

# High Frequency Ceramic Solutions

Sub-GHz Balun, 800MHz - 1GHz, 1:1 Impedance Ratio, EIA 0805

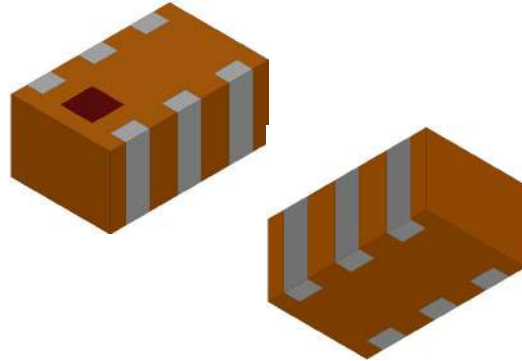
P/N 0900BL15C050

Detail Specification: 8/30/2021

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## General Specifications

Part Number	0900BL15C050
Frequency (MHz)	800 - 1000
Unbalanced Impedance	50 Ω
Balanced Impedance	50 Ω
Insertion Loss (dB)	1.2 max.
Return Loss (dB)	9.5 min.
Phase Difference (°)	180 ± 10
Amplitude Difference (dB)	2.0 max.
Power Capacity (W)	2 max. (CW)
Reel Quantity	4,000 pcs
Operating Temperature	-40 to +85°C
Recommended Solder Paste	SAC 305 Type



**Recommended Storage Conditions of unused product on T&R\***

+5 to +35°C  
Humidity 45~75% RH  
18 months in vacuum sealed bag  
1 week after opening

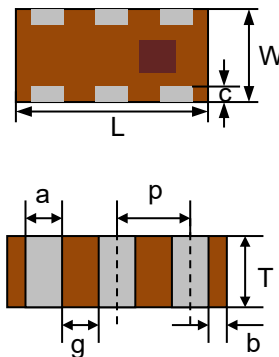
\*This component has silver leads. Please keep unused parts in vacuum sealed bag. See <https://www.johansontechnology.com/silverleads-profile>

## Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	E.g. 0900BL15C050S
		T & R	Suffix = E	E.g. 0900BL15C050E
	Termination Style	AgPt	Suffix = None	E.g. 0900BL15C050 (E or S)
	Evaluation Board	0900BL15C050-EB1SMA (3 female SMA connectors)		

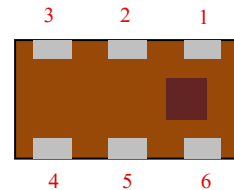
## Mechanical Dimensions

	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
2	GND or DC feed + RF GND
3	Balanced Port
4	Balanced Port
5	GND
6	NC



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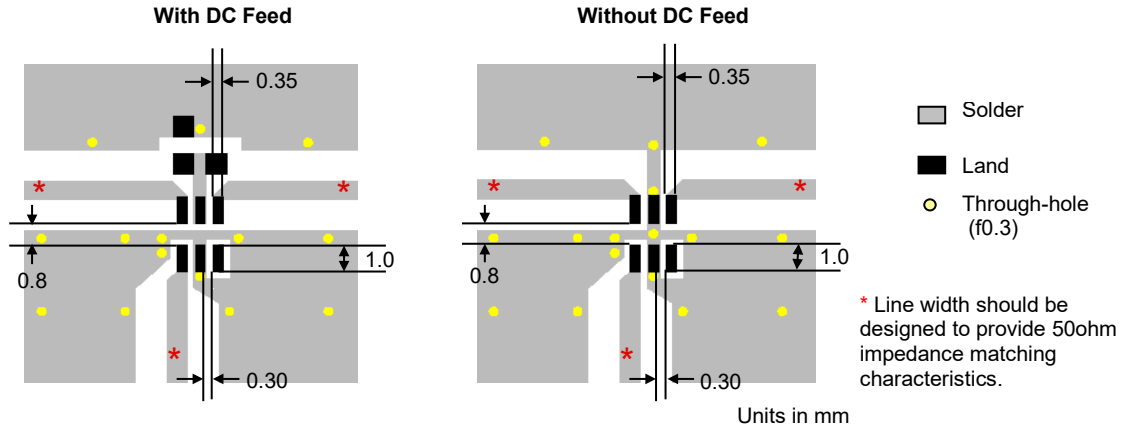
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## Mounting Considerations

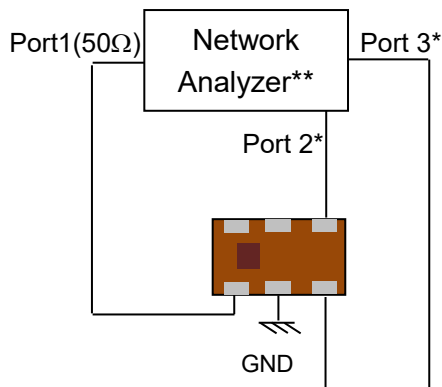
Mount these devices with colored mark facing up.



