



**Part Number:** **MS-068090-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	17.27 mm 18.03 mm	0.680 in 0.710 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	9.65 mm 9.02 mm	0.380 in 0.355 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	6.35 mm 7.11 mm	0.250 in 0.280 in
<b>Mass</b>	(approximate)	5.7 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.232 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	4.14 cm	
	V <sub>e</sub> - Eff. Core Volume	0.961 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	0.639 cm <sup>2</sup>	
	sa - Surface Area	11.7 cm <sup>2</sup>	
	mlt - mean length per turn	2.77 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	90	
	A <sub>L</sub> value (nominal)	64 nH/N <sup>2</sup>	
	Test Winding	N=70, #28 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.072 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	2,340 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	14	16	18	20	22	24	26	28	30	32	34
		mm	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160
	<b>Single Layer</b>	Turns	12	15	20	26	32	41	52	65	82	102	128
		Rdc(Ω)	2.8 m	5.5 m	11.6 m	24.0 m	47.0 m	95.7 m	193.1 m	383.8 m	770.0 m	1.5	3.0
<b>Full Winding</b>	Turns	12	19	30	46	71	110	170	264	408	632	978	
	Rdc(Ω)	2.8 m	6.9 m	17.4 m	42.5 m	104.2 m	256.8 m	631.1 m	1.6	3.8	9.4	23.2	

