Common Mode Chokes – BU Series

These low cost, high performance choke coils are designed to virtually eliminate line conducted common mode noise.

The BU9S and BU9HS families are ideal for signal line applications; the others can be used in switching power supplies and power supply circuits. All provide significant attenuation of common mode noise across a broad range of frequencies.

For height-restricted applications, the BU9 and BU9S filters are available in a horizontal configuration, which reduces their height to under half an inch (12.5 mm).

For free evaluation samples, contact Coilcraft or request them on-line at www.coilcraft.com.

Core material  Ferrite
Terminations  RoHS compliant tin-silver over copper. Other terminations available at additional cost.

**Weight**
- BU9: 3.1 – 4.1 g
- BU9H: 3.1 – 4.1 g
- BU9HS: 3.1 – 3.8 g
- BU9S: 3.1 – 3.8 g
- BU10: 6.3 – 6.9 g
- BU15: 14.6 – 16.1 g
- BU16: 15.1 – 18.0 g

**Ambient temperature**  –40°C to +125°C
**Storage temperature**  Component: –40°C to +125°C.
Tray packaging: –40°C to +80°C
**Moisture Sensitivity Level (MSL)**  1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**
38 per billion hours / 26,315,789 hours, calculated per Telcordia SR-332

**Packaging**
- BU9: 100 per tray
- BU9H: 100 per tray
- BU9HS: 100 per tray
- BU9S: 100 per tray
- BU10: 100 per tray
- BU15: 80 per tray
- BU16: 80 per tray

**PCB washing**  Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See Doc787_PCB_Washing.pdf.
# Common Mode Chokes - BU9S, BU9HS Series

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Inductance(^1) (mH)</th>
<th>DCR(^2) (Ohms)</th>
<th>Isolation(^3) (Vrms)</th>
<th>Current max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU9S-153R15BL</td>
<td>105.7 @ 200 kHz</td>
<td>15.0</td>
<td>5.0</td>
<td>1000</td>
<td>0.15</td>
</tr>
<tr>
<td>BU9S-7020R3BL</td>
<td>59.8 @ 370 kHz</td>
<td>7.0</td>
<td>2.5</td>
<td>1000</td>
<td>0.30</td>
</tr>
<tr>
<td>BU9HS-153R15BL</td>
<td>146.5 @ 220 kHz</td>
<td>15.0</td>
<td>5.0</td>
<td>1000</td>
<td>0.15</td>
</tr>
<tr>
<td>BU9HS-7020R3BL</td>
<td>61.9 @ 380 kHz</td>
<td>7.0</td>
<td>2.5</td>
<td>1000</td>
<td>0.30</td>
</tr>
</tbody>
</table>

1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

**BU9S**

![BU9S Diagram]

**BU9HS**

![BU9HS Diagram]

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1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

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# Common Mode Chokes - BU9, BU9H Series

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Inductance(^1) (mH)</th>
<th>DCR(^2) (Ohms)</th>
<th>Isolation(^3) (Vrms)</th>
<th>Current max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU9-103R25BL</td>
<td>123.5 @ 250 kHz</td>
<td>10.0</td>
<td>3.5</td>
<td>1000</td>
<td>0.25</td>
</tr>
<tr>
<td>BU9-2820R5BL</td>
<td>25.12 @ 660 kHz</td>
<td>2.8</td>
<td>1.0</td>
<td>1000</td>
<td>0.50</td>
</tr>
<tr>
<td>BU9-1320R7BL</td>
<td>17.33 @ 910 kHz</td>
<td>1.3</td>
<td>0.5</td>
<td>1000</td>
<td>0.70</td>
</tr>
<tr>
<td>BU9-6011R0BL</td>
<td>5.43 @ 2100 kHz</td>
<td>0.6</td>
<td>0.2</td>
<td>1000</td>
<td>1.00</td>
</tr>
<tr>
<td>BU9-2011R6BL</td>
<td>3.62 @ 4000 kHz</td>
<td>0.2</td>
<td>0.1</td>
<td>1000</td>
<td>1.60</td>
</tr>
<tr>
<td>BU9H-103R25BL</td>
<td>148.2 @ 230 kHz</td>
<td>10.0</td>
<td>3.5</td>
<td>1000</td>
<td>0.25</td>
</tr>
<tr>
<td>BU9H-2820R5BL</td>
<td>29.76 @ 600 kHz</td>
<td>2.8</td>
<td>1.0</td>
<td>1000</td>
<td>0.50</td>
</tr>
<tr>
<td>BU9H-1320R7BL</td>
<td>12.31 @ 980 kHz</td>
<td>1.3</td>
<td>0.5</td>
<td>1000</td>
<td>0.70</td>
</tr>
<tr>
<td>BU9H-6011R0BL</td>
<td>5.47 @ 2000 kHz</td>
<td>0.6</td>
<td>0.2</td>
<td>1000</td>
<td>1.00</td>
</tr>
<tr>
<td>BU9H-2011R6BL</td>
<td>4.43 @ 2700 kHz</td>
<td>0.2</td>
<td>0.1</td>
<td>1000</td>
<td>1.60</td>
</tr>
</tbody>
</table>

1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

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**BU9**

**BU9H**

**Recommended Board Layout**

Dimensions are in **inches**

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This product may not be used in medical or high risk applications without prior Coilcraft approval.

