

# High Frequency Ceramic Solutions


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

P/N 1720BL15B0050

Detail Specification: 5/8/2017

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## General Specifications

<b>Part Number</b>	1720BL15B0050				
<b>Frequency (MHz)</b>	625 ~ 2815				
<b>Unbalanced Impedance</b>	50 Ω				
<b>Balanced Impedance</b>	50 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>Storage Temperature</b>	-40 to +105°C
<b>CMRR</b>	20 dB min.			<b>Storage Period</b>	18 months max.
<b>Power Capacity</b>	2W max. (CW)			<b>Recommended Storage Conditions of unused product on T&amp;R</b>	+5 to +35°C, 18 mos. max. Humidity 45~75% RH
<b>Reel Quantity</b>	4,000 pcs				
<b>Operating Temperature</b>	-40 to +105°C				

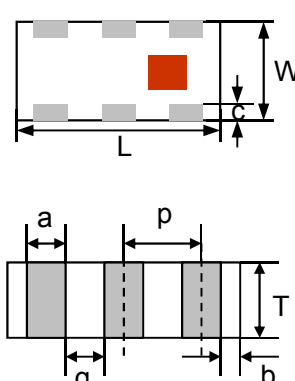
You can download measured s-parameters of this component at: <http://www.johansontechnology.com/baluns>

## Part Number Explanation

<b>P/N Suffix</b>	<b>Packing Style</b>	Bulk	Suffix = S	Eg. 1720BL15B0050S
		T & R	Suffix = E	Eg. 1720BL15B0050E
	<b>Termination style</b>	100% Tin	Suffix = None	Eg. 1720BL15B0050 (E or S)
	<b>Evaluation Board</b>	1720BL15B0050-EB1SMA (3 female SMA connectors)		

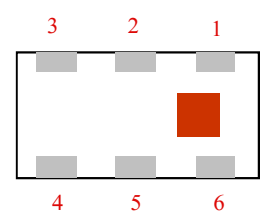
## Mechanical Dimensions

	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

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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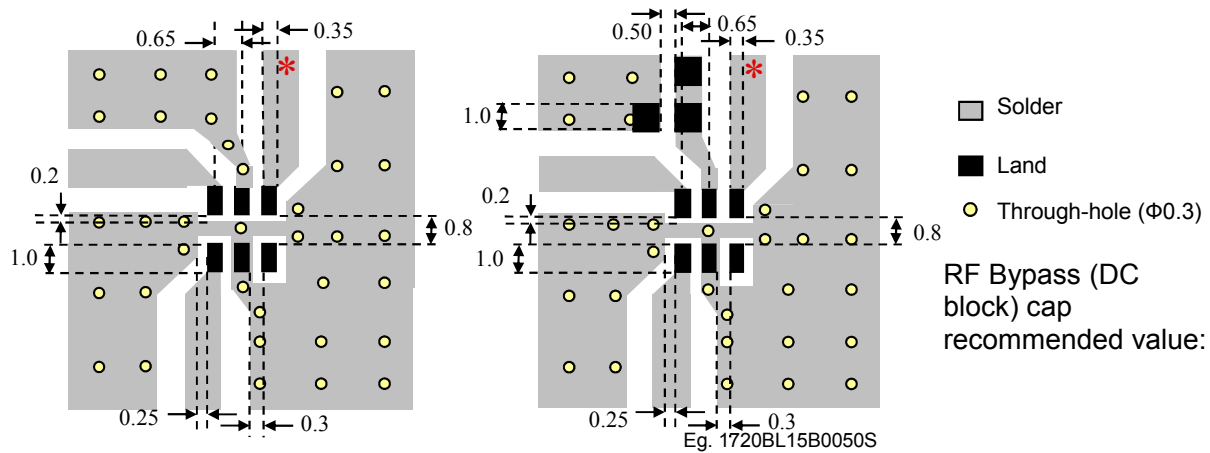
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## Mounting Considerations

Mount these devices with colored mark facing up.

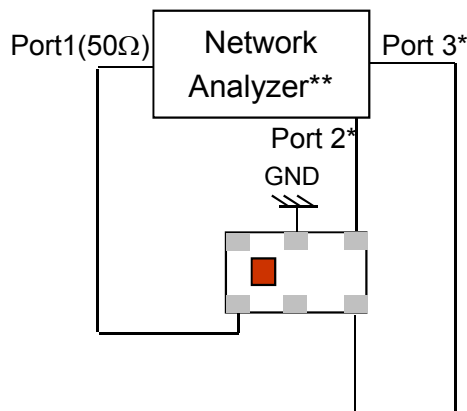
\* Line width should be designed to provide 50ohm impedance matching characteristics.



