

ECN/PCN No.: R0449

## For Manufacturer

**Product Description:**  
SMD 2436 MHz SAW Filter

**Abracon Part Number / Part Series:**  
AFS14A72-2436.00

- Documentation only     Series  
 ECN     Part  
 EOL     Number

**Affected Revision:**

A

**New Revision:**

B

**Application:**

- Safety  
 Non-Safety

### Prior to Change:

	AFS14A72-2436.00-T3 Surface Mount 2436.00MHz SAW Filter	
Date of Issue: Oct. 6 <sup>th</sup> , 2014	1.4 x 1.1 x 0.7 mm	
Page (2) of (14)	Abracon Drawing #: A53641	Revision #: A

**1.0 Key Electrical Specifications**

**1.1 Maximum Ratings**

Item	Value
Input Power Level ( <i>Note #1</i> )	+21 dBm max.
DC Permissible Voltage	3.0V DC max.
Operating Temperature Range	-30°C to + 85°C
Storage Temperature Range	-40°C to + 85°C

*Note #1:* Input Power Level = +10dBm max for products with September 2014 date code or earlier  
Input Power Level = +21dBm max for products with October 2014 date code or later

**1.2 Electrical Characteristics**

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (f <sub>c</sub> )		2436.00	4.4	MHz	(2400.00–2472.00MHz)
Insertion Loss (IL)		3.5	4.4	dB	(2400.00–2472.00MHz)
3-dB Bandwidth		72		MHz	
Amplitude Ripple		2.0	3.3	dB	(2400.00–2472.00MHz)
Worst-Case Input / Output Return Loss		9.54	7.35	dB	
Stop-band Attenuation (Referenced to 0.0 dB)	25	35		dB	DC–960 MHz
	25	33		dB	960–1580 MHz
	25	34		dB	1710–1990 MHz
	28	37		dB	2110–2170 MHz
	30	40		dB	2496–2690MHz @ 25°C
	10	20		dB	2496–2690MHz over the operating temperature
Terminating Source Impedance (Z <sub>s</sub> )	25	44		Ω	2690–4800MHz
	20	36		Ω	4800–5000MHz
	15	31		Ω	5000–6000MHz
Terminating Load Impedance (Z <sub>L</sub> )		50		Ω	
Temperature Coefficient of Frequency		-36		ppm/°C	

**2.0** AFS14A72-2436.00-T3 is RoHS/RoHS II Compliant and Pb free.

**3.0** Moisture Sensitivity Level (MSL) – This product is Hermetically Sealed and not Moisture Sensitive - MSL = N/A: Not Applicable

### After Change:

**SMD 2436 MHz SAW Filter**

AFS14A72-2436.00    Request Samples    Check Inventory    1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level - 3

**Description**

Designed for cost-sensitive IoT and consumer electronics, this compact 1.4 x 1.1 x 0.7 mm filter provides essential RF conditioning for Wi-Fi 4/5, Bluetooth®, Zigbee®, Thread, and Matter protocols. Its 72 MHz bandwidth and >20 dB out-of-band rejection effectively mitigate interference, while a 2 dB insertion loss balances performance and value. Supporting up to +21 dBm input power and rated MSL Level 3 for reliable assembly, this RoHS-compliant solution is ideally suited for compact routers, home automation devices, and various networking and remote sensing applications.

**Features**

- Bandwidth: 72 MHz
- Small 1.4 x 1.1 x 0.7 mm in Size
- Low Insertion Loss: 2 dB
- Out-of-Band Rejection: > 20 dB
- Maximum Input Power: +21 dBm
- RoHS Compliant | MSL Level 3

**Applications**

- Wi-Fi/WLAN Coverage
  - Wi-Fi 4/5 (802.11b/g/n/ac)
- Bluetooth®/ ZigBee® / Thread/ Matter
- Router and Networking
- Home Automation and Remote Sensing

**Ordering Information**

Part Number	Description
AFS14A72-2436.00	SMD 2436 MHz SAW Filter on Cut Tape
AFS14A72-2436.00-T3	SMD 2436 MHz SAW Filter on Tape & Reel
AFS14A72-2436.00-EVB	SMD 2436 MHz SAW Filter Evaluation Board

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

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**Cause/Reason for Change:** Updated templates & product image, no design or performance updates

### Change Plan

<b>Effective Date:</b> 05/19/2026	<b>Additional Remarks:</b>	
<b>Change Declaration:</b>		
<b>Issued Date:</b> 05/19/2026	<b>Issued By:</b> Allan	<b>Issued Department:</b> Engineering
<b>Approval:</b> Saravanan Subramanian Engineering Manager	<b>Approval:</b> Reuben Quintanilla Quality Director	<b>Approval:</b> Ying Huang Purchasing Director

