

# High Frequency Ceramic Solutions

1850 MHz EIA 0805 1:1 RF Balun

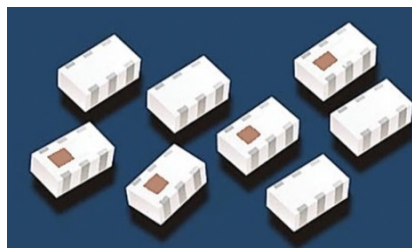
P/N 1850BL15B050

Detail Specification: 1/18/2019

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## General Specifications

<b>Part Number</b>	1850BL15B050	
<b>Unbalanced Impedance</b> (single ended)	50 $\Omega$	
<b>Differential Balanced Imp.</b>	50 $\Omega$	
<b>Operating Frequency 1 (MHz)</b>	1700 ~ 2000	
<b>Insertion Loss, Oper Freq 1</b>	1.0 dB max.	
<b>Return Loss, Oper Freq 1</b>	9.5 dB min.	
<b>Operating Frequency 2 (MHz)</b>	1700 ~ 2300	
<b>Insertion Loss, Oper Freq 2</b>	1.1 dB max.	<b>Power Capacity</b>
<b>Return Loss, Oper Freq 2</b>	9.0 dB min.	<b>Operating Temperature</b>
<b>Phase Difference (1&amp;2)</b>	180 $\pm$ 10 deg.	<b>Storage Temperature Range</b>
<b>Amplitude Difference (1&amp;2)</b>	2 dB max.	<b>Reel Quantity</b>
		3 W max. (CW)
		-40 to +105°C
		-40 to +105°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 $\pm$ 0.004	2.00 $\pm$ 0.10
W	0.049 $\pm$ 0.004	1.25 $\pm$ 0.10
T	0.033 $\pm$ 0.004	0.85 $\pm$ 0.10
a	0.012 $\pm$ 0.004	0.30 $\pm$ 0.10
b	0.008 $\pm$ 0.004	0.20 $\pm$ 0.10
c	0.012 +0.004/0.008	0.30 +0.1/-0.2
g	0.014 $\pm$ 0.004	0.35 $\pm$ 0.10
p	0.026 $\pm$ 0.002	0.65 $\pm$ 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 ( $\Phi$ 0.3)

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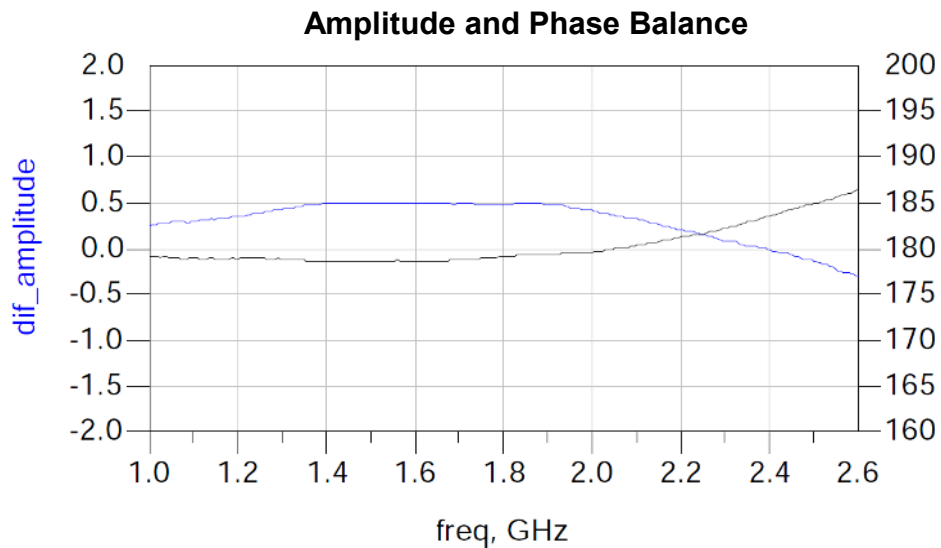
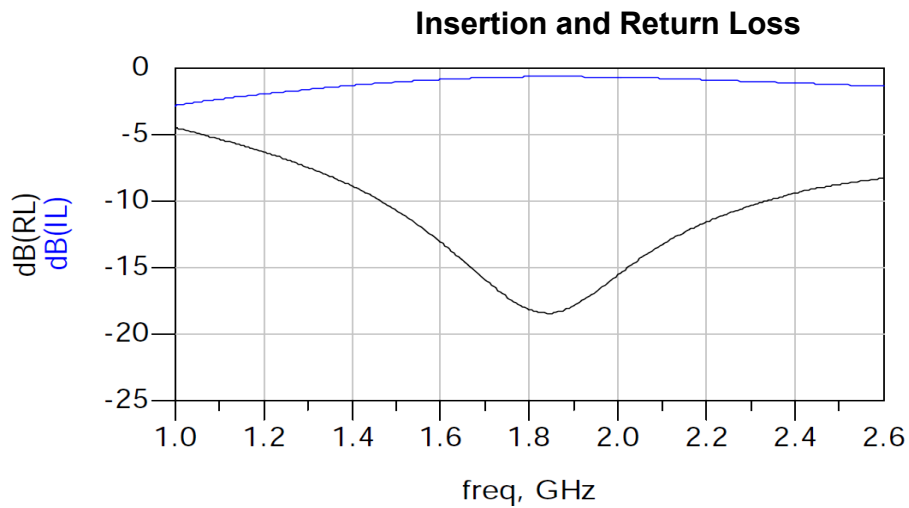
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## Typical Electrical Characteristics (T=25°C)



