

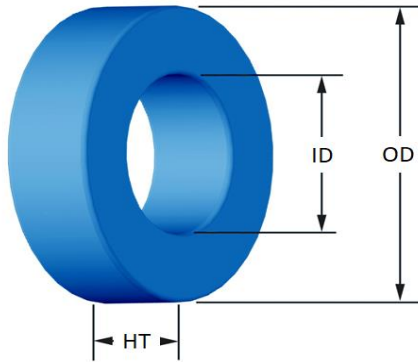


Part Number:

**MS-601040-2**

Revision:

2023-Dec-06



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

| (if coated, Max./Min. includes coating) |                                                                                                                                                                         |        | mm                 | in                |         |   |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|--------------------|-------------------|---------|---|
| OD                                      | (nom. - bare core)                                                                                                                                                      |        | 152.40             | 6.000             |         |   |
|                                         | (max.)                                                                                                                                                                  |        | 153.90             | 6.059             |         |   |
| ID                                      | (nom. - bare core)                                                                                                                                                      |        | 81.28              | 3.200             |         |   |
|                                         | (min.)                                                                                                                                                                  |        | 79.65              | 3.136             |         |   |
| HT                                      | (nom. - bare core)                                                                                                                                                      |        | 25.40              | 1.000             |         |   |
|                                         | (max.)                                                                                                                                                                  |        | 26.80              | 1.055             |         |   |
| Mass                                    | (approximate)                                                                                                                                                           |        | 1,730              | grams             |         |   |
| Magnetic Dimensions                     | A <sub>e</sub> - Eff. Mag. Cross Section                                                                                                                                |        | 8.81               | cm <sup>2</sup>   |         |   |
|                                         | L <sub>e</sub> - Eff. Mag. Path Length                                                                                                                                  |        | 35.97              | cm                |         |   |
|                                         | V <sub>e</sub> - Eff. Core Volume                                                                                                                                       |        | 317                | cm <sup>3</sup>   |         |   |
|                                         | W <sub>A</sub> - Min. Eff. Window Area                                                                                                                                  |        | 49.8               | cm <sup>2</sup>   |         |   |
|                                         | s <sub>a</sub> - Surface Area                                                                                                                                           |        | 674                | cm <sup>2</sup>   |         |   |
|                                         | mlt - mean length per turn                                                                                                                                              |        | 16.8               | cm                |         |   |
| Inductance                              | μ <sub>i</sub> (reference)                                                                                                                                              |        | 40                 |                   |         |   |
|                                         | A <sub>L</sub> value (nominal)                                                                                                                                          |        | 127                | nH/N <sup>2</sup> |         |   |
|                                         | Test Winding                                                                                                                                                            |        | 200 Turns          | AWG# 18           |         |   |
|                                         | Frequency                                                                                                                                                               |        | 10k                | Hz                |         |   |
|                                         | Voltage on Agilent 4284A                                                                                                                                                |        | 7.8                | 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 <i>B<sub>pk</sub></i> expressed in gauss, <i>f</i> expressed in hertz, and:<br><i>a</i> =1.000E+06, <i>b</i> =6.961E+08, <i>c</i> =5.397E+06, <i>d</i> =4.127E-14 |        |                    |                   |         |   |
|                                         | B <sub>pk</sub>                                                                                                                                                         | 1000   | G                  |                   |         |   |
|                                         | frequency                                                                                                                                                               | 50 k   | Hz                 |                   |         |   |
|                                         | Core Loss (nominal)                                                                                                                                                     | 441    | mW/cm <sup>3</sup> |                   |         |   |
|                                         | Core Loss (maximum)                                                                                                                                                     | 507    | mW/cm <sup>3</sup> |                   |         |   |
| DC Saturation                           | $\% \mu_i \frac{1}{a+b\cdot H^c}+d$                                                                                                                                     |        |                    |                   |         |   |
|                                         | where H expressed in oersteds, and:<br><i>a</i> =1.000E-02, <i>b</i> =2.655E-06, <i>c</i> =1.703, <i>d</i> =0.000                                                       |        |                    |                   |         |   |
|                                         | H <sub>DC</sub>                                                                                                                                                         | 100    | Oe                 |                   |         |   |
|                                         | Percent Initial Perm.(nom.)                                                                                                                                             | 59.6   | %                  |                   |         |   |
|                                         | Percent Initial Perm.(min.)                                                                                                                                             | 52.0   | %                  |                   |         |   |
| Coating/Pkg                             | Coating Type: Blue Epoxy                                                                                                                                                |        |                    |                   |         |   |
|                                         | Voltage Breakdown (min.)                                                                                                                                                |        | 1000               | Vrms              |         |   |
|                                         | Limit                                                                                                                                                                   |        | 0.1 mA, 5 s        |                   |         |   |
|                                         | Package Quantity                                                                                                                                                        |        | 3 Pcs/Box          |                   |         |   |
| Winding Table                           | Wire Size                                                                                                                                                               | AWG    | 8                  | 10                | 12      |   |
|                                         |                                                                                                                                                                         | mm     | 3.150              | 2.500             | 2.000   |   |
|                                         | Single Layer                                                                                                                                                            | Turns  | 65                 | 81                | 102     |   |
|                                         |                                                                                                                                                                         | Rdc(Ω) | 22.4 m             | 44.4 m            | 88.9 m  | 1 |
|                                         | Full Winding                                                                                                                                                            | Turns  | 261                | 404               | 625     |   |
|                                         |                                                                                                                                                                         | Rdc(Ω) | 90.0 m             | 221.5 m           | 545.0 m |   |

