**Part Number**: 2450BM14G0011

**Frequency (MHz)**: 2400 - 2500

**Unbalanced Impedance**: 50 Ω

**Balanced Differential Impedance**: Conjugate match to TI CC2620, CC2630, CC2640, CC2650, CC2652R (RGZ) chipsets operated on INTERNAL BIAS MODE

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

**Return Loss (dB)**: 9.5 min.

**Operating Temp. Range**: -40 ~ +105°C

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

**Power Capacity**: 2W max (CW)

**Qty/Reel (pcs)**: 4,000

**Terminal Configuration**

<table>
<thead>
<tr>
<th>No</th>
<th>Function</th>
<th>No</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Unbalanced Port</td>
<td>4</td>
<td>Balanced Port</td>
</tr>
<tr>
<td>2</td>
<td>NC</td>
<td>5</td>
<td>GND</td>
</tr>
<tr>
<td>3</td>
<td>Balanced Port</td>
<td>6</td>
<td>GND</td>
</tr>
</tbody>
</table>

**Mechanical Dimensions**

<table>
<thead>
<tr>
<th></th>
<th>Inches</th>
<th>Millimeter</th>
</tr>
</thead>
<tbody>
<tr>
<td>L</td>
<td>0.063 ± 0.004</td>
<td>1.6 ± 0.10</td>
</tr>
<tr>
<td>W</td>
<td>0.031 ± 0.004</td>
<td>0.8 ± 0.10</td>
</tr>
<tr>
<td>T</td>
<td>0.024 ± 0.004</td>
<td>0.6 ± 0.10</td>
</tr>
<tr>
<td>a</td>
<td>0.008 ± 0.0039</td>
<td>0.2 ± 0.10</td>
</tr>
<tr>
<td>b</td>
<td>0.008 +0.1/-0.15</td>
<td>0.2 +0.1/-0.15</td>
</tr>
<tr>
<td>c</td>
<td>0.006 ± 0.0039</td>
<td>0.15 ± 0.10</td>
</tr>
<tr>
<td>g</td>
<td>0.012 ± 0.0039</td>
<td>0.3 ± 0.10</td>
</tr>
<tr>
<td>p</td>
<td>0.020 ± 0.002</td>
<td>0.5 ± 0.05</td>
</tr>
</tbody>
</table>

Do you need help selecting the best mini or micro 2.4GHz antenna for your application? Send us a message at: [https://www.johansontechnology.com/ask-a-question](https://www.johansontechnology.com/ask-a-question) or go to: [https://www.johansontechnology.com/antennas](https://www.johansontechnology.com/antennas)

**2.4GHz Impedance Matched Balun + embedded FCC/ETSI Band Pass Filter For TI CC2620, CC2630, CC2640, CC2650, CC2652R (RGZ) chipsets operated on INTERNAL BIAS MODE**

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

Johanson Technology, Inc. reserves the right to make design changes without notice. All sales are subject to Johanson Technology, Inc. terms and conditions.
2.4GHz Impedance Matched Balun + embedded FCC/ETSI Band Pass Filter For TI CC2620, CC2630, CC2640, CC2650, CC2652R (RGZ) chipsets operated on INTERNAL BIAS MODE

Mounting Considerations

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

\[
\begin{align*}
&\text{Land} \\
&\text{Through-hole (Ø 0.3/Ø 0.2) vias to GND}
\end{align*}
\]

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

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

Measuring Diagram

Port 1: Unbalanced Port
Ports 2 and 3: Balanced Port
IL=S_{d21}
RL=S_{ss11}
Amp\_balance = dB(S(2,1)/S(3,1))
Phase\_balance = Phase(S(2,1)/S(3,1))

*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

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

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