

ECN/PCN No.: R0442

For Manufacturer

Product Description:
SMD 2442 MHZ SAW FILTER

Abracon Part Number / Part Series:
AFS2442.0S4

☐ Documentation only
☒ ECN
☐ EOL

☐ Series
☐ Part
Number

Affected Revision:
C

New Revision:
D

Application:
☐ Safety
☒ Non-Safety

Prior to Change:

SMD 2442 MHZ SAW FILTER

AFS2442.0S4

Request Samples

Check Inventory

3.0 x 3.0 x 1.4 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|--|---------|---------|---------|-------|-----------------|
| Center Frequency (fc) | 2437 | 2442 | 2447 | MHz | |
| Bandwidth | 55 | 78 | - | MHz | |
| Insertion Loss | - | 2.0 | 2.7 | dB | 2437~2447 MHz |
| Amplitude Ripple | - | 0.6 | 0.7 | dB | 2437~2447 MHz |
| Group Delay | - | 9.6 | 11.4 | ns | |
| Attenuation (Refer to min. insertion loss) | 37 | 41 | - | dB | 698~894 MHz |
| | 20 | 31 | - | | DC ~ 2300 MHz |
| | 40 | 44 | - | | 2300 ~ 2367 MHz |
| | 25 | 31 | - | | 2517 ~ 2650 MHz |
| VSWR | - | 1.2 | 1.3 | - | 2437~2447 MHz |
| DC Voltage | - | - | 0 | V | |
| Input Power Level | - | - | 10 | dBm | |
| Terminating Source Impedance | - | 50 | - | Ω | |
| Terminating Load Impedance | - | 50 | - | Ω | |

Mechanical Specification

| Parameters | Specifications |
|------------------|--------------------|
| Filter Dimension | 3.0 x 3.0 x 1.4 mm |
| Mounting Type | Surface Mount |

Environmental Specification

| Parameters | Specifications |
|-----------------------------|----------------|
| Operating Temperature Range | -20°C ~ +70°C |
| Storage Temperature Range | -40°C ~ +85°C |
| MSL level | 1 |

SMD 2442 MHZ SAW FILTER

AFS2442.0S4

Request Samples

Check Inventory

3.0 x 3.0 x 1.4 mm
RoHS Compliant
MSL Level = 1

Ordering Information

| Part Number | Description |
|---------------|--|
| AFS2442.0S4 | SMD 2442 MHZ SAW FILTER on Cut Tape |
| AFS2442.0S4-T | SMD 2442 MHZ SAW FILTER on Tape & Reel |

Note: Other options not listed may be available upon request via abracon@abracon.com

After Change:

SMD 2442 MHZ SAW FILTER

AFS2442.0S4

Request Samples

Check Inventory

3.0 x 3.0 x 1.4 mm
RoHS Compliant
MSL Level = 1

Description

This 3.0 x 3.0 x 1.4 mm filter delivers robust performance for mainstream Wi-Fi and wireless coexistence. Supporting Wi-Fi 4/5, Bluetooth®, ZigBee®, Thread, and Matter, its 78 MHz bandwidth and > 31 dB out-of-band rejection ensure reliable signal integrity in crowded environments. With a 2 dB insertion loss and < 10 dBm power handling, it balances performance and efficiency. The component's RoHS compliance and MSL Level 1 rating offer superior moisture sensitivity for simplified manufacturing, making it an excellent, reliable choice for cost-effective routers, home automation systems, and networking devices.

Features

- Bandwidth: 78 MHz
- Ultra-small: 3.0 x 3.0 x 1.4 mm in size
- Low Insertion Loss: 2 dB
- Out-of-Band Rejection: > 31 dB
- Maximum Input Power: +10 dBm
- RoHS Compliant | MSL Level 1

Applications

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

Ordering Information

| Part Number | Description |
|-----------------|--|
| AFS2442.0S4 | SMD 2442 MHZ SAW FILTER on Tape & Reel |
| AFS2442.0S4-EVB | SMD 2442 MHZ SAW FILTER Evaluation Board |

Note: Other options not listed may be available upon request via abracon@abracon.com



12117 Rue Croix-Rouge, Bldg 3, Zone 300 Bix
Cote St. Louis
Phone: 514-375-4219 | Fax: 514-351-8818
For more and addresses of sales offices visit
www.abracon.com

REVISED: 10-07-20

AFS2442.0S4
000001-0001
03/20/2020

SMD 2442 MHZ SAW FILTER

AFS2442.0S4

Request Samples

Check Inventory

3.0 x 3.0 x 1.4 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

| Parameters | Minimum | Typical | Maximum | Units | Notes |
|--|---------|---------|---------|-------|-----------------|
| Center Frequency (fc) | 2437 | 2442 | 2447 | MHz | |
| Bandwidth | 55 | 78 | - | MHz | |
| Insertion Loss | - | 1.9 | 6.0 | dB | 2437~2447 MHz |
| Amplitude Ripple | - | 0.6 | 2.0 | dB | fc ± 12.5 MHz |
| VSWR | - | 1.6 | 2.5 | - | fc ± 12.5 MHz |
| Group Delay | - | 14 | 50 | ns | fc ± 12.5 MHz |
| Group Delay Ripple | - | 5 | 20 | ns | fc ± 12.5 MHz |
| Attenuation (Refer to min. insertion loss) | 37 | 41 | - | | DC ~ 2300 MHz |
| | 20 | 31 | - | | 2300 ~ 2367 MHz |
| | 40 | 44 | - | | 2517 ~ 2650 MHz |
| | 25 | 31 | - | | 2650 ~ 4000 MHz |
| DC Voltage | - | - | 0 | V | |
| Input Power Level | - | - | 10 | dBm | |
| Terminating Source Impedance | - | 50 | - | Ω | |
| Terminating Load Impedance | - | 50 | - | Ω | |

Mechanical Specification

| Parameters | Specifications |
|------------------|--------------------|
| Filter Dimension | 3.0 x 3.0 x 1.4 mm |
| Mounting Type | Surface Mount |

Environmental Specification

| Parameters | Specifications |
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| Operating Temperature Range | -20°C ~ +70°C |
| Storage Temperature Range | -40°C ~ +85°C |
| MSL level | 1 |

Updated test data

Cause/Reason for Change: Updated test data and ordering information

Change Plan

Effective Date:

Additional Remarks:

| | | |
|--|--|---|
| 10/07/2025 | | |
| Change Declaration: | | |
| Issued Date: 10/07/2025 | Issued By: Allan | Issued Department: Engineering |
| Approval: Saravanan Subramanian Engineering Manager | Approval: Reuben Quintanilla Quality Director | Approval: Ying Huang Purchasing Director |
| For Abracon EOL only | | |
| Last Time Buy (if applicable): | Alternate Part Number / Part Series: | |
| Additional Approval: | Additional Approval: | Additional Approval: |
| Customer Approval (If Applicable) | | |
| Qualification Status: <div style="text-align: center;"> <input type="checkbox"/> Approved <input type="checkbox"/> Not accepted </div> <p style="font-size: small; margin-top: 5px;"><i>Note: It is considered approved if there is no feedback from the customer 1 month after ECN/PCN is released.</i></p> | | |
| Customer Part Number: | Customer Project: | |
| Company Name: | Company Representative: | Representative Signature: |
| Customer Remarks: | | |