

F58

Material Type: Manganese-Zinc Ferrite

Properties: High stability of inductance
Low temperature coefficient
Low loss factor at high frequency

Frequency Range: 200 kHz to 1 MHz (subject to application)

Typical Application: Filters, proximity switches and gate drive transformers for switch mode power supplies

Standard Geometries: Toroids, RM and pot cores
Additional shapes are available upon request



Parameter	Symbol	Standard Test Conditions			Unit	Value
Initial Permeability (nominal)	μ_i	B < 0.1 mT	f = 10 kHz	T = 25°C	-	750
Saturation Flux Density (typical)	B_s	H = 796 A/m (10 Oe)		T = 25°C	mT	400
Remanent Flux Density (typical)	B_r	H ~ 0 A/m (from near saturation) f = 10 kHz		T = 25°C	mT	94
Coercivity (typical)	H_c	B ~ 0 mT (from near saturation) f = 10 kHz		T = 25°C	A/m	47
Loss Factor (maximum)	$\tan \delta$ μ_i	B < 0.1 mT	f = 200 kHz	T = 25°C	10^{-6}	12
		B < 0.1 mT	f = 1 MHz	T = 25°C		20
Curie Temperature (minimum)	T_c	B < 0.1 mT	f = 10 kHz		°C	200
Disaccommodation Factor (maximum)	D_F	B < 0.25 mT	f = 10 kHz	T = 25°C	10^{-6}	12
Relative Temperature Factor (typical)	$\frac{\Delta \mu}{\mu_i^2 \Delta T}$	B < 0.1 mT	f = 10 kHz	T = 25 to 55°C	$10^{-6}/°C$	0.5 to 2.3
Resistivity (typical)	ρ	E = 1 V/cm		T = 25°C	$\Omega \cdot \text{cm}$	100

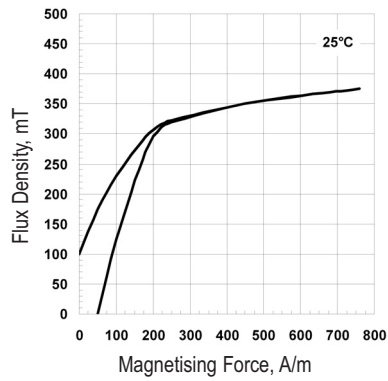
* Data was derived from measurements made on a standard test toroid core with an outside diameter of 30 mm



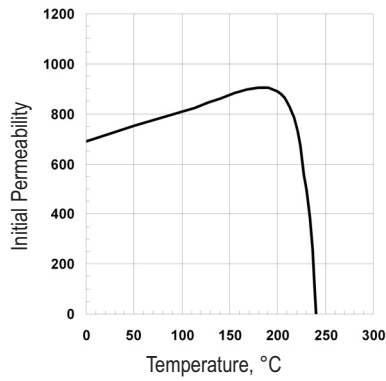
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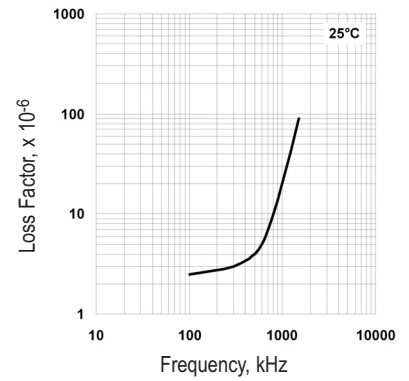
Dynamic Magnetisation Curve



Permeability vs Temperature



Loss Factor vs Frequency



Permeability vs Frequency

