

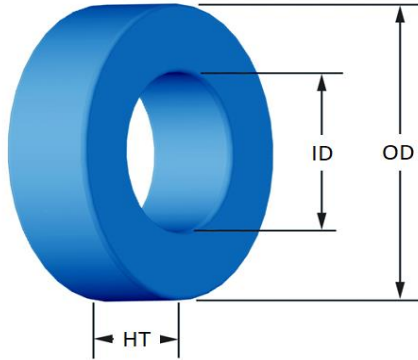


Part Number:

MS-185040-2

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)	28.70	1.130
	(min.)	27.89	1.098
HT	(nom. - bare core)	15.24	0.600
	(max.)	16.13	0.635
Mass	(approximate)	85	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.34	cm ²
	L_e - Eff. Mag. Path Length	11.62	cm
	V_e - Eff. Core Volume	15.6	cm ³
	W_A - Min. Eff. Window Area	6.11	cm ²
	s_a - Surface Area	79.6	cm ²
	mlt - mean length per turn	6.59	cm
Inductance	μ_i (reference)	40	
	A_L value (nominal)	57	nH/N ²
	Test Winding	80 Turns	AWG# 20
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.48	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	100 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	21	27	34	43	54	68	85	106	133	166	207
	Full Winding	Turns	32	49	77	119	184	284	440	680	1,053	1,630	2,523
		Rdc(Ω)	2.8 m	5.8 m	11.7 m	23.5 m	46.8 m	93.8 m	186.5 m	369.9 m	738.1 m	1.5	2.9
		Rdc(Ω)	4.3 m	10.6 m	26.4 m	64.9 m	159.6 m	391.8 m	965.4 m	2.4	5.8	14.4	35.4

