



**Part Number:** **SH-250125-2**

Revision 20190403 - Generated 2019-Apr-04



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

<b>OD</b>	(nom. - bare core) (max.)	63.50 mm 64.77 mm	2.500 in 2.550 in
<b>ID</b>	(nom. - bare core) (min.)	31.37 mm 30.48 mm	1.235 in 1.200 in
<b>HT</b>	(nom. - bare core) (max.)	25.00 mm 25.90 mm	0.984 in 1.020 in
<b>Mass</b>	(approximate)	320 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	3.89 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	14.314 cm	
	V <sub>e</sub> - Eff. Core Volume	55.8 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	7.30 cm <sup>2</sup>	
	sa - Surface Area	150 cm <sup>2</sup>	
	mlt - mean length per turn	10.1 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	125	
	A <sub>L</sub> value (nominal)	430 nH/N <sup>2</sup>	
	Test Winding	N=100, #18 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	1.7 V	
	AL tolerance	±8%	
<b>Core Loss</b>	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B <sub>pk</sub> 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 <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	240 mW/cm <sup>3</sup>	
Core Loss (maximum)	276 mW/cm <sup>3</sup>		
<b>DC Saturation</b>	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.000E-02, b=3.265E-05, c=1.587, d=0.000		
	H <sub>DC</sub>	40 Oe	
	Percent Initial Perm(nom.)	46.8%	
Percent Initial Perm(min.)	39.7%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	27 Pcs/Box	

<b>Winding Table</b>	<b>Wire Size</b>	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
	<b>Single Layer</b>	Turns	23	29	37	47	59	74	93	116	145	182	227
		Rdc(Ω)	4.8 m	9.6 m	19.5 m	39.4 m	78.6 m	156.9 m	313.5 m	622.0 m	1.2	2.5	4.9
<b>Full Winding</b>	Turns	38	59	91	142	219	339	525	813	1,258	1,947	3,013	
	Rdc(Ω)	7.9 m	19.6 m	48.0 m	119.0 m	291.9 m	718.6 m	1.8	4.4	10.7	26.4	65.0	

