

# High Frequency Ceramic Solutions

900MHz 1:1 RF Balun, EIA 0805 with DC-Feed Feature

P/N 0900BL15C050

Detail Specification: 8/4/2016

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## General Specifications

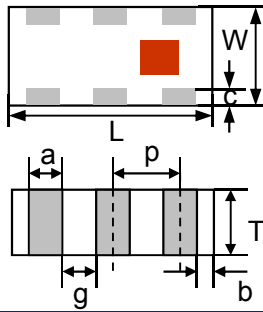
Part Number	0900BL15C050	Amplitude Difference	2.0 dB max.
Frequency	800 - 1000 (MHz)	Operating Temperature	-40 to +85°C
Unbalanced Impedance	50 Ω	Storage Temperature	-40 to +85°C
Differential Balanced Imp.	50 Ω	Power Capacity	3 W max. (CW)
Insertion Loss	0.9dB Typ (1.2 dB max.)	Recommended Storage Conditions of unused product on T&R	+5 to +35°C, 18 mos. max. Humidity 45~75% RH
Return Loss	11dB Typ (9.5 dB min.)		
Phase Difference	180 ± 10 deg.		

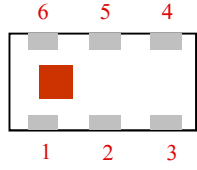
## Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 0900BL15C050S
		T & R	Suffix = E	Eg. 0900BL15C050E (4000 pcs/reel)
	Termination style	AgPt	Suffix = None	Eg. 0900BL15C050 (E or S)
	Evaluation Board	eg.0900BL15C050-EB1SMA (2 port back-to-back EVB)		
eg. 0900BL15C0500-EB2SMA (3 port standard EVB)				

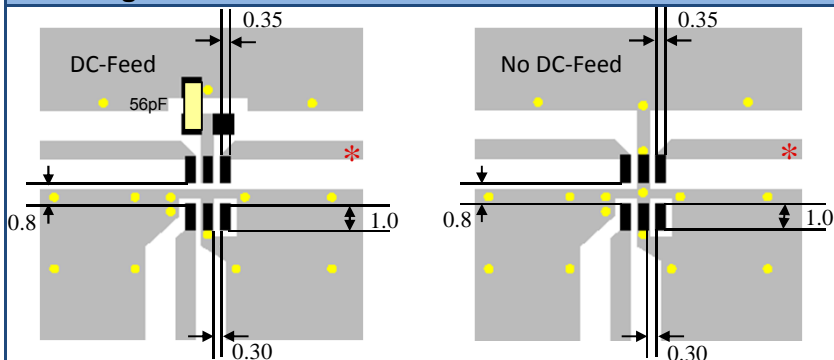
You can download measured s-parameters of this component at: <http://www.johansontechnology.com/rfbaluns>

Mechanical Dimensions		
	In	mm
L	0.079 ± 0.004	2.00 ± 0.10
W	0.049 ± 0.004	1.25 ± 0.10
T	0.028 ± 0.004	0.70 ± 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 (IN)	6	NC
2	GND or DC Feed+RF GND		
3	Balanced Port (OUT2)		
4	Balanced Port (OUT1)		
5	GND		

## Mounting Considerations



Mount these devices with colored mark facing up.

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

- Solder
- Land
- Through-hole (Φ0.3)

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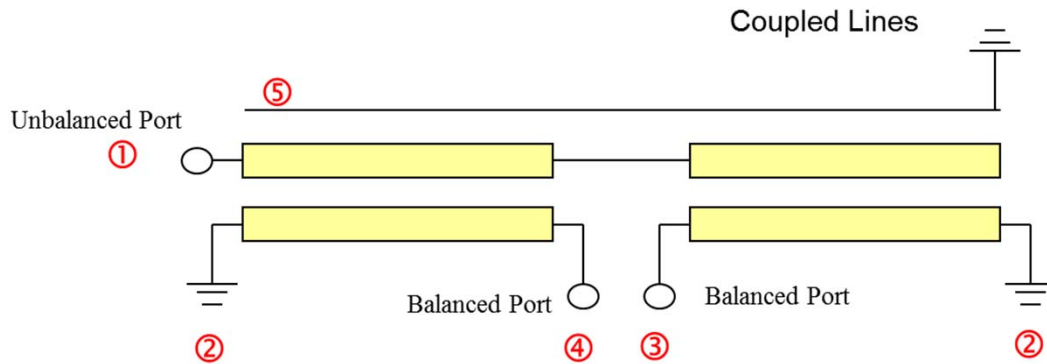
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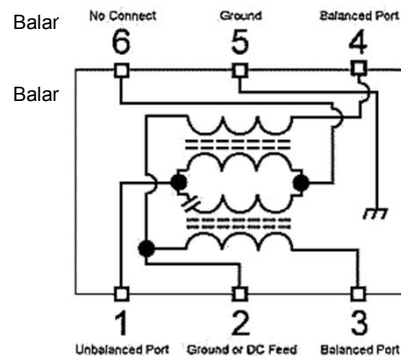
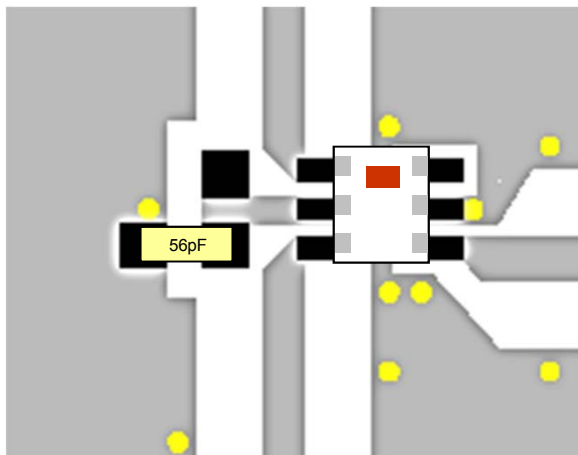
## Equivalent Circuit for 0900BL15C050



