

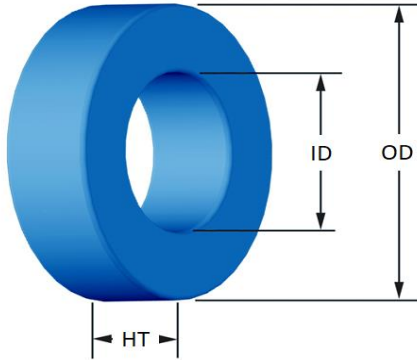


Part Number:

MS-171040-2

Revision:

2023-Dec-18



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

		mm	in
OD	(nom. - bare core)	43.40	1.709
	(max.)	44.30	1.744
ID	(nom. - bare core)	26.40	1.039
	(min.)	25.50	1.004
HT	(nom. - bare core)	16.20	0.638
	(max.)	17.10	0.673
Mass	(approximate)	77	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	1.31	cm ²
	L_e - Eff. Mag. Path Length	10.74	cm
	V_e - Eff. Core Volume	14.1	cm ³
	W_A - Min. Eff. Window Area	5.11	cm ²
	s_a - Surface Area	72.0	cm ²
	mlt - mean length per turn	6.58	cm
Inductance	μ_i (reference)	40	
	A_L value (nominal)	61	nH/N ²
	Test Winding	70 Turns	AWG# 22
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.41	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	120 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	19	24	31	39	49	62	77	97	121	151	189
		Rdc(Ω)	2.6 m	5.2 m	10.6 m	21.2 m	42.4 m	85.3 m	168.4 m	337.5 m	669.5 m	1.3	2.6
Full Winding	Turns	27	41	64	99	153	237	367	569	880	1,362	2,109	
		Rdc(Ω)	3.7 m	8.8 m	21.9 m	53.8 m	132.3 m	326.0 m	802.8 m	2.0	4.9	12.0	29.5

