physical Dimensions**

<b>A</b>	72.4 ± 1.09 mm	2.850 ± 0.043 in
<b>B</b>	27.9 ± 0.41 mm	1.098 ± 0.016 in
<b>C</b>	19.1 ± 0.38 mm	0.752 ± 0.015 in
<b>D</b>	17.8 mm (min.)	0.701 in (min.)
<b>E</b>	52.6 mm (min.)	2.071 in (min.)
<b>F</b>	19.1 ± 0.38 mm	0.752 ± 0.015 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	3.68 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	13.7 cm
<b>Ve</b>	Effective Core Volume	50.3 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	5.90 cm <sup>2</sup>
<b>SA</b>	Surface Area	159 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	14.3 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	81	EMS-0722819-014	EFS-0722819-014
26μ	130	EMS-0722819-026	EFS-0722819-026
40μ	173	EMS-0722819-040	EFS-0722819-040
60μ	236	EMS-0722819-060	EFS-0722819-060
75μ	287	EMS-0722819-075	EFS-0722819-075
90μ	338	EMS-0722819-090	EFS-0722819-090
<b>Approximate Unit Weight:</b>		150 g/half	170 g/half

**Test Conditions**

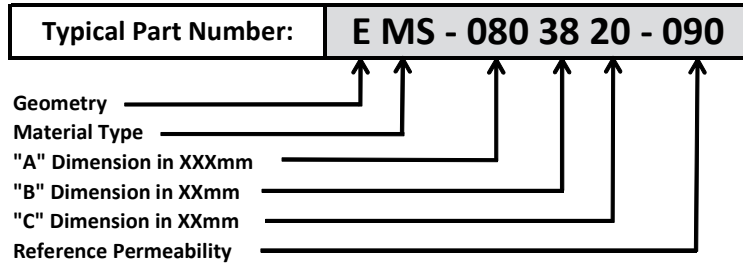
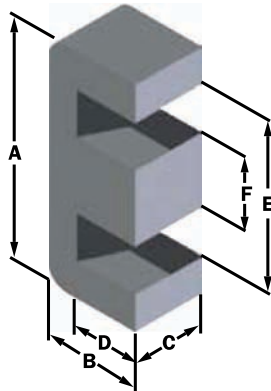
<b>Winding</b>	N=100, #16 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.6 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	72 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Full Winding</b>	Turns	32	49	76	118	182	282	437	676	1,047	1,620	2,507
	Rdc(Ω)	9.4 m	23.0 m	56.7 m	140.0 m	343.3 m	846.0 m	2.1	5.1	12.6	31.1	76.5



**Physical Dimensions**

<b>A</b>	80 ± 1.19 mm	3.150 ± 0.047 in
<b>B</b>	38.1 ± 0.58 mm	1.500 ± 0.023 in
<b>C</b>	19.8 ± 0.41 mm	0.780 ± 0.016 in
<b>D</b>	28.1 mm (min.)	1.106 in (min.)
<b>E</b>	59.3 mm (min.)	2.335 in (min.)
<b>F</b>	19.8 ± 0.41 mm	0.780 ± 0.016 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	3.89 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	18.5 cm
<b>Ve</b>	Effective Core Volume	72.1 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	11.0 cm <sup>2</sup>
<b>SA</b>	Surface Area	229 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	15.8 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	63	EMS-0803820-014	EFS-0803820-014
26μ	103	EMS-0803820-026	EFS-0803820-026
40μ	145	EMS-0803820-040	EFS-0803820-040
60μ	190	EMS-0803820-060	EFS-0803820-060
75μ	225	EMS-0803820-075	EFS-0803820-075
90μ	264	EMS-0803820-090	EFS-0803820-090
<b>Approximate Unit Weight:</b>		210 g/half	240 g/half

**Test Conditions**

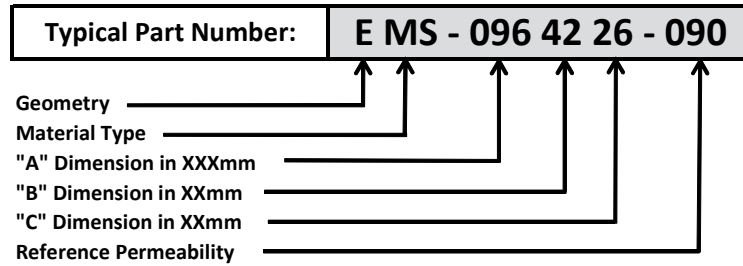
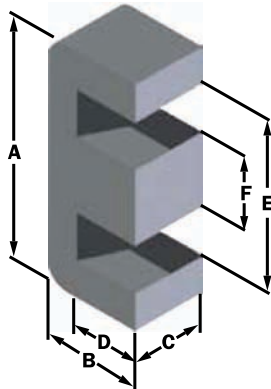
<b>Winding</b>	N=100, #14 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	1.7 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	60 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Full Winding</b>	Turns	59	92	142	220	340	526	814	1,260	1,950	3,019	4,672
	Rdc(Ω)	19.2 m	47.6 m	116.8 m	287.9 m	707.5 m	1.7	4.3	10.5	26.0	63.9	157.3



**Physical Dimensions**

<b>A</b>	96 ± 1.45 mm	3.780 ± 0.057 in
<b>B</b>	41.5 ± 0.64 mm	1.634 ± 0.025 in
<b>C</b>	25.5 ± 0.51 mm	1.004 ± 0.020 in
<b>D</b>	25 mm (min.)	0.984 in (min.)
<b>E</b>	64.4 mm (min.)	2.535 in (min.)
<b>F</b>	31.6 ± 0.64 mm	1.244 ± 0.025 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	8.02 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	18.03 cm
<b>Ve</b>	Effective Core Volume	145 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	8.04 cm <sup>2</sup>
<b>SA</b>	Surface Area	288 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	18.0 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	134	EMS-0964226-014	EFS-0964226-014
26μ	201	EMS-0964226-026	EFS-0964226-026
40μ	279	EMS-0964226-040	EFS-0964226-040
60μ	391	EMS-0964226-060	EFS-0964226-060
75μ	475	EMS-0964226-075	EFS-0964226-075
90μ	559	EMS-0964226-090	EFS-0964226-090
<b>Approximate Unit Weight:</b>		420 g/half	480 g/half

**Test Conditions**

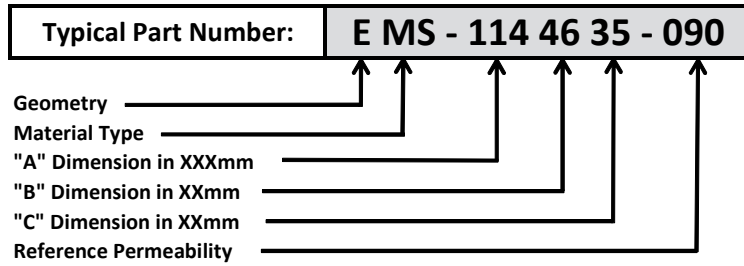
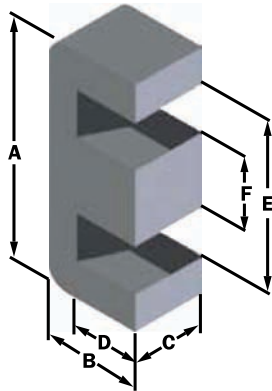
<b>Winding</b>	N=100, #14 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	3.6 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	36 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Full Winding</b>	Turns	43	67	104	161	249	385	596	922	1,428	2,210	3,420
	Rdc(Ω)	15.9 m	39.4 m	97.2 m	239.4 m	588.9 m	1.4	3.6	8.8	21.6	53.2	130.9



**Physical Dimensions**

<b>A</b>	114 ± 1.70 mm	4.488 ± 0.067 in
<b>B</b>	46.2 ± 0.69 mm	1.819 ± 0.027 in
<b>C</b>	34.9 ± 0.58 mm	1.374 ± 0.023 in
<b>D</b>	28.6 mm (min.)	1.126 in (min.)
<b>E</b>	79.3 mm (min.)	3.122 in (min.)
<b>F</b>	34.9 ± 0.69 mm	1.374 ± 0.027 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	12.2 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	22.9 cm
<b>Ve</b>	Effective Core Volume	280 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	12.5 cm <sup>2</sup>
<b>SA</b>	Surface Area	415 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	22.8 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	161	EMS-1144635-014	EFS-1144635-014
26μ	241	EMS-1144635-026	EFS-1144635-026
40μ	335	EMS-1144635-040	EFS-1144635-040
60μ	469	EMS-1144635-060	EFS-1144635-060
75μ	569	EMS-1144635-075	EFS-1144635-075
90μ	669	EMS-1144635-090	EFS-1144635-090
<b>Approximate Unit Weight:</b>		810 g/half	920 g/half

