

High Frequency Ceramic Solutions

900MHz Balun, 1:1 Impedance Ratio, EIA 0603

P/N 0896BL14B050

Detail Specification: 4/13/2018

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General Specifications

Part Number	0896BL14B050
Frequency (MHz)	851 - 960
Unbalanced Impedance	50 Ω
Balanced Impedance	50 Ω
Insertion Loss	1.5 dB max.
Return Loss	9.5 dB min.
Phase Difference	180 $\pm$ 10 deg.
Amplitude Difference	0.7 dB max.



Power Capacity	3W max. (CW)	Operating Temperature	-40 to +85°C
Reel Quantity	4,000 pcs	Storage Temperature	-40 to +85°C
Storage Conditions	18 months max. Vacuum packaging is mandatory if device soldering will not occur within 168 hours after opening the vacuum pack.		

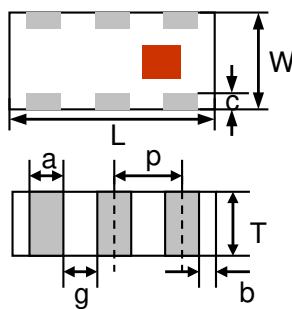
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

Part Number Explanation

P/N Suffix	Packing Style	Bulk	Suffix = S	Eg. 0896BL14B050S
		T & R	Suffix = T	Eg. 0896BL14B050T
	Termination style	AgPt	Suffix = None	Eg. 0896BL14B050 (T or S)
	Evaluation Board	0896BL14B050-EB1SMA (3 female SMA connectors)		

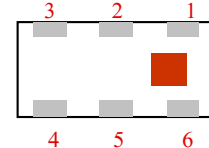
Mechanical Dimensions

	In	mm
L	0.063 $\pm$ 0.004	1.60 $\pm$ 0.10
W	0.031 $\pm$ 0.004	0.80 $\pm$ 0.10
T	0.024 $\pm$ 0.004	0.60 $\pm$ 0.10
a	0.008 $\pm$ 0.004	0.20 $\pm$ 0.10
b	0.008 $\pm$ 0.004	0.20 $\pm$ 0.10
c	0.006 $\pm$ 0.004	0.15 $\pm$ 0.10
g	0.012 $\pm$ 0.004	0.30 $\pm$ 0.10
p	0.020 $\pm$ 0.002	0.50 $\pm$ 0.05



Terminal Configuration

1	Unbalanced Port	4	Balanced Port
2	GND or DC Feed + RF GND	5	GND
3	Balanced Port	6	NC



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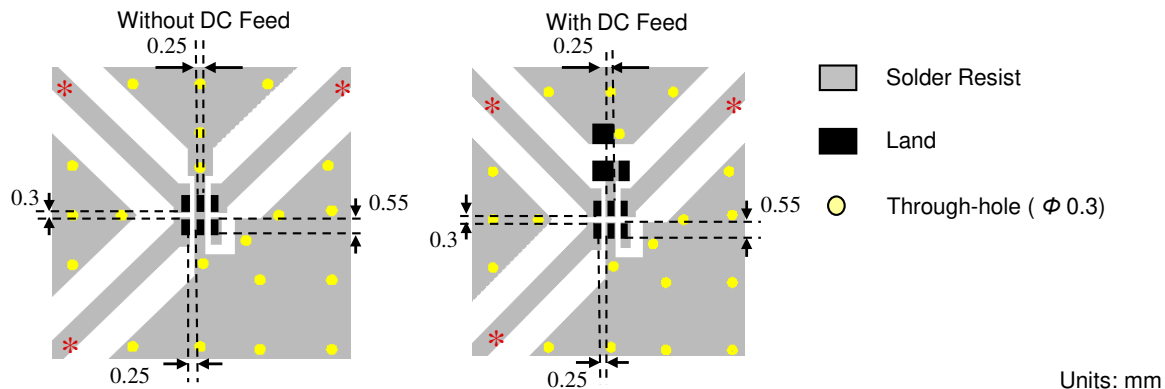
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Mounting Considerations

