

# High Frequency Ceramic Solutions

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

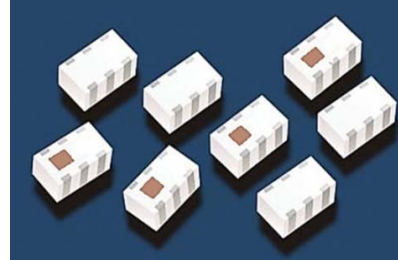
P/N 2450BL15B100

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)		

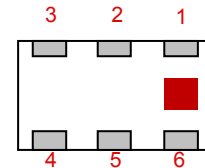


### Mechanical Dimensions

	In	mm
L	0.079 ± 0.004	2.00 ± 0.10
W	0.049 ± 0.004	1.25 ± 0.10
T	0.033 ± 0.004	0.85 ± 0.10
a	0.012 ± 0.004	0.30 ± 0.10
b	0.008 ± 0.004	0.20 ± 0.10
c	0.012 +.004/-.008	0.30 +0.1/-0.2
g	0.014 ± 0.004	0.35 ± 0.10
p	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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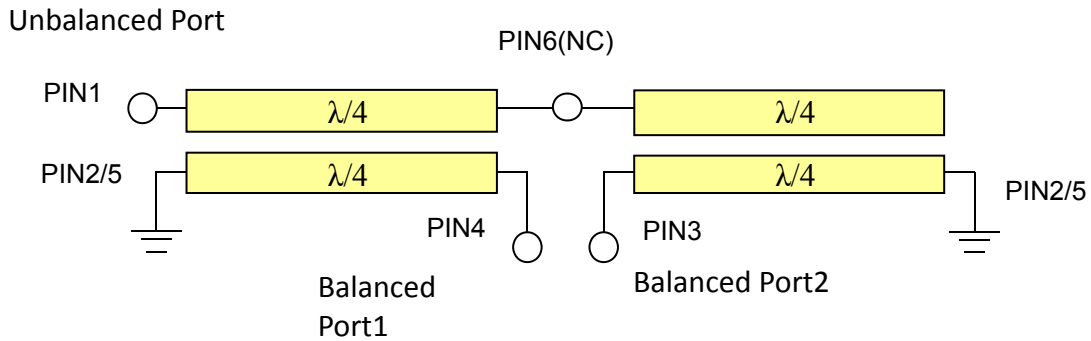
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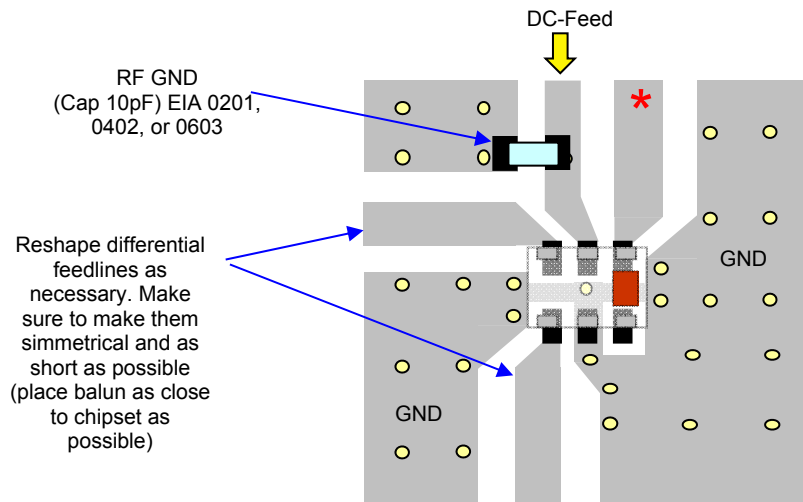
Detail Specification: 3/12/2014

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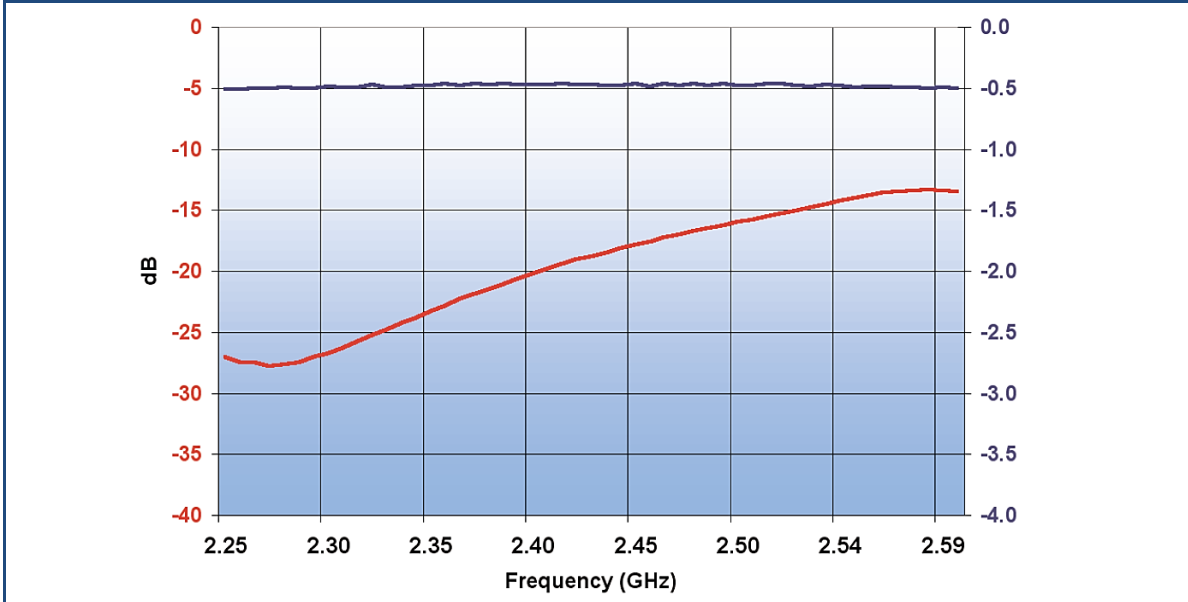
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## Typical Electrical Performance (T=25°C)



## 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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