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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.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# High Frequency Ceramic Solutions

## 2450 MHz EIA 0603 RF Balun

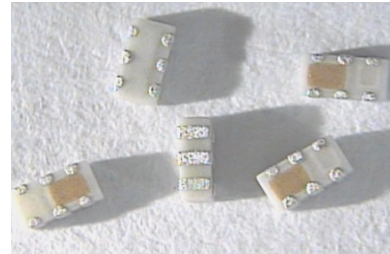
P/N 2450BL14C050

Detail Specification: 2/7/2018

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### General Specifications

Part Number	2450BL14C050	Reel Quantity	4,000 pcs
Frequency (MHz)	2400 ~ 2500	Power Capacity	3W max. (CW)
Unbalanced Impedance	50 Ω		
Balanced Differential Impedance	50 Ω		
Insertion Loss	1.2 dB max.		
Return Loss	9.5 dB min.		
Phase Difference	180 ± 10 deg.		
Amplitude Difference	2 dB max.		
Operating Temperature	-40 to +85°C		
Storage Temperature Range	-40 to +85°C		



You can download measured s-parameters of this component at: <https://www.johansontechnology.com/rfbaluns>

### Part Number Explanation

P/N Suffix	Packaging Style	Bulk	Suffix = S	Eg. 2450BL14C050S
		T & R	Suffix = T	Eg. 2450BL14C050T
	Termination Style	100% Tin	Suffix = None	Eg. 2450BL14C050(T or S)

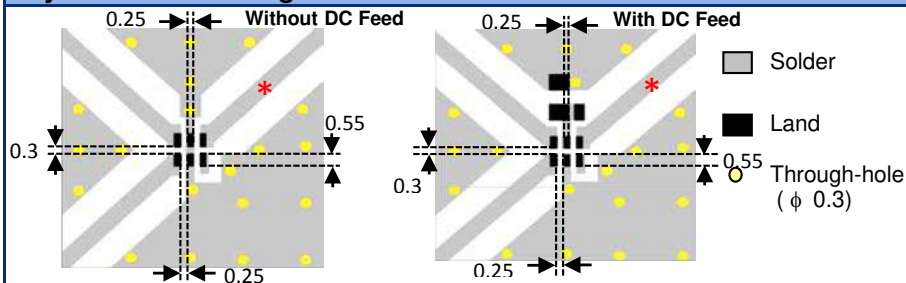
### Mechanical Dimensions

	In	mm
L	0.063 ± 0.004	1.60 ± 0.10
W	0.031 ± 0.004	0.80 ± 0.10
T	0.024 ± 0.004	0.60 ± 0.10
a	0.008 ± 0.004	0.20 ± 0.10
b	0.008 +0.004/0.008	0.20 +0.1/-0.15
c	0.006 ± 0.004	0.15 ± 0.10
g	0.012 ± 0.004	0.30 ± 0.10
p	0.020 ± 0.004	0.50 ± 0.10

### Terminal Configuration

1	Unbalanced Port
2	GND, or DC Bias + RF GND
3	Balanced Port
4	Balanced Port
5	GND
6	NC

### Layout and Mounting Considerations



\* RF trace geometry must be designed with a 50ohm characteristic impedance

Need help with the balun's layout? Want the layout file? Send us a message at: [www.johansontechnology.com/component/techquestion](http://www.johansontechnology.com/component/techquestion)

Mount these devices with red mark facing up. Line width should be designed to provide proper impedance matching characteristics.

Units: mm

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# High Frequency Ceramic Solutions

2450 MHz EIA 0603 RF Balun

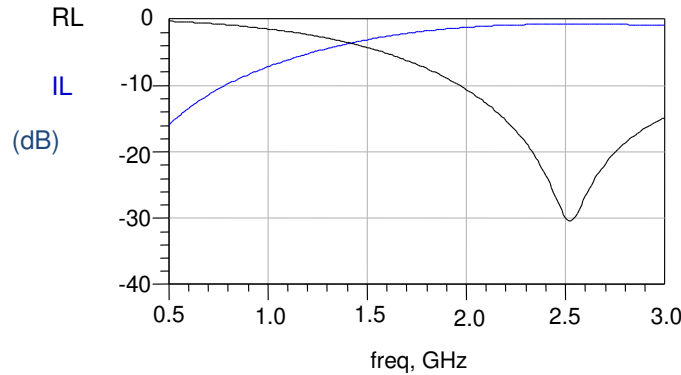
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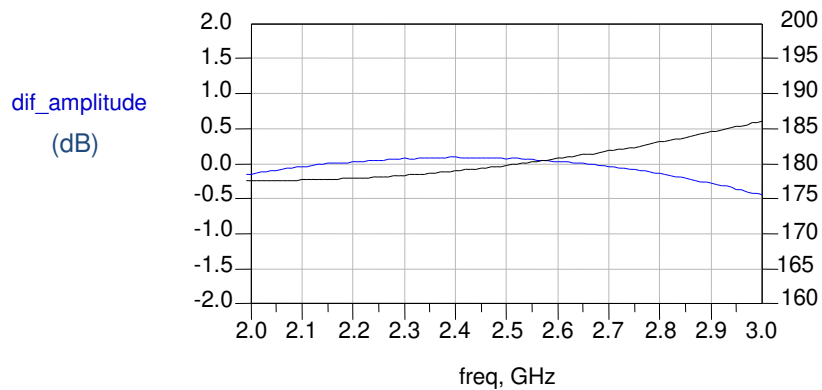
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## Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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**P/N 2450BL14C050**

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## More Balun info at:

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

## Packaging information

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

## Soldering Information

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

## 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)

## RoHS Compliance

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

## 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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