



Part Number: **E118-52**

Revision 20190524 - Generated 2019-May-30



| | | | | | | | | | | | | | |
|----------------------------|--|--------------------------|--------|--------|--------|---------|---------|-------|-------|-------|-------|-------|-------|
| A | 30.10 ± 0.25 mm | 1.185 ± 0.010 in | | | | | | | | | | | |
| B | 15.06 ± 0.13 mm | 0.593 ± 0.005 in | | | | | | | | | | | |
| C | 7.06 ± 0.13 mm | 0.278 ± 0.005 in | | | | | | | | | | | |
| D | 9.93 mm (nom.) | 0.391 in (nom.) | | | | | | | | | | | |
| E | 19.86 mm (nom.) | 0.782 in (nom.) | | | | | | | | | | | |
| F | 7.06 ± 0.13 mm | 0.278 ± 0.005 in | | | | | | | | | | | |
| Mass | (approximate) | 16 grams/half | | | | | | | | | | | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 0.498 cm ² | | | | | | | | | | | |
| | L _e - Eff. Mag. Path Length | 7.14 cm | | | | | | | | | | | |
| | V _e - Eff. Core Volume | 4.60 cm ³ | | | | | | | | | | | |
| | WA - Min. Eff. Window Area | 1.26 cm ² | | | | | | | | | | | |
| | sa - Surface Area | 31.7 cm ² | | | | | | | | | | | |
| Inductance | mlt - mean length per turn | 5.38 cm | | | | | | | | | | | |
| | μ _i (reference) | 75 | | | | | | | | | | | |
| | A _L value (nominal) | 90 nH/N ² | | | | | | | | | | | |
| | Test Winding | N=100, #20 AWG | | | | | | | | | | | |
| | Frequency | 10 kHz | | | | | | | | | | | |
| Core Loss | Voltage on Agilent 4284A | 0.22 V | | | | | | | | | | | |
| | A _L 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 _{pk} 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 _{pk} | 140 G | | | | | | | | | | | |
| DC Saturation | frequency | 100 kHz | | | | | | | | | | | |
| | Core Loss (nominal) | 58 mW/cm ³ | | | | | | | | | | | |
| | Core Loss (maximum) | 67 mW/cm ³ | | | | | | | | | | | |
| | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$ | | | | | | | | | | | | |
| | where H expressed in oersteds, and: a=1.00E-02, b=4.66E-06, c=1.84, d=0.00 | | | | | | | | | | | | |
| Coating/Pkg | H _{DC} | 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 | | | | | | | | | | | |
| Winding Table | Limit | N/A | | | | | | | | | | | |
| | Package Quantity | 1,225 Halves/Box | | | | | | | | | | | |
| | Wire Size | AWG | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 |
| | | mm | 2.000 | 1.600 | 1.250 | 1.000 | 0.800 | 0.630 | 0.500 | 0.400 | 0.315 | 0.250 | 0.200 |
| | Full Winding | Turns | 16 | 25 | 39 | 60 | 93 | 144 | 223 | 346 | 535 | 829 | 1,282 |
| | Rdc(Ω) | 4.5 m | 11.1 m | 27.6 m | 67.6 m | 166.6 m | 410.3 m | 1.0 | 2.5 | 6.1 | 15.1 | 37.2 | |

