



Part Number:

MS-300075-2

Revision:

2023-Dec-06



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

(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)	200	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)	75	
	A_L value (nominal)	85	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: $a=7.890E+09$, $b=7.111E+08$, $c=8.980E+06$, $d=2.846E-14$		
	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: $a=1.000E-02$, $b=3.414E-06$, $c=1.841$, $d=0.000$		
	H_{dc}	80	Oe
	Percent Initial Perm(nom.)	47.9	%
	Percent Initial Perm(min.)	39.6	%

Coating/Pkg	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