**Test Conditions**

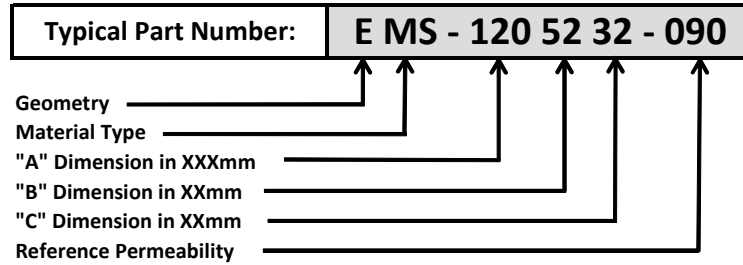
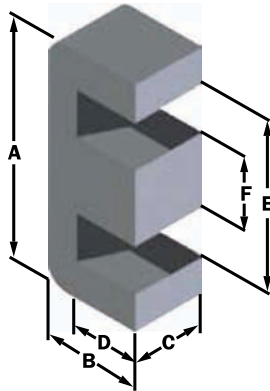
<b>Winding</b>	N=100, #14 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	5.4 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	8 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
<b>Full Winding</b>	Turns	67	104	161	250	387	599	927	1,434	2,220	3,436	5,317
	Rdc(Ω)	31.5 m	77.7 m	191.2 m	472.3 m	1.2	2.9	7.0	17.3	42.7	105.0	258.5



**Physical Dimensions**

<b>A</b>	120 ± 1.80 mm	4.724 ± 0.071 in
<b>B</b>	52 ± 0.79 mm	2.047 ± 0.031 in
<b>C</b>	31.5 ± 0.64 mm	1.240 ± 0.025 in
<b>D</b>	31.5 mm (min.)	1.240 in (min.)
<b>E</b>	80.4 mm (min.)	3.165 in (min.)
<b>F</b>	39.6 ± 0.71 mm	1.559 ± 0.028 in

**Magnetic Dimensions**

<b>Ae</b>	Effective Magnetic Cross Section	13.03 cm <sup>2</sup>
<b>Le</b>	Effective Magnetic Path Length	23.78 cm
<b>Ve</b>	Effective Core Volume	310 cm <sup>3</sup>
<b>WA</b>	Minimum Effective Window Area	12.6 cm <sup>2</sup>
<b>SA</b>	Surface Area	449 cm <sup>2</sup>
<b>MLT</b>	Mean Length Per Turn	22.4 cm

**Permeability**

**Part Numbers**

Reference Permeability	A <sub>L</sub> Value (nH/N <sup>2</sup> )	Super-MSS™ Sendust	FluxSan™ Silicon Iron
14μ	165	EMS-1205232-014	EFS-1205232-014
26μ	248	EMS-1205232-026	EFS-1205232-026
40μ	344	EMS-1205232-040	EFS-1205232-040
60μ	482	EMS-1205232-060	EFS-1205232-060
75μ	585	EMS-1205232-075	EFS-1205232-075
90μ	689	EMS-1205232-090	EFS-1205232-090
<b>Approximate Unit Weight:</b>		900 g/half	1,020 g/half

**Test Conditions**

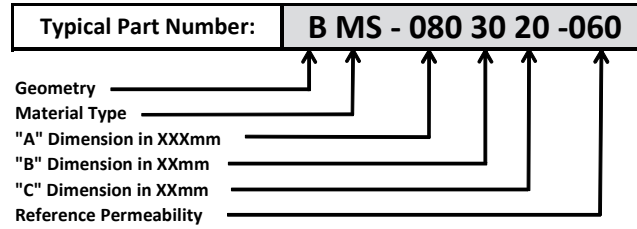
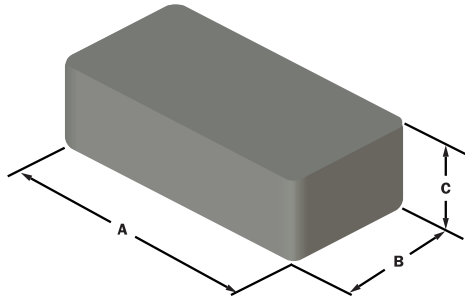
<b>Winding</b>	N=100, #14 AWG
<b>Frequency</b>	10 kHz
<b>Voltage</b>	5.8 V
<b>A<sub>L</sub> Tolerance</b>	±8%

**Coating/Packaging Information**

<b>Coating Type</b>	None
<b>Voltage Breakdown</b>	N/A
<b>Limit</b>	N/A
<b>Package Quantity</b>	8 Halves/Box

**Winding Table**

Wire Size	AWG	8	10	12	14	16	18	20	22	24	26	28
	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
Full Winding	Turns	68	105	163	252	391	605	936	1,449	2,242	3,470	5,371
	Rdc(Ω)	31.3 m	76.8 m	189.7 m	466.5 m	1.2	2.8	7.0	17.2	42.2	103.9	255.9



Physical Dimensions

Part Numbers

Physical Dimensions			Part Numbers		
A	B	C	26μ	40μ	60μ
47.5 mm 1.870 in	41.0 mm 1.614 in	20.1 mm 0.791 in	BMS-0474120-026 BFS-0474120-026	BMS-0474120-040 BFS-0474120-040	BMS-0474120-060 BFS-0474120-060
47.5 mm 1.870 in	41.0 mm 1.614 in	27.5 mm 1.083 in	BMS-0474128-026 BFS-0474128-026	BMS-0474128-040 BFS-0474128-040	BMS-0474128-060 BFS-0474128-060
50.0 mm 1.969 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS-0503015-026 BFS-0503015-026	BMS-0503015-040 BFS-0503015-040	BMS-0503015-060 BFS-0503015-060
50.0 mm 1.969 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS-0503020-026 BFS-0503020-026	BMS-0503020-040 BFS-0503020-040	BMS-0503020-060 BFS-0503020-060
60.0 mm 2.362 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS-0603015-026 BFS-0603015-026	BMS-0603015-040 BFS-0603015-040	BMS-0603015-060 BFS-0603015-060
60.0 mm 2.362 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS-0603020-026 BFS-0603020-026	BMS-0603020-040 BFS-0603020-040	BMS-0603020-060 BFS-0603020-060
70.0 mm 2.756 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS-0703015-026 BFS-0703015-026	BMS-0703015-040 BFS-0703015-040	BMS-0703015-060 BFS-0703015-060
70.0 mm 2.756 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS-0703020-026 BFS-0703020-026	BMS-0703020-040 BFS-0703020-040	BMS-0703020-060 BFS-0703020-060
70.0 mm 2.756 in	30.0 mm 1.181 in	25.0 mm 0.984 in	BMS-0703025-026 BFS-0703025-026	BMS-0703025-040 BFS-0703025-040	BMS-0703025-060 BFS-0703025-060
80.0 mm 3.150 in	30.0 mm 1.181 in	15.0 mm 0.591 in	BMS-0803015-026 BFS-0803015-026	BMS-0803015-040 BFS-0803015-040	BMS-0803015-060 BFS-0803015-060
80.0 mm 3.150 in	30.0 mm 1.181 in	20.0 mm 0.787 in	BMS-0803020-026 BFS-0803020-026	BMS-0803020-040 BFS-0803020-040	BMS-0803020-060 BFS-0803020-060
80.0 mm 3.150 in	30.0 mm 1.181 in	25.0 mm 0.984 in	BMS-0803025-026 BFS-0803025-026	BMS-0803025-040 BFS-0803025-040	BMS-0803025-060 BFS-0803025-060
80.0 mm 3.150 in	30.0 mm 1.181 in	35.0 mm 1.378 in	BMS-0803035-026 BFS-0803035-026	BMS-0803035-040 BFS-0803035-040	BMS-0803035-060 BFS-0803035-060
±0.5 mm ±0.020 in	±0.5 mm ±0.020 in	±0.5 mm ±0.020 in	MS = Super-MSS™ (Sendust)    FS = FluxSan™ (Silicon Iron)		
Tolerance					

