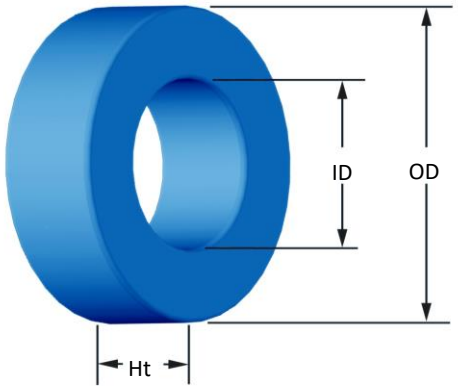
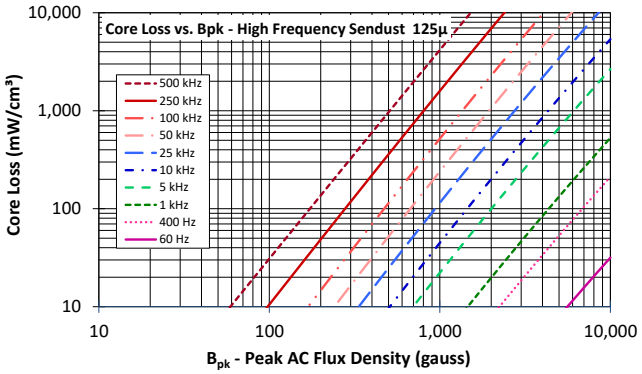
MICROMETALS
ALLOY POWDER CORES

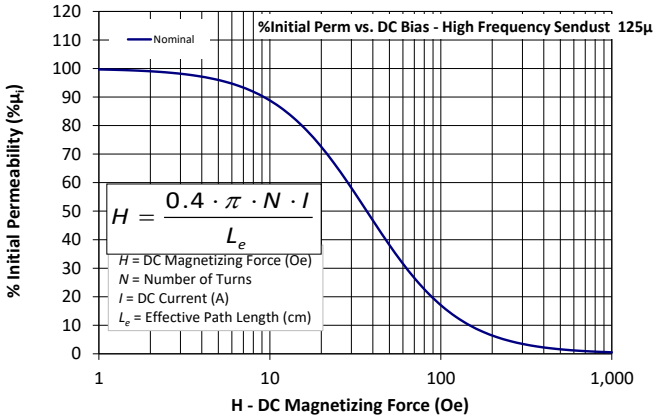
Part Number:	SH-301125-2

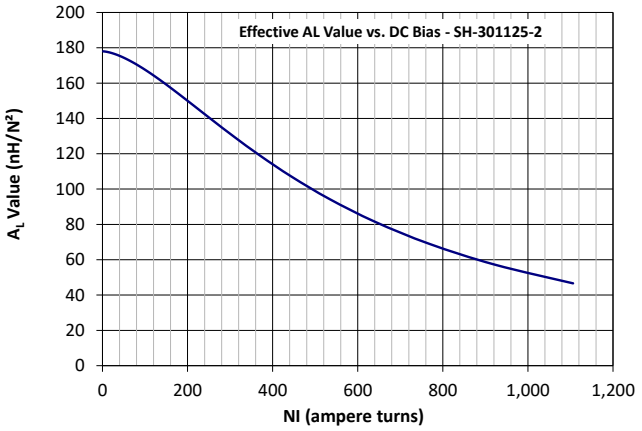
Revision 20170403 - Generated 2017-Apr-03

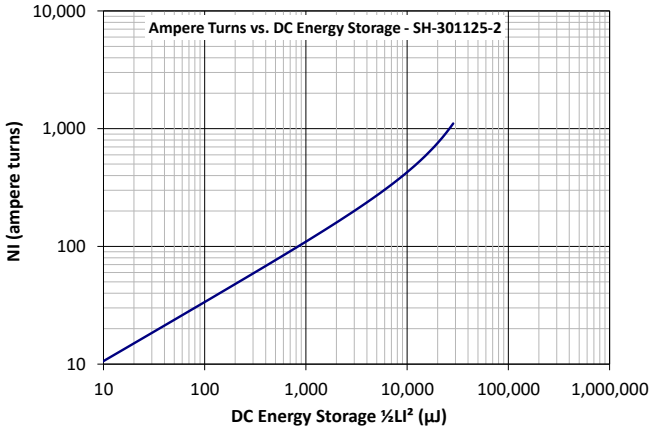


OD	(nom. - bare core)	77.80 mm	3.063 in
	(max. - after coating)	78.94 mm	3.108 in
ID	(nom. - bare core)	49.23 mm	1.938 in
	(min. - after coating)	47.96 mm	1.888 in
Ht	(nom. - bare core)	15.88 mm	0.625 in
	(max. - after coating)	17.15 mm	0.675 in
Mass	(approximate)	250 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	2.22 cm²	
	L_e - Eff. Mag. Path Length	19.612 cm	
	V_e - Eff. Core Volume	43.5 cm³	
	WA - Min. Eff. Window Area	18.1 cm²	
	sa - Surface Area	193 cm²	
	mlt - mean length per turn	8.93 cm	
Inductance	μ_i(reference)	125	
	A_L value (nominal)	178 nH/N²	
	Test Winding	N=120, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	1.2 V	
	AL tolerance	±8%	
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	$\%\mu_i \cdot \frac{1}{a+b\cdot H^c}+d$		
	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:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	36 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	38	48	60	75	95	118	148	185	230	287	358
		Rdc(Ω)	7.0 m	14.0 m	27.9 m	55.4 m	111.5 m	220.3 m	439.5 m	873.8 m	1.7	3.4	6.8
	Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
		Rdc(Ω)	17.4 m	42.6 m	105.4 m	259.1 m	637.6 m	1.6	3.9	9.5	23.4	57.6	141.7

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