

Part Number: 6695505021
 Frequency Range: Dimensions
 Description: 95 PQ CORE
 Application: Inductive Components
 Where Used: Closed Magnetic Circuit
 Part Type: PQ Cores
 Generic Name: PQ50/50

Mechanical Specifications

Weight: 195.000(g) per Set

Part Type Information

PQ20/16, PQ20/20, PQ26/20, PQ26/25, PQ32/20, PQ32/30, PQ35/35, PQ40/40, PQ50/50

PQ cores were developed for use in power applications. The large surface area to volume of the core aids in heat dissipation. PQ cores are employed both in filter and transformer designs for switch mode power supplies.

-PQ cores can be supplied with the centerpost gapped to a mechanical dimension or an AL value.

-AL value is measured at 1 kHz, B < 10 gauss.

-Weight indicated is per pair or set.



Mechanical Specifications

Dim	mm	mm tol	nominal inch	inch misc.
A	50.00	± 0.8	1.969	-
B	25.00	± 0.15	0.984	-
C	32.00	± 0.6	1.260	-
D	18.10	± 0.25	0.713	-
E	44.00	± 0.7	1.732	-
F	20.00	± 0.4	0.787	-
G	32.00	min	1.260	min
H	-	-	-	-
J	-	-	-	-
K	-	-	-	-

Electrical Specifications

Typical Impedance (Ω)	

Electrical Properties	
A_L (nH)	8000 ±25%
A_e (cm ²)	3.19000
$\sum I/A$ (cm ⁻¹)	3.59
l_e (cm)	11.47
V_e (cm ³)	36.63000
A_{min} (cm ²)	3.142

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.

$\sum I/A$ - Core Constant

A_e - Effective Cross-Sectional Area

A_L - Inductance Factor ($\frac{L}{N^2}$)

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

l_e - Effective Path Length

V_e - Effective Core Volume

NI - Value of dc Ampere-turns

Land Patterns

V	W ref	X	Y	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
-	-



Ferrite Material Constants

Specific Heat	0.25 cal/g/°C
Thermal Conductivity	3.5 - 4.5 mW/cm - °C
Coefficient of Linear Expansion	8 - 10x10 ⁻⁶ /°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.

See next page for further material specifications.



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, 6695505021
Printed: 2013-07-03



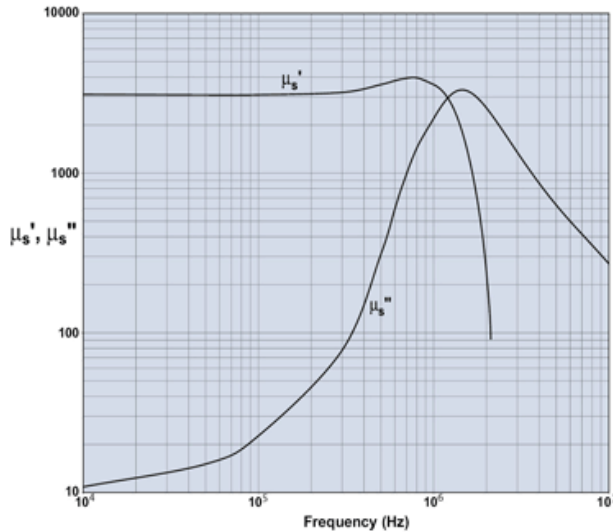
A low loss MnZn ferrite material for power applications up to 200 kHz with low temperature variation. New type 95 Material is a low loss power material, which features less power loss variation over temperature (25-120°C) at moderate flux densities for operation below 200 kHz.

Shapes available in 95 material are Toroids, U cores, Pot Cores, RM, PQ, EFD, EP.

95 Material Characteristics

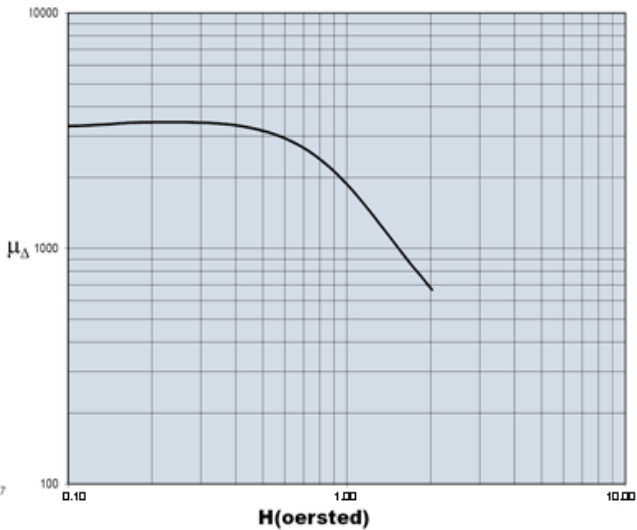
Property	Unit	Symbol	Value
Initial Permeability @ B < 10gauss		μ_i	3000
Flux Density @ Field Strength	gauss oersted	B H	5000 5
Residual Flux Density	gauss	B_r	800
Coercive Force	oersted	H_c	0.13
Loss Factor @ Frequency	10^{-6} MHz	$\tan\delta/\mu_i$	3.0 0.1
Temperature Coefficient of Initial Permeability (20 - 70°C)	% / °C		0.4
Curie Temperature	°C	T_c	> 220
Resistivity	ohm-cm	ρ	200

