

# High Frequency Ceramic Solutions

**Mini Passive RF Diplexer 2.5/6.1GHz for 802.11-WLAN-WiFi,  
EIA 0603 with LPF/BPF Filtering Scheme**

**P/N 2450DP14B6100**

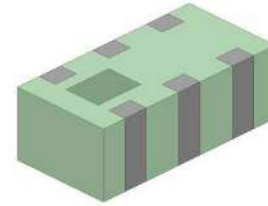
Detail Specification: 4/28/2021

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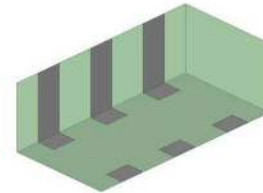
Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

## General Specifications

<b>Part Number</b>	2450DP14B6100	
<b>Passband (MHz)</b>	2400 - 2500	5170 - 7125
<b>Insertion Loss (dB)</b>	0.6 max.	0.9 max.
<b>Return Loss (dB)</b>	12 min.	10 min.
<b>Attenuation (dB)</b>		35 min. @ .070-.108GHz
		35 min. @ .7-.915GHz
		15 min. @ .915-.960GHz
		30 min. @ 1.425-1.47GHz
		28 min. @ 1.47-1.557GHz
		26 min. @ 1.557-1.607GHz
		2 min. @ 3.3-4.8GHz
		35 min. @ 1.71-1.785GHz
		33 min. @ 4.8-5GHz
		26 min. @ 1.805-1.85GHz
		25 min. @ 5.17-7.125GHz
		35 min. @ 1.85-1.91GHz
		25 min. @ 7.2-7.5GHz
		35 min. @ 1.91-2.02GHz
	27 min. @ 9.6-10GHz	
	23 min. @ 2.11-2.2GHz	
	20 min. @ 12-12.5GHz	
	26 min. @ 2.3-2.4GHz	
	25 min. @ 2.4-2.5GHz	
	20 min. @ 2.5-2.69GHz	
	10 min. @ 3.4-3.8GHz	
	25 min. @ 10.34-14.25GHz	
	30 min. @ 15.51-19.5GHz	
	22 min. @ 19.5-21.375GHz	



Top



Bottom

<b>Power Capacity (W)</b>	3 max. (CW)
<b>Operating Temp.</b>	-40 to +85 °C
<b>Recommended Storage Conditions and Period for Unused Product on T&amp;R</b>	+5°C to +35°C Humidity 45 - 75% RH 18 months max.
<b>Reel Quantity (pcs/reel)</b>	4,000

## Part Number Explanation

<b>P/N Suffix</b>	<b>Packing Style</b>	Bulk (loose pcs.)	Suffix = S	e.g. 2450DP14B6100S
		T & R	Suffix = T	e.g. 2450DP14B6100T
	<b>Termination Style</b>	100% Tin	Suffix = None	e.g. 2450DP14B6100(T or S)
	<b>Evaluation Board</b>	2450DP14A6100-EB1SMA		

## Mechanical Dimensions

	In	mm
<b>L</b>	0.063 ± 0.004	1.6 ± 0.1
<b>W</b>	0.031 ± 0.004	0.8 ± 0.1
<b>T</b>	0.028 max	0.7 max
<b>a</b>	0.008 ± 0.004	0.2 ± 0.1
<b>b</b>	0.008 +.004/-0.006	0.2 +0.1/-0.15
<b>c</b>	0.006 ± 0.004	0.15 ± 0.1
<b>g</b>	0.012 ± 0.004	0.3 ± 0.1
<b>p</b>	0.020 ± 0.002	0.5 ± 0.05

## Terminal Configuration

No.	Function	No.	Function
1	GND	4	Low Freq Band
2	Common Port	5	GND
3	GND	6	High Freq Band



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Ver. 1.0

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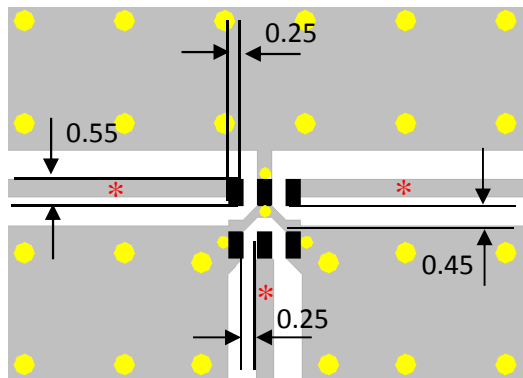
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## Mounting Considerations

