

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, 4061287011 Printed: 2013-07-03



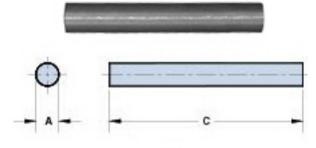


Figure 1

Part Number:	4061287011
Frequency Range:	Low Permeability, 61(ui=125) material
Description:	61 ROD
Application:	Inductive Components
Where Used:	Open Magnetic Circuit
Part Type:	Rods
	· • • • • •

Mechanical Specifications

Weight: 3.400 (g)

Part Type Information

Pressed Fair-Rite rods are used extensively in high-energy storage designs. These rods can also be used for inductive components that require temperature stability or have to accommodate large dc bias requirements.

-The 'A' dimension can be centerless ground to tighter tolerances.

-Figure 2 rods have a 0.6 mm (.024") maximum chamfer on the end faces.

-For frequency tuned rod designs see section Antenna/RFID Rods.

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

Fair-Rite Products Corp. Your Signal Solution®

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Mechanical Specifications

Dim	mm	mm	nominal	inch
		tol	inch	misc.
А	6.35	±0.25	0.250	-
В	-	-	-	-
С	22.10	±0.70	0.870	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
К	-	-	-	-

Electrical Specifications

Typical Impedance (Ω)
Electrical Properties	

Land Patterns

\vee	W ref	Х	Y	Ζ
-	-	-	-	-

Winding Information

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

Reel Information

Tape Width	Pitch	Parts 7 "	Parts 13 "	Parts 14 "
mm	mm	Reel	Reel	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 ½ turn is defined as a single pass through a hole.

LI/A - Core Constant

A_e: Effective Cross-Sectional Area

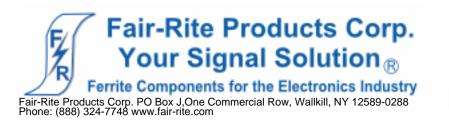
 A_{I} - Inductance Factor $\left(\frac{L}{N^{2}}\right)$

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

I e: Effective Path Length

Ve: Effective Core Volume

NI - Value of dc Ampere-turns



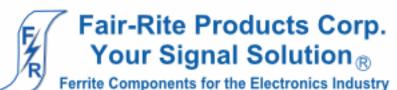
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Ferrite Material Constants

Specific Heat	0.25 cal/g/ºC
Thermal Conductivity	3.5 - 4.5 mW/cm - °C
Coefficient of Linear Expansion	8 - 10x10 ⁻⁶ /ºC
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	\approx 4.7 g/cm ³
The above quoted properties are typical for Fair-Rit	e MnZn and NiZn ferrites.

See next page for further material specifications.

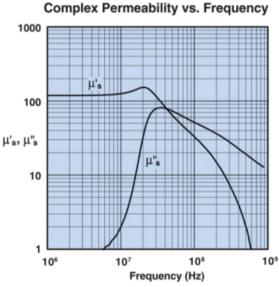


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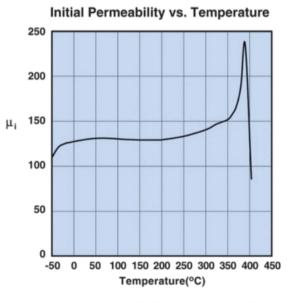
A high frequency NiZn ferrite developed for a range of inductive applications up to 25 MHz. This material is also used in EMI applications for suppression of noise frequencies above 200 MHz.

EMI suppression beads, beads on leads, SM beads, wound beads, multi-aperture cores, round cable snap-its, rods, antenna/RFID rods, and toroids are all available in 61 material.

Strong magnetic fields or excessive mechanical stresses may result in irreversible changes in permeability and losses.



Measured on a 19/10/6mm toroid using the HP 4284A and the HP 4291A.



150 9001 TS 16949 Material Declaration

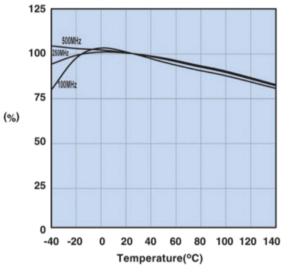
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61 Material Characteristics:

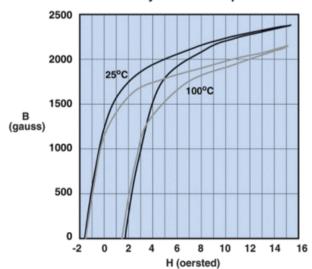
Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ	125
Flux Density	gauss	в	2350
@ Field Strength	oersted	н	15
Residual Flux Density	gauss	B,	1200
Coercive Force	oersted	Hc	1.8
Loss Factor	10-6	tan δ/μ,	30
@ Frequency	MHz		1.0
Temperature Coefficient of Initial Permeability (20 -70°C)	%/°C		0.10
Curie Temperature	°C	Tc	>300
Resistivity	Ωcm	ρ	1x10 ⁸

Percent of Original Impedance vs. Temperature



Measured on a 2661000301 using the HP4291A.

Hysteresis Loop



Measured on a 19/10/6mm toroid at 100kHz.

Measured on a 19/10/6mm toroid at 10kHz.

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