



Part Number: FS-014040-8

Revision 20190529 - Generated 2019-May-29



(If coated, Max./Min. includes coating)

| | | | |
|----------------------------|--|------------------------|----------|
| OD | (nom. - bare core) | 3.56 mm | 0.140 in |
| | (max.) | 3.76 mm | 0.148 in |
| ID | (nom. - bare core) | 1.78 mm | 0.070 in |
| | (min.) | 1.52 mm | 0.060 in |
| HT | (nom. - bare core) | 1.52 mm | 0.060 in |
| | (max.) | 1.73 mm | 0.068 in |
| Mass | (approximate) | 0.07 grams | |
| Magnetic Dimensions | A_e - Eff. Mag. Cross Section | 0.0137 cm ² | |
| | L_e - Eff. Mag. Path Length | 0.817 cm | |
| | V_e - Eff. Core Volume | 0.0107 cm ³ | |
| | WA - Min. Eff. Window Area | 0.0181 cm ² | |
| | sa - Surface Area | 0.523 cm ² | |
| | mlt - mean length per turn | 0.646 cm | |
| Inductance | μ_i (reference) | 40 | |
| | A_L value (nominal) | 9 nH/N ² | |
| | Test Winding | N=30, #36 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.002 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: $a=1.000E+06$, $b=3.071E+08$, $c=3.524E+06$, $d=5.634E-14$ | | |
| | B_{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 780 mW/cm ³ | |
| Core Loss (maximum) | 897 mW/cm ³ | | |
| DC Saturation | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$ | | |
| | where H expressed in oersteds, and: $a=1.000E-02$, $b=6.314E-08$, $c=2.151$, $d=0.000$ | | |
| | H_{DC} | 200 Oe | |
| | Percent Initial Perm(nom.) | 64.0% | |
| Percent Initial Perm(min.) | 54.5% | | |
| Coating/Pkg | Coating Type: | Parylene N | |
| | Voltage Breakdown (min.) | 500 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 36,000 Pcs/Box | |

| | | | | | | | | | | | | | |
|----------------------|---------------------|--------|--------|---------|---------|---------|---------|---------|-------|-------|---|---|---|
| Winding Table | Wire Size | AWG | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | - | - | - |
| | | mm | 0.250 | 0.200 | 0.160 | 0.125 | 0.100 | 0.080 | 0.063 | 0.050 | - | - | - |
| | Single Layer | Turns | 11 | 15 | 19 | 25 | 31 | 40 | 50 | 63 | - | - | - |
| | | Rdc(Ω) | 24.1 m | 52.2 m | 105.1 m | 219.9 m | 433.7 m | 890.0 m | 1.8 | 3.5 | - | - | - |
| Full Winding | Turns | 12 | 18 | 28 | 43 | 67 | 103 | 159 | 247 | - | - | - | |
| | Rdc(Ω) | 26.2 m | 62.6 m | 154.9 m | 378.3 m | 937.3 m | 2.3 | 5.6 | 13.9 | - | - | - | |

