

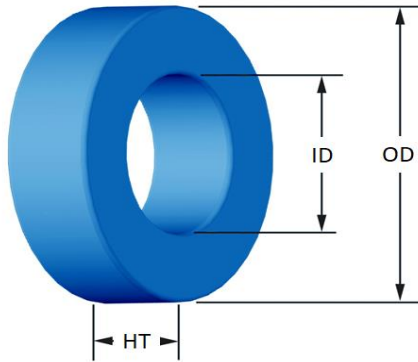


Part Number:

MS-131090-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	33.02	1.300
	(max.)	33.83	1.332
ID	(nom. - bare core)	19.94	0.785
	(min.)	19.30	0.760
HT	(nom. - bare core)	8.76	0.345
	(max.)	9.70	0.382
Mass	(approximate)	26	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	0.551	cm ²
	L_e - Eff. Mag. Path Length	8.15	cm
	V_e - Eff. Core Volume	4.49	cm ³
	W_A - Min. Eff. Window Area	2.93	cm ²
	s_a - Surface Area	37.8	cm ²
	mlt - mean length per turn	4.36	cm
Inductance	μ_i (reference)	90	
	A_L value (nominal)	76.5	nH/N ²
	Test Winding	70 Turns	AWG# 22
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.17	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:		
	$a=7.890E+09$, $b=7.111E+08$, $c=8.980E+06$, $d=2.846E-14$		
	B_{pk}	1000	G
	frequency	50 k	Hz
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
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	420 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	14	18	22	29	36	46	58	73	91	114	142
	Full Winding	Rdc(Ω)	1.3 m	2.6 m	5.0 m	10.5 m	20.6 m	41.9 m	84.1 m	168.3 m	333.7 m	664.9 m	1.3
	Full Winding	Turns	15	24	37	57	88	136	211	326	504	780	1,208
		Rdc(Ω)	1.3 m	3.4 m	8.4 m	20.5 m	50.4 m	124.0 m	305.9 m	751.8 m	1.8	4.5	11.2

