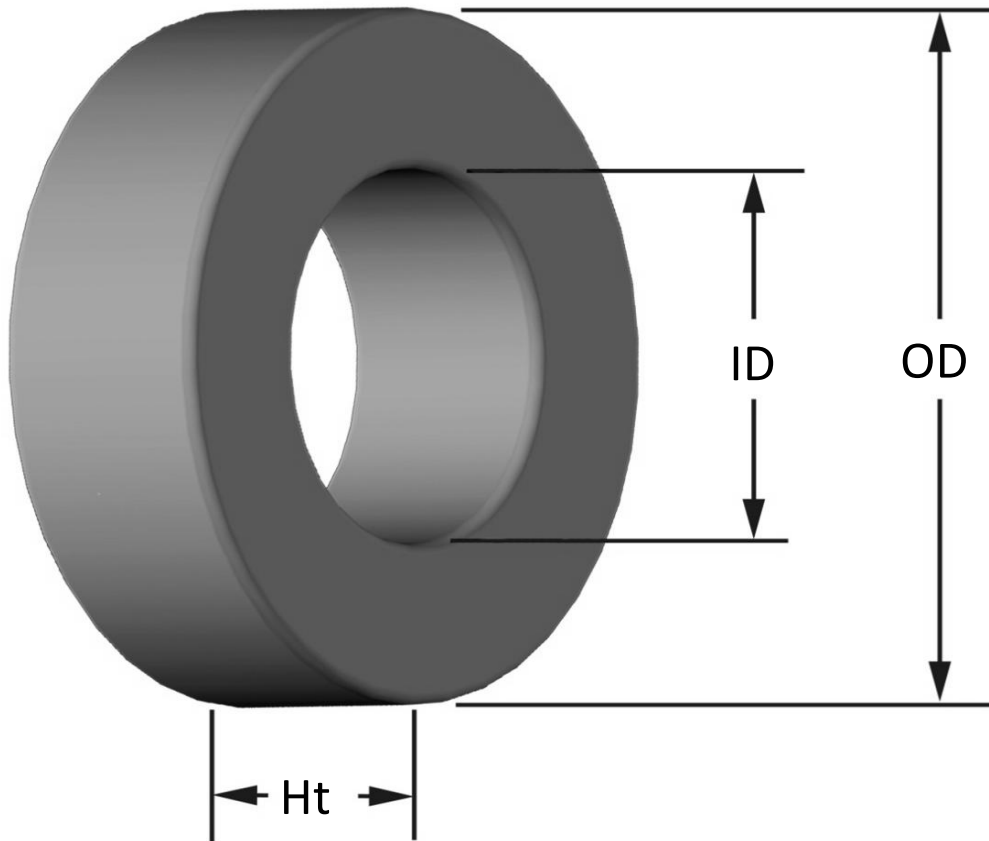




**Part Number:** **T7-17**

Revision 20190524 - Generated 2019-May-30



|                            |  |  |                      |
|----------------------------|--|--|----------------------|
| <b>OD</b>                  | (nom. - bare core)<br>(max. - after coating)                         | 1.78 mm<br>1.91 mm   | 0.070 in<br>0.075 in |
| <b>ID</b>                  | (nom. - bare core)<br>(min. - after coating)                         | 0.89 mm<br>0.76 mm   | 0.035 in<br>0.030 in |
| <b>Ht</b>                  | (nom. - bare core)<br>(max. - after coating)                         | 0.76 mm<br>0.89 mm   | 0.030 in<br>0.035 in |
| <b>Mass</b>                | (approximate)  | 0.01 grams   |                      |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section                             | 0.00350 cm <sup>2</sup>  |                      |
|                            | L <sub>e</sub> - Eff. Mag. Path Length                               | 0.420 cm   |                      |
|                            | V <sub>e</sub> - Eff. Core Volume                                    | 0.00150  |                      |
|                            | WA - Min. Eff. Window Area   | 0.00456 cm <sup>2</sup>  |                      |
|                            | sa - Surface Area  | 0.135 cm <sup>2</sup>  |                      |
| <b>Inductance</b>          | μ <sub>i</sub> (reference)   | 4  |                      |
|                            | A <sub>L</sub> value (nominal)                                       | 0.6 nH/N <sup>2</sup>  |                      |
|                            | Test Winding   | N=10, #36 AWG  |                      |
|                            | Frequency  | 1 MHz  |                      |
|                            | Voltage on Agilent 4284A   | 0.016 V  |                      |
| <b>Core Loss &amp; Q</b>   | A <sub>L</sub> tolerance   | ±5%  |                      |
|                            | Core Loss(mW/cm <sup>3</sup> )=                                      | $\frac{f}{\frac{a}{Bpk^3} + \frac{b}{Bpk^{2.3}} + \frac{c}{Bpk^{1.65}}} + d \cdot Bpk^2 \cdot f^2$ |                      |
|                            | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and: | a=4.00E+09, b=3.00E+08, c=2.70E+06, d=4.40E-16   |                      |
|                            | Q test winding   | N=10, #36 AWG  |                      |
|                            | Q frequency  | 70 MHz   |                      |
| <b>DC Saturation</b>       | Q min on HP4342A   | 47   |                      |
|                            | %μ <sub>i</sub> =  | $\frac{1}{a + b \cdot H^c} + d$  |                      |
|                            | where H expressed in oersteds, and:                                  | a=1.00E-02, b=1.34E-08, c=1.55, d=0.00   |                      |
|                            | H <sub>DC</sub>  | 200 Oe   |                      |
|                            | Percent Initial Perm(nom.)   | 99.5%  |                      |
| <b>Coating/Pkg</b>         | Percent Initial Perm(min.)   | 99.4%  |                      |
|                            | Coating Type:  | Parylene C   |                      |
|                            | Voltage Breakdown (min.)   | 500 Vrms, 60Hz   |                      |
|                            | Limit  | 3 mA, 5 s  |                      |
| <b>Winding Table</b>       | Package Quantity   | 250,000 Pcs/Box  |                      |
|                            |  |  |                      |

|                      |                     |        |         |         |         |         |         |      |      |      |      |      |      |
|----------------------|---------------------|--------|---------|---------|---------|---------|---------|------|------|------|------|------|------|
| <b>Winding Table</b> | <b>Wire Size</b>    | AWG    | 36      | 38      | 40      | 42      | 44      | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
|                      |                     | mm     | 0.125   | 0.100   | 0.080   | 0.063   | 0.050   | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
|                      | <b>Single Layer</b> | Turns  | 11      | 14      | 18      | 24      | 30      | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
|                      |                     | Rdc(Ω) | 49.5 m  | 100.1 m | 204.7 m | 434.1 m | 863.0 m | #N/A | #N/A | #N/A | #N/A | #N/A | #N/A |
| <b>Full Winding</b>  | Turns               | 11     | 17      | 26      | 40      | 62      | #N/A    | #N/A | #N/A | #N/A | #N/A | #N/A |      |
|                      | Rdc(Ω)              | 49.5 m | 121.6 m | 295.7 m | 723.5 m | 1.8     | #N/A    | #N/A | #N/A | #N/A | #N/A | #N/A |      |

