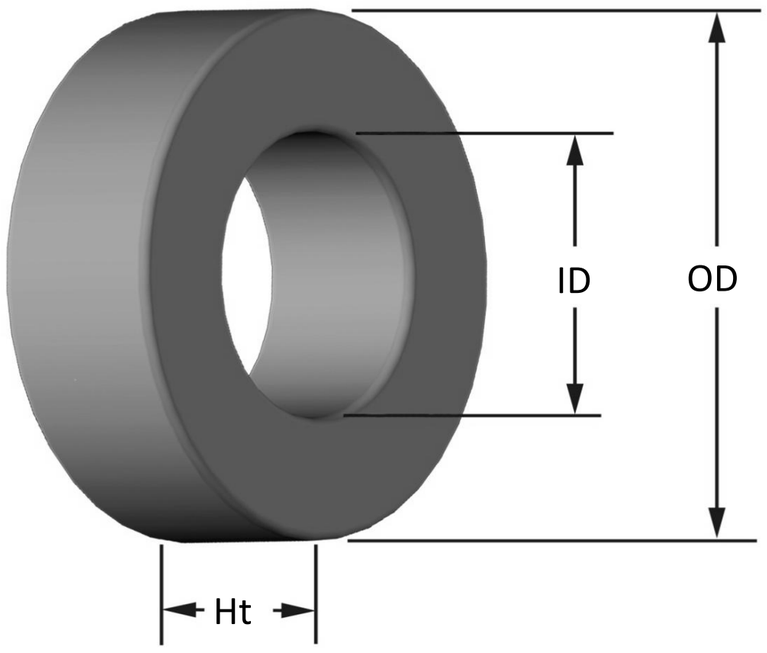
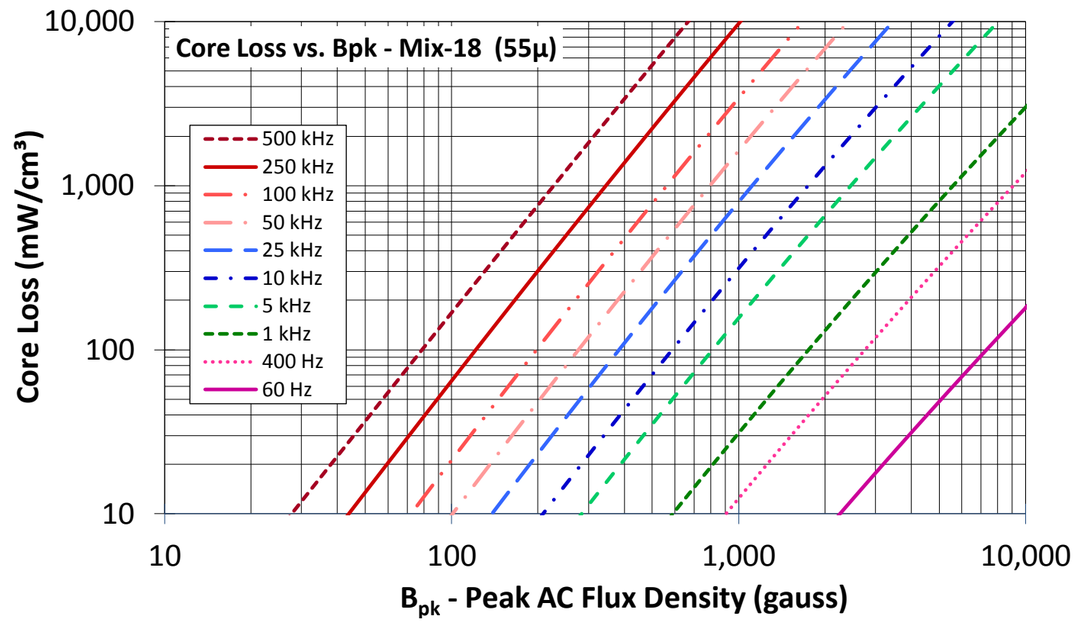
MICROMETALS™
POWDER CORE SOLUTIONS

