



Part Number: **FS-031075-8**
 Revision 20160816 - Generated 2016-Aug-16



| | | | |
|-----------------------------|--|------------------------|----------|
| OD | (nom. - bare core) | 7.87 mm | 0.310 in |
| | (max. - after coating) | 8.51 mm | 0.335 in |
| ID | (nom. - bare core) | 3.96 mm | 0.156 in |
| | (min. - after coating) | 3.43 mm | 0.135 in |
| Ht | (nom. - bare core) | 3.18 mm | 0.125 in |
| | (max. - after coating) | 3.81 mm | 0.150 in |
| Mass | (approximate) | 0.76 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 0.0615 cm ² | |
| | L _e - Eff. Mag. Path Length | 1.79 cm | |
| | V _e - Eff. Core Volume | 0.110 cm ³ | |
| | WA - Min. Eff. Window Area | 0.0924 cm ² | |
| | sa - Surface Area | 2.65 cm ² | |
| | mlt - mean length per turn | 1.44 cm | |
| Inductance | μ _i (reference) | 75 | |
| | A _L value (nominal) | 31 nH/N ² | |
| | Test Winding | N=45, #32 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.012 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=1.883E+08, b=5.098E+08, c=1.162E+06, d=5.024E-14 | | |
| | B _{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 772 mW/cm ³ | |
| Core Loss (maximum) | 887 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=3.486E-06, c=1.682, d=0.000 | | |
| | H _{DC} | 80 Oe | |
| | Percent Initial Perm.(nom.) | 64.4% | |
| Percent Initial Perm.(min.) | 57.1% | | |
| Coating/Pkg | Coating Type: | Parylene N | |
| | Voltage Breakdown (min.) | 500 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 14,400 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 | 74 | 93 | 116 |
| | | Rdc(Ω) | 8.4 m | 17.0 m | 34.7 m | 70.6 m | 141.5 m | 287.1 m | 580.1 m | 1.2 | 2.3 | 4.6 | 9.2 |
| Full Winding | Turns | 10 | 16 | 25 | 38 | 59 | 91 | 141 | 219 | 339 | 524 | 812 | |
| | Rdc(Ω) | 7.6 m | 19.4 m | 48.2 m | 116.6 m | 287.9 m | 706.2 m | 1.7 | 4.3 | 10.6 | 26.0 | 64.1 | |

