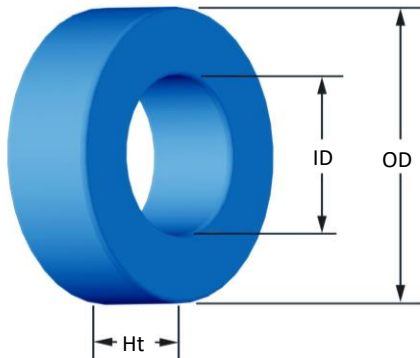




Part Number:

**MS-050060-2H095**

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



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

|                     |                                                                      |                                                                                                      |                      |        |        |         |         |         |         |       |       |       |       |
|---------------------|----------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|----------------------|--------|--------|---------|---------|---------|---------|-------|-------|-------|-------|
| OD                  | (nom. - bare core)<br>(max.)                                         | 12.70 mm<br>13.46 mm                                                                                 | 0.500 in<br>0.530 in |        |        |         |         |         |         |       |       |       |       |
| ID                  | (nom. - bare core)<br>(min.)                                         | 7.62 mm<br>6.99 mm                                                                                   | 0.300 in<br>0.275 in |        |        |         |         |         |         |       |       |       |       |
| HT                  | (nom. - bare core)<br>(max.)                                         | 9.50 mm<br>10.26 mm                                                                                  | 0.374 in<br>0.404 in |        |        |         |         |         |         |       |       |       |       |
| Mass                | (approximate)                                                        | 4.1 grams                                                                                            |                      |        |        |         |         |         |         |       |       |       |       |
| Magnetic Dimensions | A <sub>e</sub> - Eff. Mag. Cross Section                             | 0.228 cm <sup>2</sup>                                                                                |                      |        |        |         |         |         |         |       |       |       |       |
|                     | L <sub>e</sub> - Eff. Mag. Path Length                               | 3.12 cm                                                                                              |                      |        |        |         |         |         |         |       |       |       |       |
|                     | V <sub>e</sub> - Eff. Core Volume                                    | 0.712 cm <sup>3</sup>                                                                                |                      |        |        |         |         |         |         |       |       |       |       |
|                     | WA - Min. Eff. Window Area                                           | 0.384 cm <sup>2</sup>                                                                                |                      |        |        |         |         |         |         |       |       |       |       |
|                     | sa - Surface Area                                                    | 8.94 cm <sup>2</sup>                                                                                 |                      |        |        |         |         |         |         |       |       |       |       |
| Inductance          | mlt - mean length per turn                                           | 3.05 cm                                                                                              |                      |        |        |         |         |         |         |       |       |       |       |
|                     | μ <sub>i</sub> (reference)                                           | 60                                                                                                   |                      |        |        |         |         |         |         |       |       |       |       |
|                     | A <sub>L</sub> value (nominal)                                       | 54 nH/N <sup>2</sup>                                                                                 |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Test Winding                                                         | N=50, #28 AWG                                                                                        |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Frequency                                                            | 10 kHz                                                                                               |                      |        |        |         |         |         |         |       |       |       |       |
| Core Loss           | Voltage on Agilent 4284A                                             | 0.051 V                                                                                              |                      |        |        |         |         |         |         |       |       |       |       |
|                     | AL tolerance                                                         | ±8%                                                                                                  |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Core Loss(mW/cm³):                                                   | $\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}} + d \cdot B_{pk}^2 \cdot f^2$ |                      |        |        |         |         |         |         |       |       |       |       |
|                     | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and: | a=7.890E+09, b=7.111E+08, c=8.980E+06, d=2.846E-14                                                   |                      |        |        |         |         |         |         |       |       |       |       |
|                     | B <sub>pk</sub>                                                      | 1000 G                                                                                               |                      |        |        |         |         |         |         |       |       |       |       |
| DC Saturation       | frequency                                                            | 50 kHz                                                                                               |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Core Loss (nominal)                                                  | 323 mW/cm³                                                                                           |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Core Loss (maximum)                                                  | 372 mW/cm³                                                                                           |                      |        |        |         |         |         |         |       |       |       |       |
|                     | %μ <sub>i</sub>                                                      | $\frac{1}{a + b \cdot H^c} + d$                                                                      |                      |        |        |         |         |         |         |       |       |       |       |
|                     | where H expressed in oersteds, and:                                  | a=1.000E-02, b=2.151E-06, c=1.841, d=0.000                                                           |                      |        |        |         |         |         |         |       |       |       |       |
| Coating/Pkg         | H <sub>DC</sub>                                                      | 100 Oe                                                                                               |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Percent Initial Perm(nom.)                                           | 49.2%                                                                                                |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Percent Initial Perm(min.)                                           | 40.9%                                                                                                |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Coating Type:                                                        | Blue Epoxy                                                                                           |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Voltage Breakdown (min.)                                             | 1000 Vrms                                                                                            |                      |        |        |         |         |         |         |       |       |       |       |
| Winding Table       | Limit                                                                | 0.1 mA, 5 s                                                                                          |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Package Quantity                                                     | 2,700 Pcs/Box                                                                                        |                      |        |        |         |         |         |         |       |       |       |       |
|                     | Wire Size                                                            | AWG                                                                                                  | 16                   | 18     | 20     | 22      | 24      | 26      | 28      | 30    | 32    | 34    | 36    |
|                     |                                                                      | mm                                                                                                   | 1.250                | 1.000  | 0.800  | 0.630   | 0.500   | 0.400   | 0.315   | 0.250 | 0.200 | 0.160 | 0.125 |
|                     | Single Layer                                                         | Turns                                                                                                | 11                   | 15     | 19     | 24      | 31      | 39      | 50      | 63    | 79    | 98    | 123   |
|                     | R <sub>dc</sub> (Ω)                                                  | 4.4 m                                                                                                | 9.6 m                | 19.3 m | 38.7 m | 79.5 m  | 159.1 m | 324.4 m | 650.1 m | 1.3   | 2.6   | 5.1   |       |
| Full Winding        | Turns                                                                | 12                                                                                                   | 18                   | 28     | 43     | 66      | 102     | 158     | 245     | 380   | 587   | 909   |       |
|                     | R <sub>dc</sub> (Ω)                                                  | 4.8 m                                                                                                | 11.5 m               | 28.4 m | 69.4 m | 169.3 m | 416.2 m | 1.0     | 2.5     | 6.2   | 15.3  | 37.7  |       |

