

SMD 2450MHz High Rejection Band Pass Filter



AFII-LC-0045

Request Samples



Check Inventory



2.5 x 2.0 x 0.9 mm
RoHS Compliant

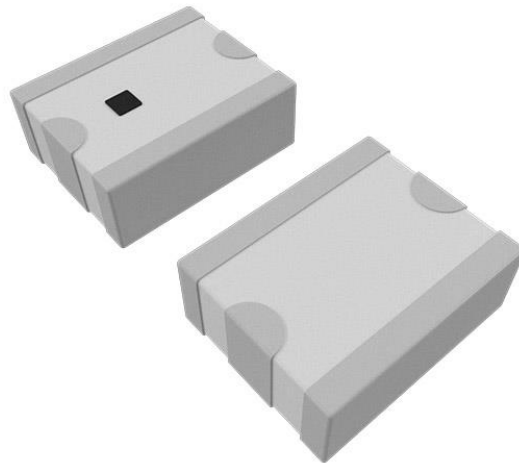
Features

- Bandpass Ceramic Filter with 100MHz Bandwidth
- Compact Size 2.5 x 2.0 x 0.9 mm
- Single-Ended Input and Output
- Excellent Selectivity with High Out-of-Band Rejection
- RoHS Compliant

Applications

- 2.4GHz TWS Audio
- Bluetooth® / ZigBee® / Thread/ Matter
- Router and Networking
- Home Automation and Remote Sensing

Product Image



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Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency (f_0)	-	2450	-	MHz	-
Passband	2400	-	2500	MHz	-
Insertion Loss	-	1.5	2.0	dB	@25°C
	-	-	2.4		@-40°C ~ +85°C
VSWR	-	-	2.0	-	-
Relative Attenuation (Reference level: 0dB)	40	44	-	dB	500 - 1000 MHz
	40	44	-		1000 - 1900 MHz
	30	34.5	-		2100 MHz
	22	23.5	-		3500 - 4000 MHz
	28	29.5	-		4000 - 4800 MHz
	35	37.1	-		4800 - 5000 MHz
Source Impedance ⁽¹⁾ (single ended)	-	50	-	Ω	-
Load Impedance ⁽¹⁾ (single ended)	-	50	-	Ω	-
Power Capacity	3.0			W	

Notes: (1) A matching network is unnecessary (refer to the Measurement Circuits section).

Mechanical Specification

Parameters	Specifications
Dimension	2.5 x 2.0 x 0.9 mm
Mounting Type	Surface Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-40°C ~ +105°C
Storage Temperature Range	-40°C ~ +105°C
RoHS Complaint	Yes



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Ordering Information

Part Number	Description
AFII-LC-0045	SMD 2450MHz High Rejection Band Pass Filter
AFII-LC-0045-EVB	SMD 2450MHz High Rejection Band Pass Filter EVB

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

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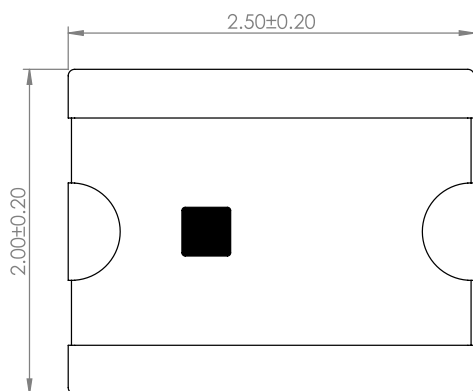


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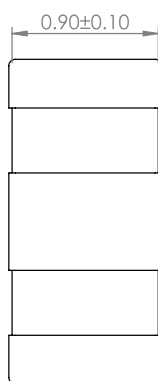


