

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB

P/N 2450DP14B7200

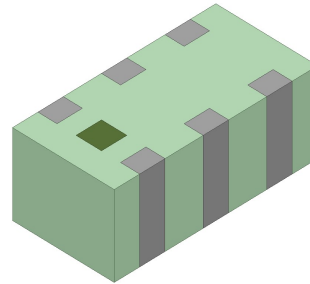
Detail Specification: 6/22/2022

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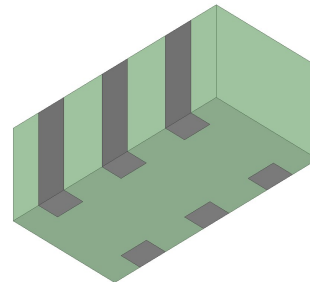
Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

## General Specifications

<b>Part Number</b>	2450DP14B7200	
<b>Passband (MHz)</b>	2400 - 2500	6200 - 8200
<b>Insertion Loss (dB)</b>	0.7 max. @ 25°C 1.0 max. @ -40~105°C	1.0 max. @ 25°C 1.3 max. @ -40~105°C
<b>Return Loss (dB)</b>	10 min.	10 min.
<b>Attenuation (dB)</b>	20 min. @ 4.8-5.0GHz 20 min. @ 6.2-8.5GHz	25 min. @ 2.4-2.5GHz 22 min. @ 12.4-16.4GHz
<b>Isolation (dB)</b>	25 min. @ 2.4-2.5GHz 22 min. @ 6.2-8.5GHz	
<b>Power Capacity (W)</b>	1 max. (CW)	
<b>Operating Temp.</b>	-40 to +105 °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	



Top



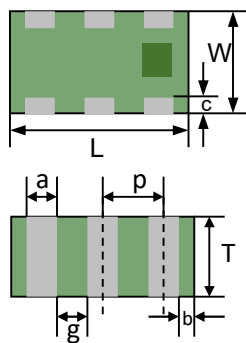
Bottom

## Part Number Explanation

<b>P/N Suffix</b>	<b>Packing Style</b>	Bulk (loose pcs.)	Suffix = S	e.g. 2450DP14B7200S
		T & R	Suffix = T	e.g. 2450DP14B7200T
	<b>Evaluation Board</b>	2450DP14B7200-EB1SMA		

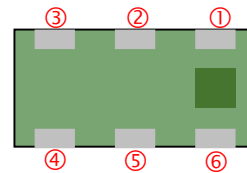
## Mechanical Dimensions

	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>	0.024 ± 0.004	0.6 ± 0.1
<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	High Freq. Band
2	Common Port	5	GND
3	GND	6	Low Freq. Band



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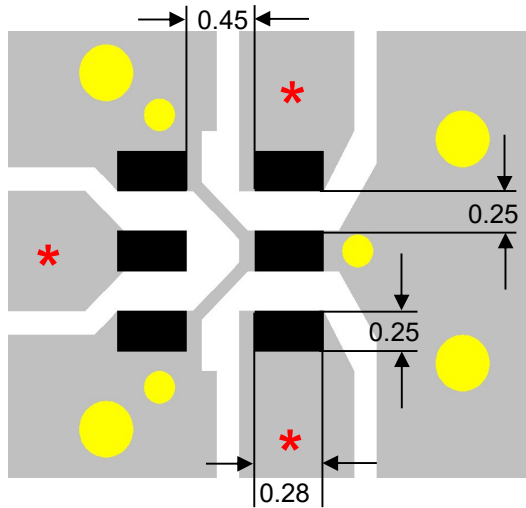
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## Mounting Considerations

Units in mm



■ Solder Resist

■ Land

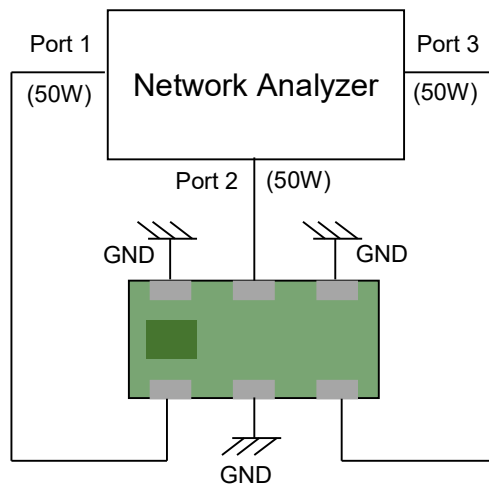
● Through-hole ( $\phi$  0.35)

