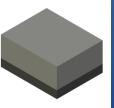


# 2437MHz Coexistence Bandpass SAW Filter



AFII-SW-0064

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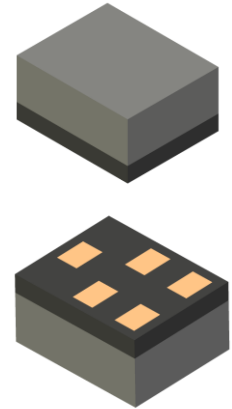
Check Inventory



1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

## Description

This high-power SAW filter delivers exceptional performance for demanding wireless infrastructure, featuring outstanding +29 dBm power handling in an ultra-compact 1.1 x 0.9 x 0.55 mm package. Engineered for high-power WLAN access points and small cells, it provides critical band-edge filtering for S-band/Wi-Fi signals with low insertion loss of 1.1-1.4 dB. The filter's sharp rejection characteristics (>23 dB) effectively enable LTE/Wi-Fi coexistence in congested spectra. This RoHS-compliant, MSL Level 3 component is ideal for portable hotspots, mobile routers, and ISM band applications where robust power handling and interference rejection are essential for maintaining signal integrity.



## Features

- 1.1 x 0.9 x 0.55mm in Size
- Insertion Loss: 1.1 ~1.4 dB
- Out-of-Band Rejection: > 23 dB
- Maximum Input Power: +29 dBm
- [RoHS Compliant](#) | [MSL Level 3](#)

## Applications

- High-Power WLAN Access Points and Small Cells
- Band-Edge Filtering for S-Band/Wi-Fi Signals
- Wi-Fi Bandpass Filtering for LTE/Wi-Fi Coexistence
- Portable Hotspots and Mobile Routers
- ISM Band Applications

## Ordering Information

| Part Number      | Description                                              |
|------------------|----------------------------------------------------------|
| AFII-SW-0064     | 2437MHz Coexistence Bandpass SAW Filter on Cut Tape      |
| AFII-SW-0064-T   | 2437MHz Coexistence Bandpass SAW Filter on Tape & Reel   |
| AFII-SW-0064-EVB | 2437MHz Coexistence Bandpass SAW Filter Evaluation Board |

Note: Other options not listed may be available upon request via [Abracon online support](#)

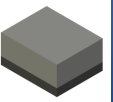


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CERTIFIED

# 2437MHz Coexistence Bandpass SAW Filter



**AFII-SW-0064**

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**1.1 x 0.9 x 0.55mm**  
**RoHS Compliant**  
**MSL Level = 3**

## Electrical Specification

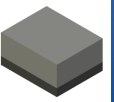
| Parameters                                                | Minimum | Typical | Maximum | Units    | Notes              |
|-----------------------------------------------------------|---------|---------|---------|----------|--------------------|
| Center Frequency( $f_c$ )                                 | -       | 2437    | -       | MHz      | -                  |
| VSWR                                                      | -       | 1.1     | 1.3     |          | 2402.5 ~ 2471.5MHz |
| Insertion Loss <sup>(1)</sup>                             | -       | 1.4     | 1.7     | dB       | 2402.5 ~ 2421.5MHz |
|                                                           | -       | 1.3     | 1.5     |          | 2407.5 ~ 2426.5MHz |
|                                                           | -       | 1.1     | 1.3     |          | 2412.5 ~ 2461.5MHz |
|                                                           | -       | 1.1     | 1.3     |          | 2447.5 ~ 2466.5MHz |
|                                                           | -       | 1.4     | 1.6     |          | 2452.5 ~ 2471.5MHz |
|                                                           | -       | 1.5     | 3.0     |          | 2402.5 ~ 2421.5MHz |
| Amplitude Ripple <sup>(1)</sup>                           | -       | 0.8     | 1.5     | dB       | 2407.5 ~ 2426.5MHz |
|                                                           | -       | 0.5     | 1.1     |          | 2412.5 ~ 2461.5MHz |
|                                                           | -       | 0.5     | 1.2     |          | 2447.5 ~ 2466.5MHz |
|                                                           | -       | 1.0     | 3.5     |          | 2452.5 ~ 2471.5MHz |
|                                                           | -       | 15      | 30      |          | 2402.5 ~ 2471.5MHz |
| Group Delay <sup>(1)</sup>                                | -       | 12.9    | 31.55   | ns       | 2402.5 ~ 2471.5MHz |
| Group Delay Ripple <sup>(1)</sup>                         | -       | 20      | 23      | dB       | 100 ~ 2320 MHz     |
| Attenuation <sup>(2)</sup><br>(Reference level from 0 dB) | 30      | 36      | -       |          | 2300 ~ 2370 MHz    |
|                                                           | 28      | 33      | -       |          | 2370 ~ 2390 MHz    |
|                                                           | 20      | 30      | -       |          | 2483.5 ~ 2500 MHz  |
|                                                           | 20      | 30      | -       |          | 2486 ~ 2497.5 MHz  |
|                                                           | 23      | 32      | -       |          | 2500 ~ 2520 MHz    |
|                                                           | 30      | 36      | -       |          | 2520 ~ 2570 MHz    |
|                                                           | 25      | 35      | -       |          | 2570 ~ 2620 MHz    |
|                                                           | 25      | 35      | -       |          | 2620 ~ 2690 MHz    |
|                                                           | 30      | 39      | -       |          | 4800 ~ 5000 MHz    |
| Source Impedance <sup>(3)</sup><br>(single ended)         | -       | 50      | -       | $\Omega$ |                    |
| Load Impedance <sup>(3)</sup><br>(single ended)           | -       | 50      | -       | $\Omega$ |                    |
| RF Power Dissipation                                      | -       | -       | 29      | dBm      |                    |

