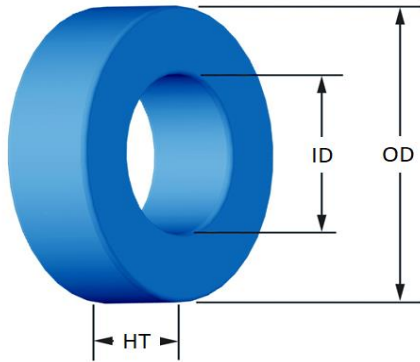




Part Number: **FS-301090-2**  
 Revision: 2023-Dec-06



(If coated, Max./Min. includes coating)		mm	in
<b>OD</b>	(nom. - bare core)	77.80	3.063
	(max.)	78.94	3.108
<b>ID</b>	(nom. - bare core)	49.23	1.938
	(min.)	47.96	1.888
<b>HT</b>	(nom. - bare core)	15.88	0.625
	(max.)	17.15	0.675
<b>Mass</b>	(approximate)	300	grams
<b>Magnetic Dimensions</b>	$A_e$ - Eff. Mag. Cross Section	2.22	cm <sup>2</sup>
	$L_e$ - Eff. Mag. Path Length	19.612	cm
	$V_e$ - Eff. Core Volume	43.5	cm <sup>3</sup>
	$W_A$ - Min. Eff. Window Area	18.1	cm <sup>2</sup>
	$s_a$ - Surface Area	193	cm <sup>2</sup>
	$m_{lt}$ - mean length per turn	8.93	cm
<b>Inductance</b>	$\mu_i$ (reference)	90	
	$A_L$ value (nominal)	128	nH/N <sup>2</sup>
	Test Winding	120 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	1.2	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
	Core Loss (nominal)	571	mW/cm <sup>3</sup>
Core Loss (maximum)	657	mW/cm <sup>3</sup>	
<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
	Percent Initial Perm (nom.)	80.7	%
Percent Initial Perm (min.)	74.4	%	
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	30 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	38	48	60	75	95	118	148	185	230	287	358	
	Rdc(Ω)	7.0 m	14.0 m	27.9 m	55.4 m	111.5 m	220.3 m	439.5 m	873.8 m	1.7	3.4	6.8	
Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459	
	Rdc(Ω)	17.4 m	42.6 m	105.4 m	259.1 m	637.6 m	1.6	3.9	9.5	23.4	57.6	141.7	

