



**Part Number:** **FS-401090-2**

Revision 20190529 - Generated 2019-May-29



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

<b>OD</b>	(nom. - bare core) (max.)	101.60 mm 102.87 mm	4.000 in 4.050 in
<b>ID</b>	(nom. - bare core) (min.)	57.15 mm 55.75 mm	2.250 in 2.195 in
<b>HT</b>	(nom. - bare core) (max.)	13.59 mm 14.86 mm	0.535 in 0.585 in
<b>Mass</b>	(approximate)	500 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	2.97 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	24.271 cm	
	V <sub>e</sub> - Eff. Core Volume	72.1 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	24.4 cm <sup>2</sup>	
	sa - Surface Area	293 cm <sup>2</sup>	
<b>Inductance</b>	μ <sub>i</sub> (reference)	90	
	A <sub>L</sub> value (nominal)	139 nH/N <sup>2</sup>	
<b>Core Loss</b>	Test Winding	N=140, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	1.8 V	
	AL tolerance	±8%	
	Core Loss(mW/cm <sup>3</sup> )=	$\frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$	
<b>DC Saturation</b>	where B <sub>pk</sub> 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 <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	869 mW/cm <sup>3</sup>	
<b>Coating/Pkg</b>	Core Loss (maximum)	999 mW/cm <sup>3</sup>	
	%μ <sub>i</sub> =	$\frac{1}{a + b \cdot H^c} + d$	
	where H expressed in oersteds, and: a=1.000E-02, b=8.566E-06, c=1.584, d=0.000		
<b>Winding Table</b>	H <sub>DC</sub>	50 Oe	
	Percent Initial Perm(nom.)	70.4%	
	Percent Initial Perm(min.)	64.0%	
	Coating Type:	Blue Epoxy	
<b>Winding Table</b>	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	16 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	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
	<b>Single Layer</b>	Turns	44	56	70	88	110	138	172	215	268	335	417
		Rdc(Ω)	9.5 m	19.2 m	38.1 m	76.2 m	151.5 m	302.3 m	599.2 m	1.2	2.4	4.7	9.3
<b>Full Winding</b>	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079	
	Rdc(Ω)	27.6 m	67.8 m	166.6 m	410.5 m	1.0	2.5	6.1	15.1	37.1	91.3	224.6	

