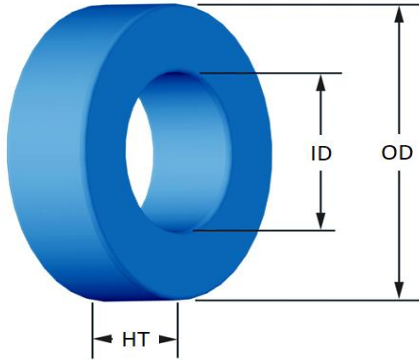




**Part Number:** FS-130090-2

Revision: 2023-Dec-06



(If coated, Max./Min. includes coating)		mm	in
<b>OD</b>	(nom. - bare core)	33.02	1.300
	(max.)	33.83	1.332
<b>ID</b>	(nom. - bare core)	19.94	0.785
	(min.)	19.30	0.760
<b>HT</b>	(nom. - bare core)	10.67	0.420
	(max.)	11.61	0.457
<b>Mass</b>	(approximate)	38	grams
<b>Magnetic Dimensions</b>	$A_e$ - Eff. Mag. Cross Section	0.672	cm <sup>2</sup>
	$L_e$ - Eff. Mag. Path Length	8.15	cm
	$V_e$ - Eff. Core Volume	5.48	cm <sup>3</sup>
	WA - Min. Eff. Window Area	2.93	cm <sup>2</sup>
	sa - Surface Area	40.1	cm <sup>2</sup>
	mlt - mean length per turn	4.74	cm
<b>Inductance</b>	$\mu_i$ (reference)	90	
	$A_L$ value (nominal)	91	nH/N <sup>2</sup>
	Test Winding	70 Turns	AWG# 22
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.21	V
AL tolerance	±8%		
<b>Core Loss</b>	$\text{Core Loss (mW/cm}^3\text{)} = \frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$		
	where $B_{pk}$ expressed in gauss, $f$ expressed in hertz, and:		
	$a=4.222E+08, b=6.073E+08, c=2.905E+06, d=4.589E-14$		
	$B_{pk}$	1000	G
	frequency	50 k	Hz
<b>DC Saturation</b>	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02, b=9.719E-07, c=1.995, d=0.000$		
	$H_{DC}$	50	Oe
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	336 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	14	18	22	29	36	46	58	73	91	114	142	
	Rdc(Ω)	1.4 m	2.8 m	5.4 m	11.4 m	22.4 m	45.6 m	91.5 m	183.1 m	363.0 m	723.2 m	1.4	
Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208	
	Rdc(Ω)	1.5 m	3.7 m	9.1 m	22.3 m	54.9 m	134.9 m	332.8 m	817.6 m	2.0	4.9	12.2	

