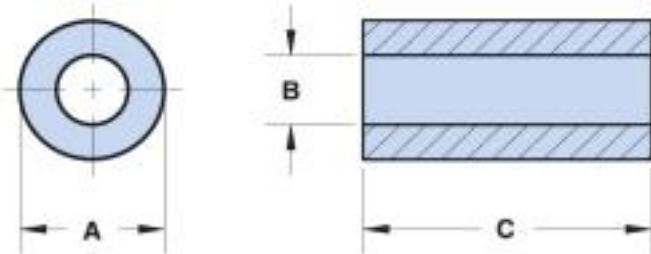




Fair-Rite Products Corp. Your Signal Solution®

Ferrite Components for the Electronics Industry

Fair-Rite Products Corp. PO Box J, One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com



Fair-Rite Product's Catalog
Part Data Sheet, 2675540202
Printed: 2014-05-13



Part Number: 2675540202

Frequency Range: Low Frequency 200 kHz - 30 MHz (75 material)

Description: 75 ROUND CABLE CORE

Application: Suppression Components

Where Used: Cable Component

Part Type: Round Cable EMI Suppression Cores

Mechanical Specifications

Weight: 8.300 (g)

Part Type Information

Fair-Rite offers a broad selection of ferrite EMI suppression cable cores in several materials with guaranteed minimum impedance specifications.

-All cable cores have been burnished to remove the sharp edges.

-The column 'H' (Oe) gives for each cable core the calculated dc bias field in oersted for 1 turn and 1 ampere direct current. The actual dc H field in the application, is this value of 'H' times the actual NI (ampere-turns) product. For the effect of the dc bias on the impedance of the core material, see the figures 18-23 in the application note 'How to choose Ferrite Components for EMI Suppression'.

-Suppression cable cores are controlled for impedances only. Minimum impedance values are specified for the + marked frequencies. The minimum impedance is typically the listed impedance less 20%.

-Single turn impedance tests for 31, 43 and 46 material cores are performed on the 4193A Vector Impedance Meter. The 61 material parts are tested on the 4191A RF Impedance Analyzer and 75 material parts are tested on the 4285A LCR Meter. Cores are tested with the shortest Practical wire length.

-For smaller suppression parts, refer to the EMI Suppression Bead section of our catalog.

-For any cable suppression core not listed here, feel free to contact our customer service group for availability and pricing.

-The 'C' dimension, the core length, can be modified to suit specific applications.

-Our Expanded Cable and Suppressor Kit (part number 0199000005) Contains a selection of these suppression cores.

-Explanation of Part Numbers: Digits 1 & 2 =product class, 3 & 4 material grade and last digit 2 = burnished.



Fair-Rite Products Corp.

Your Signal Solution®

Ferrite Components for the Electronics Industry

Fair-Rite Products Corp. PO Box J, One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com

Fair-Rite Product's Catalog
Part Data Sheet, 2675540202
Printed: 2014-05-13



RoHS
Material Declaration

Mechanical Specifications

Dim	mm	mm tol	nominal inch	inch misc.
A	14.30	±0.45	0.563	-
B	6.35	±0.25	0.250	-
C	13.45	±0.35	0.530	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-

Electrical Specifications

Typical Impedance (Ω)	
200 kHz	16
500 kHz	39
1 MHz	58
2 MHz	67
5 MHz	52

Electrical Properties	
H(Oe)	.43

Land Patterns

V	W ref	X	Y	Z
-	-	-	-	-
-	-	-	-	-

Winding Information

Turns Tested	Wire Size	1st Wire Length	2nd Wire Length
-	-	-	-

Reel Information

Tape Width mm	Pitch mm	Parts 7 " Reel	Parts 13 " Reel	Parts 14 " Reel
-	-	-	-	-

Package Size

Pkg Size
- (-)

Connector Plate

# Holes	# Rows
-	-

Legend

+ Test frequency

Preferred parts, the suggested choice for new designs, have shorter lead times and are more readily available.

The column H(Oe) gives for each bead the calculated dc bias field in oersted for 1 turn and 1 ampere direct current. The actual dc H field in the application is this value of H times the actual NI (ampere-turn) product. For the effect of the dc bias on the impedance of the bead material, see figures 18-23 in the application note How to choose Ferrite Components for EMI Suppression.

A 1/2 turn is defined as a single pass through a hole.

