

Ferrite Suppression Core 31-1

### 31 Material Characteristics:

Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		$\mu_i$	1500
Flux Density @ Field Strength	gauss oersted	B H	3400 5
Residual Flux Density	gauss	$B_r$	2500
Coercive Force	oersted	$H_c$	0.35
Loss Factor @ Frequency	$10^{-6}$ MHz	$\tan \delta/\mu_i$	20 0.1
Temperature Coefficient of Initial Permeability (20 - 70°C)	%/°C		1.6
Curie Temperature	°C	$T_c$	>130
Resistivity	$\Omega$ cm	$\rho$	$3 \times 10^3$

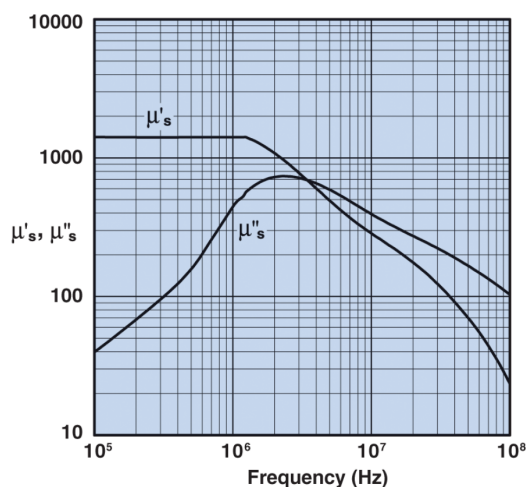
### Introduction

This type 31-1 ferrite suppression core is a MnZn ferrite designed specifically for EMI suppression applications from as low as 1MHz up to 500MHz. For DRSSTC applications, these are commonly used as EMI suppressors in high power gate transformers, typically those used with CM300 and CM600 IGBT brick modules.

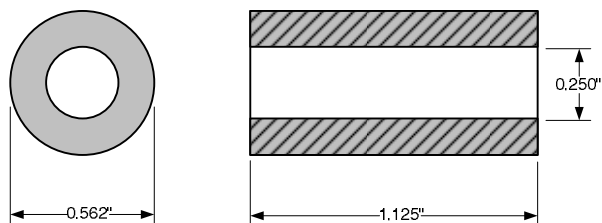
### Typical Applications:

- Gate transformers (up to 350kHz)
- Current transformers (1000A+)
- Half-bridge and full-bridges
- Solid state Tesla Coils (SSTCs)
- DRSSTCs
- Flyback drivers

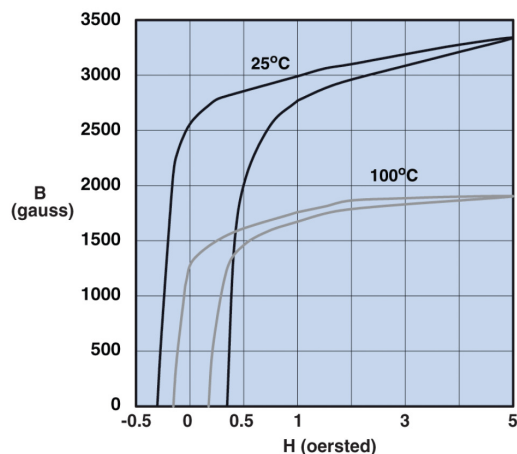
### Complex Permeability vs. Frequency



### Physical Dimensions



### Hysteresis Loop





Typical Application – EMI Suppression in CM300 / CM600 Gate Transformer  
(shown with Ferrite Toroid 5000-1 Core)