

# High Frequency Ceramic Solutions

1850 MHz EIA 0805 1:1 RF Balun

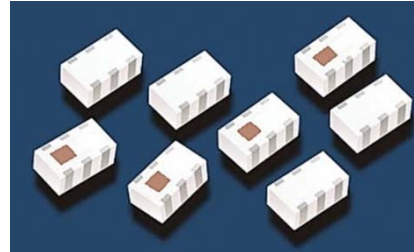
P/N 1850BL15B050

Detail Specification: 7/16/2014

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## General Specifications

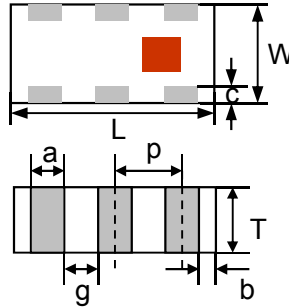
Part Number	1850BL15B050		
Unbalanced Impedance (single ended)	50 Ω		
Differential Balanced Imp.	50 Ω		
Operating Frequency 1 (MHz)	1700 ~ 2000		
Insertion Loss, Oper Freq 1	1.0 dB max.		
Return Loss, Oper Freq 1	9.5 dB min.		
Operating Frequency 2 (MHz)	1700 ~ 2300		
Insertion Loss, Oper Freq 2	1.1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



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

## Mechanical Dimensions

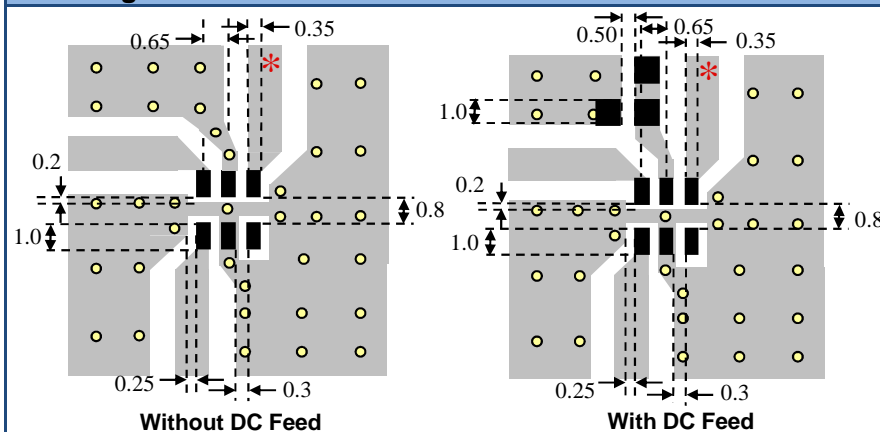
	In	mm
L	0.079 ± 0.004	2.00 ± 0.10
W	0.049 ± 0.004	1.25 ± 0.10
T	0.033 ± 0.004	0.85 ± 0.10
a	0.012 ± 0.004	0.30 ± 0.10
b	0.008 ± 0.004	0.20 ± 0.10
c	0.012 +0.004/0.008	0.30 +0.1/-0.2
g	0.014 ± 0.004	0.35 ± 0.10
p	0.026 ± 0.002	0.65 ± 0.05



