

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

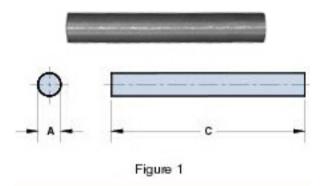
Fair-Rite Product's Catalog Part Data Sheet, 4052098411

Printed: 2013-07-03









Part Number: 4052098411

Frequency Range: Low Permeability, High Saturation 52 (ui=250) material

Description: 52 ROD

Application: Inductive Components

Where Used: Open Magnetic Circuit

Part Type: Rods

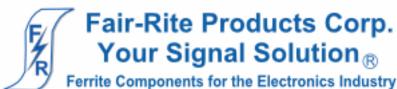
## **Mechanical Specifications**

Weight: .360 (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.



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### **Mechanical Specifications**

Dim	mm	mm	nominal	inch
		tol	inch	misc.
Α	2.50	±0.13	0.098	
В	-	-	-	
С	15.00	±0.45	0.591	-
D	-	-	-	-
Е	•	ı	-	-
F	•	ı	-	-
G	-		-	-
Н	-		-	-
J	-		-	-
K	-	-	-	-

### **Electrical Specifications**

= restriction openioditions		
Typical Impedance ( $\Omega$ )		
Electrical Properties		

#### **Land Patterns**

V	W	Х	Υ	Z
-	-	-		-

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

∠I/A - Core Constant

A<sub>e</sub>: Effective Cross-Sectional Area

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

I e: Effective Path Length

Ve: Effective Core Volume

NI - Value of dc Ampere-turns

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



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# **Ferrite Material Constants**

0.25 cal/g/°C Specific Heat ..... 3.5 - 4.5 mW/cm - °C Thermal Conductivity ..... Coefficient of Linear Expansion ..... 8 - 10x10-6/°C 4.9 kgf/mm<sup>2</sup> Tensile Strength ..... Compressive Strength ..... 42 kgf/mm<sup>2</sup> 15x103 kgf/mm2 Young's Modulus ..... Hardness (Knoop)..... 650 Specific Gravity .....  $\approx 4.7 \text{ g/cm}^3$ The above quoted properties are typical for Fair-Rite MnZn and NiZn ferrites.

See next page for further material specifications.