

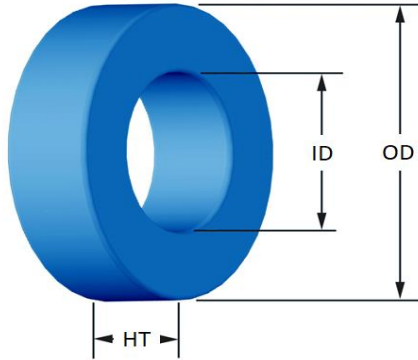


Part Number:

MS-300160-2

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)	12.70	0.500
(max.)	13.97	0.550

Mass	(approximate)	210	grams
Magnetic Dimensions			
A_e - Eff. Mag. Cross Section	1.77	cm ²	
L_e - Eff. Mag. Path Length	19.612	cm	
V_e - Eff. Core Volume	34.8	cm ³	
W_A - Min. Eff. Window Area	18.1	cm ²	
s_a - Surface Area	184	cm ²	
mlt - mean length per turn	8.29	cm	

Inductance			
μ_i (reference)	160		
A_L value (nominal)	182	nH/N ²	
Test Winding	120 Turns	AWG#	18
Frequency	10k	Hz	
Voltage on Agilent 4284A	0.94	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: $a=1.394E+10$, $b=1.034E+09$, $c=1.244E+07$, $d=4.007E-14$			
B_{pk}	1000	G	
frequency	50 k	Hz	
Core Loss (nominal)	276	mW/cm ³	
Core Loss (maximum)	318	mW/cm ³	

DC Saturation			
$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$			
where H expressed in oersteds, and: $a=1.000E-02$, $b=4.439E-05$, $c=1.627$, $d=0.000$			
H_{dc}	40	Oe	
Percent Initial Perm(nom.)	35.8	%	
Percent Initial Perm(min.)	29.3	%	

Coating/Pkg			
Coating Type:	Blue Epoxy		
Voltage Breakdown (min.)	1000	Vrms	
Limit	0.1 mA, 5 s		
Package Quantity	36	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)	16.2 m	39.6 m	97.9 m	240.7 m	592.1 m	1.5	3.6	8.8	21.7	53.5	131.6

