

High Frequency Ceramic Solutions

1850 MHz EIA 0805 1:1 RF Balun

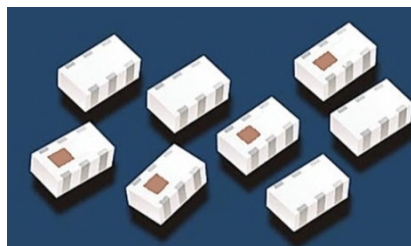
P/N 1850BL15B050

Detail Specification: 1/18/2019

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General Specifications

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 +105°C
Phase Difference (1&2)	180 \pm 10 deg.	Storage Temperature Range -40 to +105°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 \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

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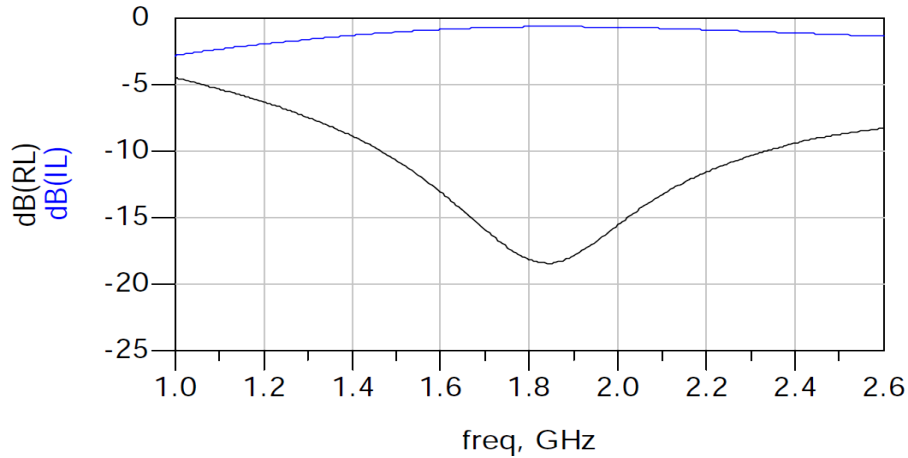
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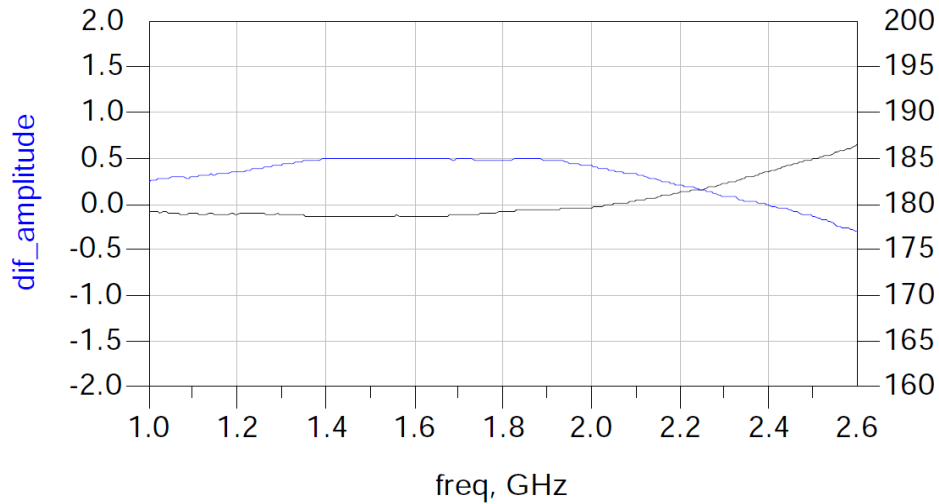
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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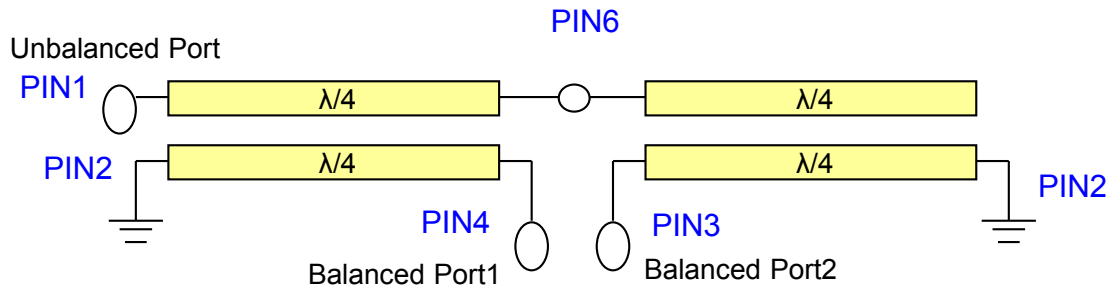
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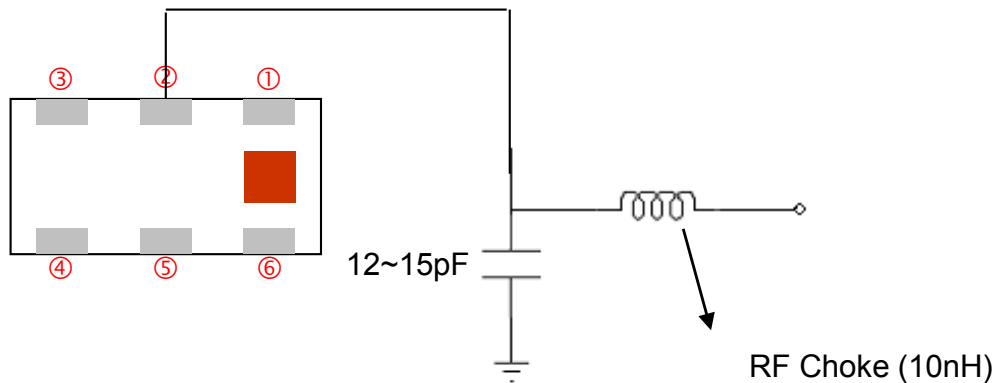
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Equivalent Circuit



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

RoHS Compliance

www.johansontechnology.com/rohs-compliance

Packaging information

www.johansontechnology.com/tape-reel-packaging

Soldering Information

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