

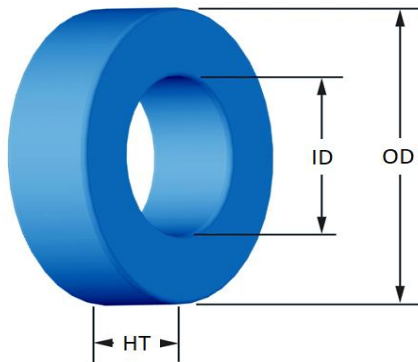


Part Number:

MS-185090-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	46.74	1.840
	(max.)	47.63	1.875
ID	(nom. - bare core)	28.70	1.130
	(min.)	27.89	1.098
HT	(nom. - bare core)	15.24	0.600
	(max.)	16.13	0.635
Mass	(approximate)	92	grams
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	1.34	cm ²
	L _e - Eff. Mag. Path Length	11.62	cm
	V _e - Eff. Core Volume	15.6	cm ³
	W _A - Min. Eff. Window Area	6.11	cm ²
	s _a - Surface Area	79.6	cm ²
	mlt - mean length per turn	6.59	cm
Inductance	μ _i (reference)	90	
	A _L value (nominal)	128	nH/N ²
	Test Winding	80 Turns	AWG# 20
	Frequency	10k	Hz
	Voltage on Agilent 4284A	0.48	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=3.994E-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	100 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	21	27	34	43	54	68	85	106	133	166	207
		Rdc(Ω)	2.8 m	5.8 m	11.7 m	23.5 m	46.8 m	93.8 m	186.5 m	369.9 m	738.1 m	1.5	2.9
Full Winding	Turns	32	49	77	119	184	284	440	680	1,053	1,630	2,523	
		Rdc(Ω)	4.3 m	10.6 m	26.4 m	64.9 m	159.6 m	391.8 m	965.4 m	2.4	5.8	14.4	35.4

