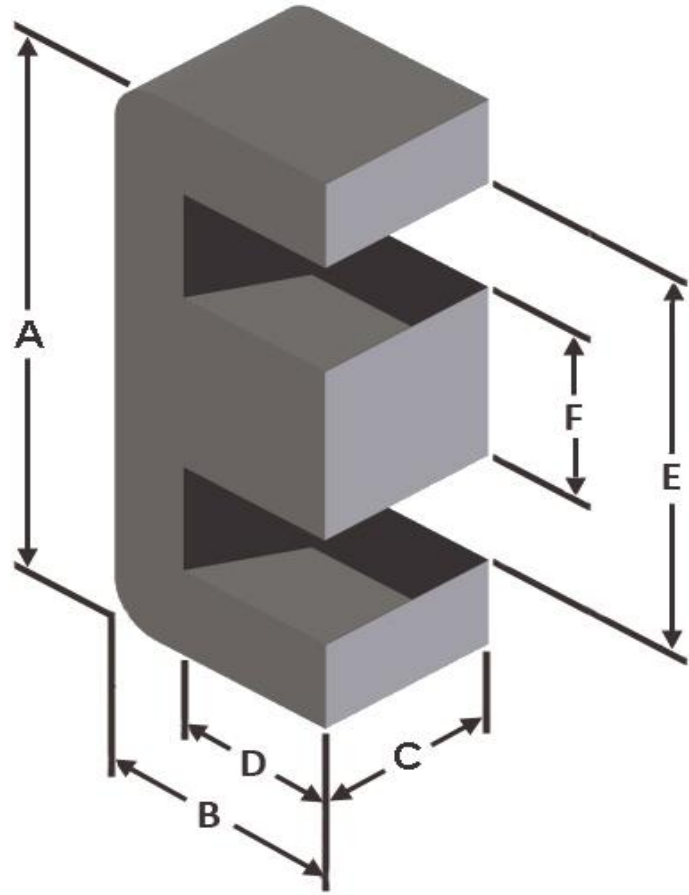




**Part Number:** **E99-2**

Revision 20190524 - Generated 2019-May-30



|                            |  |                       |        |        |         |         |         |       |       |       |       |       |       |
|----------------------------|--|-----------------------|--------|--------|---------|---------|---------|-------|-------|-------|-------|-------|-------|
| <b>A</b>                   | 25.40 ± 0.25 mm  | 1.000 ± 0.010 in      |        |        |         |         |         |       |       |       |       |       |       |
| <b>B</b>                   | 12.70 ± 0.13 mm  | 0.500 ± 0.005 in      |        |        |         |         |         |       |       |       |       |       |       |
| <b>C</b>                   | 7.29 ± 0.13 mm   | 0.287 ± 0.005 in      |        |        |         |         |         |       |       |       |       |       |       |
| <b>D</b>                   | 8.76 mm (nom.)   | 0.345 in (nom.)       |        |        |         |         |         |       |       |       |       |       |       |
| <b>E</b>                   | 17.65 mm (nom.)  | 0.695 in (nom.)       |        |        |         |         |         |       |       |       |       |       |       |
| <b>F</b>                   | 7.29 ± 0.13 mm   | 0.287 ± 0.005 in      |        |        |         |         |         |       |       |       |       |       |       |
| <b>Mass</b>                | (approximate)  | 8.5 grams/half        |        |        |         |         |         |       |       |       |       |       |       |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section   | 0.548 cm <sup>2</sup> |        |        |         |         |         |       |       |       |       |       |       |
|                            | L <sub>e</sub> - Eff. Mag. Path Length   | 6.08 cm               |        |        |         |         |         |       |       |       |       |       |       |
|                            | V <sub>e</sub> - Eff. Core Volume  | 3.38 cm <sup>3</sup>  |        |        |         |         |         |       |       |       |       |       |       |
|                            | WA - Min. Eff. Window Area   | 0.897 cm <sup>2</sup> |        |        |         |         |         |       |       |       |       |       |       |
|                            | sa - Surface Area  | 24.0 cm <sup>2</sup>  |        |        |         |         |         |       |       |       |       |       |       |
| <b>Inductance</b>          | mlt - mean length per turn   | 4.99 cm               |        |        |         |         |         |       |       |       |       |       |       |
|                            | μ <sub>i</sub> (reference)   | 10                    |        |        |         |         |         |       |       |       |       |       |       |
|                            | A <sub>L</sub> value (nominal)   | 24 nH/N <sup>2</sup>  |        |        |         |         |         |       |       |       |       |       |       |
|                            | Test Winding   | N=100, #22 AWG        |        |        |         |         |         |       |       |       |       |       |       |
|                            | Frequency  | 10 kHz                |        |        |         |         |         |       |       |       |       |       |       |
| <b>Core Loss</b>           | Voltage on Agilent 4284A   | 0.24 V                |        |        |         |         |         |       |       |       |       |       |       |