Need our help laying this out for you? Need the layout file?

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## Measuring Diagram



Port 1: Unbalanced Port  
Ports 2 and 3: Balanced Port

$IL = S_{ds21}$

$RL = S_{ss11}$

$Amp\_balance = dB(S(2,1)/S(3,1))$

$Phase\_balance = Phase(S(2,1)/S(3,1))$

\*Impedance for ports 2 and 3 = Balanced Impedance/2

\*\*E5071B from Agilent

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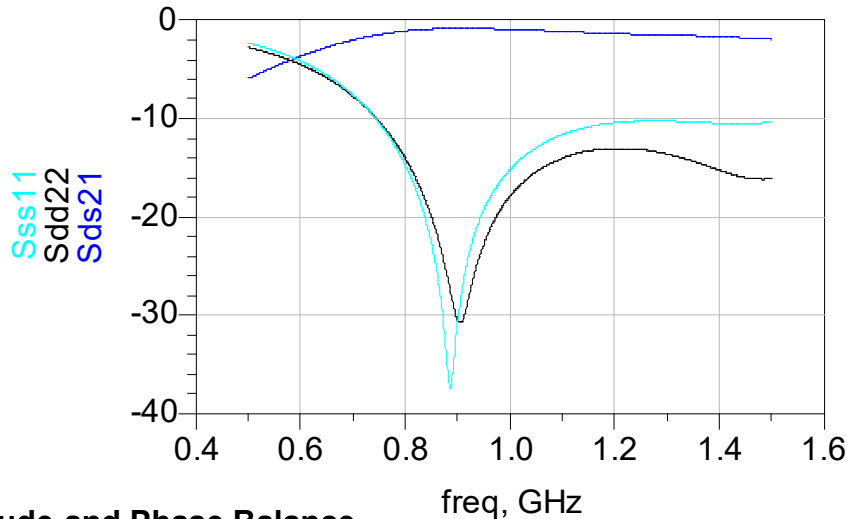
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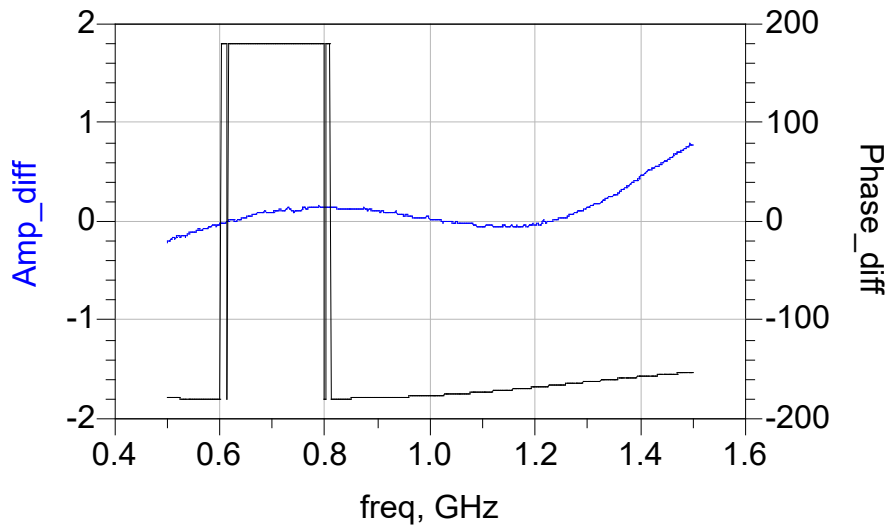
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## Typical Electrical Characteristics (T=25°C)

### Insertion and Return Loss



### Amplitude and Phase Balance



Would you like the s-parameter files? Please contact us at: <https://www.johansontechnology.com/ask-a-question>

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## More Filter-Balun info at:

<https://www.johansontechnology.com/baluns>

## Packaging information

<https://www.johansontechnology.com/tape-reel-packaging>

## Soldering Information

<https://www.johansontechnology.com/ipcsoldering-profile>

## Silver Leads

<https://www.johansontechnology.com/silverleads-profile>

## MSL Info

<https://www.johansontechnology.com/msl-rating>

## Recommended Storage Condition and Max Shelf Life

<https://www.johansontechnology.com/recommended-storage-conditions>

## RoHS Compliance

<https://www.johansontechnology.com/rohs-compliance>

## Layout review services

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## Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

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