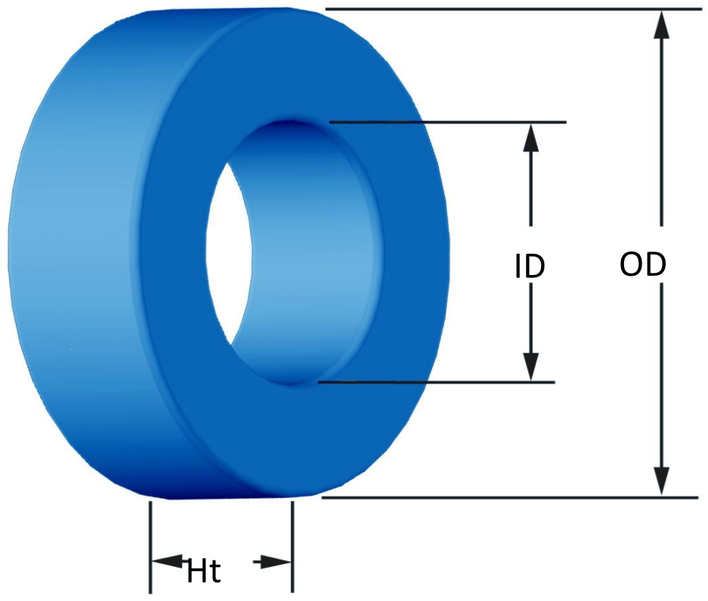
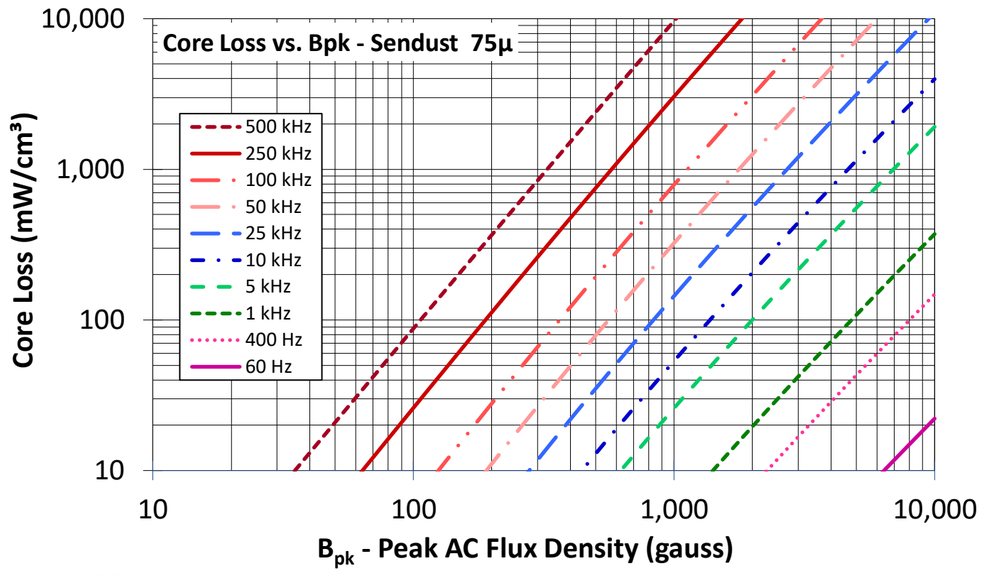
MICROMETALS
ALLOY POWDER CORES

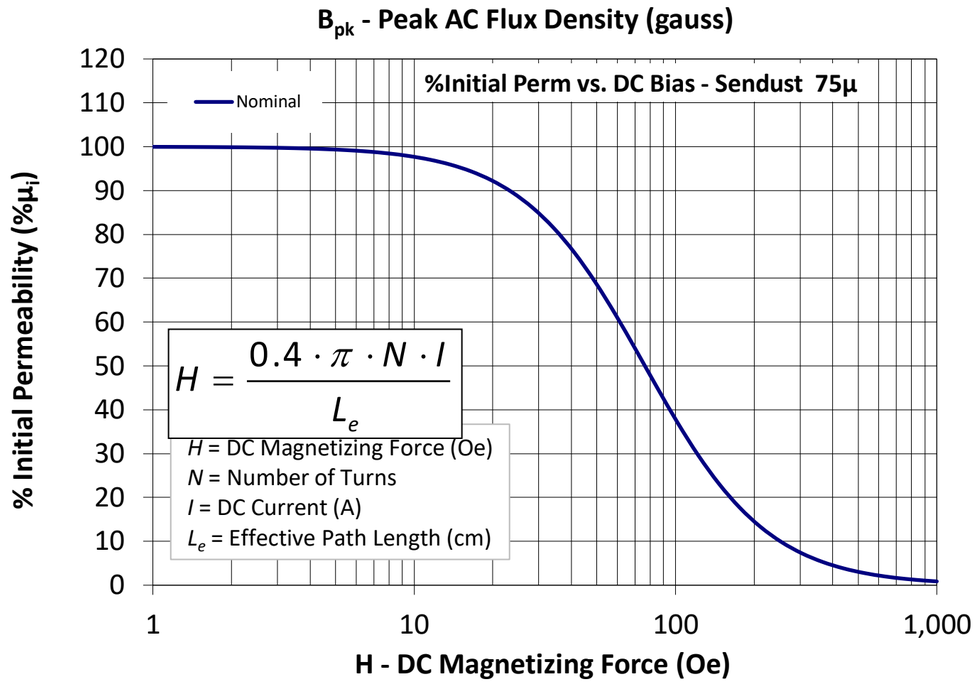
Part Number:	MS-250075-2

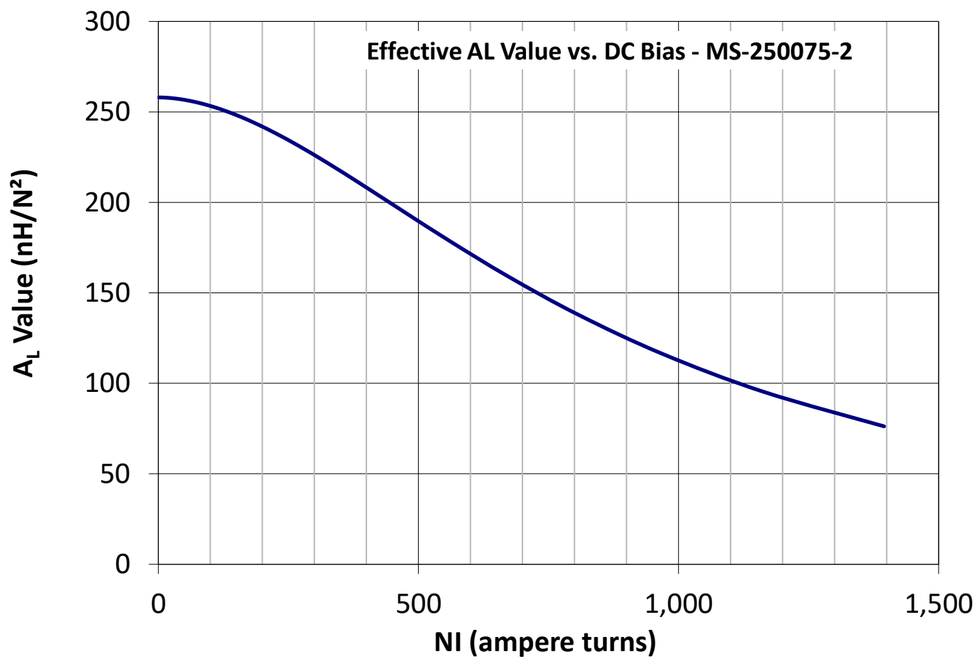
Revision 20161018 - Generated 2016-Oct-26

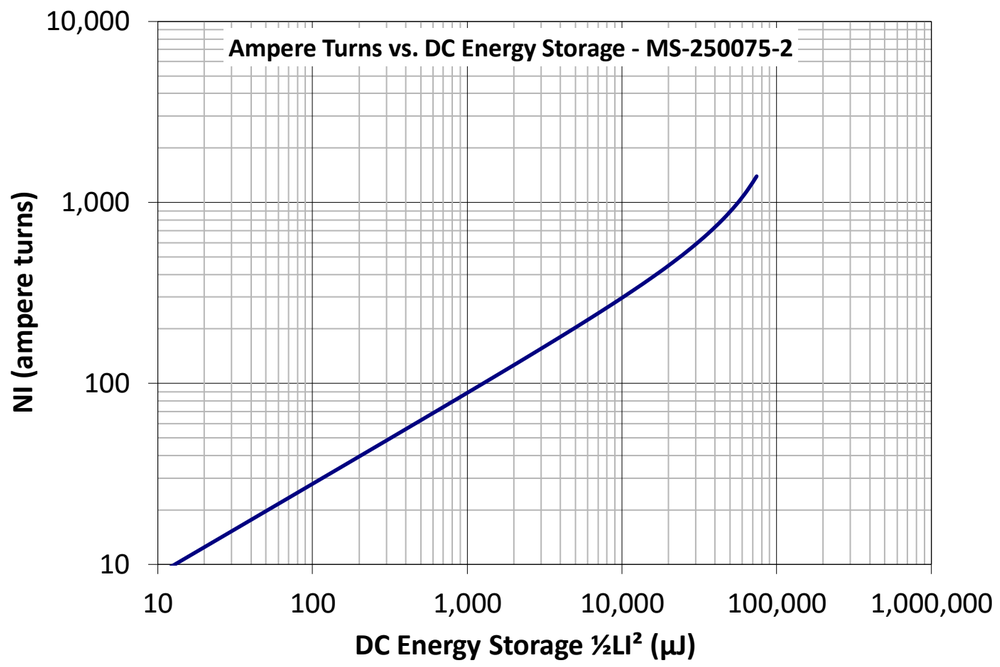


OD	(nom. - bare core)	63.50 mm	2.500 in
	(max. - after coating)	64.77 mm	2.550 in
ID	(nom. - bare core)	31.37 mm	1.235 in
	(min. - after coating)	30.48 mm	1.200 in
Ht	(nom. - bare core)	25.00 mm	0.984 in
	(max. - after coating)	25.90 mm	1.020 in