Old Part No.	New Part No.
A-050056-2	MP-050125-2
A-051027-2	MP-050060-2
A-052012-2	MP-050026-2
A-053006-2	MP-050014-2
A-057008-2	MP-080014-2
A-059043-2	MP-090060-2
A-060019-2	MP-090026-2
A-062010-2	MP-090014-2
A-066032-2	MP-106026-2
A-068018-2	MP-106014-2
A-071065-2	MP-132060-2
A-073028-2	MP-132026-2
A-074015-2	MP-132014-2
A-076056-2	MP-141060-2
A-078024-2	MP-141026-2
A-080013-2	MP-141014-2
A-083081-2	MP-157060-2
A-085035-2	MP-157026-2
A-086019-2	MP-157014-2
A-087059-2	MP-184026-2
A-088032-2	MP-184014-2
A-089178-2	MP-185125-2
A-090086-2	MP-185060-2
A-091037-2	MP-185026-2
A-092020-2	MP-185014-2
A-094033-2	MP-225026-2
A-096018-2	MP-225014-2
A-106073-2	MP-200060-2
A-109156-2	MP-225125-2
A-123068-2	MP-300060-2
A-124030-2	MP-300026-2
A-125112-2	MP-400060-2
A-126040-2	MP-401026-2
A-127259-2	MP-520125-2
A-128124-2	MP-520060-2
A-129054-2	MP-520026-2
A-134103-8	MP-026125-8
A-135050-8	MP-026060-8
A-137052-8	MP-031125-8
A-138025-8	MP-031060-8
A-143067-2	MP-050147-2
A-144081-2	MP-080147-2
A-145185-2	MP-106147-2
A-147106-2	MP-090147-2
A-148150-2	MP-130147-2
A-149093-2	MP-135147-2
A-150138-2	MP-141147-2
A-151198-2	MP-157147-2
A-152330-2	MP-184147-2
A-153210-2	MP-185147-2
A-154179-2	MP-200147-2
A-155185-2	MP-225147-2

Old Part No.	New Part No.
A-156167-2	MP-300147-2
A-157268-2	MP-400147-2
A-158304-2	MP-520147-2
A-162129-2	MP-131147-2
A-166151-2	MP-131173-2
A-172079-2	MP-050173-2
A-173096-2	MP-080173-2
A-174124-2	MP-090173-2
A-175217-5	MP-106173-2
A-176176-2	MP-130173-2
A-177109-2	MP-135173-2
A-178162-2	MP-141173-2
A-179233-2	MP-157173-2
A-180390-2	MP-184173-2
A-181210-2	MP-200173-2
A-182218-2	MP-225173-2
A-183197-2	MP-300173-2
A-184316-2	MP-400173-2
A-185358-2	MP-520173-2
A-187010-2	MP-068014-2
A-188019-2	MP-068026-2
A-189043-2	MP-068060-2
A-190089-2	MP-068125-2
A-193105-2	MP-068147-2
A-194123-2	MP-068173-2
A-195246-2	MP-185173-2
A-197109-2	MP-131125-2
A-200170-8	MP-026205-8
A-201086-8	MP-031205-8
A-202109-8	MP-038205-8
A-203088-2	MP-044205-2
A-204093-2	MP-050205-2
A-205146-2	MP-068205-2
A-206068-2	MP-080125-2
A-207113-2	MP-080205-2
A-208147-2	MP-090205-2
A-209257-2	MP-106205-2
A-210180-2	MP-131205-2
A-211208-2	MP-130205-2
A-212130-2	MP-135205-2
A-213192-2	MP-141205-2
A-214276-2	MP-157205-2
A-215462-2	MP-184205-2
A-216292-2	MP-185205-2
A-217249-2	MP-200205-2
A-218259-2	MP-225205-2
A-219233-2	MP-300205-2
A-222144-8	MP-026173-8
A-223073-8	MP-031173-8
A-224122-8	MP-026147-8
A-225062-8	MP-031147-8
A-238092-2	MP-040173-2

Old Part No.	New Part No.
A-239078-2	MP-040147-2
A-240084-8	MP-038160-8
A-244092-8	MP-038173-8
A-245078-8	MP-038147-8
A-246066-8	MP-038125-8
A-247032-8	MP-038060-8
A-248014-8	MP-038026-8
A-249007-8	MP-038014-8
A-250053-8	MP-039125-8
A-251074-2	MP-044173-2
A-252063-2	MP-044147-2
A-253053-2	MP-044125-2
A-254168-2	MP-157125-2
A-255026-2	MP-044060-2
A-256011-2	MP-044026-2
A-257006-2	MP-044014-2
A-262123-2	MP-065205-2
A-263104-2	MP-065173-2
A-264088-2	MP-065147-2
A-266036-2	MP-065060-2
A-267015-2	MP-065026-2
A-268008-2	MP-065014-2
A-271087-2	MP-080160-2
A-272173-2	MP-092205-2
A-281072-2	MP-065125-2
A-285092-2	MP-065160-2
A-291061-2	MP-130060-2
A-292066-2	MP-040125-2
A-298028-2	MP-130026-2
A-300115-2	MP-090160-2
A-301072-2	MP-050160-2
A-302201-2	MP-106160-2
A-303163-2	MP-130160-2
A-304101-2	MP-135160-2
A-305150-2	MP-141160-2
A-306215-2	MP-157160-2
A-307032-2	MP-040060-2
A-308084-2	MP-040160-2
A-309105-2	MP-040205-2
A-310090-2	MP-090125-2
A-324117-2	MP-141125-2
A-325360-2	MP-184160-2
A-326228-2	MP-185160-2
A-327195-2	MP-200160-2
A-328200-2	MP-225160-2
A-330170-2	MP-107173-2
A-331054-8	MP-027125-8
A-335016-2	MP-300014-2
A-338066-8	MP-031160-8
A-339011-8	MP-031026-8
A-340006-8	MP-031014-8
A-341014-2	MP-040026-2

# Part Number Cross Reference - Old/New



Old Part No.	New Part No.
A-342007-2	MP-040014-2
A-344014-2	MP-130014-2
A-345038-2	MP-135060-2
A-346016-2	MP-135026-2
A-347009-2	MP-135014-2
A-348032-2	MP-200026-2
A-349017-2	MP-200014-2
A-350005-8	MP-018014-8
A-351009-8	MP-018026-8
A-352020-8	MP-018060-8
A-353042-8	MP-018125-8
A-354049-8	MP-018147-8
A-355053-8	MP-018160-8
A-356057-8	MP-018173-8
A-357068-8	MP-018205-8
A-358083-8	MP-018250-8
A-362108-8	MP-027250-8
A-363206-8	MP-026250-8
A-364104-8	MP-031250-8
A-365132-8	MP-038250-8
A-366132-2	MP-040250-2
A-367106-2	MP-044250-2
A-368112-2	MP-050250-2
A-369144-2	MP-065250-2
A-370178-2	MP-068250-2
A-371136-2	MP-080250-2
A-372180-2	MP-090250-2
A-373314-2	MP-106250-2
A-374254-2	MP-130250-2
A-430026-2	MP-520014-2
A-438281-2	MP-184125-2
A-439012-2	MP-092014-2
A-440022-2	MP-092026-2
A-441051-2	MP-092060-2
A-442105-2	MP-092125-2
A-443124-2	MP-092147-2
A-444135-2	MP-092160-2
A-445146-2	MP-092173-2
A-446211-2	MP-092250-2
A-453113-8	MP-028205-8
A-460026-8	MP-027060-8
A-461069-8	MP-027160-8
A-462089-8	MP-027205-8
A-464064-8	MP-027147-8
A-465075-8	MP-027173-8
A-467004-8	MP-015014-8
A-468007-8	MP-015026-8
A-469017-8	MP-015060-8
A-470035-8	MP-015125-8
A-471041-8	MP-015147-8
A-472045-8	MP-015160-8
A-473048-8	MP-015173-8

