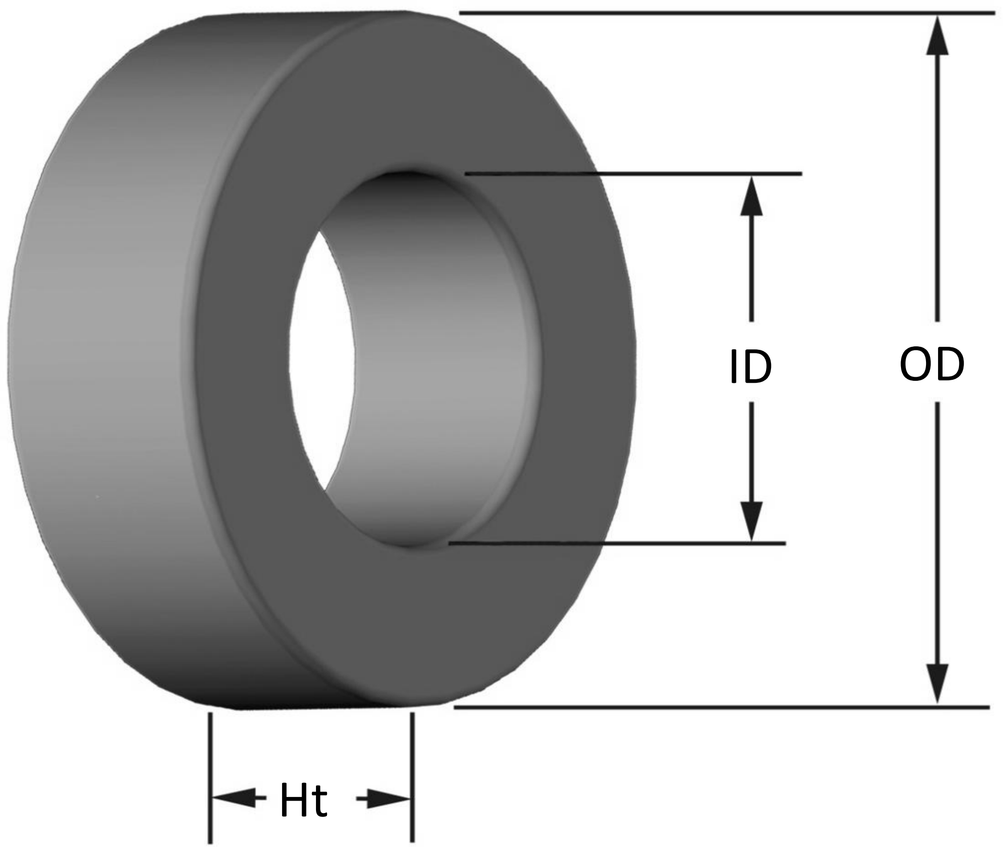
MICROMETALS™
POWDER CORE SOLUTIONS

Part Number:	T37-2

Revision 20190524 - Generated 2019-May-30



OD	(nom. - bare core)	9.53 mm	0.375 in
	(max. - after coating)	9.91 mm	0.390 in
ID	(nom. - bare core)	5.21 mm	0.205 in
	(min. - after coating)	4.83 mm	0.190 in
Ht	(nom. - bare core)	3.25 mm	0.128 in
	(max. - after coating)	3.76 mm	0.148 in
Mass	(approximate)	0.74 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.0640 cm²	
	L_e - Eff. Mag. Path Length	2.31 cm	
	V_e - Eff. Core Volume	0.147 cm³	
	WA - Min. Eff. Window Area	0.183 cm²	
	sa - Surface Area	3.47 cm²	
	mlt - mean length per turn	1.50 cm	
Inductance	μ_i(reference)	10	
	A_L value (nominal)	4 nH/N²	
	Test Winding	N=66, #32 AWG	
	Frequency	1 MHz	
	Voltage on Agilent 4284A	1.0 V	
	A_L tolerance	±5%	

