

High Frequency Ceramic Solutions

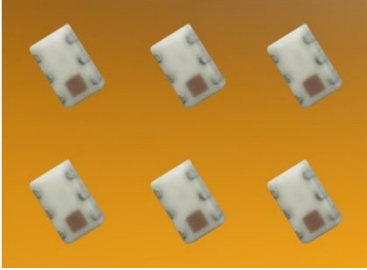
3.7 GHz 1:2 RF Balun

P/N 3700BL15B100

Detail Specification: 8/11/2017

Page 1 of 4

General Specifications

Part Number	3700BL15B100	
Frequency (MHz)	3400 ~ 4000	
Unbalanced Impedence	50 Ω	
Differential Balanced Imp.	100 Ω	
Insertion Loss	1.0 dB max.	
Return Loss	9.5 dB min.	
Phase Difference (degree)	180 ± 20	
Amplitude Difference	1.0 dB max.	
Impedence	50 / 50 Ω	
Power Capacity	3W max. (CW)	
Reel Quantity	4,000 pcs	
Operating Temperature		-40 to +85°C
Recommended Storage Conditions of unused product on T&R		+5 to +35°C, 18 mos. max. Humidity 45~75% RH

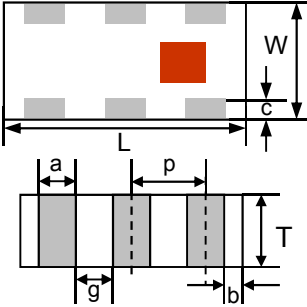
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 3700BL15B100S
		T & R	Suffix = E	Eg. 3700BL15B100E
	Termination style	100% Tin	Suffix = None	Eg. 3700BL15B100 (E or S)
	Evaluation Board	3700BL15B100-EB2SMA (3 female SMA connectors)		

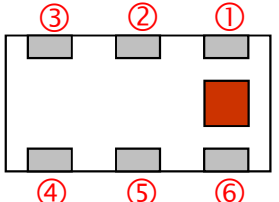
Mechanical Dimensions

	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



Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

Ver 1.2

2017 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

3.7 GHz 1:2 RF Balun

P/N 3700BL15B100

Detail Specification: 8/11/2017

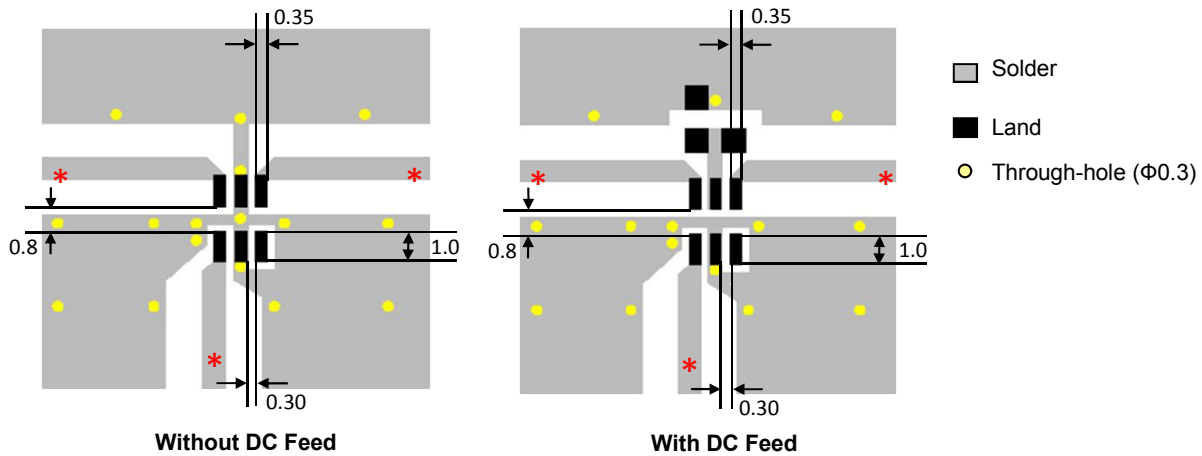
Page 2 of 4

Mounting Considerations

Mount these devices with colored mark facing up.

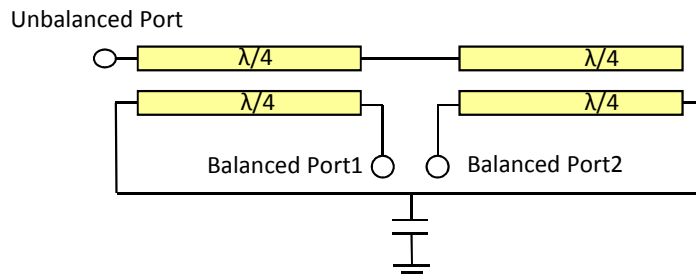
* Line width should be designed to match 50Ω characteristic impedance, depending on PCB material and thickness.

