



# NATIONAL MAGNETICS GROUP, INC.

MANUFACTURERS OF MAGNETIC AND ADVANCED MATERIALS

**AFFILIATE: TCI CERAMICS, INC.**

## M4

### Material

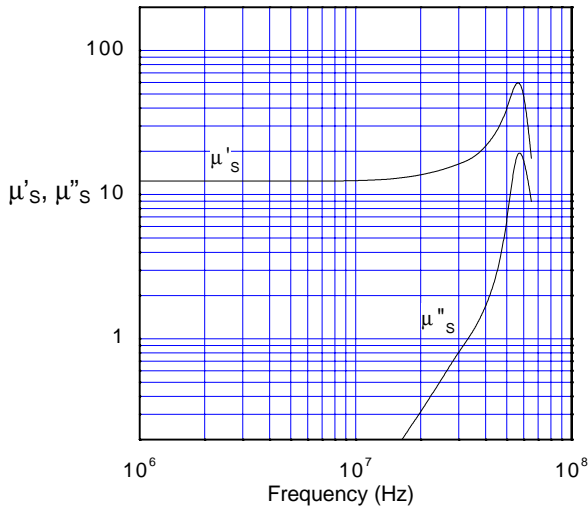
A NiZn ferrite designed for high frequency applications including transformers, antennas and resonant circuit inductors.

#### Specifications

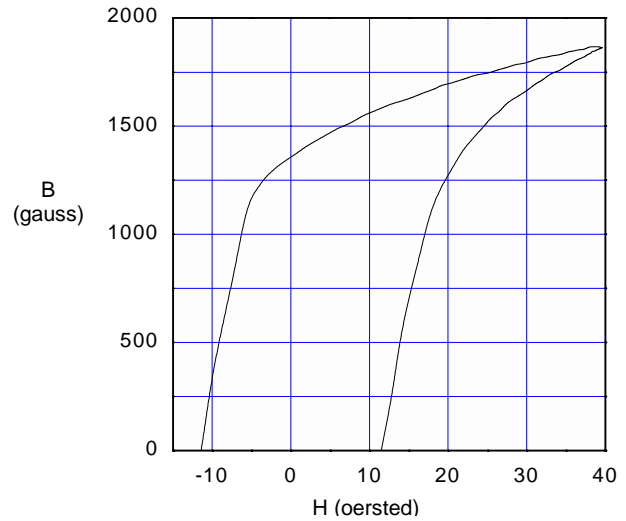
Property	Unit	Symbol	Standard Test Conditions	Value
Initial Permeability		$\mu_i$	Frequency=10 kHz; B<10 gauss	$12.5 \pm 20\%$
Saturation Flux Density	gauss	$B_s$	H=40 oersted	$\approx 1800$
Residual Flux Density	gauss	$B_r$		$\approx 1350$
Coercive Force	oersted	$H_c$		$\approx 12$
Loss Factor	$10^{-6}$	$\text{Tan} \delta / \mu_i$	Frequency=10 MHz; B=1gauss	$\leq 850$
Temperature Coefficient of Initial Permeability (20-70°C)	%/°C			$\leq 0.45$
Volume Resistivity	$\Omega \text{ cm}$	$\rho$		$\approx 10^9$
Curie Temperature	°C	$T_c$		$> 500$

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

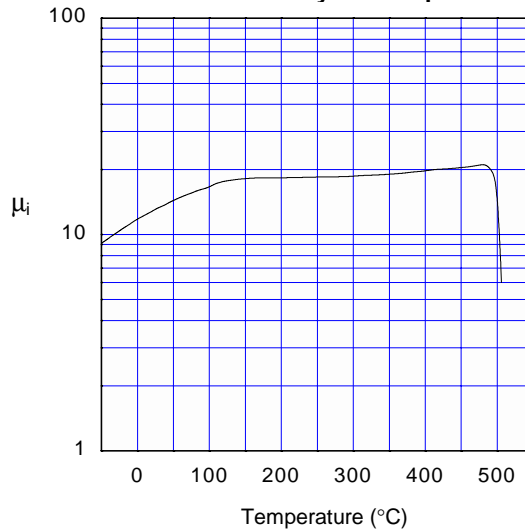
**Complex Permeability vs. Frequency**



**B – H Loop**



**Initial Permeability vs. Temperature**



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