

# High Frequency Ceramic Solutions

**Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB  
AEC-Q200 Qualified**

**P/N 2450DP14B7200T-AEC**

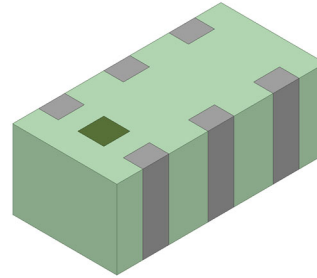
Detail Specification: 6/15/2021

Page 1 of 5

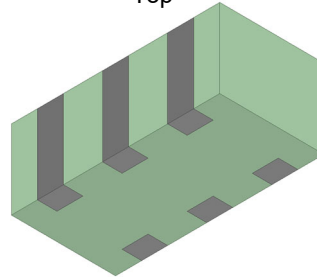
Not exactly what you are looking for and want to see our other diplexers? Go to: <https://www.johansontechnology.com/diplexers>

## General Specifications

|                                                                                |                                                         |                                                |
|--------------------------------------------------------------------------------|---------------------------------------------------------|------------------------------------------------|
| <b>Part Number</b>                                                             | 2450DP14B7200T-AEC                                      |                                                |
| <b>Passband (MHz)</b>                                                          | 2400 - 2500                                             | 6200 - 8200                                    |
| <b>Insertion Loss (dB)</b>                                                     | 0.7 max. @ 25°C<br>1.0 max. @ -40~105°C                 | 1.0 max. @ 25°C<br>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<br>20 min. @ 6.2-8.5GHz            | 25 min. @ 2.4-2.5GHz<br>22 min. @ 12.4-16.4GHz |
| <b>Isolation (dB)</b>                                                          | 25 min. @ 2.4-2.5GHz<br>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<br>Humidity 45 - 75% RH<br>18 months max. |                                                |
| <b>Reel Quantity (pcs/reel)</b>                                                | 4,000                                                   |                                                |



Top



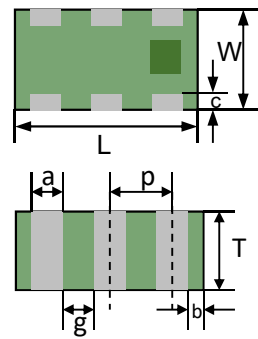
Bottom

## Part Number Explanation

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

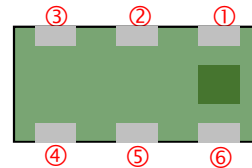
## Mechanical Dimensions

|          | 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 +0.004/-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   | Low Freq. Band  |
| 2   | Common Port | 5   | GND             |
| 3   | GND         | 6   | High Freq. Band |



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. 1.0 2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB  
AEC-Q200 Qualified

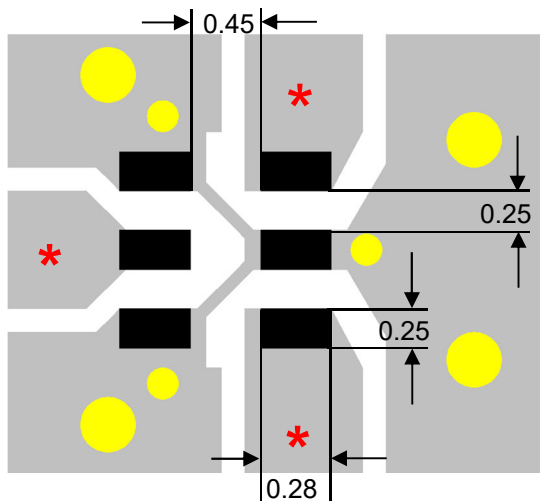
P/N 2450DP14B7200T-AEC

Detail Specification: 6/15/2021

Page 2 of 5

## Mounting Considerations

Units in mm



■ Solder Resist

■ Land

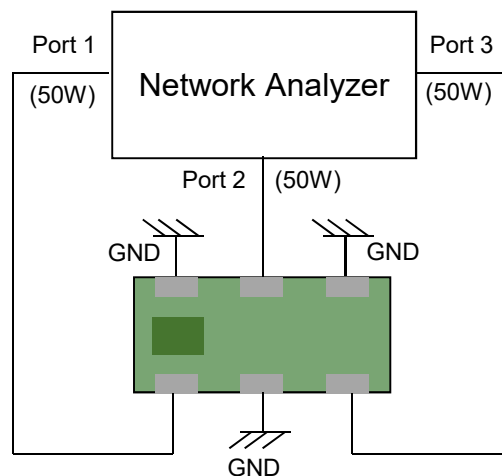
● Through-hole ( $\phi$  0.35)

● 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.



