



**Part Number:** **MP-044205-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core)	11.18 mm	0.440 in
	(max. - after coating)	11.89 mm	0.468 in
<b>ID</b>	(nom. - bare core)	6.35 mm	0.250 in
	(min. - after coating)	5.89 mm	0.232 in
<b>Ht</b>	(nom. - bare core)	3.96 mm	0.156 in
	(max. - after coating)	4.72 mm	0.186 in
<b>Mass</b>	(approximate)	1.9 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.0906 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	2.69 cm	
	V <sub>e</sub> - Eff. Core Volume	0.244 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	0.273 cm <sup>2</sup>	
	sa - Surface Area	5.10 cm <sup>2</sup>	
	mlt - mean length per turn	1.84 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	205	
	A <sub>L</sub> value (nominal)	88 nH/N <sup>2</sup>	
	Test Winding	N=60, #30 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.024 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=1.143E+10, b=2.045E+09, c=1.156E+07, d=8.981E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	350 mW/cm <sup>3</sup>	
Core Loss (maximum)	402 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=3.822E-06, c=2.349, d=0.000		
	H <sub>DC</sub>	30 Oe	
	Percent Initial Perm.(nom.)	47.0%	
Percent Initial Perm.(min.)	36.6%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	9,000 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	AWG	18	20	22	24	26	28	30	32	34	36	38
		mm	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100
	<b>Single Layer</b>	Turns	12	16	20	26	33	42	52	66	83	103	129
		Rdc(Ω)	4.6 m	9.8 m	19.5 m	40.2 m	81.2 m	164.4 m	323.6 m	653.3 m	1.3	2.6	5.1
<b>Full Winding</b>	Turns	13	20	30	47	73	113	174	270	417	646	999	
	Rdc(Ω)	5.0 m	12.2 m	29.2 m	72.7 m	179.6 m	442.2 m	1.1	2.7	6.6	16.2	39.8	

