



Part Number: **FS-141090-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core) (max. - after coating)	35.81 mm 36.63 mm	1.410 in 1.442 in
ID	(nom. - bare core) (min. - after coating)	22.35 mm 21.54 mm	0.880 in 0.848 in
Ht	(nom. - bare core) (max. - after coating)	10.46 mm 11.28 mm	0.412 in 0.444 in
Mass	(approximate)	42 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.678 cm ²	
	L _e - Eff. Mag. Path Length	8.98 cm	
	V _e - Eff. Core Volume	6.09 cm ³	
	WA - Min. Eff. Window Area	3.64 cm ²	
	sa - Surface Area	45.6 cm ²	
	mlt - mean length per turn	4.84 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	84.3 nH/N ²	
	Test Winding	N=80, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.24 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	343 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	15	20	25	32	41	52	65	81	102	128	159
		Rdc(Ω)	1.5 m	3.2 m	6.3 m	12.8 m	26.1 m	52.7 m	104.7 m	207.5 m	415.6 m	829.5 m	1.6
Full Winding	Turns	19	30	46	71	109	169	262	406	628	972	1,505	
	Rdc(Ω)	1.9 m	4.8 m	11.6 m	28.4 m	69.4 m	171.2 m	422.1 m	1.0	2.6	6.3	15.5	