Old Part No.	New Part No.
A-474057-8	MP-015205-8
A-475070-8	MP-015250-8
A-479026-8	MP-014125-8
A-480031-8	MP-014147-8
A-481033-8	MP-014160-8
A-482036-8	MP-014173-8
A-483052-8	MP-014250-8
A-488075-2	MP-225060-2
A-495106-8	MP-039250-8
A-496084-8	MP-039205-8
A-497074-8	MP-039173-8
A-498068-8	MP-039160-8
A-499063-8	MP-039147-8
A-500025-8	MP-039060-8
A-501011-8	MP-039026-8
A-502006-8	MP-039014-8
A-511014-2	MP-080026-2
A-512082-8	MP-025205-8
A-520052-8	MP-025125-8
A-522043-8	MP-014205-8
A-525100-8	MP-025250-8
A-526069-8	MP-025173-8
A-527064-8	MP-025160-8
A-528058-8	MP-025147-8
A-529024-8	MP-025060-8
A-530010-8	MP-025026-8
A-531006-8	MP-025014-8
A-534138-8	MP-028250-8
A-535095-8	MP-028173-8
A-536089-8	MP-028160-8
A-537081-8	MP-028147-8
A-538070-8	MP-028125-8
A-539033-8	MP-028060-8
A-540014-8	MP-028026-8
A-541008-8	MP-028014-8
A-542228-2	MP-400125-2
A-548127-2	MP-130125-2
A-559114-2	MP-068160-2
A-585079-2	MP-135125-2
A-630012-8	MP-026014-8
A-638132-8	MP-026160-8
A-639021-8	MP-026026-8
A-640012-2	MP-131014-2
A-641022-2	MP-131026-2
A-642051-2	MP-131060-2
A-643136-2	MP-131160-2
A-644213-2	MP-131250-2
A-645135-2	MP-132125-2
A-646158-2	MP-132147-2
A-647172-2	MP-132160-2
A-648186-2	MP-132173-2
A-649215-2	MP-132205-2

Old Part No.	New Part No.
A-650269-2	MP-132250-2
A-651022-2	MP-401014-2
A-652092-2	MP-401060-2
A-653192-2	MP-401125-2
A-654226-2	MP-401147-2
A-655246-2	MP-401160-2
A-656266-2	MP-401173-2
A-658026-2	MP-400014-2
A-659047-2	MP-400026-2
A-660292-2	MP-400160-2
A-661332-2	MP-520160-2
A-662036-2	MP-521014-2
A-663068-2	MP-521026-2
A-664156-2	MP-521060-2
A-665325-2	MP-521125-2
A-666382-2	MP-521147-2
A-667416-2	MP-521160-2
A-668450-2	MP-521173-2
A-670068-2	MP-044160-2
A-674006-8	MP-027014-8
A-675011-8	MP-027026-8
A-676014-2	MP-107014-2
A-677026-2	MP-107026-2
A-678059-2	MP-107060-2
A-679123-2	MP-107125-2
A-680145-2	MP-107147-2
A-681157-2	MP-107160-2
A-682197-2	MP-107205-2
A-683246-2	MP-107250-2
A-685182-2	MP-300160-2
A-710032-2	MP-226014-2
A-711060-2	MP-226026-2
A-712138-2	MP-226060-2
A-713287-2	MP-226125-2
A-714338-2	MP-226147-2
A-715152-2	MP-200125-2
A-716368-2	MP-226160-2
A-717398-2	MP-226173-2
A-718460-2	MP-226205-2
A-735020-2	MP-301014-2
A-736037-2	MP-301026-2
A-737085-2	MP-301060-2
A-740178-2	MP-301125-2
A-741209-2	MP-301147-2
A-742228-2	MP-301160-2
A-743246-2	MP-301173-2
A-744284-2	MP-301205-2
A-759135-2	MP-184060-2
A-848032-2	MP-080060-2
A-866142-2	MP-300125-2
A-894075-2	MP-106060-2
A-930157-1	MP-106125-2



CSC P/N	MA P/N
BK5315-026	BFS-0503015-026
BK5315-040	BFS-0503015-040
BK5315-060	BFS-0503015-060
BK5320-026	BFS-0503020-026
BK5320-040	BFS-0503020-040
BK5320-060	BFS-0503020-060
BK6315-026	BFS-0603015-026
BK6315-040	BFS-0603015-040
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BK6320-026	BFS-0603020-026
BK6320-040	BFS-0603020-040
BK6320-060	BFS-0603020-060
BK7315-026	BFS-0703015-026
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BK8315-026	BFS-0803015-026
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BS8315-040	BMS-0803015-040
BS8315-060	BMS-0803015-060
BS8320-026	BMS-0803020-026
BS8320-040	BMS-0803020-040
BS8320-060	BMS-0803020-060
CH-035060	HF-014060-8
CH-035125	HF-014125-8
CH-035147	HF-014147-8
CH-035160	HF-014160-8
CH-039026	HF-015026-8
CH-039060	HF-015060-8
CH-039125	HF-015125-8
CH-039147	HF-015147-8
CH-039160	HF-015160-8
CH-046026	HF-018026-8
CH-046060	HF-018060-8
CH-046125	HF-018125-8
CH-046147	HF-018147-8

CSC P/N	MA P/N
CH-046160	HF-018160-8
CH-063026	HF-025026-8
CH-063060	HF-025060-8
CH-063125	HF-025125-8
CH-063147	HF-025147-8
CH-063160	HF-025160-8
CH-066026	HF-027026-8
CH-066060	HF-027060-8
CH-066125	HF-027125-8
CH-066147	HF-027147-8
CH-066160	HF-027160-8
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CH-067060	HF-026060-8
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CH-067160	HF-026160-8
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CH-102125	HF-040125-2
CH-102147	HF-040147-2
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CH-112147	HF-044147-2
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CH-166125	HF-065125-2
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CH-166160	HF-065160-2
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CH-172125	HF-068125-2
CH-172147	HF-068147-2
CH-172160	HF-068160-2

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CH-229026	HF-090026-2
CH-229060	HF-090060-2
CH-229125	HF-090125-2
CH-229147	HF-090147-2
CH-229160	HF-090160-2
CH-234026	HF-092026-2
CH-234060	HF-092060-2
CH-234125	HF-092125-2
CH-234147	HF-092147-2
CH-234160	HF-092160-2
CH-270026	HF-106026-2
CH-270060	HF-106060-2
CH-270125	HF-106125-2
CH-270147	HF-106147-2
CH-270160	HF-106160-2
CH-330026	HF-130026-2
CH-330060	HF-130060-2
CH-330125	HF-130125-2
CH-330147	HF-130147-2
CH-330160	HF-130160-2
CH-343026	HF-135026-2
CH-343060	HF-135060-2
CH-343125	HF-135125-2
CH-343147	HF-135147-2
CH-343160	HF-135160-2
CH-358026	HF-141026-2
CH-358060	HF-141060-2
CH-358125	HF-141125-2
CH-358147	HF-141147-2
CH-358160	HF-141160-2
CH-400026	HF-157026-2
CH-400060	HF-157060-2
CH-400125	HF-157125-2
CH-400147	HF-157147-2
CH-400160	HF-157160-2
CH-467026	HF-184026-2
CH-467060	HF-184060-2
CH-467125	HF-184125-2
CH-467147	HF-184147-2
CH-467160	HF-184160-2
CH-468026	HF-185026-2
CH-468060	HF-185060-2
CH-468125	HF-185125-2
CH-468147	HF-185147-2
CH-468160	HF-185160-2
CH-508026	HF-200026-2
CH-508060	HF-200060-2
CH-508125	HF-200125-2
CH-508147	HF-200147-2
CH-508160	HF-200160-2
CH-571026	HF-226026-2
CH-571060	HF-226060-2
CH-571125	HF-226125-2
CH-571147	HF-226147-2
CH-571160	HF-226160-2
CH-572026	HF-225026-2

# Part Number Cross Reference - CSC/Micrometals Arnold



CSC P/N	MA P/N
CH-572060	HF-225060-2
CH-572125	HF-225125-2
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CH-572160	HF-225160-2
CH-777026	HF-300026-2
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CM-063147	MP-025147-8
CM-063160	MP-025160-8
CM-063173	MP-025173-8
CM-063200	MP-025205-8

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CM-066160	MP-027160-8
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CM-127060	MP-050060-2
CM-127125	MP-050125-2
CM-127147	MP-050147-2
CM-127160	MP-050160-2

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CM-343173	MP-135173-2
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CM-358125	MP-141125-2

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CM-358173	MP-141173-2
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CS-035125	MS-014125-8
CS-039060	MS-015060-8
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CS-039090	MS-015090-8
CS-039125	MS-015125-8

