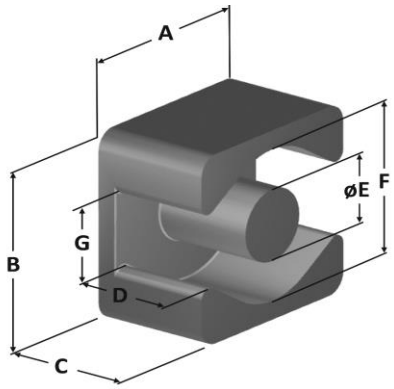
MICROMETALS™
POWDER CORE SOLUTIONS

Part Number:	HC101B47A-02000

Revision 20200506 - Generated 2020-May-06



A	10.05 ± 0.20 mm	0.396 ± 0.008 in
B	10.05 ± 0.20 mm	0.396 ± 0.008 in
C	4.70 ± 0.10 mm	0.185 ± 0.004 in
D	3.60 mm (min.)	0.142 in (min.)
E	3.95 ± 0.10 mm	0.156 ± 0.004 in
F	8.05 mm (min.)	0.317 in (min.)
G	3.60 mm (nom.)	0.142 in (nom.)
Mass	(approximate)	1.5 grams/half

Magnetic Dimensions

when matched with IC (thickness=1.00 mm. nom.)

A_e - Eff. Mag. Cross Section	0.211 cm²
L_e - Eff. Mag. Path Length	1.81 cm
V_e - Eff. Core Volume	0.397 cm³
WA - Min. Eff. Window Area	0.0740 cm²
sa - Surface Area	4.31 cm²
mlt - mean length per turn	1.91 cm

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=4.00E+09, b=3.00E+08, c=2.70E+06, d=9.60E-16

B_{pk}	140 G
frequency	100 kHz
Core Loss (nominal)	18 mW/cm³
Core Loss (maximum)	20 mW/cm³

DC Saturation

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

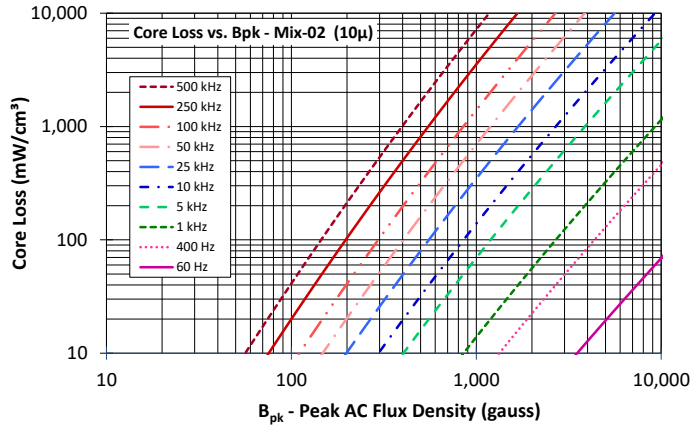
where H expressed in oersteds, and:

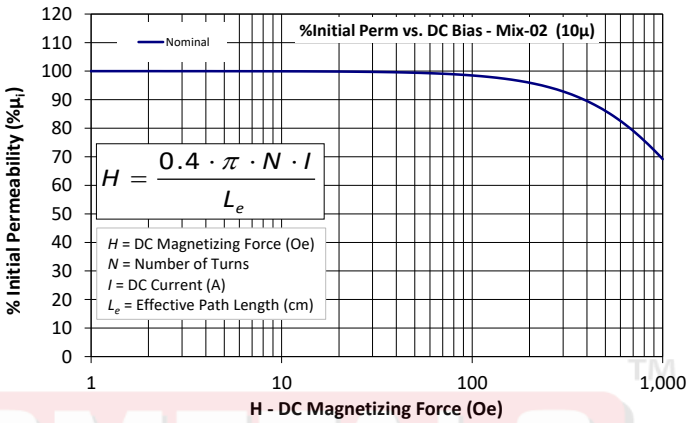
a=1.00E-02, b=1.83E-07, c=1.46, d=0.00

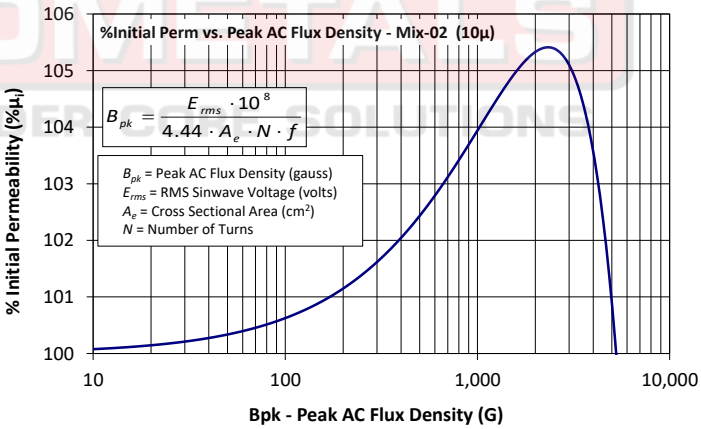
H_{DC}	200 Oe
Percent Initial Perm(nom.)	95.9%
Percent Initial Perm(min.)	94.8%

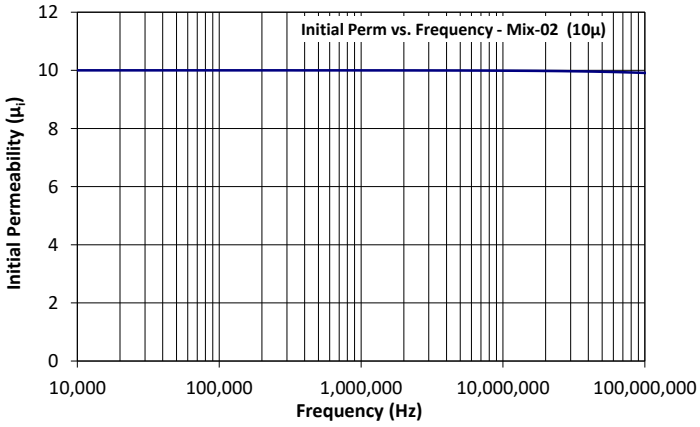
Coating/Pkg

Coating Type:	Per UL Card File #E140098(S), Black, Outer Surface only
Voltage Breakdown (min.)	200Vrms, 60Hz
Limit	3 mA, 5 s
Package Quantity	7,500 Halves/Box









Winding Table

Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
Full Winding	Turns	8	13	20	31	49	75	117	181	280	433	670
	Rdc(Ω)	8.1 m	20.9 m	51.1 m	125.9 m	316.5 m	770.5 m	1.9	4.7	11.6	28.5	70.0

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