

Part Number: 2744051447
Frequency Range: Broadband Frequencies 10-300 MHz (44 material)
Description: CMWBS4.4/6.7/12-44 44 COMMON MODE SM BEAD
Application: Suppression Components
Where Used: Board Component
Part Type: SM Beads (Common-Mode)
Preferred Part: ✓

Part Type Information

Mechanical Specifications

Weight: 1.00 (g)
[View Chart Legend](#)

Dim	mm	mm tol	nominal inch	inch misc.
A	4.50	Max	0.177	Max
B	6.65	Max	0.262	Max
C	12.00	Max	0.472	Max
D	2.50	±0.50	0.098	-
E	3.00	±0.10	0.118	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-

Land Patterns				
V	W (ref)	X	Y	Z
4.000	9.000	1.000	5.000	3.000
0.158	0.354	0.040	0.197	0.118

Reel Information				
Tape Width mm	Pitch mm	Parts 7" Reel	Parts 13" Reel	Parts 14" Reel
24	12	-	1000	-

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

Pkg Size	
-	

Connector Plate	
# Holes	# Rows
-	-

Cable Information			
Max Diameter	Max Dimension	Solid Equivalent	Flat Cable Cores
-	-	-	-

Electrical Specifications

Typical Impedance (Ω)	
10 MHz	60
25 MHz ⁺	100
100 MHz ⁺	230
250 MHz	-
300 MHz	275

Electrical Properties	
Max Rdc(mΩ)	4.00

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.

44 Material Specifications:

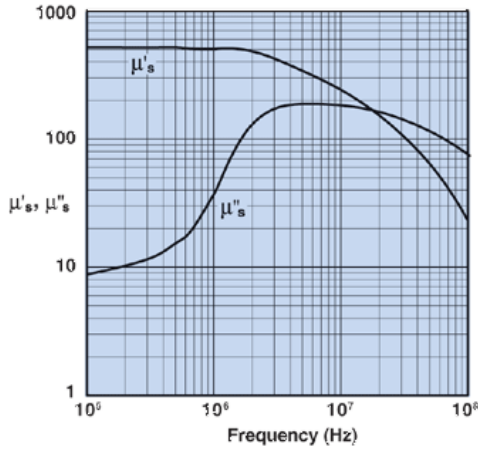
A NiZn ferrite developed to combine a high suppression performance, from 30 MHz to 500 MHz, with a very high dc resistivity.

SM beads, PC beads, wound beads, round cable snap-its, and connector EMI suppression plates are all available in 44 material.

Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ _i	500
Flux Density @ Field Strength	gauss oersted	B H	3000 10
Residual Flux Density	gauss	B _r	1100
Coercive Force	oersted	H _c	0.45
Loss Factor @ Frequency	10 ⁻⁵ MHz	tan δ/μ _i	125 1.0

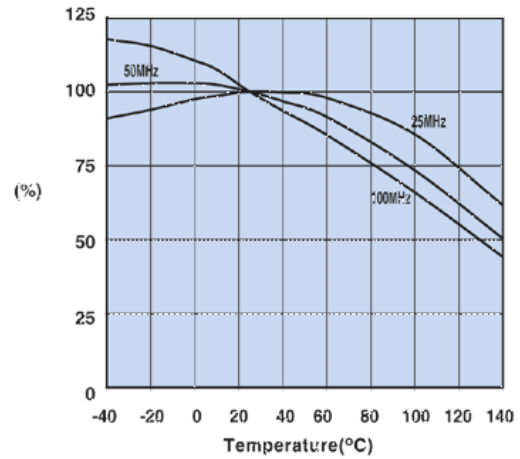
Temperature Coefficient of Initial Permeability (20-70°C)	%/°C		0.75
Curie Temperature	°C	T_c	>160
Resistivity	Ω cm	ρ	1×10^{-9}