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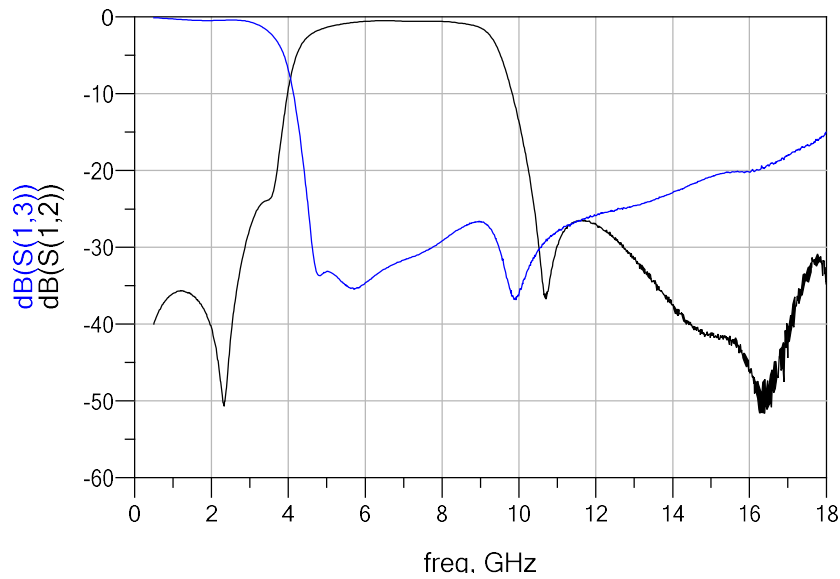
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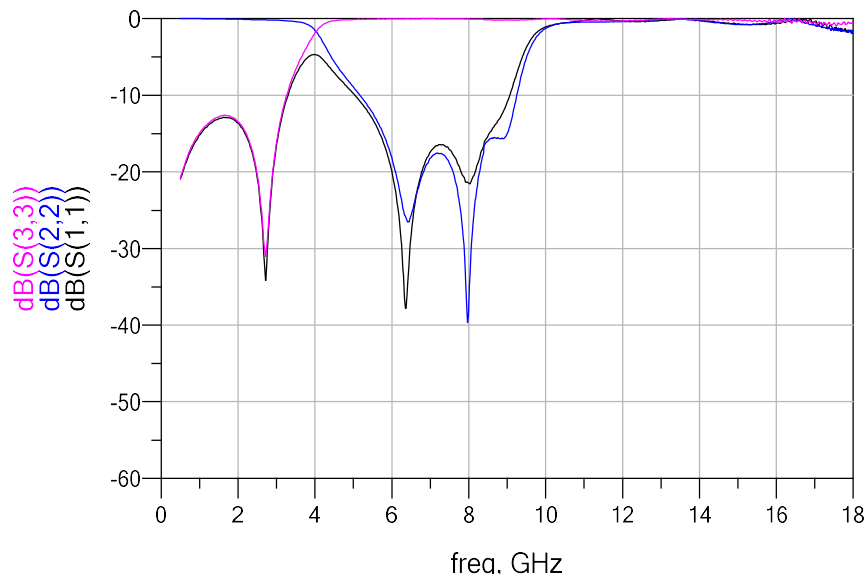
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## Typical Electrical Characteristics (T=25 °C)

Insertion Loss



Return Loss



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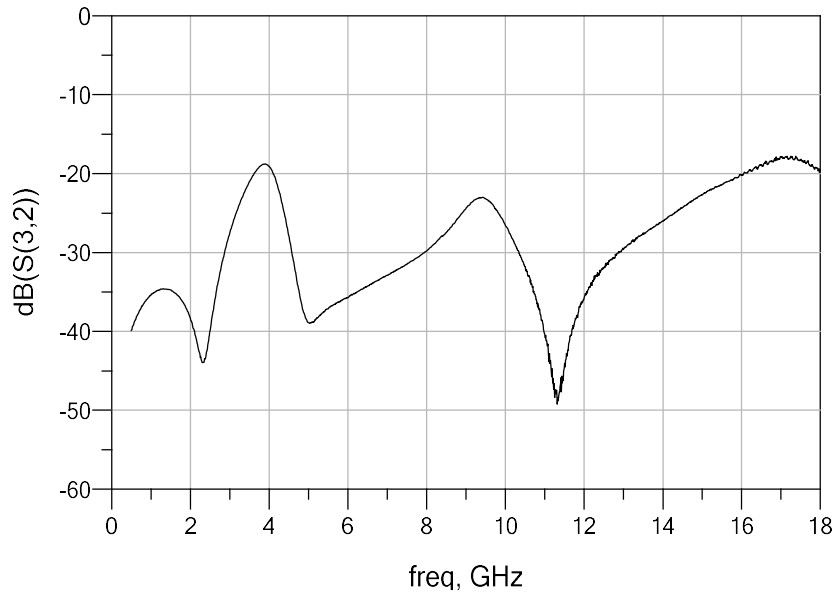
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## Typical Electrical Characteristics (T=25 °C)

### Isolation



Request our measured S-parameter files here:  
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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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