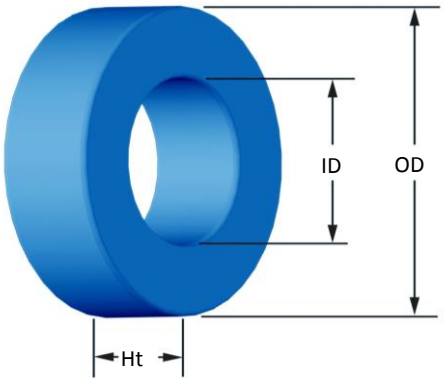
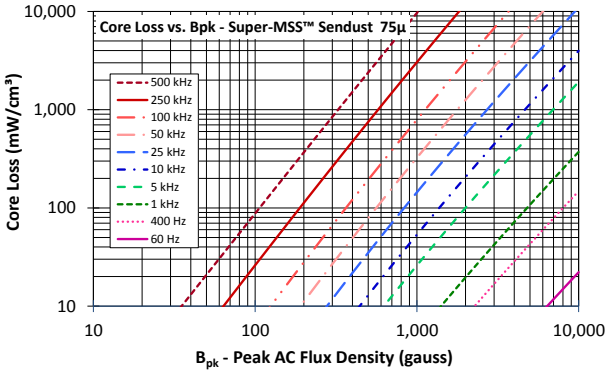
MICROMETALS
ARNOLD POWDER CORES

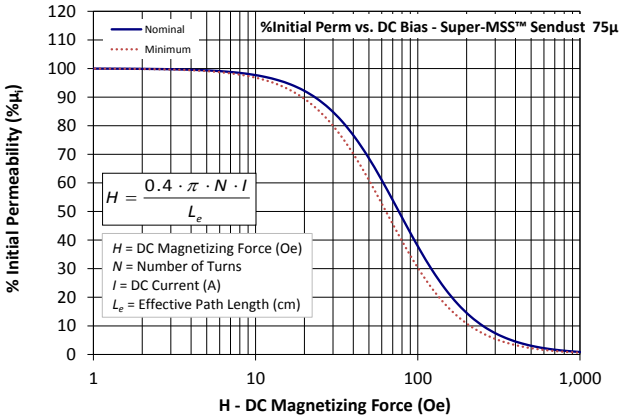
Part Number:	MS-184075-2

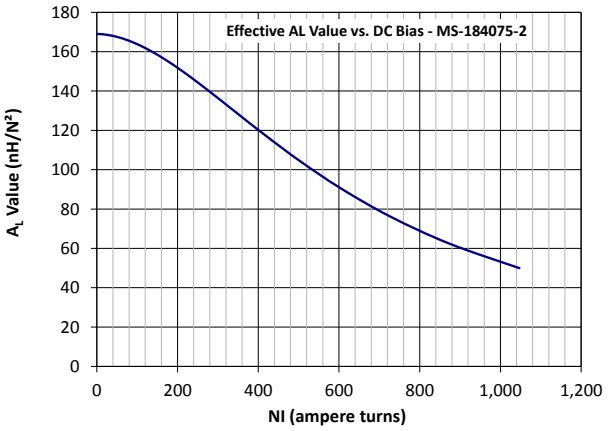
Revision 20140225 - Generated 12-Mar-2014

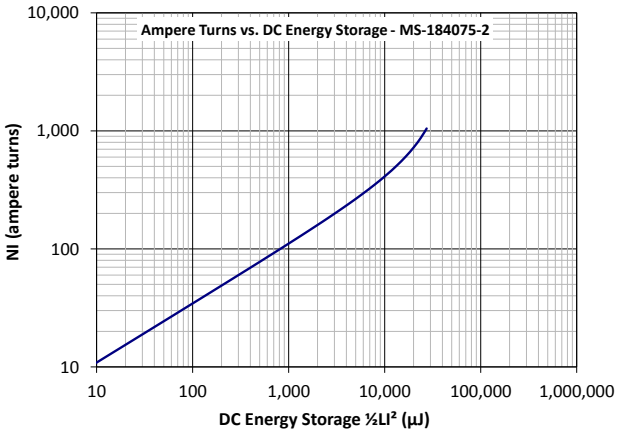


OD	(nom. - bare core)	46.74 mm	1.840 in
	(max. - after coating)	47.63 mm	1.875 in
ID	(nom. - bare core)	24.13 mm	0.950 in
	(min. - after coating)	23.32 mm	0.918 in
Ht	(nom. - bare core)	18.03 mm	0.710 in
	(max. - after coating)	18.92 mm	0.745 in
Mass	(approximate)	130 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.99 cm²	
	L_e - Eff. Mag. Path Length	10.743 cm	
	V_e - Eff. Core Volume	21.4 cm³	
	WA - Min. Eff. Window Area	4.27 cm²	
	sa - Surface Area	81.7 cm²	
	mlt - mean length per turn	7.38 cm	
Inductance	μ_i(reference)	75	
	A_L value (nominal)	169 nH/N²	
	Test Winding	N=70, #20 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.62 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	100 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	17	22	28	35	45	56	70	88	111	138	173
		Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.4 m	43.7 m	86.5 m	171.9 m	343.7 m	689.5 m	1.4	2.7
	Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
		Rdc(Ω)	3.3 m	8.4 m	20.7 m	50.7 m	124.3 m	307.3 m	753.9 m	1.9	4.6	11.3	27.7

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