First and only DSCC approved Ferrite Chip Bead designed for space and other high reliability use. AEM HRB Series Ferrite Chip Beads are manufactured in our QPL certified facility in San Diego, providing complete material and process traceability.

All components are manufactured with space qualified materials and terminations. AEM HRB components are qualified and tested to AEM Drawing 487070 or DSCC Drawing 03024.

Do not let penny cost commodity components disable your mission-critical program!

Benefits
- Sole Source, DSCC Drawing 03024, 1st ever Military specification for Ferrite Chip Bead
- Made in USA
- Tin-lead terminations (5%+ Pb, no Tin Whisker worries)
- Designed and qualified as Hi Rel
- Complete material and process traceability
- Meets all high reliability demands

Features
- Military Temperatures –55°C to +125°C
- Tin-lead or gold terminations
- Reliability Qualified—Groups A/B data is supplied with shipment. Group C Inspection is optional
- Monolithic structure for closed magnetic path and high reliability
- Standard EIA/EIAJ chip sizes from 0603 to 1206

Applications
- Noise suppression in analog and digital circuits
- Where pure tin termination is prohibited
- Commercial or Military high reliability
- Medical instrumentation
- Down-hole and undersea
- Where reliability is a priority
AEM Ferrite Chip Beads

### AEM Part # | DSCC Drawing # | Impedance Ω | Max. Ω R<sub>DC</sub> | Max. Amps
--- | --- | --- | --- | ---
0603 | HRB0603S300P.500 . . | 03024-001 | 30 | 0.15 | 0.50
0603 | HRB0603S600P.500 . . | 03024-002 | 60 | 0.15 | 0.50
0603 | HRB0603S101P.400 . . | 03024-003 | 100 | 0.20 | 0.40
0603 | HRB0603S151P.400 . . | 03024-004 | 150 | 0.25 | 0.40
0603 | HRB0603S181P.400 . . | 03024-005 | 180 | 0.25 | 0.40
0603 | HRB0603S301P.200 . . | 03024-006 | 300 | 0.30 | 0.20
0603 | HRB0603S401P.200 . . | 03024-007 | 400 | 0.35 | 0.20
0603 | HRB0603S601P.200 . . | 03024-008 | 600 | 0.40 | 0.20
0603 | HRB0603S102P.200 . . | 03024-009 | 1000 | 0.60 | 0.20
0805 | HRB0805S300P4.00 . . | 03024-010 | 30 | 0.02 | 4.00
0805 | HRB0805S500P2.00 . . | 03024-011 | 50 | 0.08 | 2.00
0805 | HRB0805S600P1.50 . . | 03024-012 | 60 | 0.15 | 1.50
0805 | HRB0805S700P1.50 . . | 03024-013 | 70 | 0.15 | 1.50
0805 | HRB0805S101P1.00 . . | 03024-014 | 100 | 0.20 | 1.00
0805 | HRB0805S121P1.00 . . | 03024-015 | 120 | 0.20 | 1.00
0805 | HRB0805S151P1.00 . . | 03024-016 | 150 | 0.20 | 1.00
0805 | HRB0805S221P1.00 . . | 03024-017 | 220 | 0.20 | 1.00
0805 | HRB0805S331P1.00 . . | 03024-018 | 330 | 0.25 | 1.00
0805 | HRB0805S471P1.00 . . | 03024-019 | 470 | 0.25 | 1.00
0805 | HRB0805S601P1.00 . . | 03024-020 | 600 | 0.30 | 1.00
0805 | HRB0805S102P1.00 . . | 03024-021 | 1000 | 0.40 | 1.00
1206 | HRB1206S300P4.00 . . | 03024-022 | 30 | 0.01 | 4.00
1206 | HRB1206S500P3.00 . . | 03024-023 | 50 | 0.03 | 3.00
1206 | HRB1206S800P1.50 . . | 03024-024 | 80 | 0.10 | 1.50
1206 | HRB1206S121P1.50 . . | 03024-025 | 120 | 0.10 | 1.50
1206 | HRB1206S251P1.50 . . | 03024-026 | 250 | 0.10 | 1.50
1206 | HRB1206S501P1.00 . . | 03024-027 | 500 | 0.20 | 1.00
1206 | HRB1206S601P1.00 . . | 03024-028 | 600 | 0.30 | 1.00

