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With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# High Frequency Ceramic Solutions

## 2.45 GHz RF Balun. 1:2 Ratio, 50/100Ω Impedance

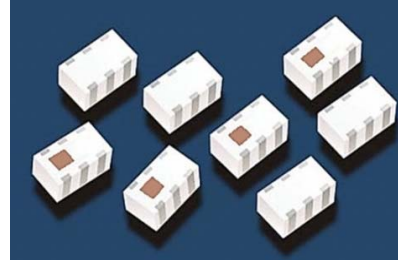
P/N 2450BL15B100

Detail Specification: 3/12/2014

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### General Specifications

|                                     |                   |                              |              |
|-------------------------------------|-------------------|------------------------------|--------------|
| <b>Part Number</b>                  | 2450BL15B100      | <b>Operating Temperature</b> | -40 to +85°C |
| <b>Frequency (MHz)</b>              | 2400 ~ 2500       | <b>Reel Quantity</b>         | 4,000        |
| <b>Unbalanced Impedance</b>         | 50Ω               |                              |              |
| <b>Balanced Differential Imped.</b> | 100Ω              |                              |              |
| <b>Insertion Loss</b>               | 1.0 dB max.       |                              |              |
| <b>Return Loss</b>                  | 9.5 dB min.       |                              |              |
| <b>Phase Difference</b>             | 180° ± 10°        |                              |              |
| <b>Amplitude Difference</b>         | 2.0 dB max.       |                              |              |
| <b>Input Power</b>                  | 3 Watts max. (CW) |                              |              |

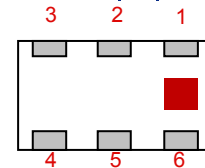


### Mechanical Dimensions

|          | In                 | mm             |
|----------|--------------------|----------------|
| <b>L</b> | 0.079 ± 0.004      | 2.00 ± 0.10    |
| <b>W</b> | 0.049 ± 0.004      | 1.25 ± 0.10    |
| <b>T</b> | 0.033 ± 0.004      | 0.85 ± 0.10    |
| <b>a</b> | 0.012 ± 0.004      | 0.30 ± 0.10    |
| <b>b</b> | 0.008 ± 0.004      | 0.20 ± 0.10    |
| <b>c</b> | 0.012 +.004/-0.008 | 0.30 +0.1/-0.2 |
| <b>g</b> | 0.014 ± 0.004      | 0.35 ± 0.10    |
| <b>p</b> | 0.026 ± 0.002      | 0.65 ± 0.05    |

### Terminal Configuration

| No. | Function        | No. | Function      |
|-----|-----------------|-----|---------------|
| 1   | Unbalanced Port | 4   | Balanced Port |
| 2   | GND or DC Feed  | 5   | GND           |
| 3   | Balanced Port   | 6   | NC            |



|                   |                         |   |            |                   |
|-------------------|-------------------------|---|------------|-------------------|
| <b>P/N Suffix</b> | <b>Packing Style</b>    | Bulk  | Suffix = S | eg. 2450BL15B100S |
|                   |                         | T & R   | Suffix = E | eg. 2450BL15B100E |
|                   | <b>Evaluation Board</b> | 2450BL15B100-EB1SMA (3 Female SMA connector on a 50Ω PCB) |            |                   |

### Mounting Considerations

Mount these devices with brown mark facing up.

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

- Solder Resist
- Land
- Through-hole (φ 0.3)

Want the layout file of the above? Send us a message at: [www.johansontechnology.com/component/techquestion](http://www.johansontechnology.com/component/techquestion)

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# High Frequency Ceramic Solutions

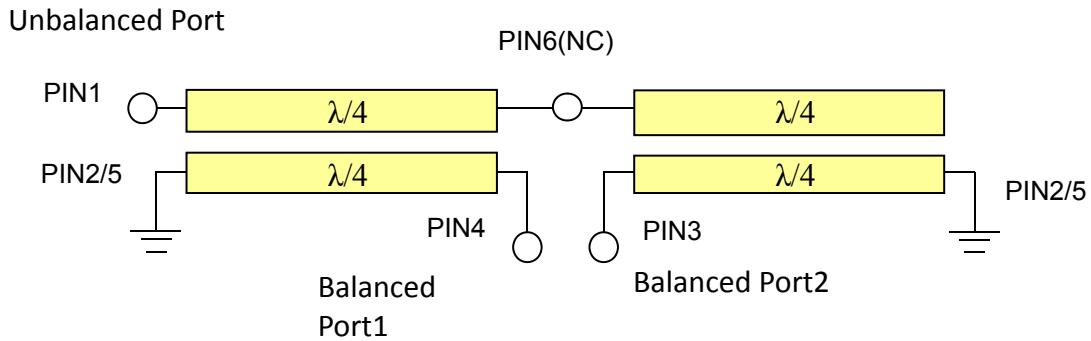
**2.45 GHz RF Balun. 1:2 Ratio, 50/100Ω Impedance**

