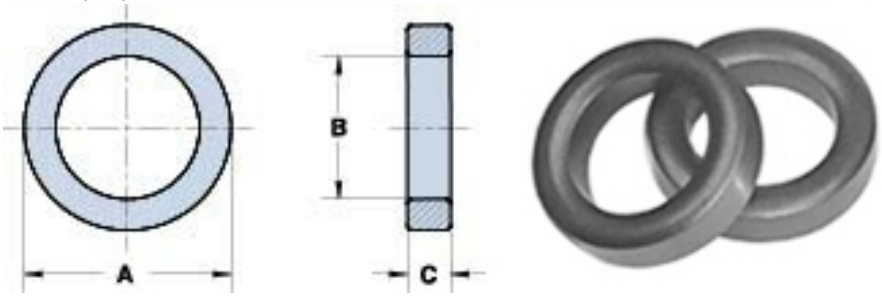
Fair-Rite Products Corp.
Your Signal Solution®
Ferrite Components for the Electronics Industry
Fair-Rite Products Corp. PO Box J,One Commercial Row, Wallkill, NY 12589-0288
Phone: (888) 324-7748 www.fair-rite.com

Fair-Rite Product's Catalog
Part Data Sheet, 5967001101
Printed: 2013-07-03



Part Number:	5967001101
Frequency Range:	Low Permeability, 67 (ui=40) material
Description:	67 TOROID
Application:	Inductive Components
Where Used:	Closed Magnetic Circuit
Part Type:	Toroids

Mechanical Specifications

Weight:	2.400 (g)

Part Type Information

A ring configuration provides the ultimate utilization of the intrinsic ferrite material properties. Toroidal cores are used in a wide variety of applications such as power input filters, ground-fault interrupters, common-mode filters and in pulse and broadband transformers.

-Toroids are listed by initial permeability classes and increasing dimension of the inside diameter.

-All toroidal cores are supplied burnished to break sharp edges.

-Toroids are tested for AL values at 10 kHz.

-Toroids with an outside diameter of 9.5mm (.375") or smaller can be supplied Parylene C coated. The Parylene coating will increase the 'A' and 'C' dimensions and decrease the 'B' dimension a maximum of 0.038mm (.0015"). The ninth digit of a Parylene coated toroid part number is a '1'. See the material characteristics of Parylene C in our online catalog.

-Toroids with an outside diameter of 9.5mm (.375") or larger can be supplied with a uniform coating of thermo-set plastic coating. This coating will increase the 'A' and 'C' dimensions and decrease the 'B' dimension a maximum of 0.5mm (.020"). The 9th digit of the thermo-set plastic coated toroid part number is a '2'. Thermo-set plastic coating is RoHS compliant.

-Thermo-set plastic coated parts can withstand a minimum breakdown voltage of 1000 Vrms, uniformly applied across the 'C' dimension of the toroid.

-The "C" dimension may be modified to suit specific applications.

-For any toroidal core requirement not listed in the catalog, please contact our customer service department for availability and pricing.

-Explaination of Part Numbers: Digits 1&2 = product class, 3&4 = material grade, 9th digit 1 = Parylene coating, 2 = thermo-set plastic coating.

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Mechanical Specifications

Dim	mm	mm tol	nominal inch	inch misc.
A	12.70	±0.25	0.500	-
B	7.90	±0.20	0.312	-
C	6.35	±0.25	0.250	-
D	-	-	-	-
E	-	-	-	-
F	-	-	-	-
G	-	-	-	-
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-

Electrical Specifications

Typical Impedance (Ω)	

Electrical Properties	
A_L (nH)	24 +35%, -25%
Ae(cm^2)	0.15000
Σl/A(cm^{-1})	20.80
l_e (cm)	3.12
V_e (cm^3)	0.47000

Land Patterns

V	W ref	X	Y	Z
- -	- -	- -	- -	- -

Winding Information

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

Reel Information

Tape Width mm	Pitch mm	Parts 7 " Reel	Parts 13 " Reel	Parts 14 " 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.

Σl/A - Core Constant
l_e: Effective Path Length
A_e: Effective Cross-Sectional Area
V_e: Effective Core Volume
A_L - Inductance Factor $\left(\frac{L}{N^2}\right)$
NI - Value of dc Ampere-turns
N/AWG - Number of Turns/Wire Size for Test Coil

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Ferrite Material Constants

Specific Heat	0.25 cal/g/°C
Thermal Conductivity	**3.5 - 4.5 mW/cm** - °C
Coefficient of Linear Expansion	8 - 10×10^{-6}/°C
Tensile Strength	4.9 kgf/mm^2
Compressive Strength	42 kgf/mm^2
Young's Modulus	15×10^3 kgf/mm^2
Hardness (Knoop)	650
Specific Gravity	$\approx$ 4.7 g/cm^3

The above quoted properties are typical for Fair-Rite MnZn and NiZn ferrites.

See next page for further material specifications.

