

# High Frequency Ceramic Solutions

Wideband Ceramic Balun, 1:2 Impedance Ratio, EIA 0805

P/N 1720BL15A0100

Detail Specification: 4/12/2018

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## General Specifications

<b>Part Number</b>	1720BL15A0100	<b>Operating Temperature</b>	-40 to +105°C
<b>Frequency (MHz)</b>	625 ~ 2815	<b>Storage Temperature</b>	-40 to +105°C
<b>Unbalanced Impedance</b>	50 Ω	<b>Storage Period</b>	12 months max.
<b>Balanced Impedance</b>	100 Ω		
<b>Insertion Loss</b>	1.5 dB max.		
<b>Return Loss</b>	9.5 dB min.		
<b>Phase Difference</b>	180 ± 10 deg.		
<b>Amplitude Difference</b>	1.0 dB max.		
<b>CMRR</b>	20 dB min.		
<b>Power Capacity</b>	3W max. (CW)		
<b>Reel Quantity</b>	4,000 pcs		



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

## Part Number Explanation

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

## Mechanical Dimensions

	In	mm
<b>L</b>	0.079 ± 0.004	2.00 ± 0.10
<b>W</b>	0.049 ± 0.004	1.25 ± 0.10
<b>T</b>	0.037 ± 0.004	0.95 ± 0.10
<b>a</b>	0.012 ± 0.004	0.30 ± 0.10
<b>b</b>	0.008 ± 0.004	0.20 ± 0.10
<b>c</b>	0.012 +0.004/0.008	0.30 +0.1/-0.2
<b>g</b>	0.014 ± 0.004	0.35 ± 0.10
<b>p</b>	0.026 ± 0.002	0.65 ± 0.05

## Terminal Configuration

<b>1</b>	Unbalanced Port	<b>4</b>	Balanced Port
<b>2</b>	GND or DC Feed + RF GND	<b>5</b>	GND or NC <sup>1</sup>
<b>3</b>	Balanced Port	<b>6</b>	NC

<sup>1</sup> Pin 5 may be designated NC with no impact to performance

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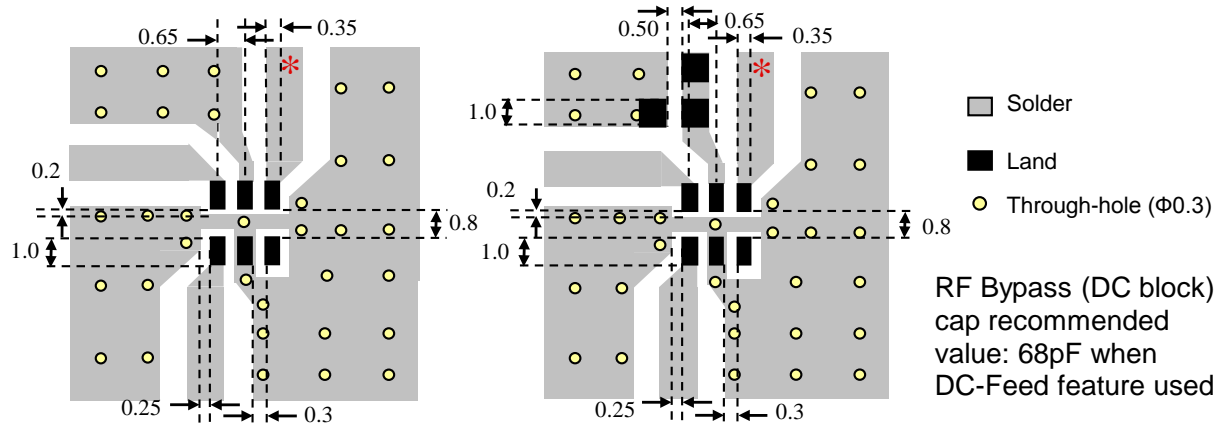
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## Mounting Considerations

Mount these devices with colored mark facing up.

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

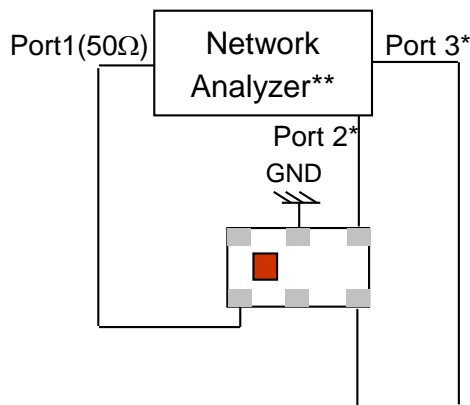


Need our help laying this out for you? Need the layout file? Send us a message at:

