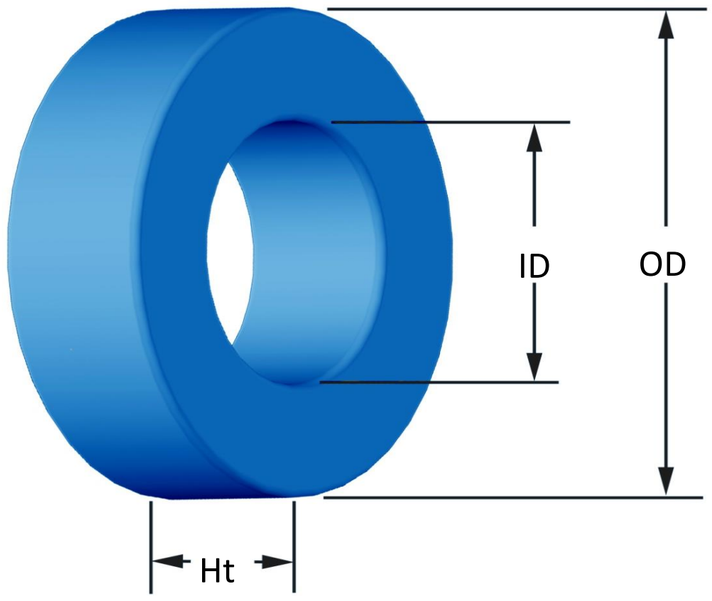
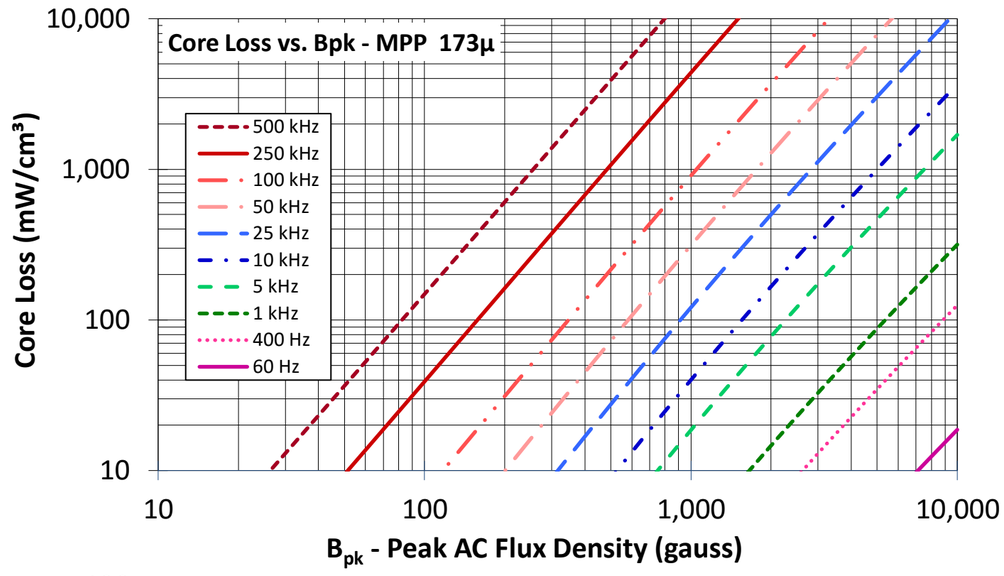
MICROMETALS
ALLOY POWDER CORES