# Part Number Cross Reference - CSC/Micrometals Arnold



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CS-046075	MS-018075-8
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CS-063060	MS-025060-8
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ES5528B026	EMS-0552825-026
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Mag Inc P/N	MA P/N
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00K1207E060	EMS-0130604-060
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00K2510E014	EMS-0251007-014
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00K2510E060	EMS-0251007-060
00K2510E075	EMS-0251007-075
00K2510E090	EMS-0251007-090
00K3007E014	EMS-0301507-014
00K3007E026	EMS-0301507-026
00K3007E060	EMS-0301507-060
00K3007E075	EMS-0301507-075
00K3007E090	EMS-0301507-090
00K3515E014	EMS-0351409-014
00K3515E026	EMS-0351409-026
00K3515E060	EMS-0351409-060
00K3515E075	EMS-0351409-075
00K3515E090	EMS-0351409-090
00K4017E014	EMS-0432111-014
00K4017E026	EMS-0432111-026
00K4017E060	EMS-0432111-060
00K4017E075	EMS-0432111-075
00K4017E090	EMS-0432111-090
00K4020E014	EMS-0432115-014
00K4020E026	EMS-0432115-026
00K4020E060	EMS-0432115-060
00K4020E075	EMS-0432115-075
00K4020E090	EMS-0432115-090
00K4022E014	EMS-0432120-014
00K4022E026	EMS-0432120-026
00K4022E060	EMS-0432120-060
00K4022E075	EMS-0432120-075
00K4022E090	EMS-0432120-090
00K4317E014	EMS-0411713-014
00K4317E026	EMS-0411713-026
00K4317E060	EMS-0411713-060
00K4317E075	EMS-0411713-075
00K4317E090	EMS-0411713-090
00K4741B026	BMS-0474128-026
00K4741B02603	BMS-0474120-026
00K4741B060	BMS-0474128-060
00K5528E014	EMS-0552821-014
00K5528E026	EMS-0552821-026
00K5528E060	EMS-0552821-060
00K5528E075	EMS-0552821-075
00K5528E090	EMS-0552821-090
00K5530E014	EMS-0552825-014
00K5530E026	EMS-0552825-026
00K5530E060	EMS-0552825-060
00K5530E075	EMS-0552825-075
00K5530E090	EMS-0552825-090
00K6030B026	BMS-0603015-026
00K6030B060	BMS-0603015-060

Mag Inc P/N	MA P/N
00K6527E014	EMS-0653327-014
00K6527E026	EMS-0653327-026
00K6527E060	EMS-0653327-060
00K6527E075	EMS-0653327-075
00K6527E090	EMS-0653327-090
00K7228E014	EMS-0722819-014
00K7228E026	EMS-0722819-026
00K7228E060	EMS-0722819-060
00K7228E075	EMS-0722819-075
00K7228E090	EMS-0722819-090
00K8020E014	EMS-0803820-014
00K8020E026	EMS-0803820-026
00K8020E060	EMS-0803820-060
00K8020E075	EMS-0803820-075
00K8020E090	EMS-0803820-090
55014-A2	MP-025173-8
55017-A2	MP-025205-8
55018-A2	MP-025160-8
55019-A2	MP-025147-8
55020-A2	MP-025125-8
55021-A2	MP-025060-8
55022-A2	MP-025026-8
55023-A2	MP-025014-8
55024-A2	MP-031173-8
55027-A2	MP-031205-8
55028-A2	MP-031160-8
55029-A2	MP-031147-8
55030-A2	MP-031125-8
55031-A2	MP-031060-8
55032-A2	MP-031026-8
55033-A2	MP-031014-8
55034-A2	MP-040173-2
55037-A2	MP-040205-2
55038-A2	MP-040160-2
55039-A2	MP-040147-2
55040-A2	MP-040125-2
55041-A2	MP-040060-2
55042-A2	MP-040026-2
55043-A2	MP-040014-2
55044-A2	MP-050173-2
55047-A2	MP-050205-2
55048-A2	MP-050160-2
55049-A2	MP-050147-2
55050-A2	MP-050125-2
55051-A2	MP-050060-2
55052-A2	MP-050026-2
55053-A2	MP-050014-2
55059-A2	MP-090060-2
55071-A2	MP-130060-2
55076-A2	MP-141060-2
55082-A2	MP-185173-2
55083-A2	MP-157060-2
55086-A2	MP-185205-2
55087-A2	MP-185160-2
55088-A2	MP-185147-2
55089-A2	MP-185125-2
55090-A2	MP-185060-2
55091-A2	MP-185026-2
55092-A2	MP-185014-2
55103-A2	MP-225173-2

Mag Inc P/N	MA P/N
55106-A2	MP-225205-2
55107-A2	MP-225160-2
55108-A2	MP-225147-2
55109-A2	MP-225125-2
55110-A2	MP-225060-2
55111-A2	MP-225026-2
55112-A2	MP-225014-2
55114-A2	MP-065173-2
55117-A2	MP-065205-2
55118-A2	MP-065160-2
55119-A2	MP-065147-2
55120-A2	MP-065125-2
55121-A2	MP-065060-2
55122-A2	MP-065026-2
55123-A2	MP-065014-2
55124-A2	MP-044173-2
55127-A2	MP-044205-2
55128-A2	MP-044160-2
55129-A2	MP-044147-2
55130-A2	MP-044125-2
55131-A2	MP-044060-2
55132-A2	MP-044026-2
55133-A2	MP-044014-2
55134-AY	MP-014173-8
55137-AY	MP-014205-8
55138-AY	MP-014160-8
55139-AY	MP-014147-8
55140-AY	MP-014125-8
55144-A2	MP-015173-8
55147-A2	MP-015205-8
55148-A2	MP-015160-8
55149-A2	MP-015147-8
55150-A2	MP-015125-8
55174-AY	MP-018173-8
55177-AY	MP-018205-8
55178-AY	MP-018160-8
55179-AY	MP-018147-8
55180-AY	MP-018125-8
55181-A2	MP-018060-8
55190-A2	MP-226014-2
55191-A2	MP-226026-2
55192-A2	MP-226060-2
55195-A2	MP-226125-2
55196-A2	MP-226147-2
55197-A2	MP-226160-2
55198-A2	MP-226173-2
55199-A2	MP-226205-2
55200-A2	MP-080173-2
55203-A2	MP-080205-2
55204-A2	MP-080160-2
55205-A2	MP-080147-2
55206-A2	MP-080125-2
55208-A2	MP-080026-2
55209-A2	MP-080014-2
55234-A2	MP-027173-8
55237-A2	MP-027205-8
55238-A2	MP-027160-8
55239-A2	MP-027147-8
55240-A2	MP-027125-8
55241-A2	MP-027060-8

# Part Number Cross Reference - Mag Inc./Micrometals Arnold



Mag Inc P/N	MA P/N
55242-A2	MP-027026-8
55243-A2	MP-027014-8
55248-A2	MP-157173-2
55251-A2	MP-157205-2
55252-A2	MP-157160-2
55253-A2	MP-157147-2
55254-A2	MP-157125-2
55256-A2	MP-157026-2
55257-A2	MP-157014-2
55264-A3	MP-026173-8
55267-A2	MP-026205-8
55268-A2	MP-026160-8
55269-A2	MP-026147-8
55270-A2	MP-026125-8
55271-A2	MP-026060-8
55272-A2	MP-026026-8
55273-A2	MP-026014-8
55274-A2	MP-039173-8
55277-A2	MP-039205-8
55278-A2	MP-039160-8
55279-A2	MP-039147-8
55280-A2	MP-039125-8
55281-A2	MP-039060-8
55282-A2	MP-039026-8
55283-A2	MP-039014-8
55284-A2	MP-038173-8
55287-A2	MP-038205-8
55288-A2	MP-038160-8
55289-A2	MP-038147-8
55290-A2	MP-038125-8
55291-A2	MP-038060-8
55292-A2	MP-038026-8
55293-A2	MP-038014-8
55304-A2	MP-090173-2
55307-A2	MP-090205-2
55308-A2	MP-090160-2
55309-A2	MP-090147-2
55310-A2	MP-090125-2
55312-A2	MP-090026-2
55313-A2	MP-090014-2
55318-A3	MP-141173-2
55321-A2	MP-141205-2
55322-A2	MP-141160-2
55323-A2	MP-141147-2
55324-A2	MP-141125-2
55326-A2	MP-141026-2
55327-A2	MP-141014-2
55344-A2	MP-092173-2
55347-A2	MP-092205-2
55348-A2	MP-092160-2
55349-A2	MP-092147-2
55350-A2	MP-092125-2
55351-A2	MP-092060-2
55352-A2	MP-092026-2
55353-A2	MP-092014-2
55374-A2	MP-068173-2
55377-A2	MP-068205-2
55378-A2	MP-068160-2
55379-A2	MP-068147-2
55380-A2	MP-068125-2

