

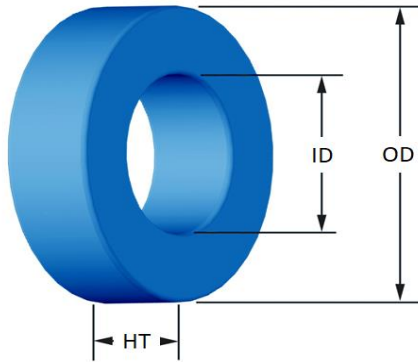


Part Number:

MS-301075-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	77.80	3.063
	(max.)	78.94	3.108
ID	(nom. - bare core)	49.23	1.938
	(min.)	47.96	1.888
HT	(nom. - bare core)	15.88	0.625
	(max.)	17.15	0.675
Mass	(approximate)	250	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	2.22	cm ²
	L_e - Eff. Mag. Path Length	19.612	cm
	V_e - Eff. Core Volume	43.5	cm ³
	W_A - Min. Eff. Window Area	18.1	cm ²
	s_a - Surface Area	193	cm ²
	mlt - mean length per turn	8.93	cm
Inductance	μ_i (reference)	75	
	A_L value (nominal)	107	nH/N ²
	Test Winding	120 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	1.2	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
	Core Loss (nominal)	323	mW/cm ³
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=3.414E-06$, $c=1.841$, $d=0.000$		
	H_{dc}	80	Oe
	Percent Initial Perm(nom.)	47.9	%
	Percent Initial Perm(min.)	39.6	%
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	30 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	38	48	60	75	95	118	148	185	230	287	358
	Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
		Rdc(Ω)	7.0 m	14.0 m	27.9 m	55.4 m	111.5 m	220.3 m	439.5 m	873.8 m	1.7	3.4	6.8
		Rdc(Ω)	17.4 m	42.6 m	105.4 m	259.1 m	637.6 m	1.6	3.9	9.5	23.4	57.6	141.7

