



**Part Number: MS-107090-2**  
Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	26.92 mm 27.69 mm	1.060 in 1.090 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	14.73 mm 14.10 mm	0.580 in 0.555 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	8.64 mm 9.45 mm	0.340 in 0.372 in
<b>Mass</b>	(approximate)	19 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.497 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	6.35 cm	
	V <sub>e</sub> - Eff. Core Volume	3.16 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	1.56 cm <sup>2</sup>	
	sa - Surface Area	26.3 cm <sup>2</sup>	
	mlt - mean length per turn	3.95 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	90	
	A <sub>L</sub> value (nominal)	88.4 nH/N <sup>2</sup>	
	Test Winding	N=80, #26 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.18 V	
	AL tolerance	±8%	
<b>Core Loss</b>	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B <sub>pk</sub> 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 <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	323 mW/cm <sup>3</sup>	
Core Loss (maximum)	372 mW/cm <sup>3</sup>		
<b>DC Saturation</b>	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.000E-02, b=3.994E-06, c=1.883, d=0.000		
	H <sub>DC</sub>	50 Oe	
	Percent Initial Perm.(nom.)	61.3%	
Percent Initial Perm.(min.)	52.9%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	900 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
	<b>Single Layer</b>	Turns	12	16	20	26	33	41	52	66	82	103	129
		Rdc(Ω)	1.6 m	3.3 m	6.5 m	13.5 m	27.3 m	53.9 m	108.8 m	219.6 m	433.9 m	866.9 m	1.7
<b>Full Winding</b>	Turns	13	20	30	47	73	112	174	269	417	645	998	
	Rdc(Ω)	1.7 m	4.1 m	9.8 m	24.4 m	60.4 m	147.3 m	364.0 m	895.1 m	2.2	5.4	13.4	

