

Part Number: 2631102002
Frequency Range: Lower & Broadband Frequencies 1-300 MHz (31 material)
Description: CS26/13/29-31 31 ROUND CABLE CORE
Application: Suppression Components
Where Used: Cable Component
Part Type: Round Cable EMI Suppression Cores
Preferred Part: ✓

Part Type Information

Mechanical Specifications

Weight: 55.00 (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	25.90	±0.75	1.020	-	-	-	-	-	-	-	-	-	-	-
B	12.80	±0.25	0.505	-	Reel Information					Pkg Size				
C	28.60	±0.80	1.125	-						Connector Plate				
D	-	-	-	-	Tape Width mm	Pitch mm	Parts 7" Reel	Parts 13" Reel	Parts 14" Reel	# Holes		# Rows		
E	-	-	-	-	-	-	-	-	-	-	-	-	-	
F	-	-	-	-	Cable Information									
G	-	-	-	-	Max Diameter	Max Dimension	Solid Equivalent	Flat Cable Cores	-	-	-	-	-	
H	-	-	-	-	-	-	-	-	-	-	-	-	-	
J	-	-	-	-	-	-	-	-	-	-	-	-	-	
K	-	-	-	-	-	-	-	-	-	-	-	-	-	

Electrical Specifications

Typical Impedance (Ω)	
1 MHz	31
5 MHz	79
10 MHz*	103
25 MHz*	156
100 MHz*	260
250 MHz	280

Electrical Properties	
H(Oe)	22

Ferrite Material Constants

Specific Heat	0.25 cal/g ^o C
Thermal Conductivity	10x10 ⁻³ cal/sec/cm ^o C
Coefficient of Linear Expansion	8 - 10x10 ⁻⁶ / ^o 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.

A MnZn ferrite designed specifically for EMI suppression applications from as low as 1 MHz up to 500 MHz. This material does not have the dimensional resonance limitations associated with conventional MnZn ferrite materials.

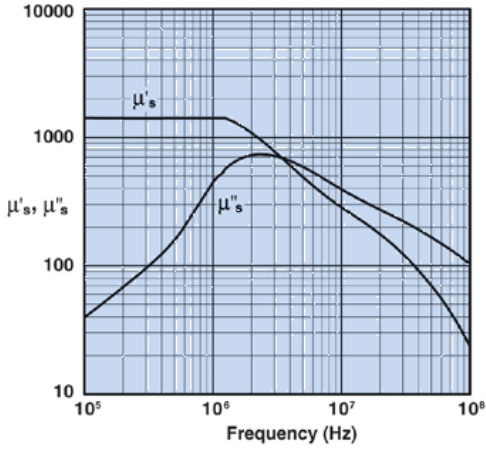
Round cable EMI suppression cores, round cable snap-its, flat cable EMI suppression cores, and flat cable snap-its are all available in 31 material.

31 Material Specifications:

Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ _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 ⁻² MHz	tan δ/μ _i	20 0.1
Temperature Coefficient of Initial Permeability (20 -70°C)	%/ ^o C		1.6

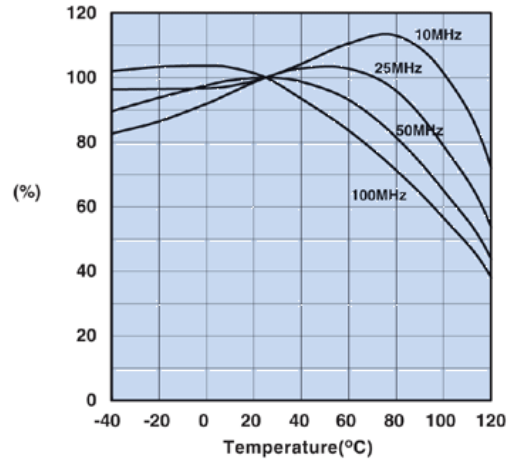
Curie Temperature	°C	T _c	>130
Resistivity	Ω cm	ρ	3x10 ³

Complex Permeability vs. Frequency



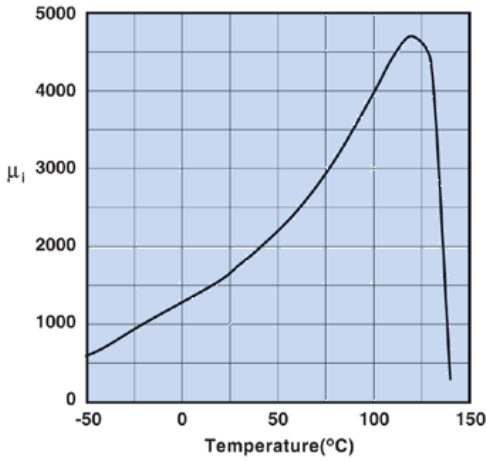
Measured on a 17/10/6mm toroid at 25°C using the HP 4284A and the HP 4291A.

Percent of Original Impedance vs. Temperature



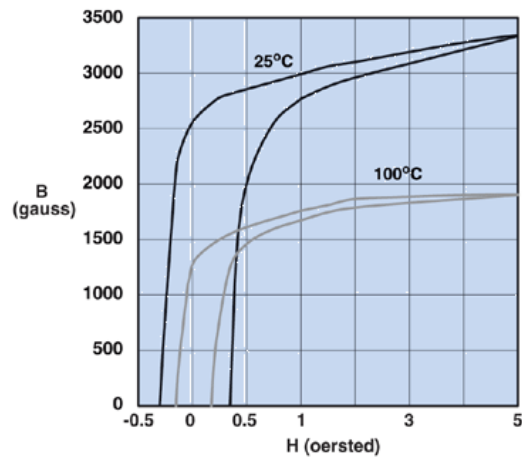
Measured on a 2631000301 using the HP4291A.

Initial Permeability vs. Temperature



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

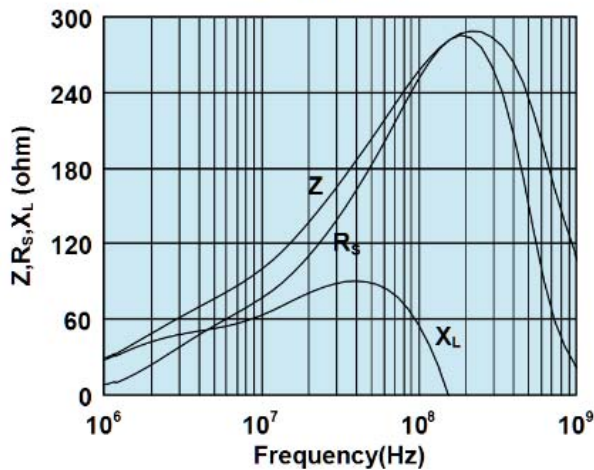
Hysteresis Loop



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

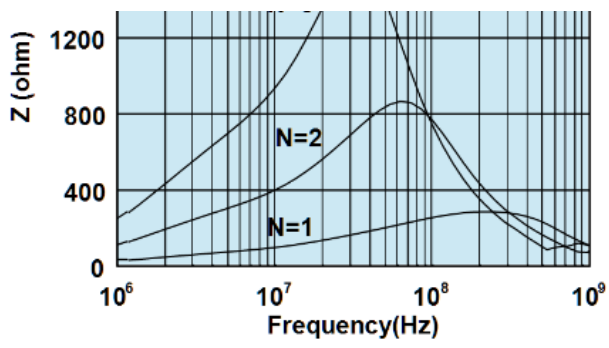
Impedance Curve

2631102002



Impedance, reactance, and resistance vs. frequency.





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