-Pin3 and Pin4 are DC connected to Pin2 (GND or DC feed) in the device but not DC connected to Pin5 (GND). Therefore by-pass capacitors should be connected when feeding DC power from Pin2.

Unbalanced port does not have a direct current path to GND

Use 56pF RF GND cap when using DC-Feed option



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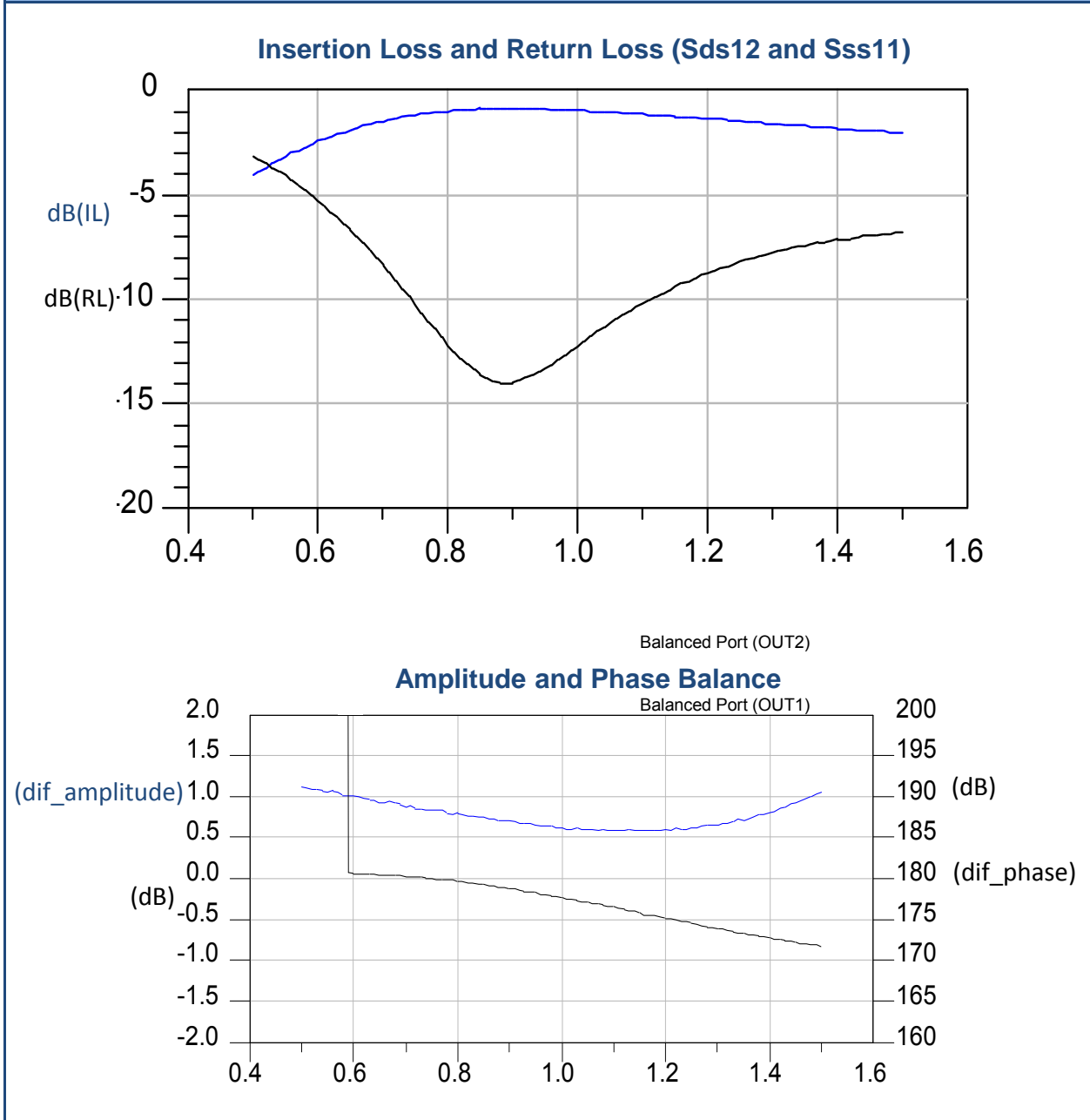
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## Typical Electrical Characteristics (T=25°C)



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**More Filter-Balun info such as s-parameters and other frequencies 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)

Balanced Port (OUT1)

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