Complex Permeability vs. Frequency

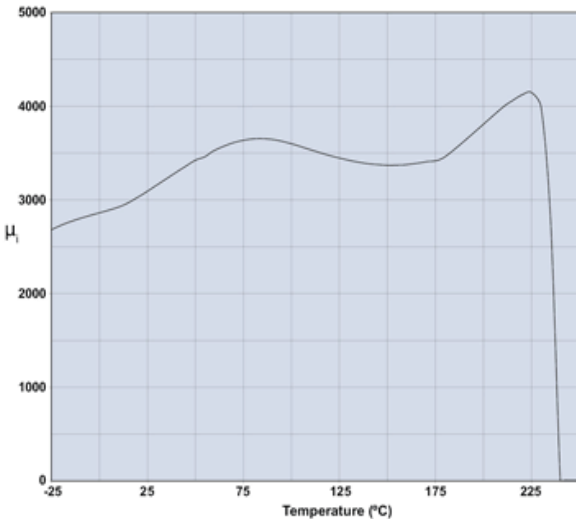


Measured on an 18/10/6mm toroid using HP 4284A and HP4291A.

Incremental Permeability vs. H

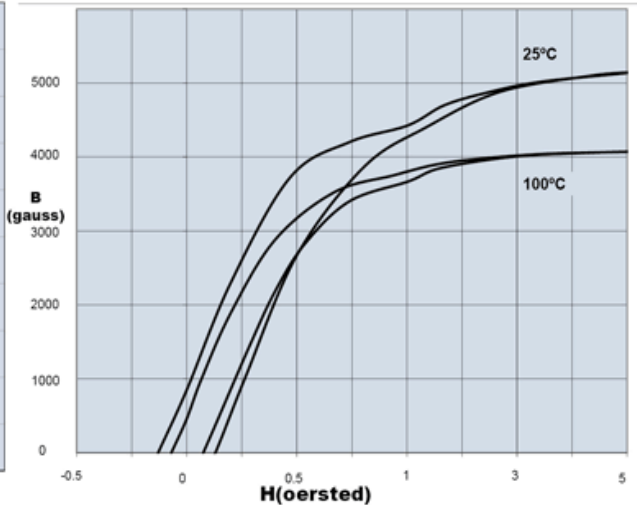


Initial Permeability vs. Temperature



Measured on an 18/10/6mm toroid at 10kHz.

Hysteresis Loop

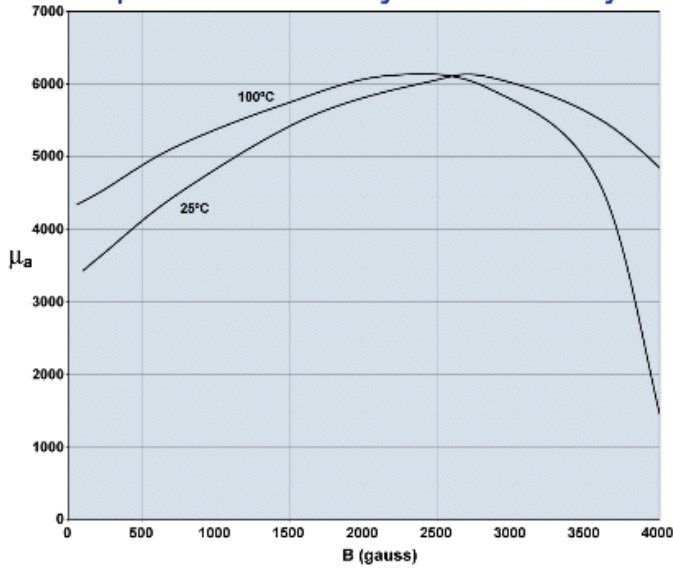


Measured on an 18/10/6mm toroid at 10kHz.



