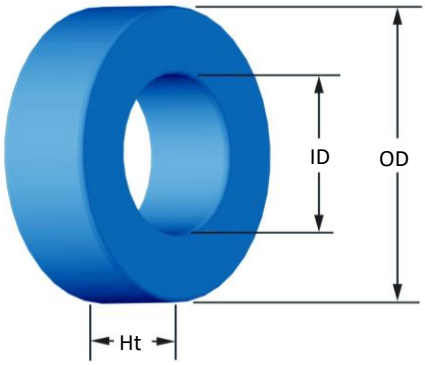
MICROMETALS™
POWDER CORE SOLUTIONS

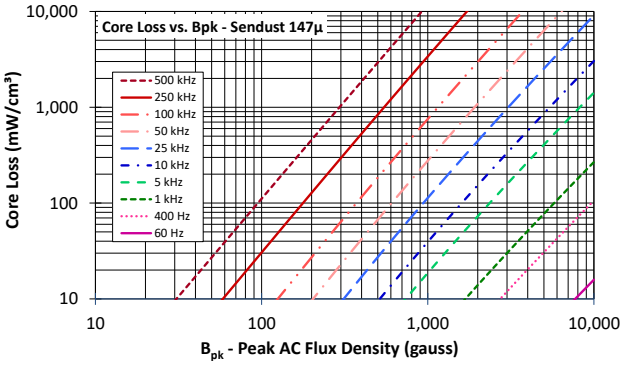
Part Number:	MS-015147-8

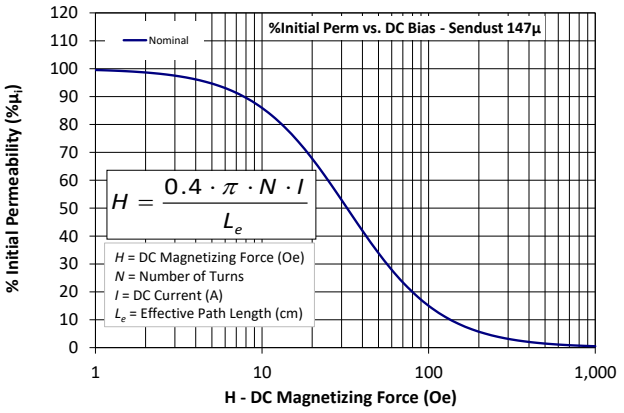
Revision 2022-Apr-28

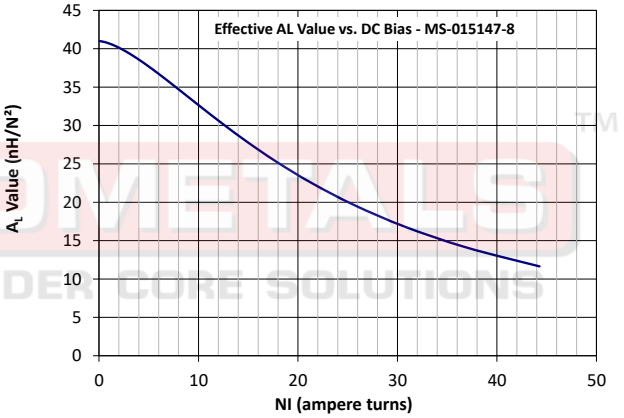


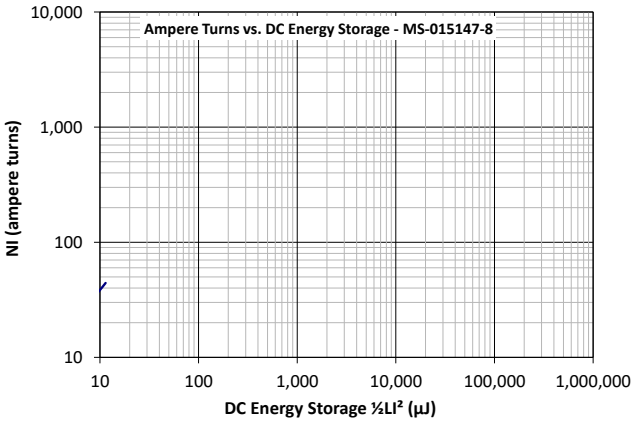
(If coated, Max./Min. includes coating)

OD	(nom. - bare core)	3.94 mm	0.155 in
	(max.)	4.14 mm	0.163 in
ID	(nom. - bare core)	2.21 mm	0.087 in
	(min.)	2.01 mm	0.079 in
HT	(nom. - bare core)	2.54 mm	0.100 in
	(max.)	2.74 mm	0.108 in
Mass	(approximate)	0.12 grams	
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.0211 cm²	
	L_e - Eff. Mag. Path Length	0.942 cm	
	V_e - Eff. Core Volume	0.0197 cm³	
	WA - Min. Eff. Window Area	0.0317 cm²	
	sa - Surface Area	0.776 cm²	
	mlt - mean length per turn	0.862 cm	
Inductance	μ_i(reference)	147	
	A_L value (nominal)	41 nH/N²	
	Test Winding	N=30, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.003 V	
	AL tolerance	±15%	
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=1.394E+10, b=1.034E+09, c=1.244E+07, d=4.007E-14		
	B_{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	276 mW/cm³	
	Core Loss (maximum)	318 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=4.732E-05, c=1.539, d=0.000		
	H_{DC}	40 Oe	
	Percent Initial Perm(nom.)	42.0%	
	Percent Initial Perm(min.)	35.3%	
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	27,000 Pcs/Box	









Winding Table	**Wire Size**	AWG	28	30	32	34	36	38	40	42	44	-	-
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
	Single Layer	Turns	12	16	21	26	33	42	53	67	84	-	-
		Rdc(Ω)	22.0 m	46.7 m	97.4 m	191.8 m	387.1 m	783.6 m	1.6	3.2	6.3	-	-
	Full Winding	Turns	13	20	31	49	75	116	180	279	431	-	-
		Rdc(Ω)	23.8 m	58.3 m	143.8 m	361.4 m	879.8 m	2.2	5.3	13.2	32.3	-	-

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