Notes: (1) Averaged values of linear S-Parameters over any 18 MHz at +25°C

(2) Averaged values of linear S-Parameters over any 5 MHz at +25°C

(3) A matching network is necessary (refer to the Measurement Circuits section).

# 2437MHz Coexistence Bandpass SAW Filter



**AFII-SW-0064**

Request Samples



Check Inventory



**1.1 x 0.9 x 0.55mm**  
**RoHS Compliant**  
**MSL Level = 3**

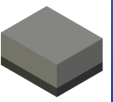
## Mechanical Specification

| Parameters       | Specifications     |
|------------------|--------------------|
| Filter Dimension | 1.1 x 0.9 x 0.55mm |
| Mounting Type    | Surface Mount      |

## Environmental Specification

| Parameters                  | Specifications |
|-----------------------------|----------------|
| Operating Temperature Range | -40°C ~ +85°C  |
| Storage Temperature Range   | -40°C ~ +85°C  |
| ESD (HBM)                   | >100 V         |
| ESD (CDM)                   | >100 V         |
| MSL level                   | 3              |
| RoHS Compliant              | Yes            |

# 2437MHz Coexistence Bandpass SAW Filter



AFII-SW-0064

Request Samples

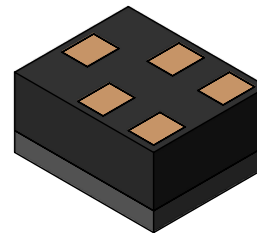
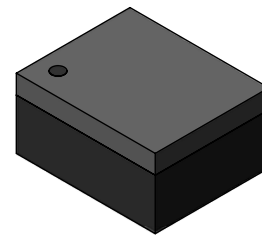
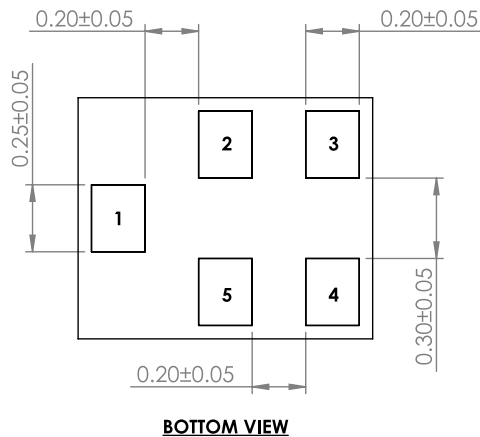
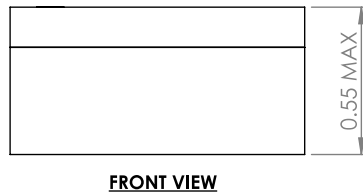
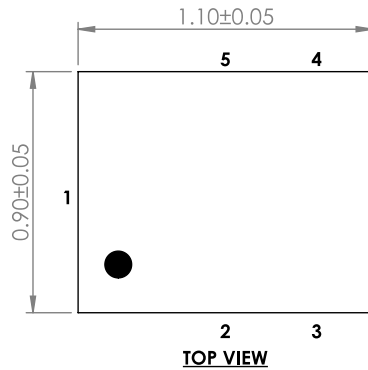


Check Inventory



1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

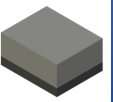
## Product Dimensions & Footprint



Unit: mm

| Pin No. | Description |
|---------|-------------|
| 1       | Input       |
| 2,3,5   | Ground      |
| 4       | Output      |

