

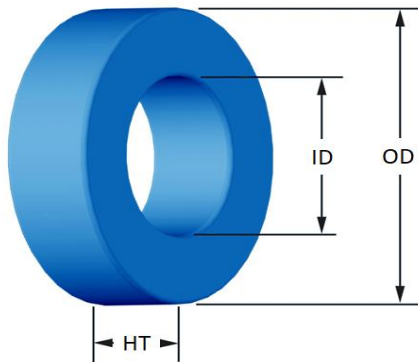


Part Number:

MS-200147-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	50.80	2.000
	(max.)	51.69	2.035
ID	(nom. - bare core)	31.75	1.250
	(min.)	30.94	1.218
HT	(nom. - bare core)	13.46	0.530
	(max.)	14.35	0.565
Mass	(approximate)	94	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.25	cm ²
	L_e - Eff. Mag. Path Length	12.733	cm
	V_e - Eff. Core Volume	15.9	cm ³
	W_A - Min. Eff. Window Area	7.52	cm ²
	s_a - Surface Area	88.2	cm ²
	mlt - mean length per turn	6.49	cm
Inductance	μ_i (reference)	147	
	A_L value (nominal)	179	nH/N ²
	Test Winding	70 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.39	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:		
	$a=1.394E+10$, $b=1.034E+09$, $c=1.244E+07$, $d=4.007E-14$		
	B_{pk}	1000	G
	frequency	50 k	Hz
	Core Loss (nominal)	276	mW/cm ³
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=4.732E-05$, $c=1.539$, $d=0.000$		
	H_{dc}	40	Oe
	Percent Initial Perm(nom.)	42.0	%
	Percent Initial Perm(min.)	35.3	%
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	60 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	23	30	38	48	60	75	94	118	148	184	230
	Full Winding	Turns	39	61	94	146	226	350	541	837	1,296	2,006	3,104
		Rdc(Ω)	3.1 m	6.4 m	12.8 m	25.8 m	51.2 m	101.9 m	203.0 m	405.4 m	808.6 m	1.6	3.2
		Rdc(Ω)	5.2 m	12.9 m	31.7 m	78.4 m	193.0 m	475.3 m	1.2	2.9	7.1	17.4	42.9

