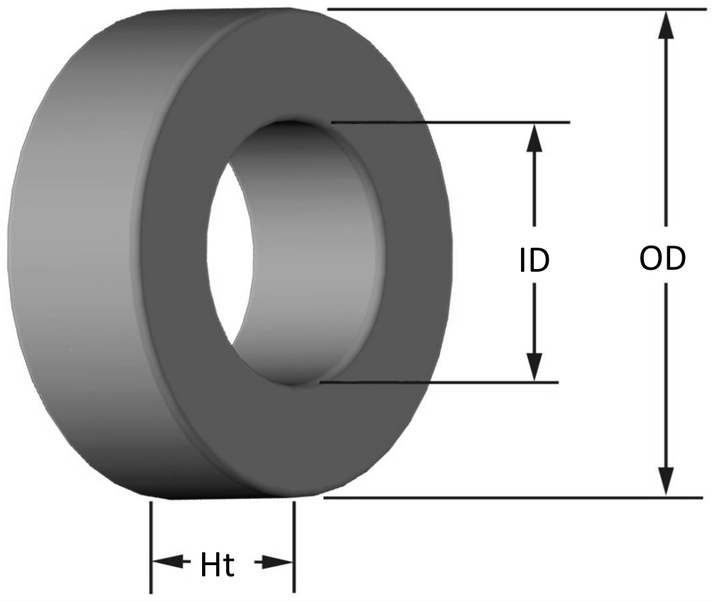
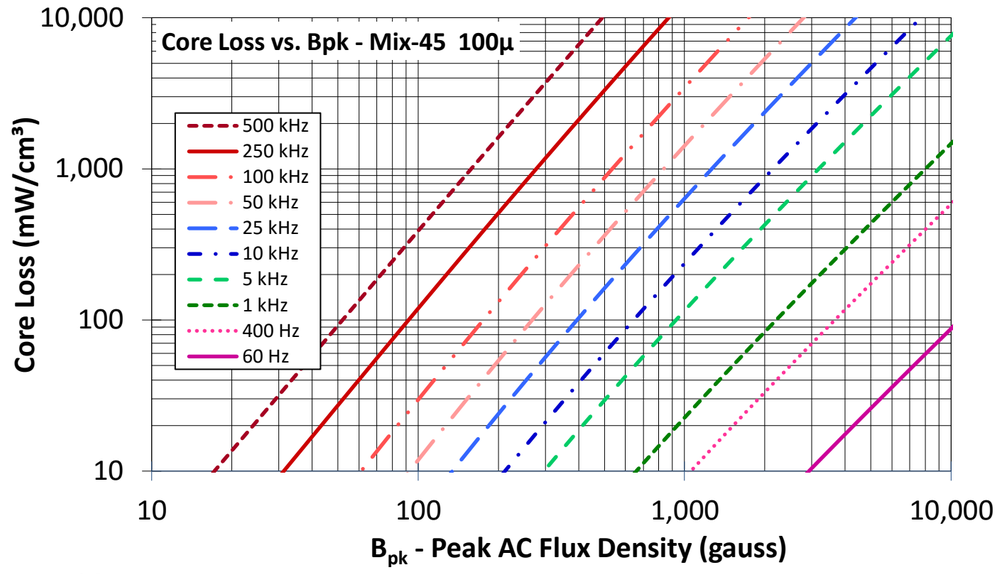
MICROMETALS
POWDER CORE SOLUTIONS

