

# "High Frequency Ceramic Solutions"

Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi

P/N 2450DP14C5400

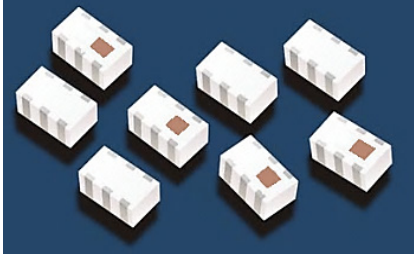
EIA 0603 with LPF/BPF Filtering Scheme

Detail Specification: 9/25/2014

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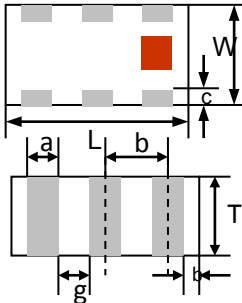
Not exactly what you are looking for and want to see our other diplexers? Go to: [www.johansontechnology.com/diplexers](http://www.johansontechnology.com/diplexers)

## General Specifications

<b>Part Number</b>	2450DP14C5400		
<b>Passband (MHz)</b>	2400~2500	4900~5900	
<b>Insertion Loss (dB)</b>	0.8 max.	1.2 max.	
<b>Attenuation I (db)</b>	18 min. @ 4.8 ~ 6.0 GHz	18 min. @ 2.4 ~ 2.5 GHz	
<b>Attenuation II (db)</b>	20 min. @ 7.2 to 7.5GHz	18 min. @ 9.8 to 11.8GHz	
<b>Passband VSWR</b>	2.0 max.	2.0 max.	
<b>Operating Temp. Range</b>	-40 to +85 °C		
<b>Recom. Storage Conditions<sup>1</sup></b>	+5 to +35 °C, Humidity 45~75%RH		<b>Power Capacity</b> 2W max. (CW)
<b>Storage Period</b>	18 months max.		<b>Reel Quantity</b> 4,000

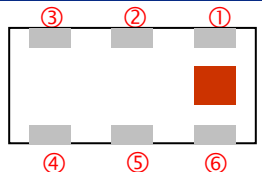
<sup>1</sup>This applies on to pre-installation storage (i.e. still on T&R)

## 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>	0.016 ± 0.004	0.4 ± 0.1	
<b>a</b>	0.008 ± 0.004	0.2 ± 0.1	
<b>b</b>	0.008 ± .004/.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

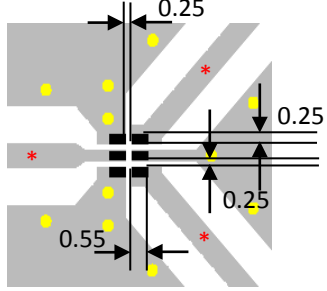
No.	Function	No.	Function
1	High Freq (5.4GHz) Band	4	GND
2	GND	5	Common Port
3	Low Freq (2.45GHz) Band	6	GND



## Part Number Explanation

<b>P/N Suffix</b>	<b>Packing Style</b>	Bulk	Suffix = S	eg. 2450DP14C5400S
		T & R	Suffix = E	eg. 2450DP14C5400T
	<b>Termination style</b>	100% Tin	Suffix = None	eg. 2450DP14C5400(T or S)
	<b>Evaluation Board</b>	2450DP14C5400-EB1SMA		

## Mounting Considerations

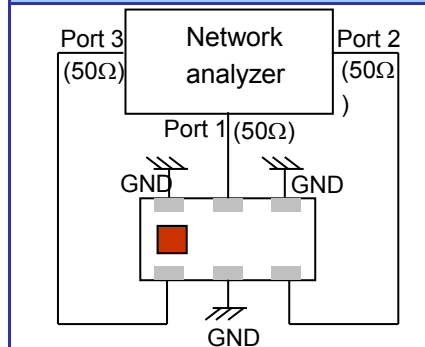


Solder Resist  
 Land  
 Through-hole (φ0.35)

\* Line width should be designed to match 50ohm characteristic impedance, depending on PCB material

Need the layout file of the above? Send us a message at: <http://www.johansontechnology.com/component/techquestion>

