



Part Number: **FS-133090-2**
 Revision 20160816 - Generated 2016-Aug-16



OD	(nom. - bare core)	33.02 mm	1.300 in
	(max. - after coating)	33.83 mm	1.332 in
ID	(nom. - bare core)	19.94 mm	0.785 in
	(min. - after coating)	19.30 mm	0.760 in
Ht	(nom. - bare core)	14.00 mm	0.551 in
	(max. - after coating)	15.00 mm	0.591 in
Mass	(approximate)	49 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.874 cm ²	
	L _e - Eff. Mag. Path Length	8.15 cm	
	V _e - Eff. Core Volume	7.12 cm ³	
	WA - Min. Eff. Window Area	2.93 cm ²	
	sa - Surface Area	44.3 cm ²	
	mlt - mean length per turn	5.42 cm	
	μ _i (reference)	90	
Inductance	A _L value (nominal)	120 nH/N ²	
	Test Winding	N=70, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.27 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	384 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	14	18	22	29	36	46	58	73	91	114	142
		Rdc(Ω)	1.6 m	3.2 m	6.2 m	13.0 m	25.7 m	52.1 m	104.6 m	209.3 m	414.9 m	826.6 m	1.6
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208	
	Rdc(Ω)	1.7 m	4.3 m	10.4 m	25.5 m	62.7 m	154.2 m	380.4 m	934.6 m	2.3	5.7	13.9	