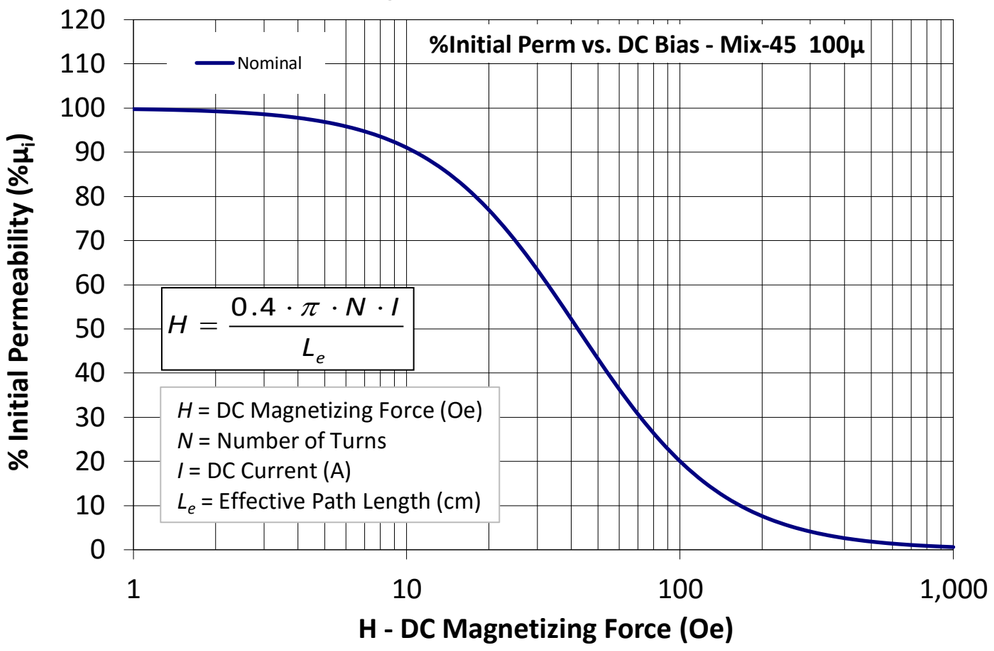
Part Number:	T20-45

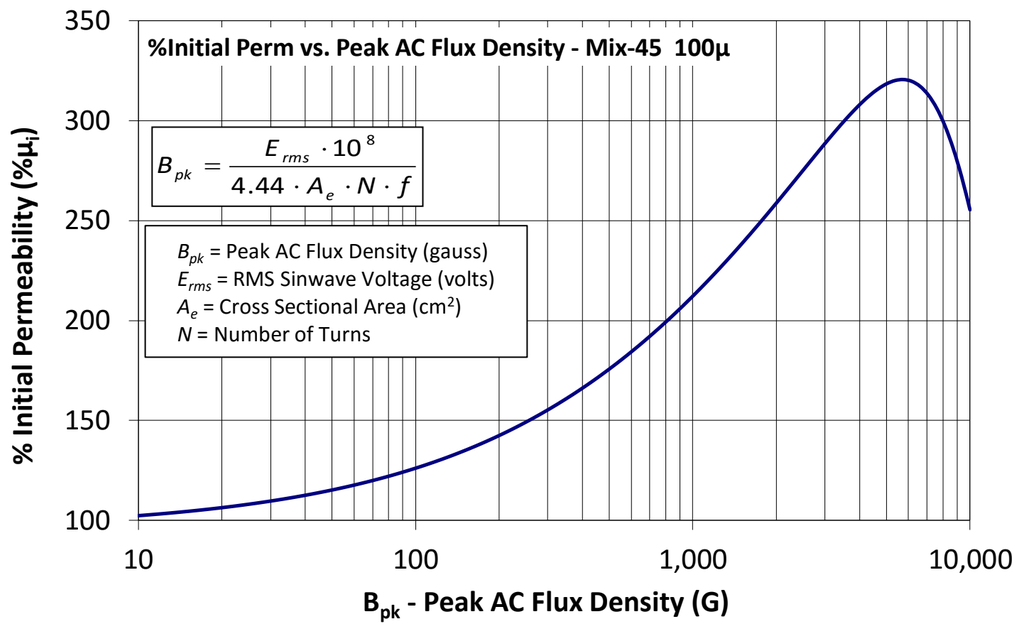
Revision 20160713 - Generated 2016-Aug-15

