



**Part Number:** **MS-225125-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	57.15 mm 58.04 mm	2.250 in 2.285 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	35.56 mm 34.75 mm	1.400 in 1.368 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	13.97 mm 14.86 mm	0.550 in 0.585 in
<b>Mass</b>	(approximate)	120 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	1.44 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	14.296 cm	
	V <sub>e</sub> - Eff. Core Volume	20.7 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	9.48 cm <sup>2</sup>	
	sa - Surface Area	109 cm <sup>2</sup>	
	mlt - mean length per turn	7.04 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	125	
	A <sub>L</sub> value (nominal)	156 nH/N <sup>2</sup>	
	Test Winding	N=80, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.51 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=1.394E+10, b=1.034E+09, c=1.244E+07, d=4.007E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	276 mW/cm <sup>3</sup>	
Core Loss (maximum)	318 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=7.884E-06, c=1.883, d=0.000		
	H <sub>DC</sub>	40 Oe	
	Percent Initial Perm (nom.)	55.0%	
Percent Initial Perm (min.)	46.4%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	80 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	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
	<b>Single Layer</b>	Turns	27	34	43	54	68	85	106	133	166	207	259
		Rdc(Ω)	3.9 m	7.8 m	15.7 m	31.4 m	63.0 m	125.2 m	248.2 m	495.3 m	983.2 m	1.9	3.9
<b>Full Winding</b>	Turns	50	77	119	184	285	441	682	1,056	1,635	2,530	3,916	
	Rdc(Ω)	7.2 m	17.7 m	43.6 m	107.1 m	263.9 m	649.4 m	1.6	3.9	9.7	23.8	58.7	