Mag Inc P/N	MA P/N
55381-A2	MP-068060-2
55382-A2	MP-068026-2
55383-A2	MP-068014-2
55404-A2	MP-028173-8
55407-A2	MP-028205-8
55408-A2	MP-028160-8
55409-A2	MP-028147-8
55410-A2	MP-028125-8
55411-A2	MP-028060-8
55412-A2	MP-028026-8
55413-A2	MP-028014-8
55432-A2	MP-184173-2
55435-A2	MP-184205-2
55436-A2	MP-184160-2
55437-A2	MP-184147-2
55438-A2	MP-184125-2
55439-A2	MP-184060-2
55440-A2	MP-184026-2
55441-A2	MP-184014-2
55542-A2	MP-130173-2
55545-A2	MP-130205-2
55546-A2	MP-130160-2
55547-A2	MP-130147-2
55548-A2	MP-130125-2
55550-A2	MP-130026-2
55551-A2	MP-130014-2
55579-A1	MP-135173-2
55582-A2	MP-135205-2
55583-A2	MP-135160-2
55584-A2	MP-135147-2
55585-A2	MP-135125-2
55586-A2	MP-135060-2
55587-A2	MP-135026-2
55588-A2	MP-135014-2
55709-A2	MP-200173-2
55712-A2	MP-200205-2
55713-A2	MP-200160-2
55714-A2	MP-200147-2
55715-A2	MP-200125-2
55716-A2	MP-200060-2
55717-A2	MP-200026-2
55718-A2	MP-200014-2
55848-A2	MP-080060-2
55866-A2	MP-300125-2
55867-A2	MP-300060-2
55868-A2	MP-300026-2
55869-A2	MP-300014-2
55894-A2	MP-106060-2
55906-A2	MP-301125-2
55907-A2	MP-301060-2
55908-A2	MP-301026-2
55909-A2	MP-301014-2
55924-A5	MP-106173-2
55927-A2	MP-106205-2
55928-A2	MP-106160-2
55929-A2	MP-106147-2
55930-A1	MP-106125-2
55932-A2	MP-106026-2
55933-A2	MP-106014-2
58018-A2	HF-025160-8

Mag Inc P/N	MA P/N
58019-A2	HF-025147-8
58020-A2	HF-025125-8
58021-A2	HF-025060-8
58022-A2	HF-025026-8
58023-A2	HF-025014-8
58028-A2	HF-031160-8
58029-A2	HF-031147-8
58030-A2	HF-031125-8
58031-A2	HF-031060-8
58032-A2	HF-031026-8
58033-A2	HF-031014-8
58038-A2	HF-040160-2
58039-A2	HF-040147-2
58040-A2	HF-040125-2
58041-A2	HF-040060-2
58042-A2	HF-040026-2
58043-A2	HF-040014-2
58048-A2	HF-050160-2
58049-A2	HF-050147-2
58050-A2	HF-050125-2
58051-A2	HF-050060-2
58052-A2	HF-050026-2
58053-A2	HF-050014-2
58059-A2	HF-090060-2
58071-A2	HF-130060-2
58076-A2	HF-141060-2
58083-A2	HF-157060-2
58089-A2	HF-185125-2
58090-A2	HF-185060-2
58091-A2	HF-185026-2
58092-A2	HF-185014-2
58109-A2	HF-225125-2
58110-A2	HF-225060-2
58111-A2	HF-225026-2
58112-A2	HF-225014-2
58118-A2	HF-065160-2
58119-A2	HF-065147-2
58120-A2	HF-065125-2
58121-A2	HF-065060-2
58122-A2	HF-065026-2
58123-A2	HF-065014-2
58128-A2	HF-044160-2
58129-A2	HF-044147-2
58130-A2	HF-044125-2
58131-A2	HF-044060-2
58132-A2	HF-044026-2
58133-A2	HF-044014-2
58190-A2	HF-226014-2
58191-A2	HF-226026-2
58192-A2	HF-226060-2
58195-A2	HF-226125-2
58204-A2	HF-080160-2
58205-A2	HF-080147-2
58206-A2	HF-080125-2
58208-A2	HF-080026-2
58209-A2	HF-080014-2
58238-A2	HF-027160-8
58239-A2	HF-027147-8
58240-A2	HF-027125-8
58241-A2	HF-027060-8

Mag Inc P/N	MA P/N
58242-A2	HF-027026-8
58243-A2	HF-027014-8
58252-A2	HF-157160-2
58253-A2	HF-157147-2
58254-A2	HF-157125-2
58256-A2	HF-157026-2
58257-A2	HF-157014-2
58268-A2	HF-026160-8
58269-A2	HF-026147-8
58270-A2	HF-026125-8
58271-A2	HF-026060-8
58272-A2	HF-026026-8
58273-A2	HF-026014-8
58278-A2	HF-039160-8
58279-A2	HF-039147-8
58280-A2	HF-039125-8
58281-A2	HF-039060-8
58282-A2	HF-039026-8
58283-A2	HF-039014-8
58288-A2	HF-038160-8
58289-A2	HF-038147-8
58290-A2	HF-038125-8
58291-A2	HF-038060-8
58292-A2	HF-038026-8
58293-A2	HF-038014-8
58308-A2	HF-090160-2
58309-A2	HF-090147-2
58310-A2	HF-090125-2
58312-A2	HF-090026-2
58313-A2	HF-090014-2
58322-A2	HF-141160-2
58323-A2	HF-141147-2
58324-A2	HF-141125-2
58326-A2	HF-141026-2
58327-A2	HF-141014-2
58348-A2	HF-092160-2
58349-A2	HF-092147-2
58350-A2	HF-092125-2
58351-A2	HF-092060-2
58352-A2	HF-092026-2
58353-A2	HF-092014-2
58378-A2	HF-068160-2
58379-A2	HF-068147-2
58380-A2	HF-068125-2
58381-A2	HF-068060-2
58382-A2	HF-068026-2
58383-A2	HF-068014-2
58408-A2	HF-028160-8
58409-A2	HF-028147-8
58410-A2	HF-028125-8
58411-A2	HF-028060-8
58412-A2	HF-028026-8
58413-A2	HF-028014-8
58438-A2	HF-184125-2
58439-A2	HF-184060-2
58440-A2	HF-184026-2
58441-A2	HF-184014-2
58546-A2	HF-130160-2
58547-A2	HF-130147-2
58548-A2	HF-130125-2

Mag Inc P/N	MA P/N
58550-A2	HF-130026-2
58551-A2	HF-130014-2
58583-A2	HF-135160-2
58584-A2	HF-135147-2
58585-A2	HF-135125-2
58586-A2	HF-135060-2
58587-A2	HF-135026-2
58588-A2	HF-135014-2
58715-A2	HF-200125-2
58716-A2	HF-200060-2
58717-A2	HF-200026-2
58718-A2	HF-200014-2
58848-A2	HF-080060-2
58866-A2	HF-300125-2
58867-A2	HF-300060-2
58868-A2	HF-300026-2
58869-A2	HF-300014-2
58894-A2	HF-106060-2
58906-A2	HF-301125-2
58907-A2	HF-301060-2
58908-A2	HF-301026-2
58909-A2	HF-301014-2
58928-A2	HF-106160-2
58929-A2	HF-106147-2
58930-A2	HF-106125-2
58932-A2	HF-106026-2
58933-A2	HF-106014-2
77020-A7	MS-025125-8
77021-A7	MS-025060-8
77030-A7	MS-031125-8
77031-A7	MS-031060-8
77040-A7	MS-040125-2
77041-A7	MS-040060-2
77050-A7	MS-050125-2
77051-A7	MS-050060-2
77054-A7	MS-050090-2
77055-A7	MS-050075-2
77059-A7	MS-090060-2
77071-A7	MS-130060-2
77076-A7	MS-141060-2
77083-A7	MS-157060-2
77089-A7	MS-185125-2
77090-A7	MS-185060-2
77091-A7	MS-185026-2
77093-A7	MS-185090-2
77094-A7	MS-185075-2
77109-A7	MS-225125-2
77110-A7	MS-225060-2
77111-A7	MS-225026-2
77120-A7	MS-065125-2
77121-A7	MS-065060-2
77130-A7	MS-044125-2
77131-A7	MS-044060-2
77140-A7	MS-014125-8
77141-A7	MS-014060-8
77150-A7	MS-015125-8
77151-A7	MS-015060-8
77154-A7	MS-015090-8
77155-A7	MS-015075-8
77180-A7	MS-018125-8