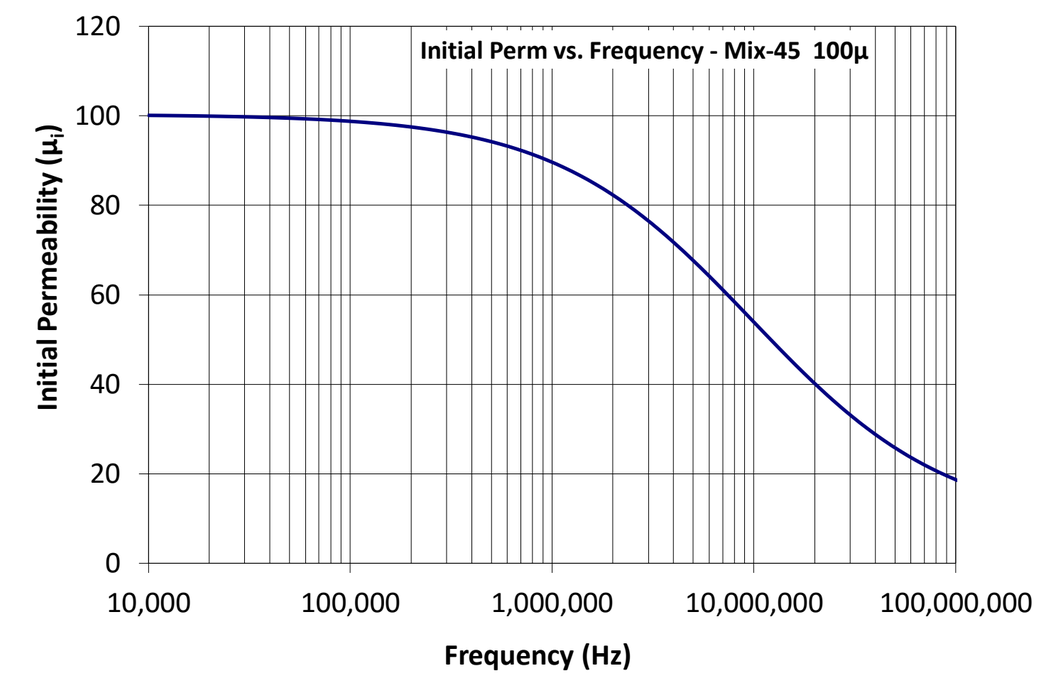


OD	(nom. - bare core)	5.08 mm	0.200 in
	(max. - after coating)	5.33 mm	0.210 in
ID	(nom. - bare core)	2.24 mm	0.088 in
	(min. - after coating)	1.98 mm	0.078 in
Ht	(nom. - bare core)	1.78 mm	0.070 in
	(max. - after coating)	2.03 mm	0.080 in
Mass	(approximate)	0.19 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.0230 cm²	
	L_e - Eff. Mag. Path Length	1.15 cm	
	V_e - Eff. Core Volume	0.0260 cm³	
	WA - Min. Eff. Window Area	0.0308 cm²	
	sa - Surface Area	0.962 cm²	
	mlt - mean length per turn	0.841 cm	
Inductance	μ_i(reference)	100	
	A_L value (nominal)	22.5 nH/N²	
	Test Winding	N=50, #36 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.005 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=1.20E+09, b=1.30E+08, c=2.40E+06, d=1.20E-13		
	Bpk	140 G	
	frequency	100 kHz	
	Core Loss (nominal)	61 mW/cm³	
	Core Loss (maximum)	71 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=2.44E-05, c=1.61, d=0.00		
	H_{DC}	50 Oe	
	Percent Initial Perm(nom.)	43.3%	
	Percent Initial Perm(min.)	36.3%	
Coating/Pkg	Coating Type:	Parylene C	
	Voltage Breakdown (min.)	500 Vrms, 60Hz	
	Limit	0.1 mA, 5 s	
	Package Quantity	100,000 Pcs/Box	









Winding Table	**Wire Size**	AWG	28	30	32	34	36	38	40	42	44	#N/A	#N/A
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	#N/A	#N/A
	Single Layer	Turns	12	16	20	26	33	42	52	66	83	#N/A	#N/A
		Rdc(Ω)	21.5 m	45.5 m	90.5 m	187.2 m	377.8 m	764.7 m	1.5	3.0	6.1	#N/A	#N/A
	Full Winding	Turns	13	20	30	47	73	113	175	271	419	#N/A	#N/A
		Rdc(Ω)	23.3 m	56.9 m	135.8 m	338.3 m	835.7 m	2.1	5.1	12.5	30.7	#N/A	#N/A

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