$\sum I/A$ - Core Constant

A_e - Effective Cross-Sectional Area

A_L - Inductance Factor $(\frac{L}{N^2})$

N/AWG - Number of Turns/Wire Size for Test Coil

I_e : Effective Path Length

V_e : Effective Core Volume

NI - Value of dc Ampere-turns



Fair-Rite Products Corp. Your Signal Solution®

Ferrite Components for the Electronics Industry

Fair-Rite Products Corp. PO Box J, One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com

Fair-Rite Product's Catalog
Part Data Sheet, 2675540202
Printed: 2014-05-13



RoHS
Material
Declaration

Ferrite Material Constants

Specific Heat	0.25 cal/g/°C
Thermal Conductivity	3.5 - 4.5 mW/cm - °C
Coefficient of Linear Expansion	8 - 10x10 ⁻⁶ /°C
Tensile Strength	4.9 kgf/mm ²
Compressive Strength	42 kgf/mm ²
Young's Modulus	15x10 ³ kgf/mm ²
Hardness (Knoop)	650
Specific Gravity	≈ 4.7 g/cm ³

The above quoted properties are typical for Fair-Rite MnZn and NiZn ferrites.

See next page for further material specifications.



Fair-Rite Products Corp.

Your Signal Solution®

Ferrite Components for the Electronics Industry

Fair-Rite Products Corp. PO Box J, One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com

A high permeability MnZn ferrite intended for a range of broadband and pulse transformer applications and common-mode inductor designs.

Toroidal cores are available in 75 material.

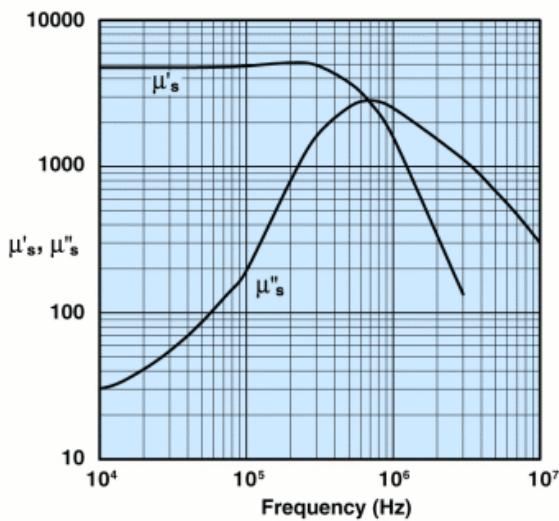
Fair-Rite Product's Catalog
Part Data Sheet, 2675540202
Printed: 2014-05-13



75 Material Characteristics:

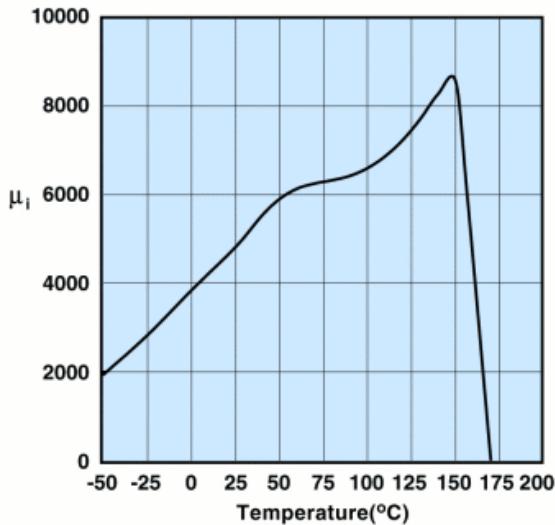
Property	Unit	Symbol	Value
Initial Permeability @ $B < 10$ gauss		μ_i	5000
Flux Density @ Field Strength	gauss oersted	B H	4300 5
Residual Flux Density	gauss	B_r	1400
Coercive Force	oersted	H_c	0.16
Loss Factor @ Frequency	10^{-6} MHz	$\tan \delta / \mu_i$	15 0.1
Temperature Coefficient of Initial Permeability (20 -70°C)	%/ $^{\circ}$ C		0.6
Curie Temperature	$^{\circ}$ C	T_c	>140
Resistivity	Ω cm	ρ	3×10^{-2}

Complex Permeability vs. Frequency



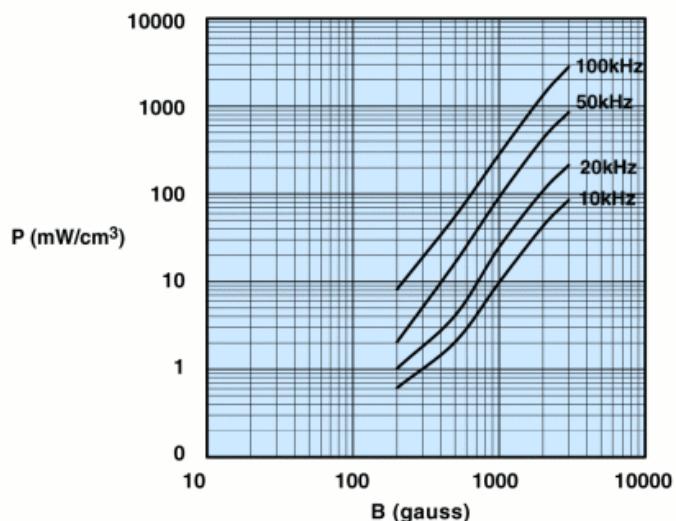
Measured on a 17/10/6mm toroid using the HP 4284A and the HP 4291A.

