



Part Number: MP-184125-2
Revision 20160816 - Generated 2016-Aug-16



| | | | |
|-----------------------------|--|------------------------|----------------------|
| OD | (nom. - bare core) (max. - after coating) | 46.74 mm 47.63 mm | 1.840 in 1.875 in |
| ID | (nom. - bare core) (min. - after coating) | 24.13 mm 23.32 mm | 0.950 in 0.918 in |
| Ht | (nom. - bare core) (max. - after coating) | 18.03 mm 18.92 mm | 0.710 in 0.745 in |
| Mass | (approximate) | 170 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 1.99 cm ² | |
| | L _e - Eff. Mag. Path Length | 10.743 cm | |
| | V _e - Eff. Core Volume | 21.4 cm ³ | |
| | WA - Min. Eff. Window Area | 4.27 cm ² | |
| | sa - Surface Area | 81.7 cm ² | |
| | mlt - mean length per turn | 7.38 cm | |
| Inductance | μ _i (reference) | 125 | |
| | A _L value (nominal) | 281 nH/N ² | |
| | Test Winding | N=70, #20 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.62 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=2.193E+10, b=1.308E+09, c=9.301E+06, d=3.087E-14 | | |
| | B _{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 249 mW/cm ³ | |
| Core Loss (maximum) | 286 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=7.875E-06, c=1.874, d=0.000 | | |
| | H _{DC} | 40 Oe | |
| | Percent Initial Perm.(nom.) | 55.8% | |
| Percent Initial Perm.(min.) | 47.3% | | |
| Coating/Pkg | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 100 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 | 17 | 22 | 28 | 35 | 45 | 56 | 70 | 88 | 111 | 138 | 173 |
| | | Rdc(Ω) | 2.6 m | 5.3 m | 10.7 m | 21.4 m | 43.7 m | 86.5 m | 171.9 m | 343.7 m | 689.5 m | 1.4 | 2.7 |
| Full Winding | Turns | 22 | 35 | 54 | 83 | 128 | 199 | 307 | 476 | 736 | 1,139 | 1,764 | |
| | Rdc(Ω) | 3.3 m | 8.4 m | 20.7 m | 50.7 m | 124.3 m | 307.3 m | 753.9 m | 1.9 | 4.6 | 11.3 | 27.7 | |

