High Frequency Ceramic Solutions

900MHz 1:1 RF Balun, EIA 0805 with DC-Feed Feature **P/N 0900BL15C050**

Detail Specification: 1/18/2019

General Specifications

Part Number	0900BL15C050	**Amplitude Difference**	2.0 dB max.
Frequency	800 - 1000 (MHz)	**Operating Temperature**	-40 to +105°C
Unbalanced Impedance	50 Ω	**Storage Temperature**	-40 to +105°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.		

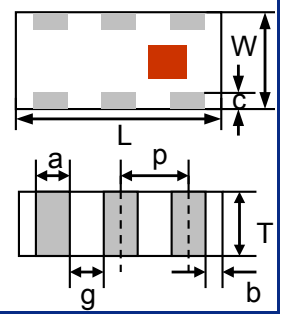
Part Number Explanation

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

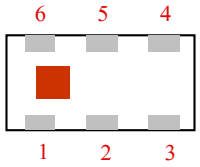
Mechanical Dimensions

	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

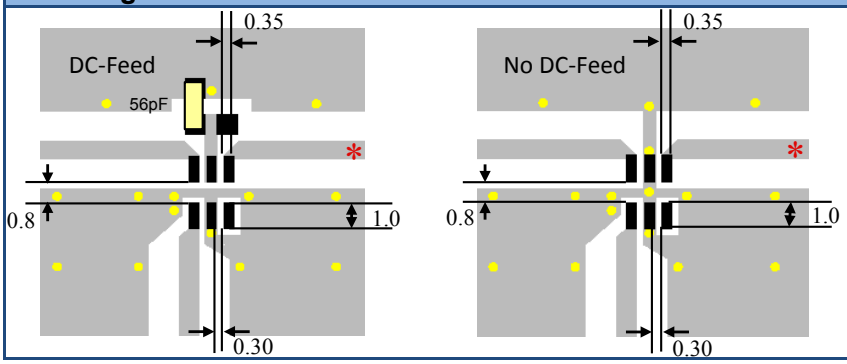


Terminal Configuration

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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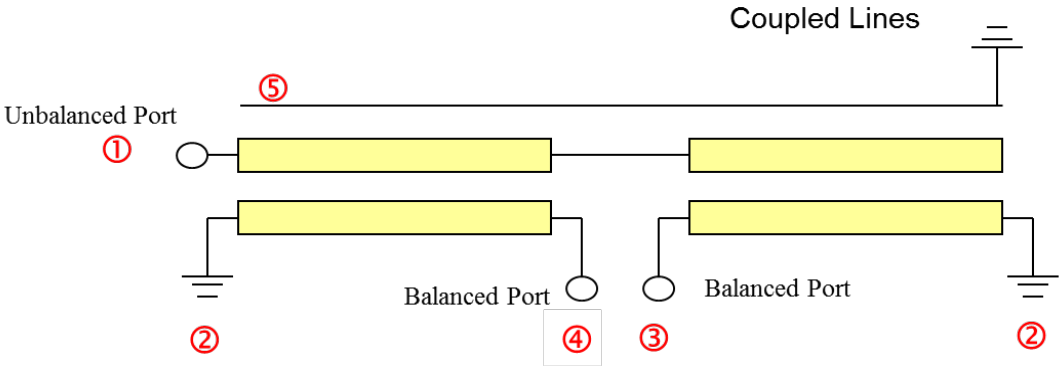
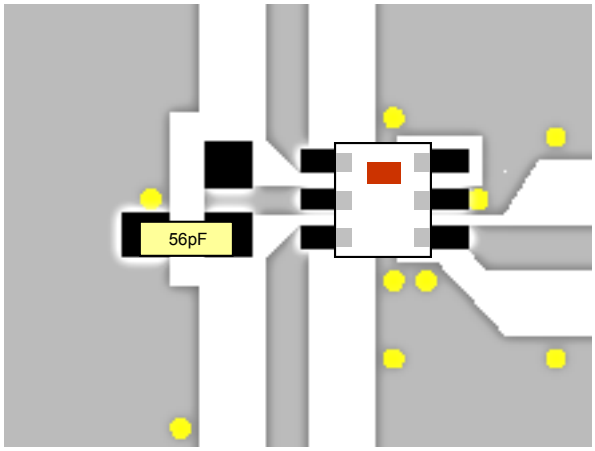
Equivalent Circuit for 0900BL15C050

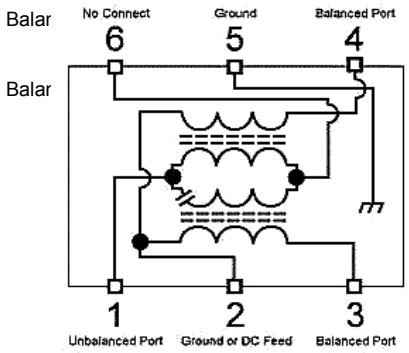


-Pin3 and Pin4 are DC connected to Pin2 (GND or DC feed) in the device but not DC connected to Pin5 (GND). Therefore by-pass capacitors should be connected when feeding DC power from Pin2.