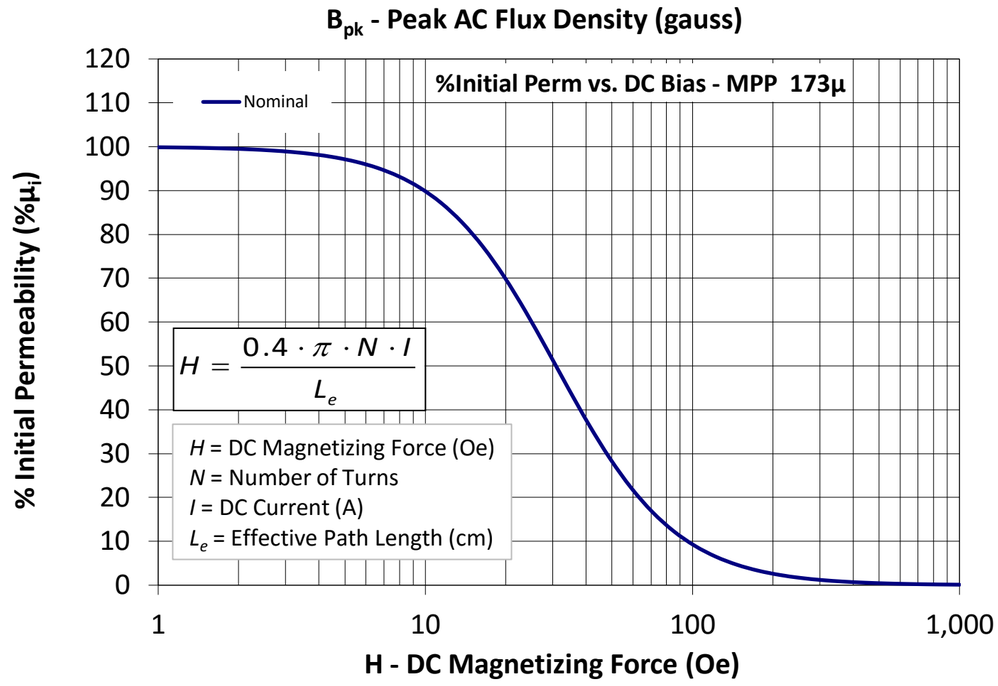
Part Number:	MP-031173-8

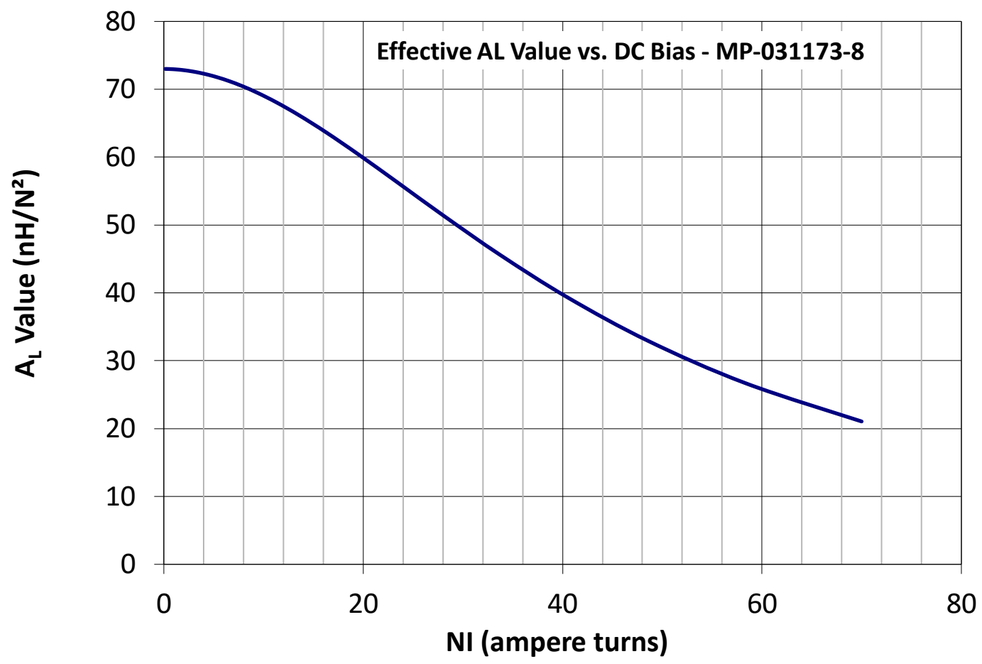
Revision 20160816 - Generated 2016-Aug-16