# 2437MHz Coexistence Bandpass SAW Filter



AFII-SW-0064

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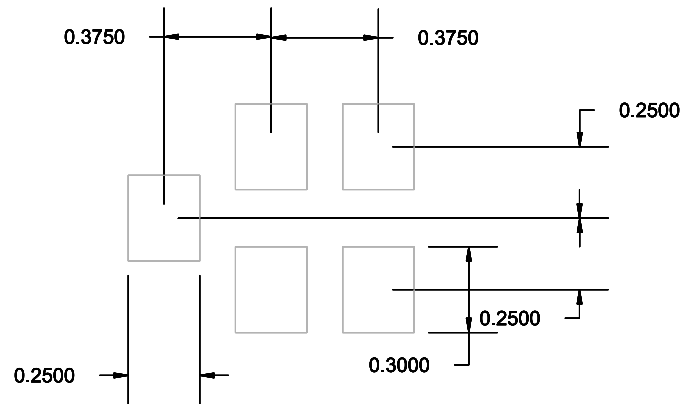


Check Inventory



1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

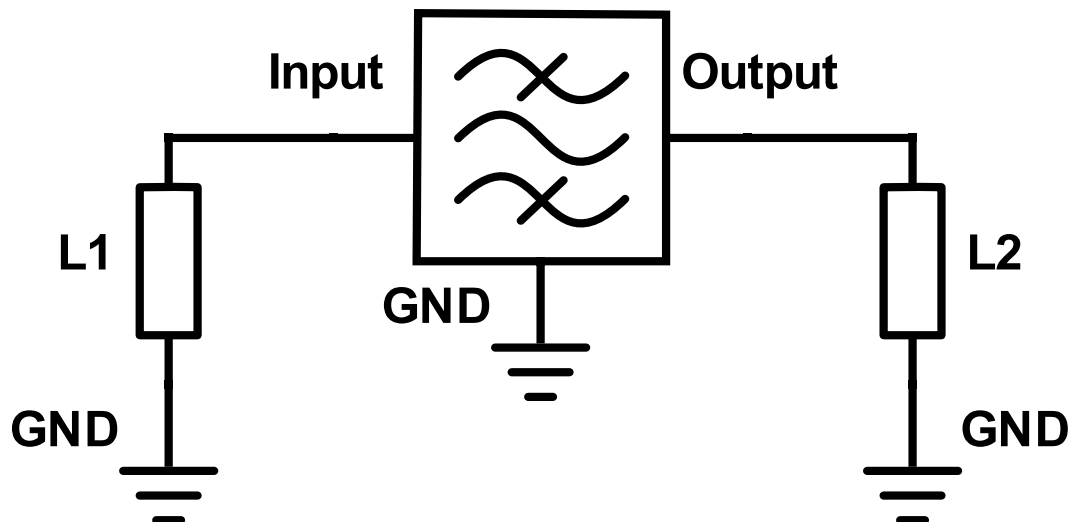
## Recommended Land Pattern



Unit : mm

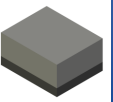
Please note: The line width should be designed to achieve a 50-ohm characteristic impedance, depending on the PCB material and thickness. For technical assistance, please contact [Abracon online support](#) through our online support platform.

## Measurement Circuit



| Port           | Matching Component | Manufacturer Part          |
|----------------|--------------------|----------------------------|
| Input (Pin 1)  | L1: 22nH           | Abracon: AIMC-06UHQ-22NH-T |
| Output (Pin 4) | L2: 18nH           | Abracon: AIMC-06UHQ-18NH-T |

