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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

1850 MHz EIA 0805 1:1 RF Balun

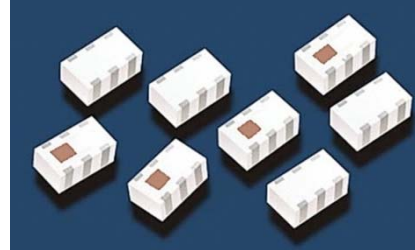
P/N 1850BL15B050

Detail Specification: 7/16/2014

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## General Specifications

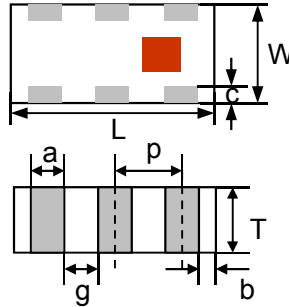
Part Number	1850BL15B050	
Unbalanced Impedance (single ended)	50 Ω	
Differential Balanced Imp.	50 Ω	
Operating Frequency 1 (MHz)	1700 ~ 2000	
Insertion Loss, Oper Freq 1	1.0 dB max.	
Return Loss, Oper Freq 1	9.5 dB min.	
Operating Frequency 2 (MHz)	1700 ~ 2300	
Insertion Loss, Oper Freq 2	1.1 dB max.	Power Capacity
Return Loss, Oper Freq 2	9.0 dB min.	Operating Temperature
Phase Difference (1&2)	180 ± 10 deg.	Storage Temperature Range
Amplitude Difference (1&2)	2 dB max.	Reel Quantity
		3 W max. (CW)
		-40 to +85°C
		-40 to +85°C
		4,000 pcs



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

## Mechanical Dimensions

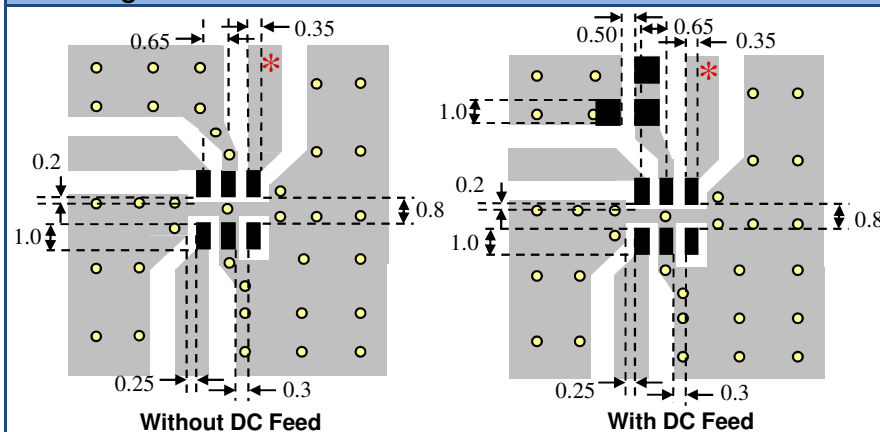
	In	mm
L	0.079 ± 0.004	2.00 ± 0.10
W	0.049 ± 0.004	1.25 ± 0.10
T	0.033 ± 0.004	0.85 ± 0.10
a	0.012 ± 0.004	0.30 ± 0.10
b	0.008 ± 0.004	0.20 ± 0.10
c	0.012 +0.004/0.008	0.30 +0.1/-0.2
g	0.014 ± 0.004	0.35 ± 0.10
p	0.026 ± 0.002	0.65 ± 0.05



## Terminal Configuration

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

## Mounting Considerations



Mount these devices with

- Solder
- Land
- Through-hole (Φ0.3)

\* Line width should be designed to provide 50ohm impedance

Need our help laying this out for you? Need the layout file? Send us a message at: [www.johansontechnology.com/component/techquestion](http://www.johansontechnology.com/component/techquestion)

Johanson Technology, Inc. reserves the right to make design changes without notice.

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

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# High Frequency Ceramic Solutions

