For the Full App Note and Layout Files, go to: https://www.johansontechnology.com/ti

General Specifications

<table>
<thead>
<tr>
<th>P/N Suffix</th>
<th>Part Number</th>
<th>Frequency (MHz)</th>
<th>Unbalanced Impedance</th>
<th>Balanced Differential Impedance</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2450BM14G0011</td>
<td>2400 - 2500</td>
<td>50 Ω</td>
<td>Conjugate match to TI CC2620, CC2630, CC2640, CC2642, CC2642R1F CC2650, CC2652R (RGZ) chipsets operated on INTERNAL BIAS MODE</td>
</tr>
</tbody>
</table>

Insertion Loss when component measured by itself (passive insertion loss) 1.5 Typ. (1.8dB max. -40C to +105C)

Return Loss (dB) 9.5 min.

Amplitude Difference 2.0 max.

Phase Difference (deg.) 180 ± 10

Power Capacity 2W max (CW)

Qty/Reel (pcs) 4,000

Operating Temp. Range -40 to +105°C

Recommended Storage Conditions of Unused Product on T&R +5 ~ +35 °C, Humidity 45-75%, 18 months max.

Part Number Explanation

<table>
<thead>
<tr>
<th>P/N Suffix</th>
<th>Packaging Style</th>
<th>Termination Style</th>
<th>Mechanical Dimensions</th>
<th>Terminal Configuration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bulk</td>
<td>S</td>
<td>L 0.063 ± 0.004</td>
<td>1 Unbalanced Port</td>
</tr>
<tr>
<td></td>
<td>Suffix = S</td>
<td>100% Tin</td>
<td>W 0.031 ± 0.004</td>
<td>4 Balanced Port</td>
</tr>
<tr>
<td></td>
<td>T &amp; R</td>
<td>Suffix = None</td>
<td>T 0.024 ± 0.004</td>
<td>2 NC</td>
</tr>
<tr>
<td></td>
<td>Suffix = T</td>
<td></td>
<td>a 0.008 ± 0.004</td>
<td>5 GND</td>
</tr>
<tr>
<td></td>
<td>E.g. 2450BM14G0011S</td>
<td></td>
<td>b 0.008 +0.1/-0.15</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.g. 2450BM14G0011T</td>
<td></td>
<td>c 0.006 ± 0.004</td>
<td></td>
</tr>
<tr>
<td></td>
<td>E.g. 2450BM14G0011(T or S)</td>
<td></td>
<td>g 0.012 ± 0.004</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>p 0.020 ± 0.002</td>
<td></td>
</tr>
</tbody>
</table>

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**Mounting Considerations**

*Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

<table>
<thead>
<tr>
<th>Port 1: Unbalanced Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>Port 1 (50 Ohms)</td>
</tr>
<tr>
<td>Port 2*</td>
</tr>
<tr>
<td>Port 3*</td>
</tr>
<tr>
<td>Network Analyzer**</td>
</tr>
</tbody>
</table>

**Measuring Diagram**

Would you like us to provide the layout files of the TI chipset + 2450BM14G0011? Review your layout for free? Please go to this link to contact our RF team:

https://www.johansontechnology.com/ask-a-question

*Applications Engineering* on the drop down question type

**Units in mm**

- Land
- Through-hole (Ø 0.3/Ø 0.2) vias to GND

Do you need the layout/gerber files of the above? Go to: https://www.johansontechnology.com/ti or send us a message to review your layout at: https://www.johansontechnology.com/ask-a-question

*Impedance for ports 2 and 3

- Conjugate to Balanced Impedance/2

**E5071C from Agilent**

You can download the s-parameters at: http://www.johansontechnology.com/ti
**Typical Electrical Characteristics (T=25°C)**

**Insertion and Return Loss**

![Graph showing Insertion and Return Loss](image)

**Amplitude and Phase Balance**

![Graph showing Amplitude and Phase Balance](image)
2.4GHz Impedance Matched Balun + embedded FCC/ETSI Band Pass Filter For TI CC2620, CC2630, CC2640, CC2642, CC2642R1F, CC2650, CC2652R (RGZ) chipsets operated on INTERNAL BIAS MODE

Application Notes, Layout Files, and more
https://www.johansontechnology.com/ti

Packaging information
https://www.johansontechnology.com/tape-reel-packaging

Soldering Information
https://www.johansontechnology.com/ipcsoldering-profile

MSL Info
https://www.johansontechnology.com/msl-rating

Recommended Storage Condition and Max Shelf Life
https://www.johansontechnology.com/recommended-storage-conditions

RoHS Compliance
https://www.johansontechnology.com/rohs-compliance

Antenna layout and tuning techniques
https://www.johansontechnology.com/tuning

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