### For Abracon EOL only

<b>Last Time Buy (if applicable):</b>	<b>Alternate Part Number / Part Series:</b>	
<b>Additional Approval:</b>	<b>Additional Approval:</b>	<b>Additional Approval:</b>

### Customer Approval (If Applicable)

<b>Qualification Status:</b> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted <i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i>		
<b>Customer Part Number:</b>		<b>Customer Project:</b>
<b>Company Name:</b>	<b>Company Representative:</b>	<b>Representative Signature:</b>
<b>Customer Remarks:</b>		

# SMD 2436 MHz SAW Filter



**AFS14A72-2436.00**

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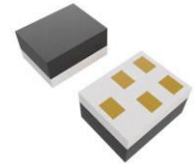
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**1.4 x 1.1 x 0.7 mm**  
**RoHS Compliant**  
**MSL Level = 3**

## Description

Designed for cost-sensitive IoT and consumer electronics, this compact 1.4 x 1.1 x 0.7 mm filter provides essential RF conditioning for Wi-Fi 4/5, Bluetooth®, Zigbee®, Thread, and Matter protocols. Its 72 MHz bandwidth and >20 dB out-of-band rejection effectively mitigate interference, while a 2 dB insertion loss balances performance and value. Supporting up to +21 dBm input power and rated MSL Level 3 for reliable assembly, this RoHS-compliant solution is ideally suited for compact routers, home automation devices, and various networking and remote sensing applications.



## Features

- Bandwidth: 72 MHz
- Small 1.4 x 1.1 x 0.7 mm in Size
- Low Insertion Loss: 2 dB
- Out-of-Band Rejection: > 20 dB
- Maximum Input Power: +21 dBm
- [RoHS Compliant | MSL Level 3](#)

## Applications

- Wi-Fi/WLAN Coverage
  - Wi-Fi 4/5 (802.11b/g/n/ac)
- Bluetooth®/ ZigBee® / Thread/ Matter
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1.4 x 1.1 x 0.7 mm  
**RoHS Compliant**  
 MSL Level = 3

## Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (fc)	2400	2436	2472	MHz	
Bandwidth	-	72	-	MHz	
VSWR <sup>(1)</sup>	-	2.1	2.5	-	2400~2472MHz
Insertion Loss <sup>(1)</sup>	-	2.0	2.7	dB	2400~2472MHz
Insertion Loss	-	3.5	4.4	dB	2400~2472MHz
Amplitude Ripple <sup>(1)</sup>	-	1.5	2.1	dB	2400~2472MHz
Amplitude Ripple	-	2	3.3	dB	2400~2472MHz
Group Delay <sup>(1)</sup>	-	11.4	18.4	ns	2400~2472MHz
Group Delay Ripple <sup>(1)</sup>	-	1.5	6.1	ns	2400~2472MHz
Attenuation (Refer to min. insertion loss) <sup>(1)</sup>	25	35	-	dB	DC~960 MHz
	25	33	-		960~1580 MHz
	25	34	-		1710~1990 MHz
	28	37	-		2110~2170 MHz
	30	40	-		2496~2690 MHz @ 25°C
	10	20	-		2496~2690MHz over the operating temperature
	25	44	-		2690~4800MHz
	20	36	-		4800~5000MHz
	15	31	-		5000~6000MHz
DC Voltage	-	3	-	V	
Input Power Level	-	-	21	dBm	
Terminating Source Impedance <sup>(2)</sup>	-	50	-	Ω	
Terminating Load Impedance <sup>(2)</sup>	-	50	-	Ω	
Temperature Coefficient of Frequency		-36		ppm/°C	

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

(2) A matching network is unnecessary (refer to the Measurement Circuits section).

# SMD 2436 MHz SAW Filter



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1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

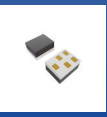
## Mechanical Specification

Parameters	Specifications
Dimension	1.4 x 1.1 x 0.7 mm
Mounting Type	Surface Mount

## Environmental Specification

Parameters	Specifications
Operating Temperature Range	-30°C ~ +85°C
Storage Temperature Range	-40°C ~ +85°C
MSL level	3

