

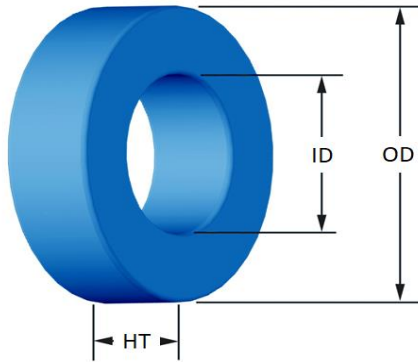


Part Number:

MS-520125-2

Revision:

2023-Dec-06



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

		mm	in
OD	(nom. - bare core)	132.54	5.218
	(max.)	134.21	5.284
ID	(nom. - bare core)	78.59	3.094
	(min.)	77.04	3.033
HT	(nom. - bare core)	20.32	0.800
	(max.)	21.72	0.855
Mass	(approximate)	1,020	grams
Magnetic Dimensions	A_e - Eff. Mag. Cross Section	5.35	cm ²
	L_e - Eff. Mag. Path Length	32.429	cm
	V_e - Eff. Core Volume	173	cm ³
	W_A - Min. Eff. Window Area	46.6	cm ²
	s_a - Surface Area	515	cm ²
	mlt - mean length per turn	13.9	cm
Inductance	μ_i (reference)	125	
	A_L value (nominal)	259	nH/N ²
	Test Winding	200 Turns	AWG# 18
	Frequency	10k	Hz
	Voltage on Agilent 4284A	4.8	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: $a=1.000E-02$, $b=3.798E-05$, $c=1.548$, $d=0.000$		
	H_{dc}	40	Oe
	Percent Initial Perm(nom.)	46.6	%
	Percent Initial Perm(min.)	39.7	%
Coating/Pkg	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	6 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	62	78	98	123	154	192	239	298	372	463	577
	Full Winding	Turns	244	378	584	905	1,400	2,167	3,354	5,191	8,035	12,436	19,248
		Rdc(Ω)	69.8 m	172.0 m	422.6 m	1.0	2.6	6.3	15.5	38.2	94.1	231.6	570.0

