

High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/5-7GHz for 802.11-WLAN-WiFi,
EIA 0603 with LPF/BPF Filtering Scheme

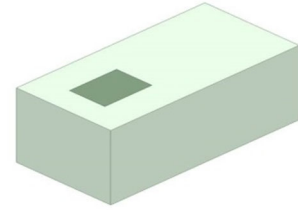
P/N 2450DP14A6000

Detail Specification: 6/15/2021

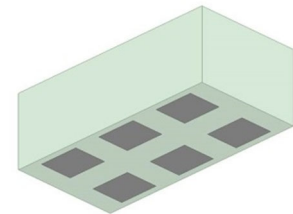
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Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

General Specifications		
Part Number	2450DP14A6000	
Frequency	Low Band High Band	
Insertion Loss (dB)	2400-2500MHz 0.6 typ. (0.8 max.@ 25°C) 0.8 typ. (1.0 max.@ 105°C)	4900-5100MHz 1.0 typ. (1.3 max.@ 25°C) 1.2 typ. (1.5 max.@ 105°C)
		5150-5950MHz 0.8 typ. (1.0 max.@ 25°C) 1.0 typ. (1.2 max.@ 105°C)
		5950-7150MHz 0.8 typ. (1.0 max.@ 25°C) 1.0 typ. (1.2 max.@ 105°C)
Return Loss (dB)	9.5 min.	
Attenuation (dB)	50 typ.(45 min.) @4800-5000MHz 33 typ.(15 min.) @7200-7500MHz	50 typ.(45 min.) @2400-2500MHz 25 typ.(22 min.) @10300-14300MHz 25 typ.(15 min.) @15300-21450MHz
Isolation (dB)	50 typ.(40 min.) @2400-2500MHz 50 typ.(40 min.) @4800-5000MHz 45 typ.(40 min.) @5000-6000MHz 35 typ.(30 min.) @6000-7150MHz	
Power Capacity (W)	3 max. (CW)	
Operating Temp.	-40 to +105 °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

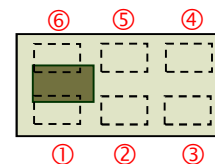
P/N Suffix	Packing Style	Bulk (loose pcs.)	Suffix = S	E.g. 2450DP14A6000S
		T & R	Suffix = T	E.g. 2450DP14A6000T
	Termination Style	100% Tin	Suffix = None	e.g. 2450DP14A6000(T or S)
	Evaluation Board	2450DP14A6000-EB1SMA		

Mechanical Dimensions

	In	mm
L	0.063 ± 0.004	1.6 ± 0.1
W	0.031 ± 0.004	0.8 ± 0.1
T	0.028 max	0.7 max
a	0.012 ± 0.004	0.3 ± 0.1
b	0.008 ± 0.004	0.2 ± 0.1
c	0.010 ± 0.004	0.25 ± 0.1
d	0.008 ± 0.004	0.2 ± 0.1
b1	0.006 ± 0.002	0.15 ± 0.05
b2	0.002 ± 0.002	0.05 ± 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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<https://www.johansontechnology.com>
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Ver. 1.0

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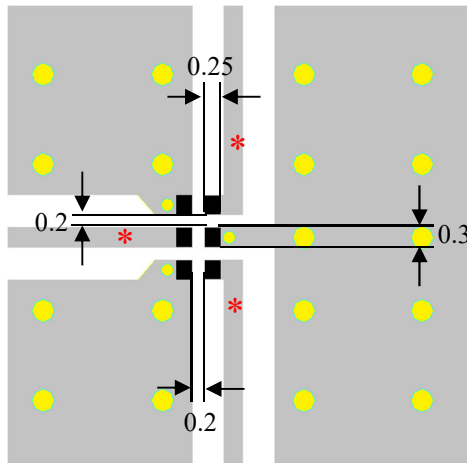
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Mounting Considerations

Units in mm



■ Solder Resist

■ Land

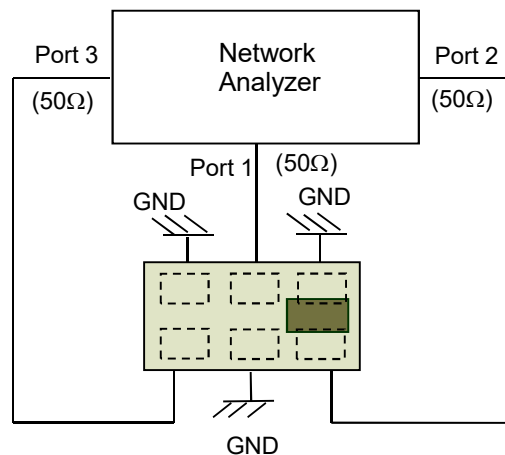
● Through-hole (ϕ 0.35)

● 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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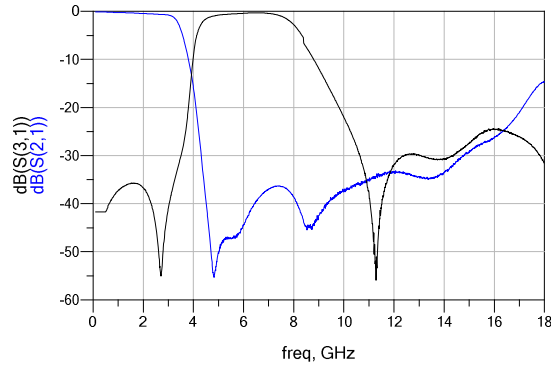
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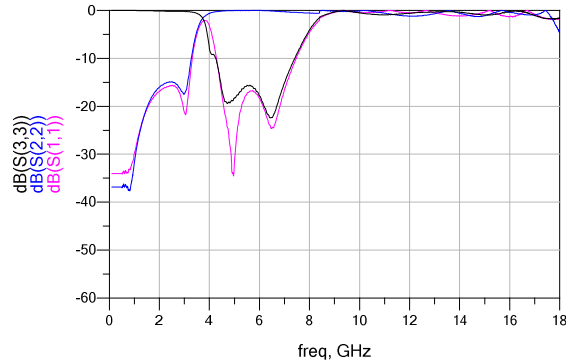
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Typical Electrical Characteristics (T=25 °C)

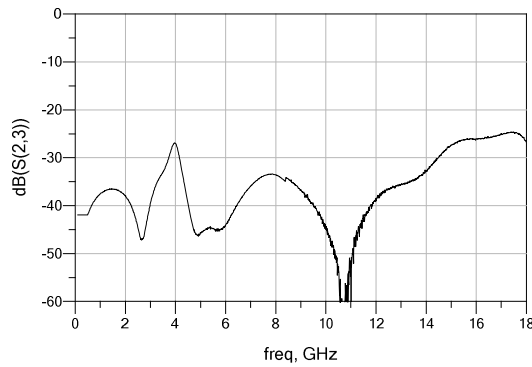
Insertion Loss



Return Loss



Isolation



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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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