Core Loss & Q

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

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

Q test winding	N=66, #32 AWG
Q frequency	3.5 MHz
Q min on HP4342A	152

DC Saturation

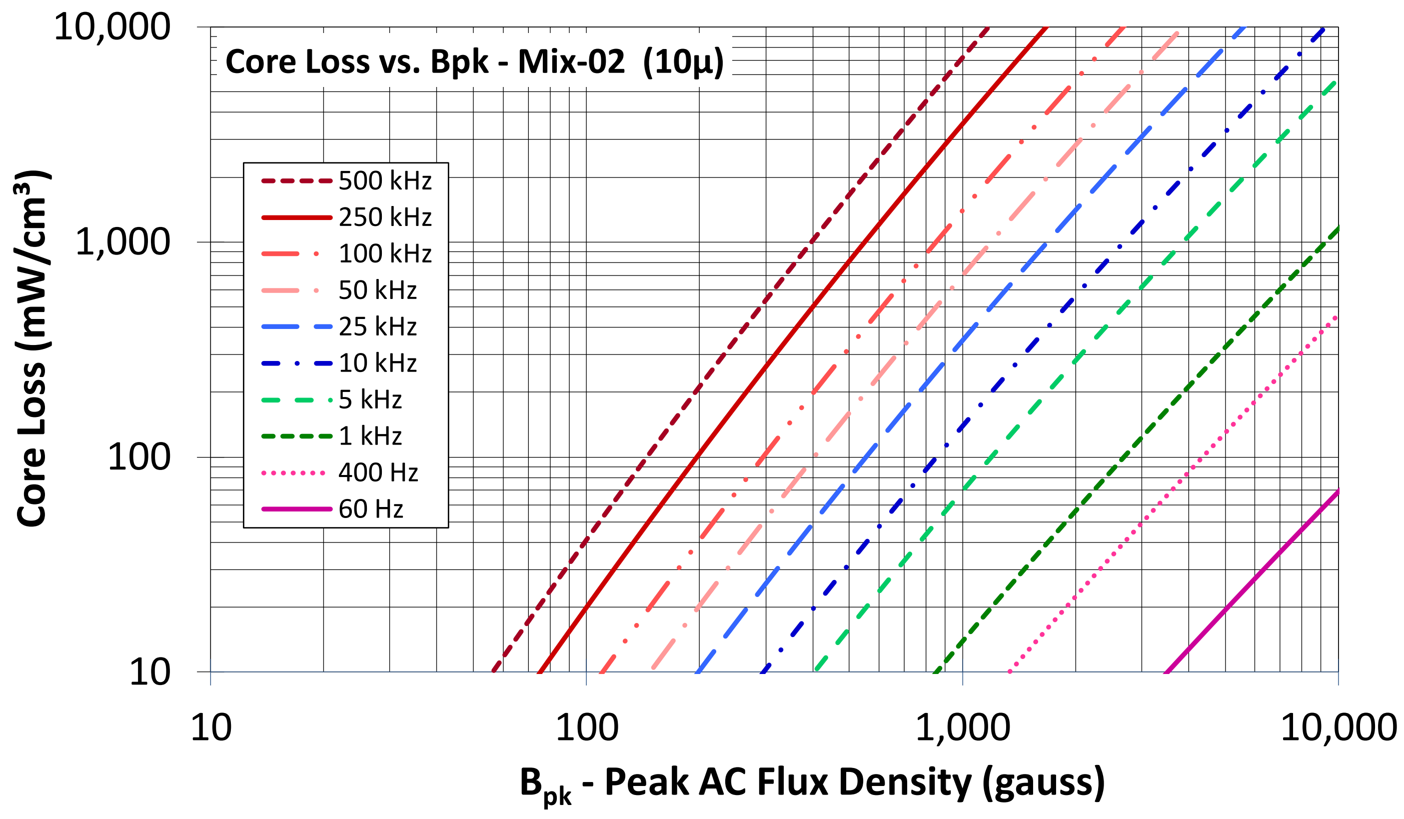
$$\%\mu_i = \frac{1}{a + b \cdot H^c} + d$$

