

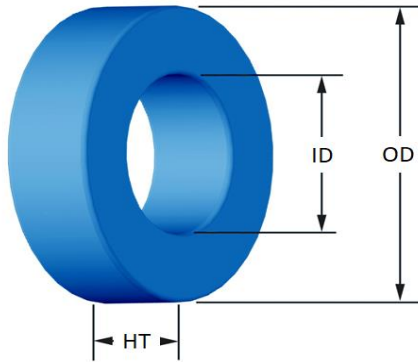


Part Number:

MS-108090-2

Revision:

2023-Dec-06



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

	mm	in
OD		
(nom. - bare core)	26.92	1.060
(max.)	27.69	1.090
ID		
(nom. - bare core)	14.73	0.580
(min.)	14.10	0.555
HT		
(nom. - bare core)	14.00	0.551
(max.)	15.00	0.591

Mass	(approximate)	31	grams
Magnetic Dimensions			
A_e - Eff. Mag. Cross Section	0.819	cm ²	
L_e - Eff. Mag. Path Length	6.35	cm	
V_e - Eff. Core Volume	5.20	cm ³	
W_A - Min. Eff. Window Area	1.56	cm ²	
s_a - Surface Area	31.7	cm ²	
mlt - mean length per turn	5.06	cm	

Inductance			
μ_i (reference)	90		
A_L value (nominal)	141	nH/N ²	
Test Winding	80 Turns	AWG#	26
Frequency	10k	Hz	
Voltage on Agilent 4284A	0.29	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	378	Pcs/Box	

Winding Table	Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
	Single Layer	Turns	12	16	20	26	33	41	52	66	82	103	129
	Full Winding	Turns	13	20	30	47	73	112	174	269	417	645	998
		Rdc(Ω)	2.0 m	4.2 m	8.4 m	17.3 m	35.0 m	69.1 m	139.3 m	281.3 m	555.8 m	1.1	2.2
		Rdc(Ω)	2.2 m	5.3 m	12.6 m	31.3 m	77.3 m	188.7 m	466.2 m	1.1	2.8	7.0	17.1

