



Part Number: **FS-250090-2**

Revision 20190529 - Generated 2019-May-29



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

OD	(nom. - bare core) (max.)	63.50 mm 64.77 mm	2.500 in 2.550 in
ID	(nom. - bare core) (min.)	31.37 mm 30.48 mm	1.235 in 1.200 in
HT	(nom. - bare core) (max.)	25.00 mm 25.90 mm	0.984 in 1.020 in
Mass	(approximate)	380 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	3.89 cm ²	
	L _e - Eff. Mag. Path Length	14.314 cm	
	V _e - Eff. Core Volume	55.8 cm ³	
	WA - Min. Eff. Window Area	7.30 cm ²	
	sa - Surface Area	150 cm ²	
	mlt - mean length per turn	10.1 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	310 nH/N ²	
	Test Winding	N=100, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	1.7 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=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	27 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	23	29	37	47	59	74	93	116	145	182	227
		Rdc(Ω)	4.8 m	9.6 m	19.5 m	39.4 m	78.6 m	156.9 m	313.5 m	622.0 m	1.2	2.5	4.9
Full Winding	Turns	38	59	91	142	219	339	525	813	1,258	1,947	3,013	
	Rdc(Ω)	7.9 m	19.6 m	48.0 m	119.0 m	291.9 m	718.6 m	1.8	4.4	10.7	26.4	65.0	

