

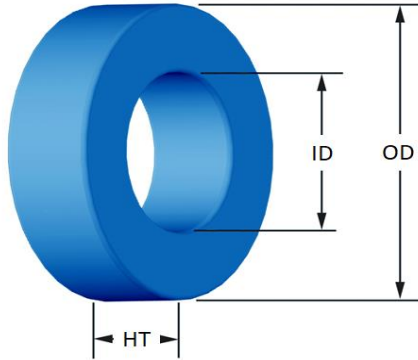


Part Number:

MS-301090-2

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

Magnetic Dimensions	Mass (approximate)	260	grams
	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)	90	
	A_L value (nominal)	128	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
	Core Loss (maximum)	372	mW/cm ³

DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and:		
	$a=1.000E-02$, $b=3.994E-06$, $c=1.883$, $d=0.000$		
	H_{dc}	50	Oe
	Percent Initial Perm(nom.)	61.3	%
	Percent Initial Perm(min.)	52.9	%

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
		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
	Full Winding	Turns	95	146	227	351	543	840	1,300	2,012	3,114	4,820	7,459
		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