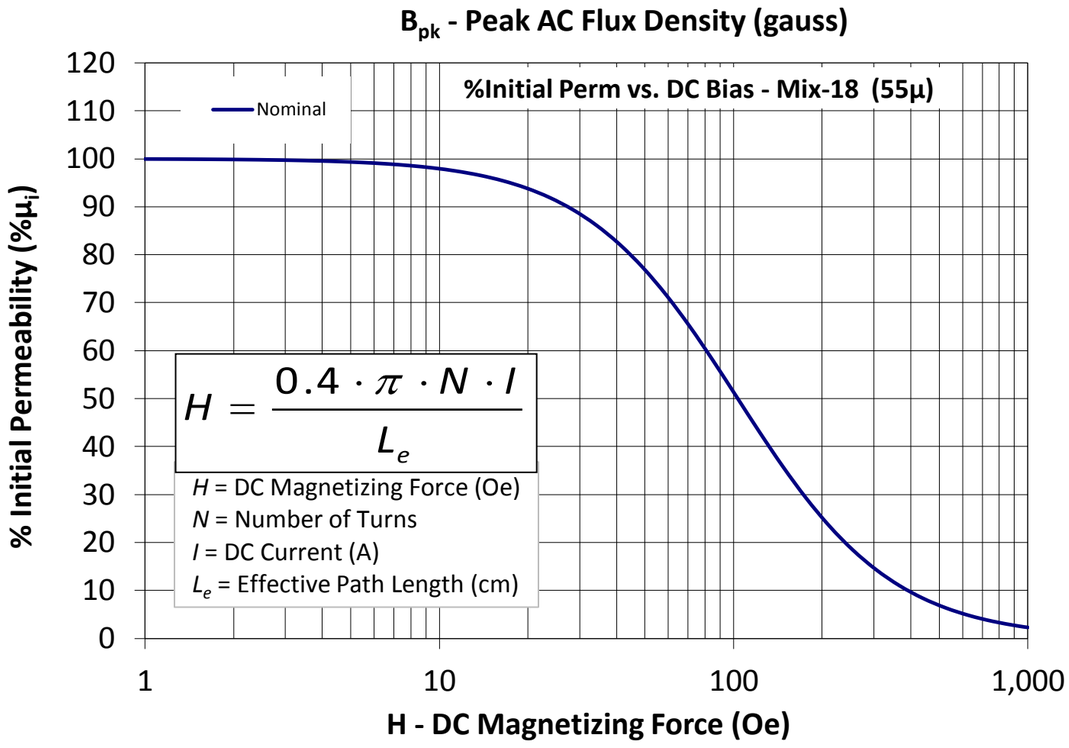
Part Number:	T50-18B

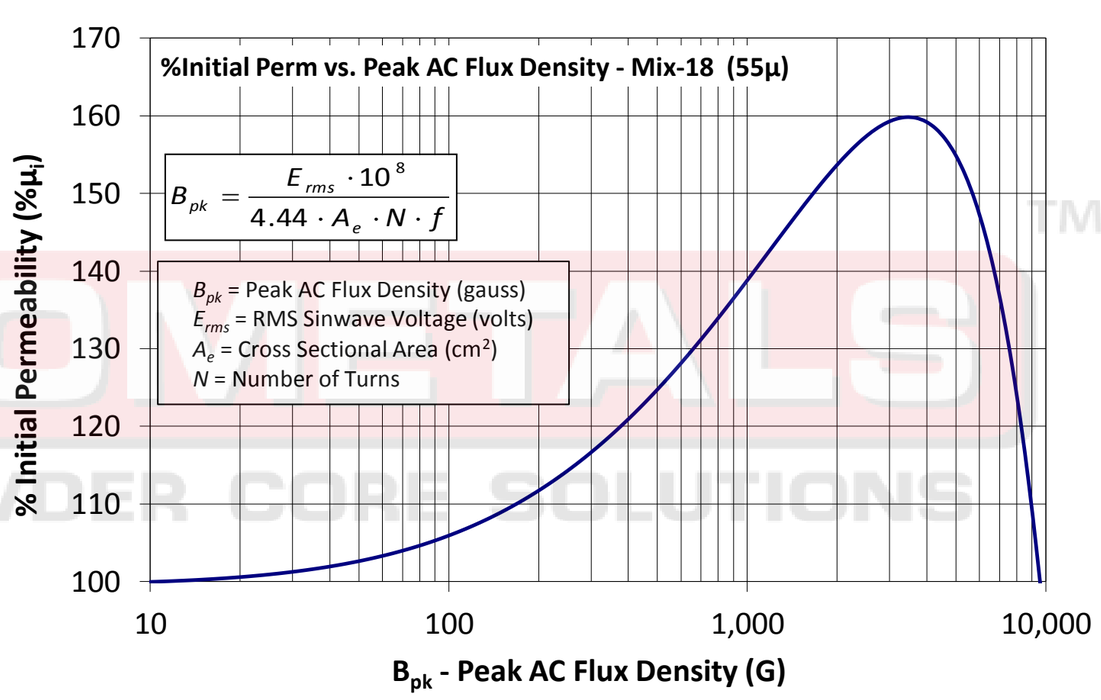
Revision 20190524 - Generated 2019-May-30

