**High Frequency Ceramic Solutions**

AEC-Q200 Qualified Component  
Wideband Ceramic Balun, 1:1 Impedance Ratio, EIA 0805  
P/N 1720BL15B0050E-AEC

**General Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part Number</td>
<td>1720BL15B0050E-AEC</td>
</tr>
<tr>
<td>Frequency (MHz)</td>
<td>625 ~ 2815</td>
</tr>
<tr>
<td>Unbalanced Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Balanced Impedance</td>
<td>50 Ω</td>
</tr>
<tr>
<td>Insertion Loss</td>
<td>1.5 dB max.</td>
</tr>
<tr>
<td>Return Loss</td>
<td>9.5 dB min.</td>
</tr>
<tr>
<td>Phase Difference</td>
<td>±180 ± 10 deg.</td>
</tr>
<tr>
<td>Amplitude Difference</td>
<td>±1.0 dB max.</td>
</tr>
<tr>
<td>CMRR</td>
<td>±20 dB min.</td>
</tr>
<tr>
<td>Power Capacity</td>
<td>2W max. (CW)</td>
</tr>
<tr>
<td>Reel Quantity</td>
<td>4,000 pcs</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-40 to +105°C</td>
</tr>
</tbody>
</table>

**Part Number Explanation**

<table>
<thead>
<tr>
<th>P/N Suffix</th>
<th>Packing Style</th>
<th>Termination Style</th>
<th>Evaluation Style</th>
</tr>
</thead>
<tbody>
<tr>
<td>S</td>
<td>Bulk</td>
<td>100% Tin</td>
<td>1720BL15B0050-EB1SMA  (3 female SMA connectors)</td>
</tr>
<tr>
<td>E</td>
<td>T &amp; R</td>
<td>100% Tin</td>
<td>1720BL15B0050(E or S)-AEC</td>
</tr>
</tbody>
</table>

**Mechanical Dimensions**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>0.079 ± 0.004</td>
</tr>
<tr>
<td>W</td>
<td>0.049 ± 0.004</td>
</tr>
<tr>
<td>T</td>
<td>0.037 ± 0.004</td>
</tr>
<tr>
<td>a</td>
<td>0.012 ± 0.004</td>
</tr>
<tr>
<td>b</td>
<td>0.008 ± 0.004</td>
</tr>
<tr>
<td>c</td>
<td>0.012 +0.004/-0.008</td>
</tr>
<tr>
<td>g</td>
<td>0.014 ± 0.004</td>
</tr>
<tr>
<td>p</td>
<td>0.026 ± 0.002</td>
</tr>
</tbody>
</table>

**Terminal Configuration**

1. Unbalanced Port (IN)  
2. GND or DC feed + RF GND  
3. Balanced Port (OUT1)  
4. Balanced Port (OUT2)  
5. GND  
6. NC

You can download measured s-parameters of this component at: [www.johansontechnology.com/baluns](http://www.johansontechnology.com/baluns)

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P/N 1720BL15B0050E-AEC

Detail Specification: 2/22/2018

Mounting Considerations

Mount these devices with colored mark facing up.
* Line width should be designed to provide 50ohm impedance matching characteristics.

Need our help laying this out for you? Need the layout file?
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Measuring Diagram

Port 1: Unbalanced Port
Ports 2 and 3: Balanced Port
IL = Sds21
RL = Sss11
Amp_balance = dB(S(2,1)/S(3,1))
Phase_balance = Phase(S(2,1)/S(3,1))

*Impedance for ports 2 and 3 = Balanced Impedance/2
**E5071B from Agilent

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Typical Electrical Characteristics (T=25°C)

**Insertion and Return Loss**

![Graph showing Insertion and Return Loss]

**Amplitude and Phase Balance**

![Graph showing Amplitude and Phase Balance]

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Packaging information  
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Soldering Information  
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MSL Info  
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Recommended Storage Condition and Max Shelf Life  
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