



Part Number: MP-028125-8
Revision 20160816 - Generated 2016-Aug-16



| | | | |
|----------------------------|--|------------------------|----------|
| OD | (nom. - bare core) | 7.04 mm | 0.277 in |
| | (max. - after coating) | 7.67 mm | 0.302 in |
| ID | (nom. - bare core) | 3.96 mm | 0.156 in |
| | (min. - after coating) | 3.45 mm | 0.136 in |
| Ht | (nom. - bare core) | 5.08 mm | 0.200 in |
| | (max. - after coating) | 5.72 mm | 0.225 in |
| Mass | (approximate) | 0.98 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 0.0750 cm ² | |
| | L _e - Eff. Mag. Path Length | 1.68 cm | |
| | V _e - Eff. Core Volume | 0.126 cm ³ | |
| | WA - Min. Eff. Window Area | 0.0937 cm ² | |
| | sa - Surface Area | 2.80 cm ² | |
| | mlt - mean length per turn | 1.74 cm | |
| Inductance | μ _i (reference) | 125 | |
| | A _L value (nominal) | 70 nH/N ² | |
| | Test Winding | N=40, #32 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.013 V | |
| Core Loss | 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 | |
| DC Saturation | 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 | |
| Coating/Pkg | Percent Initial Perm.(nom.) | 55.8% | |
| | Percent Initial Perm.(min.) | 47.3% | |
| Coating/Pkg | Coating Type: | Parylene N | |
| | Voltage Breakdown (min.) | 500 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 12,600 Pcs/Box | |

| | | | | | | | | | | | | | |
|----------------------|---------------------|--------|--------|--------|---------|---------|---------|---------|---------|-------|-------|-------|-------|
| Winding Table | Wire Size | AWG | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 |
| | | mm | 0.630 | 0.500 | 0.400 | 0.315 | 0.250 | 0.200 | 0.160 | 0.125 | 0.100 | 0.080 | 0.063 |
| | Single Layer | Turns | 11 | 14 | 18 | 23 | 29 | 37 | 47 | 59 | 75 | 93 | 117 |
| | | Rdc(Ω) | 10.1 m | 20.5 m | 41.9 m | 85.1 m | 170.7 m | 346.3 m | 699.6 m | 1.4 | 2.8 | 5.6 | 11.1 |
| Full Winding | Turns | 10 | 16 | 25 | 39 | 60 | 92 | 143 | 222 | 343 | 531 | 821 | |
| | Rdc(Ω) | 9.2 m | 23.4 m | 58.2 m | 144.3 m | 353.1 m | 861.1 m | 2.1 | 5.3 | 12.9 | 31.8 | 78.2 | |

