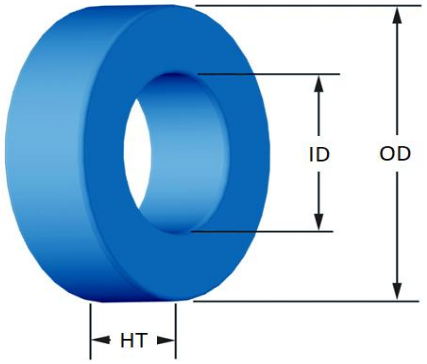
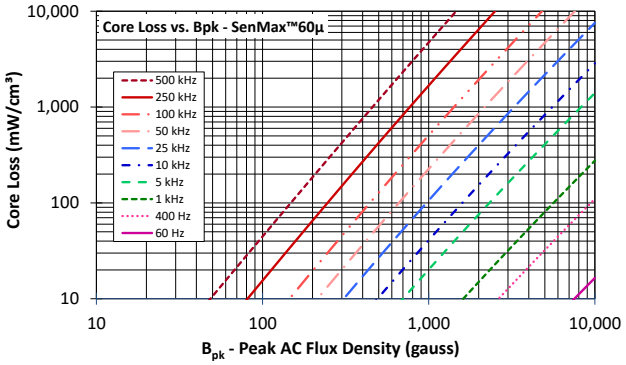
MICROMETALS™
POWDER CORE SOLUTIONS

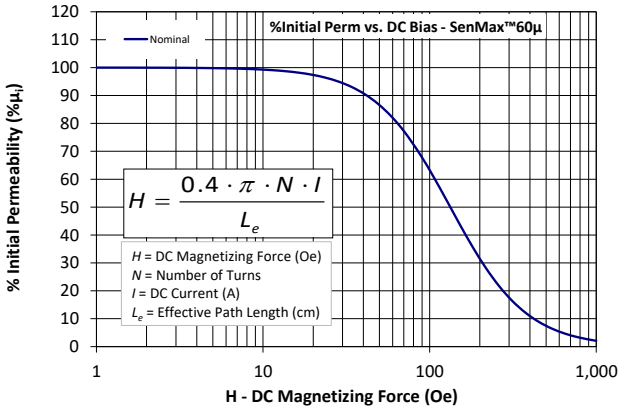
Part Number:	SM-157060-2

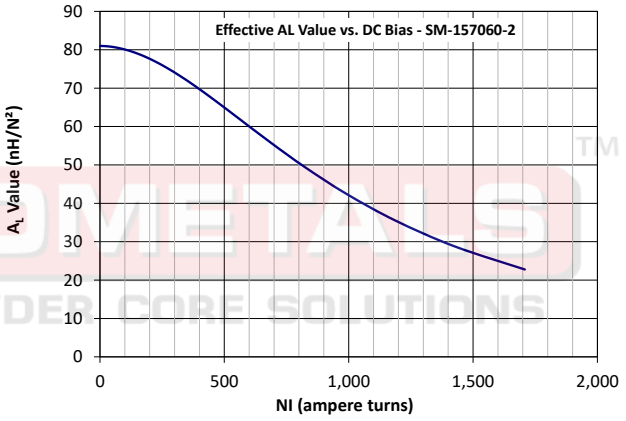
Revision: 2023-Dec-06

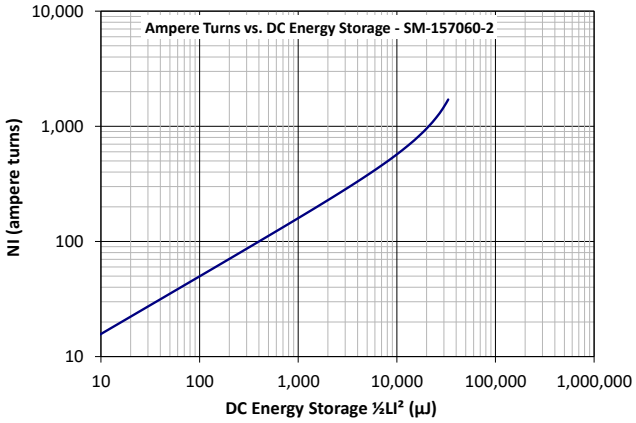


(If coated, Max./Min. includes coating)		mm	in
OD	(nom. - bare core)	39.88	1.570
	(max.)	40.69	1.602
ID	(nom. - bare core)	24.13	0.950
	(min.)	23.32	0.918
HT	(nom. - bare core)	14.48	0.570
	(max.)	15.37	0.605
Mass	(approximate)	70	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.07	cm^2
	L_e - Eff. Mag. Path Length	9.85	cm
	V_e - Eff. Core Volume	10.5	cm^3
	WA - Min. Eff. Window Area	4.27	cm^2
	sa - Surface Area	60.2	cm^2
	mlt - mean length per turn	5.98	cm
Inductance	μ_i(reference)	60	
	A_L value (nominal)	81	nH/N^2
	Test Winding	70 Turns	AWG# 20
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.33	V
	AL tolerance	±8%	
Core Loss	Core Loss$(mW/cm^3) = \frac{f}{\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}}} + d \cdot Bpk^2 \cdot f^2$		
	where B_{pk} expressed in gauss, f expressed in hertz, and:		
	a=1.000E+06, b=9.109E+08, c=1.221E+07, d=1.096E-14		
	B_{pk}	1000	G
	frequency	50 k	Hz
	Core Loss (nominal)	226	mW/cm^3
	Core Loss (maximum)	260	mW/cm^3
DC Saturation	$\%\mu_i \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	a=1.000E-02, b=9.058E-07, c=1.903, d=0.000		
	H_{DC}	100	Oe
	Percent Initial Perm(nom.)	63.3	%
	Percent Initial Perm(min.)	54.9	%
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	180 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)	2.1 m	4.3 m	8.7 m	17.3 m	35.4 m	70.0 m	139.2 m	278.3 m	558.3 m	1.1	2.2
	Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
		Rdc(Ω)	2.7 m	6.8 m	16.8 m	41.0 m	100.6 m	248.8 m	610.5 m	1.5	3.7	9.1	22.4