## Measuring Diagram



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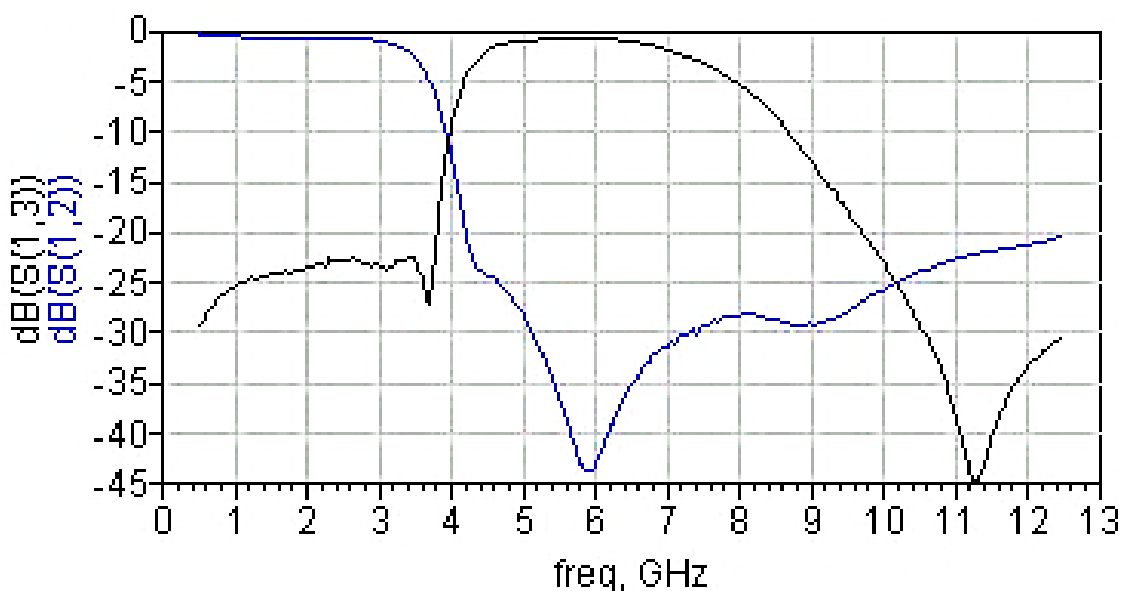
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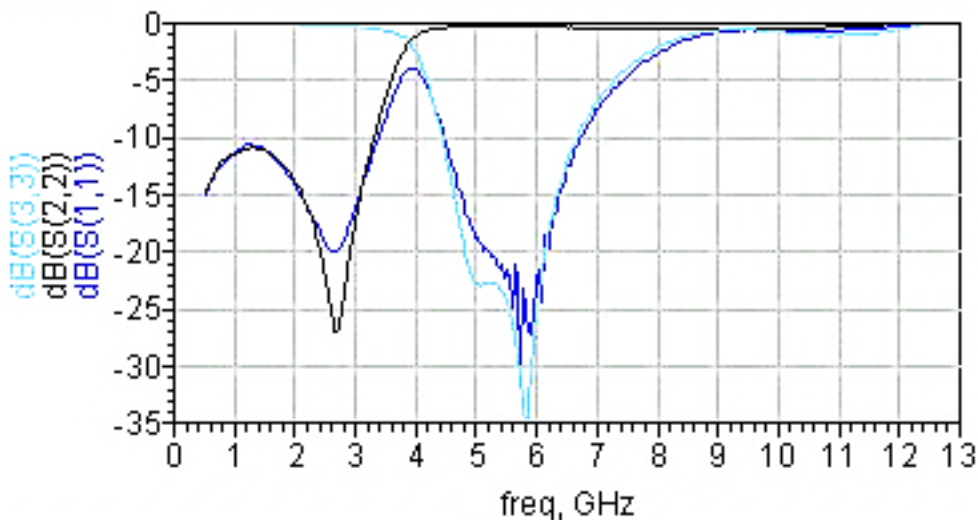
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## Typical Electrical Characteristics (T=25 °C)

Attenuation



Return Loss



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## RoHS Compliance

[www.johansontechnology.com/technical-notes/rohs-compliance.html](http://www.johansontechnology.com/technical-notes/rohs-compliance.html)

## Packaging information

[www.johansontechnology.com/ipcpackaging.html](http://www.johansontechnology.com/ipcpackaging.html)

## Soldering Information

[www.johansontechnology.com/ipcsoldering-profile](http://www.johansontechnology.com/ipcsoldering-profile)

## Layout Files, s-parameters and any other technical questions

[www.johansontechnology.com/component/techquestion/?Itemid=407](http://www.johansontechnology.com/component/techquestion/?Itemid=407)

## MSL Info

[www.johansontechnology.com/technical-notes/msl-rating.html](http://www.johansontechnology.com/technical-notes/msl-rating.html)

## Recommended Storage Condition and Max Shelf Life

[www.johansontechnology.com/ipcstorage-shelflife](http://www.johansontechnology.com/ipcstorage-shelflife)

## Antenna layout and tuning techniques

[www.johansontechnology.com/tuning](http://www.johansontechnology.com/tuning)

## Antenna layout review, tuning, and characterization services

[www.johansontechnology.com/ipcantennaservices](http://www.johansontechnology.com/ipcantennaservices)

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Ver. 1.1

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