

High Frequency Ceramic Solutions

10GHz EIA 0603 2:1 Balun

P/N 10R1BL14A0100

Detail Specification: 12/17/2015

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General Specifications

Part Number	10R1BL14A0100		
Frequency (MHz)	9900 ~ 11000		
Unbalanced Impedance	50 Ω		
Balanced Impedance	100 Ω		
Insertion Loss	1.5 dB max.		
Return Loss	9.5 dB min.	Operating Temperature	-40 to +85°C
Phase Difference (degree)	180° ± 8	Storage Temperature	-40 to +85°C
Amplitude Difference	0.8 dB max.	Power Capacity	1 Watt max. (CW)
Reel Quantity	4,000 pcs	Storage Period	18 months max.



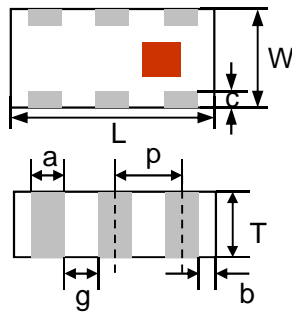
You can download measured s-parameters of this component at: <http://www.johansontechnology.com/baluns>

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 10R1BL14A0100S
		T & R	Suffix = T	Eg. 10R1BL14A0100T
	Termination style	100% Tin	Suffix = None	Eg. 10R1BL14A0100 (T or S)

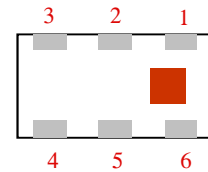
Mechanical Dimensions

	In	mm
L	0.063 ± 0.004	1.60 ± 0.10
W	0.031 ± 0.004	0.80 ± 0.10
T	0.024 ± 0.004	0.60 ± 0.10
a	0.008 ± 0.004	0.20 ± 0.10
b	0.008 +0.004/0.006	0.20 +0.1/-0.15
c	0.006 ± 0.004	0.15 ± 0.10
g	0.012 ± 0.004	0.30 ± 0.10
p	0.020 ± 0.002	0.50 ± 0.05

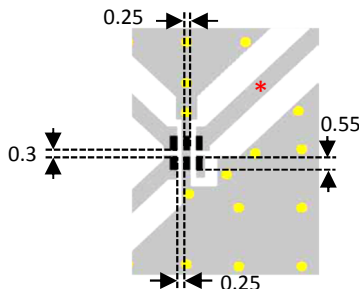


Terminal Configuration

1	Unbalanced Port	4	Balanced Port
2	GND	5	GND
3	Balanced Port	6	NC



Mounting Considerations



Without DC Feed

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

Do you need us to help you with the balun's layout, review your gerber files (free) to make sure, or get the layout file? Send us a message at: www.johansontechnology.com/ask-a-question

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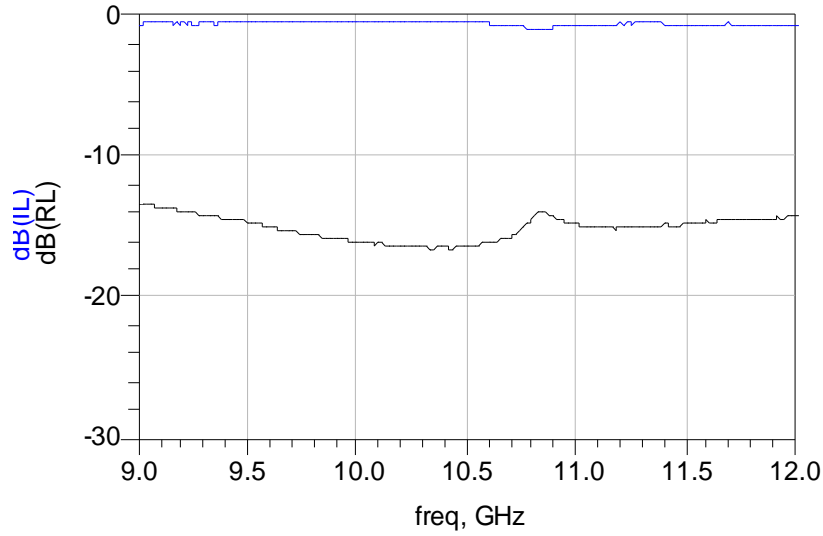
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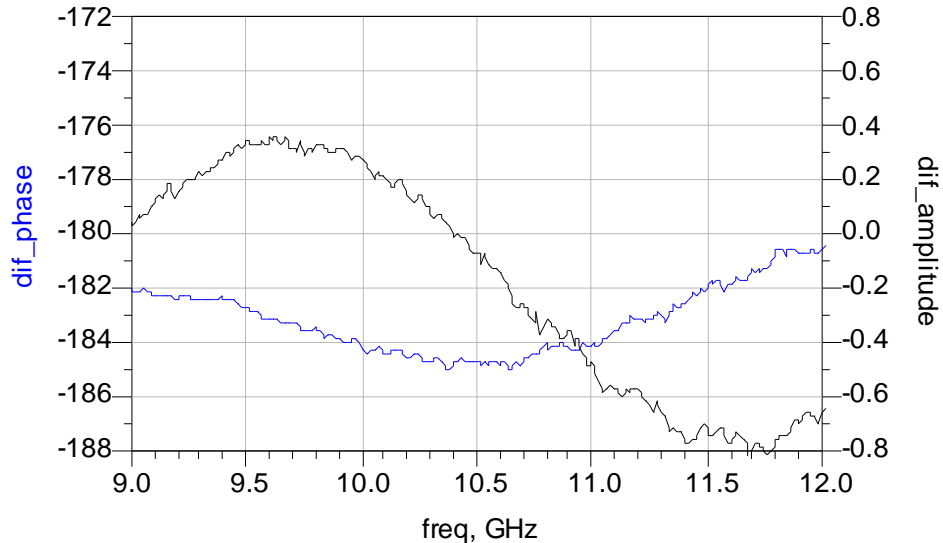
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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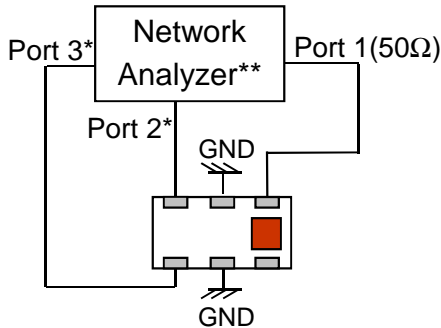
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Measuring Diagram



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

More Filter-Balun info at:

<http://www.johansontechnology.com/baluns>

Packaging information

<http://www.johansontechnology.com/tape-reel-packaging>

Soldering Information

<http://www.johansontechnology.com/typical-soldering-profile>

MSL Info

<http://www.johansontechnology.com/msl-rating>

Recommended Storage Condition and Max Shelf Life

www.johansontechnology.com/recommended-storage-conditions

RoHS Compliance

<http://www.johansontechnology.com/rohs-compliance>

Layout review services

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

Antenna layout review, tuning, and characterization services

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