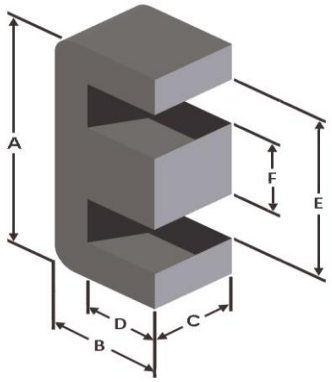
MICROMETALS™
POWDER CORE SOLUTIONS

Part Number:	EFS-0130604-040

Revision: 2023-Dec-06



A	12.7 ± 0.25 mm	0.500 ± 0.010 in
B	6.4 ± 0.10 mm	0.252 ± 0.004 in
C	3.56 ± 0.15 mm	0.140 ± 0.006 in
D	4.42 mm (min.)	0.174 in (min.)
E	8.89 mm (min.)	0.350 in (min.)
F	3.56 ± 0.13 mm	0.140 ± 0.005 in
Mass	(approximate)	1.2 grams/half

Magnetic Dimensions

A_e - Eff. Mag. Cross Section	0.130 cm²
L_e - Eff. Mag. Path Length	2.96 cm
V_e - Eff. Core Volume	0.385 cm³
WA - Min. Eff. Window Area	0.230 cm²
sa - Surface Area	6.01 cm²
mlt - mean length per turn	2.49 cm

Inductance

μ_i(reference)	40
A_L value (nominal)	28 nH/N²
Test Winding	N=100, #28 AWG
Frequency	10 kHz
Voltage on Agilent 4284A	0.058 V
A_L tolerance	±8%

Core Loss

$$\text{Core Loss(mW/cm}^3\text{)} = \frac{f}{\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}}} + d \cdot Bpk^2 \cdot f^2$$

where B_{pk} expressed in gauss, f expressed in hertz, and:

a=1.000E+06, b=3.482E+08, c=4.063E+06, d=2.798E-14

B_{pk}	1000	G
frequency	50 k	Hz
Core Loss (nominal)	629	mW/cm³
Core Loss (maximum)	755	mW/cm³

DC Saturation

$$\%\mu_i = \frac{1}{a + b \cdot H^c} + d$$

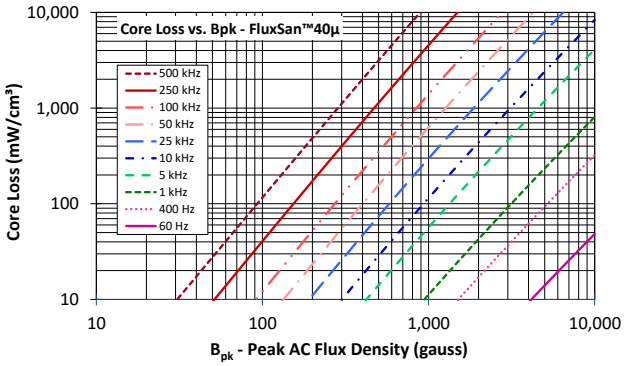
where H expressed in oersteds, and:

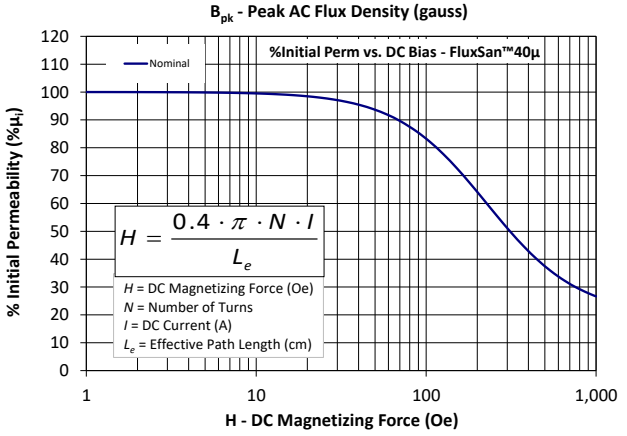
a=1.250E-02, b=1.927E-06, c=1.618, d=19.987

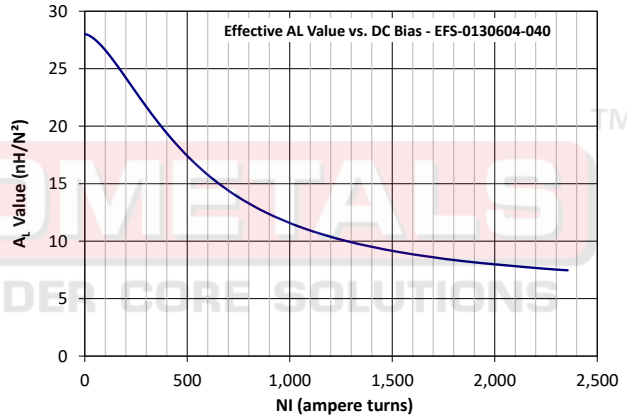
H_{DC}	100	Oe
Percent Initial Perm(nom.)	83.3	%
Percent Initial Perm(min.)	79.0	%

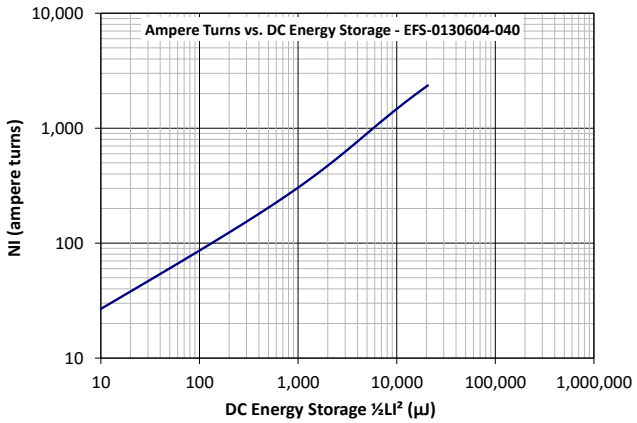
Coating/Pkg

Coating Type:	None
Voltage Breakdown (min.)	N/A
Limit	N/A
Package Quantity	3,920 Halves/Box









Winding Table

Wire Size	AWG	20	22	24	26	28	30	32	34	36	38	40
	mm	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080
Full Winding	Turns	17	26	41	63	98	151	234	363	561	869	1,345
	Rdc(Ω)	14.1 m	34.3 m	85.9 m	209.9 m	519.4 m	1.3	3.1	7.7	19.0	46.9	115.3

Handling and Storage: Cores should be stored in the original unopened packaging between -10°C and +50°C and less than 60% relative humidity. After the original packaging is opened, the cores should be stored between -8°C and +25°C less than 30% relative humidity. Gloves should be used when handling uncoated cores. The cores should also be sheltered from rain, moisture, salt water, salt air, plasters, ashes, sulfur, sulfur dioxide, ammonia sulfates, soils, acids, metals shavings, and solvents.

Operating Temperature: Cores can be used continuously at operating temperatures between -60°C and +200°C.

RoHS 2.0, REACH and ISO (TS16949, ISO 9001, ISO 14001) compliant. Statements available for download at www.micrometals.com.

Micrometals Alloy Powder Cores, A Division of Micrometals, Inc. - 5615 E. La Palma Ave., Anaheim, California 92807 USA
Ph: +1-714-970-9400, Toll Free in USA: +1-800-356-5977, Asia Pacific Sales: +852 3106 3736
www.Micrometals.com