# SMD 2436 MHz SAW Filter



**AFS14A72-2436.00**

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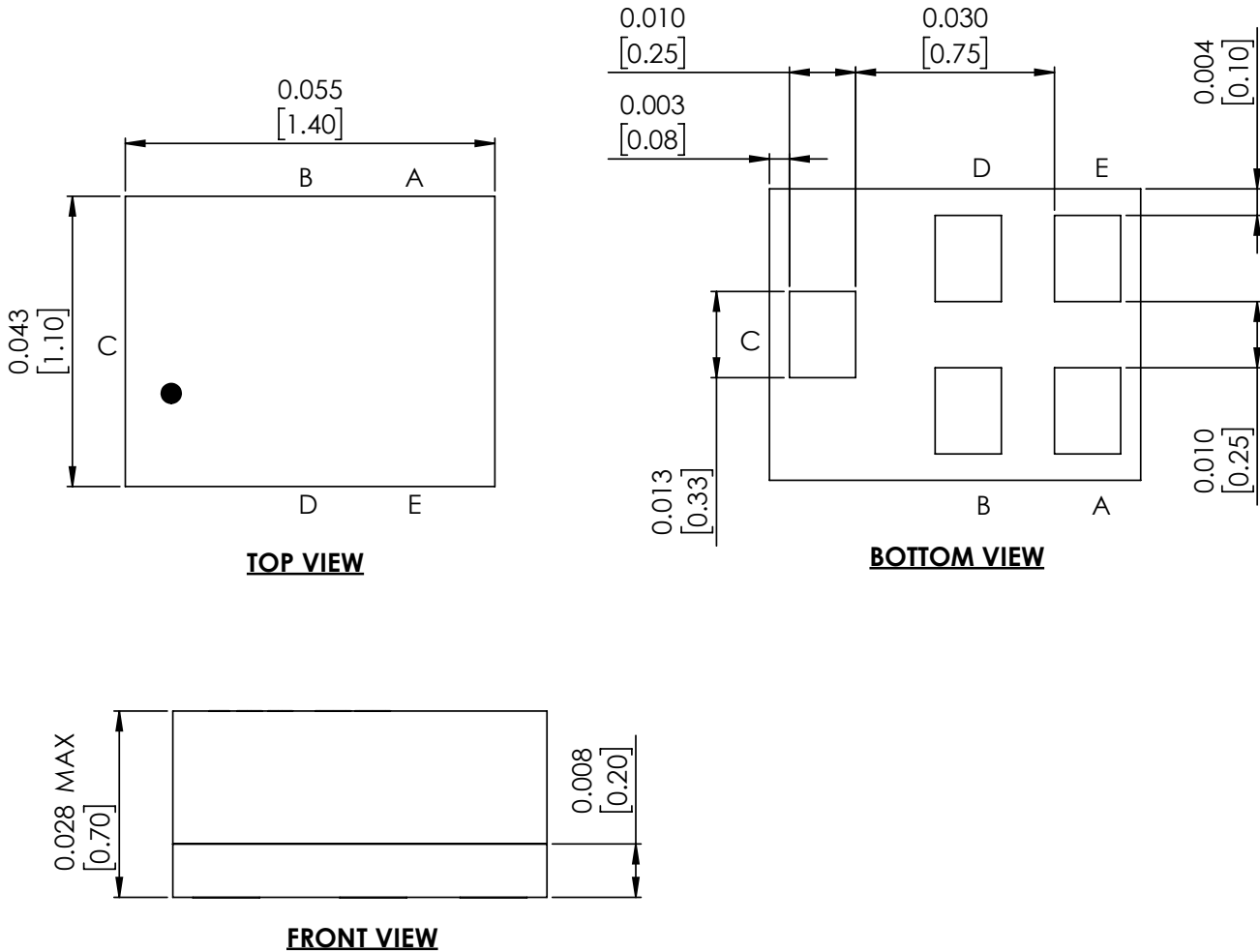


Check Inventory



1.4 x 1.1 x 0.7 mm  
**RoHS Compliant**  
 MSL Level = 3

## Product Dimensions



Unit: inches [mm]

Pin No.	Description
C	Input
A	Output
B, D, E	Ground

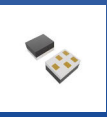


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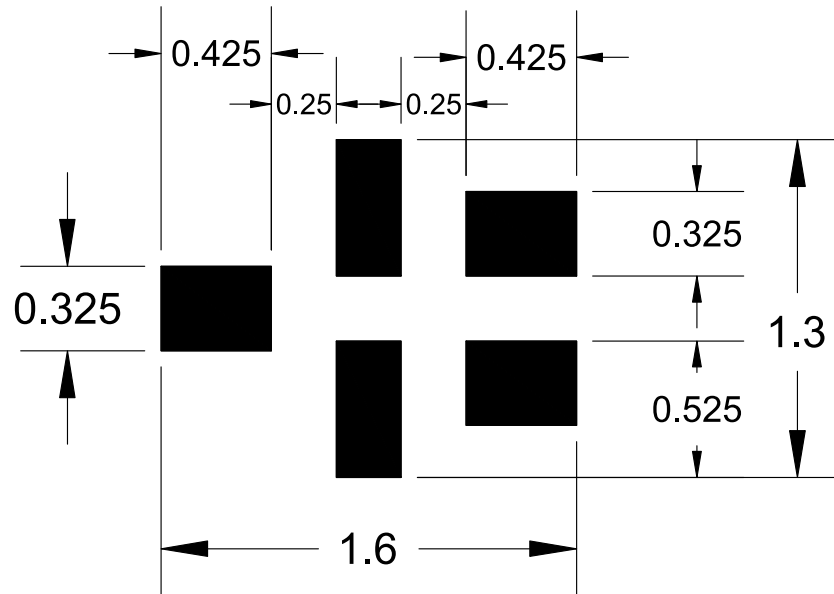


Check Inventory



1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

## Recommended Land Pattern



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.

