High Frequency Ceramic Solutions

5.4GHz EIA 0603 Balun with DC Feed Option. 50Ω Differential Impedance, 50Ω Single Ended **P/N 5400BL14A0050**

Detail Specification: 11/14/2018

General Specifications

Part Number	5400BL14A0050	**Phase Difference**	180±10 deg
Frequency (MHz)	4800 - 5950	**Return Loss**	9.5 dB min.
Balanced Diff. Impedance	50 Ω	**Operating Temperature**	-40 to +85°C
Unbalanced Impedance	50 Ω	**Reel Quantity**	4,000 pcs
Insertion Loss @ BW	1.1 dB max.	**Power Capacity**	3W max. (CW)

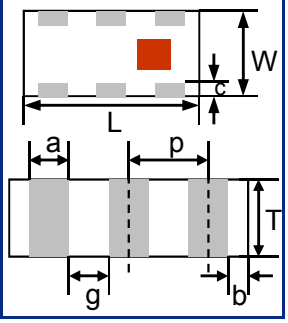
You can download measured s-parameters of this component at: https://www.johansontechnology.com/baluns

Part Number Explanation

P/N Suffix	**Packaging Style**	Bulk	Suffix = S	Eg. 5400BL14A0050S
		T & R	Suffix = T	Eg. 5400BL14A0050T
	Termination Style	100% Tin	Suffix = None	Eg. 5400BL14A0050(T or S)

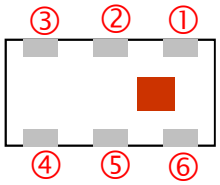
Mechanical Dimensions

	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

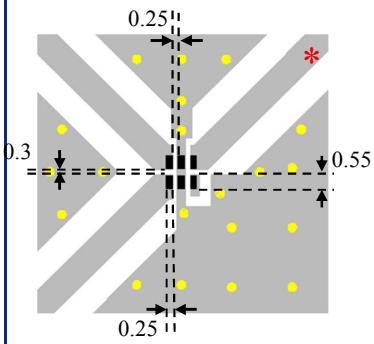
1	Unbalanced Port	**4**	Balanced Port (OUT2)
2	DC feed + RD GND	**5**	GND
3	Balanced Port (OUT1)	**6**	NC



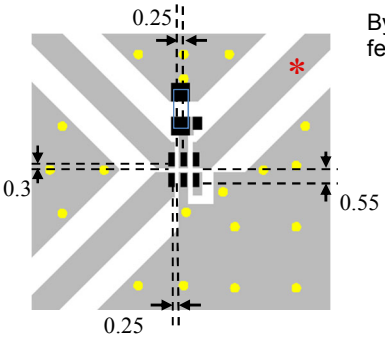
Mounting Considerations

Mount these devices with brown mark facing up.

Without DC Feed



With DC Feed



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

By-pass capacitor should be connected when feeding DC power, go to page 2 for details

Solder Resist

Land

Through-hole (Φ0.3)

Units: mm

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

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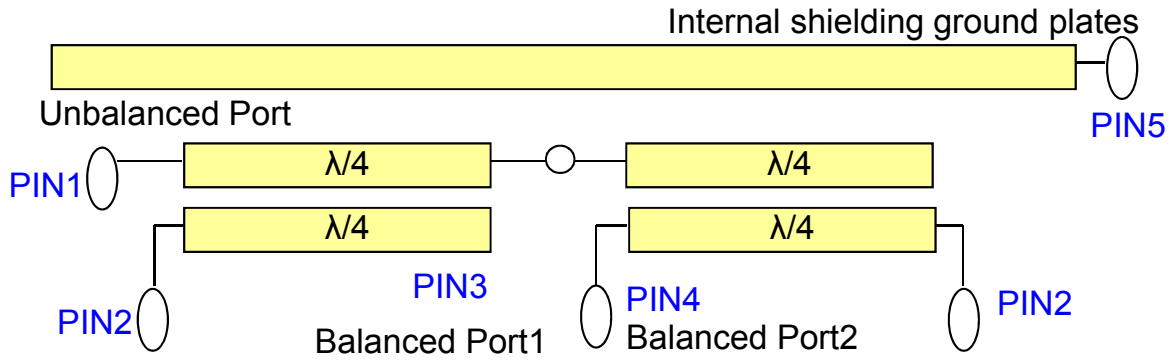
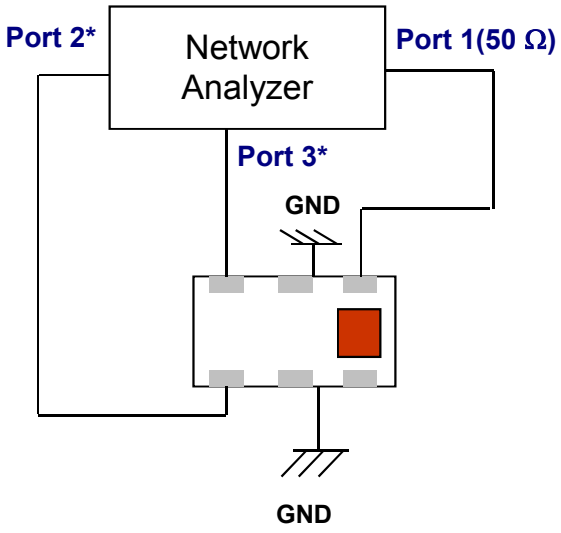
Equivalent Circuit