Specification subject to change without notice.

Please check web site for latest information.
# Common Mode Chokes - BU10 Series

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Inductance ( ^1 ) min (mH)</th>
<th>DCR ( ^2 ) Ohms</th>
<th>Isolation ( ^3 ) Vrms</th>
<th>Current max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU10-1811R2BL</td>
<td>5.27 @ 1200 KHz</td>
<td>0.18</td>
<td>0.20</td>
<td>1000</td>
<td>1.20</td>
</tr>
<tr>
<td>BU10-1311R6BL</td>
<td>3.60 @ 1200 KHz</td>
<td>0.13</td>
<td>0.12</td>
<td>1000</td>
<td>1.60</td>
</tr>
<tr>
<td>BU10-1012R2BL</td>
<td>1.88 @ 1500 KHz</td>
<td>0.10</td>
<td>0.08</td>
<td>1000</td>
<td>2.20</td>
</tr>
<tr>
<td>BU10-6003R0BL</td>
<td>1.15 @ 2100 KHz</td>
<td>0.06</td>
<td>0.04</td>
<td>1000</td>
<td>3.00</td>
</tr>
</tbody>
</table>

1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding.
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

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**Recommended Board Layout**

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Dimensions are in **inches** and **mm**.
Common Mode Chokes - BU15 Series

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kOhms)</th>
<th>Inductance¹ min (mH)</th>
<th>DCR² (Ohms)</th>
<th>Isolation³ (Vrms)</th>
<th>Current max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU15-4530R4BL</td>
<td>398.7 @ 130 kHz</td>
<td>45.0</td>
<td>3.0</td>
<td>1000</td>
<td>0.40</td>
</tr>
<tr>
<td>BU15-1430R7BL</td>
<td>70.58 @ 240 kHz</td>
<td>14.0</td>
<td>1.0</td>
<td>1000</td>
<td>0.70</td>
</tr>
<tr>
<td>BU15-7521R0BL</td>
<td>43.05 @ 340 kHz</td>
<td>7.5</td>
<td>0.6</td>
<td>1000</td>
<td>1.00</td>
</tr>
<tr>
<td>BU15-4421R3BL</td>
<td>41.14 @ 510 kHz</td>
<td>4.4</td>
<td>0.3</td>
<td>1000</td>
<td>1.30</td>
</tr>
<tr>
<td>BU15-2721R6BL</td>
<td>32.22 @ 620 kHz</td>
<td>2.7</td>
<td>0.2</td>
<td>1000</td>
<td>1.60</td>
</tr>
</tbody>
</table>

1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

Dimensions are in inches

Recommended Board Layout

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## Common Mode Chokes - BU16 Series

<table>
<thead>
<tr>
<th>Part number</th>
<th>Common mode peak impedance (kΩ)</th>
<th>Inductance(^1) min (mH)</th>
<th>DCR(^2) (Ohms)</th>
<th>Isolation(^3) (Vrms)</th>
<th>Current max (A)</th>
</tr>
</thead>
<tbody>
<tr>
<td>BU16-4530R5BL</td>
<td>269.6 @ 130 kHz</td>
<td>45.0</td>
<td>2.3</td>
<td>1000</td>
<td>0.50</td>
</tr>
<tr>
<td>BU16-2530R7BL</td>
<td>208.3 @ 190 kHz</td>
<td>25.0</td>
<td>1.3</td>
<td>1000</td>
<td>0.70</td>
</tr>
<tr>
<td>BU16-1031R0BL</td>
<td>57.14 @ 310 kHz</td>
<td>10.0</td>
<td>0.5</td>
<td>1000</td>
<td>1.00</td>
</tr>
<tr>
<td>BU16-4021R5BL</td>
<td>26.26 @ 470 kHz</td>
<td>4.0</td>
<td>0.3</td>
<td>1000</td>
<td>1.50</td>
</tr>
<tr>
<td>BU16-2022R0BL</td>
<td>14.47 @ 720 kHz</td>
<td>2.0</td>
<td>0.2</td>
<td>1000</td>
<td>2.00</td>
</tr>
</tbody>
</table>

1. Inductance tested at 1 kHz, 1 Vrms, 0 Adc on an Agilent/HP 4284A LCR-meter or equivalent.
2. DCR is per winding
3. Interwinding isolation (hipot) tested for one minute.
4. Electrical specifications at 25°C.

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**Recommended Board Layout**

- **Dimensions are in** inches or mm

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