

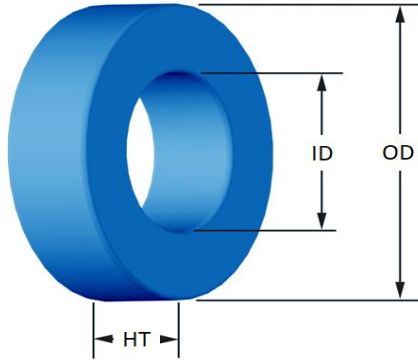


Part Number:

MS-068075-2H127

Revision:

2023-Dec-18



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

| (if coated, Max./Min. includes coating) |                                                                                                                                                                         | mm       | in                 |        |        |   |
|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|--------------------|--------|--------|---|
| OD                                      | (nom. - bare core)                                                                                                                                                      | 17.27    | 0.680              |        |        |   |
|                                         | (max.)                                                                                                                                                                  | 18.03    | 0.710              |        |        |   |
| ID                                      | (nom. - bare core)                                                                                                                                                      | 9.65     | 0.380              |        |        |   |
|                                         | (min.)                                                                                                                                                                  | 9.02     | 0.355              |        |        |   |
| HT                                      | (nom. - bare core)                                                                                                                                                      | 12.70    | 0.500              |        |        |   |
|                                         | (max.)                                                                                                                                                                  | 13.46    | 0.530              |        |        |   |
| Mass                                    | (approximate)                                                                                                                                                           | 11       | grams              |        |        |   |
| Magnetic Dimensions                     | A <sub>e</sub> - Eff. Mag. Cross Section                                                                                                                                | 0.464    | cm <sup>2</sup>    |        |        |   |
|                                         | L <sub>e</sub> - Eff. Mag. Path Length                                                                                                                                  | 4.14     | cm                 |        |        |   |
|                                         | V <sub>e</sub> - Eff. Core Volume                                                                                                                                       | 1.92     | cm <sup>3</sup>    |        |        |   |
|                                         | W <sub>A</sub> - Min. Eff. Window Area                                                                                                                                  | 0.639    | cm <sup>2</sup>    |        |        |   |
|                                         | s <sub>a</sub> - Surface Area                                                                                                                                           | 15.8     | cm <sup>2</sup>    |        |        |   |
|                                         | mlt - mean length per turn                                                                                                                                              | 4.04     | cm                 |        |        |   |
| Inductance                              | μ <sub>i</sub> (reference)                                                                                                                                              | 75       |                    |        |        |   |
|                                         | A <sub>L</sub> value (nominal)                                                                                                                                          | 106      | nH/N <sup>2</sup>  |        |        |   |
|                                         | Test Winding                                                                                                                                                            | 70 Turns | AWG# 28            |        |        |   |
|                                         | Frequency                                                                                                                                                               | 10k      | Hz                 |        |        |   |
|                                         | Voltage on Agilent 4284A                                                                                                                                                | 0.14     | V                  |        |        |   |
|                                         | AL tolerance                                                                                                                                                            | ±8%      |                    |        |        |   |
| Core Loss                               | $\text{Core Loss(mW/cm}^3\text{)} = \frac{f}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$                                 |          |                    |        |        |   |
|                                         | where <i>B<sub>pk</sub></i> expressed in gauss, <i>f</i> expressed in hertz, and:<br><i>a</i> =7.890E+09, <i>b</i> =7.111E+08, <i>c</i> =8.980E+06, <i>d</i> =2.846E-14 |          |                    |        |        |   |
|                                         | B <sub>pk</sub>                                                                                                                                                         | 1000     | G                  |        |        |   |
|                                         | frequency                                                                                                                                                               | 50 k     | Hz                 |        |        |   |
|                                         | Core Loss (nominal)                                                                                                                                                     | 323      | mW/cm <sup>3</sup> |        |        |   |
|                                         | Core Loss (maximum)                                                                                                                                                     | 372      | 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> =3.414E-06, <i>c</i> =1.841, <i>d</i> =0.000                                                       |          |                    |        |        |   |
|                                         | H <sub>DC</sub>                                                                                                                                                         | 80       | Oe                 |        |        |   |
|                                         | Percent Initial Perm.(nom.)                                                                                                                                             | 47.9     | %                  |        |        |   |
|                                         | Percent Initial Perm.(min.)                                                                                                                                             | 39.6     | %                  |        |        |   |
| Coating/Pkg                             | Coating Type: Blue Epoxy                                                                                                                                                |          |                    |        |        |   |
|                                         | Voltage Breakdown (min.)                                                                                                                                                | 1000     | Vrms               |        |        |   |
|                                         | Limit                                                                                                                                                                   | 0.1      | mA, 5 s            |        |        |   |
|                                         | Package Quantity                                                                                                                                                        | 1,080    | Pcs/Box            |        |        |   |
| Winding Table                           | Wire Size                                                                                                                                                               | AWG      | 14                 | 16     | 18     |   |
|                                         |                                                                                                                                                                         | mm       | 1.600              | 1.250  | 1.000  |   |
|                                         | Single Layer                                                                                                                                                            | Turns    | 12                 | 15     | 20     |   |
|                                         |                                                                                                                                                                         | Rdc(Ω)   | 4.0 m              | 8.0 m  | 16.9 m | 3 |
|                                         | Full Winding                                                                                                                                                            | Turns    | 12                 | 19     | 30     |   |
|                                         |                                                                                                                                                                         | Rdc(Ω)   | 4.0 m              | 10.1 m | 25.4 m |   |

