

High Frequency Ceramic Solutions

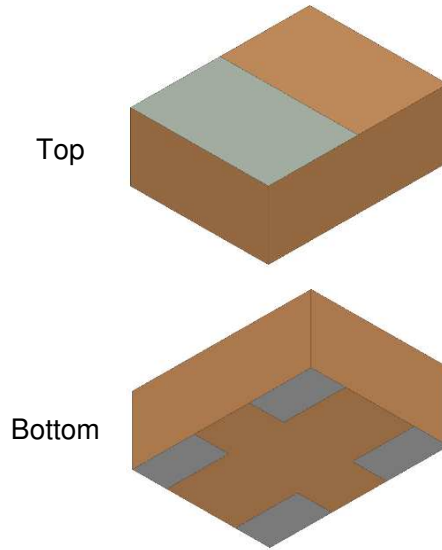
2.4GHz EIA 0202 Micro Balun 1:2 impedance for BLE/WiFi/LTE/Cellular

P/N 2450BL05A0100

Detail Specification: 11/3/2021

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General Specifications	
Part Number	2450BL05A0100
Frequency (MHz)	2300 - 2690
Unbalanced Impedance (Ω)	50
Balanced Impedance (Ω)	100
Insertion Loss (dB)	0.55 max.
Return Loss (dB)	9.5 min.
Phase Difference (deg.)	180 \pm 10
Amplitude Difference (dB)	2.5 max.
Power Capacity (W)	2 max. (CW)
Operating Temperature	-40 to +85°C
Reel Quantity (pcs./reel)	10,000
Recommended Solder Paste	SAC 305 Type
Recommended Storage Conditions and Period for unused Product on T&R*	+5 to +35°C Humidity 45~75% RH 18 months in vacuum sealed bag 1 week after opening



*This component has silver leads. Please keep unused parts in vacuum sealed bag. See <https://www.johansontechnology.com/silverleads-profile>

Part Number Explanation			
P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S E.g. 2450BL05A0100S
		T & R	Suffix = T E.g. 2450BL05A0100T
	Termination Style	AgPt	Suffix = None E.g. 2450BL05A0100(T or S)
	Evaluation Board	2450BL05A0100-EB1SMA (3 female SMA connectors)	

Mechanical Dimensions		
	In	mm
L	0.026 \pm 0.002	0.65 \pm 0.05
W	0.020 \pm 0.002	0.50 \pm 0.05
T	0.018 max.	0.45 max.
a	0.009 +0.004/-0.002	0.225 +0.1/-0.05
b	0.008 +0.004/-0.002	0.20 +0.1/-0.05
c	0.006 +0.004/-0.002	0.15 +0.1/-0.05
d	0.008 +0.004/-0.002	0.20 +0.1/-0.05

Terminal Configuration	
1	GND
2	Unbalanced Port
3	Balanced Port
4	Balanced Port

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Ver 1.1

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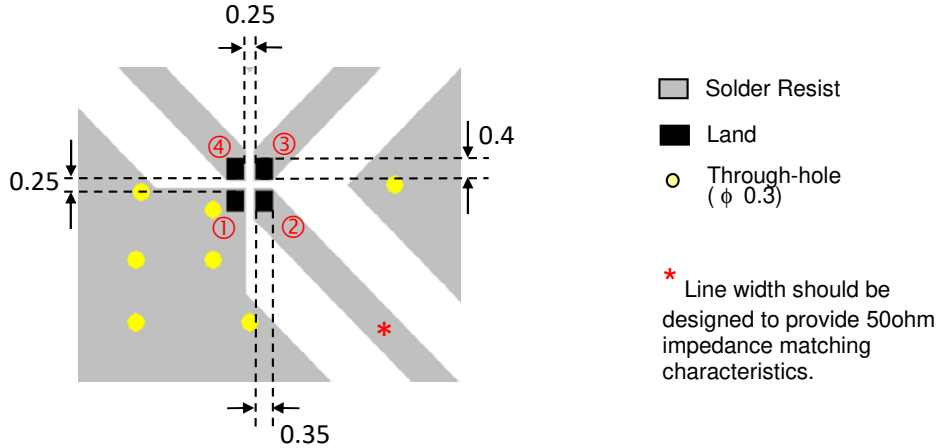
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Mounting Considerations

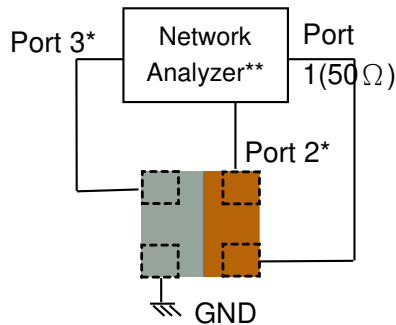
This micro balun fits well with differential feedlines that have a very small pitch.