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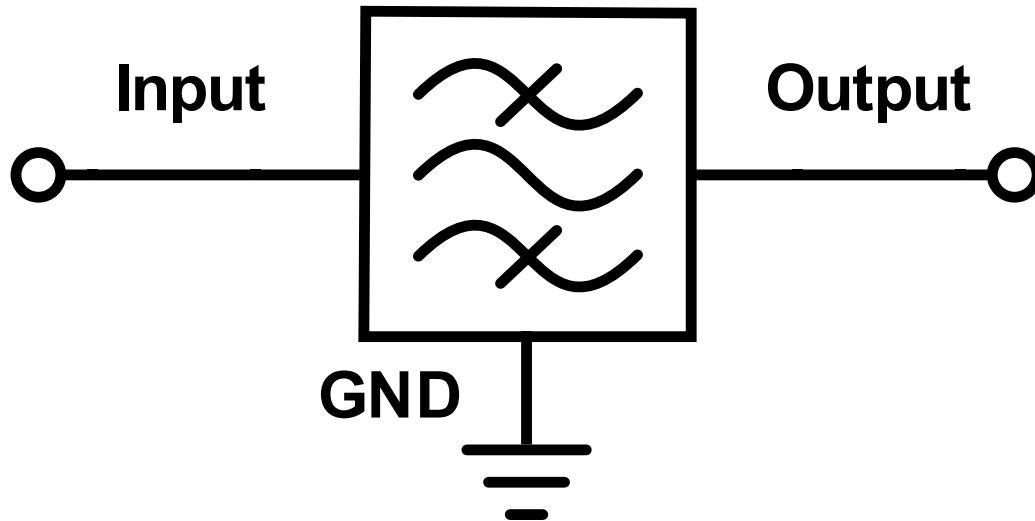


Check Inventory



1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

## Measurement Circuit



Pin No.	Description
C	Input Impedance: 50 $\Omega$
A	Output Impedance: 50 $\Omega$
B, D, E	Ground

# SMD 2436 MHz SAW Filter



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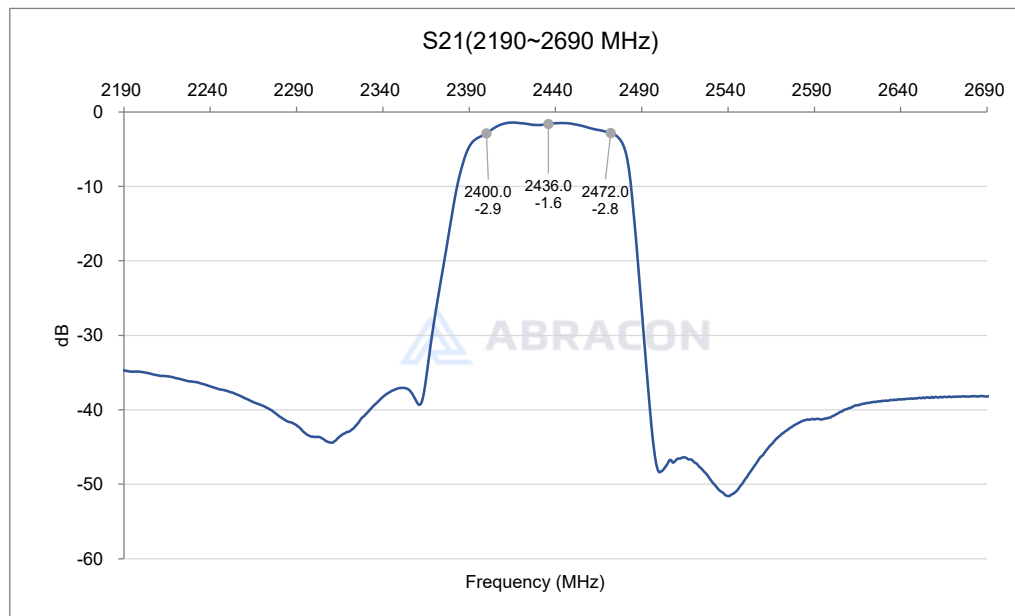
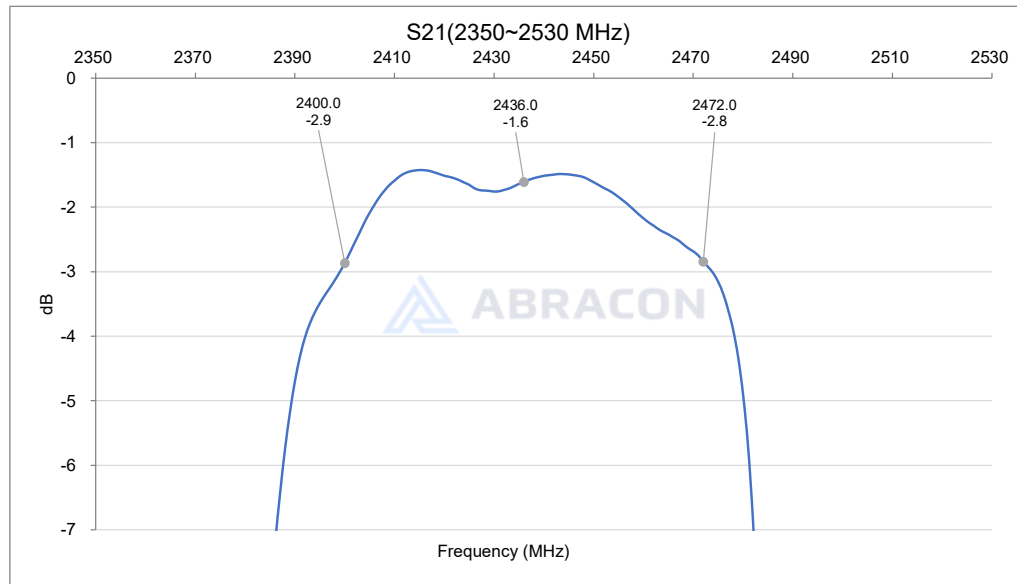
Check Inventory



