

Catalog Part Search:

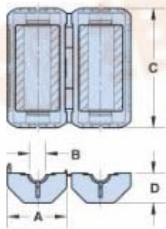


Figure 1

Part Number: 0431173951
Frequency Range: Lower & Broadband Frequencies 1-300 MHz (31 material)
Description: CSRA13/11/25-31-5.1 31 ROUND CABLE CORE ASSEMBLY
Application: Suppression Components
Where Used: Cable Component
Part Type: Round Cable Snap-its
Preferred Part: ✓

Part Type Information

Mechanical Specifications

Weight: 6.50 (g)
View Chart Legend

Dim	mm	mm tol	nominal inch	inch misc.	Land Patterns					Winding Information				
					V	W (ref)	X	Y	Z	Turns Tested	Wire Size	1st Wire Length	2nd Wire Length	
A	12.80	—	0.504	—	—	—	—	—	—	—	—	—	—	
B	5.10	—	0.201	—	Reel Information					Pkg Size				
C	25.00	—	0.984	—						—				
D	5.60	—	0.220	—	Tape Width mm	Pitch mm	Parts 7" Reel	Parts 13" Reel	Parts 14" Reel	Connector Plate				
E	—	—	—	—	—	—	—	—	—	# Holes	# Rows			
F	—	—	—	—	Cable Information									
G	—	—	—	—										
H	—	—	—	—	Max Diameter	Max Dimension		Solid Equivalent		Flat Cable Cores				
J	—	—	—	—	4.900 .193	—		2631023002		—				
K	—	—	—	—										

Electrical Specifications

Typical Impedance (Ω)	
1 MHz	14
5 MHz	44
10 MHz*	60
25 MHz*	100
100 MHz*	180
250 MHz	208

Electrical Properties	
—	—

Ferrite Material Constants

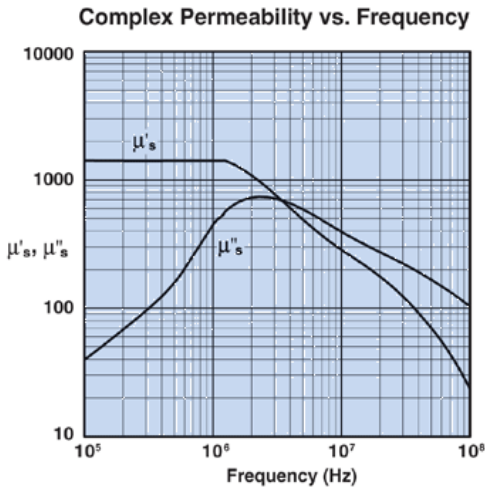
Specific Heat	0.25 cal/g/°C
Thermal Conductivity	10x10 ⁻³ cal/sec/cm/°C
Coefficient of Linear Expansion	8 - 10x10 ⁻⁶ /°C
Tensile Strength	4.9 kgf/mm ²
Compressive Strength	42 kgf/mm ²
Young's Modulus	15x10 ³ kgf/mm ²
Hardness (Knoop)	650
Specific Gravity	≈ 4.7 g/cm ³
The above quoted properties are typical for Fair-Rite MnZn and NiZn ferrites.	

31 Material Specifications:

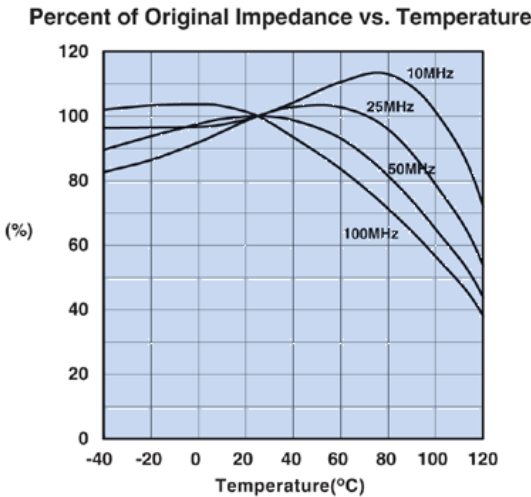
Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ _i	1500
Flux Density	gauss	B	3400

Round cable EMI suppression cores, round cable snap-its, flat cable EMI suppression cores, and flat cable snap-its are all available in 31 material.

