

Materials - Manganese Zinc

Parameter	Symbol	Standard Conditions of Test	Unit	F58	P11	F5	F5A	F5C	F44	F44A	F47
Initial Permeability (nominal)	μ_i	B<0.1mT 10kHz 25°C	-	750 ±20%	2250 ±20%	2000 ±20%	2500 ±20%	3000 ±20%	1900 ±20%	2400 ±20%	1800 ±20%
Saturation Flux Density (typical)	B_{sat}	H=796 A/m = 10 Oe Static 25°C 100°C	mT	450 -	- -	470 350	470 350	460 330	500 400	510 -	470 350
Remanent Flux Density (typical)	B_r	H→0 (from near Saturation) 10kHz 25°C	mT	94	70	200	150	150	270	140	130
Coercivity (typical)	H_c	B→0 (from near Saturation) 10kHz 25°C	A/m	47	18	21	15	18	27	10	24
Loss Factor (maximum)	$\frac{\tan \delta_{(r+e)}}{\mu}$	B<0.1mT 25°C	10kHz	-	1.5	-	-	-	-	-	-
			100kHz	<12	5	-	-	-	-	-	-
			200kHz	-	-	-	-	-	-	-	-
			500kHz	<20	-	-	-	-	-	-	-
			1MHz	-	-	-	-	-	-	-	-
			2MHz	-	-	-	-	-	-	-	-
			5MHz 10MHz	- -	- -	- -	- -	- -	- -	- -	- -
Temperature Factor	$\frac{\Delta \mu}{\mu^2 \Delta T}$	B<0.1mT 10kHz +25°C to 55°C	10 ⁻⁶ / °C	0.5 - 2.3	0.5 - 1.5	-	-	-	-	-	-
Curie Temperature (minimum)	θ_c	B<0.1mT 10kHz	°C	200	150	200	200	180	230	210	200
Disaccommodation Factor (max)	$\frac{\Delta \mu}{\mu_i^2 \log_{10}(t_2/t_1)}$	B<0.1mT 50°C 10 to 100 mins 10kHz	10 ⁻⁶	<12	4	-	-	-	-	-	-
Hysteresis Material Constant (max)	η_B	B from 1.5 to 3mT 10kHz 25°C	10 ⁻⁶ / mT	<1.8	0.8	-	-	-	-	-	-
Resistivity (typical)	ρ	1 V/cm 25°C	ohm-cm	100	100	100	100	100	100	100	100
Amplitude Permeability (minimum)	μ_a	400mT 25°C	-	-	-	2400	2400	2400	2500	2500	2000
		320mT 100°C	-	-	-	1825	1825	-	-	-	2500
		340mT 100°C	-	-	-	-	-	-	1900	-	-
Total Power Loss Density (maximum)	P_v	200mT ; 16kHz 25°C	-	-	-	120	120	120	-	-	-
		200mT ; 16kHz 60°C	-	-	-	110	110	120	-	-	-
		200mT ; 16kHz 100°C	-	-	-	110	110	110	-	-	-
		200mT ; 25kHz 25°C	-	-	-	-	-	-	200	-	120
		200mT ; 25kHz 60°C	-	-	-	190	190	190	-	-	-
		200mT ; 25kHz 100°C	-	-	-	190	190	210	130	-	100
		200mT ; 100kHz 100°C	-	-	-	-	-	-	750	380	-
		100mT ; 100kHz 25°C	-	-	-	-	-	-	250	-	110
		100mT ; 100kHz 100°C	-	-	-	-	-	-	160	80	80
		50mT ; 400kHz 25°C	-	-	-	-	-	-	-	-	150
50mT ; 400kHz 100°C	-	-	-	-	-	-	-	-	150		



F48	F49	FB2	FB3	F9Q	F9N	F65	F9	F9C/F82	F10	FT6	FT7	F39	FTA
2300 ±20%	1000 ±20%	2000 ±20%	2700 ±20%	2300 ±20%	4000 ±20%	4400 ±20%	4400 ±20%	5000 ±20%	6000 ±20%	6000 ±20%	7500 ±20%	10000 ±30%	10000 ±30%
480 380	580 -	480 -	480 -	350 -	410 -	350 -	380 -	460 -	380 -	430 -	420 -	380 -	420 -
150	230	140	140	190	270	100	180	170	100	150	130	200	180
20	20	10	10	24	15	14	13	13	11	15	10	16	8
-	-	30	15	-	-	-	-	-	-	-	6	-	6
-	8	-	-	20	30	20	20	20	20	25	50	-	50
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	0 to 2	-1 to 2	-1 to 2	-	-	-	-1 to 0
220	290	230	230	140	140	>150	130	160	130	140	150	120	150
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	1.1	-	-	-	-	-	-
100	100	100	100	20	20	20	50	50	50	20	10	100	10
2500 2000 -	- - -	2500 - 1900	2500 - 1900	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -	- - -
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	350	200	200	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	250	130	130	-	-	-	-	-	-	-	-	-	-
380	-	750	750	-	-	-	-	-	-	-	-	-	-
-	-	250	250	-	-	-	-	-	-	-	-	-	-
70	-	160	160	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-	-	-	-	-