



Part Number: **FS-350090-2**

Revision 20190529 - Generated 2019-May-29



(If coated, Max./Min. includes coating)

OD	(nom. - bare core) (max.)	88.85 mm 90.00 mm	3.498 in 3.543 in
ID	(nom. - bare core) (min.)	66.01 mm 64.74 mm	2.599 in 2.549 in
HT	(nom. - bare core) (max.)	15.93 mm 17.20 mm	0.627 in 0.677 in
Mass	(approximate)	300 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	1.83 cm ²	
	L _e - Eff. Mag. Path Length	24 cm	
	V _e - Eff. Core Volume	43.9 cm ³	
	WA - Min. Eff. Window Area	32.9 cm ²	
	sa - Surface Area	251 cm ²	
	mlt - mean length per turn	9.20 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	86 nH/N ²	
	Test Winding	N=100, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.81 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	45 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	52	65	82	103	129	161	201	250	312	389	485
		Rdc(Ω)	9.8 m	19.6 m	39.2 m	78.4 m	156.2 m	310.0 m	615.5 m	1.2	2.4	4.8	9.5
Full Winding	Turns	172	267	413	639	989	1,530	2,369	3,666	5,674	8,782	13,592	
	Rdc(Ω)	32.5 m	80.4 m	197.7 m	486.4 m	1.2	2.9	7.3	17.9	43.9	108.2	266.3	