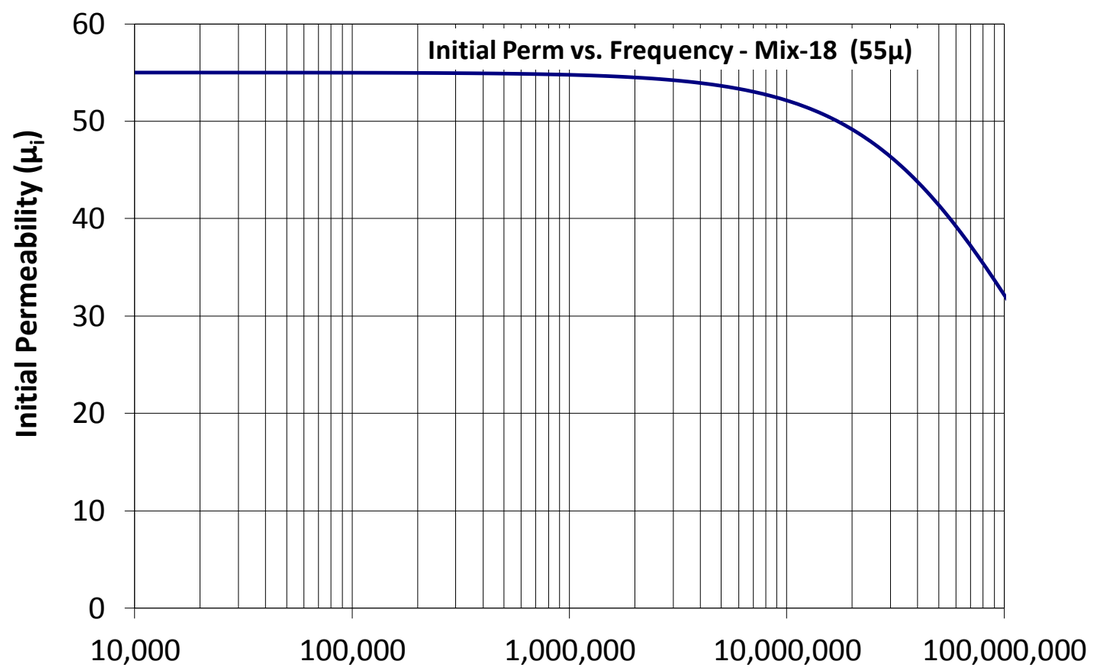


OD	(nom. - bare core)	12.70 mm	0.500 in
	(max. - after coating)	13.21 mm	0.520 in
ID	(nom. - bare core)	7.70 mm	0.303 in
	(min. - after coating)	7.19 mm	0.283 in
Ht	(nom. - bare core)	6.35 mm	0.250 in
	(max. - after coating)	6.86 mm	0.270 in
Mass	(approximate)	3.1 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.148 cm²	
	L_e - Eff. Mag. Path Length	3.19 cm	
	V_e - Eff. Core Volume	0.471 cm³	
	WA - Min. Eff. Window Area	0.406 cm²	
	sa - Surface Area	7.16 cm²	
	mlt - mean length per turn	2.33 cm	
Inductance	μ_i(reference)	55	
	A_L value (nominal)	32 nH/N²	
	Test Winding	N=100, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.066 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=8.00E+08, b=1.70E+08, c=9.00E+05, d=3.10E-14		
	Bpk	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	46 mW/cm³	
	Core Loss (maximum)	53 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=4.72E-06, c=1.65, d=0.00		
	H_{DC}	100 Oe	
	Percent Initial Perm(nom.)	51.4%	
	Percent Initial Perm(min.)	43.9%	
Coating/Pkg	Coating Type:	Green/Red Epoxy Paint	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	3 mA, 5 s	
	Package Quantity	5,000 Pcs/Box	









Winding Table	**Wire Size**	AWG	16	18	20	22	24	26	28	30	32	34	36
		mm	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125
	Single Layer	Turns	12	15	20	25	32	41	51	64	81	101	127
		Rdc(Ω)	3.7 m	7.3 m	15.5 m	30.9 m	62.8 m	128.0 m	253.3 m	505.4 m	1.0	2.0	4.0
	Full Winding	Turns	12	19	29	45	70	108	168	259	401	621	962
		Rdc(Ω)	3.7 m	9.3 m	22.5 m	55.6 m	137.4 m	337.2 m	834.3 m	2.0	5.0	12.4	30.6

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