

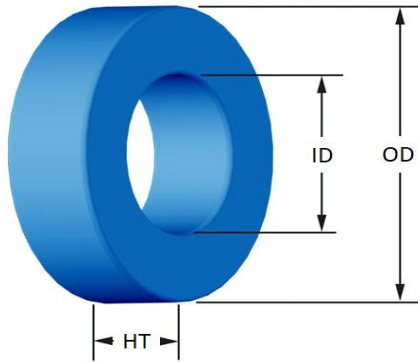


Part Number:

MS-300014-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	77.80	3.063
	(max.)	78.94	3.108
ID	(nom. - bare core)	49.23	1.938
	(min.)	47.96	1.888
HT	(nom. - bare core)	12.70	0.500
	(max.)	13.97	0.550

Magnetic Dimensions	Mass (approximate)	170	grams
	A_e - Eff. Mag. Cross Section	1.77	cm ²
	L_e - Eff. Mag. Path Length	19.612	cm
	V_e - Eff. Core Volume	34.8	cm ³
	W_A - Min. Eff. Window Area	18.1	cm ²
	s_a - Surface Area	184	cm ²
Inductance	m_l - mean length per turn	8.29	cm
	μ_i (reference)	14	
	A_L value (nominal)	16	nH/N ²
	Test Winding	120 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.94	V
Core Loss	AL tolerance	±8%	
	$\text{Core Loss (mW/cm}^3\text{)} = \frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B_{pk} expressed in gauss, f expressed in hertz, and:		
	$a=1.000E+06$, $b=1.814E+08$, $c=3.377E+06$, $d=2.628E-14$		
	B_{pk}	300	G
	frequency	100 k	Hz
DC Saturation	Core Loss (nominal)	180	mW/cm ³
	Core Loss (maximum)	207	mW/cm ³
	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=9.443E-07$, $c=1.533$, $d=0.000$		
	H_{dc}	200	Oe
Coating/Pkg	Percent Initial Perm(nom.)	75.9	%
	Percent Initial Perm(min.)	70.4	%
	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000	Vrms
Winding Table	Limit	0.1 mA, 5 s	
	Package Quantity	36 Pcs/Box	
	Wire Size	AWG	8
		mm	3.150
Single Layer	Turns	10	2.500
		12	2.000
		14	1.600
		16	1.250
Full Winding	Turns	18	1.000
		20	0.800
		22	0.630
		24	0.500
Rdc(Q)	Turns	26	0.400
		28	0.315
		30	0.250
		32	0.200
Rdc(Q)	Turns	34	0.160
		36	0.125
		38	0.100
		40	0.080

