

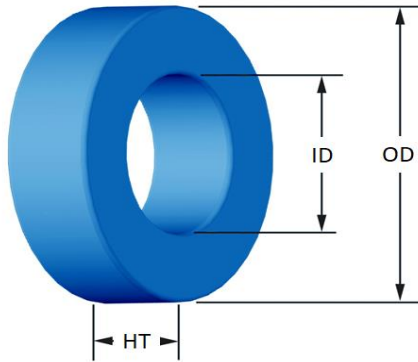


Part Number:

MS-306090-2

Revision:

2023-Dec-18



(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)	39.34	1.549
	(min.)	38.34	1.509
HT	(nom. - bare core)	25.85	1.018
	(max.)	26.85	1.057

Mass	(approximate)	480	grams
	A_e - Eff. Mag. Cross Section	4.78	cm ²
	L_e - Eff. Mag. Path Length	17	cm
	V_e - Eff. Core Volume	81.5	cm ³
	W_A - Min. Eff. Window Area	11.5	cm ²
	s_a - Surface Area	211	cm ²
Magnetic Dimensions	m_{lt} - mean length per turn	11.3	cm
	μ_i (reference)	90	
	A_L value (nominal)	306	nH/N ²
	Test Winding	120 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	2.5	V
Inductance	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	Core Loss (maximum)	372	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	18 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	30	38	47	60	75	94	118	147	184	229	286
		Rdc(Ω)	7.0 m	14.1 m	27.7 m	56.3 m	111.9 m	223.1 m	445.5 m	882.6 m	1.8	3.5	6.9
Full Winding		Turns	60	94	145	224	347	537	831	1,286	1,990	3,080	4,767
		Rdc(Ω)	14.0 m	34.9 m	85.6 m	210.2 m	517.9 m	1.3	3.1	7.7	19.0	46.8	115.1