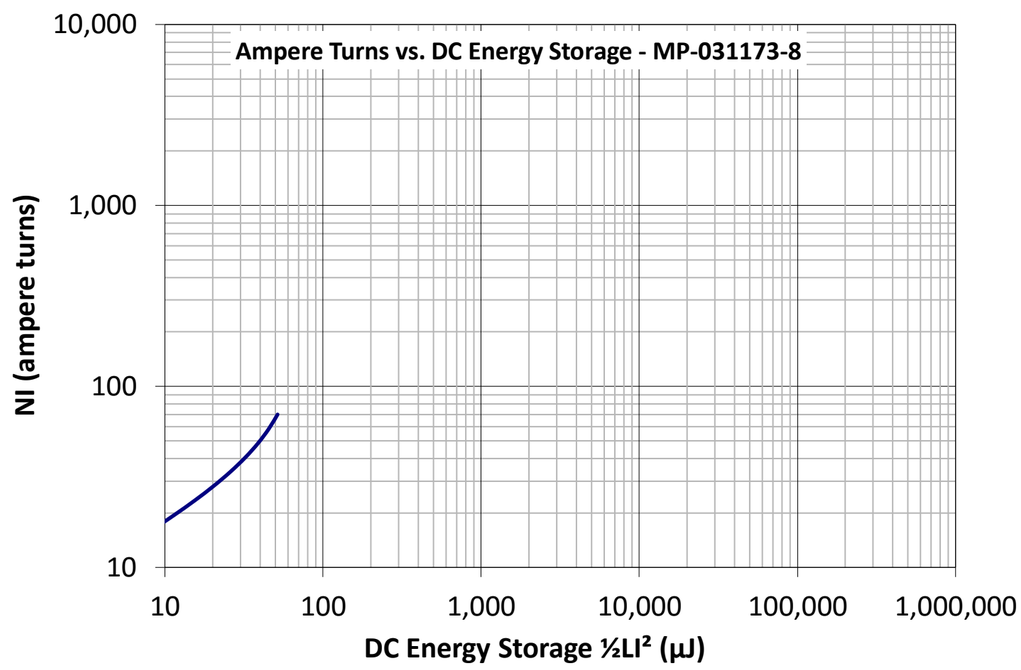


OD	(nom. - bare core)	7.87 mm	0.310 in
	(max. - after coating)	8.51 mm	0.335 in
ID	(nom. - bare core)	3.96 mm	0.156 in
	(min. - after coating)	3.43 mm	0.135 in
Ht	(nom. - bare core)	3.18 mm	0.125 in
	(max. - after coating)	3.81 mm	0.150 in
Mass	(approximate)	0.87 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.0615 cm²	
	L_e - Eff. Mag. Path Length	1.79 cm	
	V_e - Eff. Core Volume	0.110 cm³	
	WA - Min. Eff. Window Area	0.0924 cm²	
	sa - Surface Area	2.65 cm²	
	mlt - mean length per turn	1.44 cm	
Inductance	μ_i(reference)	173	
	A_L value (nominal)	73 nH/N²	
	Test Winding	N=45, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.012 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=3.167E+10, b=1.206E+09, c=9.656E+06, d=5.636E-14*		
	B_{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	312 mW/cm³	
	Core Loss (maximum)	359 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=1.313E-05, c=1.935, d=0.000*		
	H_{DC}	30 Oe	
	Percent Initial Perm(nom.)	51.4%	
	Percent Initial Perm(min.)	42.6%	
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	14,400 Pcs/Box	









Winding Table													
Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
	mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
Single Layer	Turns	11	14	18	23	29	37	47	59	74	93	116
	Rdc(Ω)	8.4 m	17.0 m	34.7 m	70.6 m	141.5 m	287.1 m	580.1 m	1.2	2.3	4.6	9.2
Full Winding	Turns	10	16	25	38	59	91	141	219	339	524	812
	Rdc(Ω)	7.6 m	19.4 m	48.2 m	116.6 m	287.9 m	706.2 m	1.7	4.3	10.6	26.0	64.1

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