



Part Number: MS-650040-2
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OD	(nom. - bare core) (max. - after coating)	165.10 mm 166.37 mm	6.500 in 6.550 in
ID	(nom. - bare core) (min. - after coating)	102.40 mm 101.13 mm	4.031 in 3.981 in
Ht	(nom. - bare core) (max. - after coating)	31.75 mm 33.02 mm	1.250 in 1.300 in
Mass	(approximate)	2,260 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	9.87 cm ²	
	L _e - Eff. Mag. Path Length	41.2 cm	
	V _e - Eff. Core Volume	415 cm ³	
	WA - Min. Eff. Window Area	80.3 cm ²	
	sa - Surface Area	838 cm ²	
	mlt - mean length per turn	18.2 cm	
Inductance	μ _i (reference)	40	
	A _L value (nominal)	120 nH/N ²	
	Test Winding	N=100, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	4.4 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=1.000E+06, b=6.961E+08, c=5.397E+06, d=4.127E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	441 mW/cm ³	
Core Loss (maximum)	507 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=2.655E-06, c=1.703, d=0.000		
	H _{DC}	100 Oe	
	Percent Initial Perm (nom.)	59.6%	
Percent Initial Perm (min.)	52.0%		
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	4 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	83	104	130	162	203	253	315	393	489	609	758
		Rdc(Ω)	31.0 m	61.8 m	122.9 m	243.7 m	485.6 m	962.5 m	1.9	3.8	7.5	14.8	29.3
Full Winding	Turns	420	651	1,007	1,559	2,413	3,734	5,780	8,946	13,846	21,429	33,167	
	Rdc(Ω)	157.0 m	387.1 m	952.3 m	2.3	5.8	14.2	35.0	86.1	211.9	521.5	1.3 k	