Other Sizes and Values may be added by request

---

**Shape and Dimensions**

≥5% Lead + Tin

- Nickel
- Silver
- Electrode

---

**Product Identification**

HRB 0805 S 300 P 4.00 F T

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
</tr>
</thead>
<tbody>
<tr>
<td>0805</td>
<td>S</td>
<td>300</td>
<td>P</td>
<td>4.00</td>
<td>F</td>
<td>T</td>
<td></td>
</tr>
</tbody>
</table>

(1) Series code: HR = High Reliability Ferrite Chip Bead
(2) Chip size, EIA/EIAJ dimensions A x B
   First 2 digits: A ("length")  Last 2 digits: B ("width")
(3) Speed code: S = Standard  H = High speed
(4) Value code: Impedance (Ohms at 100 MHz)
   The first two digits are significant.
   The last digit specifies zeros to follow 300=30 Ohms
(5) Tolerance code: J = ±5%  K = ±10%
   M = ±20%  P = ±25%
(6) Current value in Ampere (4.00=4.00A; .150=0.15A)
(7) Termination code: F = Sn/Pb solder plate  G = Gold
(8) Package Code:  T = Tape & Reel  B = Bulk

---

**CHIP SIZE EIA/EIAJ**

<table>
<thead>
<tr>
<th>CHIP SIZE EIA/EIAJ</th>
<th>A INCH (mm)</th>
<th>B INCH (mm)</th>
<th>C INCH (mm)</th>
<th>TERMINATION (BW) INCH (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0603/1608</td>
<td>0.063 ± 0.006 (1.60 ± 0.15)</td>
<td>0.031 ± 0.006 (0.80 ± 0.15)</td>
<td>0.031 ± 0.006 (0.80 ± 0.15)</td>
<td>0.014 ± 0.006 (0.36 ± 0.15)</td>
</tr>
<tr>
<td>0805/2012</td>
<td>0.079 ± 0.008 (2.00 ± 0.20)</td>
<td>0.049 ± 0.008 (1.25 ± 0.20)</td>
<td>0.035 ± 0.008 (0.90 ± 0.20)</td>
<td>0.020 ± 0.010 (0.51 ± 0.25)</td>
</tr>
<tr>
<td>1206/3216</td>
<td>0.126 ± 0.008 (3.20 ± 0.20)</td>
<td>0.063 ± 0.008 (1.60 ± 0.20)</td>
<td>0.043 ± 0.008 (1.10 ± 0.20)</td>
<td>0.020 ± 0.010 (0.51 ± 0.25)</td>
</tr>
</tbody>
</table>

---

11525 Sorrento Valley Road, San Diego, CA 92121 USA  Phone: (858)481-0210 or 888-323-6462  Fax: (858)481-1123
Email: hринd@aem-usa.com  Website: www.aem-usa.com

Rev 7-04
Wire Wound Ceramic Inductors

Features
- Groups A/B and Qualification data
- From an AEM selected manufacturer
- Standard 5%+ Pb solder plate terminations
- Storage Temperature –55°C to +125°C
- Wire wound structure with high Q and large current capacity
- 0402, 0603, 0805 and 1008 sizes

Applications
- For applications where reliability is Priority 1
- Where pure tin termination is prohibited
- General Noise, EMI, RFI suppression
- Surface mounting

Product Identification

<table>
<thead>
<tr>
<th>HRI</th>
<th>0603</th>
<th>C</th>
<th>1N0</th>
<th>J</th>
<th>T</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
<td>(6)</td>
</tr>
</tbody>
</table>