Pin 6 is a floating pin (no internal connections) but it still must have soldering pad

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

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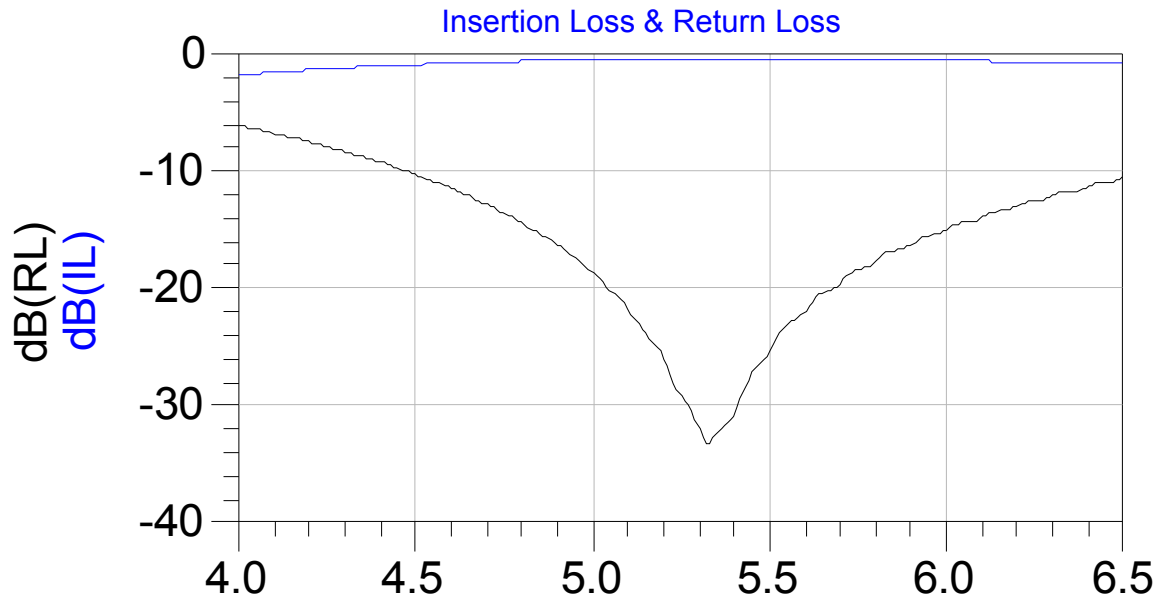
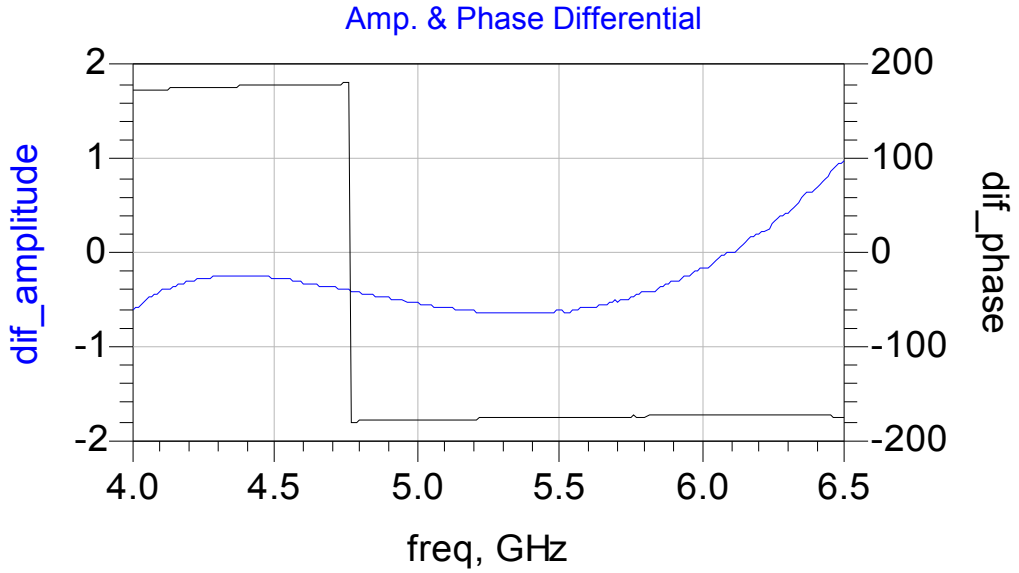
Typical Electrical Characteristics (T=25°C)





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More Balun info at:
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Packaging Information
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Soldering Information
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MSL Info
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Recommneded Storage Condition and Max Shelf Life
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