



**Part Number:** EMS-0432111-075

Revision 20160816 - Generated 2016-Aug-16



|                            |  |                        |
|----------------------------|--|------------------------|
| <b>A</b>                   | 42.8 ± 0.64 mm   | 1.685 ± 0.025 in       |
| <b>B</b>                   | 21.1 ± 0.33 mm   | 0.831 ± 0.013 in       |
| <b>C</b>                   | 10.8 ± 0.25 mm   | 0.425 ± 0.010 in       |
| <b>D</b>                   | 15 mm (min.)   | 0.591 in (min.)        |
| <b>E</b>                   | 30.4 mm (min.)   | 1.197 in (min.)        |
| <b>F</b>                   | 11.9 ± 0.25 mm   | 0.469 ± 0.010 in       |
| <b>Mass</b>                | (approximate)  | 37 grams/half          |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section   | 1.28 cm <sup>2</sup>   |
|                            | L <sub>e</sub> - Eff. Mag. Path Length   | 9.84 cm                |
|                            | V <sub>e</sub> - Eff. Core Volume  | 12.6 cm <sup>3</sup>   |
|                            | WA - Min. Eff. Window Area   | 2.74 cm <sup>2</sup>   |
|                            | sa - Surface Area  | 65.7 cm <sup>2</sup>   |
|                            | mlt - mean length per turn   | 8.24 cm                |
| <b>Inductance</b>          | μ <sub>i</sub> (reference)   | 75                     |
|                            | A <sub>L</sub> value (nominal)   | 139 nH/N <sup>2</sup>  |
|                            | Test Winding   | N=100, #18 AWG         |
|                            | Frequency  | 10 kHz                 |
|                            | Voltage on Agilent 4284A   | 0.57 V                 |
| A <sub>L</sub> tolerance   | ±8%  |                        |
| <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:<br>a=7.89E+09, b=7.11E+08, c=8.98E+06, d=2.85E-14                             |                        |
|                            | B <sub>pk</sub>  | 1000 G                 |
|                            | frequency  | 50 kHz                 |
|                            | Core Loss (nominal)  | 323 mW/cm <sup>3</sup> |
| Core Loss (maximum)        | 372 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:<br>a=0.01, b=3.41E-06, c=1.84, d=0.00  |                        |
|                            | H <sub>DC</sub>  | 50 Oe                  |
|                            | Percent Initial Perm(nom.)   | 68.6%                  |
| Percent Initial Perm(min.) | 60.9%  |                        |
| <b>Coating/Pkg</b>         | Coating Type:  | None                   |
|                            | Voltage Breakdown (min.)   | N/A                    |
|                            | Limit  | N/A                    |
|                            | Package Quantity   | 210 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    | 23     | 35     | 55     | 85      | 131     | 203   | 314   | 486   | 752   | 1,164 |
|                      | Rdc(Ω)              | 2.5 m | 6.2 m | 15.0 m | 37.5 m | 92.1 m | 225.8 m | 556.5 m | 1.4   | 3.4   | 8.3   | 20.4  |       |

