

# High Frequency Ceramic Solutions

625 - 2815MHz Wideband Balun, 1:2 Impedance Ratio, EIA 0805

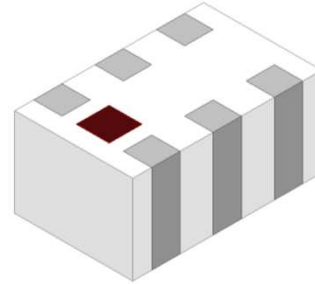
P/N 1720BL15A0100

Detail Specification: 2/21/2020

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## General Specifications

Part Number	1720BL15A0100
Frequency (MHz)	625 - 2815
Unbalanced Impedance	50 $\Omega$
Balanced Impedance	100 $\Omega$
Insertion Loss	1.5 dB max.
Return Loss	9.5 dB min.
Phase Difference	180 $\pm$ 10 deg.
Amplitude Difference	1.0 dB max.
CMRR	20 dB min.
Power Capacity	3W max. (CW)
Reel Quantity	4,000 pcs
Operating Temperature	-40 to +105°C



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

+5 to +35°C, 18 mos. max.  
Humidity 45~75% RH

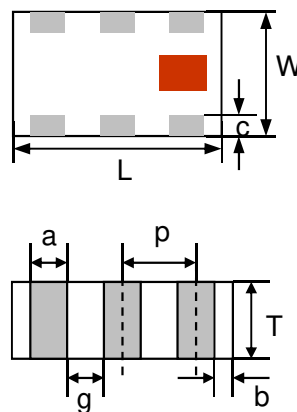
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

## Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 1720BL15A0100S
		T & R	Suffix = E	Eg. 1720BL15A0100E
	Termination style	100% Tin	Suffix = None	Eg. 1720BL15A0100 (E or S)
	Evaluation Board	1720BL15A0100-EB1SMA (3 female SMA connectors)		

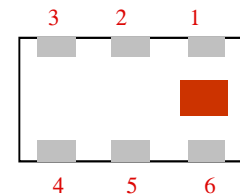
## Mechanical Dimensions

	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	0.037 $\pm$ 0.004	0.95 $\pm$ 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 (IN)
2	GND or DC feed + RF GND
3	Balanced Port (OUT1)
4	Balanced Port (OUT2)
5	GND
6	NC



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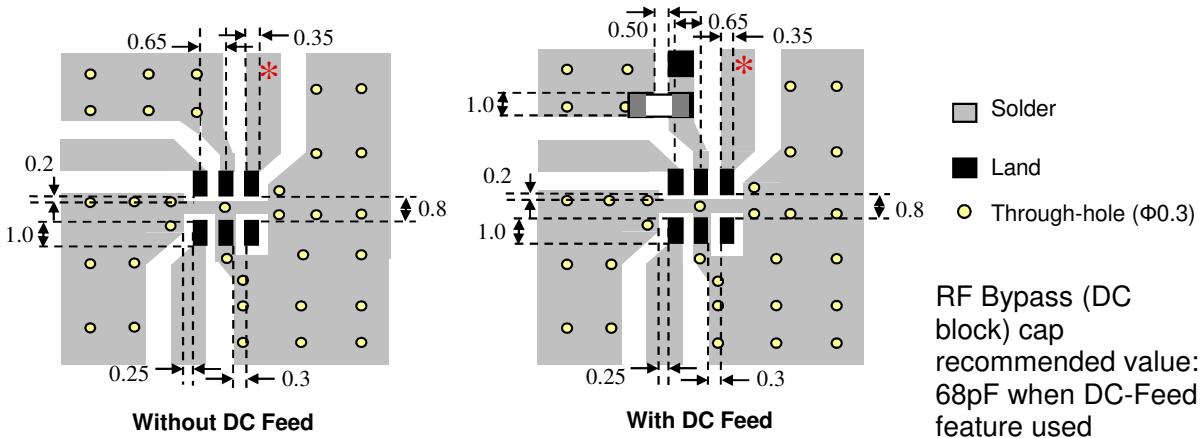
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## Mounting Considerations

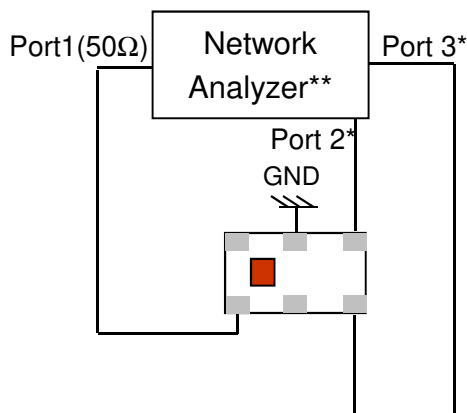
Mount these devices with colored mark facing up.

