



Part Number: **FS-520040-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	132.54 mm	5.218 in
	(max. - after coating)	134.21 mm	5.284 in
ID	(nom. - bare core)	78.59 mm	3.094 in
	(min. - after coating)	77.04 mm	3.033 in
Ht	(nom. - bare core)	20.32 mm	0.800 in
	(max. - after coating)	21.72 mm	0.855 in
Mass	(approximate)	1,140 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	5.35 cm ²	
	L _e - Eff. Mag. Path Length	32.429 cm	
	V _e - Eff. Core Volume	173 cm ³	
	WA - Min. Eff. Window Area	46.6 cm ²	
	sa - Surface Area	515 cm ²	
	mlt - mean length per turn	13.9 cm	
Inductance	μ _i (reference)	40	
	A _L value (nominal)	83 nH/N ²	
	Test Winding	N=200, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	4.7 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	4 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	62	78	98	123	154	192	239	298	372	463	577
		Rdc(Ω)	17.7 m	35.5 m	70.9 m	141.5 m	281.8 m	558.8 m	1.1	2.2	4.4	8.6	17.1
Full Winding	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248	
	Rdc(Ω)	69.8 m	172.0 m	422.6 m	1.0	2.6	6.3	15.5	38.2	94.1	231.6	570.0	

