Ferrite Toroid Core 77-1

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77 Material Characteristics:

Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ_i	2000
Flux Density @ Field Strength	gauss oersted	B H	4900 5
Residual Flux Density	gauss	B_r	1800
Coercive Force	oersted	H_c	0.30
Loss Factor @ Frequency	10^{-6} MHz	$\tan\delta/\mu_i$	15 0.1
Temperature Coefficient of Initial Permeability (20 -70°C)	%/°C		0.7
Curie Temperature	°C	T_c	>200
Resistivity	Ω cm	ρ	$1x10^2$

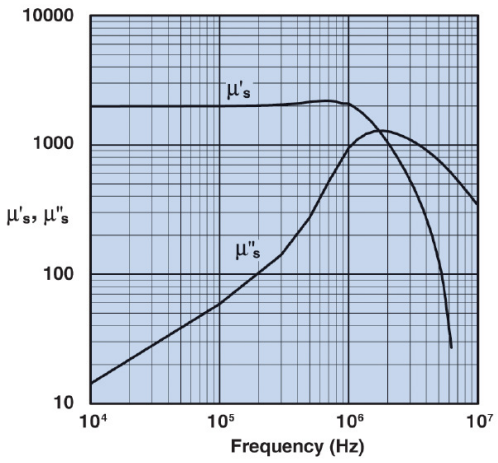
Introduction

This type 77 MnZn ferrite core is our most popular ferrite core used in a wide range of high and low flux density inductive designs. It is primarily used as a gate transformer for SSTC and DRSSTC applications, but can also be used in the design of current transformers as well. These cores are perfect for all low-to-medium powered SSTCs and DRSSTCs. They work in most half-bridge and full-bridge configurations, including flyback drivers, up to a frequency of at least 350kHz.

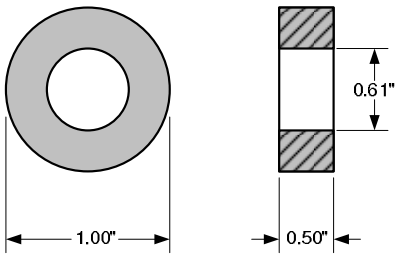
Typical Applications:

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

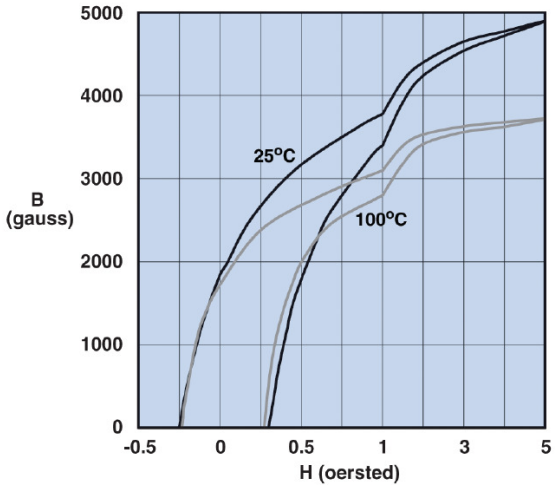
Complex Permeability vs. Frequency



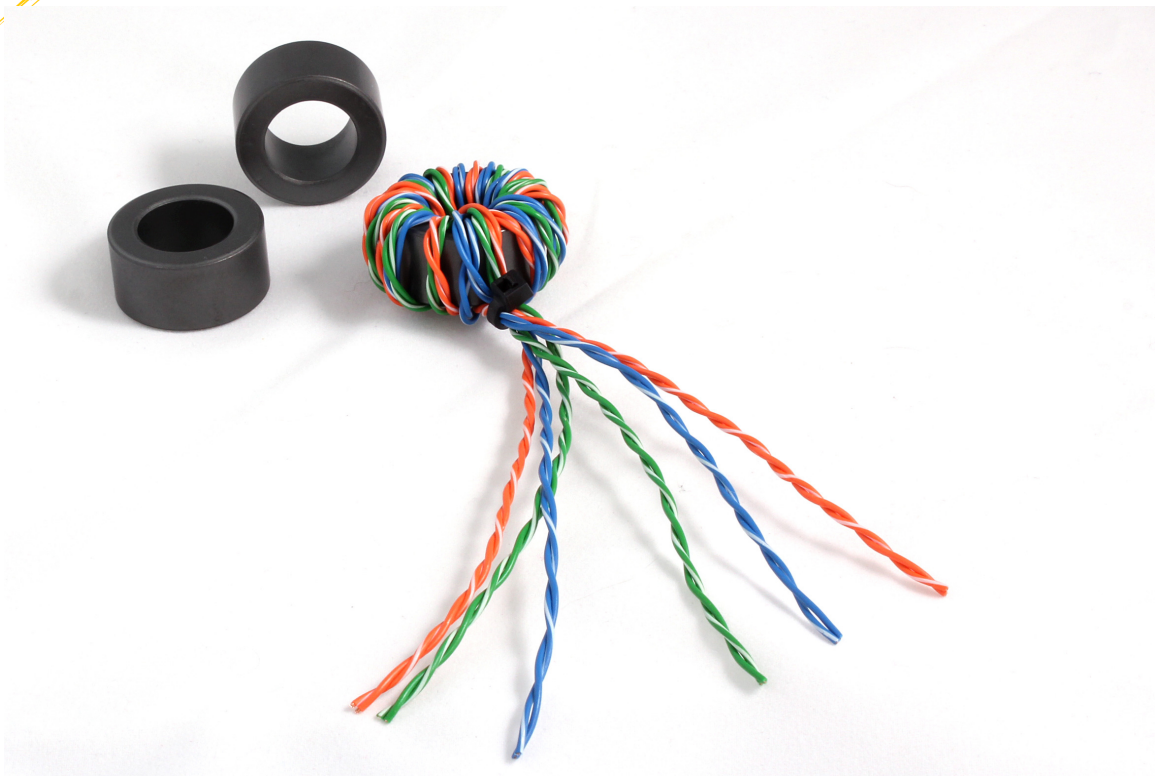
Physical Dimensions



Hysteresis Loop



Electrical Properties	
A_L(nH)	2700 ± 25%
A_e(cm^2)	0.62
∑l/A(cm^{-1})	10.00
l_e(cm)	6.20
V_e(cm^3)	3.80



Typical Application – Gate Transformer using Ferrite Toroid Core 77-1