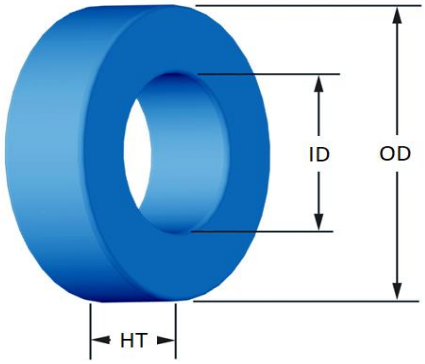
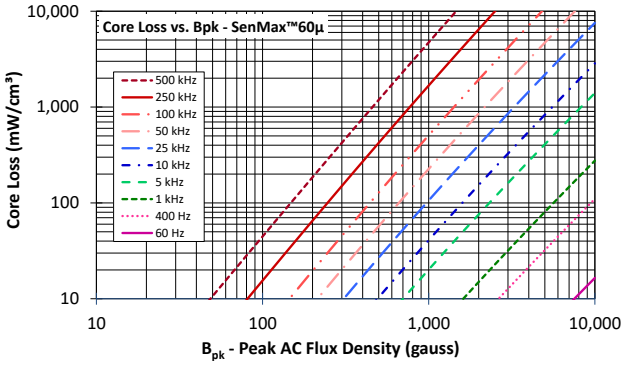
MICROMETALS™
POWDER CORE SOLUTIONS

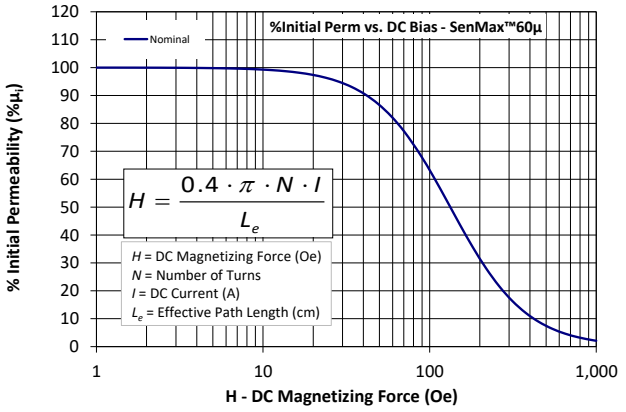
Part Number:	SM-292060-2

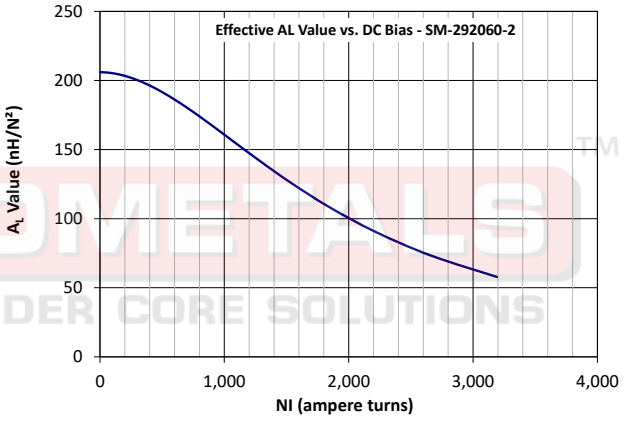
Revision: 2023-Dec-18

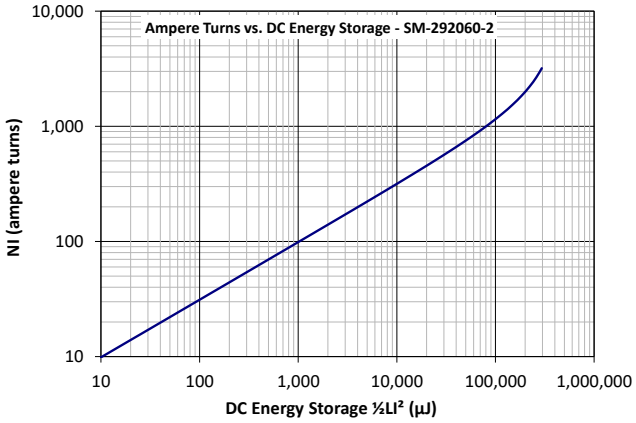


(If coated, Max./Min. includes coating)		mm	in
OD	(nom. - bare core)	74.10	2.917
	(max.)	75.20	2.961
ID	(nom. - bare core)	45.30	1.783
	(min.)	44.10	1.736
HT	(nom. - bare core)	35.00	1.378
	(max.)	36.20	1.425
Mass	(approximate)	600	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	4.94	cm^2
	L_e - Eff. Mag. Path Length	18.4	cm
	V_e - Eff. Core Volume	90.9	cm^3
	WA - Min. Eff. Window Area	15.3	cm^2
	sa - Surface Area	228	cm^2
	mlt - mean length per turn	12.6	cm
Inductance	μ_i(reference)	60	
	A_L value (nominal)	206	nH/N^2
	Test Winding	100 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	2.2	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	12 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	35	44	55	69	87	109	136	170	212	264	329
		Rdc(Ω)	9.0 m	18.1 m	35.9 m	71.7 m	143.7 m	286.3 m	568.1 m	1.1	2.2	4.4	8.8
	Full Winding	Turns	80	124	192	296	459	710	1,099	1,701	2,633	4,075	6,307
		Rdc(Ω)	20.7 m	50.9 m	125.4 m	307.4 m	758.0 m	1.9	4.6	11.3	27.8	68.5	168.5