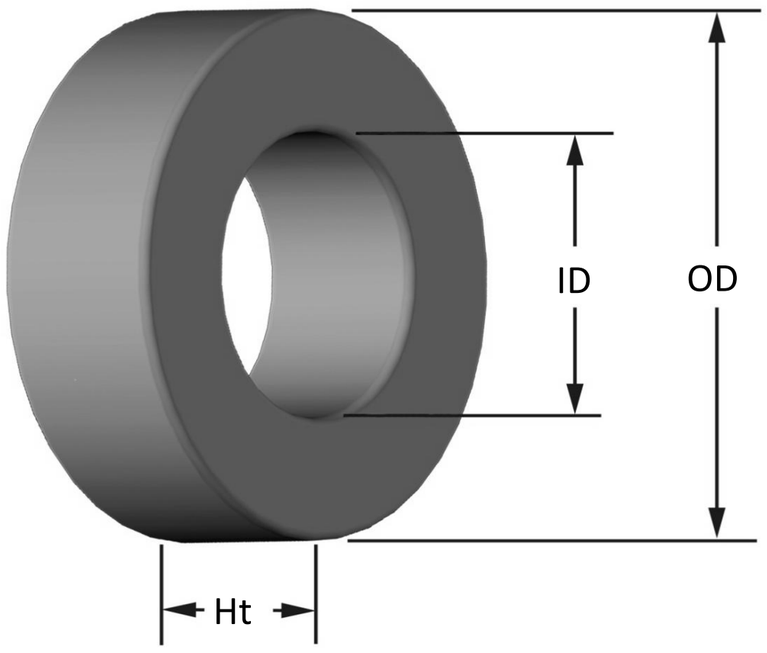
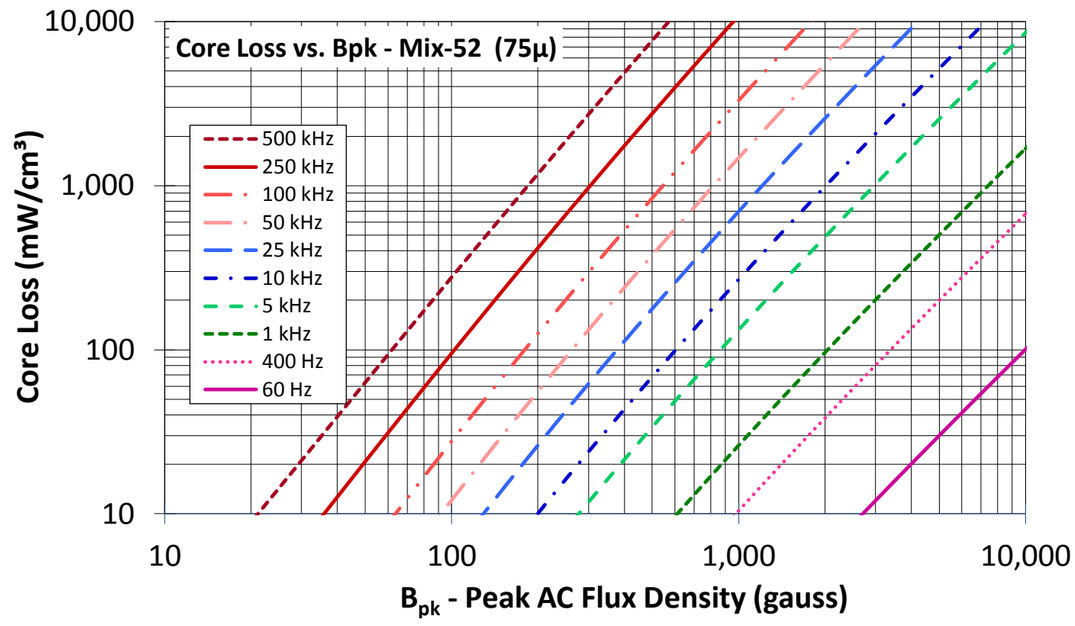
MICROMETALS™
POWDER CORE SOLUTIONS

