



**Part Number:** **HF-184147-2**  
 Revision 20160816 - Generated 2016-Aug-16



<b>OD</b>	(nom. - bare core) (max. - after coating)	46.74 mm 47.63 mm	1.840 in 1.875 in
<b>ID</b>	(nom. - bare core) (min. - after coating)	24.13 mm 23.32 mm	0.950 in 0.918 in
<b>Ht</b>	(nom. - bare core) (max. - after coating)	18.03 mm 18.92 mm	0.710 in 0.745 in
<b>Mass</b>	(approximate)	160 grams	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	1.99 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	10.743 cm	
	V <sub>e</sub> - Eff. Core Volume	21.4 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	4.27 cm <sup>2</sup>	
	sa - Surface Area	81.7 cm <sup>2</sup>	
	mlt - mean length per turn	7.38 cm	
<b>Inductance</b>	μ <sub>i</sub> (reference)	147	
	A <sub>L</sub> value (nominal)	330 nH/N <sup>2</sup>	
	Test Winding	N=70, #20 AWG	
	Frequency	10 kHz	
	Voltage on Agilent 4284A	0.62 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=4.299E+10, b=6.671E+08, c=3.114E+06, d=8.003E-14		
	B <sub>pk</sub>	1000 G	
	frequency	50 kHz	
	Core Loss (nominal)	509 mW/cm <sup>3</sup>	
Core Loss (maximum)	585 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=1.248E-06, c=2.169, d=0.000		
	H <sub>DC</sub>	40 Oe	
	Percent Initial Perm.(nom.)	72.9%	
Percent Initial Perm.(min.)	64.4%		
<b>Coating/Pkg</b>	Coating Type:	Blue Epoxy	
	Voltage Breakdown (min.)	1000 Vrms	
	Limit	0.1 mA, 5 s	
	Package Quantity	100 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	17	22	28	35	45	56	70	88	111	138	173
		Rdc(Ω)	2.6 m	5.3 m	10.7 m	21.4 m	43.7 m	86.5 m	171.9 m	343.7 m	689.5 m	1.4	2.7
<b>Full Winding</b>	Turns	22	35	54	83	128	199	307	476	736	1,139	1,764	
	Rdc(Ω)	3.3 m	8.4 m	20.7 m	50.7 m	124.3 m	307.3 m	753.9 m	1.9	4.6	11.3	27.7	

