

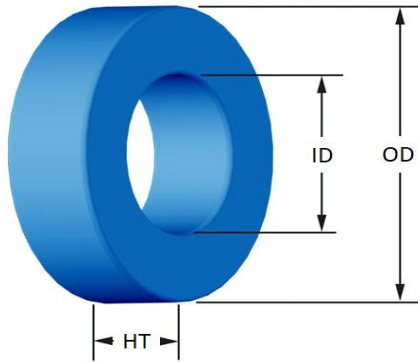


Part Number:

MS-400040-2

Revision:

2023-Dec-06



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

	mm	in
OD		
(nom. - bare core)	101.60	4.000
(max.)	102.87	4.050
ID		
(nom. - bare core)	57.15	2.250
(min.)	55.75	2.195
HT		
(nom. - bare core)	16.51	0.650
(max.)	17.78	0.700

Mass	(approximate)	470	grams
Magnetic Dimensions			
A_e - Eff. Mag. Cross Section	3.52	cm ²	
L_e - Eff. Mag. Path Length	24.271	cm	
V_e - Eff. Core Volume	85.5	cm ³	
W_A - Min. Eff. Window Area	24.4	cm ²	
s_a - Surface Area	303	cm ²	
m_{lt} - mean length per turn	11.1	cm	

Inductance			
μ_i (reference)	40		
A_L value (nominal)	75	nH/N ²	
Test Winding	140 Turns	AWG#	18
Frequency	10k	Hz	
Voltage on Agilent 4284A	2.2	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: $a=1.000E+06$, $b=6.961E+08$, $c=5.397E+06$, $d=4.127E-14$			
B_{pk}	1000	G	
frequency	50 k	Hz	
Core Loss (nominal)	441	mW/cm ³	
Core Loss (maximum)	507	mW/cm ³	

DC Saturation			
$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$			
where H expressed in oersteds, and: $a=1.000E-02$, $b=2.655E-06$, $c=1.703$, $d=0.000$			
H_{dc}	100	Oe	
Percent Initial Perm (nom.)	59.6	%	
Percent Initial Perm (min.)	52.0	%	

Coating/Pkg			
Coating Type:	Blue Epoxy		
Voltage Breakdown (min.)	1000	Vrms	
Limit	0.1 mA, 5 s		
Package Quantity	20 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	44	56	70	88	110	138	172	215	268	335	417
	Full Winding	Turns	128	198	306	474	733	1,135	1,756	2,719	4,208	6,512	10,079
		Rdc(Ω)	29.1 m	71.6 m	175.9 m	433.4 m	1.1	2.6	6.5	15.9	39.1	96.4	237.2

