



MMG Canada Limited

P12

Material Type: Manganese-Zinc Ferrite

Properties: High stability of inductance
 Low temperature coefficient
 Low loss factor
 Medium permeability

Frequency Range: 10 kHz to 500 kHz (subject to application)

Typical Application: Filter networks

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



| Parameter | Symbol | Standard Test Conditions | | | Unit | Value |
|--|-------------------------------------|---|-----------------------|---------------------------------------|--------------------------|-------------|
| Initial Permeability (nominal) | μ_i | $B < 0.1 \text{ mT}$ | $f = 10 \text{ kHz}$ | $T = 25^\circ\text{C}$ | - | 2000 |
| Saturation Flux Density (typical) | B_s | $H = 796 \text{ A/m (10 Oe)}$ | | $T = 25^\circ\text{C}$ | mT | 380 |
| Remanent Flux Density (typical) | B_r | $H \sim 0 \text{ A/m (from near saturation)}$ $f = 10 \text{ kHz}$ | | $T = 25^\circ\text{C}$ | mT | 35 |
| Coercivity (typical) | H_c | $B \sim 0 \text{ mT (from near saturation)}$ $f = 10 \text{ kHz}$ | | $T = 25^\circ\text{C}$ | A/m | 7 |
| Loss Factor (maximum) | $\tan \delta$ μ_i | $B < 0.1 \text{ mT}$ | $f = 10 \text{ kHz}$ | $T = 25^\circ\text{C}$ | 10^{-6} | 0.8 |
| | | $B < 0.1 \text{ mT}$ | $f = 100 \text{ kHz}$ | $T = 25^\circ\text{C}$ | | 2.5 |
| Curie Temperature (minimum) | T_c | $B < 0.1 \text{ mT}$ | $f = 10 \text{ kHz}$ | | $^\circ\text{C}$ | 150 |
| Disaccommodation Factor (maximum) | D_F | $B < 0.25 \text{ mT}$ | $f = 10 \text{ kHz}$ | $T = 25^\circ\text{C}$ | 10^{-6} | 3 |
| Relative Temperature Factor (typical) | $\frac{\Delta\mu}{\mu_i^2\Delta T}$ | $B < 0.1 \text{ mT}$ | $f = 10 \text{ kHz}$ | $T = 25 \text{ to } 55^\circ\text{C}$ | $10^{-6}/^\circ\text{C}$ | 0.4 to 1.08 |
| Resistivity (typical) | ρ | $E = 1 \text{ V/cm}$ | | $T = 25^\circ\text{C}$ | $\Omega \cdot \text{cm}$ | 100 |

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

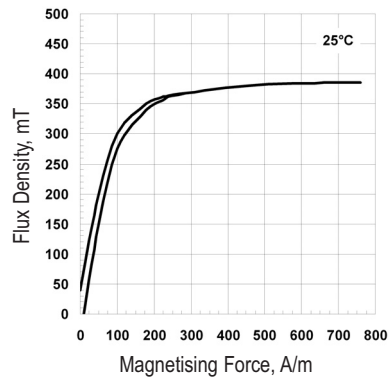




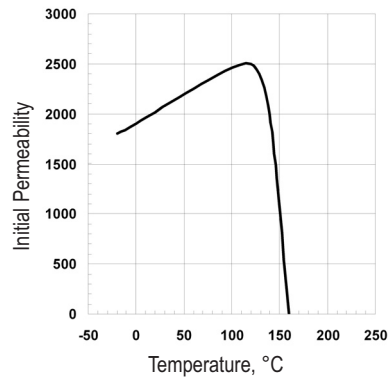
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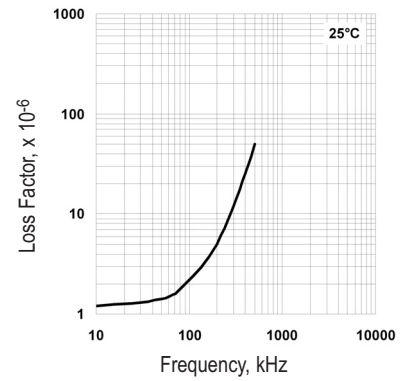
Dynamic Magnetisation Curve



Permeability vs Temperature



Loss Factor vs Frequency



Permeability vs Frequency

