

High Frequency Ceramic Solutions

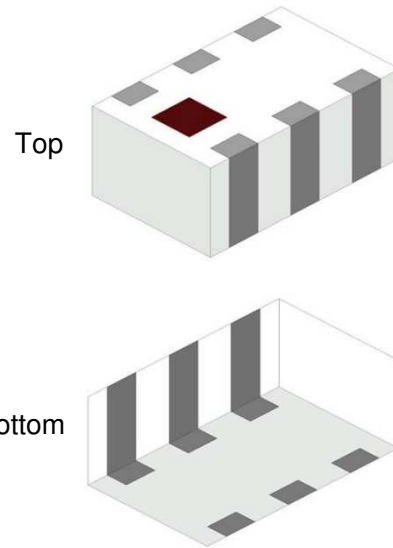
625 - 2815MHz Wideband Balun, 1:2 Impedance Ratio, EIA 0805

P/N 1720BL15A0100

Detail Specification: 9/23/2021

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General Specifications	
Part Number	1720BL15A0100
Frequency (MHz)	625 - 2815
Unbalanced Impedance (Ω)	50
Balanced Impedance (Ω)	100
Insertion Loss (dB)	1.5 max.
Return Loss (dB)	9.5 min.
Phase Difference (deg.)	180 \pm 10
Amplitude Difference (dB)	1.0 max.
CMRR (dB)	20 min.
Power Capacity (W)	3 max. (CW)
Reel Quantity (pcs./reel)	4,000
Operating Temperature	-40 to +105°C
Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.



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

Part Number Explanation			
P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S Eg. 1720BL15A0100S
		T & R	Suffix = E Eg. 1720BL15A0100E
	Termination Style	Ni/Sn	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
2	GND or DC feed + RF GND
3	Balanced Port
4	Balanced Port
5	GND
6	NC

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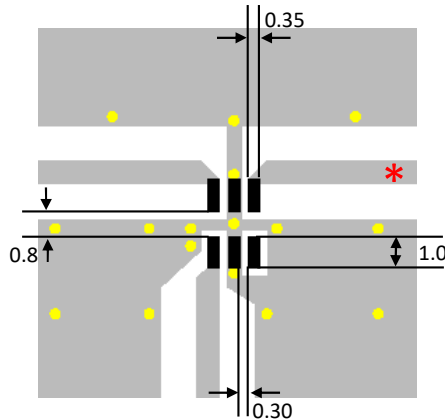
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Mounting Considerations

Mount these devices with colored mark facing up.



Units in mm

■ Solder Resist

■ Land

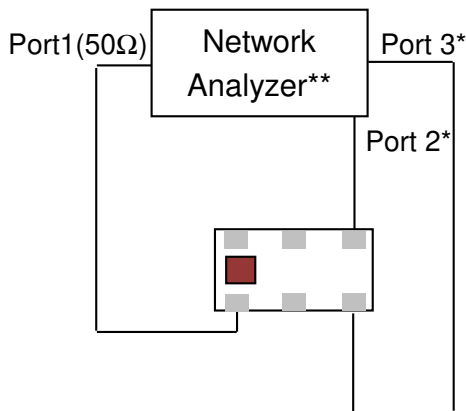
○ Through-hole ($\Phi 0.3$)

* Transmission line width should be designed to match 50 Ω characteristic impedance, depending on PCB material and thickness..

Need help with the layout, s-parameters, simulation, or design validation?

Send us a message at: <https://www.johansontechnology.com/ask-a-question>

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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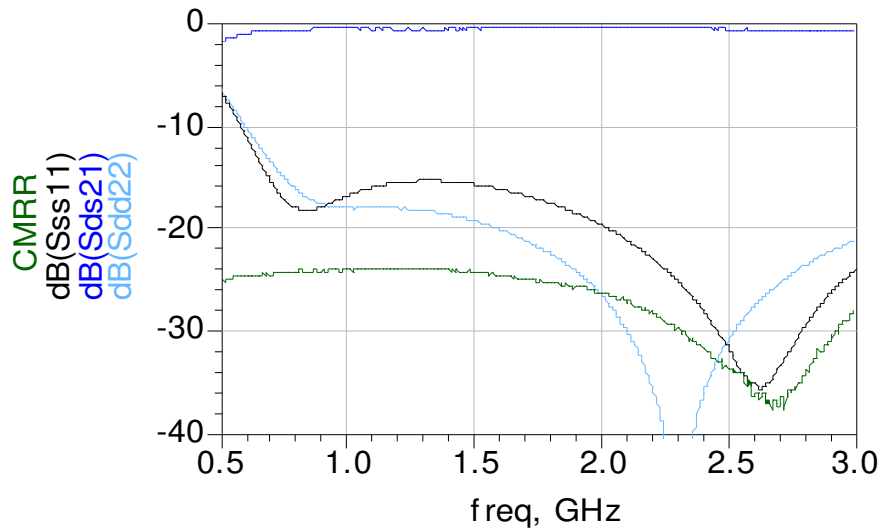
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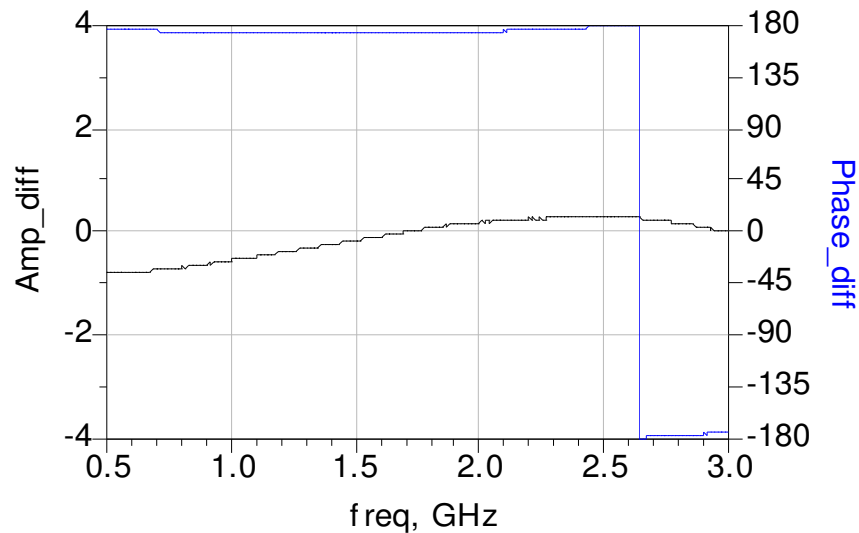
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Typical Electrical Characteristics (T=25°C)

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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