Ver. 1.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB  
AEC-Q200 Qualified

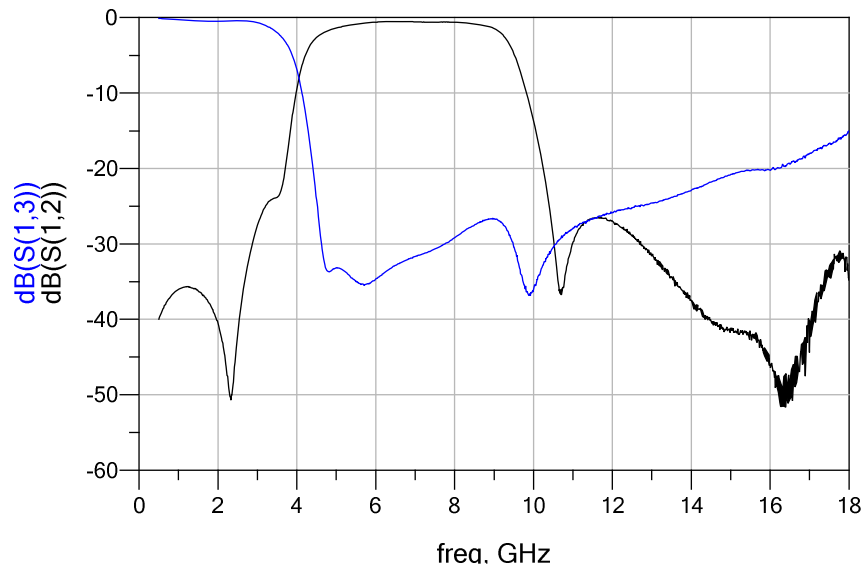
P/N 2450DP14B7200T-AEC

Detail Specification: 6/15/2021

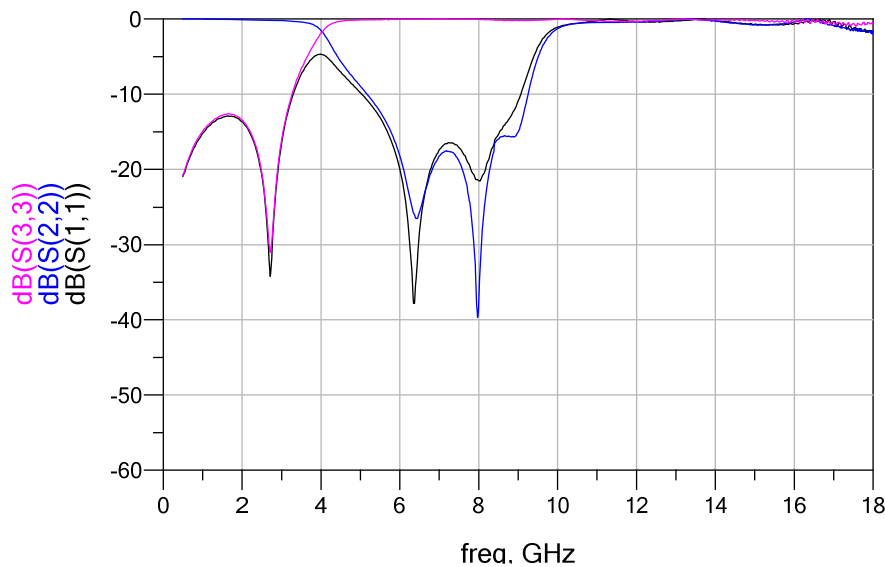
Page 3 of 5

## 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.

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB  
AEC-Q200 Qualified

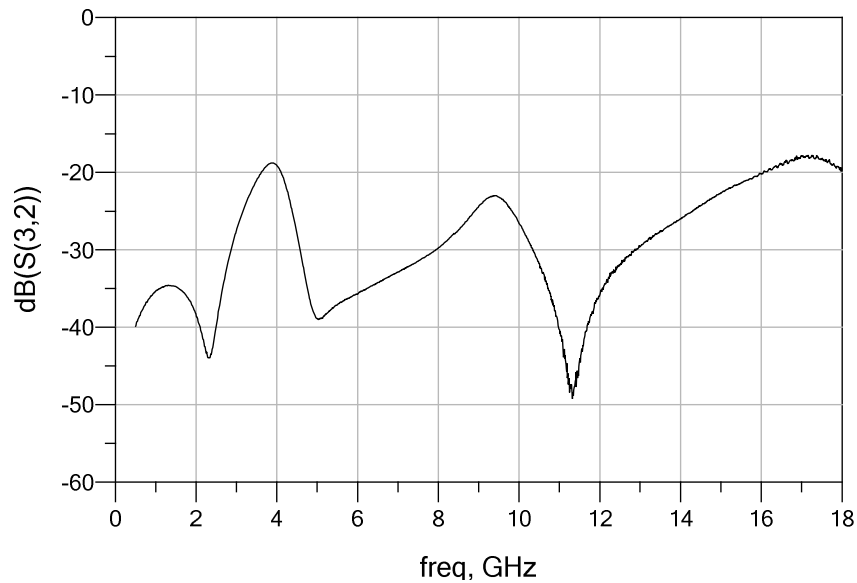
P/N 2450DP14B7200T-AEC

Detail Specification: 6/15/2021

Page 4 of 5

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

Isolation



Request our measured S-parameter files here:  
<https://www.johansontechnology.com/ask-a-question>

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



Ver. 1.0

<https://www.johansontechnology.com>

4001 Calle Tecate • Camarillo, CA 93012 • TEL 805.389.1166 FAX 805.389.1821

2021 Johanson Technology, Inc. All Rights Reserved

# High Frequency Ceramic Solutions

Mini Passive RF Diplexer 2.4/7GHz for Wi-Fi, Bluetooth, UWB  
AEC-Q200 Qualified

P/N 2450DP14B7200T-AEC

Detail Specification: 6/15/2021

Page 5 of 5

## 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. 1.0 2021 Johanson Technology, Inc. All Rights Reserved

# Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

[Johanson:](#)

[2450DP14B7200T-AEC](#) [2450DP14B7200002T](#)