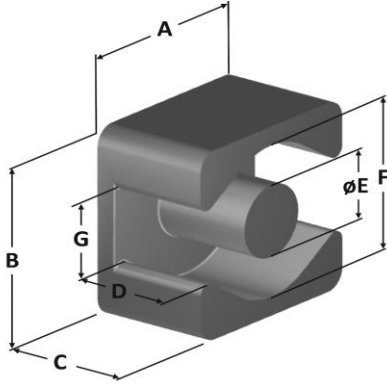




**Part Number:** **HC054B30A-66000**

Revision 20200506 - Generated 2020-May-06



|             |                |                  |
|-------------|----------------|------------------|
| <b>A</b>    | 5.40 ± 0.15 mm | 0.213 ± 0.006 in |
| <b>B</b>    | 5.10 ± 0.15 mm | 0.201 ± 0.006 in |
| <b>C</b>    | 3.05 ± 0.10 mm | 0.120 ± 0.004 in |
| <b>D</b>    | 2.30 mm (min.) | 0.091 in (min.)  |
| <b>E</b>    | 1.80 ± 0.10 mm | 0.071 ± 0.004 in |
| <b>F</b>    | 4.10 mm (min.) | 0.161 in (min.)  |
| <b>G</b>    | 2.20 mm (nom.) | 0.087 in (nom.)  |
| <b>Mass</b> | (approximate)  | 0.30 grams/half  |

|                            |  |                        |
|----------------------------|--|------------------------|
| <b>Magnetic Dimensions</b> | when matched with IC (thickness=0.65 mm. nom.) |                        |
|                            | A <sub>e</sub> - Eff. Mag. Cross Section       | 0.0580 cm <sup>2</sup> |
|                            | L <sub>e</sub> - Eff. Mag. Path Length         | 1.07 cm                |
|                            | V <sub>e</sub> - Eff. Core Volume              | 0.0669 cm <sup>3</sup> |
|                            | WA - Min. Eff. Window Area                     | 0.0264 cm <sup>2</sup> |
|                            | sa - Surface Area                              | 1.33 cm <sup>2</sup>   |
|                            | mlt - mean length per turn                     | 0.950 cm               |

|                  |  |                       |
|------------------|--|-----------------------|
| <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:<br>a=1.72E+10, b=4.96E+07, c=1.23E+06, d=1.73E-14                             |                       |
|                  | B <sub>pk</sub>  | 140 G                 |
|                  | frequency  | 100 kHz               |
|                  | Core Loss (nominal)  | 17 mW/cm <sup>3</sup> |
|                  | Core Loss (maximum)  | 20 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:<br>a=1.00E-02, b=1.23E-05, c=1.48, d=0.00 |       |
|                      | H <sub>DC</sub>   | 50 Oe |
|                      | Percent Initial Perm.(nom.)   | 71.0% |
|                      | Percent Initial Perm.(min.)   | 65.1% |

|                    |                          |  |
|--------------------|--------------------------|--|
| <b>Coating/Pkg</b> | Coating Type:            | Per UL Card File #E140098(S),<br>Black, Outer Surface only |
|                    | Voltage Breakdown (min.) | 200Vrms, 60Hz  |
|                    | Limit                    | 3 mA, 5 s  |
|                    | Package Quantity         | 20,000 Halves/Box  |

|                      |                     |        |       |        |        |         |         |         |       |       |       |       |      |
|----------------------|---------------------|--------|-------|--------|--------|---------|---------|---------|-------|-------|-------|-------|------|
| <b>Winding Table</b> | <b>Wire Size</b>    | AWG    | 26    | 28     | 30     | 32      | 34      | 36      | 38    | 40    | 42    | 44    | #N/A |
|                      |                     | mm     | 0.400 | 0.315  | 0.250  | 0.200   | 0.160   | 0.125   | 0.100 | 0.080 | 0.063 | 0.050 | #N/A |
|                      | <b>Full Winding</b> | Turns  | 7     | 11     | 17     | 27      | 42      | 64      | 100   | 154   | 239   | 370   | #N/A |
|                      |                     | Rdc(Ω) | 8.9 m | 22.3 m | 54.7 m | 138.1 m | 341.8 m | 828.2 m | 2.1   | 5.0   | 12.4  | 30.6  | #N/A |