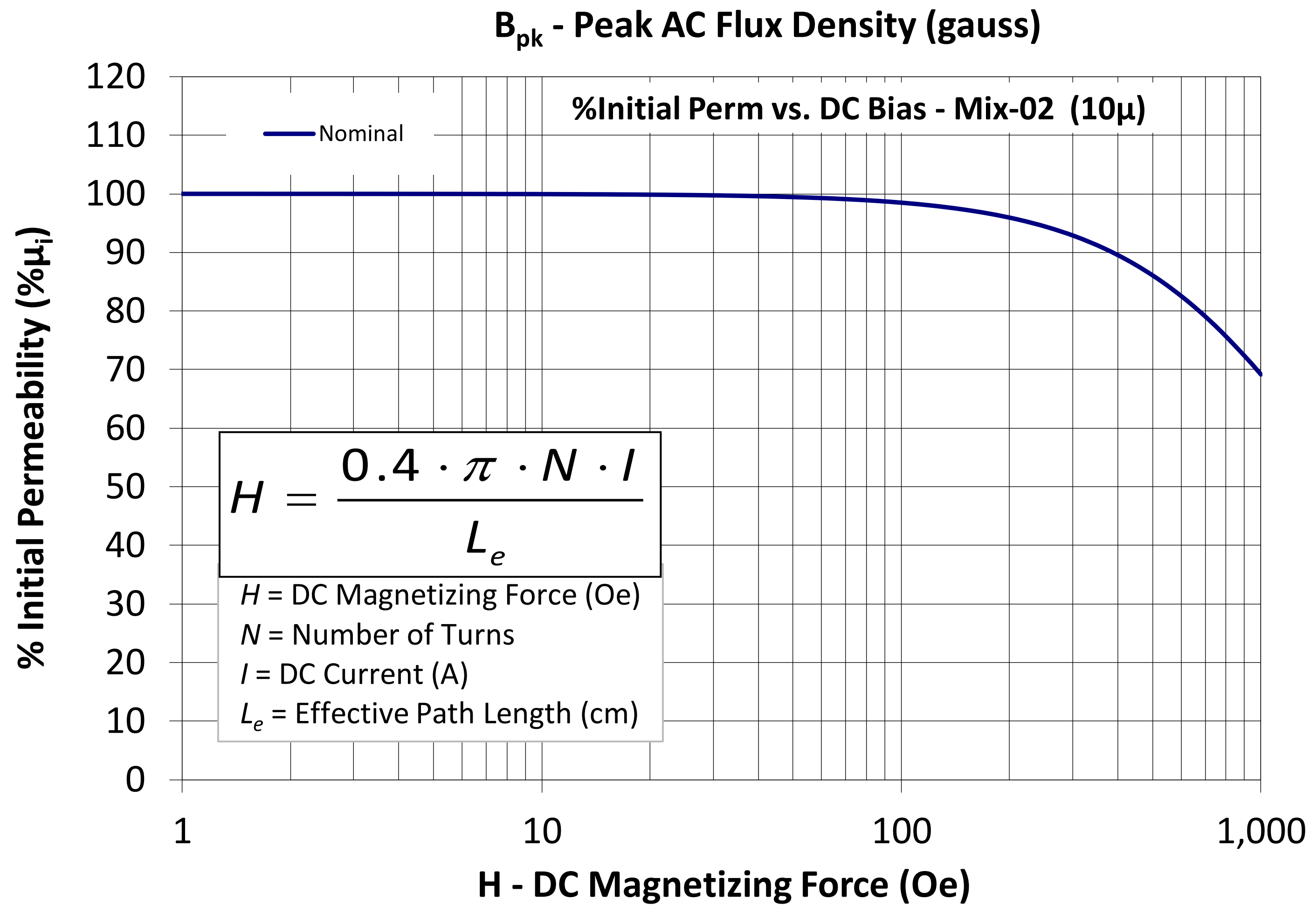
where H expressed in oersteds, and:
a=1.00E-02, b=1.83E-07, c=1.46, d=0.00