Unbalanced port does not have a direct current path to GND

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

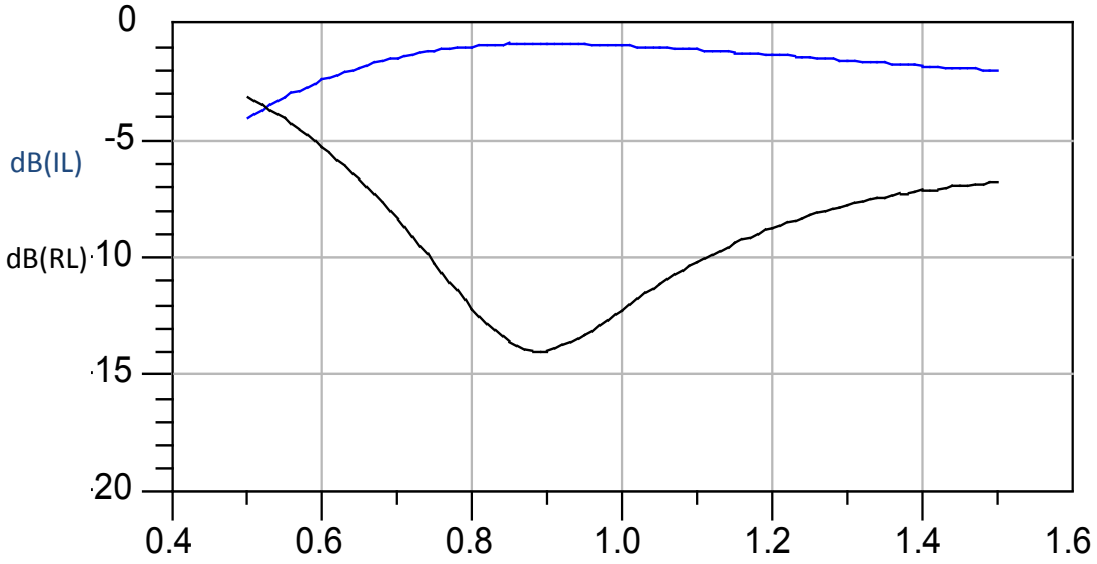




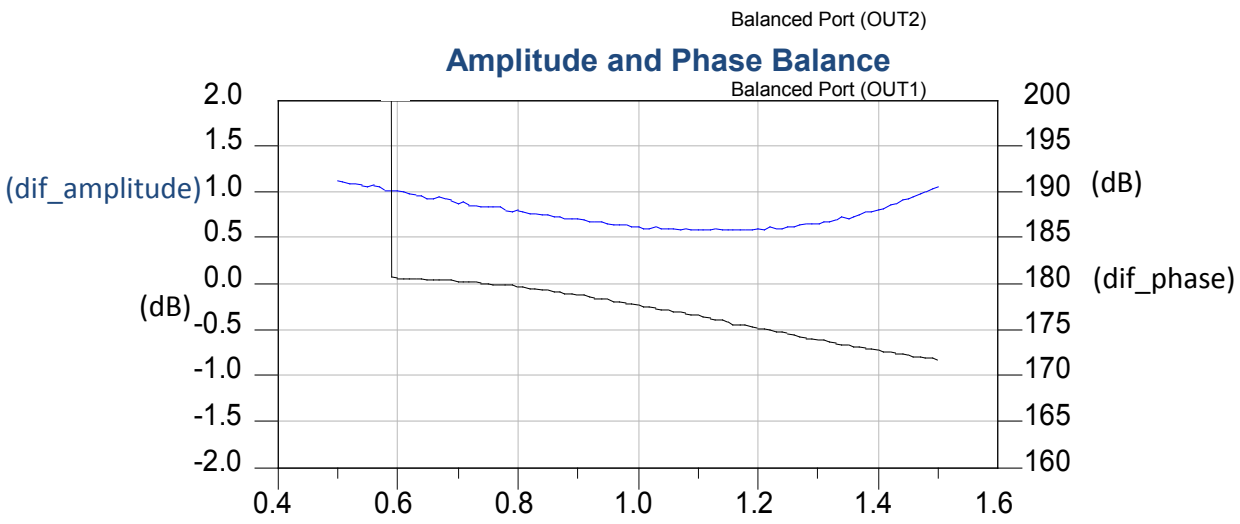
Need our help laying this out for you? Need the layout file? Send us a message at:
www.johansontechnology.com/component/techquestion

Typical Electrical Characteristics (T=25°C)

Insertion Loss and Return Loss (Sds12 and Sss11)



Amplitude and Phase Balance



More Balun info at:
www.johansontechnology.com/baluns

RoHS Compliance
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