Initial Permeability vs. Temperature



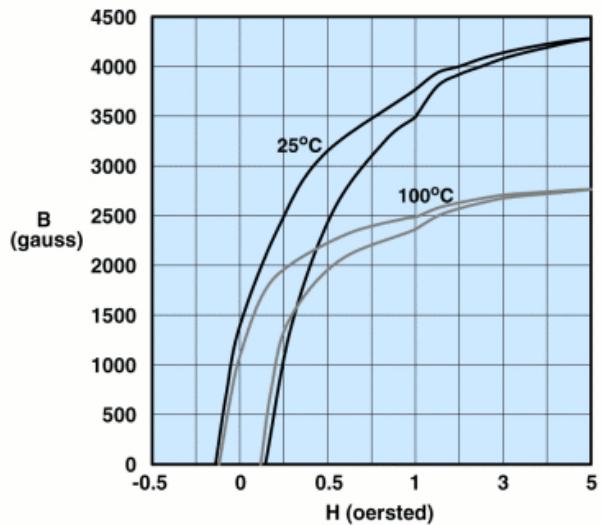
Measured on a 17/10/6mm toroid at 10kHz.

Power Loss Density vs. Flux Density



Measured on a 17/10/6mm toroid using the Clarke Hess 258 VAW at 100°C.

Hysteresis Loop



Measured on a 17/10/6mm toroid at 10kHz.



Fair-Rite Products Corp. Your Signal Solution®

Ferrite Components for the Electronics Industry

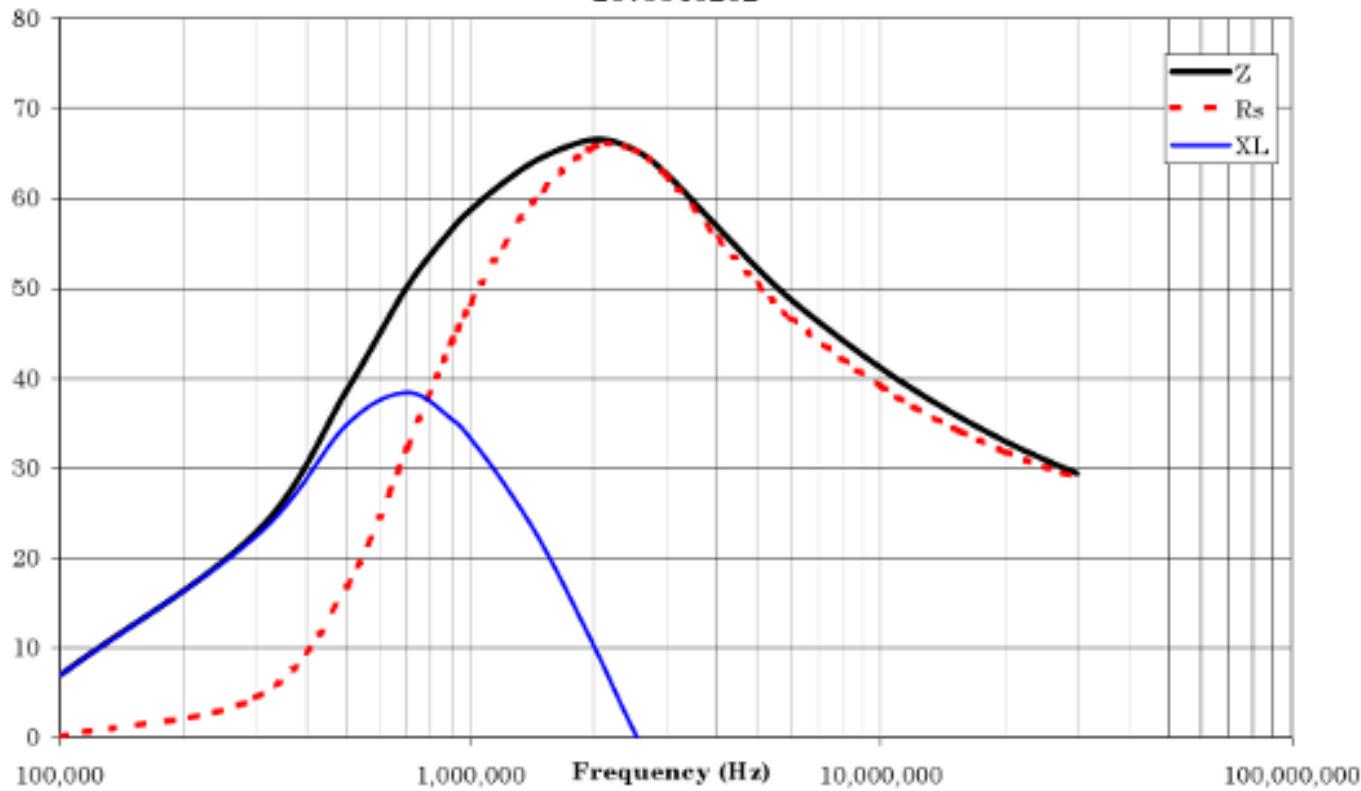
Fair-Rite Products Corp. PO Box J, One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com

