



**Part Number:** **E305-52**

Revision 20190524 - Generated 2019-May-30



<b>A</b>	77.50 ± 0.76 mm	3.051 ± 0.030 in	
<b>B</b>	38.76 ± 0.38 mm	1.526 ± 0.015 in	
<b>C</b>	23.70 ± 0.38 mm	0.933 ± 0.015 in	
<b>D</b>	26.90 mm (nom.)	1.059 in (nom.)	
<b>E</b>	53.80 mm (nom.)	2.118 in (nom.)	
<b>F</b>	23.70 ± 0.38 mm	0.933 ± 0.015 in	
<b>Mass</b>	(approximate)	360 grams/half	
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	5.62 cm <sup>2</sup>	
	L <sub>e</sub> - Eff. Mag. Path Length	18.5 cm	
	V <sub>e</sub> - Eff. Core Volume	104 cm <sup>3</sup>	
	WA - Min. Eff. Window Area	7.99 cm <sup>2</sup>	
	sa - Surface Area	226 cm <sup>2</sup>	
<b>Inductance</b>	mlt - mean length per turn	15.5 cm	
	μ <sub>i</sub> (reference)	75	
	A <sub>L</sub> value (nominal)	287 nH/N <sup>2</sup>	
	Test Winding	N=100, #16 AWG	
	Frequency	10 kHz	
<b>Core Loss</b>	Voltage on Agilent 4284A	2.5 V	
	A <sub>L</sub> tolerance	±10%	
	$\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$		
	where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and: a=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14		
	B <sub>pk</sub>	140 G	
<b>DC Saturation</b>	frequency	100 kHz	
	Core Loss (nominal)	58 mW/cm <sup>3</sup>	
	Core Loss (maximum)	67 mW/cm <sup>3</sup>	
	$\% \mu_i = \frac{1}{a + b \cdot H^c} + d$		
	where H expressed in oersteds, and: a=1.00E-02, b=4.66E-06, c=1.84, d=0.00		
<b>Coating/Pkg</b>	H <sub>DC</sub>	50 Oe	
	Percent Initial Perm(nom.)	61.6%	
	Percent Initial Perm(min.)	53.4%	
	Coating Type:	None, Green/Blue Stripes	
	Voltage Breakdown (min.)	N/A	
<b>Winding Table</b>	Limit	N/A	
	Package Quantity	48 Halves/Box	
	<b>Wire Size</b>	AWG	8
		mm	3.150
	<b>Full Winding</b>	Turns	43
	Rdc(Ω)	13.7 m	
		10	
		12	
		14	
		16	
		18	
		20	
		22	
		24	
		26	
		28	
		2.000	
		1.600	
		1.250	
		1.000	
		0.800	
		0.630	
		0.500	
		0.400	
		0.315	
		103	
		160	
		247	
		383	
		592	
		917	
		1,419	
		2,197	
		3,400	
		83.0 m	
		205.1 m	
		503.6 m	
		1.2	
		3.1	
		7.5	
		18.5	
		45.6	
		112.2	

