



**Part Number:** **FS-135090-2**

Revision 20190529 - Generated 2019-May-29



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

<b>OD</b>	(nom. - bare core) (max.)	34.29 mm 35.10 mm	1.350 in 1.382 in
<b>ID</b>	(nom. - bare core) (min.)	23.37 mm 22.56 mm	0.920 in 0.888 in
<b>HT</b>	(nom. - bare core) (max.)	8.89 mm 9.83 mm	0.350 in 0.387 in
<b>Mass</b>	(approximate)	28 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	0.454 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	8.95 cm	
	V <sub>e</sub> - Eff. Core Volume	4.06 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	4.00 cm <sup>2</sup>	
	sa - Surface Area	41.4 cm <sup>2</sup>	
<b>Inductance</b>	μ <sub>i</sub> (reference)	90	
	A <sub>L</sub> value (nominal)	56 nH/N <sup>2</sup>	
<b>Core Loss</b>	Test Winding	N=90, #22 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.18 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>	
	Core Loss (maximum)	999 mW/cm <sup>3</sup>	
<b>DC Saturation</b>	%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		
	H <sub>DC</sub>	50 Oe	
	Percent Initial Perm(nom.)	70.4%	
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	441 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	16	21	27	34	43	54	68	85	107	134	167
		Rdc(Ω)	1.4 m	3.0 m	6.1 m	12.2 m	24.6 m	49.1 m	98.4 m	195.6 m	391.5 m	779.8 m	1.5
<b>Full Winding</b>	Turns	21	32	50	78	120	186	288	445	689	1,066	1,651	
	Rdc(Ω)	1.9 m	4.5 m	11.3 m	28.1 m	68.6 m	169.2 m	416.6 m	1.0	2.5	6.2	15.3	

