

Table 3.1. SURVEY OF SOME FERRITE GRADES

APPLICATION CLASSIFICATION												
Class	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	
Initial permeability	800-2500	500-1000	1500-10 000	1000-3000	> 1000	500-1000	160-490	70-150	36-65	12-30	< 10	
Main applications	Inductors	Inductors Antenna rods	Wide band & pulse transformers	High B_{sat} applns., T.V. & power transformers	Wide band & pulse transformers	H.F. Wide band & power transformers, Antenna rods	Antenna rods, H.F. power transformers	Inductors, Antenna rods, H.F. power transformers	Inductors	Inductors	Inductors	
Approx. frequency range	< 200 kHz	100 kHz-2 MHz	LF-200 MHz	< 100 kHz	1-300 MHz	100 kHz 300 MHz	500 kHz-5 MHz	2-30 MHz	10-40 MHz	20-60 MHz	> 30 MHz	
Manufacturer and trade name												
UNITED KINGDOM												
1 Aladdin Components Ltd. Feradin							R1	R4 R5	R6 R8	R9 R10		
2 Mullard Ltd. Ferroxcube	A1 A5 A13	A10	A5T A8 A7 A15	A2 A3 A9 A16			B1	B2	B10	B4	B5	
3 Neosid Ltd.	F7 F8 F8A	F11	F7 F8A				F14A	F16 F17	F25		F29	
4 The Plessey Company Ltd.	M2 T5 T11	T21 T31	T5 T5T	NW27 NW29 NW26			NW25	NW6 NW10 H32				
5 S.E.I. Ltd. Feralex	P R	S	P	R			K2	K4	K6	K8		
6 S.T.C. Ltd. Stanferite	SA503 SA502 SA500L	SA401	SA500T SA601				SB700	SB600	SB500	SB400	SB300	
HOLLAND												
7 N.V. Philips Ferroxcube	3B 3B3 3B5 3H1 3B7	3D3	3E1 3E2 3E3	3C2 3C6 3C7 3C8			4A1 4A4	4B1	4C1 4C6 4C7	4D1 4D2	4E1 1Z3	
FRANCE												
8 Cofelec Ferrinox	T4 T6 T10 T14 T22	B10* T31*	B50 T6	B30 B42 B50			H20	H30 H32	H50	H60 H52		
9 Coprim Ferroxcube	3B 3B3 3B5 3H1 3B7	3D3	3E1 3E2 3E3	3C6 3C7 3C8			4A1 4A3	4B1	4C1 4C7	4D1	4E1	
10 L.T.T. Fermalite Fermalite	2002 1004 1002 2005	1005	2002 2003	3002 3001	2101		1101	1102	1112 1103	1104	1105	
GERMANY												
11 Krupp Widia-Fabric Hyperox	D1S4 D1S2 D1S3		C3 D1 D1S1	C2 C22 C21	E1		E2 E3	E4	E5	E6	E7	
12 Neosid Pemetzrieder GmbH							F1	F2	F106	F20	F40 F100	
13 Siemens A.G. Siferrit	N22 N28 N29	M33	T26 N30 T35 T38	N20 N27			M11	K1		K12	U17 U60	
14 Steatite Magnesia Keraperm	417	615	417	407 417			503	606 612	602		704 814	
15 Valvo GmbH Ferroxcube	3B 3B3 3B5 3H1 3B7	3D3	3E1 3E2 3E3	3C6 3C7 3C8			4A1 4A3 4A4	4B1	4C1 4C6 4C7	4D1	4E1	
U.S.A.												
16 Allen-Bradley Co.	W-03 W-5			W-03 W-04 W-5			W-01	R-02				
17 Ceramic Magnetics Inc.	MN-30 MN-60	MN-30 MN-31	MN-30	MN-31	CM-2002		CN-20 C-2025	C-2050 C-2075	C-2075 N-51	N-50	N-40	
18 Fair-rite Products Corp.	71 72 73	31 32 33					64 62	61 65 51	63			
19 Ferroxcube Corp. Ferroxcube	3B9 3B7	3D3	3E 3E2A 3E3	3E 3C5	4A6		4A	4B	4C 4C4	4D	4E 1Z2	
20 Indiana General Corp. Ferramic	TC-6 TC-7	TC-3	O-5 O-6	O-5			H		TC-4 Q-1	Q-2	Q-3	
21 Magnetics Inc.	C D G	A	A C D G	C D					N			
22 National Moldite Co. Inc.	D*	71*							M	M2*		
23 Stackpole Carbon Co. Ceramag	C24 C26	C27A	C24	C24A			C7A C5N	C9	C11 C11A	C12	C2285 C2285A	
24 D. M. Steward Manufacturing Co.	F-112						F4S-1		F-220		F6-21	
JAPAN												
25 Nippon Electric Co. Ltd. Neferrite	C*		D1* D2 D3									
26 Nippon Ferrite Industrial Co. Ltd.	VL-71 VL-74 FQ-2 GP-5 GP-3 GQ-2 SB-5 FB-5	AL-3 CL-81	VL-71 VL-74 FB-3 GP-5	VL-71 VL-74 SB-5 FB-5 FB-3			L-84 L-85 T-314 TH-100 CL-81	LK-100 QL-400 L-81 QM-051 KQ-1 L-82	QM-101 QM-201 LM-81	MH-81 VH-40 KM-45 IT-1 MH-90	VH-50 VH-100 VH-150 VH-200	VH-300
27 Sony Corp.	407*FBM FB1 FB4 FB4A	503* 403 FB1	204 FBL FC1 FC2 FC4	304 307	4B1*		5A5 KT23	KT21 KT41	6A6 KM21	6A7	KH51 KH72 KH75	
28 Tohoku Metal Industries Ltd.	1801F	801F	4000H 7000H 12000H	1300B 1500B 3000B	2000L		250L 400L	80L 100L	40L	20L	10L	

- (i) See text for the description of this table.
- (ii) The application classifications are summarized at the heads of the columns; they are defined more completely in the text.
- (iii) As far as is known classifications I to IV are basically manganese zinc ferrites and V to XI are basically nickel zinc ferrites. Exceptions are 1Z2 and 1Z3, which are hexagonal structures, and AL-3 and CL-81 which, although appearing in column II are nickel zinc ferrites.

- (iv) Often associated companies use the same code number for equivalent material grades. However, sometimes quite different ferrites manufactured by unrelated companies have by chance identical code numbers; to avoid ambiguity in the graphical data only those material grades printed in bold type are quoted in Figs. 3.1 to 3.24.