Units in mm



■ Solder Resist

■ Land

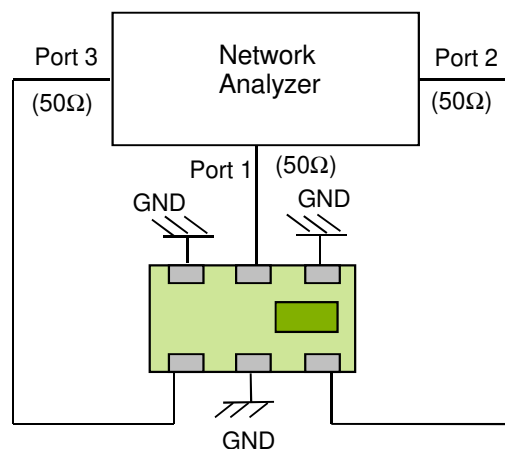
● Through-hole ( $\phi$  0.35)

● Through-hole ( $\phi$  0.2)

\* Line width should be designed to maintain 50 $\Omega$  characteristic impedance (CPWG preferred), depending on PCB material and thickness.

Need help with the layout, s-parameters, simulation, or design validation?  
Send us a message at: <https://www.johansontechnology.com/ask-a-question>

## Measuring Diagram



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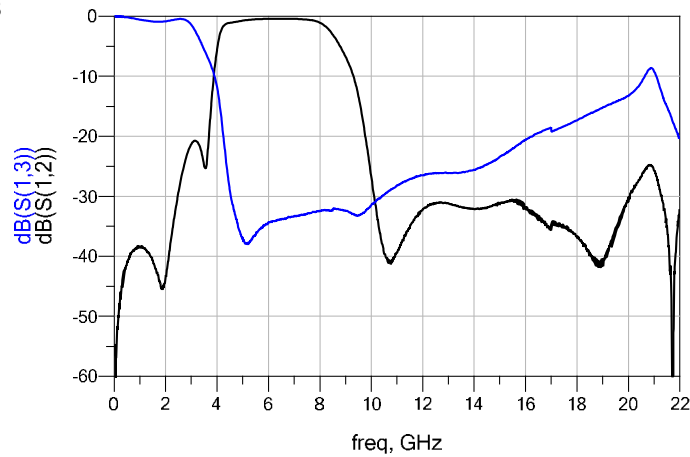
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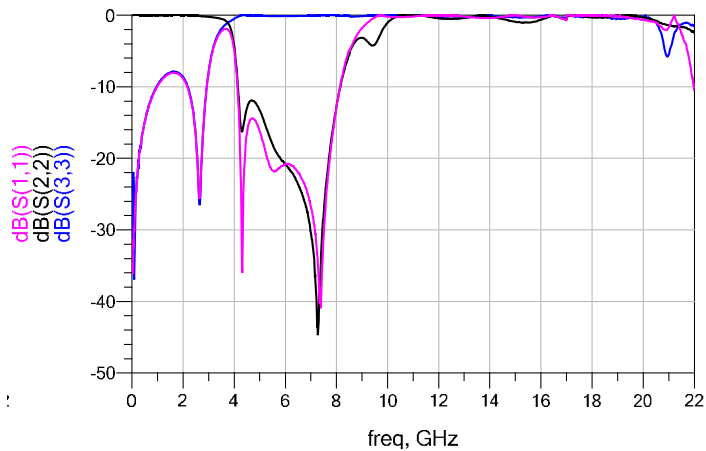
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## Typical Electrical Characteristics (T=25 °C)

Insertion Loss



Return Loss



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## Application Notes, Layout Files, and more

<https://www.johansontechnology.com/diplexers>

## 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/technical-notes/rohs-compliance>

## Antenna layout and tuning techniques

<https://www.johansontechnology.com/tuning.html>

## Antenna layout review, tuning, and characterization services

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

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