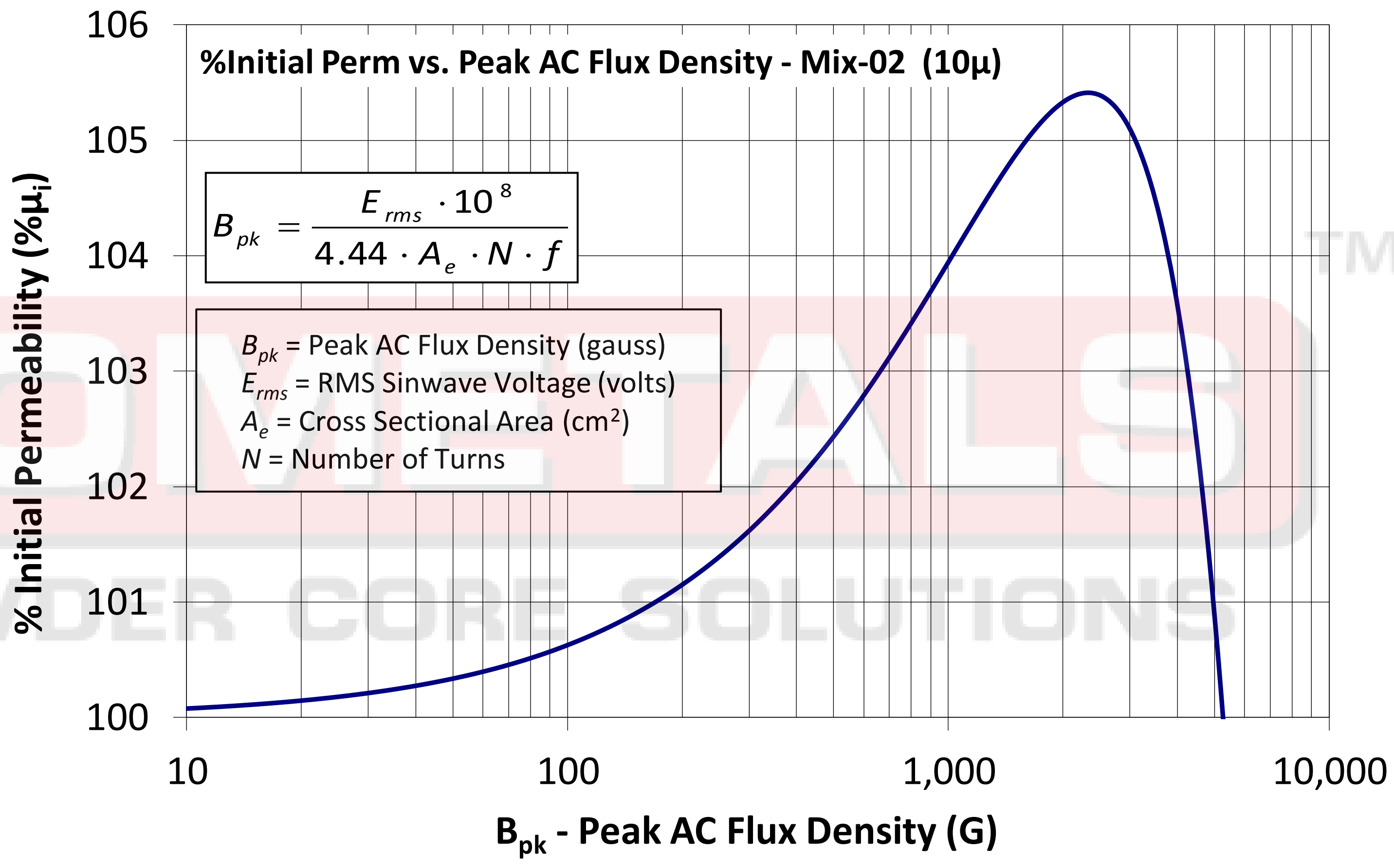
H_{DC}	200 Oe
Percent Initial Perm(nom.)	95.9%
Percent Initial Perm(min.)	94.8%