# 2437MHz Coexistence Bandpass SAW Filter



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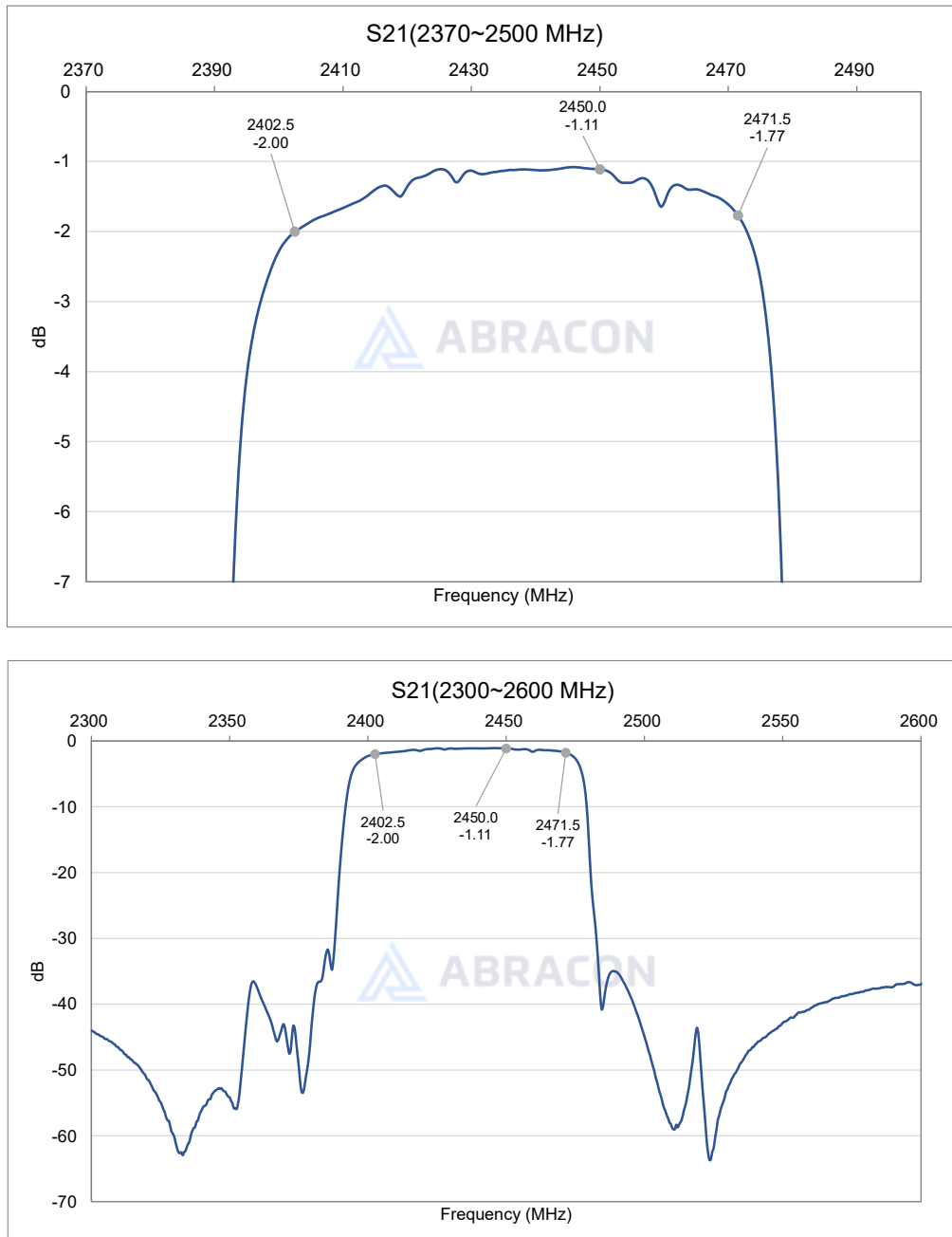
Check Inventory



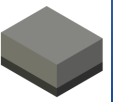
1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

## Frequency Characteristics

S21 narrow band



# 2437MHz Coexistence Bandpass SAW Filter



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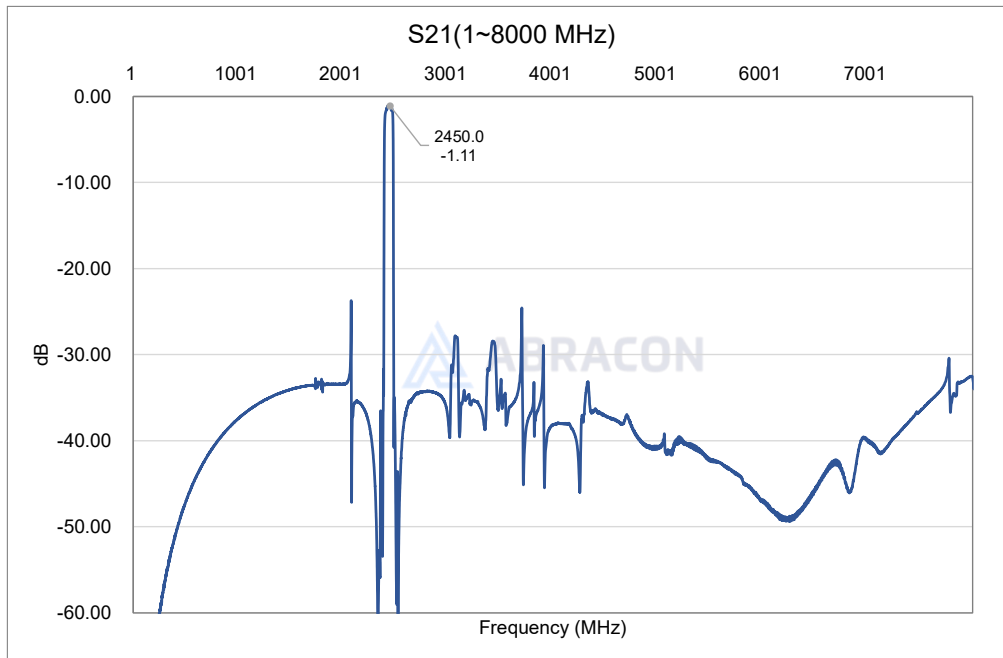