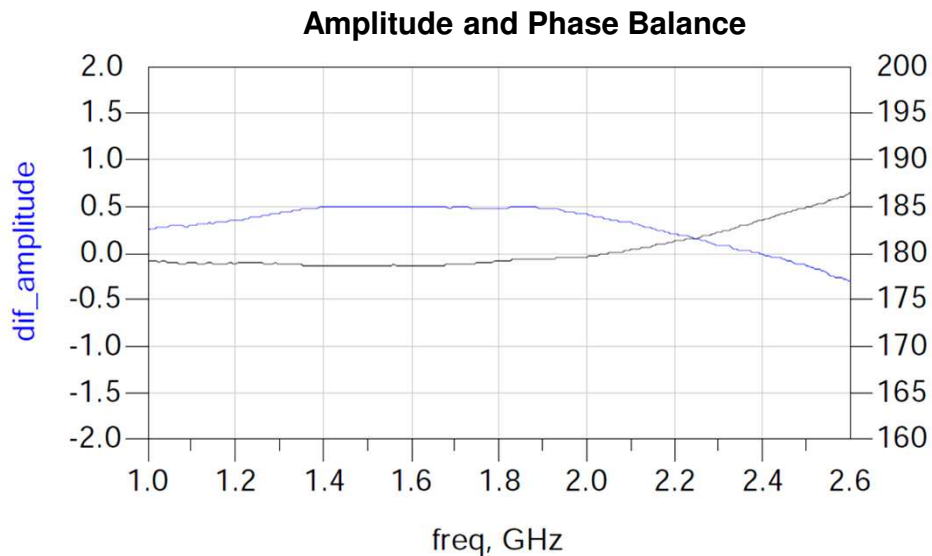
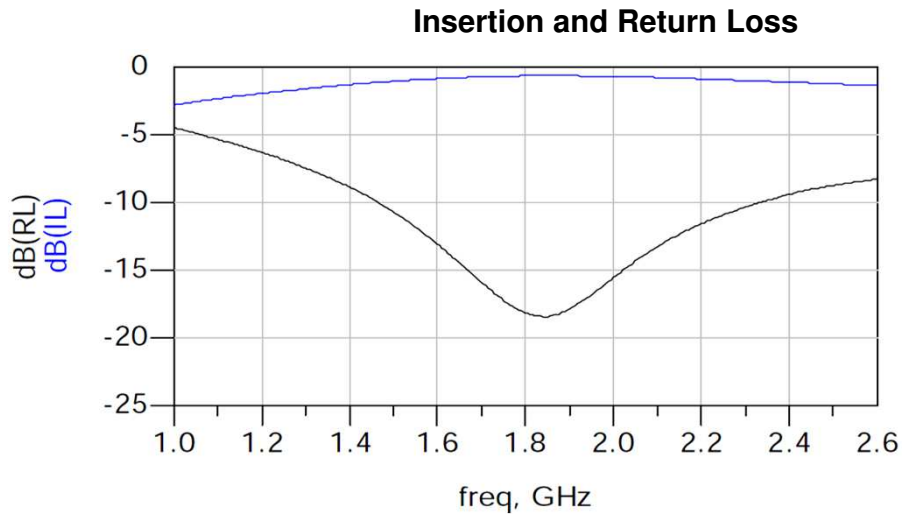
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## Typical Electrical Characteristics (T=25°C)



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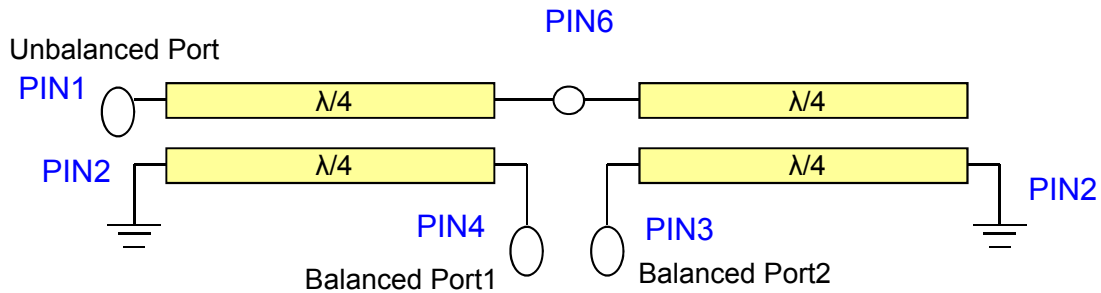
1850 MHz EIA 0805 1:1 RF Balun

P/N 1850BL15B050

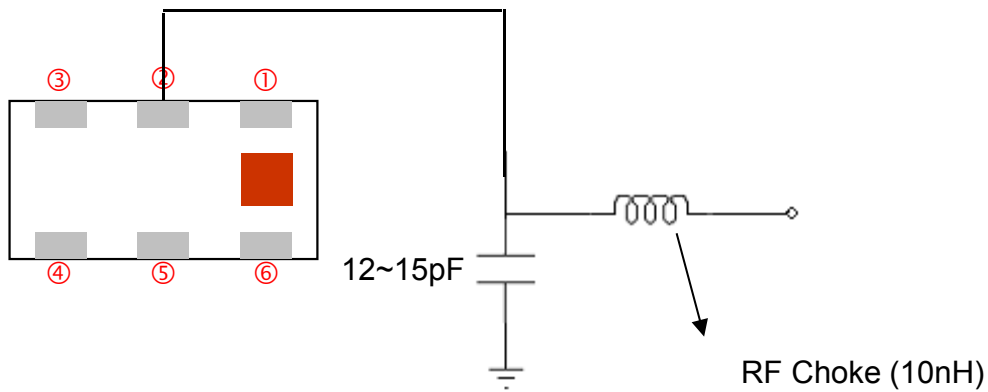
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## Equivalent Circuit



## Recommended Circuit when using DC-Feed (Pin 2) feature



Note: The by-pass capacitor and RF choke should be placed *as close as possible* to Pin2 of balun!

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## Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 1850BL15B050S
		T & R	Suffix = E	Eg. 1850BL15B050E
	Termination style	100% Tin	Suffix = None	Eg. 1850BL15B050 (E or S)
	Evaluation Board	1850BL15B050-EBSMA		

## Recommended Storage Conditions of unused product on T&R

+5 to +35°C, 18 mos. max. Humidity 45~75% RH

## More Filter-Balun info at:

<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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