



Part Number: **FS-044090-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	11.18 mm	0.440 in
	(max. - after coating)	11.89 mm	0.468 in
ID	(nom. - bare core)	6.35 mm	0.250 in
	(min. - after coating)	5.89 mm	0.232 in
Ht	(nom. - bare core)	3.96 mm	0.156 in
	(max. - after coating)	4.72 mm	0.186 in
Mass	(approximate)	1.7 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0906 cm ²	
	L _e - Eff. Mag. Path Length	2.69 cm	
	V _e - Eff. Core Volume	0.244 cm ³	
	WA - Min. Eff. Window Area	0.273 cm ²	
	sa - Surface Area	5.10 cm ²	
	mlt - mean length per turn	1.84 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	38 nH/N ²	
	Test Winding	N=60, #30 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.024 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	9,000 Pcs/Box	

Winding Table	Wire Size	AWG	18	20	22	24	26	28	30	32	34	36	38
		mm	1.000	0.800	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100
	Single Layer	Turns	12	16	20	26	33	42	52	66	83	103	129
		Rdc(Ω)	4.6 m	9.8 m	19.5 m	40.2 m	81.2 m	164.4 m	323.6 m	653.3 m	1.3	2.6	5.1
Full Winding	Turns	13	20	30	47	73	113	174	270	417	646	999	
	Rdc(Ω)	5.0 m	12.2 m	29.2 m	72.7 m	179.6 m	442.2 m	1.1	2.7	6.6	16.2	39.8	