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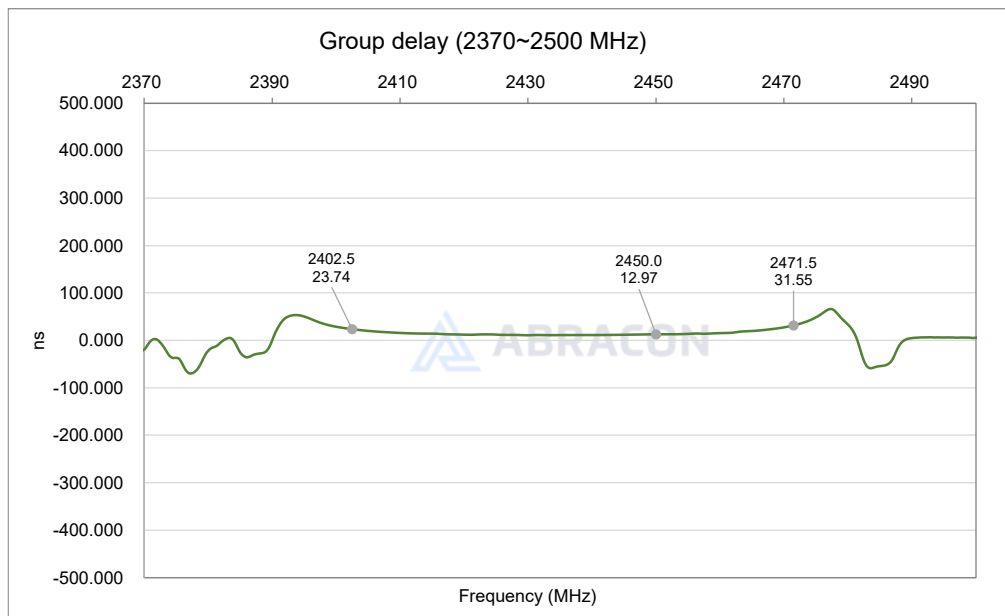


