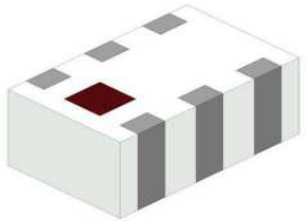
High Frequency Ceramic Solutions

4GHz Balun, 1:2 Impedance, EIA 0603 **P/N 4000BL14U100**

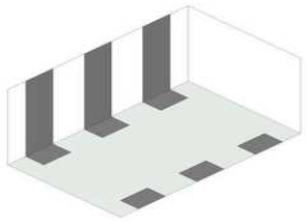
Detail Specification: 4/27/2022

General Specifications	
Part Number	4000BL14U100
Operating Frequency (MHz)	3100 - 4800
Unbalanced Impedance (Ω)	50
Balanced Impedance (Ω)	100
Insertion Loss (dB)	1.2 max.
Return Loss (dB)	9.5 min.
Phase Difference (deg.)	180 ± 20
Amplitude Difference (dB)	1.5 max.
Power Capacity (W)	2 max. (CW)
Operating Temperature	-40 to +85°C
Recommended Storage Conditions and Period for unused Product on T&R	+5 to +35°C Humidity 45 - 75% RH 18 months max.
Reel Quantity (pcs./reel)	4,000

Top



Bottom

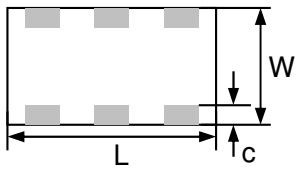


You can download measured s-parameters of this component at: https://www.johansontechnology.com/baluns

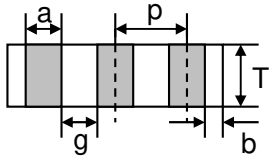
Part Number Explanation				
P/N Suffix	**Packing Style**	Bulk (loose pcs.)	Suffix = S	E.g. 4000BL14U100S
		T & R	Suffix = T	E.g. 4000BL14U100T
	Termination Style	Ni/Sn	Suffix = None	E.g. 4000BL14U100(T or S)
	Evaluation Board	4000BL14U100-EB2SMA (3 female SMA connectors)		

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 +0.10/-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



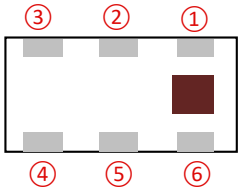
<Bottom View>



<Side View>

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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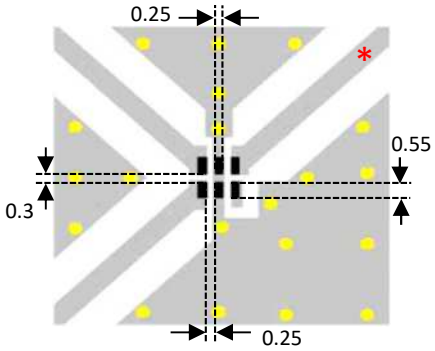
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Layout and Mounting Considerations

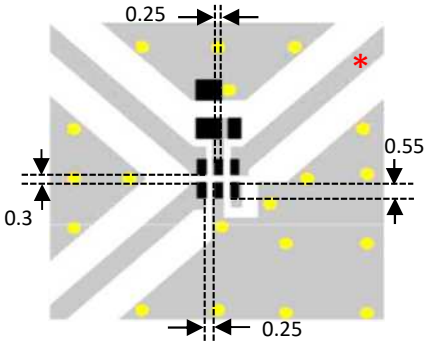
Mount these devices with colored mark facing up.

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

Without DC Feed



With DC Feed



Unit in mm

Solder Resist

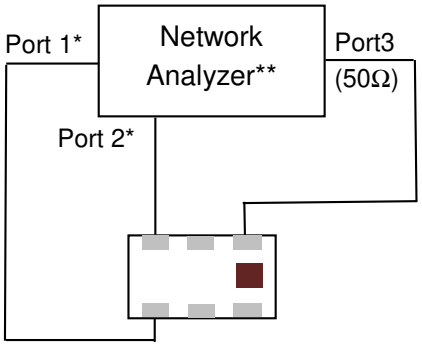
Land

Through-hole (Φ0.3)