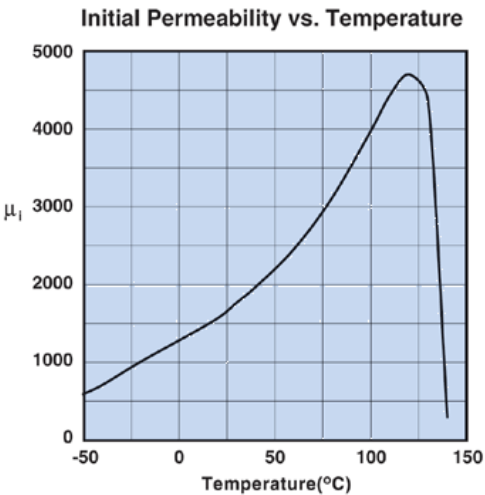
Residual Flux Density	gauss	B_r	2500
Coercive Force	oersted	H_c	0.35
Loss Factor @ Frequency	10^{-2} MHz	$\tan \delta / \mu_i$	20
Temperature Coefficient of Initial Permeability (20 -70°C)	%/°C		1.6
Curie Temperature	°C	T_c	>130
Resistivity	Ω cm	ρ	3×10^3



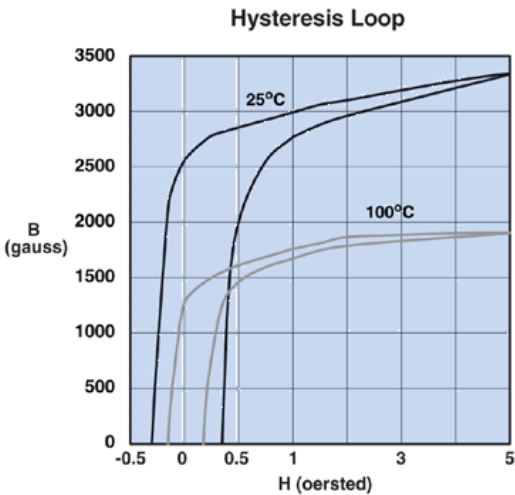
Measured on a 17/10/6mm toroid at 25°C using the HP 4284A and the HP 4291A.



Measured on a 2631000301 using the HP4291A.

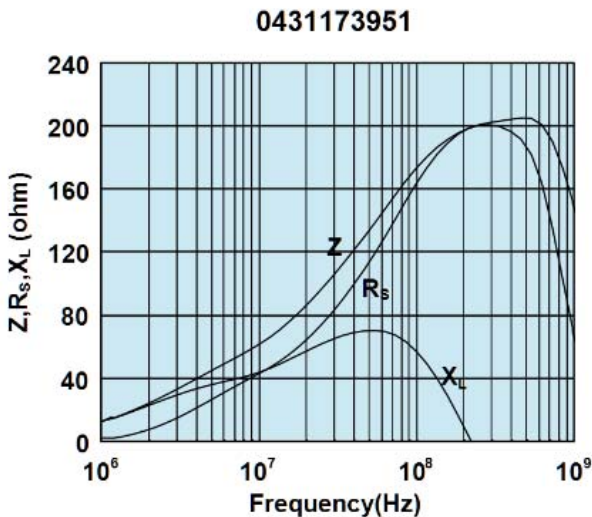


Measured on a 17/10/6mm toroid at 100kHz.

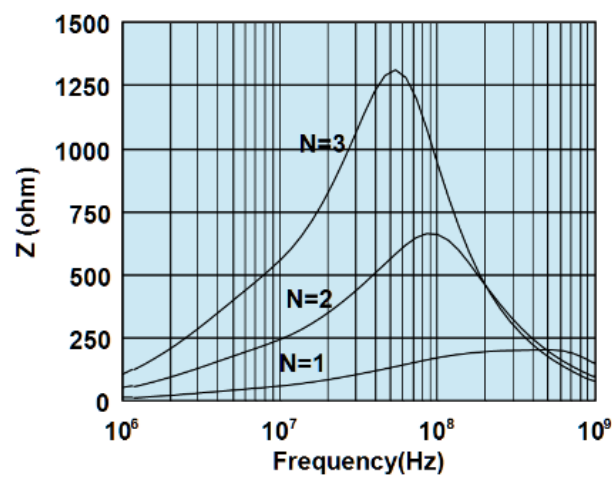


Measured on a 17/10/6mm toroid at 10kHz.

Impedance Curve



Impedance, reactance, and resistance vs. frequency.



Impedance vs. frequency with one, two, and three turns.