1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

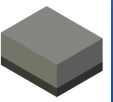
## S21 Wide Band



## Group Delay



# 2437MHz Coexistence Bandpass SAW Filter



**AFII-SW-0064**

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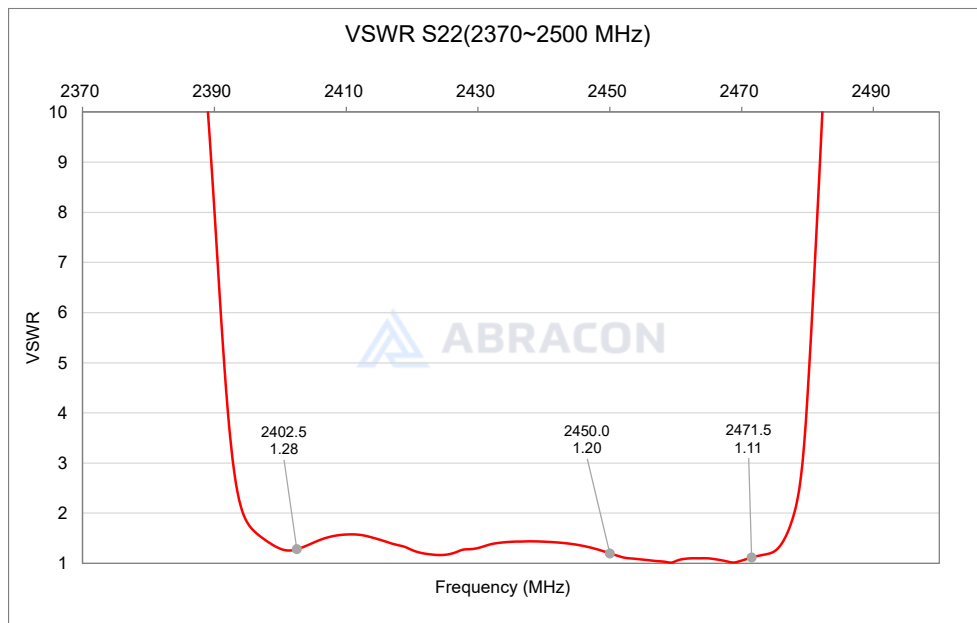
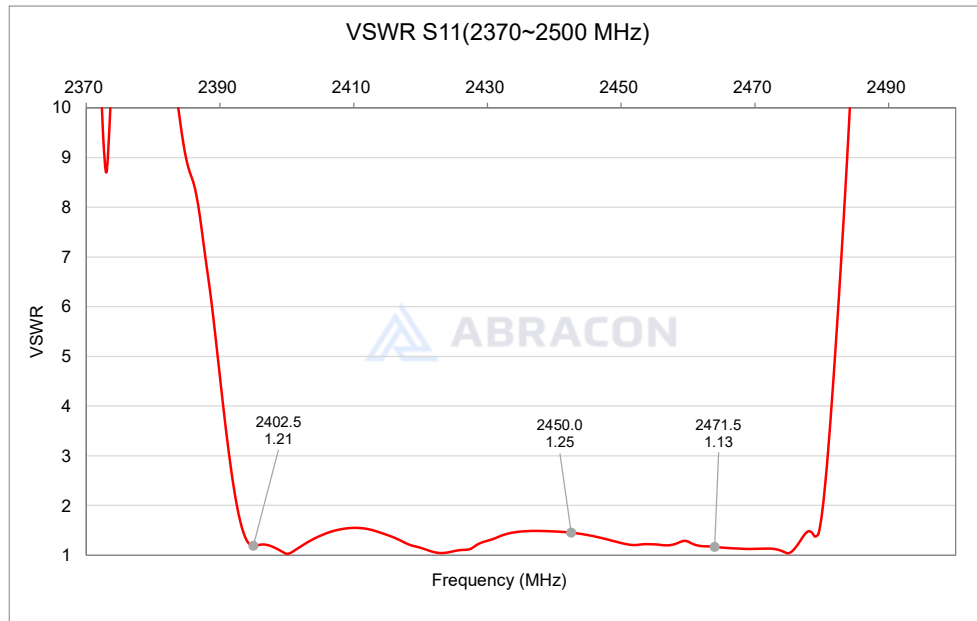


Check Inventory



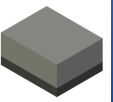
**1.1 x 0.9 x 0.55mm**  
**RoHS Compliant**  
**MSL Level = 3**

VSWR (S11 & S22)





# 2437MHz Coexistence Bandpass SAW Filter



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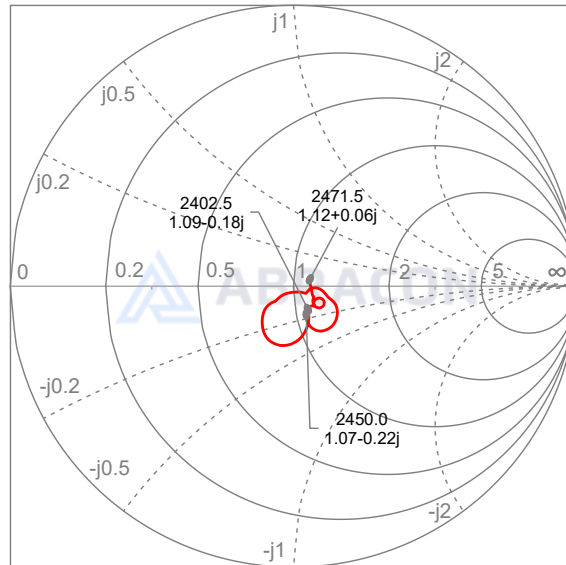
Check Inventory



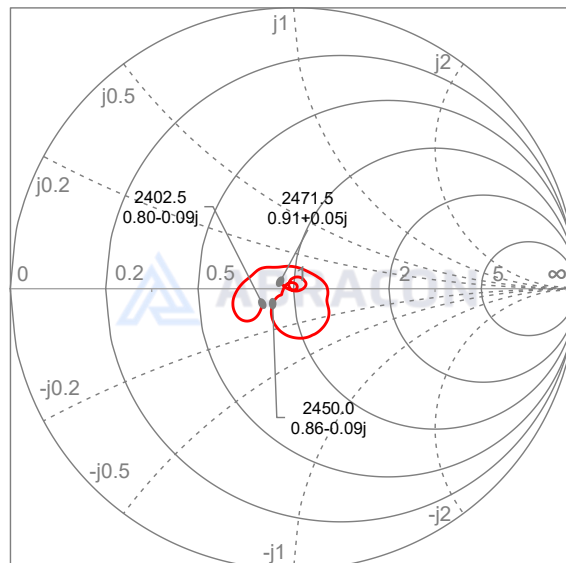
1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

