

High Frequency Ceramic Solutions

**Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi,
EIA 0603 with LPF/BPF Filtering Scheme**

P/N 2450DP14D5400

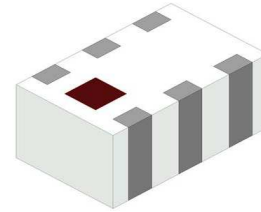
Detail Specification: 4/6/2021

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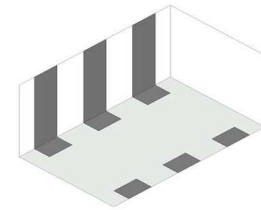
Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

General Specifications

Part Number	2450DP14D5400	
Passband (MHz)	2400-2500	4900-5900
Insertion Loss (dB)	0.5 typ. (0.68 max.@ 25°C / 0.88 max.@-40~125°C)	0.55 typ. (0.78 max.@ 25°C / 1.10 max.@-40~125°C)
Return Loss (dB)	9.5 min.	9.5 min.
Attenuation (dB)	10 min.@ 3.6-3.75GHz 20 min.@ 4.8-5.0GHz 10 min.@ 7.2-7.5GHz 10 min.@ 9.6-10GHz	25 min.@ 0.86-0.96GHz 25 min.@ 1.545-1.605GHz 25 min.@ 1.71-1.99GHz 30 min.@ 2.17GHz 10 min.@ 8.1-8.8GHz 15 min.@ 8.82-9.8GHz 25 min. @ 9.8-11.8GHz
Power Capacity (W)	3 max. (CW)	
Operating Temp.	-40 to +125 °C	
Recommended Storage Conditions and Period for Unused Product on T&R	+5°C to +35°C Humidity 45 - 75% RH 18 months max.	
Reel Quantity (pcs/reel)	4,000	



Top



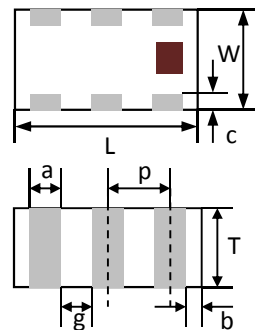
Bottom

Part Number Explanation

P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	e.g. 2450DP14D5400S
		T & R	Suffix = T	e.g. 2450DP14D5400T
		100% Tin	Suffix = None	e.g. 2450DP14D5400(T or S)
	Evaluation Board	2450DP14D5400-EB1SMA		

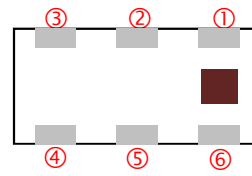
Mechanical Dimensions

	In	mm
L	0.063 ± 0.004	1.6 ± 0.1
W	0.031 ± 0.004	0.8 ± 0.1
T	0.024 ± 0.004	0.6 ± 0.1
a	0.008 ± 0.004	0.2 ± 0.1
b	0.008 +.004/-0.006	0.2 +0.1/-0.15
c	0.006 ± 0.004	0.15 ± 0.1
g	0.012 ± 0.004	0.3 ± 0.1
p	0.020 ± 0.002	0.5 ± 0.05



Terminal Configuration

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



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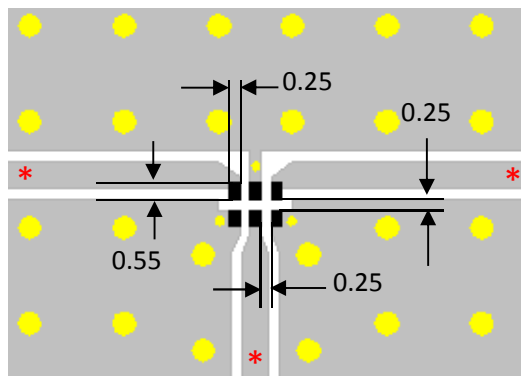
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Mounting Considerations

