



**Part Number: MP-600173-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	152.40 mm 153.90 mm	6.000 in 6.059 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	81.28 mm 79.65 mm	3.200 in 3.136 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	20.32 mm 21.72 mm	0.800 in 0.855 in
<b>Mass</b>	(approximate)	2,000 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	7.05 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	35.97 cm	
	V <sub>e</sub> - Eff. Core Volume	253 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	49.8 cm <sup>2</sup>	
	sa - Surface Area	646 cm <sup>2</sup>	
	mlt - mean length per turn	15.8 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	173	
	A <sub>L</sub> value (nominal)	440 nH/N <sup>2</sup>	
	Test Winding	N=200, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	6.3 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=3.167E+10, b=1.206E+09, c=9.656E+06, d=5.636E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	312 mW/cm <sup>3</sup>	
Core Loss (maximum)	359 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=1.313E-05, c=1.935, d=0.000		
	H <sub>DC</sub>	30 Oe	
	Percent Initial Perm.(nom.)	51.4%	
Percent Initial Perm.(min.)	42.6%		
<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	65	81	102	127	159	198	247	309	385	479	597
		Rdc(Ω)	21.1 m	41.7 m	83.6 m	165.5 m	329.4 m	652.5 m	1.3	2.6	5.1	10.1	20.0
<b>Full Winding</b>	Turns	261	404	625	967	1,497	2,316	3,585	5,549	8,589	13,293	20,574	
	Rdc(Ω)	84.5 m	208.1 m	512.0 m	1.3	3.1	7.6	18.8	46.2	113.9	280.2	689.8	