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



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

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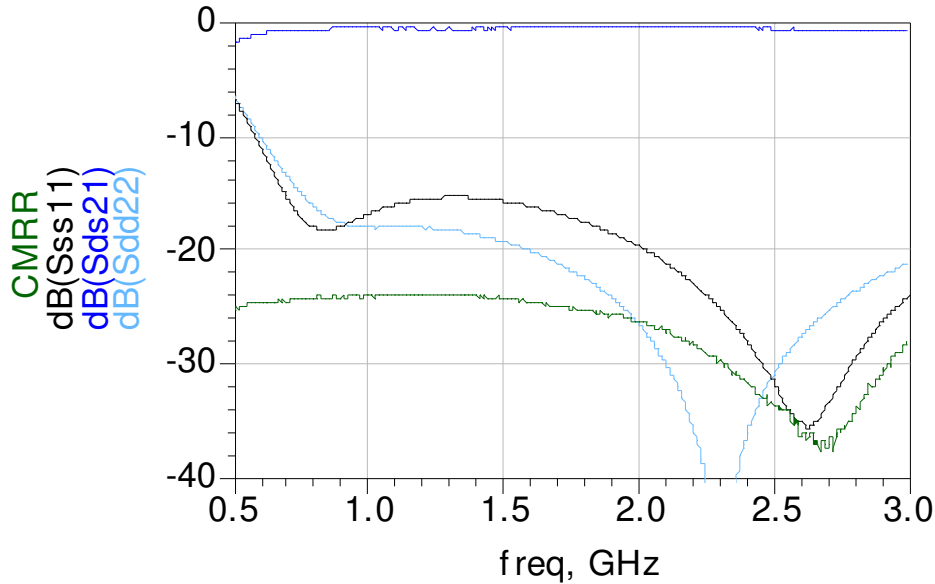
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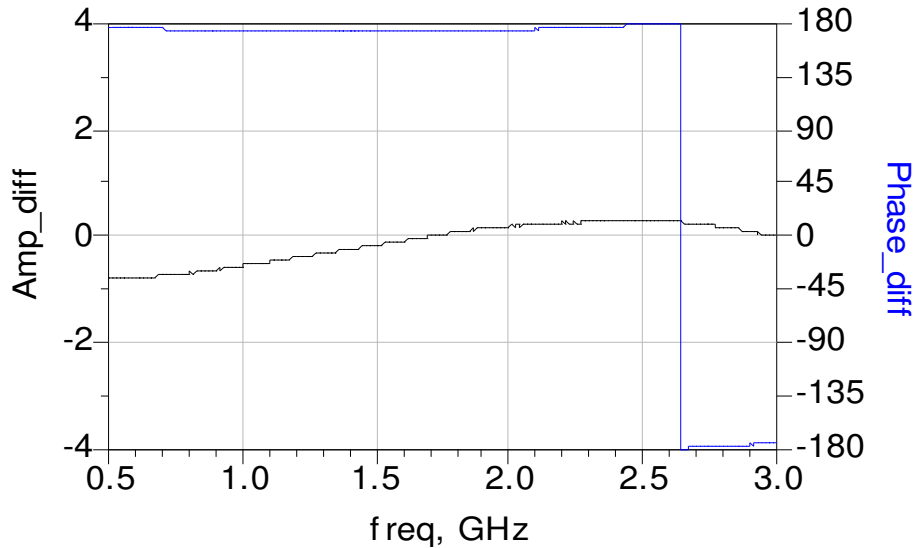
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## Typical Electrical Characteristics (T=25°C)

### Insertion and Return Loss



### Amplitude and Phase Balance



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## Application Notes, Layout Files, and more

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

## Packaging information

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

## Soldering Information

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

## Antenna layout and tuning techniques

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

## Antenna layout review, tuning, and characterization services

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

## P/N Explanation and Breakdown

<https://www.johansontechnology.com/ipc-pn-explained>

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