

High Frequency Ceramic Solutions

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

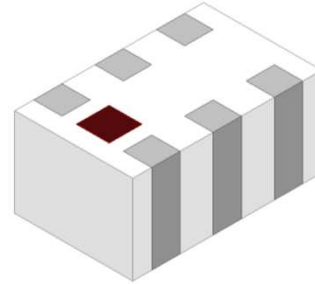
P/N 1720BL15A0100

Detail Specification: 2/21/2020

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General Specifications

Part Number	1720BL15A0100
Frequency (MHz)	625 - 2815
Unbalanced Impedance	50 Ω
Balanced Impedance	100 Ω
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

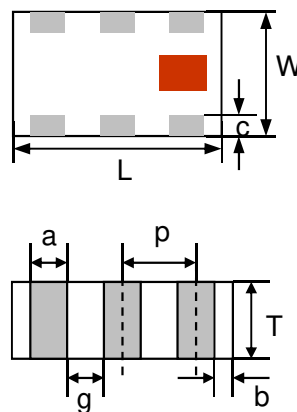
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

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)		

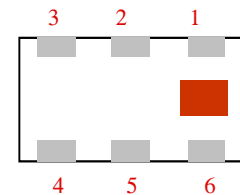
Mechanical Dimensions

	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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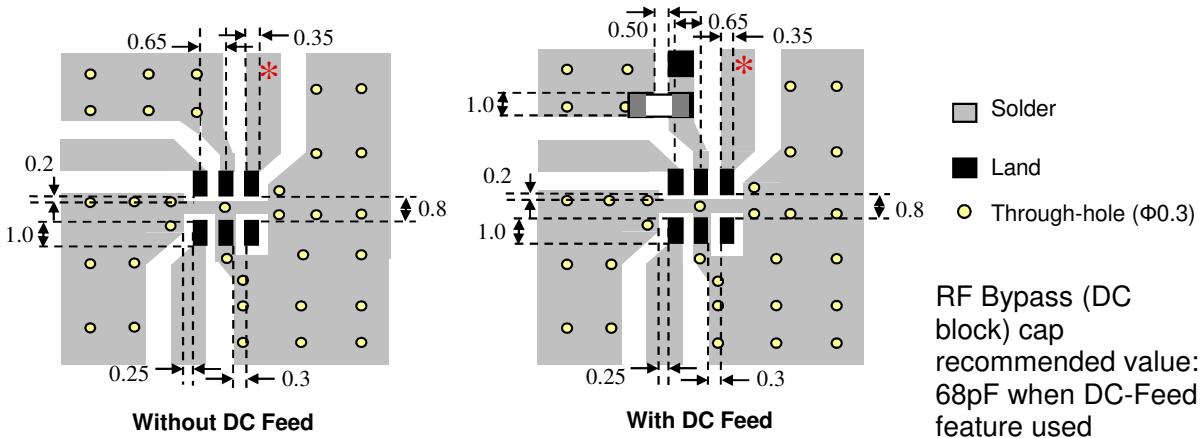
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Mounting Considerations

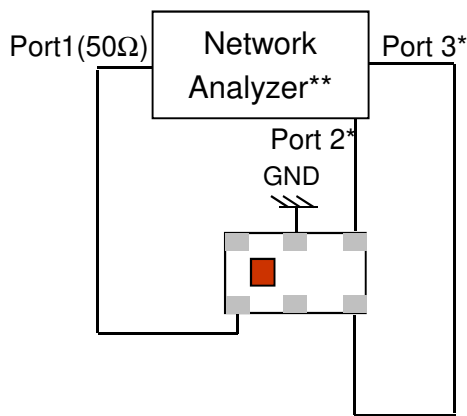
Mount these devices with colored mark facing up.

* 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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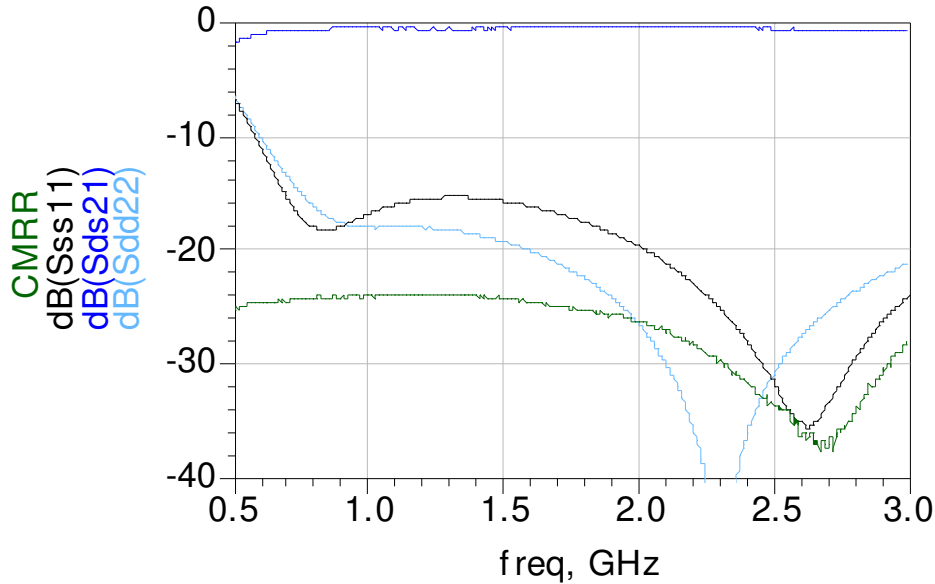
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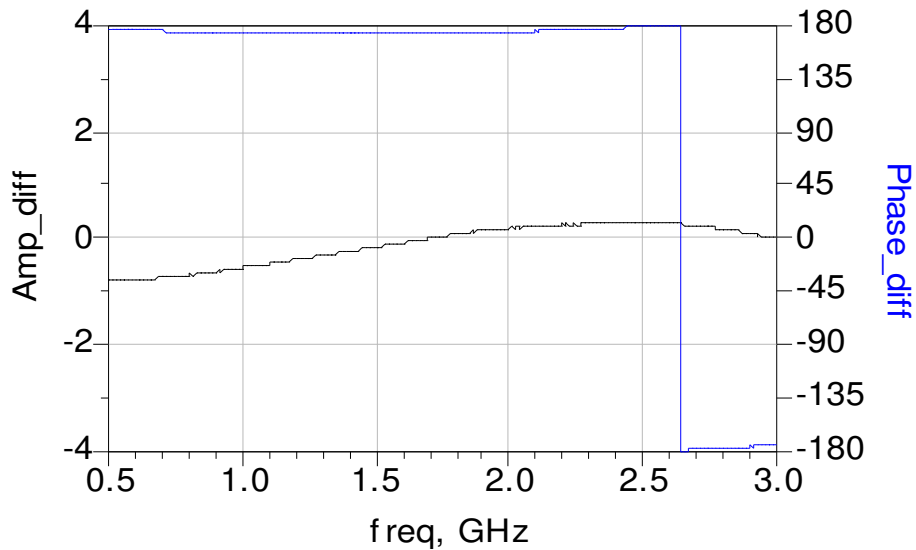
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Typical Electrical Characteristics (T=25°C)

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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