



M Material

High Permeability Ferrite Material

Magnetics introduces a new high permeability ferrite material suitable for signal, choke, and filter applications.

Available toroid sizes include:

Part No.	OD (mm)	ID (mm)	HT (mm)
40502	3.94	2.24	1.27
40601	5.84	3.05	1.52
40603	5.84	3.05	3.18
40705	7.62	3.18	4.78
41003	9.53	4.75	3.18
41005	9.53	4.75	4.78
41206	12.7	5.16	6.35
41406	12.7	7.14	6.35
41306	12.7	8.14	6.35
41605	15.9	9.07	4.70
42206	22.1	13.7	6.35
42212	22.1	13.7	12.7
42507	25.3	15.4	7.66

M material is a new high permeability (15,000 μ) material designed for optimum impedance performance across frequency ranges. High permeability ferrite materials provide superior loss factor, frequency response, temperature performance, and product consistency. M material is suitable for signal, choke, and filter applications such as common mode chokes, EMI suppression filters, signal processing, and broadband transformers.

Characteristics of M Material

Property	Symbol	Conditions	Value
Initial permeability	μ_i	25 °C; 10 kHz	15,000 \pm 30%
Curie Temperature	T_c		\geq 130 °C
Flux Density	B	25 °C; 10 kHz; 1190 A/m 100 °C; 10 kHz; 1190 A/m	470 mT 290 mT
Loss Factor	$\tan\delta/\mu_i$	25 °C; 10 kHz; 0.25 mT 25 °C; 30 kHz; 0.25 mT	\leq 10 x 10 ⁻⁶ \leq 15 x 10 ⁻⁶
Resistivity	ρ	25 °C	0.5 Ω m
Maximum Usable Frequency (50% rolloff)			120 kHz

HEADQUARTERS

110 Delta Drive
P.O. Box 11422
Pittsburgh, PA 15238 • USA

Phone: **1.800.245.3984**
+1.412.696.1333

e-mail: magnetics@spang.com

MAGNETICS INTERNATIONAL

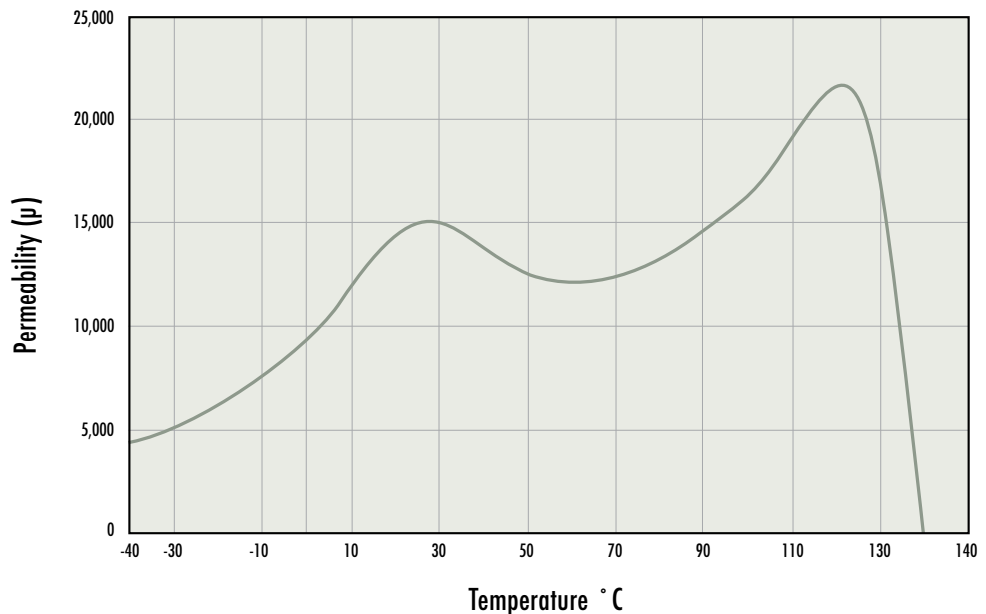
13/F 1-3 Chatham Road South
Tsim Sha Tsui, Kowloon, Hong Kong

Phone: **+852.2731.9700**
+86.139.1147.1417

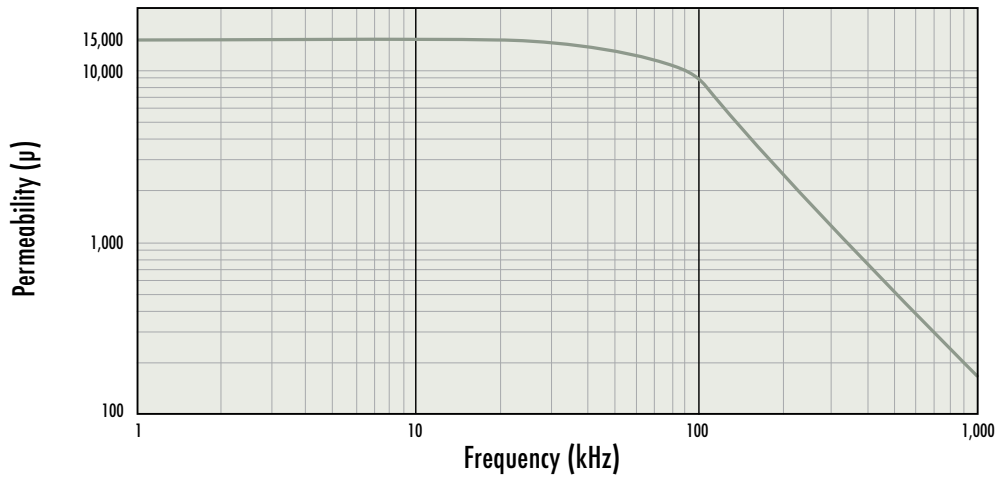
e-mail: asiasales@spang.com

web: www.mag-inc.com

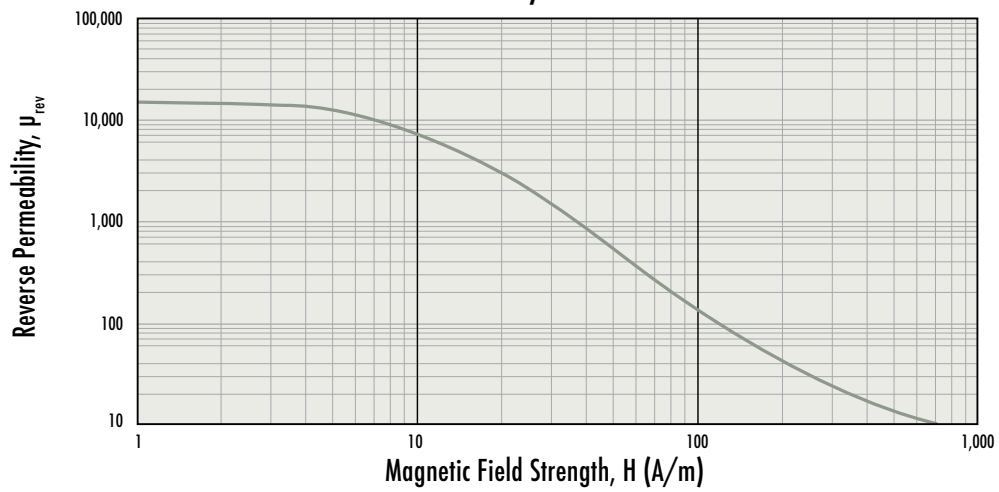
Permeability vs. Temperature



Permeability vs. Frequency



Permeability vs. DC Bias



B vs. H

