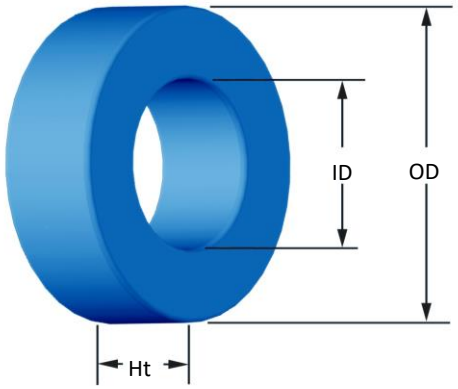
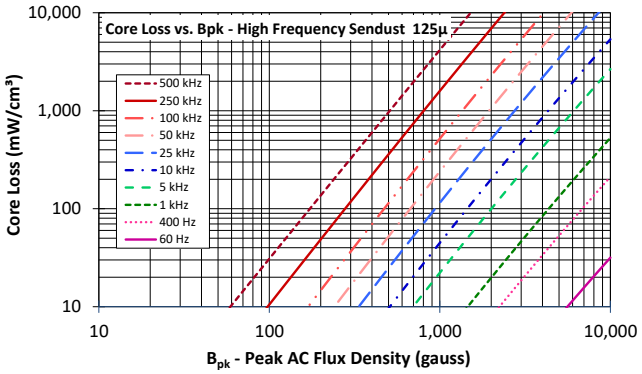
MICROMETALS
ALLOY POWDER CORES

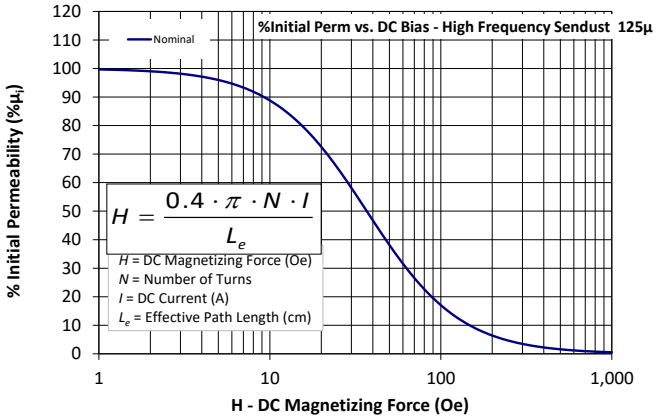
Part Number:	SH-038125-8

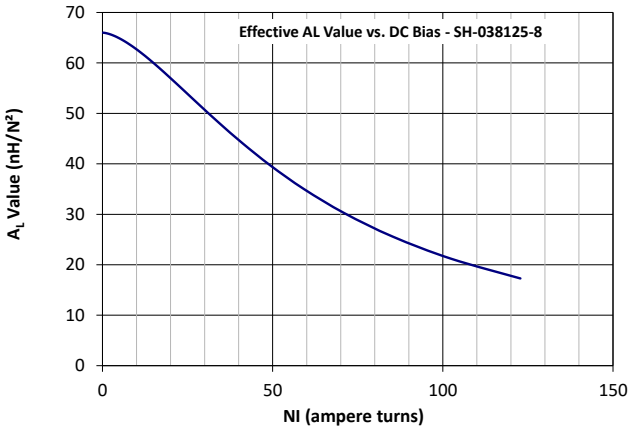
Revision 20170403 - Generated 2017-Apr-03

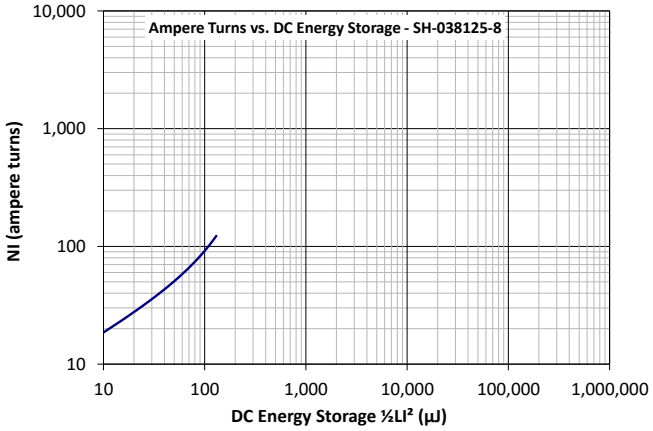


OD	(nom. - bare core)	9.65 mm	0.380 in
	(max. - after coating)	10.29 mm	0.405 in
ID	(nom. - bare core)	4.78 mm	0.188 in
	(min. - after coating)	4.27 mm	0.168 in
Ht	(nom. - bare core)	3.96 mm	0.156 in
	(max. - after coating)	4.57 mm	0.180 in
Mass	(approximate)	1.2 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.0945 cm²	
	L_e - Eff. Mag. Path Length	2.18 cm	
	V_e - Eff. Core Volume	0.206 cm³	
	WA - Min. Eff. Window Area	0.143 cm²	
	sa - Surface Area	3.88 cm²	
	mlt - mean length per turn	1.73 cm	
Inductance	μ_i(reference)	125	
	A_L value (nominal)	66 nH/N²	
	Test Winding	N=45, #30 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.019 V	
	AL tolerance	±12%	
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=7.985E+09, b=1.378E+09, c=4.041E+06, d=7.891E-15		
	B_{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	240 mW/cm³	
	Core Loss (maximum)	276 mW/cm³	
DC Saturation	$\%\mu_i \approx \frac{1}{a+b\cdot H^c}+d$		
	where H expressed in oersteds, and:		
	a=1.000E-02, b=3.265E-05, c=1.587, d=0.000		
	H_{DC}	40 Oe	
	Percent Initial Perm(nom.)	46.8%	
	Percent Initial Perm(min.)	39.7%	
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	10,800 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	11	14	18	23	29	37	47	59	74	93	116
		Rdc(Ω)	6.3 m	12.8 m	26.2 m	53.2 m	106.8 m	216.6 m	437.6 m	873.7 m	1.7	3.5	6.9
	Full Winding	Turns	10	16	25	38	59	92	142	219	339	525	813
		Rdc(Ω)	5.8 m	14.6 m	36.4 m	88.0 m	217.2 m	538.6 m	1.3	3.2	8.0	19.7	48.4

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