

High Frequency Ceramic Solutions

3.7 GHz Balun, 1:2 Impedance Ratio, EIA 0805

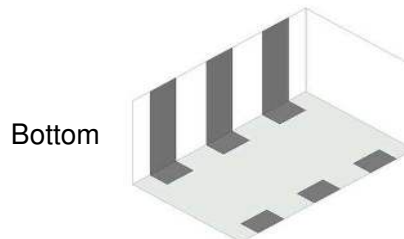
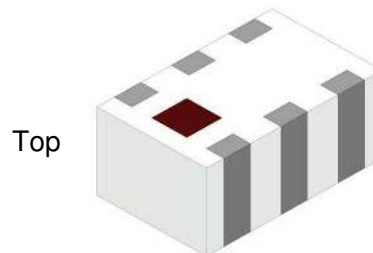
P/N 3700BL15B100

Detail Specification: 10/11/2021

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General Specifications

Part Number	3700BL15B100
Frequency (MHz)	3400 - 4000
Unbalanced Impedance (Ω)	50
Balanced Impedance (Ω)	100
Insertion Loss (dB)	1.0 max.
Return Loss (dB)	9.5 min.
Phase Difference (deg.)	180 \pm 20
Amplitude Difference (dB)	1.0 max.
Power Capacity (W)	3 max. (CW)
Reel Quantity (pcs./reel)	4,000
Operating Temperature	-40 to +125°C
Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.



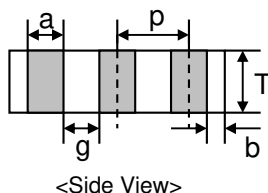
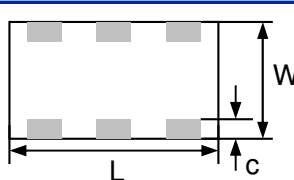
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	E.g. 3700BL15B100S
		T & R	Suffix = E	E.g. 3700BL15B100E
	Termination Style	Ni/Sn	Suffix = None	E.g. 3700BL15B100(E or S)
	Evaluation Board	3700BL15B100-EB2SMA (3 female SMA connectors)		

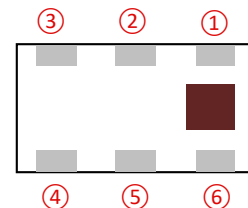
Mechanical Dimensions

	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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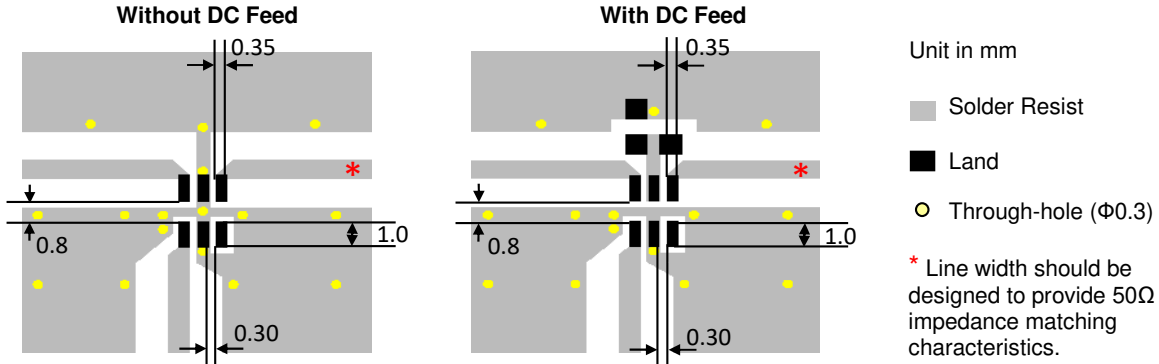
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Layout and Mounting Considerations

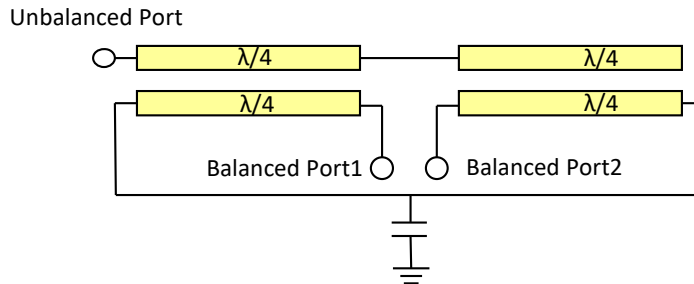
Mount these devices with colored mark facing up.

