



Part Number: **FS-520040-2**

Revision 20190529 - Generated 2019-May-29



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

OD	(nom. - bare core) (max.)	132.54 mm 134.21 mm	5.218 in 5.284 in
ID	(nom. - bare core) (min.)	78.59 mm 77.04 mm	3.094 in 3.033 in
HT	(nom. - bare core) (max.)	20.32 mm 21.72 mm	0.800 in 0.855 in
Mass	(approximate)	1,140 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	5.35 cm ²	
	L _e - Eff. Mag. Path Length	32.429 cm	
	V _e - Eff. Core Volume	173 cm ³	
	WA - Min. Eff. Window Area	46.6 cm ²	
	sa - Surface Area	515 cm ²	
Inductance	μ _i (reference)	40	
	A _L value (nominal)	83 nH/N ²	
Core Loss	Test Winding	N=200, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	4.7 V	
	AL tolerance	±8%	
	Core Loss(mW/cm ³)= $\frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
DC Saturation	where B _{pk} expressed in gauss, f expressed in hertz, and: a=1.000E+06, b=3.071E+08, c=3.524E+06, d=5.634E-14		
	B _{pk}	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	780 mW/cm ³	
	Core Loss (maximum)	897 mW/cm ³	
DC Saturation	%μ _i = $\frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.000E-02, b=6.314E-08, c=2.151, d=0.000		
	H _{DC}	200 Oe	
	Percent Initial Perm(nom.)	64.0%	
Coating/Pkg	Percent Initial Perm(min.)	54.5%	
	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
Winding Table	Package Quantity	4 Pcs/Box	
	Wire Size	AWG	8 10 12 14 16 18 20 22 24 26 28
Single Layer	mm	3.150 2.500 2.000 1.600 1.250 1.000 0.800 0.630 0.500 0.400 0.315	
	Turns	62 78 98 123 154 192 239 298 372 463 577	
Full Winding	Rdc(Ω)	17.7 m 35.5 m 70.9 m 141.5 m 281.8 m 558.8 m 1.1 2.2 4.4 8.6 17.1	
	Turns	244 378 584 905 1,400 2,167 3,354 5,191 8,035 12,436 19,248	
Full Winding	Rdc(Ω)	69.8 m 172.0 m 422.6 m 1.0 2.6 6.3 15.5 38.2 94.1 231.6 570.0	