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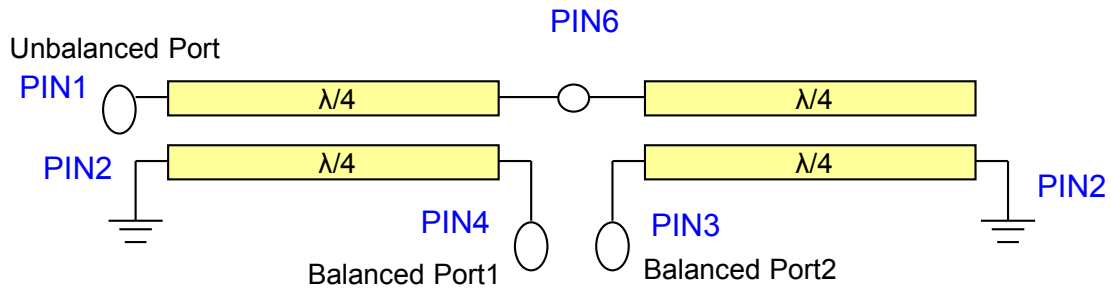
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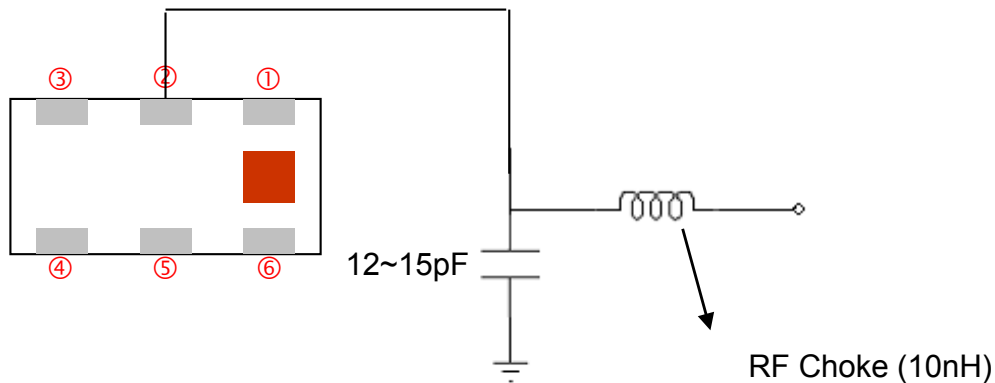
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## Equivalent Circuit



## 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 Balun info at:

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

## RoHS Compliance

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

## Packaging information

[www.johansontechnology.com/tape-reel-packaging](http://www.johansontechnology.com/tape-reel-packaging)

## Soldering Information

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

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

[www.johansontechnology.com/ask-a-question](http://www.johansontechnology.com/ask-a-question)

## MSL Info

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

## Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/recommended-storage-conditions](http://www.johansontechnology.com/recommended-storage-conditions)

## Antenna layout and tuning techniques

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

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipc-antenna-services](http://www.johansontechnology.com/ipc-antenna-services)

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