1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

## Frequency Characteristics

### S21 Narrow Band



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# SMD 2436 MHz SAW Filter



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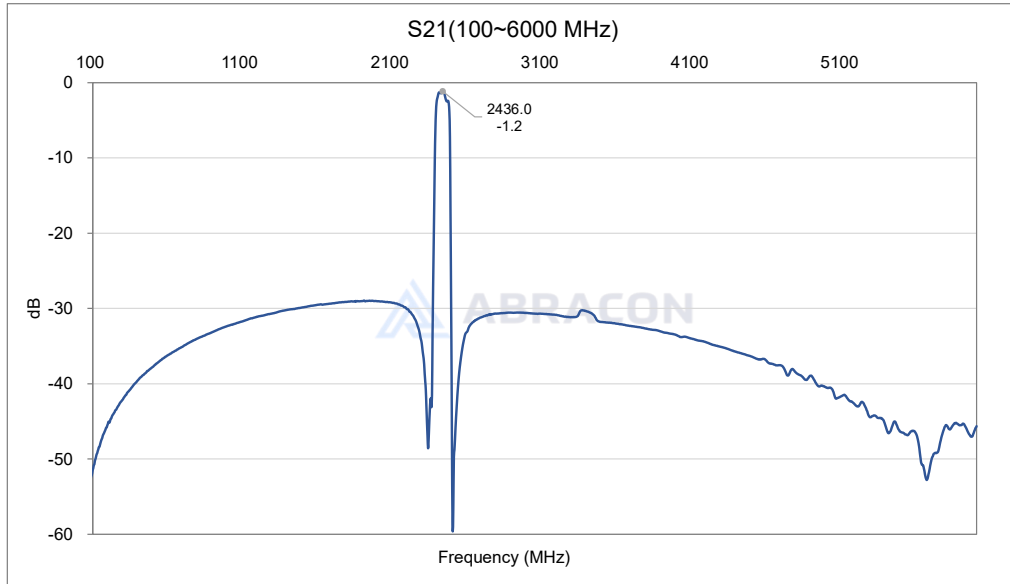


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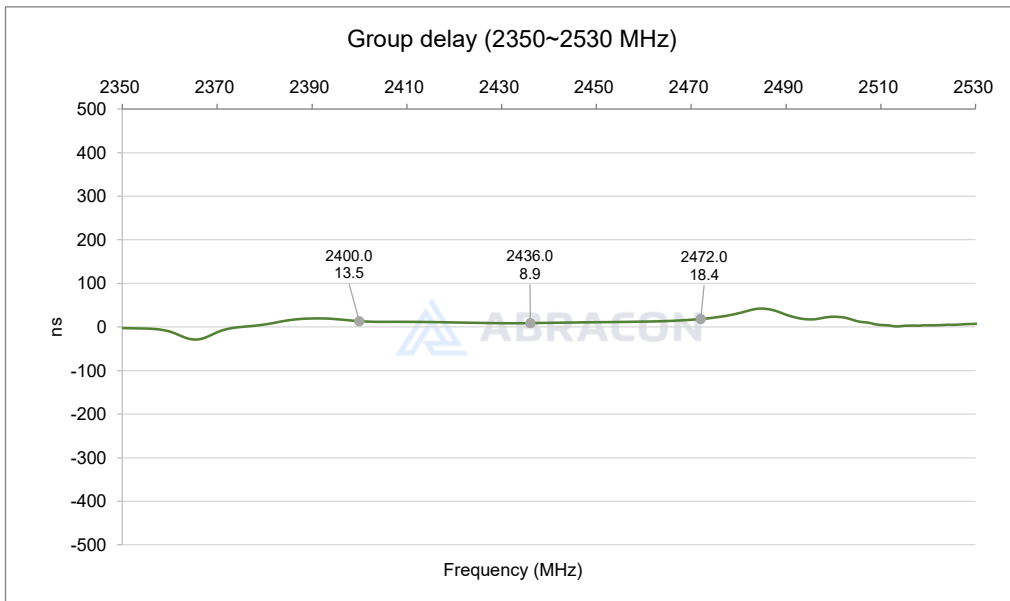