By-pass capacitor should be connected when feeding DC power.

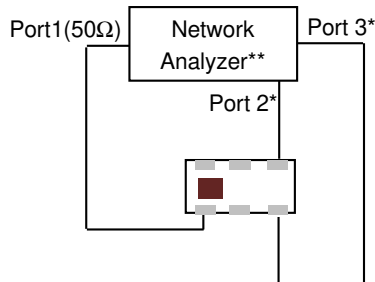


Need our help laying this out for you? Send us a message at: <https://www.johansontechnology.com/ask-a-question>

Equivalent Circuit



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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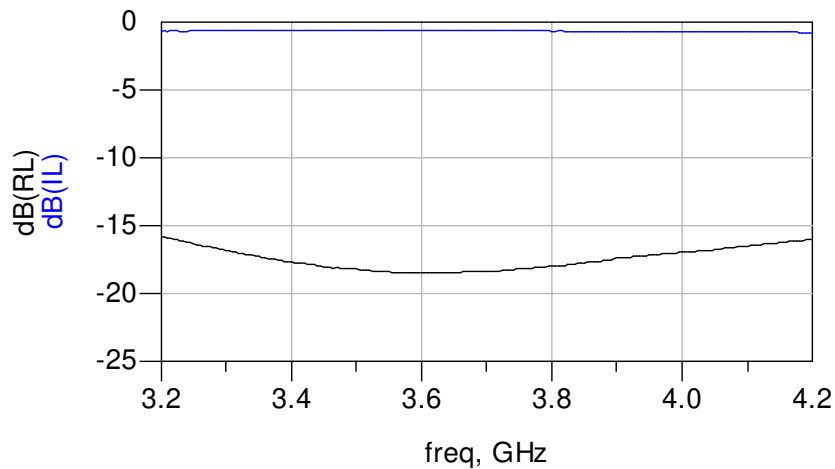
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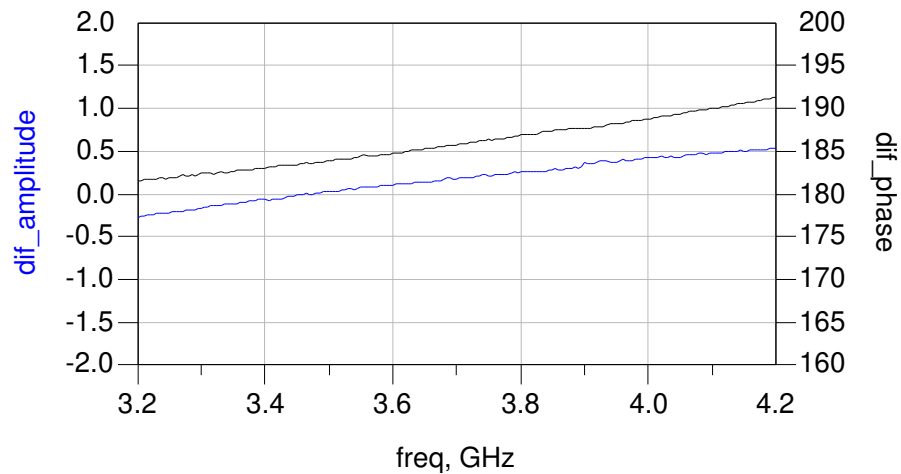
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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More RF Balun info at:

<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>

Layout review services

<https://www.johansontechnology.com/ask-a-question>

Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

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