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

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

Measuring Diagram



Port 3:Unbalanced Port
Ports 1 and 2: Balanced Port
Ports 4: GND or DC feed + RF GND
IL=S_{ds21}
RL=S_{ss11}
Amp_balance = dB(S(1,3)/S(2,3))
Phase_balance = Phase(S(1,3)/S(2,3))

*Impedance for ports 1 and 2 = Balanced Impedance/2
**E5071B from Agilent

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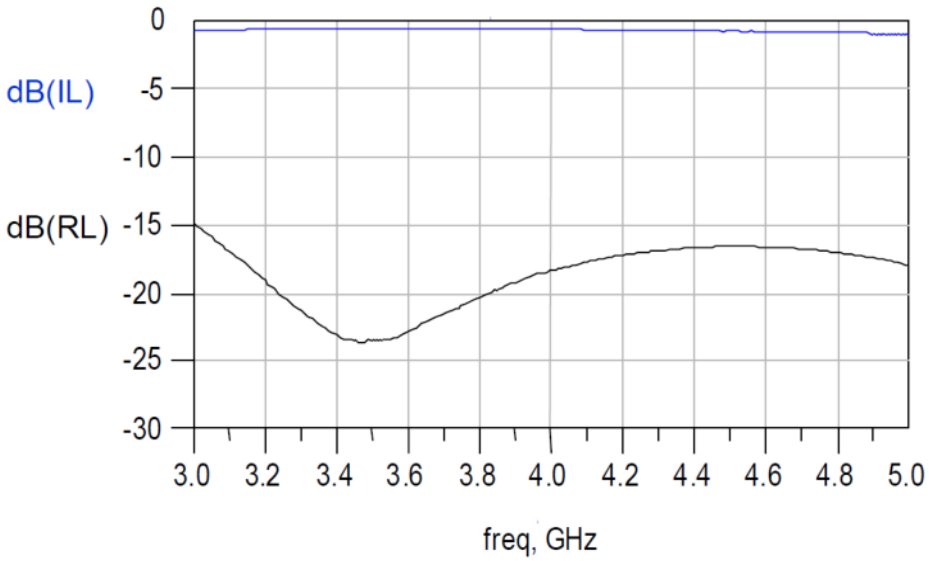
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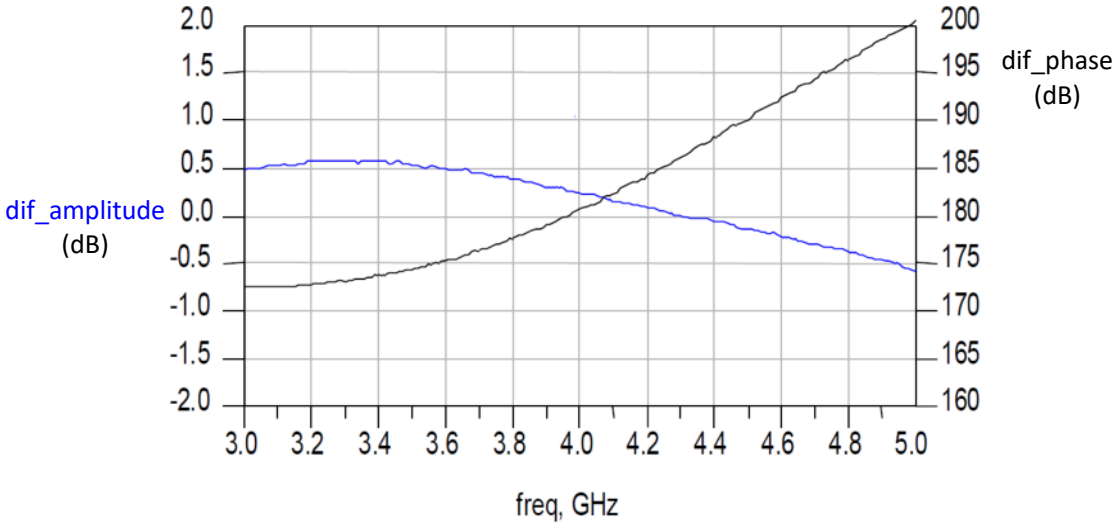
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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4GHz Balun, 1:2 Impedance, EIA 0603	**P/N 4000BL14U100**
Detail Specification: 4/27/2022	Page 4 of 4

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
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