

High Frequency Ceramic Solutions

2.45 GHz Balun, EIA 0603

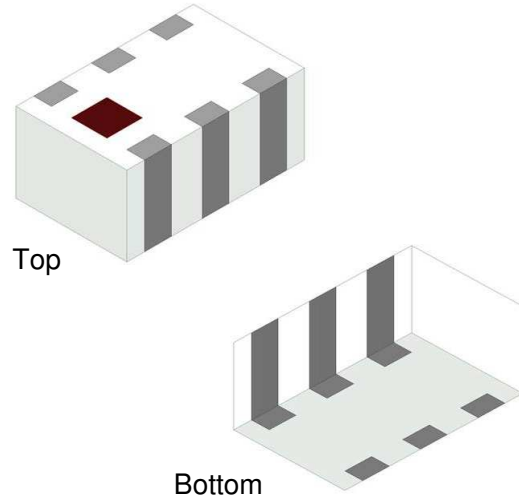
Detail Specification: 7/15/2021

P/N 2500BL14M050

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General Specifications

Part Number	2500BL14M050
Frequency (MHz)	2300 - 2700
Unbalanced Impedance (Ω)	50
Balanced Impedance (Ω)	50
Insertion Loss (dB)	1.2 max.
Return Loss (dB)	9.5 min.
Phase Difference (degree)	180 ± 15
Amplitude Difference (dB)	1.5 max.
Power Capacity (W)	2 max. (CW)
Reel Quantity (pcs./reel)	4,000
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.



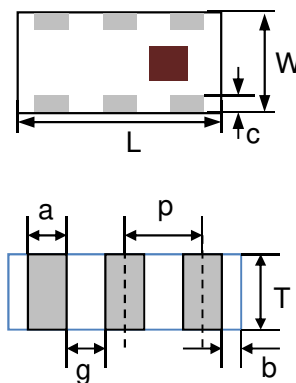
You can download measured s-parameters of this component at: <https://www.johansontechnology.com/baluns>

Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	E.g. 2500BL14M050S
		T & R	Suffix = T	E.g. 2500BL14M050T
	Termination Style	100% Tin	Suffix = None	E.g. 2500BL14M050 (T or S)
	Evaluation Board	2500BL14M050-EB2SMA (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 +0.004/-0.008	0.20 +0.1/-0.15
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 $\pm$ 0.004	0.50 $\pm$ 0.10



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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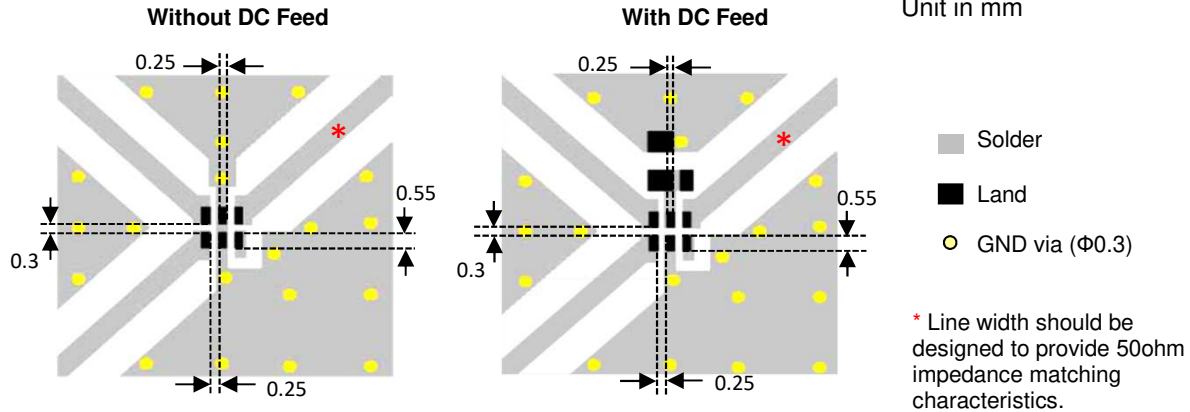
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Layout and Mounting Considerations

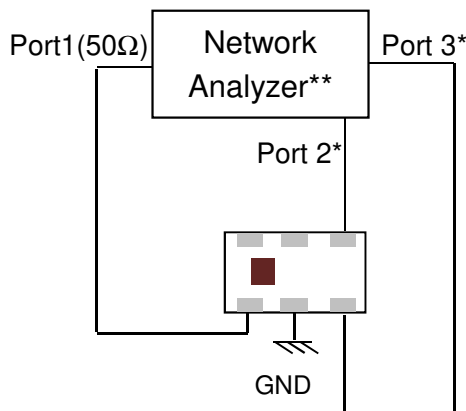
Mount these devices with colored mark facing up.



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 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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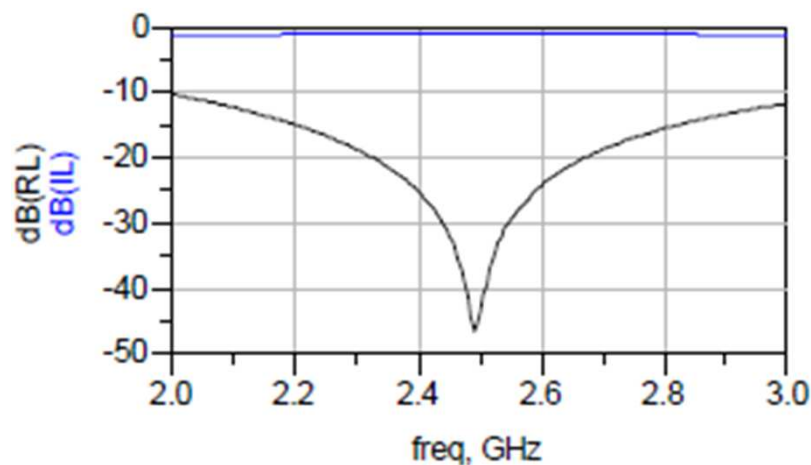
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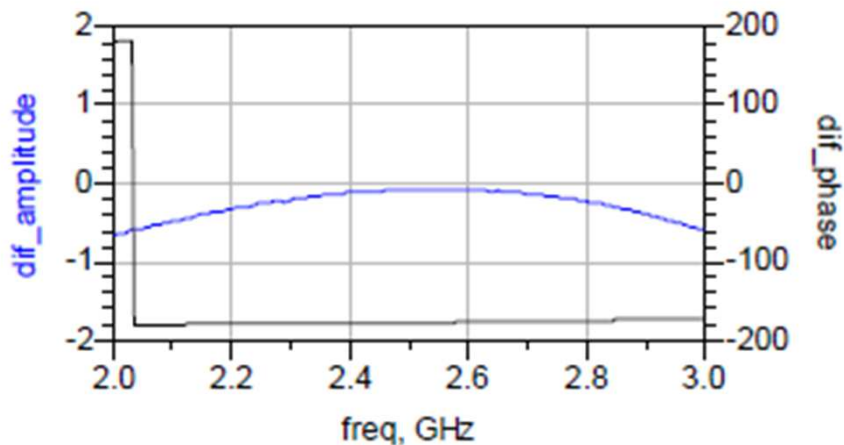
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



Would you like the s-parameter files? Please contact us at: <https://www.johansontechnology.com/ask-a-question>

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More Filter-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

<https://www.johansontechnology.com/recommended-storage-conditions>

RoHS Compliance

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

Layout review services

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

Antenna layout review, tuning, and characterization services

<https://www.johansontechnology.com/ipc-antenna-services>

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