**P/N 2450BL15B100**

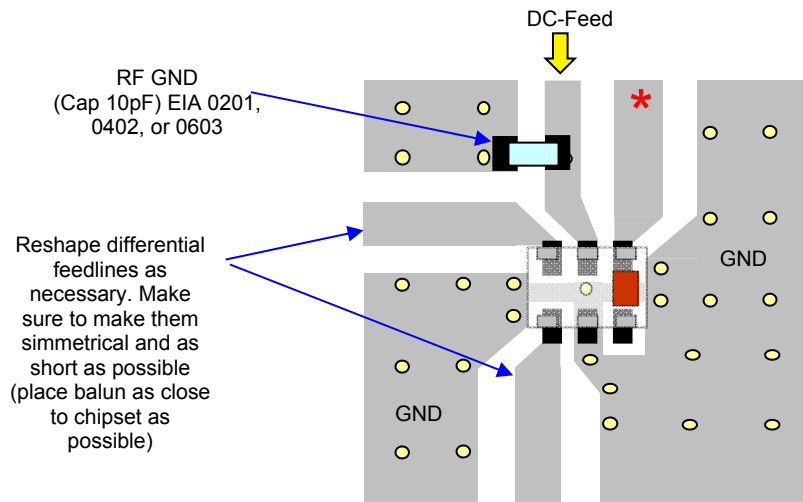
Detail Specification: 3/12/2014

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## Internal Equivalent Circuit



## Internal Equivalent Circuit



Not quite sure how to layout the balun? We'll help! Send us a message at:  
[www.johansontechnology.com/component/techquestion](http://www.johansontechnology.com/component/techquestion)

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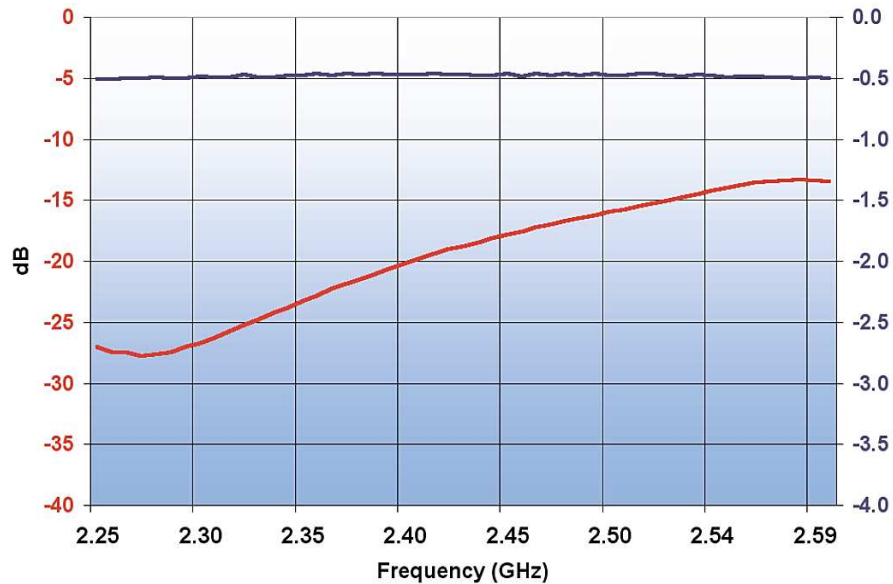
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## Typical Electrical Performance (T=25°C)



## More Baluns

[www.johansontechnology.com/rfbaluns](http://www.johansontechnology.com/rfbaluns)

## RoHS Compliance

[www.johansontechnology.com/technical-notes/rohs-compliance.html](http://www.johansontechnology.com/technical-notes/rohs-compliance.html)

## Packaging information

[www.johansontechnology.com/ipcpackaging.html](http://www.johansontechnology.com/ipcpackaging.html)

## Soldering Information (i.e. recommended profile)

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

## Layout Files, s-parameters and any other technical questions

[www.johansontechnology.com/component/techquestion/?Itemid=407](http://www.johansontechnology.com/component/techquestion/?Itemid=407)

## MSL Info

[www.johansontechnology.com/technical-notes/msl-rating.html](http://www.johansontechnology.com/technical-notes/msl-rating.html)

## Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/ipcstorage-shelflife](http://www.johansontechnology.com/ipcstorage-shelflife)

## Antenna layout and tuning techniques

[www.johansontechnology.com/tuning](http://www.johansontechnology.com/tuning)

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipcantennaservices](http://www.johansontechnology.com/ipcantennaservices)

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