Mass	(approximate)	330 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	3.89 cm²	
	L_e - Eff. Mag. Path Length	14.314 cm	
	V_e - Eff. Core Volume	55.8 cm³	
	WA - Min. Eff. Window Area	7.30 cm²	
	sa - Surface Area	150 cm²	
	mlt - mean length per turn	10.1 cm	
Inductance	μ_i(reference)	75	
	A_L value (nominal)	258 nH/N²	
	Test Winding	N=100, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	1.7 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=7.890E+09, b=7.111E+08, c=8.980E+06, d=2.846E-14*		
	B_{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	323 mW/cm³	
	Core Loss (maximum)	372 mW/cm³	
DC Saturation	$\%\mu_i = \frac{1}{a + b \cdot H^{c}} + d$		
	where H expressed in oersteds, and: *a=1.000E-02, b=3.414E-06, c=1.841, d=0.000*		
	H_{DC}	80 Oe	
	Percent Initial Perm(nom.)	47.9%	
	Percent Initial Perm(min.)	39.6%	
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	27 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	23	29	37	47	59	74	93	116	145	182	227
		Rdc(Ω)	4.8 m	9.6 m	19.5 m	39.4 m	78.6 m	156.9 m	313.5 m	622.0 m	1.2	2.5	4.9
	Full Winding	Turns	38	59	91	142	219	339	525	813	1,258	1,947	3,013
		Rdc(Ω)	7.9 m	19.6 m	48.0 m	119.0 m	291.9 m	718.6 m	1.8	4.4	10.7	26.4	65.0