



**Part Number: OC-080125-2**

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



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

|                            |  |  |                      |
|----------------------------|--|--|----------------------|
| <b>OD</b>                  | (nom. - bare core)<br>(max.)   | 20.32 mm<br>21.08 mm   | 0.800 in<br>0.830 in |
| <b>ID</b>                  | (nom. - bare core)<br>(min.)   | 12.70 mm<br>12.07 mm   | 0.500 in<br>0.475 in |
| <b>HT</b>                  | (nom. - bare core)<br>(max.)   | 6.35 mm<br>7.11 mm   | 0.250 in<br>0.280 in |
| <b>Mass</b>                | (approximate)  | 8.0 grams  |                      |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section   | 0.226 cm <sup>2</sup>  |                      |
|                            | L <sub>e</sub> - Eff. Mag. Path Length   | 5.09 cm  |                      |
|                            | V <sub>e</sub> - Eff. Core Volume  | 1.15 cm <sup>3</sup>   |                      |
|                            | WA - Min. Eff. Window Area   | 1.14 cm <sup>2</sup>   |                      |
|                            | sa - Surface Area  | 15.5 cm <sup>2</sup>   |                      |
| <b>Inductance</b>          | μ <sub>i</sub> (reference)   | 125  |                      |
|                            | A <sub>L</sub> value (nominal)   | 68 nH/N <sup>2</sup>   |                      |
| <b>Core Loss</b>           | Test Winding   | N=90, #28 AWG  |                      |
|                            | Frequency  | 10 kHz   |                      |
|                            | Voltage on Agilent 4284A   | 0.090 V  |                      |
|                            | AL tolerance   | ±8%  |                      |
|                            | Core Loss(mW/cm <sup>3</sup> ):  | $\frac{f}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}} + d \cdot Bpk^2 \cdot f^2$ |                      |
| <b>DC Saturation</b>       | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and:<br>a=1.000E+06, b=2.369E+09, c=1.449E+06, d=2.303E-14 |  |                      |
|                            | B <sub>pk</sub>  | 1000 G   |                      |
|                            | frequency  | 50 kHz   |                      |
|                            | Core Loss (nominal)  | 217 mW/cm <sup>3</sup>   |                      |
|                            | Core Loss (maximum)  | 249 mW/cm <sup>3</sup>   |                      |
| <b>DC Saturation</b>       | %μ <sub>i</sub> $\frac{1}{a + b \cdot H^c} + d$  | where H expressed in oersteds, and:<br>a=1.000E-02, b=8.990E-07, c=2.221, d=0.000        |                      |
|                            | H <sub>DC</sub>  | 40 Oe  |                      |
|                            | Percent Initial Perm(nom.)   | 75.5%  |                      |
| <b>Coating/Pkg</b>         | Percent Initial Perm(min.)   | 67.2%  |                      |
|                            | Coating Type:  | Blue Epoxy   |                      |
|                            | Voltage Breakdown (min.)   | 1000 Vrms  |                      |
|                            | Limit  | 0.1 mA, 5 s  |                      |
| Package Quantity           | 1,800 Pcs/Box  |  |                      |

|                      |                     |        |       |       |        |        |        |         |         |         |         |         |       |
|----------------------|---------------------|--------|-------|-------|--------|--------|--------|---------|---------|---------|---------|---------|-------|
| <b>Winding Table</b> | <b>Wire Size</b>    | AWG    | 10    | 12    | 14     | 16     | 18     | 20      | 22      | 24      | 26      | 28      | 30    |
|                      |                     | mm     | 2.500 | 2.000 | 1.600  | 1.250  | 1.000  | 0.800   | 0.630   | 0.500   | 0.400   | 0.315   | 0.250 |
|                      | <b>Single Layer</b> | Turns  | 10    | 13    | 17     | 22     | 28     | 35      | 44      | 56      | 70      | 88      | 110   |
|                      |                     | Rdc(Ω) | 1.0 m | 2.0 m | 4.1 m  | 8.5 m  | 17.1 m | 34.1 m  | 68.1 m  | 137.9 m | 274.2 m | 548.2 m | 1.1   |
| <b>Full Winding</b>  | Turns               | 9      | 14    | 22    | 34     | 53     | 82     | 127     | 197     | 305     | 472     | 731     |       |
|                      | Rdc(Ω)              | 0.9 m  | 2.1 m | 5.3 m | 13.1 m | 32.4 m | 79.8 m | 196.7 m | 485.2 m | 1.2     | 2.9     | 7.2     |       |

