

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi,  
EIA 0603 with LPF/BPF Filtering Scheme, AEC-Q200 Qualified

P/N 2450DP14D5400T-AEC

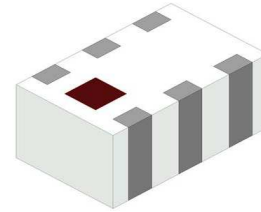
Detail Specification: 4/6/2021

Page 1 of 4

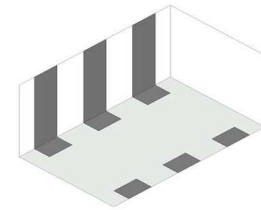
Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

## General Specifications

<b>Part Number</b>	2450DP14D5400T-AEC	
<b>Passband (MHz)</b>	2400-2500	4900-5900
<b>Insertion Loss (dB)</b>	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)
<b>Return Loss (dB)</b>	9.5 min.	9.5 min.
<b>Attenuation (dB)</b>	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
<b>Power Capacity (W)</b>	3 max. (CW)	
<b>Operating Temp.</b>	-40 to +125 °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



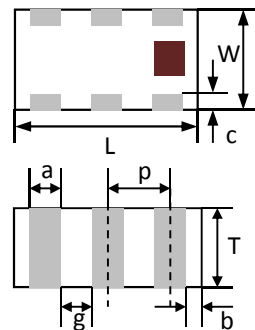
Bottom

## Part Number Explanation

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

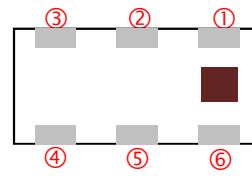
## Mechanical Dimensions

	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	Low Freq Band	4	GND
2	GND	5	Common Port
3	High Freq Band	6	GND



Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 2.0 2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi,  
EIA 0603 with LPF/BPF Filtering Scheme, AEC-Q200 Qualified

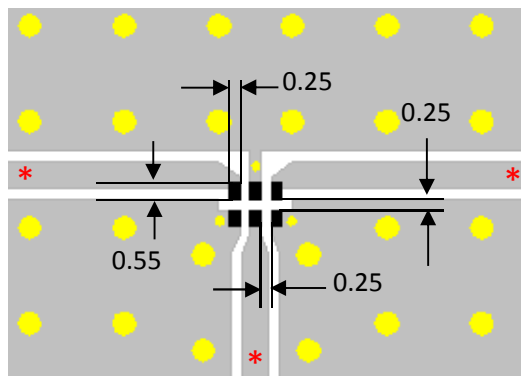
P/N 2450DP14D5400T-AEC

Detail Specification: 4/6/2021

Page 2 of 4

## Mounting Considerations

Units in mm



■ Solder Resist

■ Land

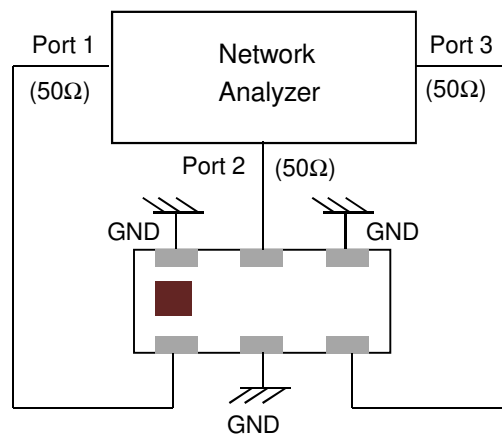
● Through-hole ( $\phi 0.35$ )

● 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



Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi,  
EIA 0603 with LPF/BPF Filtering Scheme, AEC-Q200 Qualified