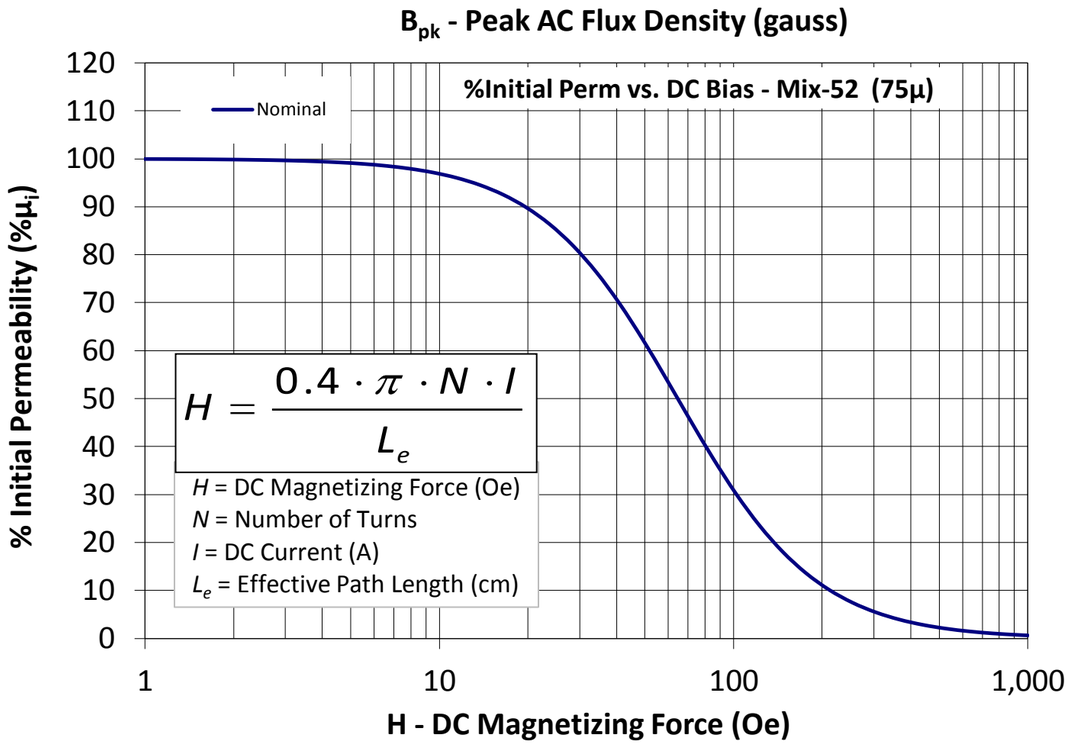
Part Number:	T184-52

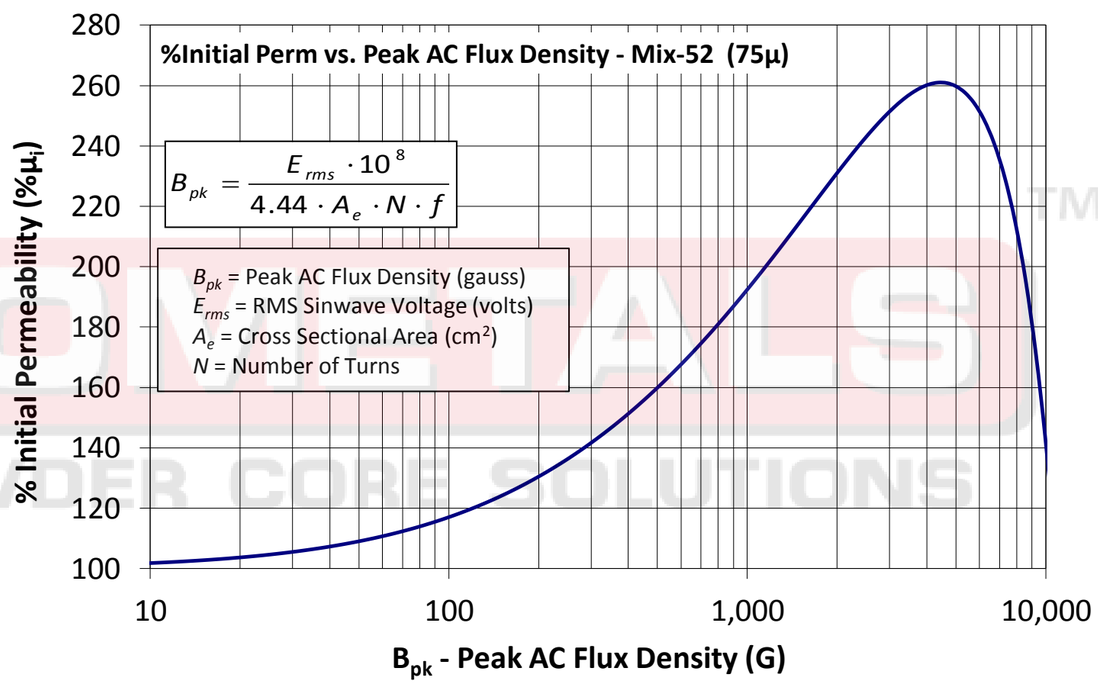
Revision 20190524 - Generated 2019-May-30