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



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

Equivalent Circuit



Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

Ver 1.2

2017 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

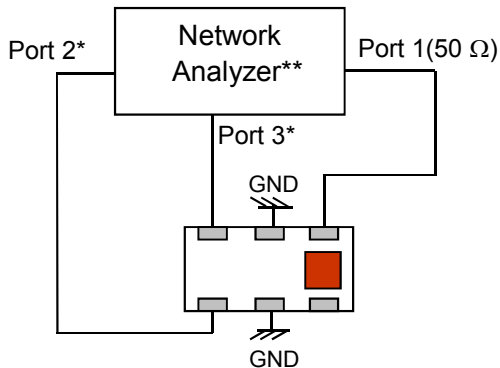
3.7 GHz 1:2 RF Balun

P/N 3700BL15B100

Detail Specification: 8/11/2017

Page 3 of 4

Measuring Diagram

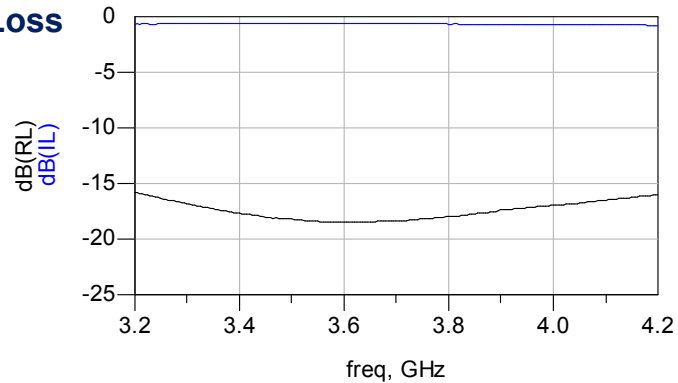


Port 1: Unbalanced Port
 Ports 2 and 3: Balanced Port
 $IL = S_{ds21}$
 $RL = S_{ss11}$
 $Amp_balance = dB(S(2,1)/S(3,1))$
 $Phase_balance = Phase(S(2,1)/S(3,1))$

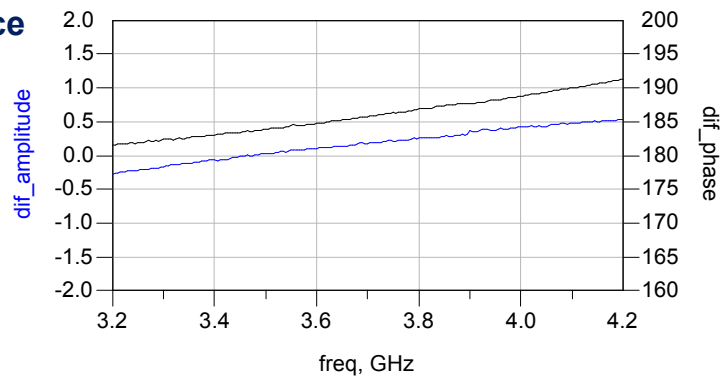
*Impedance for ports 2 and 3 = Balanced Impedance/2
 **E5071B from Agilent

Typical Electrical Characteristics (T=25°C)

Insertion Loss and Return Loss



Amplitude and Phase Balance



Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

Ver 1.2

2017 Johanson Technology, Inc. All Rights Reserved

High Frequency Ceramic Solutions

3.7 GHz 1:2 RF Balun

P/N 3700BL15B100

Detail Specification: 8/11/2017

Page 4 of 4

More Baluns

www.johansontechnology.com/baluns

RoHS Compliance

www.johansontechnology.com/rohs-compliance

Packaging information

www.johansontechnology.com/tape-reel-packaging

Soldering Information (i.e. recommended profile)

www.johansontechnology.com/ipcsoldering-profile

Layout Files, s-parameters and any other technical questions

www.johansontechnology.com/ask-a-question

MSL Info

www.johansontechnology.com/msl-rating

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/recommended-storage-conditions

Antenna layout and tuning techniques

www.johansontechnology.com/tuning

Antenna layout review, tuning, and characterization services

www.johansontechnology.com/ipc-antenna-services

Johanson Technology, Inc. reserves the right to make design changes without notice.

All sales are subject to Johanson Technology, Inc. terms and conditions.



www.johansontechnology.com

4001 Calle Tecate • Camarillo, CA 93012, USA • TEL +1.805.389.1166

Ver 1.2

2017 Johanson Technology, Inc. All Rights Reserved