



Part Number: **MS-130160-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	33.02 mm	1.300 in
	(max. - after coating)	33.83 mm	1.332 in
ID	(nom. - bare core)	19.94 mm	0.785 in
	(min. - after coating)	19.30 mm	0.760 in
Ht	(nom. - bare core)	10.67 mm	0.420 in
	(max. - after coating)	11.61 mm	0.457 in
Mass	(approximate)	32 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.672 cm ²	
	L _e - Eff. Mag. Path Length	8.15 cm	
	V _e - Eff. Core Volume	5.48 cm ³	
	WA - Min. Eff. Window Area	2.93 cm ²	
	sa - Surface Area	40.1 cm ²	
	mlt - mean length per turn	4.74 cm	
Inductance	μ _i (reference)	160	
	A _L value (nominal)	163 nH/N ²	
	Test Winding	N=70, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.21 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=3.679E+10, b=1.150E+09, c=1.004E+07, d=2.851E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
Core Loss (nominal)	241 mW/cm ³		
Core Loss (maximum)	277 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=4.439E-05, c=1.627, d=0.000		
	H _{DC}	40 Oe	
Percent Initial Perm.(nom.)	35.8%		
Percent Initial Perm.(min.)	29.3%		
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	512 Pcs/Box	

Winding Table	Wire Size	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
	Single Layer	Turns	14	18	22	29	36	46	58	73	91	114	142
		Rdc(Ω)	1.4 m	2.8 m	5.4 m	11.4 m	22.4 m	45.6 m	91.5 m	183.1 m	363.0 m	723.2 m	1.4
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208	
	Rdc(Ω)	1.5 m	3.7 m	9.1 m	22.3 m	54.9 m	134.9 m	332.8 m	817.6 m	2.0	4.9	12.2	

