



**Part Number: MS-133147-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	33.02 mm 33.83 mm	1.300 in 1.332 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	19.94 mm 19.30 mm	0.785 in 0.760 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	14.00 mm 15.00 mm	0.551 in 0.591 in
<b>Mass</b>	(approximate)	42 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.874 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	8.15 cm	
	V <sub>e</sub> - Eff. Core Volume	7.12 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	2.93 cm <sup>2</sup>	
	sa - Surface Area	44.3 cm <sup>2</sup>	
	mlt - mean length per turn	5.42 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	147	
	A <sub>L</sub> value (nominal)	196 nH/N <sup>2</sup>	
	Test Winding	N=70, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.27 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=5.176E+08, b=1.028E+09, c=9.893E+06, d=2.852E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	279 mW/cm <sup>3</sup>	
Core Loss (maximum)	321 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=4.732E-05, c=1.539, d=0.000		
	H <sub>DC</sub>	40 Oe	
	Percent Initial Perm.(nom.)	42.0%	
Percent Initial Perm.(min.)	35.3%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	384 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	14	18	22	29	36	46	58	73	91	114	142
		Rdc(Ω)	1.6 m	3.2 m	6.2 m	13.0 m	25.7 m	52.1 m	104.6 m	209.3 m	414.9 m	826.6 m	1.6
<b>Full Winding</b>	Turns	15	24	37	57	88	136	211	326	504	780	1,208	
	Rdc(Ω)	1.7 m	4.3 m	10.4 m	25.5 m	62.7 m	154.2 m	380.4 m	934.6 m	2.3	5.7	13.9	

