



Part Number: **MP-521147-2**
 Revision 20160816 - Generated 2016-Aug-16



| | | | |
|-----------------------------|--|------------------------|----------|
| OD | (nom. - bare core) | 132.54 mm | 5.218 in |
| | (max. - after coating) | 134.21 mm | 5.284 in |
| ID | (nom. - bare core) | 78.59 mm | 3.094 in |
| | (min. - after coating) | 77.04 mm | 3.033 in |
| Ht | (nom. - bare core) | 25.40 mm | 1.000 in |
| | (max. - after coating) | 26.80 mm | 1.055 in |
| Mass | (approximate) | 1,700 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 6.71 cm ² | |
| | L _e - Eff. Mag. Path Length | 32.429 cm | |
| | V _e - Eff. Core Volume | 218 cm ³ | |
| | WA - Min. Eff. Window Area | 46.6 cm ² | |
| | sa - Surface Area | 540 cm ² | |
| | mlt - mean length per turn | 14.9 cm | |
| Inductance | μ _i (reference) | 147 | |
| | A _L value (nominal) | 382 nH/N ² | |
| | Test Winding | N=200, #18 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 6.0 V | |
| AL tolerance | ±8% | | |
| 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=3.167E+10, b=1.206E+09, c=9.656E+06, d=5.636E-14 | | |
| | B _{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 312 mW/cm ³ | |
| Core Loss (maximum) | 359 mW/cm ³ | | |
| DC Saturation | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$ | | |
| | where H expressed in oersteds, and: a=1.000E-02, b=1.089E-05, c=1.874, d=0.000 | | |
| | H _{DC} | 40 Oe | |
| | Percent Initial Perm.(nom.) | 47.8% | |
| Percent Initial Perm.(min.) | 39.4% | | |
| Coating/Pkg | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 4 Pcs/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 |
| | Single Layer | Turns | 62 | 78 | 98 | 123 | 154 | 192 | 239 | 298 | 372 | 463 | 577 |
| | | Rdc(Ω) | 19.0 m | 38.1 m | 76.1 m | 151.9 m | 302.4 m | 599.6 m | 1.2 | 2.4 | 4.7 | 9.3 | 18.3 |
| Full Winding | Turns | 244 | 378 | 584 | 905 | 1,400 | 2,167 | 3,354 | 5,191 | 8,035 | 12,436 | 19,248 | |
| | Rdc(Ω) | 74.9 m | 184.5 m | 453.4 m | 1.1 | 2.7 | 6.8 | 16.7 | 41.0 | 100.9 | 248.5 | 611.6 | |