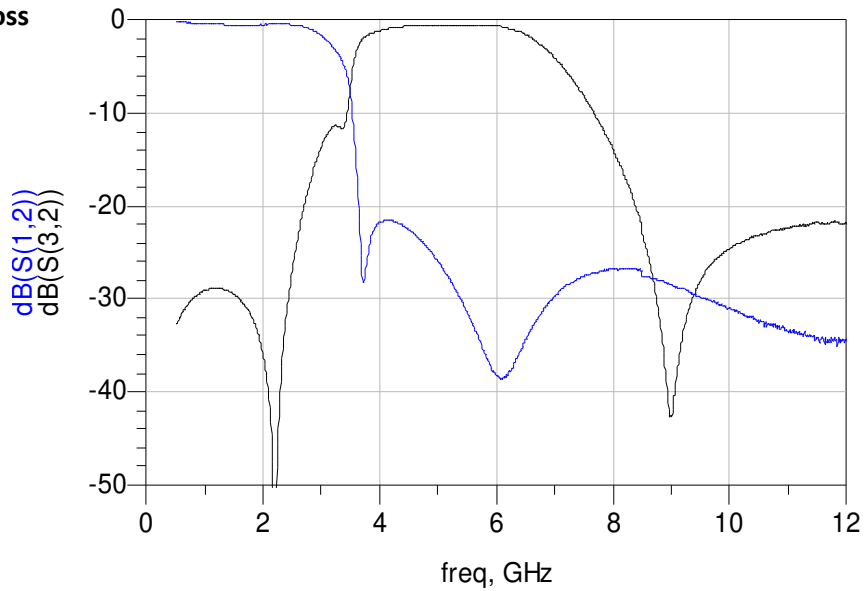
P/N 2450DP14D5400T-AEC

Detail Specification: 4/6/2021

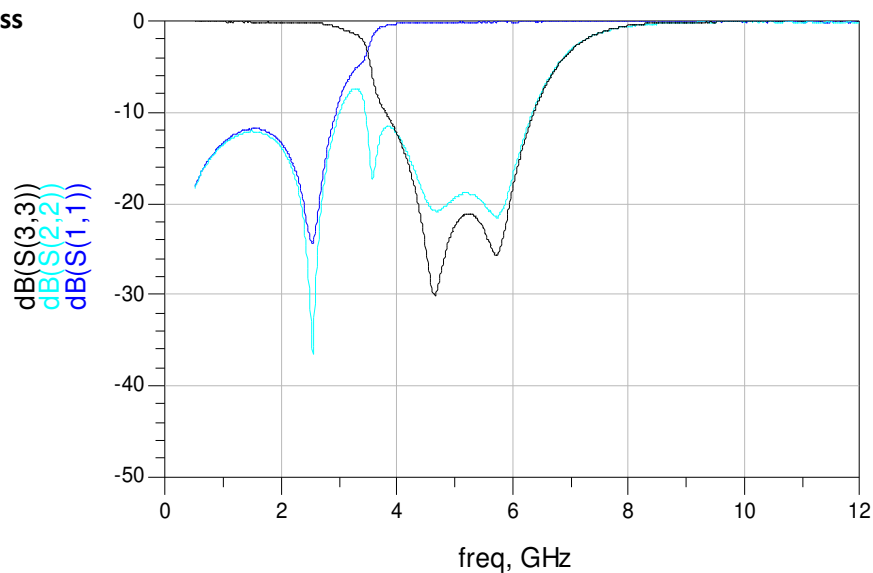
Page 3 of 4

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

Insertion Loss



Return Loss



Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 2.0 2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/5.4GHz for 802.11-WLAN-WiFi,  
EIA 0603 with LPF/BPF Filtering Scheme, AEC-Q200 Qualified

P/N 2450DP14D5400T-AEC

Detail Specification: 4/6/2021

Page 4 of 4

## 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>

Johanson Technology, Inc. reserves the right to make design changes without notice.  
All sales are subject to Johanson Technology, Inc. terms and conditions.



<https://www.johansontechnology.com>  
4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821  
Ver. 2.0 2021 Johanson Technology, Inc. All Rights Reserved