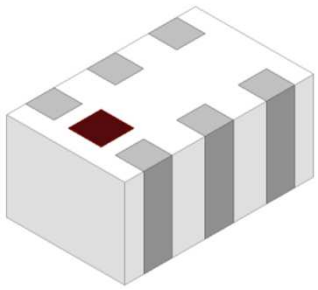
High Frequency Ceramic Solutions

625 - 2815 MHz Wideband Balun, 1:2 Impedance Ratio, EIA 0805, AEC-Q200 Qualified **P/N 1720BL15A0100E-AEC**

Detail Specification: 2/21/2020

General Specifications	
Part Number	1720BL15A0100E-AEC
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 ± 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



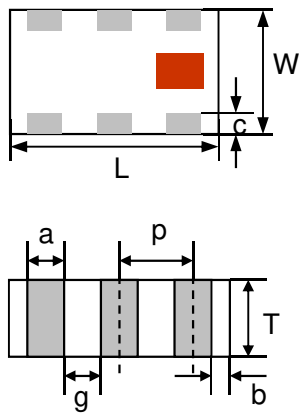
Recommended Storage Conditions of unused product on T&R	+5 to +35°C, 18 mos. max. Humidity 45~75% RH

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-AEC
		T & R	Suffix = E	Eg. 1720BL15A0100E-AEC
	Termination style	100% Tin	Suffix = None	Eg. 1720BL15A0100 (E or S)
	Evaluation Board	1720BL15A0100-EB1SMA (3 female SMA connectors)		

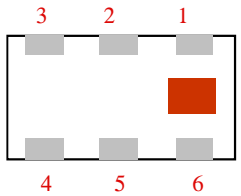
Mechanical Dimensions

	In	mm
L	0.079 ± 0.004	2.00 ± 0.10
W	0.049 ± 0.004	1.25 ± 0.10
T	0.037 ± 0.004	0.95 ± 0.10
a	0.012 ± 0.004	0.30 ± 0.10
b	0.008 ± 0.004	0.20 ± 0.10
c	0.012 +0.004/0.008	0.30 +0.1/-0.2
g	0.014 ± 0.004	0.35 ± 0.10
p	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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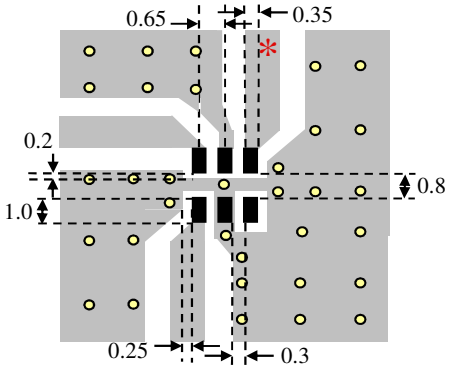
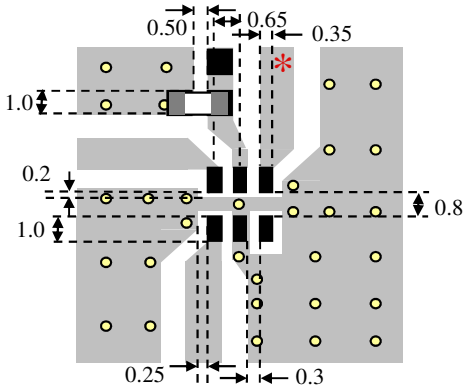
Mounting Considerations

Mount these devices with colored mark facing up.

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



Without DC Feed



With DC Feed

Solder

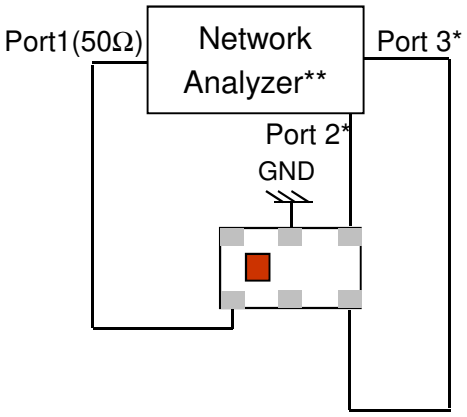
Land

Through-hole (Φ0.3)