(1) Series code:
- **HRI**: High Reliability Inductors

(2) Dimensions A x C inches
- The first two digits: A (length)
- The last two digits: C (height/thickness)

(3) Characteristic code: C

(4) Value code: Inductance
- N — decimal point for nH
  - Example: 1N2 = 1.2 nH
- R — decimal point for µH (1000 nH)
  - Example: R12 = 0.12 µH = 120 nH

(5) Tolerance code:
- F = ±1%
- G = ±2%
- J = ±5%
- K = ±10%
- M = ±20%

(6) Package code:
- T = Tape & Reel
- B = Bulk

Recommended PC Board Land Patterns

<table>
<thead>
<tr>
<th>CHIP SIZE</th>
<th>L (INCH (mm))</th>
<th>G (INCH (mm))</th>
<th>H (INCH (mm))</th>
</tr>
</thead>
<tbody>
<tr>
<td>0402</td>
<td>0.044 (1.12)</td>
<td>0.016 (0.40)</td>
<td>0.027 (0.68)</td>
</tr>
<tr>
<td>0603</td>
<td>0.075 (1.91)</td>
<td>0.025 (0.64)</td>
<td>0.040 (1.02)</td>
</tr>
<tr>
<td>0805</td>
<td>0.110 (2.80)</td>
<td>0.036 (0.92)</td>
<td>0.069 (1.75)</td>
</tr>
<tr>
<td>1008</td>
<td>0.130 (3.30)</td>
<td>0.050 (1.27)</td>
<td>0.100 (2.54)</td>
</tr>
</tbody>
</table>

Shape and Dimensions

<table>
<thead>
<tr>
<th>CHIP SIZE</th>
<th>A (INCH (mm))</th>
<th>B (INCH (mm))</th>
<th>C (INCH (mm))</th>
<th>D (INCH (mm))</th>
<th>E (INCH (mm))</th>
</tr>
</thead>
<tbody>
<tr>
<td>0402</td>
<td>0.039 (1.00)</td>
<td>0.027 (0.68)</td>
<td>0.022 (0.55)</td>
<td>0.008 (0.20)</td>
<td>0.024 (0.60)</td>
</tr>
<tr>
<td>0603</td>
<td>0.071 (1.80)</td>
<td>0.044 (1.12)</td>
<td>0.040 (1.02)</td>
<td>0.013 (0.33)</td>
<td>0.034 (0.86)</td>
</tr>
<tr>
<td>0805</td>
<td>0.091 (2.30)</td>
<td>0.067 (1.70)</td>
<td>0.063 (1.60)</td>
<td>0.017 (0.43)</td>
<td>0.046 (1.17)</td>
</tr>
<tr>
<td>1008</td>
<td>0.112 (2.85)</td>
<td>0.104 (2.65)</td>
<td>0.087 (2.20)</td>
<td>0.020 (0.50)</td>
<td>0.059 (1.50)</td>
</tr>
</tbody>
</table>

Note: Dimensions A, B, and C are maximum. Dimensions D and E are typical.
<table>
<thead>
<tr>
<th>Size</th>
<th>AEM Part Number</th>
<th>LnH @MHz</th>
<th>Q(min) @MHz</th>
<th>SRF(min) MHz</th>
<th>DCR Ω</th>
<th>mA(max)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1206</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0805</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0603</td>
<td>HRI0603C72N</td>
<td>72@150</td>
<td>33@150</td>
<td>1700</td>
<td>0.49</td>
<td>400</td>
</tr>
<tr>
<td></td>
<td>HRI0603CR15</td>
<td>150@150</td>
<td>28@150</td>
<td>1300</td>
<td>1.80</td>
<td>200</td>
</tr>
</tbody>
</table>
Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

AEM:
03024-008P  03024-008M  03024-023M  03024-021M  03024-017K