Mag Inc P/N	MA P/N
77181-A7	MS-018060-8
77184-A7	MS-018090-8
77185-A7	MS-018075-8
77191-A7	MS-226026-2
77192-A7	MS-226060-2
77193-A7	MS-226075-2
77194-A7	MS-226090-2
77195-A7	MS-226125-2
77206-A7	MS-080125-2
77210-A7	MS-080090-2
77211-A7	MS-080075-2
77213-A7	MS-225090-2
77214-A7	MS-225075-2
77224-A7	MS-065090-2
77225-A7	MS-065075-2
77240-A7	MS-027125-8
77241-A7	MS-027060-8
77244-A7	MS-027090-8
77245-A7	MS-027075-8
77254-A7	MS-157125-2
77256-A7	MS-157026-2
77258-A7	MS-157090-2
77259-A7	MS-157075-2
77270-A7	MS-026125-8
77271-A7	MS-026060-8
77280-A7	MS-039125-8
77281-A7	MS-039060-8
77290-A7	MS-038125-8
77291-A7	MS-038060-8
77294-A7	MS-038090-8
77295-A7	MS-038075-8
77310-A7	MS-090125-2
77312-A7	MS-090026-2
77314-A7	MS-090090-2
77315-A7	MS-090075-2
77324-A7	MS-141125-2
77326-A7	MS-141026-2
77328-A7	MS-141090-2
77329-A7	MS-141075-2
77334-A7	MS-044090-2
77335-A7	MS-044075-2
77350-A7	MS-092125-2
77351-A7	MS-092060-2
77352-A7	MS-092026-2
77354-A7	MS-092090-2
77355-A7	MS-092075-2
77380-A7	MS-068125-2
77381-A7	MS-068060-2
77384-A7	MS-068090-2
77385-A7	MS-068075-2
77410-A7	MS-028125-8
77411-A7	MS-028060-8
77414-A7	MS-028090-8
77415-A7	MS-028075-8
77438-A7	MS-184125-2
77439-A7	MS-184060-2
77440-A7	MS-184026-2
77442-A7	MS-184090-2
77443-A7	MS-184075-2
77444-A7	MS-014090-8

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Mag Inc P/N	MA P/N
77445-A7	MS-014075-8
77548-A7	MS-130125-2
77550-A7	MS-130026-2
77552-A7	MS-130090-2
77553-A7	MS-130075-2
77585-A7	MS-135125-2
77586-A7	MS-135060-2
77587-A7	MS-135026-2
77589-A7	MS-135090-2
77590-A7	MS-135075-2
77715-A7	MS-200125-2
77716-A7	MS-200060-2
77717-A7	MS-200026-2
77719-A7	MS-200090-2
77720-A7	MS-200075-2
77824-A7	MS-025090-8
77825-A7	MS-025075-8
77834-A7	MS-031090-8
77835-A7	MS-031075-8
77844-A7	MS-040090-2
77845-A7	MS-040075-2
77848-A7	MS-080060-2
77868-A7	MS-300026-2
77874-A7	MS-026090-8
77875-A7	MS-026075-8
77884-A7	MS-039090-8
77885-A7	MS-039075-8
77894-A7	MS-106060-2
77908-A7	MS-301026-2
77930-A7	MS-106125-2
77932-A7	MS-106026-2
77934-A7	MS-106090-2
77935-A7	MS-106075-2
78021-A7	FS-025060-8
78022-A7	FS-025026-8
78023-A7	FS-025014-8
78031-A7	FS-031060-8
78032-A7	FS-031026-8
78033-A7	FS-031014-8
78041-A7	FS-040060-2
78042-A7	FS-040026-2
78043-A7	FS-040014-2
78051-A7	FS-050060-2
78052-A7	FS-050026-2
78053-A7	FS-050014-2
78054-A7	FS-050090-2
78055-A7	FS-050075-2
78059-A7	FS-090060-2
78071-A7	FS-130060-2
78076-A7	FS-141060-2
78083-A7	FS-157060-2
78090-A7	FS-185060-2
78091-A7	FS-185026-2
78092-A7	FS-185014-2
78094-A7	FS-185075-2
78110-A7	FS-225060-2
78111-A7	FS-225026-2
78112-A7	FS-225014-2
78121-A7	FS-065060-2
78122-A7	FS-065026-2

Mag Inc P/N	MA P/N
78123-A7	FS-065014-2
78131-A7	FS-044060-2
78132-A7	FS-044026-2
78133-A7	FS-044014-2
78141-A7	FS-014060-8
78151-A7	FS-015060-8
78154-A7	FS-015090-8
78155-A7	FS-015075-8
78181-A7	FS-018060-8
78184-A7	FS-018090-8
78185-A7	FS-018075-8
78190-A7	FS-226014-2
78191-A7	FS-226026-2
78192-A7	FS-226060-2
78193-A7	FS-226075-2
78194-A7	FS-226090-2
78208-A7	FS-080026-2
78209-A7	FS-080014-2
78210-A7	FS-080090-2
78211-A7	FS-080075-2
78213-A7	FS-225090-2
78214-A7	FS-225075-2
78224-A7	FS-065090-2
78225-A7	FS-065075-2
78241-A7	FS-027060-8
78242-A7	FS-027026-8
78243-A7	FS-027014-8
78244-A7	FS-027090-8
78245-A7	FS-027075-8
78256-A7	FS-157026-2
78257-A7	FS-157014-2
78258-A7	FS-157090-2
78259-A7	FS-157075-2
78271-A7	FS-026060-8
78272-A7	FS-026026-8
78273-A7	FS-026014-8
78281-A7	FS-039060-8
78282-A7	FS-039026-8
78283-A7	FS-039014-8
78291-A7	FS-038060-8
78292-A7	FS-038026-8
78293-A7	FS-038014-8
78294-A7	FS-038090-8
78295-A7	FS-038075-8
78312-A7	FS-090026-2
78313-A7	FS-090014-2
78314-A7	FS-090090-2
78315-A7	FS-090075-2
78326-A7	FS-141026-2
78327-A7	FS-141014-2
78328-A7	FS-141090-2
78329-A7	FS-141075-2
78334-A7	FS-044090-2
78335-A7	FS-044075-2
78351-A7	FS-092060-2
78352-A7	FS-092026-2
78353-A7	FS-092014-2
78354-A7	FS-092090-2
78355-A7	FS-092075-2
78381-A7	FS-068060-2

Mag Inc P/N	MA P/N
78382-A7	FS-068026-2
78383-A7	FS-068014-2
78384-A7	FS-068090-2
78385-A7	FS-068075-2
78411-A7	FS-028060-8
78412-A7	FS-028026-8
78413-A7	FS-028014-8
78414-A7	FS-028090-8
78415-A7	FS-028075-8
78439-A7	FS-184060-2
78440-A7	FS-184026-2
78441-A7	FS-184014-2
78442-A7	FS-184090-2
78443-A7	FS-184075-2
78444-A7	FS-014090-8
78445-A7	FS-014075-8
78550-A7	FS-130026-2
78551-A7	FS-130014-2
78552-A7	FS-130090-2
78553-A7	FS-130075-2
78586-A7	FS-135060-2
78587-A7	FS-135026-2
78588-A7	FS-135014-2
78589-A7	FS-135090-2
78590-A7	FS-135075-2
78716-A7	FS-200060-2
78717-A7	FS-200026-2
78718-A7	FS-200014-2
78719-A7	FS-200090-2
78720-A7	FS-200075-2
78824-A7	FS-025090-8
78825-A7	FS-025075-8
78834-A7	FS-031090-8
78835-A7	FS-031075-8
78844-A7	FS-040090-2
78845-A7	FS-040075-2
78848-A7	FS-080060-2
78867-A7	FS-300060-2
78868-A7	FS-300026-2
78869-A7	FS-300014-2
78874-A7	FS-026090-8
78875-A7	FS-026075-8
78884-A7	FS-039090-8
78885-A7	FS-039075-8
78894-A7	FS-106060-2
78907-A7	FS-301060-2
78908-A7	FS-301026-2
78909-A7	FS-301014-2
78932-A7	FS-106026-2
78933-A7	FS-106014-2
78934-A7	FS-106090-2
78935-A7	FS-106075-2
79093-A7	FS-185090-2



Micrometals Arnold Powder Core Inductor Design Software is a flexible user-friendly tool designed to assist in the selection of powder cores. The software file size about 4.5 MB, and is available for free download from [www.MicrometalsArnoldPowderCores.com](http://www.MicrometalsArnoldPowderCores.com).