Smith Chart (S11 & S22)

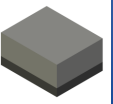
Smith chart S11 (2402~2471MHz)



Smith chart S22 (2402~2471MHz)



# 2437MHz Coexistence Bandpass SAW Filter



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1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

## Reflow Profile [JEDEC J-STD-020]

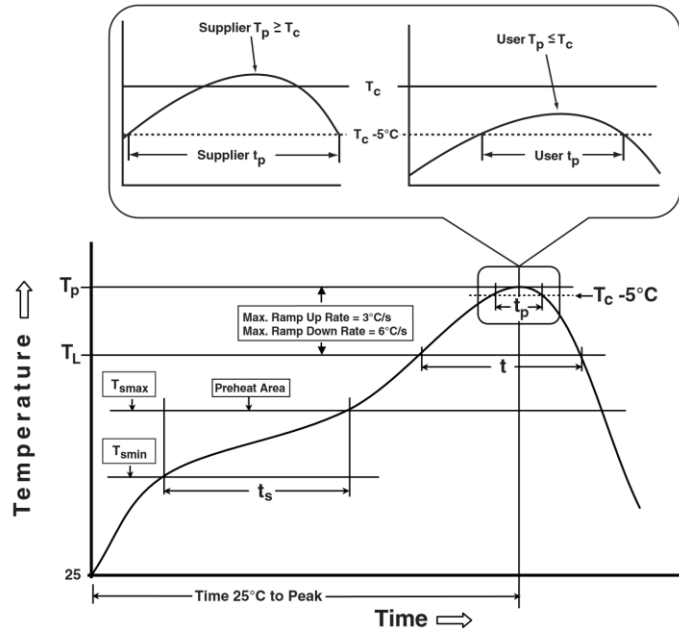


Table 1

### SnPb Eutectic Process Classification Temperatures ( $T_c$ )

| Package Thickness   | Volume $\text{mm}^3$ <350 | Volume $\text{mm}^3$ $\geq 350$ |
|---------------------|---------------------------|---------------------------------|
| <2.5mm              | 235°C                     | 220°C                           |
| $\geq 2.5\text{mm}$ | 220°C                     | 220°C                           |

Table 2

### Pb-Free Process Classification Temperatures ( $T_c$ )

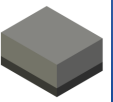
| Package Thickness | Volume $\text{mm}^3$ <350 | Volume $\text{mm}^3$ 350-2000 | Volume $\text{mm}^3$ >2000 |
|-------------------|---------------------------|-------------------------------|----------------------------|
| <1.6mm            | 260°C                     | 260°C                         | 260°C                      |
| 1.6mm - 2.5mm     | 260°C                     | 250°C                         | 245°C                      |
| >2.5mm            | 250°C                     | 245°C                         | 245°C                      |

| Profile Feature                                                                  | Sn-Pb Eutectic Assembly | Pb-Free Assembly |
|----------------------------------------------------------------------------------|-------------------------|------------------|
| Preheat / soak                                                                   |                         |                  |
| Temperature minimum ( $T_{\text{smmin}}$ )                                       | 100°C                   | 150°C            |
| Temperature maximum ( $T_{\text{smmax}}$ )                                       | 150°C                   | 180°C            |
| Time ( $T_{\text{smmin}}$ to $T_{\text{smmax}}$ ) ( $t_s$ )                      | 60 – 120 sec.           | 60 – 90 sec.     |
| Average ramp-up rate ( $T_{\text{smmax}}$ to $T_p$ )                             | 3°C/sec. max            | 3°C/sec. max     |
| Liquidous temperature ( $T_L$ )                                                  | 183°C                   | 220°C            |
| Time at Liquidous ( $T_L$ )                                                      | 60 – 150 sec.           | 50 – 80 sec.     |
| Peak package body temperature ( $T_p$ )*                                         | See Table 1             | See Table 2      |
| Time ( $T_p$ )* within 5°C of the specified classification temperature ( $T_c$ ) | 20 sec.                 | 20 ~ 40 sec.     |
| Ramp-down rate ( $T_p$ to $T_{\text{smmax}}$ )                                   | 6°C/sec. max            | 6°C/sec. max     |
| Time 25°C to peak temperature                                                    | 6 min. max              | 8 min. max       |
| Reflow cycles                                                                    | 2 max                   | 2 max            |

\*Tolerance for peak profile temperature ( $T_p$ ) is defined as a supplier minimum and a user maximum.

