



**Part Number:** **MS-520014-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core)	132.54 mm	5.218 in										
	(max. - after coating)	134.21 mm	5.284 in										
<b>ID</b>	(nom. - bare core)	78.59 mm	3.094 in										
	(min. - after coating)	77.04 mm	3.033 in										
<b>Ht</b>	(nom. - bare core)	20.32 mm	0.800 in										
	(max. - after coating)	21.72 mm	0.855 in										
<b>Mass</b>	(approximate)	850 grams											
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	5.35 cm <sup>2</sup>											
	L <sub>e</sub> - Eff. Mag. Path Length	32.429 cm											
	V <sub>e</sub> - Eff. Core Volume	173 cm <sup>3</sup>											
	WA - Min. Eff. Window Area	46.6 cm <sup>2</sup>											
	sa - Surface Area	515 cm <sup>2</sup>											
	mlt - mean length per turn	13.9 cm											
	<b>Inductance</b>	μ <sub>i</sub> (reference)	14										
<b>Core Loss</b>	A <sub>L</sub> value (nominal)	26 nH/N <sup>2</sup>											
	Test Winding	N=200, #18 AWG											
	Frequency	10 kHz											
	Voltage on Agilent 4284A	4.7 V											
	AL tolerance	±8%											
	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$ <p>where B<sub>pk</sub> expressed in gauss, f expressed in hertz, and:  a=1.000E+09, b=4.213E+08, c=1.032E+07, d=2.297E-14</p>												
<b>DC Saturation</b>	B <sub>pk</sub>	300 G											
	frequency	100 kHz											
	Core Loss (nominal)	79 mW/cm <sup>3</sup>											
	Core Loss (maximum)	90 mW/cm <sup>3</sup>											
<b>Coating/Pkg</b>	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$ <p>where H expressed in oersteds, and:  a=1.000E-02, b=5.722E-08, c=1.995, d=0.000</p>												
	H <sub>DC</sub>	200 Oe											
	Percent Initial Perm.(nom.)	81.7%											
	Percent Initial Perm.(min.)	75.7%											
<b>Winding Table</b>	Coating Type:	Blue Epoxy											
	Voltage Breakdown (min.)	1000 Vrms											
	Limit	0.1 mA, 5 s											
	Package Quantity	4 Pcs/Box											
	<b>Wire Size</b>	AWG	8	10	12	14	16	18	20	22	24	26	28
<b>Single Layer</b>	mm	3.150	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	
	Turns	62	78	98	123	154	192	239	298	372	463	577	
<b>Full Winding</b>	Rdc(Ω)	17.7 m	35.5 m	70.9 m	141.5 m	281.8 m	558.8 m	1.1	2.2	4.4	8.6	17.1	
	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248	
	Rdc(Ω)	69.8 m	172.0 m	422.6 m	1.0	2.6	6.3	15.5	38.2	94.1	231.6	570.0	