RF Bypass (DC block) cap recommended value: 68pF when DC-Feed feature used

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

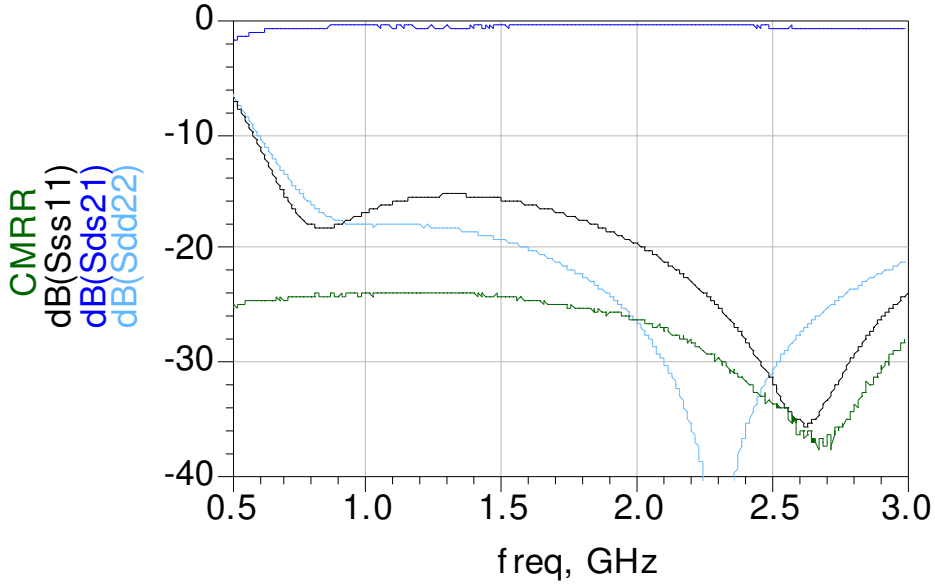


Port 1:Unbalanced Port
Ports 2 and 3: Balanced Port
IL=Sds21
RL=Sss11
Amp_balance = dB(S(2,1)/S(3,1))
Phase_balance = Phase(S(2,1)/S(3,1))

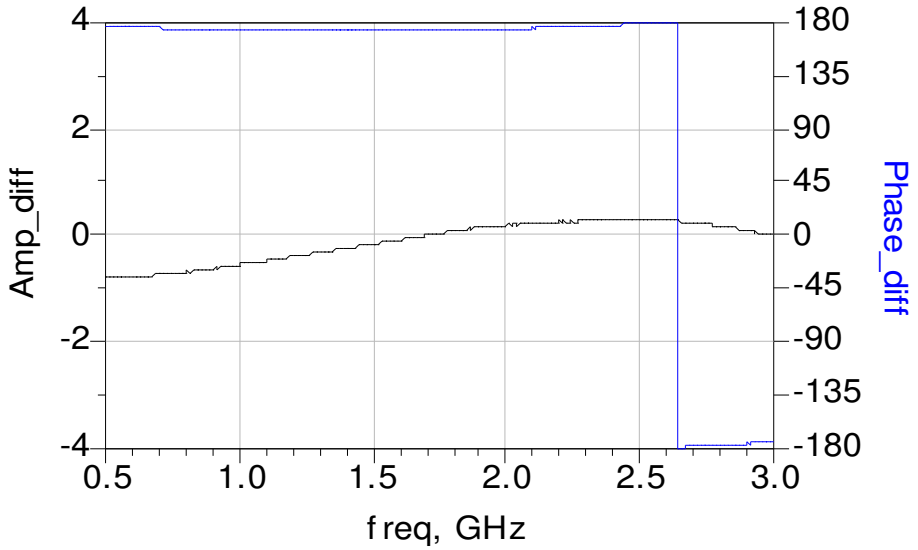
*Impedance for ports 2 and 3 = Balanced Impedance/2
**E5071B from Agilent

Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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
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P/N Explanation and Breakdown
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