F44

Material Type: Manganese-Zinc Ferrite

Properties:
*Higher saturation power grade
*Higher amplitude permeability
*Low power losses in recommended frequency range
*Losses minimised above 70°C
*Medium permeability

Frequency range: Up to 300kHz (depending upon flux density)

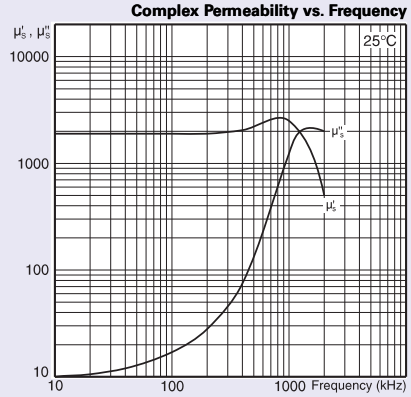
Typical Applications: SMPS, EHT Transformers, converters.

Available core shapes: E, U, ETD, EFD,EP,Pot, RM, Ring Cores.

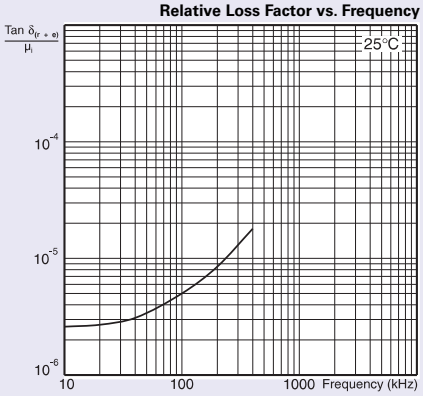
Material Specification

Parameter	Symbol	Standard Conditions of test	Unit	F44
Initial Permeability *(nominal)*	-	B<0.1mT 10kHz 25°C	-	**1900** *±20%*
Saturation Flux Density *(typical)*	B_{sat}	H=796 A/m = 10 Oe 25°C 100°C	mT	**500** **400**
Remanent Flux Density *(typical)*	B_r	H→ 0 (from near Saturation) 10kHz 25°C	mT	**270**
Coercivity *(typical)*	H_c	B→ 0 (from near Saturation) 10kHz 25°C	A/m	**27**
Curie Temperature *(minimum)*	Θ_c	B<0.10mT 10kHz	°C	**230**
Resistivity *(typical)*	ρ	1 V/cm 25°C	ohm-cm	**100**
Amplitude Permeability *(minimum)*	μ_a	400mT 25°C 340mT 100°C	-	**2500** **1900**
Total Power Loss Density *(maximum)*	P_v	200mT; 25kHz 25°C 200mT; 25kHz 100°C 100mT; 100kHz 25°C 100mT; 100kHz 100°C 200mT; 100kHz 100°C	mW/cm³	**200** **130** **250** **160** **750**

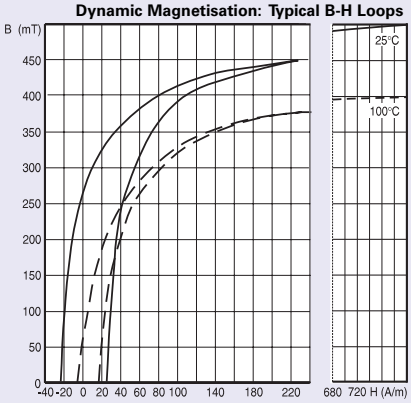
Complex Permeability vs. Frequency



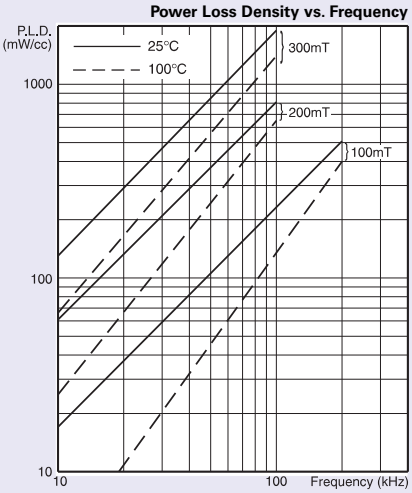
Relative Loss Factor vs. Frequency



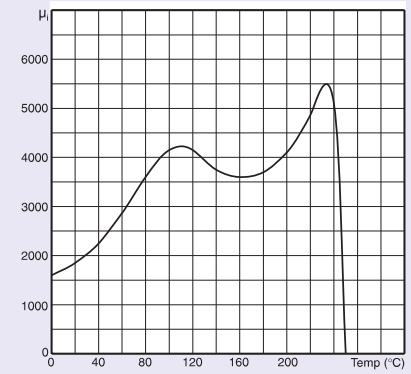
Dynamic Magnetisation: Typical B-H Loops



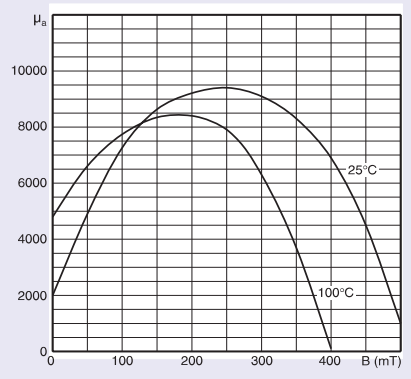
Power Loss Density vs. Frequency



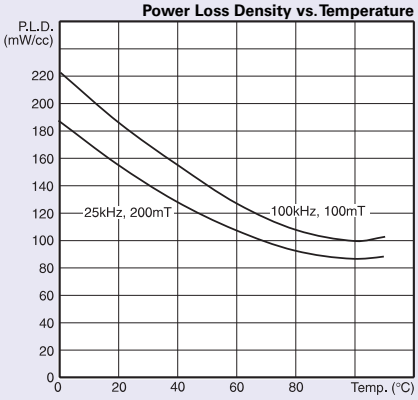
Initial Permeability vs. Temperature



Static Magnetisation: Permeability vs. B



Power Loss Density vs. Temperature



Data is derived from measurements on a ring core of 30mm outside diameter.