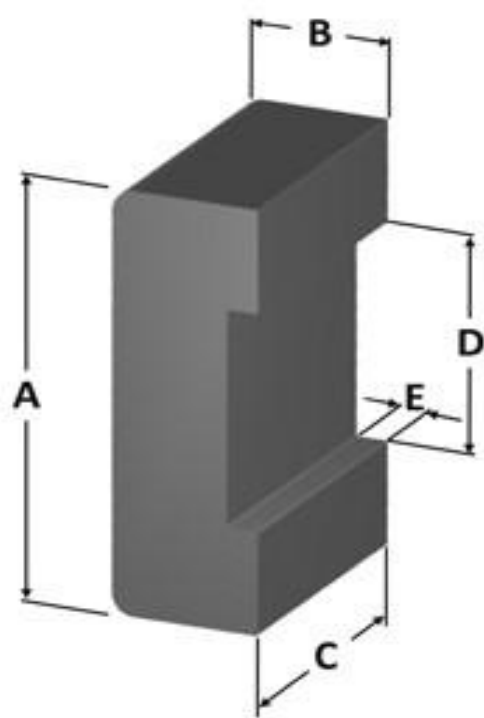




**Part Number:** **HS300-52A**

Revision 20200407 - Generated 2020-Apr-07



|                            |  |                                 |
|----------------------------|--|---------------------------------|
| <b>A</b>                   | 25.91 ± 0.38 mm  | 1.020 ± 0.015 in                |
| <b>B</b>                   | 8.26 ± 0.25 mm   | 0.325 ± 0.010 in                |
| <b>C</b>                   | 15.88 ± 0.51 mm  | 0.625 ± 0.020 in                |
| <b>D</b>                   | 13.21 mm (nom.)  | 0.520 in (nom.)                 |
| <b>E</b>                   | 1.78 mm (nom.)   | 0.070 in (nom.)                 |
| <b>Mass</b>                | (approximate)  | 20 grams/half                   |
| <b>Magnetic Dimensions</b> | A <sub>e</sub> - Eff. Mag. Cross Section   | 1.01 cm <sup>2</sup>            |
|                            | L <sub>e</sub> - Eff. Mag. Path Length   | 5.92 cm                         |
|                            | V <sub>e</sub> - Eff. Core Volume  | 5.77 cm <sup>3</sup>            |
|                            | WA - Min. Eff. Window Area   | 0.449 cm <sup>2</sup>           |
|                            | sa - Surface Area  | 22.0 cm <sup>2</sup>            |
|                            | mlt - mean length per turn   | 5.18 cm                         |
| <b>Inductance</b>          | μ <sub>i</sub> (reference)   | 75                              |
|                            | A <sub>L</sub> value (nominal)   | 179 nH/N <sup>2</sup>           |
|                            | Test Winding   | N=25, #26 AWG                   |
|                            | Frequency  | 10 kHz                          |
|                            | Voltage on Agilent 4284A   | 0.11 V                          |
|                            | A <sub>L</sub> tolerance   | ±10%                            |
| <b>Core Loss</b>           | $\text{Core Loss (mW/cm}^3\text{)} = \frac{f}{\frac{a}{B_{pk}^3} + \frac{b}{B_{pk}^{2.3}} + \frac{c}{B_{pk}^{1.65}}} + d \cdot B_{pk}^2 \cdot f^2$ |                                 |
|                            | where B <sub>pk</sub> expressed in gauss, f expressed in hertz, and:   |                                 |
|                            | a=1.00E+09, b=1.10E+08, c=2.10E+06, d=6.90E-14   |                                 |
|                            | B <sub>pk</sub>  | 140 G                           |
|                            | frequency  | 100 kHz                         |
|                            | Core Loss (nominal)  | 58 mW/cm <sup>3</sup>           |
|                            | Core Loss (maximum)  | 67 mW/cm <sup>3</sup>           |
| <b>DC Saturation</b>       | $\% \mu_i = \frac{1}{a + b \cdot H^c} + d$   |                                 |
|                            | where H expressed in oersteds, and:  |                                 |
|                            | a=1.00E-02, b=4.66E-06, c=1.84, d=0.00   |                                 |
|                            | H <sub>DC</sub>  | 50 Oe                           |
|                            | Percent Initial Perm(nom.)   | 61.6%                           |
|                            | Percent Initial Perm(min.)   | 53.4%                           |
| <b>Coating/Pkg</b>         | Coating Type:  | Green epoxy, outer surface only |
|                            | Voltage Breakdown (min.)   | N/A                             |
|                            | Limit  | N/A                             |
|                            | Package Quantity   | 900 Halves/Box                  |

