



**Part Number:** **MS-521125-2**  
 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)	25.40 mm	1.000 in
	(max. - after coating)	26.80 mm	1.055 in
<b>Mass</b>	(approximate)	1,280 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	6.71 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	32.429 cm	
	V <sub>e</sub> - Eff. Core Volume	218 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	46.6 cm <sup>2</sup>	
	sa - Surface Area	540 cm <sup>2</sup>	
	mlt - mean length per turn	14.9 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	125	
	A <sub>L</sub> value (nominal)	325 nH/N <sup>2</sup>	
	Test Winding	N=200, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	6.0 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	4 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	62	78	98	123	154	192	239	298	372	463	577
		Rdc(Ω)	19.0 m	38.1 m	76.1 m	151.9 m	302.4 m	599.6 m	1.2	2.4	4.7	9.3	18.3
<b>Full Winding</b>	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248	
	Rdc(Ω)	74.9 m	184.5 m	453.4 m	1.1	2.7	6.8	16.7	41.0	100.9	248.5	611.6	

