

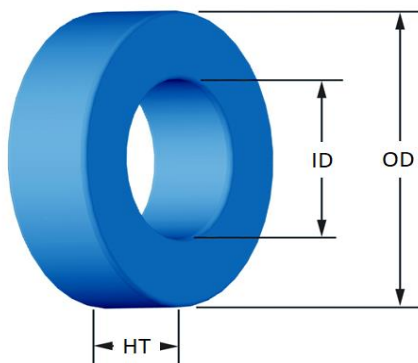


Part Number:

MS-109090-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	26.92	1.060
	(max.)	27.69	1.090
ID	(nom. - bare core)	14.73	0.580
	(min.)	14.10	0.555
HT	(nom. - bare core)	18.00	0.709
	(max.)	19.00	0.748
Mass	(approximate)	38	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.01	cm ²
	L_e - Eff. Mag. Path Length	6.35	cm
	V_e - Eff. Core Volume	6.43	cm ³
	W_A - Min. Eff. Window Area	1.56	cm ²
	s_a - Surface Area	35.6	cm ²
	mlt - mean length per turn	5.86	cm
Inductance	μ_i (reference)	90	
	A_L value (nominal)	180	nH/N ²
	Test Winding	80 Turns	AWG# 26
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.36	V
	AL tolerance	±8%	
Core Loss	$\text{Core Loss (mW/cm}^3\text{)} = \frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B_{pk} expressed in gauss, f expressed in hertz, and:		
	$a=7.890E+09$, $b=7.111E+08$, $c=8.980E+06$, $d=2.846E-14$		
	B_{pk}	1000	G
	frequency	50 k	Hz
	Core Loss (nominal)	323	mW/cm ³
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=3.994E-06$, $c=1.883$, $d=0.000$		
	H_{dc}	50	Oe
	Percent Initial Perm(nom.)	61.3	%
	Percent Initial Perm(min.)	52.9	%
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	315 Pcs/Box	

Winding Table	Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
	Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
		Rdc(Ω)	2.3 m	4.9 m	9.7 m	20.1 m	40.5 m	80.0 m	161.3 m	325.7 m	643.6 m	1.3	2.6
Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998	
	Rdc(Ω)	2.5 m	6.1 m	14.6 m	36.3 m	89.6 m	218.5 m	539.9 m	1.3	3.3	8.1	19.8	