\*\*Tolerance for time at peak profile temperature ( $t_p$ ) is defined as a supplier minimum and a user maximum.

# 2437MHz Coexistence Bandpass SAW Filter



AFII-SW-0064

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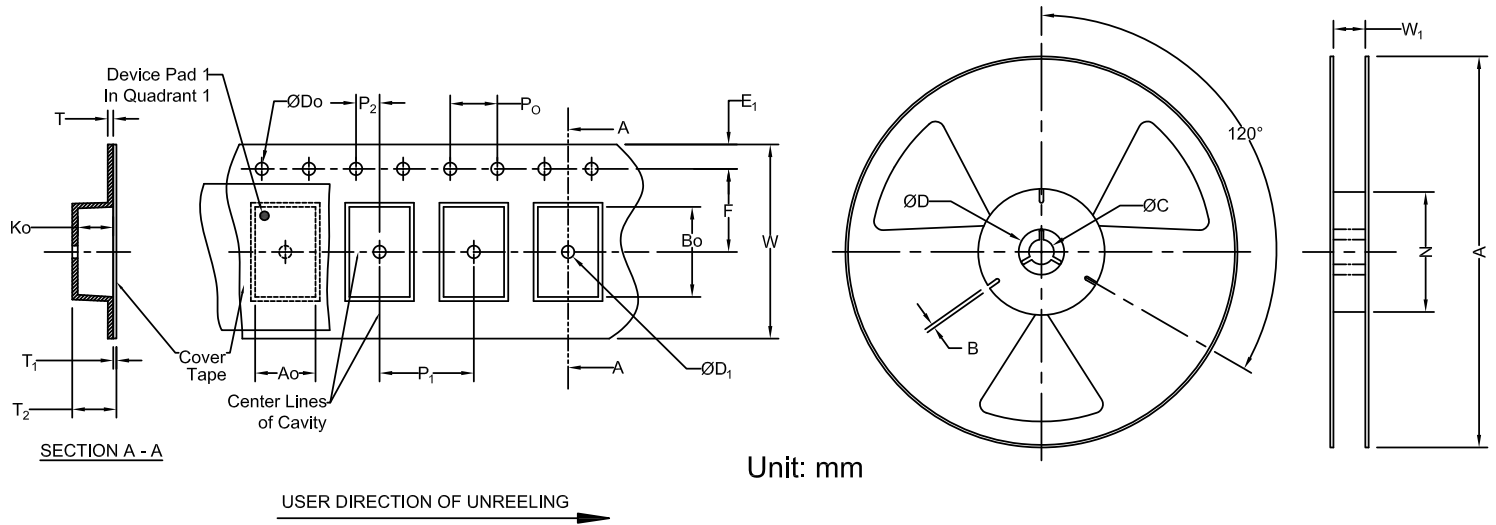


1.1 x 0.9 x 0.55mm  
RoHS Compliant  
MSL Level = 3

## Packaging

Tape & Reel (10,000 pcs / reel)

Tape & Reel Dimension



Carrier Tape Specifications (mm)

| Do        | D1          | E1         | P0        | P2         | T           | F          | P1        | W         | A0         | B0          | K0         | Reel Qty |
|-----------|-------------|------------|-----------|------------|-------------|------------|-----------|-----------|------------|-------------|------------|----------|
| 1.5 ± 0.1 | 0.50 ± 0.05 | 1.75 ± 0.1 | 4.0 ± 0.1 | 2.0 ± 0.05 | 0.25 ± 0.02 | 3.5 ± 0.05 | 4.0 ± 0.1 | 8.0 ± 0.3 | 1.1 ± 0.05 | 1.35 ± 0.05 | 0.7 ± 0.07 | 10,000   |

Reel Specifications (mm)

| A               | W1            | N          | C          | B         |
|-----------------|---------------|------------|------------|-----------|
| 258.0 +1.0/-0.5 | 9.0 +1.0/-0.5 | 81.0 ± 1.0 | 13.0 ± 0.5 | 2.2 ± 0.3 |

**ATTENTION:** Abracon LLC's products are Commercial-Off-The-Shelf ("COTS"), which are designed, intended, and validated for use in commercial, industrial, and automotive applications. The customer is responsible for testing and verifying the performance of an Abracon solution to meet their system-level requirements.



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