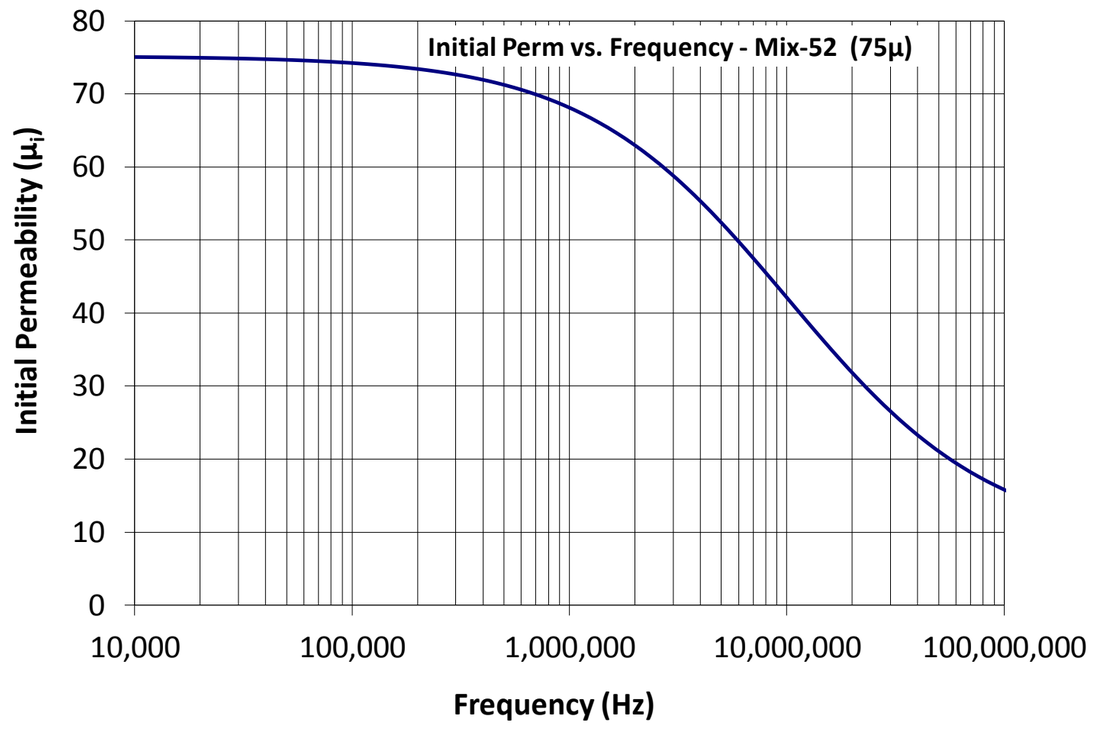


OD	(nom. - bare core)	46.74 mm	1.840 in
	(max. - after coating)	47.37 mm	1.865 in
ID	(nom. - bare core)	24.13 mm	0.950 in
	(min. - after coating)	23.50 mm	0.925 in
Ht	(nom. - bare core)	18.03 mm	0.710 in
	(max. - after coating)	18.80 mm	0.740 in
Mass	(approximate)	150 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.88 cm²	
	L_e - Eff. Mag. Path Length	11.2 cm	
	V_e - Eff. Core Volume	21.0 cm³	
	WA - Min. Eff. Window Area	4.34 cm²	
	sa - Surface Area	80.9 cm²	
	mlt - mean length per turn	7.32 cm	
Inductance	μ_i(reference)	75	
	A_L value (nominal)	159 nH/N²	
	Test Winding	N=100, #24 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.83 V	
	A_L tolerance	±10%	
Core Loss	Core Loss(mW/cm³)= $\frac{f}{\frac{a}{Bpk^{3}}+\frac{b}{Bpk^{2.3}}+\frac{c}{Bpk^{1.65}}}+d\cdot Bpk^{2}\cdot f^{2}$		
	where B_{pk} expressed in gauss, f expressed in hertz, and:		
	a=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14		
	Bpk	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	58 mW/cm³	
	Core Loss (maximum)	67 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=4.66E-06, c=1.84, d=0.00		
	H_{DC}	50 Oe	
	Percent Initial Perm(nom.)	61.6%	
	Percent Initial Perm(min.)	53.4%	
Coating/Pkg	Coating Type:	Green/Blue Epoxy Paint	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	140 Pcs/Box	









Winding Table	**Wire Size**	AWG	8	10	12	14	16	18	20	22	24	26	28
		mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315
	Single Layer	Turns	17	22	28	36	45	57	71	89	111	139	174
		Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.8 m	43.3 m	87.3 m	173.0 m	344.8 m	683.9 m	1.4	2.7
	Full Winding	Turns	23	35	54	84	130	202	312	483	747	1,157	1,790
		Rdc(Ω)	3.5 m	8.4 m	20.6 m	50.9 m	125.2 m	309.4 m	760.0 m	1.9	4.6	11.3	27.9

Micrometals Iron 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
www.Micrometals.com