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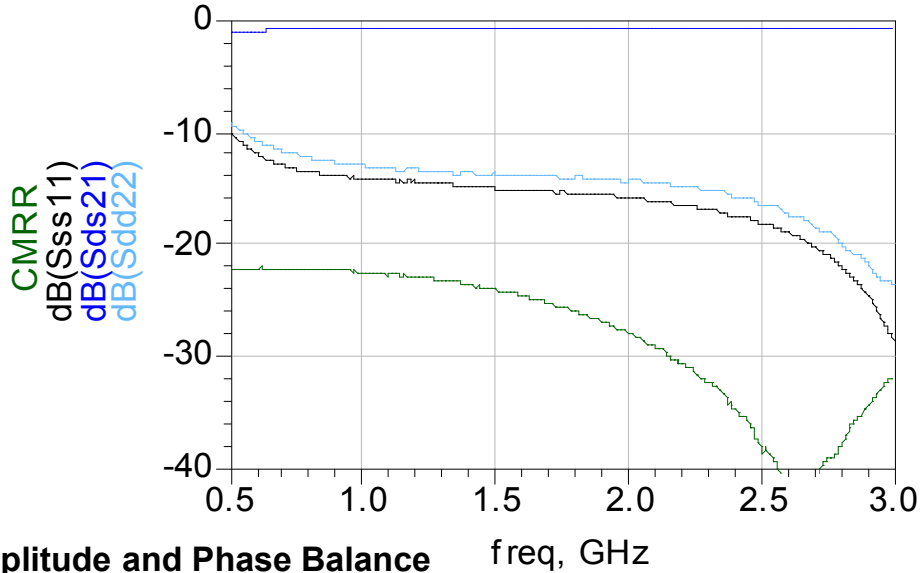
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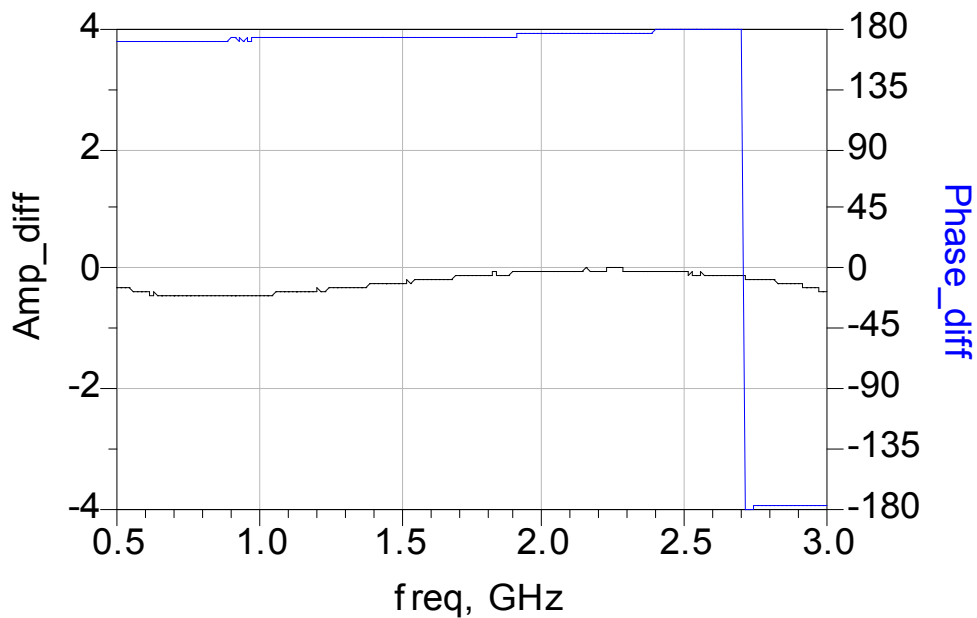
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## Typical Electrical Characteristics (T=25°C)

### Insertion and Return Loss



### Amplitude and Phase Balance



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## More Filter-Balun info at:

<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/typical-soldering-profile](http://www.johansontechnology.com/typical-soldering-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

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