



Part Number: **FS-109090-2**

Revision 20190529 - Generated 2019-May-29



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

OD	(nom. - bare core) (max.)	26.92 mm 27.81 mm	1.060 in 1.095 in
ID	(nom. - bare core) (min.)	14.73 mm 14.10 mm	0.580 in 0.555 in
HT	(nom. - bare core) (max.)	18.00 mm 19.00 mm	0.709 in 0.748 in
Mass	(approximate)	44 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	1.01 cm ²	
	L _e - Eff. Mag. Path Length	6.35 cm	
	V _e - Eff. Core Volume	6.43 cm ³	
	WA - Min. Eff. Window Area	1.56 cm ²	
	sa - Surface Area	35.8 cm ²	
	mlt - mean length per turn	5.88 cm	
Inductance	μ _i (reference)	90	
	A _L value (nominal)	180 nH/N ²	
	Test Winding	N=80, #26 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.36 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	400 Pcs/Box	

Winding Table	Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
	Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
		Rdc(Ω)	2.3 m	4.9 m	9.7 m	20.1 m	40.6 m	80.2 m	161.7 m	326.4 m	644.9 m	1.3	2.6
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998	
	Rdc(Ω)	2.5 m	6.1 m	14.6 m	36.3 m	89.7 m	219.0 m	541.0 m	1.3	3.3	8.1	19.9	

