



Part Number: **MP-015173-8**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	3.94 mm	0.155 in
	(max. - after coating)	4.14 mm	0.163 in
ID	(nom. - bare core)	2.21 mm	0.087 in
	(min. - after coating)	2.01 mm	0.079 in
Ht	(nom. - bare core)	2.54 mm	0.100 in
	(max. - after coating)	2.74 mm	0.108 in
Mass	(approximate)	0.16 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0211 cm ²	
	L _e - Eff. Mag. Path Length	0.942 cm	
	V _e - Eff. Core Volume	0.0197 cm ³	
	WA - Min. Eff. Window Area	0.0316 cm ²	
	sa - Surface Area	0.776 cm ²	
	mlt - mean length per turn	0.862 cm	
	μ _i (reference)	173	
Inductance	A _L value (nominal)	48 nH/N ²	
	Test Winding	N=30, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.003 V	
	AL tolerance	±8%	
Core Loss	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B _{pk} 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 _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	312 mW/cm ³	
Core Loss (maximum)	359 mW/cm ³		
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.000E-02, b=1.313E-05, c=1.935, d=0.000		
	H _{DC}	30 Oe	
	Percent Initial Perm.(nom.)	51.4%	
Percent Initial Perm.(min.)	42.6%		
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	27,000 Pcs/Box	

Winding Table	Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
	Single Layer	Turns	12	16	21	26	33	42	53	67	84	-	-
		Rdc(Ω)	22.0 m	46.7 m	97.4 m	191.8 m	387.1 m	783.6 m	1.6	3.2	6.3	-	-
Full Winding	Turns	13	20	31	49	75	116	180	279	431	-	-	
	Rdc(Ω)	23.8 m	58.3 m	143.8 m	361.4 m	879.8 m	2.2	5.3	13.2	32.3	-	-	