Units in mm



■ Solder Resist

■ Land

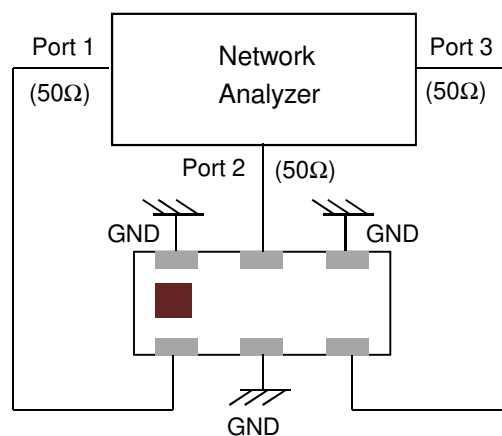
● Through-hole (ϕ 0.35)

● Through-hole (ϕ 0.2)

* Line width should be designed to maintain 50 Ω 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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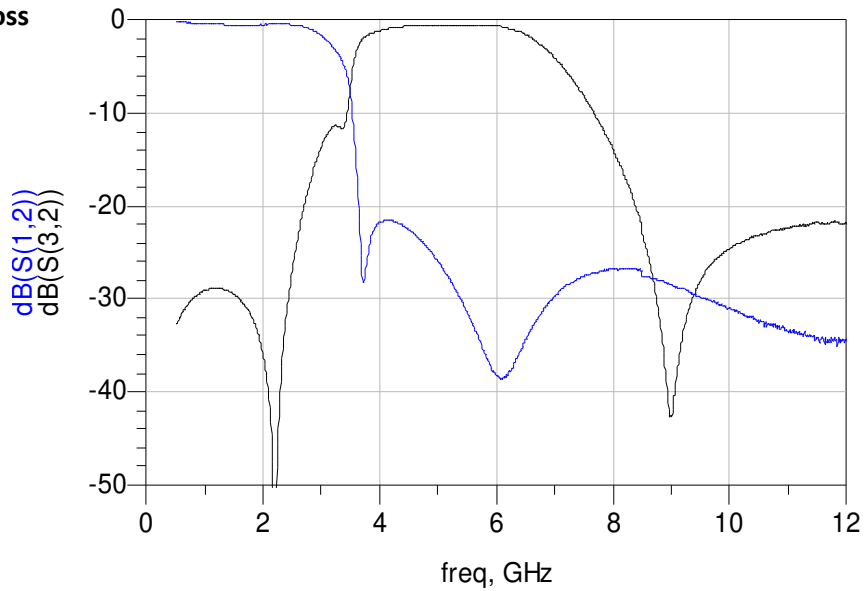
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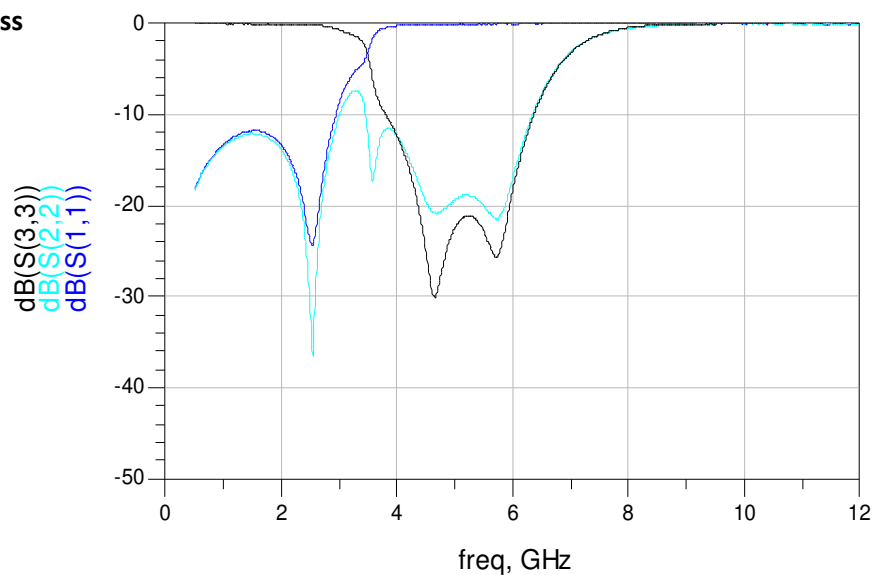
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Typical Electrical Characteristics (T=25 °C)

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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