**1.4 x 1.1 x 0.7 mm**  
**RoHS Compliant**  
**MSL Level = 3**

## S21 Wide Band



## Group Delay



# SMD 2436 MHz SAW Filter



**AFS14A72-2436.00**

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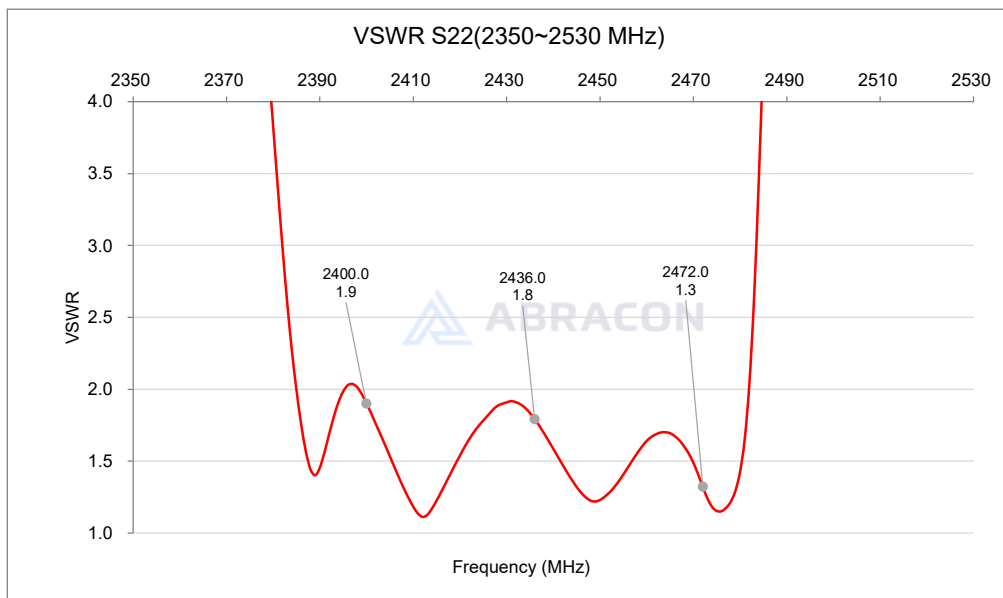
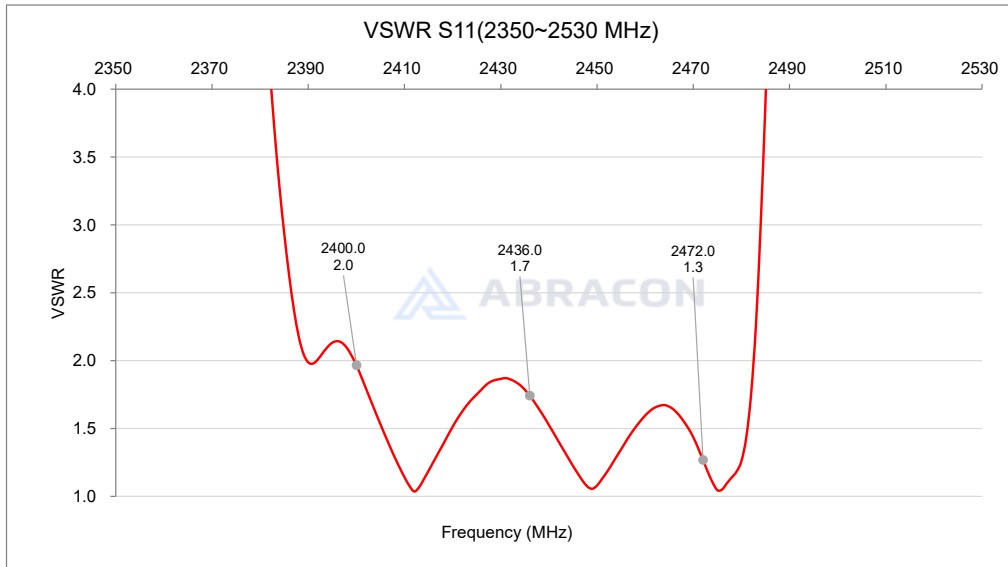