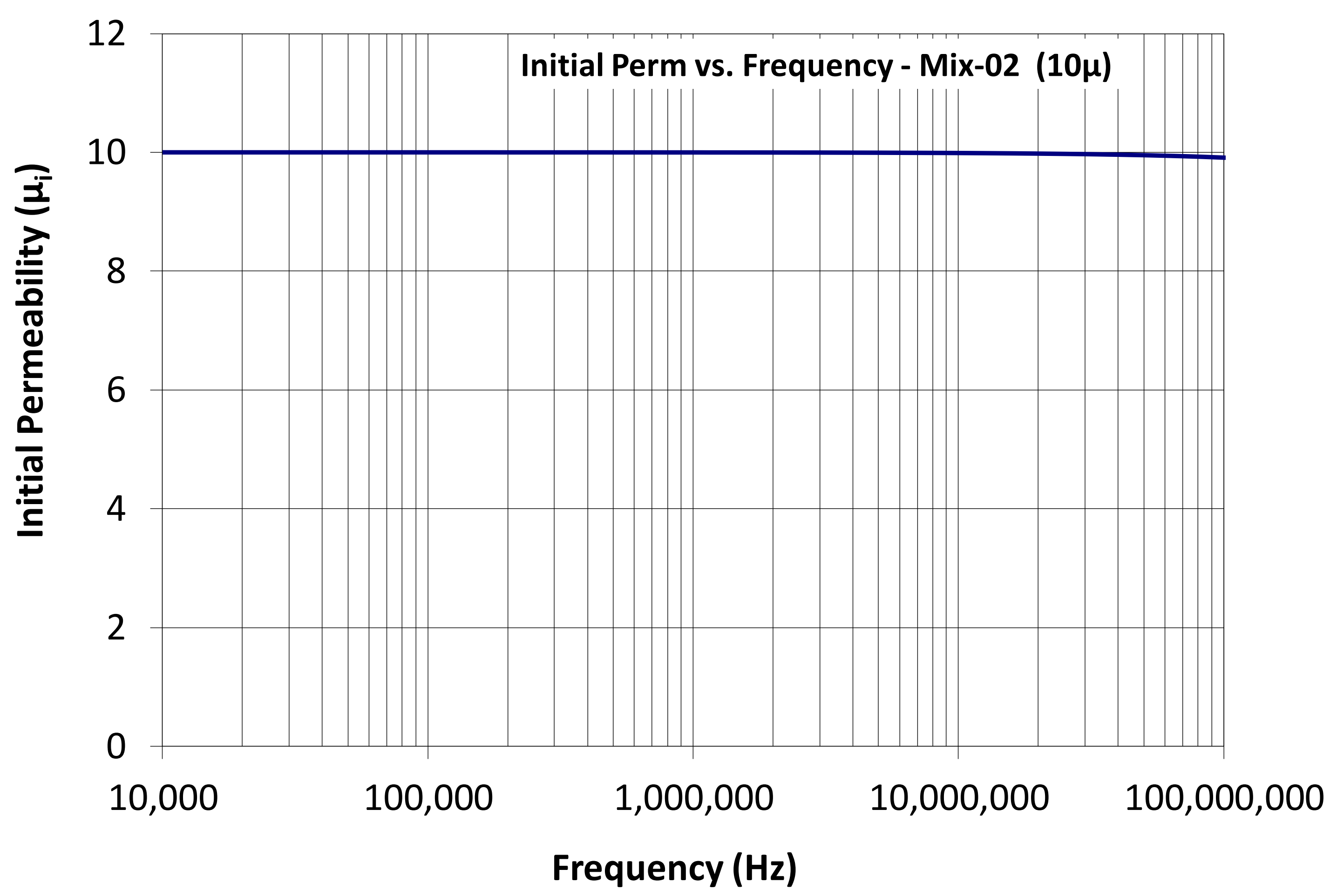
Coating/Pkg

Coating Type:	Red/Clear Epoxy Paint
Voltage Breakdown (min.)	500 Vrms, 60Hz
Limit	3 mA, 5 s
Package Quantity	20,000 Pcs/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
Single Layer	Turns	12	16	21	26	34	42	53	67	84	105	132
	Rdc(Ω)	6.0 m	12.7 m	26.5 m	52.2 m	108.6 m	213.4 m	428.3 m	861.2 m	1.7	3.4	6.8
Full Winding	Turns	13	20	32	49	76	117	181	280	433	671	1,038
	Rdc(Ω)	6.5 m	15.9 m	40.4 m	98.4 m	242.8 m	594.5 m	1.5	3.6	8.9	21.8	53.7

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