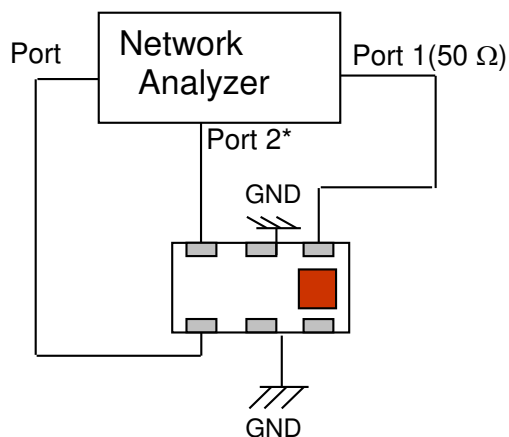
Mount these devices with colored mark facing up.

- * Line width should be designed to provide 50ohm impedance matching characteristics.
- * * 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/component/techquestion>

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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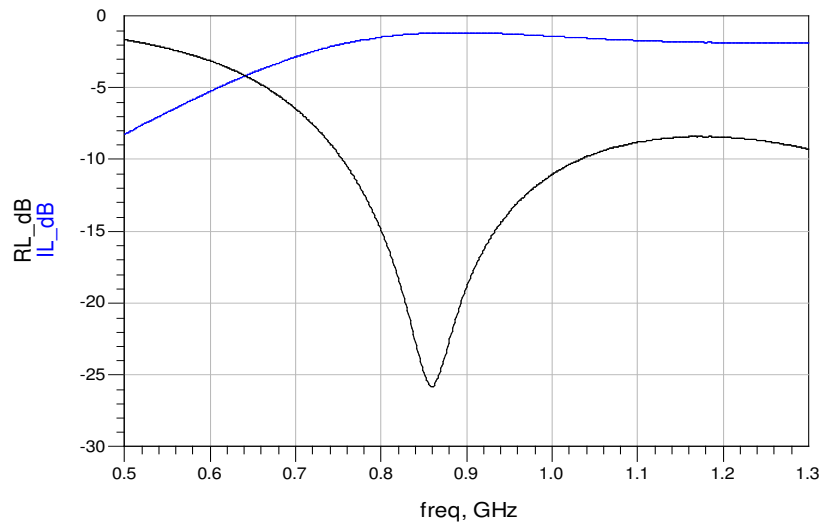
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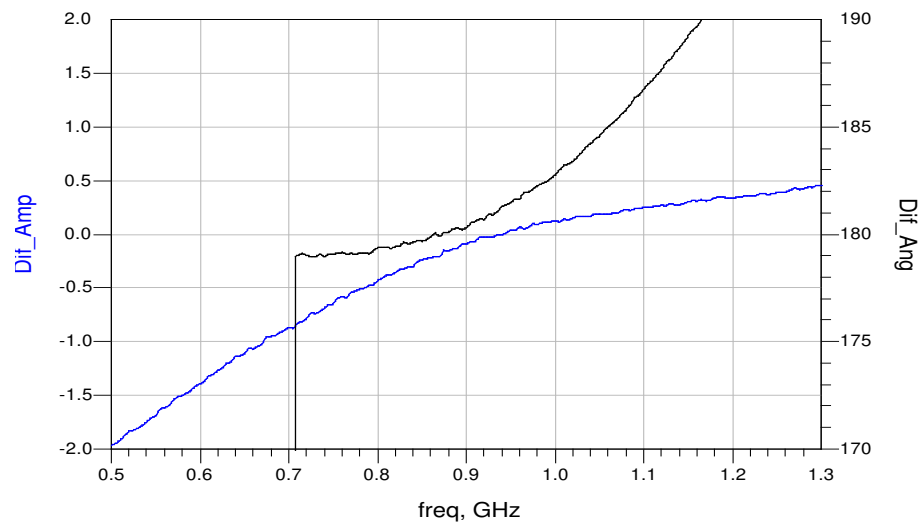
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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More Filter-Balun info at:

www.johansontechnology.com/baluns

Packaging information

www.johansontechnology.com/tape-reel-packaging

Soldering Information

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