Check Inventory



**1.4 x 1.1 x 0.7 mm**  
**RoHS Compliant**  
**MSL Level = 3**

## VSWR (S11 & S22)



# SMD 2436 MHz SAW Filter



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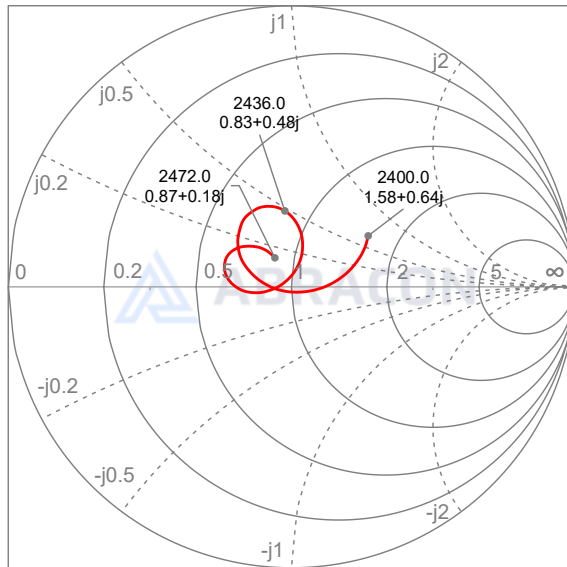
Check Inventory



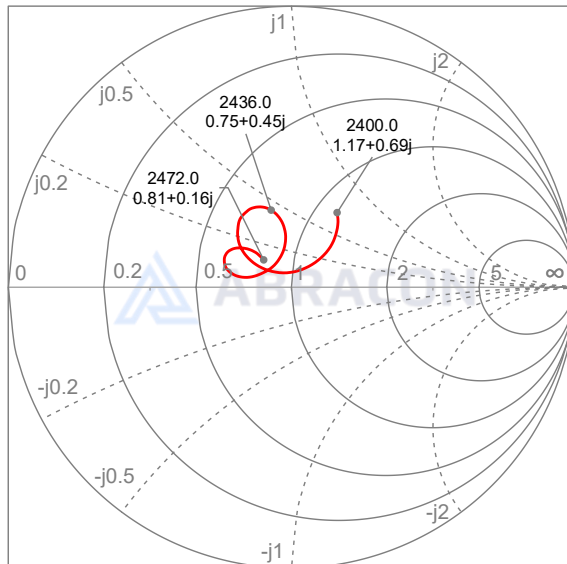
1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

## Smith Chart (S11 & S22)

Smith chart S11 (2400~2472 MHz)



Smith chart S22 (2400~2472 MHz)



# SMD 2436 MHz SAW Filter



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1.4 x 1.1 x 0.7 mm  
RoHS Compliant  
MSL Level = 3

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

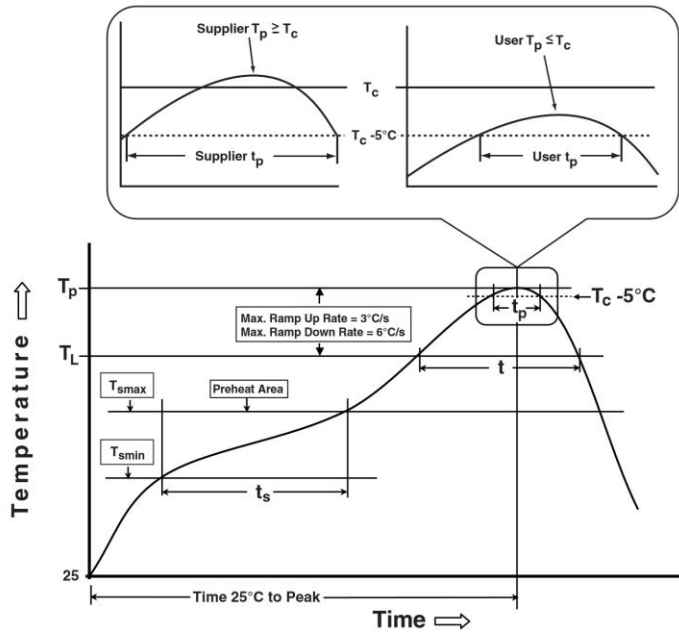


Table 1

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

Package Thickness	Volume $mm^3$ <350	Volume $mm^3$ $\geq$ 350
<2.5mm	235°C	220°C
$\geq$ 2.5mm	220°C	220°C

Table 2

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

Package Thickness	Volume $mm^3$ <350	Volume $mm^3$ 350-2000	Volume $mm^3$ >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 ( $T_{smin}$ )	100°C	150°C
Temperature maximum ( $T_{smax}$ )	150°C	180°C
Time ( $T_{smin}$ to $T_{smax}$ ) ( $t_s$ )	60 – 120 sec.	60 – 90 sec.
Average ramp-up rate ( $T_{smax}$ 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 ( $T_p$ )*	<b>See Table 1</b>	<b>See Table 2</b>
Time ( $T_p$ )** within 5°C of the specified classification temperature ( $T_c$ )	20 sec.	20 ~ 40 sec.
Ramp-down rate ( $T_p$ to $T_{smax}$ )	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.

