



**Part Number:** **E168-52A**  
Revision 20160713 - Generated 2016-Aug-15



<b>A</b>	42.80 ± 0.38 mm	1.685 ± 0.015 in
<b>B</b>	21.08 ± 0.20 mm	0.830 ± 0.008 in
<b>C</b>	19.99 ± 0.25 mm	0.787 ± 0.010 in
<b>D</b>	15.37 mm (nom.)	0.605 in (nom.)
<b>E</b>	30.73 mm (nom.)	1.210 in (nom.)
<b>F</b>	12.07 ± 0.18 mm	0.475 ± 0.007 in
<b>Mass</b>	(approximate)	86 grams/half
<b>Magnetic Dimensions</b>	A <sub>e</sub> - Eff. Mag. Cross Section	2.41 cm <sup>2</sup>
	L <sub>e</sub> - Eff. Mag. Path Length	10.4 cm
	V <sub>e</sub> - Eff. Core Volume	24.6 cm <sup>3</sup>
	WA - Min. Eff. Window Area	2.84 cm <sup>2</sup>
	sa - Surface Area	81.5 cm <sup>2</sup>
	mlt - mean length per turn	10.1 cm
<b>Inductance</b>	μ <sub>i</sub> (reference)	75
	A <sub>L</sub> value (nominal)	230 nH/N <sup>2</sup>
	Test Winding	N=100, #18 AWG
	Frequency	10 kHz
	Voltage on Agilent 4284A	1.1 V
	A <sub>L</sub> tolerance	±10%
<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=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14	
	B <sub>pk</sub>	140 G
	frequency	100 kHz
	Core Loss (nominal)	58 mW/cm <sup>3</sup>
Core Loss (maximum)	67 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=1.00E-02, b=4.66E-06, c=1.84, d=0.00	
	H <sub>DC</sub>	50 Oe
	Percent Initial Perm(nom.)	61.6%
Percent Initial Perm(min.)	53.4%	
<b>Coating/Pkg</b>	Coating Type:	None, Green/Blue Stripes
	Voltage Breakdown (min.)	N/A
	Limit	N/A
	Package Quantity	150 Halves/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>Full Winding</b>	Turns	15	24	37	57	88	136	211	326	505	781	1,209
		Rdc(Ω)	3.1 m	8.0 m	19.5 m	47.8 m	117.4 m	288.6 m	712.2 m	1.7	4.3	10.6	26.1

