



Part Number: **SH-028125-8**

Revision 20190403 - Generated 2019-Apr-04



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

OD	(nom. - bare core)	7.04 mm	0.277 in
	(max.)	7.67 mm	0.302 in
ID	(nom. - bare core)	3.96 mm	0.156 in
	(min.)	3.45 mm	0.136 in
HT	(nom. - bare core)	5.08 mm	0.200 in
	(max.)	5.72 mm	0.225 in
Mass	(approximate)	0.72 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0750 cm ²	
	L _e - Eff. Mag. Path Length	1.68 cm	
	V _e - Eff. Core Volume	0.126 cm ³	
	WA - Min. Eff. Window Area	0.0935 cm ²	
	sa - Surface Area	2.80 cm ²	
	mlt - mean length per turn	1.74 cm	
Inductance	μ _i (reference)	125	
	A _L value (nominal)	70 nH/N ²	
	Test Winding	N=40, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.013 V	
	AL tolerance	±12%	
Core Loss	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B _{pk} expressed in gauss, f expressed in hertz, and:		
	a=7.985E+09, b=1.378E+09, c=4.041E+06, d=7.891E-15		
	B _{pk}	1000 G	
	frequency	50 kHz	
Core Loss (nominal)	240 mW/cm ³		
Core Loss (maximum)	276 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=3.265E-05, c=1.587, d=0.000		
	H _{DC}	40 Oe	
	Percent Initial Perm(nom.)	46.8%	
Percent Initial Perm(min.)	39.7%		
Coating/Pkg	Coating Type:	Parylene N	
	Voltage Breakdown (min.)	500 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	12,600 Pcs/Box	

Winding Table	Wire Size	AWG	22	24	26	28	30	32	34	36	38	40	42
		mm	0.630	0.500	0.400	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063
	Single Layer	Turns	11	14	18	23	29	37	47	59	75	93	117
		Rdc(Ω)	10.1 m	20.5 m	41.9 m	85.1 m	170.7 m	346.3 m	699.6 m	1.4	2.8	5.6	11.1
Full Winding	Turns	10	16	25	39	60	92	143	222	343	531	821	
	Rdc(Ω)	9.2 m	23.4 m	58.2 m	144.3 m	353.1 m	861.1 m	2.1	5.3	12.9	31.8	78.2	