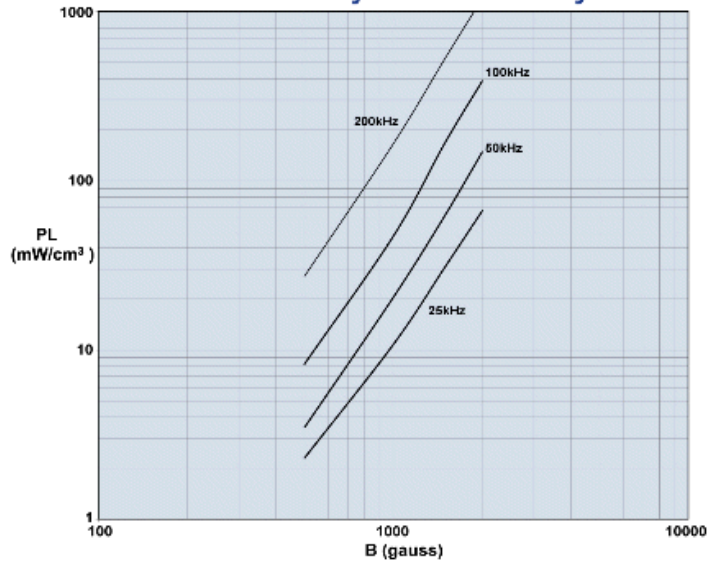
A low loss MnZn ferrite material for power applications up to 200kHz with low temperature variation.

Amplitude Permeability vs. Flux Density



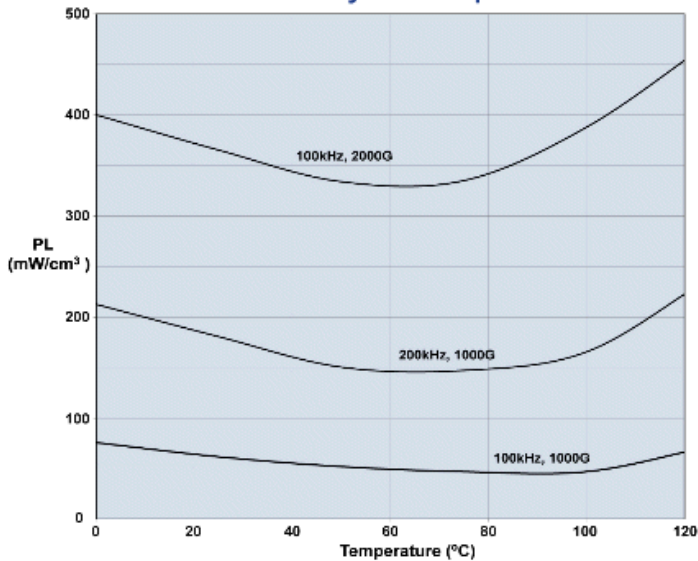
Measured on an 18/10/6mm toroid at 10kHz.

Power Loss Density vs. Flux Density



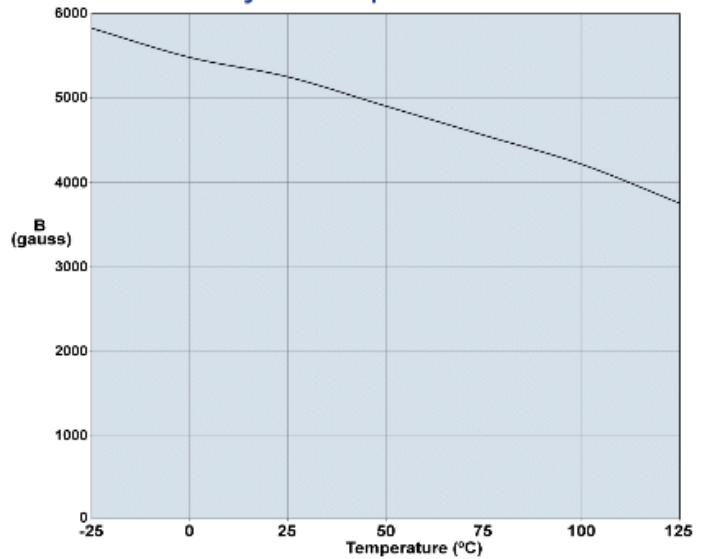
Measured on an 18/10/6mm toroid using the Clarke Hess 258 VAW at 100°C.

Power Loss Density vs. Temperature



Measured on an 18/10/6mm toroid using the Clarke Hess 258 VAW at 100°C.

Flux Density vs. Temperature



Measured on an 18/10/6mm toroid at 10kHz and H=5 oersted.

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:

- Конкуренспособные 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.
- Формирование склада под заказчика.
- 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.



Тел: +7 (812) 336 43 04 (многоканальный)

Email: org@lifeelectronics.ru