Complex Permeability vs. Frequency



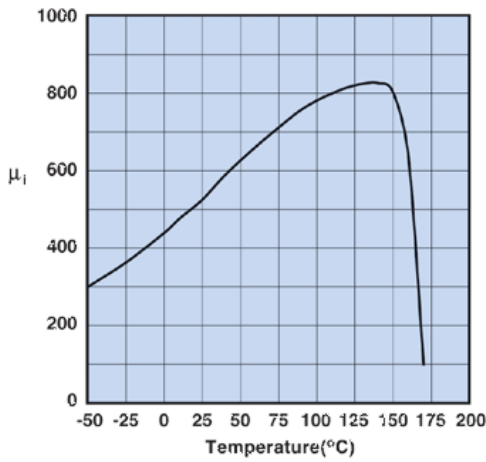
Measured on a 17/10/6mm toroid using the HP 4284A and the HP 4291A.

Percent of Original Impedance vs. Temperature



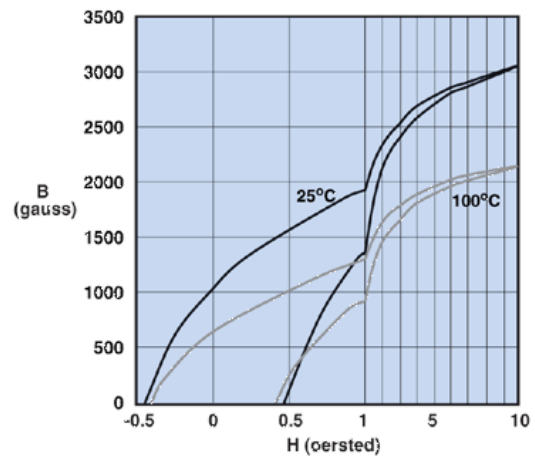
Measured on a 26440C0301 using the HP4291A.

Initial Permeability vs. Temperature



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

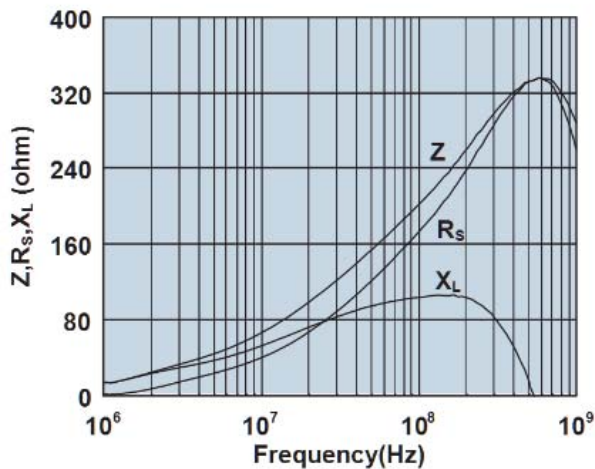
Hysteresis Loop



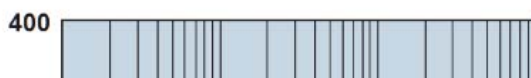
Measured on a 17/10/6mm toroid at 10kHz.

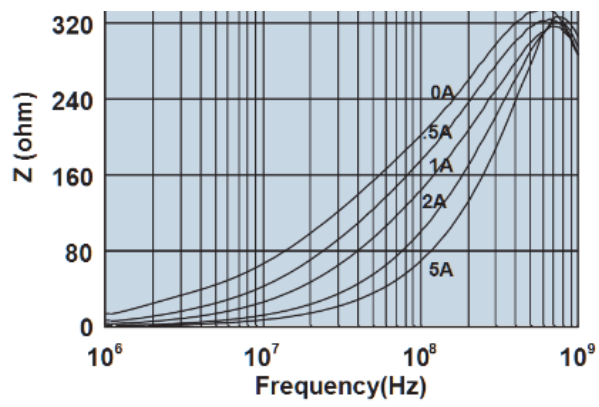
Impedance Curve

2744051447



Impedance, reactance, and resistance vs. frequency.





Impedance vs. frequency with dc bias.