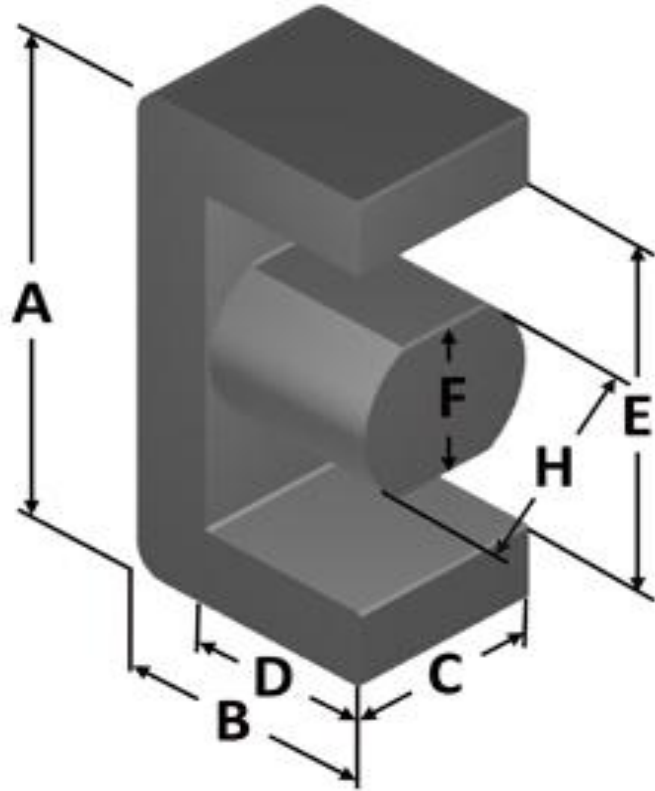




Part Number: **EM169-52**
 Revision 20190524 - Generated 2019-May-30



| | | |
|----------------------------|--|--------------------------|
| A | 42.80 ± 0.38 mm | 1.685 ± 0.015 in |
| B | 21.01 ± 0.19 mm | 0.827 ± 0.008 in |
| C | 19.46 ± 0.25 mm | 0.766 ± 0.010 in |
| D | 15.29 mm (nom.) | 0.602 in (nom.) |
| E | 34.54 mm (nom.) | 1.360 in (nom.) |
| F | 14.73 ± 0.25 mm | 0.580 ± 0.010 in |
| H | 14.73 ± 0.38 mm | 0.580 ± 0.015 in |
| Mass | (approximate) | 62 grams/half |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 1.79 cm ² |
| | L _e - Eff. Mag. Path Length | 9.90 cm |
| | V _e - Eff. Core Volume | 17.7 cm ³ |
| | WA - Min. Eff. Window Area | 2.99 cm ² |
| | sa - Surface Area | 81.9 cm ² |
| | mlt - mean length per turn | 10.8 cm |
| Inductance | μ _i (reference) | 75 |
| | A _L value (nominal) | 151 nH/N ² |
| | Test Winding | N=100, #18 AWG |
| | Frequency | 10 kHz |
| | Voltage on Agilent 4284A | 0.79 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=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14 | |
| | B _{pk} | 140 G |
| | frequency | 100 kHz |
| | Core Loss (nominal) | 58 mW/cm ³ |
| Core Loss (maximum) | 67 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=4.66E-06, c=1.84, d=0.00 | |
| | H _{DC} | 50 Oe |
| | Percent Initial Perm(nom.) | 61.6% |
| Percent Initial Perm(min.) | 53.4% | |
| Coating/Pkg | Coating Type: | None, Green/Blue Stripes |
| | Voltage Breakdown (min.) | N/A |
| | Limit | N/A |
| | Package Quantity | 155 Halves/Box |

| | | | | | | | | | | | | | |
|----------------------|---------------------|--------|-------|-------|--------|--------|---------|---------|---------|-------|-------|-------|-------|
| Winding Table | Wire Size | 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 |
| | Full Winding | Turns | 16 | 25 | 39 | 60 | 93 | 143 | 222 | 343 | 531 | 822 | 1,272 |
| | | Rdc(Ω) | 3.6 m | 8.8 m | 21.9 m | 53.6 m | 132.1 m | 323.1 m | 797.7 m | 2.0 | 4.8 | 11.9 | 29.2 |

