

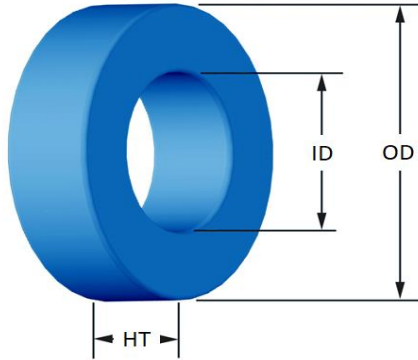


Part Number:

MS-200090-2

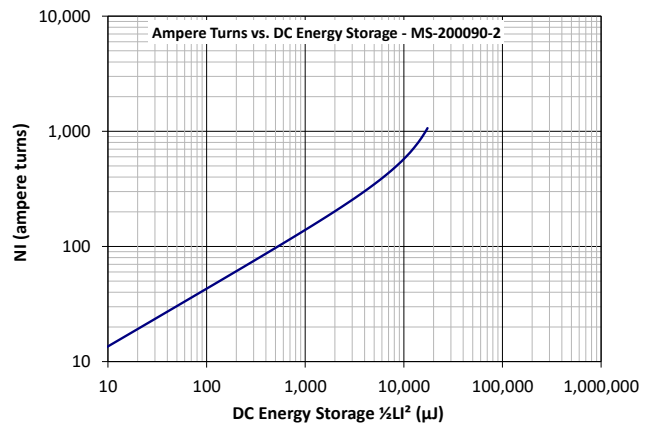
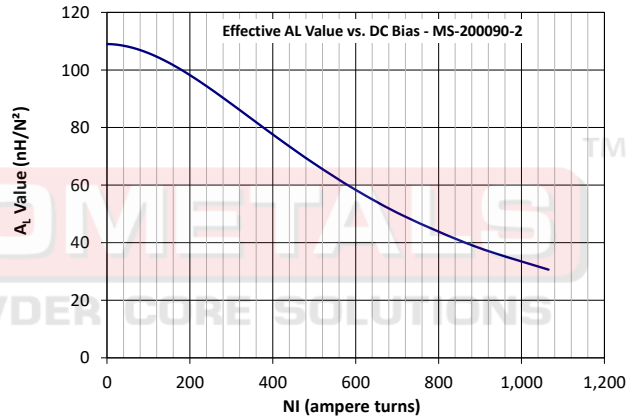
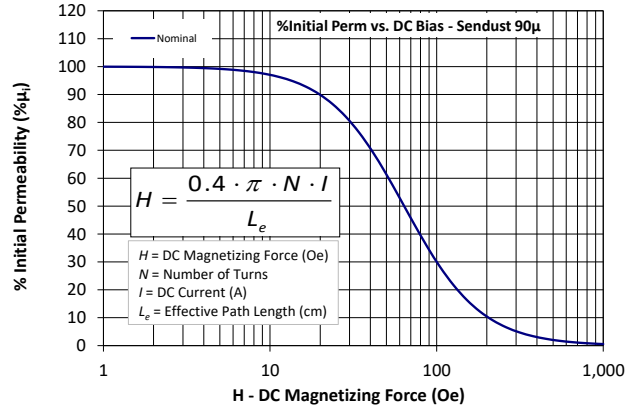
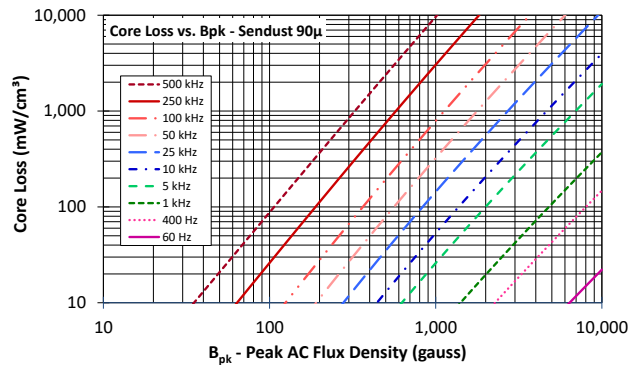
Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	50.80	2.000
	(max.)	51.69	2.035
ID	(nom. - bare core)	31.75	1.250
	(min.)	30.94	1.218
HT	(nom. - bare core)	13.46	0.530
	(max.)	14.35	0.565
Mass	(approximate)	94	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.25	cm ²
	L_e - Eff. Mag. Path Length	12.733	cm
	V_e - Eff. Core Volume	15.9	cm ³
	W_A - Min. Eff. Window Area	7.52	cm ²
	s_a - Surface Area	88.2	cm ²
Inductance	m_l - mean length per turn	6.49	cm
	μ_i (reference)	90	
	A_L value (nominal)	109	nH/N ²
	Test Winding	70 Turns	AWG# 18
	Frequency	10k	Hz
Core Loss	Voltage on Agilent 4284A	0.39	V
	AL tolerance	±8%	
	$\text{Core Loss (mW/cm}^3\text{)} = \frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$		
	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
DC Saturation	frequency	50 k	Hz
	Core Loss (nominal)	323	mW/cm ³
	Core Loss (maximum)	372	mW/cm ³
	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: $a=1.000E-02$, $b=3.994E-06$, $c=1.883$, $d=0.000$		
Coating/Pkg	H_{dc}	50	Oe
	Percent Initial Perm(nom.)	61.3	%
	Percent Initial Perm(min.)	52.9	%
	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000	Vrms
Winding Table	Limit	0.1 mA, 5 s	
	Package Quantity	60 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	23	30	38	48	60	75	94	118	148	184	230
		Rdc(Ω)	3.1 m	6.4 m	12.8 m	25.8 m	51.2 m	101.9 m	203.0 m	405.4 m	808.6 m	1.6	3.2
	Full Winding	Turns	39	61	94	146	226	350	541	837	1,296	2,006	3,104
		Rdc(Ω)	5.2 m	12.9 m	31.7 m	78.4 m	193.0 m	475.3 m	1.2	2.9	7.1	17.4	42.9