The user will have the opportunity to select from two different inductor applications:

- 1) Design of DC output inductors, typically used in Switch Mode Power Supplies (SMPS)
- 2) Design of a power factor boost inductor, commonly referred to as a PFC choke.

The program accepts user defined design requirements in terms of required inductance, dc resistance, dc bias current and applied ac voltage. The user has the option of specifying core geometry (Toroids only in this release), specific core materials or all materials, metric units or English units, maximum window fill factor, temperature rise, ambient temperature, etc.

The program will automatically calculate the smallest core size possible and will display;

- 1) Micrometals Arnold Part Number
- 2) Approximate unit price\*
- 3) Core  $A_L$  Value
- 4) Required Number of Turns
- 5) Wire Size
- 6) Percent Window Fill
- 7) DC Winding Resistance
- 8)  $B_{pk}$  - Peak AC Flux Density
- 9) Percent Initial Permeability

- 10) Core Loss
- 11) Copper Loss
- 12) Temperature Rise

\*Unit price is an estimate and intended to demonstrate relative prices between materials and sizes and provide design engineer value judgment and not a procurement offer.

In addition, the software allows the user to analyze specific designs using the analysis function.

The software allows the design engineer to quickly work up multiple design solutions based on user specified electrical requirements which all can easily printed for hard copies. Designs can also be saved to a file by using the 'F' key.

Detailed instructions can be found in the "Help" section of the software. The Applications department at Micrometals can offer technical assistance regarding the use of this software and can be contacted at the Anaheim California headquarters at [Applications@Micrometals.com](mailto:Applications@Micrometals.com).

**Micrometals Arnold Powder Cores**  
 Super-MSS(Sendust)- Molypermalloy (MPP)-Fluxsan(Silicon Iron Alloy)  
 DESIGN OF INDUCTORS FOR POWER FILTER APPLICATIONS  
 SOFTWARE BY ROBERT E. HILL  
 June 22, 2011

**Toroid & E Core Design Requirements**

**POWER FACTOR BOOST INDUCTOR**

Inductance at Maximum Current: 300.00 micro Henries  
 Maximum DC Resistance: 0.00 Ohms (Optional)  
 Maximum Current: 7.07 Amperes

Peak Regulator Input voltage: 141.00 Volts  
 Regulator DC Output voltage: 400.00 Volts  
 Frequency: 85.00 kHz  
 Temperature: 55.0 Degrees C

Core Shape: TORROID Stacked Cores: 1  
 Winding Type: SINGLE LAYER Wire Strands: 1

CORE MATERIAL  
 RIPPLE CURRENT: 4.088 Amperes p-p

**ELECTRICAL PROPERTIES DATA**

DISPLAY ELECTRICAL | DISPLAY DIMENSIONS | INDUCTANCE | TEMP RISE | ANALYSIS

**POWER FACTOR BOOST INDUCTOR** Wed Jul 06 15:37:02 2011

Inductance at Maximum Current: 300.00 micro Henries  
 Maximum DC Resistance: 0.00 Ohms (Optional)  
 Maximum Current: 7.07 Amperes

Peak Regulator Input voltage: 141.00 Volts  
 Regulator DC Output voltage: 400.00 Volts  
 Frequency: 85.00 kHz  
 Temperature: 55.0 Degrees C

Core Part Number	Price	AL nH	Turns	Wire AWG	%Fill	Rdc Ohms	Bac Gauss	%Perm	Core Loss Watts	Copper Loss Watts	Temp Rise deg C
HF-184060-2	9.78	135	49	# 16	15.0	49.0 m	603.3	92.2	4.91	1.22	39.6
FS-184060-2	2.72	135	50	# 16	15.3	50.0 m	591.2	89.6	4.21	1.25	36.0
MS-184026-2	1.71	59	74	# 20	9.0	0.182	399.5	92.8	1.16	4.55	38.9
MS-184060-2	1.88	135	52	# 17	12.7	64.9 m	568.5	81.9	2.06	1.62	26.3
MS-184075-2	1.88	169	48	# 16	14.7	48.0 m	615.8	76.6	2.43	1.20	25.6
MS-184090-2	1.88	202	45	# 16	13.8	45.0 m	656.9	73.3	2.77	1.12	27.2
MS-184125-2	1.88	281	42	# 15	16.2	33.5 m	703.8	61.7	2.96	0.84	26.2
MS-185060-2	1.40	86	68	# 17	11.6	71.8 m	645.6	76.3	1.95	1.79	28.0
MS-185075-2	1.40	107	63	# 17	10.7	66.5 m	696.8	69.5	2.28	1.66	29.2
MS-185090-2	1.40	128	60	# 16	12.8	50.8 m	731.6	64.8	2.51	1.27	27.9
MS-185125-2	1.40	178	58	# 16	12.4	49.1 m	756.9	50.0	2.50	1.23	27.6
FS-200060-2	2.06	73	69	# 17	9.5	69.5 m	681.5	86.8	4.20	1.74	38.4
MS-200060-2	1.43	73	73	# 17	10.1	73.5 m	644.1	76.7	1.98	1.84	26.6
MS-200075-2	1.43	91	69	# 17	9.5	69.5 m	681.5	70.1	2.22	1.74	27.4
MS-200090-2	1.43	109	65	# 16	11.3	52.5 m	723.4	65.5	2.51	1.31	26.3
MS-200125-2	1.43	152	62	# 16	10.8	50.1 m	758.4	51.0	2.57	1.25	26.3
HF-225026-2	8.51	33	100	# 19	6.9	0.169	407.4	91.4	3.12	4.21	39.8
HF-225125-2	9.45	156	46	# 12	16.1	16.3 m	885.6	89.3	7.54	0.41	38.9
FS-225014-2	2.63	32	98	# 19	6.8	0.165	415.7	97.4	2.28	4.13	35.6

Inductor design software is available for download at no charge from [www.MicrometalsArnoldPowderCores.com](http://www.MicrometalsArnoldPowderCores.com)

	Super-MSS™ Sendust	MPP	FluxSan™	Hi-Flux™	Optilloy™
Material Type	85% Fe 9% Si 6% Al	81% Ni 17% Fe 2% Mo	93.5% Fe 6.5% Si	50% Ni 50% Fe	Fe Si Al Ni
Material Designation	MS	MP	FS	HF	OP
Comparison made with:	60μ	60μ	60μ	60μ	60μ
Saturation Flux Density					
Bsat (G)	8,900	8,800	16,700	14,800	13,000
H at 50% μi (Oe)	99	100	142	151	141
Core Loss					
60Hz, 5000G	6.4	9.1	14.5	15.7	8.7
10kHz, 500G	12.9	12.9	26.1	18.8	11.8
100kHz, 140G	12.9	12.6	24.2	27.8	15.9
1MHz, 40G	49.0	54.6	79.1	166.5	83.5
Shapes	T, E & B	T	T, E & B	T	T
Max Size Toroid (T)	154mm	154mm	154mm	154mm	154mm
Max Size E-Core (E)	120mm	—	120mm	—	—
Max Size Block (B)	80mm	—	80mm	—	—
Relative Price*	2 - 3	10 - 18	2 - 4	7 - 9	6 - 7

\*Pricing estimate relative to Micrometals least expensive iron powder material based on 25mm toroidal geometry.



Please refer to our website for application assistance and closest distributor:

**[www.MicrometalsArnoldPowderCores.com](http://www.MicrometalsArnoldPowderCores.com)**

**Micrometals Arnold Powder Cores  
A Division of Micrometals, Inc.**

**5615 E. La Palma Ave., Anaheim, CA 92807 USA**