



NATIONAL MAGNETICS GROUP, INC.

MANUFACTURERS OF MAGNETIC AND ADVANCED MATERIALS

AFFILIATE: TCI CERAMICS, INC.

CMD5005

Material

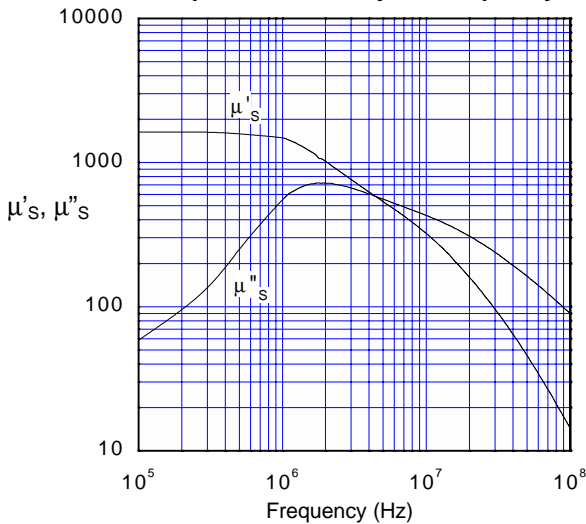
A high permeability NiZn ferrite with high resistivity for broadband transformers in the frequency range from 1 through 100 MHz, and also for RF power amplifiers, current transformers for EMP, and deflection (kicker) magnets for particle accelerators.

Specifications

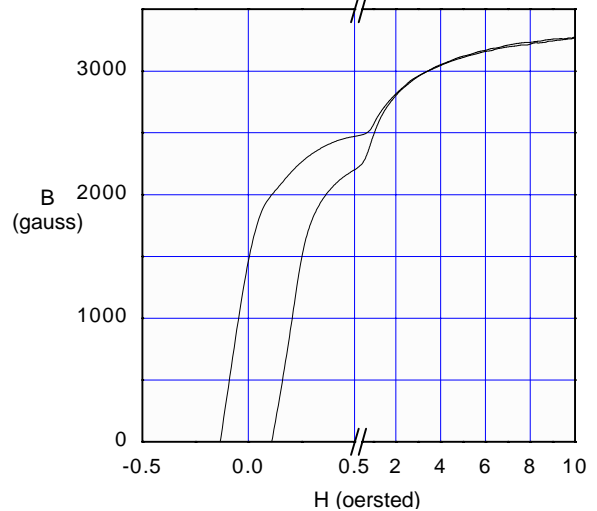
Property	Unit	Symbol	Standard Test Conditions	Value
Initial Permeability		μ_i	Frequency=10 kHz; B<10 gauss	1600 \pm 20%
Saturation Flux Density	gauss	B_s	H=10 oersted	\approx 3200
Residual Flux Density	gauss	B_r		\approx 1500
Coercive Force	oersted	H_c		\approx 0.2
Loss Factor	10^{-6}	$\text{Tan}\delta/\mu_i$	Frequency=1 MHz; B=1 gauss	\leq 250
Temperature Coefficient of Initial Permeability (20-70°C)	%/°C			\leq 0.7
Volume Resistivity	Ω cm	ρ		\approx 1×10^8
Curie Temperature	°C	T_c		\geq 130

Note: values are typical and based on measurements of a standard toroid at 25 °C

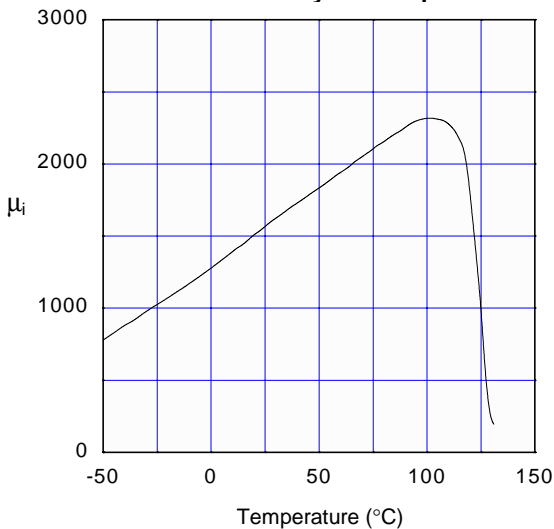
Complex Permeability vs. Frequency



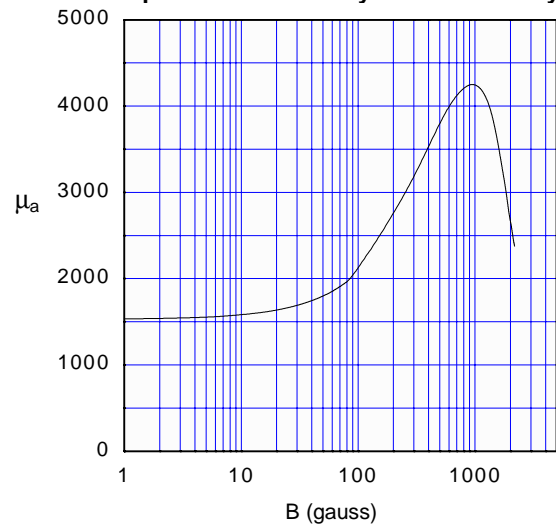
B - H Loop



Initial Permeability vs. Temperature



Amplitude Permeability vs. Flux Density



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