

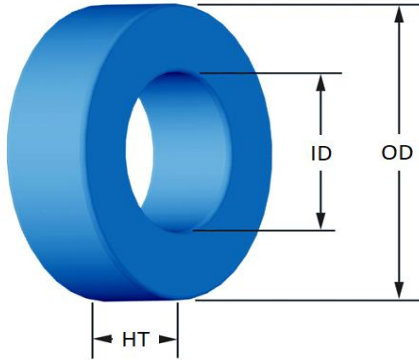


Part Number:

FS-184075-2

Revision:

2023-Dec-06



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

| | mm | in |
|-----------|--|----------------|
| OD | (nom. - bare core) 46.74 (max.) 47.63 | 1.840 1.875 |
| ID | (nom. - bare core) 24.13 (min.) 23.32 | 0.950 0.918 |
| HT | (nom. - bare core) 18.03 (max.) 18.92 | 0.710 0.745 |

| Mass | (approximate) | 150 | grams |
|----------------------------|---------------------------------|--------|-----------------|
| Magnetic Dimensions | A_e - Eff. Mag. Cross Section | 1.99 | cm ² |
| | L_e - Eff. Mag. Path Length | 10.743 | cm |
| | V_e - Eff. Core Volume | 21.4 | cm ³ |
| | W_A - Min. Eff. Window Area | 4.27 | cm ² |
| | s_a - Surface Area | 81.7 | cm ² |
| | m_{lt} - mean length per turn | 7.38 | cm |

| Inductance | μ_i (reference) | 75 | |
|-------------------|--------------------------|----------|-------------------|
| | A_L value (nominal) | 169 | nH/N ² |
| | Test Winding | 70 Turns | AWG# 20 |
| | Frequency | 10k | Hz |
| | Voltage on Agilent 4284A | 0.62 | V |
| AL tolerance | ±8% | | |

| Core Loss | $\text{Core Loss (mW/cm}^3\text{)} = \frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$ | | |
|---------------------|--|--------------------|----|
| | 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 k | Hz |
| 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: | Blue Epoxy |
|--------------------|--------------------------|-------------|
| | Voltage Breakdown (min.) | 1000 Vrms |
| | Limit | 0.1 mA, 5 s |
| | Package Quantity | 80 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 | 17 | 22 | 28 | 35 | 45 | 56 | 70 | 88 | 111 | 138 | 173 |
| | | Rdc(Ω) | 2.6 m | 5.3 m | 10.7 m | 21.4 m | 43.7 m | 86.5 m | 171.9 m | 343.7 m | 689.5 m | 1.4 | 2.7 |
| Full Winding | Turns | 22 | 35 | 54 | 83 | 128 | 199 | 307 | 476 | 736 | 1,139 | 1,764 | |
| | Rdc(Ω) | 3.3 m | 8.4 m | 20.7 m | 50.7 m | 124.3 m | 307.3 m | 753.9 m | 1.9 | 4.6 | 11.3 | 27.7 | |