## 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)

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

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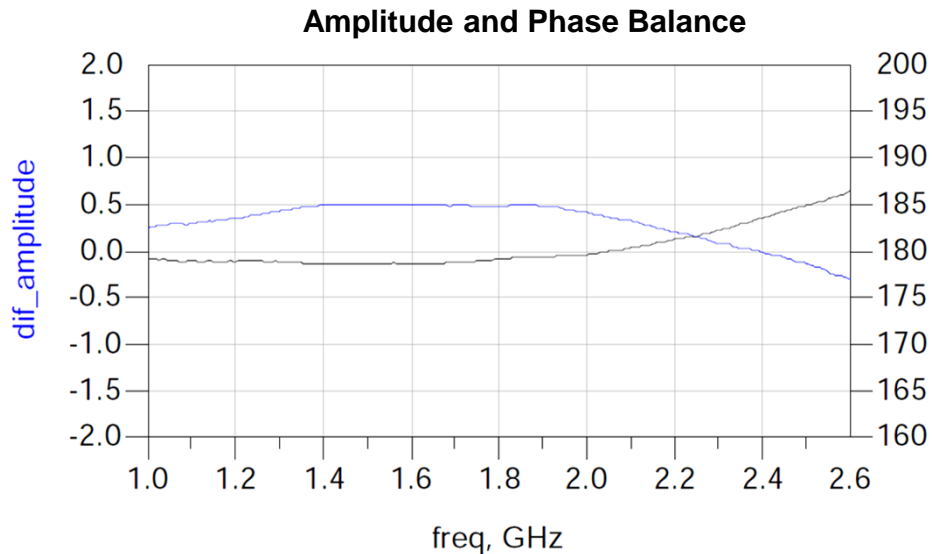
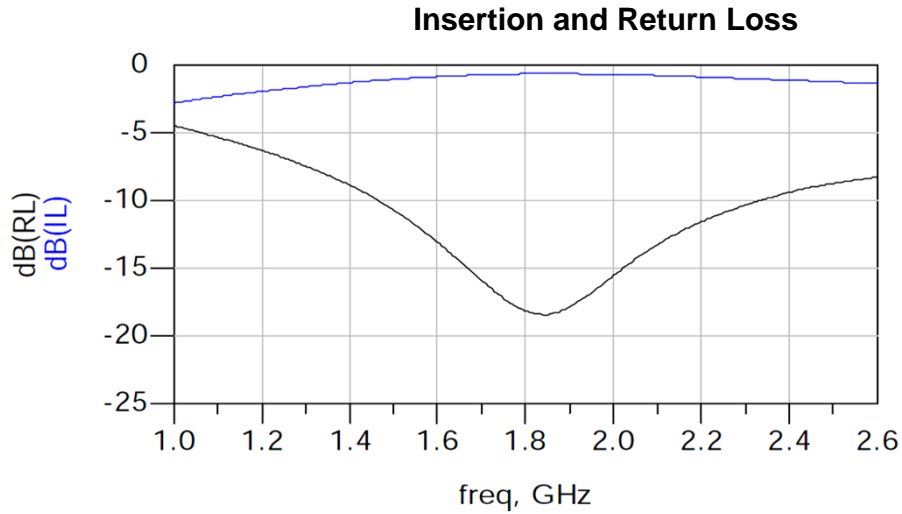
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## Typical Electrical Characteristics (T=25°C)



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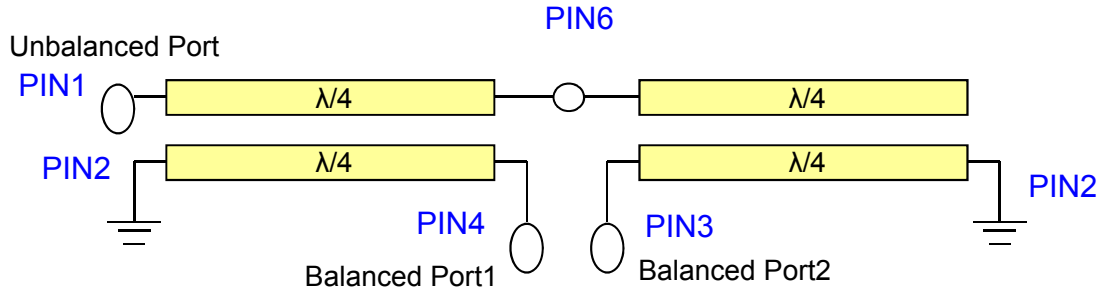
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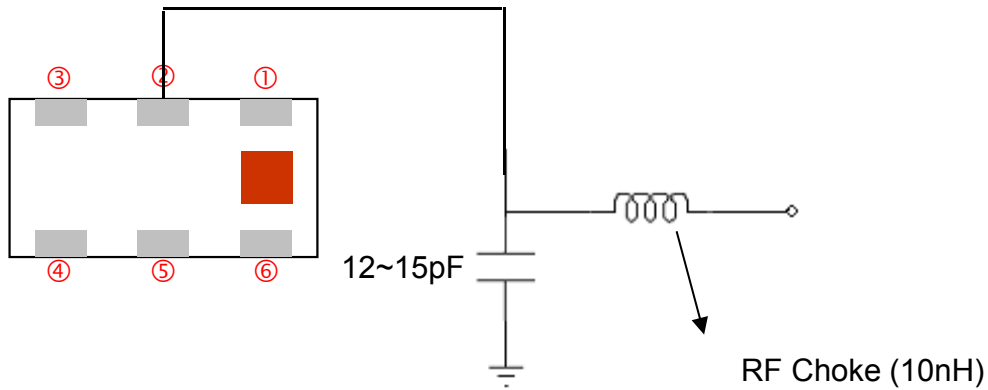
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## Equivalent Circuit



## 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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