

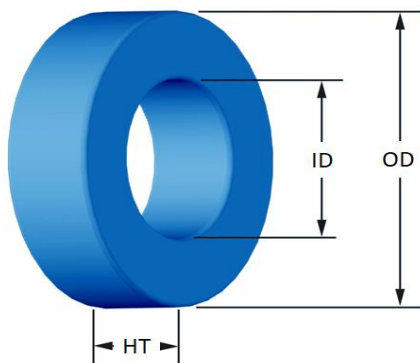


Part Number:

MS-092026-2

Revision:

2023-Dec-06



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

|                     |                                                                                                                                          | mm          | in                 |
|---------------------|------------------------------------------------------------------------------------------------------------------------------------------|-------------|--------------------|
| OD                  | (nom. - bare core)                                                                                                                       | 23.57       | 0.928              |
|                     | (max.)                                                                                                                                   | 24.28       | 0.956              |
| ID                  | (nom. - bare core)                                                                                                                       | 14.40       | 0.567              |
|                     | (min.)                                                                                                                                   | 13.77       | 0.542              |
| HT                  | (nom. - bare core)                                                                                                                       | 8.89        | 0.350              |
|                     | (max.)                                                                                                                                   | 9.70        | 0.382              |
| Mass                | (approximate)                                                                                                                            | 12          | grams              |
| Magnetic Dimensions | A <sub>e</sub> - Eff. Mag. Cross Section                                                                                                 | 0.388       | cm <sup>2</sup>    |
|                     | L <sub>e</sub> - Eff. Mag. Path Length                                                                                                   | 5.88        | cm                 |
|                     | V <sub>e</sub> - Eff. Core Volume                                                                                                        | 2.28        | cm <sup>3</sup>    |
|                     | WA - Min. Eff. Window Area                                                                                                               | 1.49        | cm <sup>2</sup>    |
|                     | sa - Surface Area                                                                                                                        | 21.8        | cm <sup>2</sup>    |
|                     | mlt - mean length per turn                                                                                                               | 3.68        | cm                 |
| Inductance          | μ <sub>i</sub> (reference)                                                                                                               | 26          |                    |
|                     | A <sub>L</sub> value (nominal)                                                                                                           | 22          | nH/N <sup>2</sup>  |
|                     | Test Winding                                                                                                                             | 80 Turns    | AWG# 26            |
|                     | Frequency                                                                                                                                | 10k         | Hz                 |
|                     | Voltage on Agilent 4284A                                                                                                                 | 0.14        | 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 <sub>pk</sub> expressed in gauss, f expressed in hertz, and:                                                                     |             |                    |
|                     | a=1.000E+06, b=4.969E+08, c=3.993E+06, d=2.867E-14                                                                                       |             |                    |
|                     | B <sub>pk</sub>                                                                                                                          | 500         | G                  |
|                     | frequency                                                                                                                                | 100 k       | Hz                 |
|                     | Core Loss (nominal)                                                                                                                      | 295         | mW/cm <sup>3</sup> |
| DC Saturation       | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$                                                                                               |             |                    |
|                     | where H expressed in oersteds, and:                                                                                                      |             |                    |
|                     | a=1.000E-02, b=2.061E-07, c=1.995, d=0.000                                                                                               |             |                    |
|                     | H <sub>dc</sub>                                                                                                                          | 200         | Oe                 |
|                     | Percent Initial Perm(nom.)                                                                                                               | 55.4        | %                  |
|                     | Percent Initial Perm(min.)                                                                                                               | 46.3        | %                  |
| Coating/Pkg         | Coating Type:                                                                                                                            | Blue Epoxy  |                    |
|                     | Voltage Breakdown (min.)                                                                                                                 | 1000 Vrms   |                    |
|                     | Limit                                                                                                                                    | 0.1 mA, 5 s |                    |
|                     | Package Quantity                                                                                                                         | 900 Pcs/Box |                    |

| Winding Table | Wire Size    | 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 |
|               | Single Layer | Turns  | 12    | 15    | 20    | 25     | 32     | 40      | 51      | 64      | 80      | 101     | 126   |
|               | Full Winding | Rdc(Ω) | 1.4 m | 2.9 m | 6.1 m | 12.1 m | 24.6 m | 49.0 m  | 99.3 m  | 198.2 m | 394.0 m | 791.0 m | 1.6   |
|               | Full Winding | Turns  | 12    | 19    | 29    | 45     | 69     | 107     | 166     | 257     | 397     | 615     | 952   |
|               |              | Rdc(Ω) | 1.4 m | 3.6 m | 8.8 m | 21.8 m | 53.1 m | 131.0 m | 323.2 m | 795.8 m | 2.0     | 4.8     | 11.9  |