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ISO 9001 Registered · TS 16949 Registered · Pb · RoHS Material Declaration

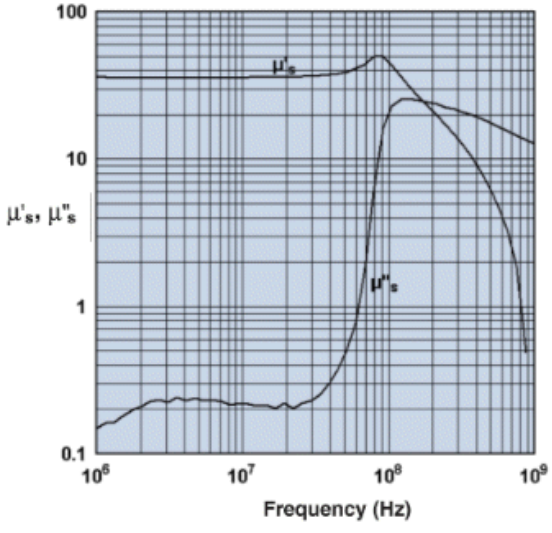
A high frequency NiZn ferrite for the design of broadband transformers, antennas and HF, high Q inductor applications up to 50 MHz. Toroids, multi-aperture cores and antenna/RFID rods are available in this material.

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

67 Material Characteristics:

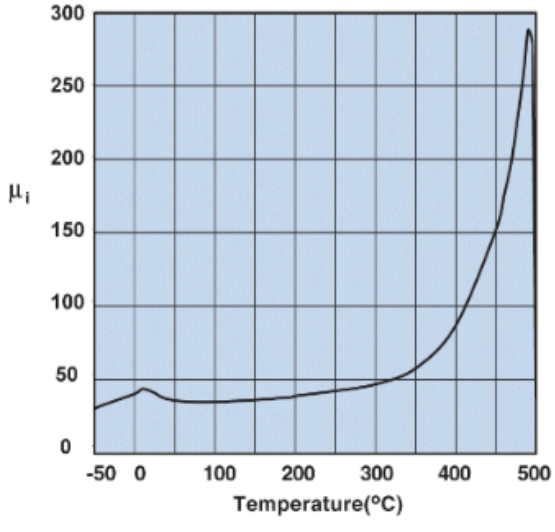
Property	Unit	Symbol	Value
Initial Permeability @ B < 10 gauss		μ_i	40
Flux Density @ Field Strength	gauss oersted	B H	2300 20
Residual Flux Density	gauss	B_r	800
Coercive Force	oersted	H_c	3.5
Loss Factor @ Frequency	10^{-6} MHz	$\tan\delta/\mu_i$	150 50
Temperature Coefficient of Initial Permeability (20 -70°C)	%/°C		0.05
Curie Temperature	°C	T_c	>475
Resistivity	Ω cm	ρ	$1x10^7$

Complex Permeability vs. Frequency



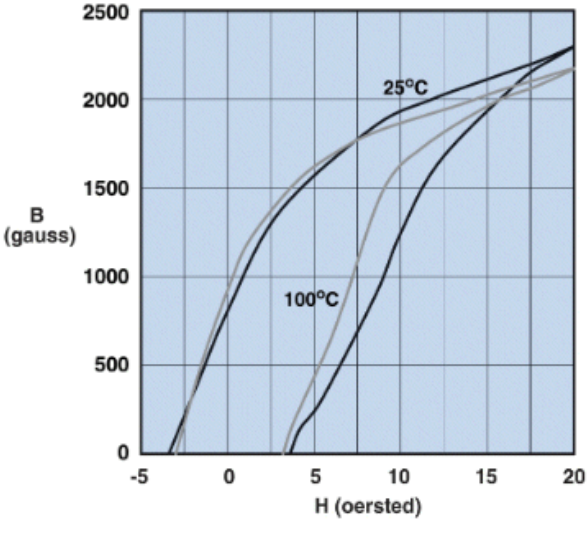
Measured on an 19/10/6mm toroid using the HP 4284A and the HP 4291A.

Initial Permeability vs. Temperature



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

Hysteresis Loop



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

LifeElectronics
Живое партнерство

ООО «ЛайфЭлектроникс» **“LifeElectronics” LLC**

ИНН 7805602321 КПП 780501001 Р/С 40702810122510004610 ФАКБ "АБСОЛЮТ БАНК" (ЗАО) в г.Санкт-Петербурге К/С 30101810900000000703 БИК 044030703

Компания «Life Electronics» занимается поставками электронных компонентов импортного и отечественного производства от производителей и со складов крупных дистрибьюторов Европы, Америки и Азии.

С конца 2013 года компания активно расширяет линейку поставок компонентов по направлению коаксиальный кабель, кварцевые генераторы и конденсаторы (керамические, пленочные, электролитические), за счёт заключения дистрибьюторских договоров

Мы предлагаем:

- *Конкурентоспособные цены и скидки постоянным клиентам.*
- *Специальные условия для постоянных клиентов.*
- *Подбор аналогов.*
- *Поставку компонентов в любых объемах, удовлетворяющих вашим потребностям.*

- *Приемлемые сроки поставки, возможна ускоренная поставка.*
- *Доставку товара в любую точку России и стран СНГ.*
- *Комплексную поставку.*
- *Работу по проектам и поставку образцов.*
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- *Сертификаты соответствия на поставляемую продукцию (по желанию клиента).*
- *Тестирование поставляемой продукции.*
- *Поставку компонентов, требующих военную и космическую приемку.*
- *Входной контроль качества.*
- *Наличие сертификата ISO.*

В составе нашей компании организован Конструкторский отдел, призванный помогать разработчикам, и инженерам.

Конструкторский отдел помогает осуществить:

- *Регистрацию проекта у производителя компонентов.*
- *Техническую поддержку проекта.*
- *Защиту от снятия компонента с производства.*
- *Оценку стоимости проекта по компонентам.*
- *Изготовление тестовой платы монтаж и пусконаладочные работы.*

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