



Part Number: **HF-185125-2**

Revision 2021-Dec-01 - Generated 2021-Dec-01



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

| | | | |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------|------------------------|----------------------|
| OD | (nom. - bare core) (max.) | 46.74 mm 47.63 mm | 1.840 in 1.875 in |
| ID | (nom. - bare core) (min.) | 28.70 mm 27.89 mm | 1.130 in 1.098 in |
| HT | (nom. - bare core) (max.) | 15.24 mm 16.13 mm | 0.600 in 0.635 in |
| Mass | (approximate) | 120 grams | |
| Magnetic Dimensions | A _e - Eff. Mag. Cross Section | 1.34 cm ² | |
| | L _e - Eff. Mag. Path Length | 11.62 cm | |
| | V _e - Eff. Core Volume | 15.6 cm ³ | |
| | WA - Min. Eff. Window Area | 6.11 cm ² | |
| | sa - Surface Area | 79.6 cm ² | |
| | mlt - mean length per turn | 6.59 cm | |
| Inductance | μ _i (reference) | 125 | |
| | A _L value (nominal) | 178 nH/N ² | |
| | Test Winding | N=80, #20 AWG | |
| | Frequency | 10 kHz | |
| | Voltage on Agilent 4284A | 0.48 V | |
| | AL tolerance | ±8% | |
| Core Loss | Core Loss(mW/cm ³): $\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}} + d \cdot Bpk^2 \cdot f^2$ | | |
| | where B _{pk} expressed in gauss, f expressed in hertz, and: a=3.540E+10, b=6.826E+08, c=2.688E+06, d=6.077E-14 | | |
| | B _{pk} | 1000 G | |
| | frequency | 50 kHz | |
| | Core Loss (nominal) | 482 mW/cm ³ | |
| | Core Loss (maximum) | 554 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=7.955E-07, c=2.174, d=0.000 | | |
| | H _{DC} | 40 Oe | |
| | Percent Initial Perm(nom.) | 80.5% | |
| | Percent Initial Perm(min.) | 73.6% | |
| Coating/Pkg | Coating Type: | Blue Epoxy | |
| | Voltage Breakdown (min.) | 1000 Vrms | |
| | Limit | 0.1 mA, 5 s | |
| | Package Quantity | 125 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 | 21 | 27 | 34 | 43 | 54 | 68 | 85 | 106 | 133 | 166 | 207 |
| | | Rdc(Ω) | 2.8 m | 5.8 m | 11.7 m | 23.5 m | 46.8 m | 93.8 m | 186.5 m | 369.9 m | 738.1 m | 1.5 | 2.9 |
| Full Winding | Turns | 32 | 49 | 77 | 119 | 184 | 284 | 440 | 680 | 1,053 | 1,630 | 2,523 | |
| | Rdc(Ω) | 4.3 m | 10.6 m | 26.4 m | 64.9 m | 159.6 m | 391.8 m | 965.4 m | 2.4 | 5.8 | 14.4 | 35.4 | |

