

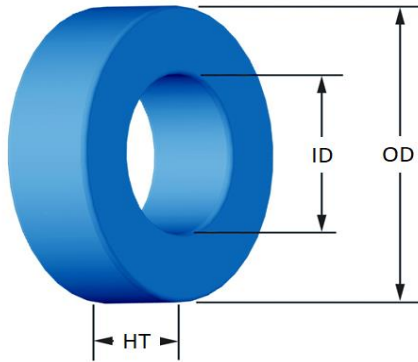


Part Number:

MS-184040-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	46.74	1.840
	(max.)	47.63	1.875
ID	(nom. - bare core)	24.13	0.950
	(min.)	23.32	0.918
HT	(nom. - bare core)	18.03	0.710
	(max.)	18.92	0.745
Mass	(approximate)	120	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.99	cm ²
	L_e - Eff. Mag. Path Length	10.743	cm
	V_e - Eff. Core Volume	21.4	cm ³
	W_A - Min. Eff. Window Area	4.27	cm ²
	s_a - Surface Area	81.7	cm ²
	m_{lt} - mean length per turn	7.38	cm
Inductance	μ_i (reference)	40	
	A_L value (nominal)	90	nH/N ²
	Test Winding	70 Turns	AWG# 20
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.62	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:		
	$a=1.000E+06$, $b=6.961E+08$, $c=5.397E+06$, $d=4.127E-14$		
	B_{pk}	1000	G
	frequency	50 k	Hz
	Core Loss (nominal)	441	mW/cm ³
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=2.655E-06$, $c=1.703$, $d=0.000$		
	H_{dc}	100	Oe
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000	Vrms
	Limit	0.1 mA, 5 s	
	Package Quantity	80 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	17	22	28	35	45	56	70	88	111	138	173
	Full Winding	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764
		Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.4 m	43.7 m	86.5 m	171.9 m	343.7 m	689.5 m	1.4	2.7
		Rdc(Ω)	3.3 m	8.4 m	20.7 m	50.7 m	124.3 m	307.3 m	753.9 m	1.9	4.6	11.3	27.7