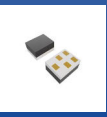


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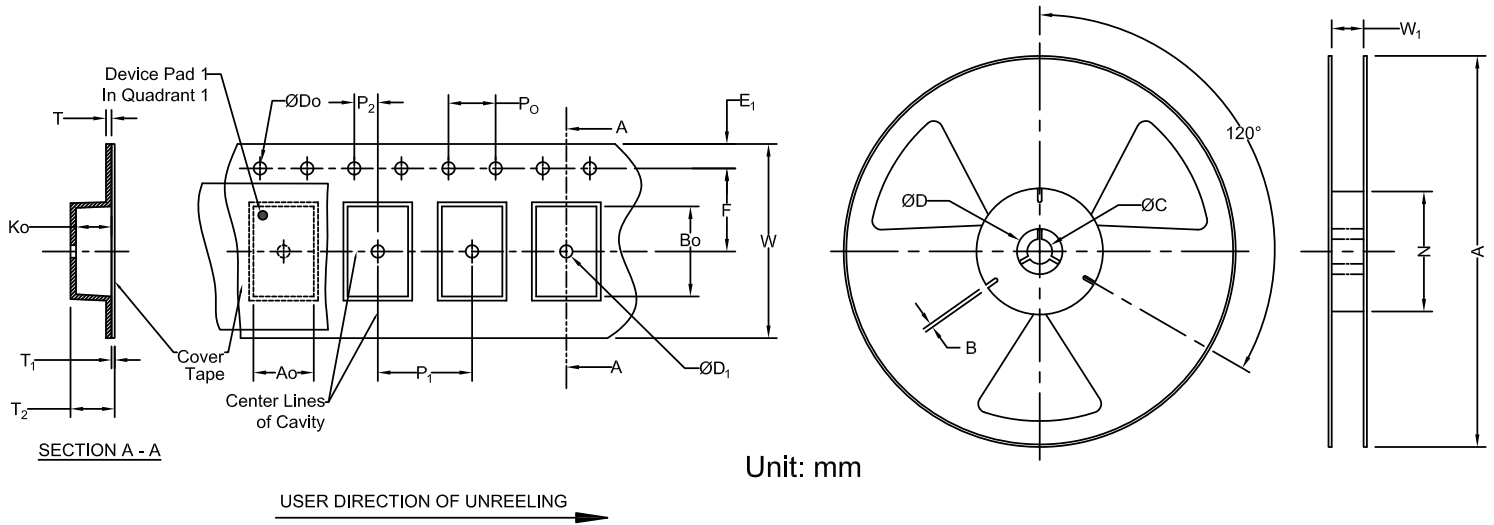


**1.4 x 1.1 x 0.7 mm**  
**RoHS Compliant**  
**MSL Level = 3**

## Packaging

### Tape & Reel

#### 1. Tape & Reel Dimension



#### Carrier Tape Specifications (mm)

Do	D <sub>1</sub>	E <sub>1</sub>	P <sub>0</sub>	P <sub>2</sub>	T	F	P <sub>1</sub>	W	A <sub>0</sub>	B <sub>0</sub>	K <sub>0</sub>	Reel Qty
1.55 ± 0.05	1.0	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	0.2 ± 0.05	3.5 ± 0.05	4.0 ± 0.1	8.0 ± 0.3	1.47 ± 0.1	1.73 ± 0.1	0.75 ± 0.1	3,000

#### Reel Specifications (mm)

A	W <sub>1</sub>	N	C	B
178.0 ± 1.0	8.4	72.0 ± 1.0	13.0 ± 0.2	2.0

**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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Brand	Affected PN	Discontinued/EOL PN	Added PN	Series	ECO#
Abracon	AFS14A72-2436.00			AFS14A72-2436.00	R0449
Abracon	AFS14A72-2436.00-T3			AFS14A72-2436.00	R0449
Abracon	AFS14A72-2436.00-EVB			AFS14A72-2436.00	R0449

**Datasheet Link**

<https://abracon.com/Filters/saw-filters/AFS14A72-2436.00-T3.pdf>

<https://abracon.com/Filters/saw-filters/AFS14A72-2436.00-T3.pdf>

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