|                            | A <sub>L</sub> tolerance   | ±5%                   |        |        |         |         |         |       |       |       |       |       |       |
|                            | $\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$ |                       |        |        |         |         |         |       |       |       |       |       |       |
|                            | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and:<br>a=4.00E+09, b=3.00E+08, c=2.70E+06, d=9.60E-16                             |                       |        |        |         |         |         |       |       |       |       |       |       |
|                            | B <sub>pk</sub>  | 140 G                 |        |        |         |         |         |       |       |       |       |       |       |
| <b>DC Saturation</b>       | frequency  | 100 kHz               |        |        |         |         |         |       |       |       |       |       |       |
|                            | Core Loss (nominal)  | 18 mW/cm <sup>3</sup> |        |        |         |         |         |       |       |       |       |       |       |
|                            | Core Loss (maximum)  | 20 mW/cm <sup>3</sup> |        |        |         |         |         |       |       |       |       |       |       |
|                            | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$   |                       |        |        |         |         |         |       |       |       |       |       |       |
|                            | where H expressed in oersteds, and:<br>a=1.00E-02, b=1.83E-07, c=1.46, d=0.00  |                       |        |        |         |         |         |       |       |       |       |       |       |
| <b>Coating/Pkg</b>         | H <sub>DC</sub>  | 200 Oe                |        |        |         |         |         |       |       |       |       |       |       |
|                            | Percent Initial Perm(nom.)   | 95.9%                 |        |        |         |         |         |       |       |       |       |       |       |
|                            | Percent Initial Perm(min.)   | 94.8%                 |        |        |         |         |         |       |       |       |       |       |       |
|                            | Coating Type:  | None                  |        |        |         |         |         |       |       |       |       |       |       |
|                            | Voltage Breakdown (min.)   | N/A                   |        |        |         |         |         |       |       |       |       |       |       |
| <b>Winding Table</b>       | Limit  | N/A                   |        |        |         |         |         |       |       |       |       |       |       |
|                            | Package Quantity   | 1,500 Halves/Box      |        |        |         |         |         |       |       |       |       |       |       |
|                            | <b>Wire Size</b>   | AWG                   | 14     | 16     | 18      | 20      | 22      | 24    | 26    | 28    | 30    | 32    | 34    |
|                            |  | mm                    | 1.600  | 1.250  | 1.000   | 0.800   | 0.630   | 0.500 | 0.400 | 0.315 | 0.250 | 0.200 | 0.160 |
|                            | <b>Full Winding</b>  | Turns                 | 18     | 28     | 43      | 66      | 103     | 159   | 246   | 382   | 590   | 914   | 1,414 |
| Rdc(Ω)                     |  | 7.4 m                 | 18.4 m | 44.9 m | 109.5 m | 271.9 m | 667.5 m | 1.6   | 4.1   | 10.0  | 24.5  | 60.4  |       |

