



Part Number: **E187-8**
Revision 20160713 - Generated 2016-Aug-15



A	47.37 ± 0.38 mm	1.865 ± 0.015 in
B	19.71 ± 0.20 mm	0.776 ± 0.008 in
C	15.75 ± 0.25 mm	0.620 ± 0.010 in
D	12.09 mm (nom.)	0.476 in (nom.)
E	31.75 mm (nom.)	1.250 in (nom.)
F	15.75 ± 0.18 mm	0.620 ± 0.007 in
Mass	(approximate)	76 grams/half
Magnetic Dimensions	A _e - Eff. Mag. Cross Section	2.48 cm ²
	L _e - Eff. Mag. Path Length	9.53 cm
	V _e - Eff. Core Volume	23.3 cm ³
	WA - Min. Eff. Window Area	1.91 cm ²
	sa - Surface Area	73.6 cm ²
	mlt - mean length per turn	9.50 cm
	Inductance	μ _i (reference)
A _L value (nominal)		144 nH/N ²
Test Winding		N=100, #20 AWG
Frequency		10 kHz
Voltage on Agilent 4284A		1.1 V
A _L tolerance		±10%
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=1.90E+09, b=2.00E+08, c=9.00E+05, d=5.00E-15	
	B _{pk}	140 G
	frequency	100 kHz
	Core Loss (nominal)	32 mW/cm ³
Core Loss (maximum)	36 mW/cm ³	
DC Saturation	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$	
	where H expressed in oersteds, and: a=1.00E-02, b=3.49E-06, c=1.43, d=0.00	
	H _{DC}	200 Oe
	Percent Initial Perm(nom.)	60.1%
Percent Initial Perm(min.)	53.7%	
Coating/Pkg	Coating Type:	None, Yellow/Red Stripes
	Voltage Breakdown (min.)	N/A
	Limit	N/A
	Package Quantity	240 Halves/Box

Winding Table	Wire Size	AWG	10	12	14	16	18	20	22	24	26	28	30
		mm	2.500	2.000	1.600	1.250	1.000	0.800	0.630	0.500	0.400	0.315	0.250
	Full Winding	Turns	16	25	38	59	92	142	219	340	526	814	1,259
		Rdc(Ω)	5.0 m	12.4 m	29.9 m	73.7 m	182.8 m	448.8 m	1.1	2.7	6.7	16.5	40.5