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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

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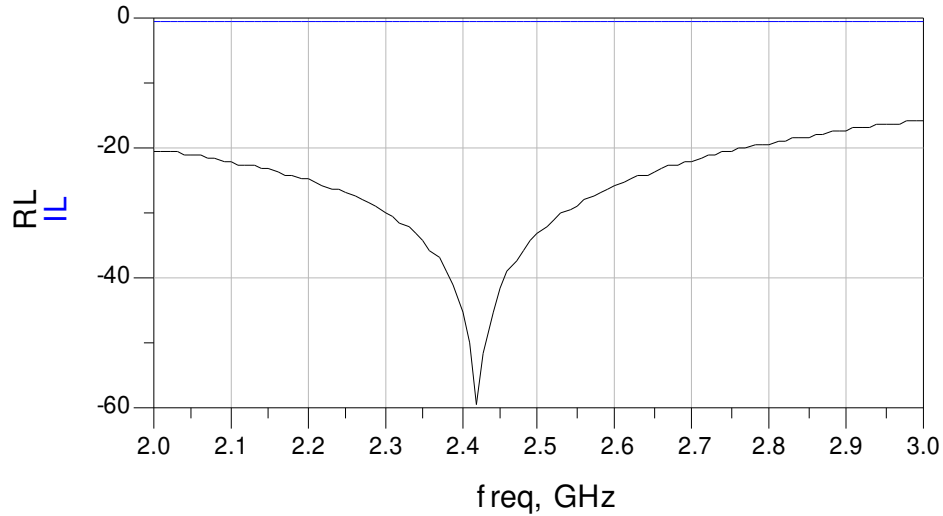
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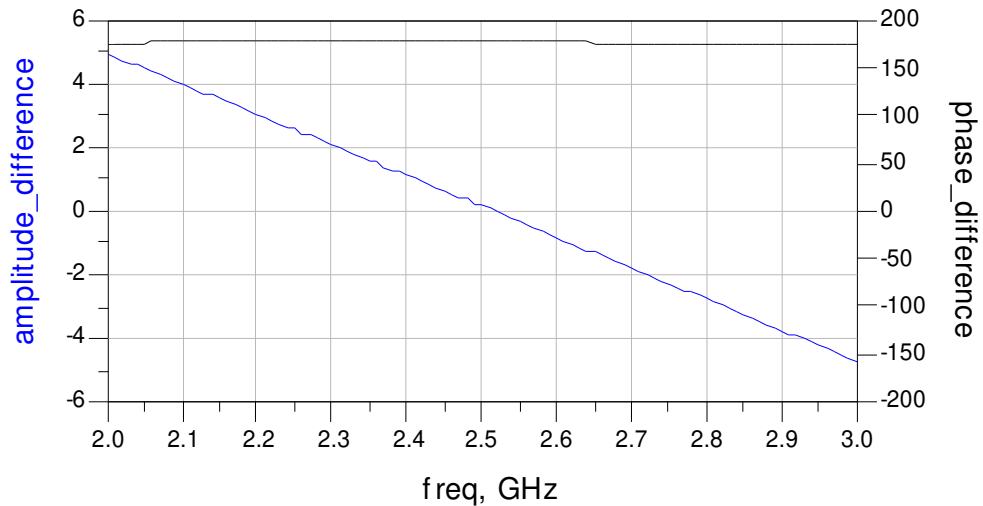
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Typical Electrical Characteristics (T=25°C)

Insertion and Return Loss



Amplitude and Phase Balance



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More 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>

Silver Leads

<https://www.johansontechnology.com/silverleads-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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