



Part Number: **FS-200090-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core) (max. - after coating)	50.80 mm 51.69 mm	2.000 in 2.035 in
ID	(nom. - bare core) (min. - after coating)	31.75 mm 30.94 mm	1.250 in 1.218 in
Ht	(nom. - bare core) (max. - after coating)	13.46 mm 14.35 mm	0.530 in 0.565 in
Mass	(approximate)	110 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	1.25 cm ²	
	L _e - Eff. Mag. Path Length	12.733 cm	
	V _e - Eff. Core Volume	15.9 cm ³	
	WA - Min. Eff. Window Area	7.52 cm ²	
	sa - Surface Area	88.2 cm ²	
	mlt - mean length per turn	6.49 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	109 nH/N ²	
	Test Winding	N=70, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.39 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=5.648E+08, c=7.440E+04, d=6.942E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	869 mW/cm ³	
	Core Loss (maximum)	999 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=8.566E-06, c=1.584, d=0.000		
	H _{DC}	50 Oe	
	Percent Initial Perm.(nom.)	70.4%	
	Percent Initial Perm.(min.)	64.0%	
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	125 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	23	30	38	48	60	75	94	118	148	184	230
		Rdc(Ω)	3.1 m	6.4 m	12.8 m	25.8 m	51.2 m	101.9 m	203.0 m	405.4 m	808.6 m	1.6	3.2
Full Winding	Turns	39	61	94	146	226	350	541	837	1,296	2,006	3,104	
	Rdc(Ω)	5.2 m	12.9 m	31.7 m	78.4 m	193.0 m	475.3 m	1.2	2.9	7.1	17.4	42.9	