<https://www.johansontechnology.com/component/techquestion>

<sup>1</sup> Pin 5 may be designated NC with no impact to performance

## Measuring Diagram



Port 1: Unbalanced Port

Ports 2 and 3: Balanced Port

IL=Sds21

RL=Sss11

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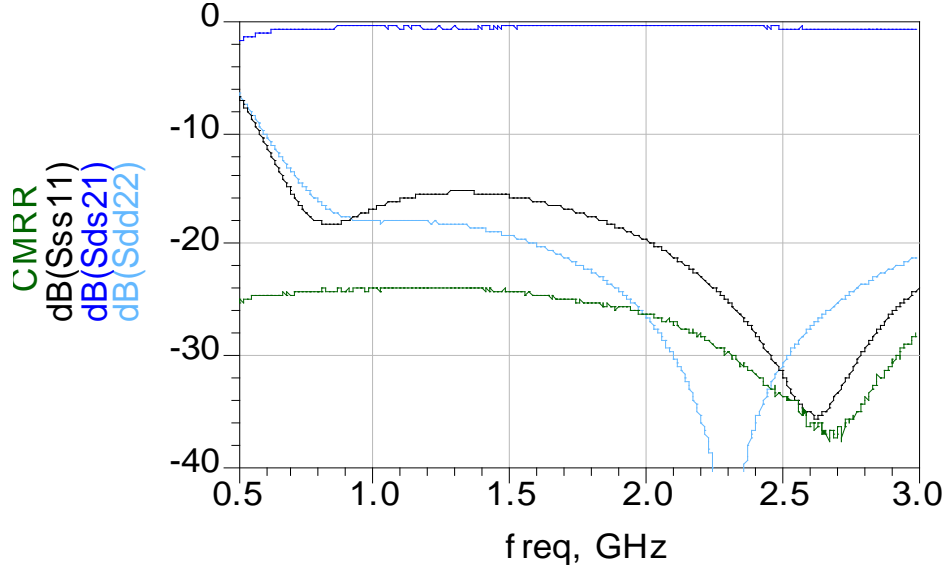
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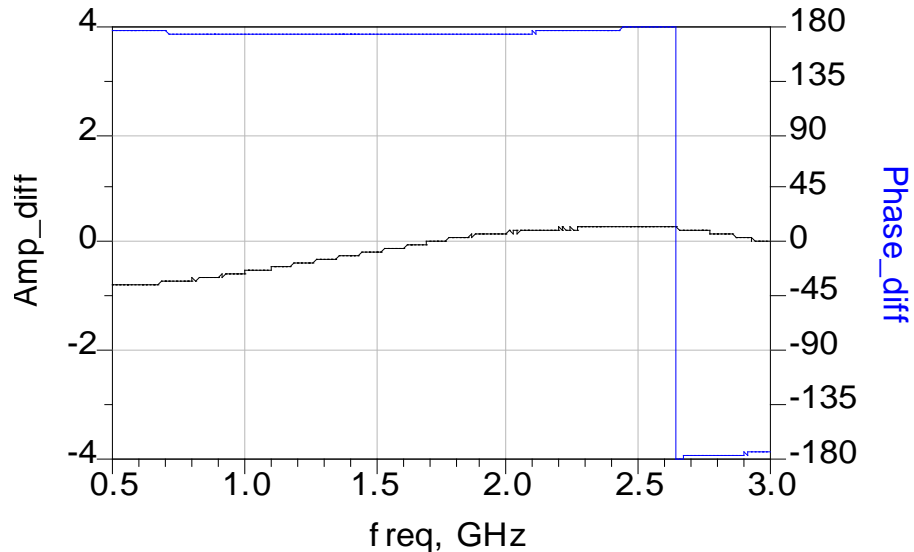
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## Typical Electrical Characteristics (T=25°C)

### Insertion and Return Loss



### Amplitude and Phase Balance



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## More Filter-Balun info at:

[www.johansontechnology.com/baluns](http://www.johansontechnology.com/baluns)

## Packaging information

[www.johansontechnology.com/tape-reel-packaging](http://www.johansontechnology.com/tape-reel-packaging)

## Soldering Information

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

## MSL Info

[www.johansontechnology.com/msl-rating](http://www.johansontechnology.com/msl-rating)

## Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/recommended-storage-conditions](http://www.johansontechnology.com/recommended-storage-conditions)

## RoHS Compliance

[www.johansontechnology.com/rohs-compliance](http://www.johansontechnology.com/rohs-compliance)

## Antenna layout and tuning techniques

[www.johansontechnology.com/tuning](http://www.johansontechnology.com/tuning)

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipc-antenna-services](http://www.johansontechnology.com/ipc-antenna-services)

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