



Part Number: **FS-400040-2**
Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	101.60 mm	4.000 in
	(max. - after coating)	102.87 mm	4.050 in
ID	(nom. - bare core)	57.15 mm	2.250 in
	(min. - after coating)	55.75 mm	2.195 in
Ht	(nom. - bare core)	16.51 mm	0.650 in
	(max. - after coating)	17.78 mm	0.700 in
Mass	(approximate)	560 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	3.52 cm ²	
	L _e - Eff. Mag. Path Length	24.271 cm	
	V _e - Eff. Core Volume	85.5 cm ³	
	WA - Min. Eff. Window Area	24.4 cm ²	
	sa - Surface Area	303 cm ²	
	mlt - mean length per turn	11.1 cm	
Inductance	μ _i (reference)	40	
	A _L value (nominal)	75 nH/N ²	
	Test Winding	N=140, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	2.2 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=3.071E+08, c=3.524E+06, d=5.634E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	780 mW/cm ³	
Core Loss (maximum)	897 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=6.314E-08, c=2.151, d=0.000		
	H _{DC}	200 Oe	
	Percent Initial Perm.(nom.)	64.0%	
Percent Initial Perm.(min.)	54.5%		
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	16 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	44	56	70	88	110	138	172	215	268	335	417
		Rdc(Ω)	10.0 m	20.2 m	40.2 m	80.5 m	160.0 m	319.2 m	632.7 m	1.3	2.5	5.0	9.8
Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079	
	Rdc(Ω)	29.1 m	71.6 m	175.9 m	433.4 m	1.1	2.6	6.5	15.9	39.1	96.4	237.2	

