



Part Number: MS-014090-8
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OD	(nom. - bare core) (max. - after coating)	3.56 mm 3.76 mm	0.140 in 0.148 in
ID	(nom. - bare core) (min. - after coating)	1.78 mm 1.52 mm	0.070 in 0.060 in
Ht	(nom. - bare core) (max. - after coating)	1.52 mm 1.73 mm	0.060 in 0.068 in
Mass	(approximate)	0.06 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0137 cm ²	
	L _e - Eff. Mag. Path Length	0.817 cm	
	V _e - Eff. Core Volume	0.0107 cm ³	
	WA - Min. Eff. Window Area	0.0182 cm ²	
	sa - Surface Area	0.523 cm ²	
	mlt - mean length per turn	0.646 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	19 nH/N ²	
	Test Winding	N=30, #36 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.002 V	
AL tolerance	±15%		
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=7.890E+09, b=7.111E+08, c=8.980E+06, d=2.846E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	323 mW/cm ³	
Core Loss (maximum)	372 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=3.994E-06, c=1.883, d=0.000		
	H _{DC}	50 Oe	
	Percent Initial Perm.(nom.)	61.3%	
Percent Initial Perm.(min.)	52.9%		
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	36,000 Pcs/Box	

Winding Table	Wire Size	AWG	30	32	34	36	38	40	42	44	-	-	-
		mm	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-	-
	Single Layer	Turns	11	15	19	25	31	40	50	63	-	-	-
		Rdc(Ω)	24.1 m	52.2 m	105.1 m	219.9 m	433.7 m	890.0 m	1.8	3.5	-	-	-
Full Winding	Turns	12	18	28	43	67	103	159	247	-	-	-	
	Rdc(Ω)	26.2 m	62.6 m	154.9 m	378.3 m	937.3 m	2.3	5.6	13.9	-	-	-	

