



Part Number: **SH-018125-8**

Revision 20190403 - Generated 2019-Apr-04



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

OD	(nom. - bare core) (max.)	4.65 mm 5.21 mm	0.183 in 0.205 in
ID	(nom. - bare core) (min.)	2.36 mm 1.93 mm	0.093 in 0.076 in
HT	(nom. - bare core) (max.)	2.54 mm 3.30 mm	0.100 in 0.130 in
Mass	(approximate)	0.17 grams	
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	0.0285 cm ²	
	L _e - Eff. Mag. Path Length	1.06 cm	
	V _e - Eff. Core Volume	0.0302 cm ³	
	WA - Min. Eff. Window Area	0.0293 cm ²	
	sa - Surface Area	1.15 cm ²	
	mlt - mean length per turn	1.08 cm	
Inductance	μ _i (reference)	125	
	A _L value (nominal)	42 nH/N ²	
	Test Winding	N=30, #32 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.004 V	
	AL tolerance	±15%	
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	27,000 Pcs/Box	

Winding Table	Wire Size	AWG	28	30	32	34	36	38	40	42	44	-	-
		mm	0.315	0.250	0.200	0.160	0.125	0.100	0.080	0.063	0.050	-	-
	Single Layer	Turns	12	15	20	25	32	40	51	64	81	-	-
		Rdc(Ω)	27.7 m	55.1 m	116.8 m	232.1 m	472.6 m	939.5 m	1.9	3.8	7.7	-	-
Full Winding	Turns	12	19	29	45	69	107	166	257	398	-	-	
	Rdc(Ω)	27.7 m	69.8 m	169.3 m	417.9 m	1.0	2.5	6.2	15.3	37.6	-	-	

