



Part Number: **MS-135090-2**
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OD	(nom. - bare core) (max. - after coating)	34.29 mm 35.10 mm	1.350 in 1.382 in
ID	(nom. - bare core) (min. - after coating)	23.37 mm 22.56 mm	0.920 in 0.888 in
Ht	(nom. - bare core) (max. - after coating)	8.89 mm 9.83 mm	0.350 in 0.387 in
Mass	(approximate)	24 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.454 cm ²	
	L _e - Eff. Mag. Path Length	8.95 cm	
	V _e - Eff. Core Volume	4.06 cm ³	
	WA - Min. Eff. Window Area	4.00 cm ²	
	sa - Surface Area	41.4 cm ²	
	mlt - mean length per turn	4.35 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	56 nH/N ²	
	Test Winding	N=90, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.18 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=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:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	441 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	16	21	27	34	43	54	68	85	107	134	167
		Rdc(Ω)	1.4 m	3.0 m	6.1 m	12.2 m	24.6 m	49.1 m	98.4 m	195.6 m	391.5 m	779.8 m	1.5
Full Winding	Turns	21	32	50	78	120	186	288	445	689	1,066	1,651	
	Rdc(Ω)	1.9 m	4.5 m	11.3 m	28.1 m	68.6 m	169.2 m	416.6 m	1.0	2.5	6.2	15.3	