Fair-Rite Product's Catalog
Part Data Sheet, 2675540202
Printed: 2014-05-13



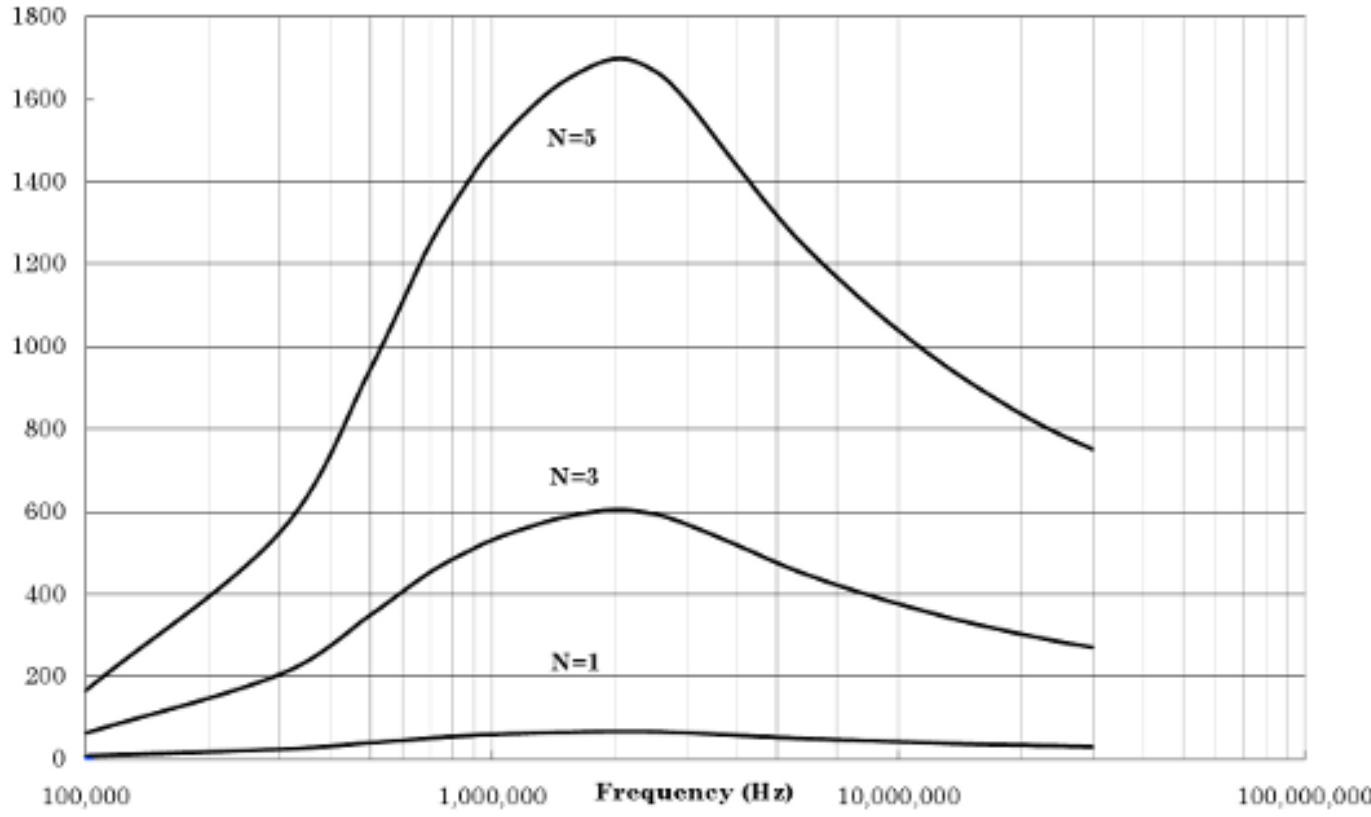
Z, Rs, XL - ohms

2675540202



Z (ohms)

2675540202



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Fair-Rite:](#)

[2675540202](#)