



Part Number: MS-133125-2
Revision 20160816 - Generated 2016-Aug-16



| | | | |
|-----------------------------|--|-------------------------|----------------------|
| OD | (nom. - bare core) (max. - after coating) | 33.02 mm 33.83 mm | 1.300 in 1.332 in |
| ID | (nom. - bare core) (min. - after coating) | 19.94 mm 19.30 mm | 0.785 in 0.760 in |
| Ht | (nom. - bare core) (max. - after coating) | 14.00 mm 15.00 mm | 0.551 in 0.591 in |
| Mass | (approximate) | 42 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 0.874 cm ² | |
| | L _e - Eff. Mag. Path Length | 8.15 cm | |
| | V _e - Eff. Core Volume | 7.12 cm ³ | |
| | WA - Min. Eff. Window Area | 2.93 cm ² | |
| | sa - Surface Area | 44.3 cm ² | |
| | mlt - mean length per turn | 5.42 cm | |
| Inductance | μ _i (reference) | 125 | |
| | A _L value (nominal) | 166.7 nH/N ² | |
| | Test Winding | N=70, #22 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.27 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=1.394E+10, b=1.034E+09, c=1.244E+07, d=4.007E-14 | | |
| | B _{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 276 mW/cm ³ | |
| Core Loss (maximum) | 318 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=7.884E-06, c=1.883, d=0.000 | | |
| | H _{DC} | 40 Oe | |
| | Percent Initial Perm (nom.) | 55.0% | |
| Percent Initial Perm (min.) | 46.4% | | |
| Coating/Pkg | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 384 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 | 14 | 18 | 22 | 29 | 36 | 46 | 58 | 73 | 91 | 114 | 142 |
| | | Rdc(Ω) | 1.6 m | 3.2 m | 6.2 m | 13.0 m | 25.7 m | 52.1 m | 104.6 m | 209.3 m | 414.9 m | 826.6 m | 1.6 |
| Full Winding | Turns | 15 | 24 | 37 | 57 | 88 | 136 | 211 | 326 | 504 | 780 | 1,208 | |
| | Rdc(Ω) | 1.7 m | 4.3 m | 10.4 m | 25.5 m | 62.7 m | 154.2 m | 380.4 m | 934.6 m | 2.3 | 5.7 | 13.9 | |