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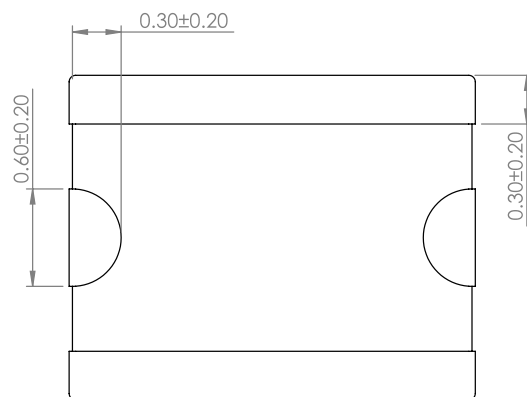
Product Dimensions



TOP VIEW

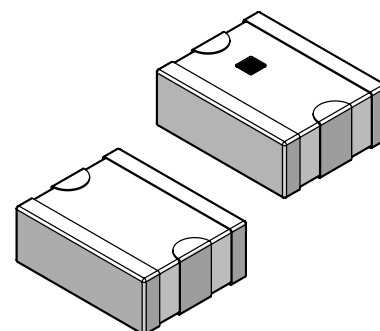


SIDE VIEW



BOTTOM VIEW

Pin #	Function
1	GND
2	IN
3	GND
4	OUT
M	MARK



Unit: mm

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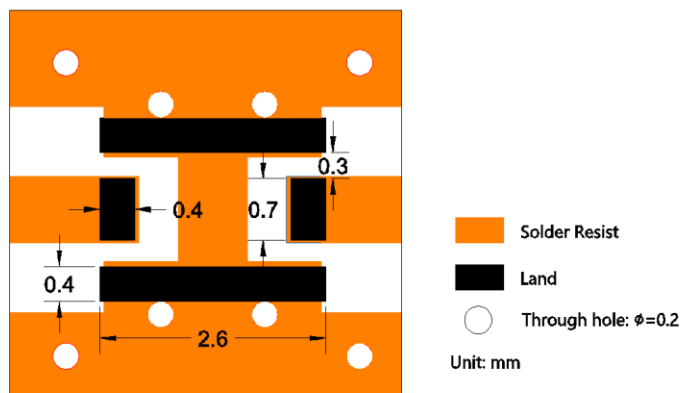


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Recommended Land Pattern



Please note: The line width should be designed to achieve a 50-ohm characteristic impedance, depending on the PCB material and thickness. Please request technical support via [Abracon online support](#)



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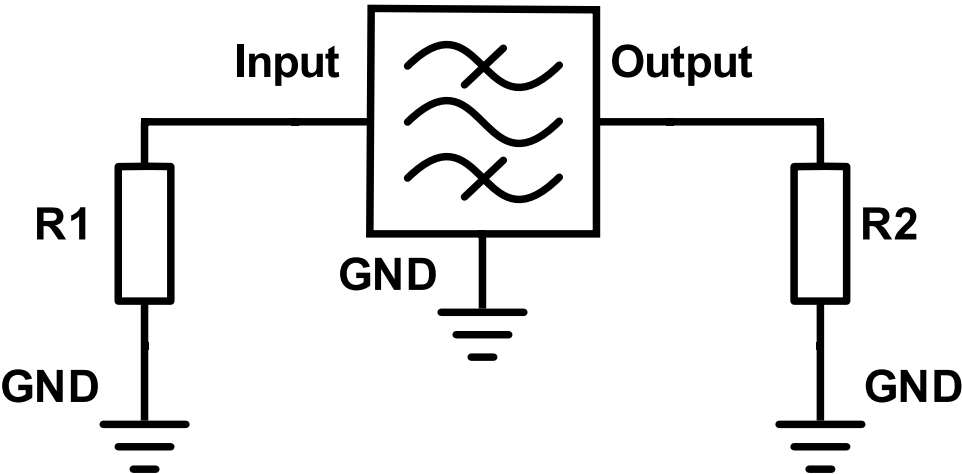


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Measurement Circuit



Port	Matching Component
Input	R1: 50Ω
Output	R2: 50Ω

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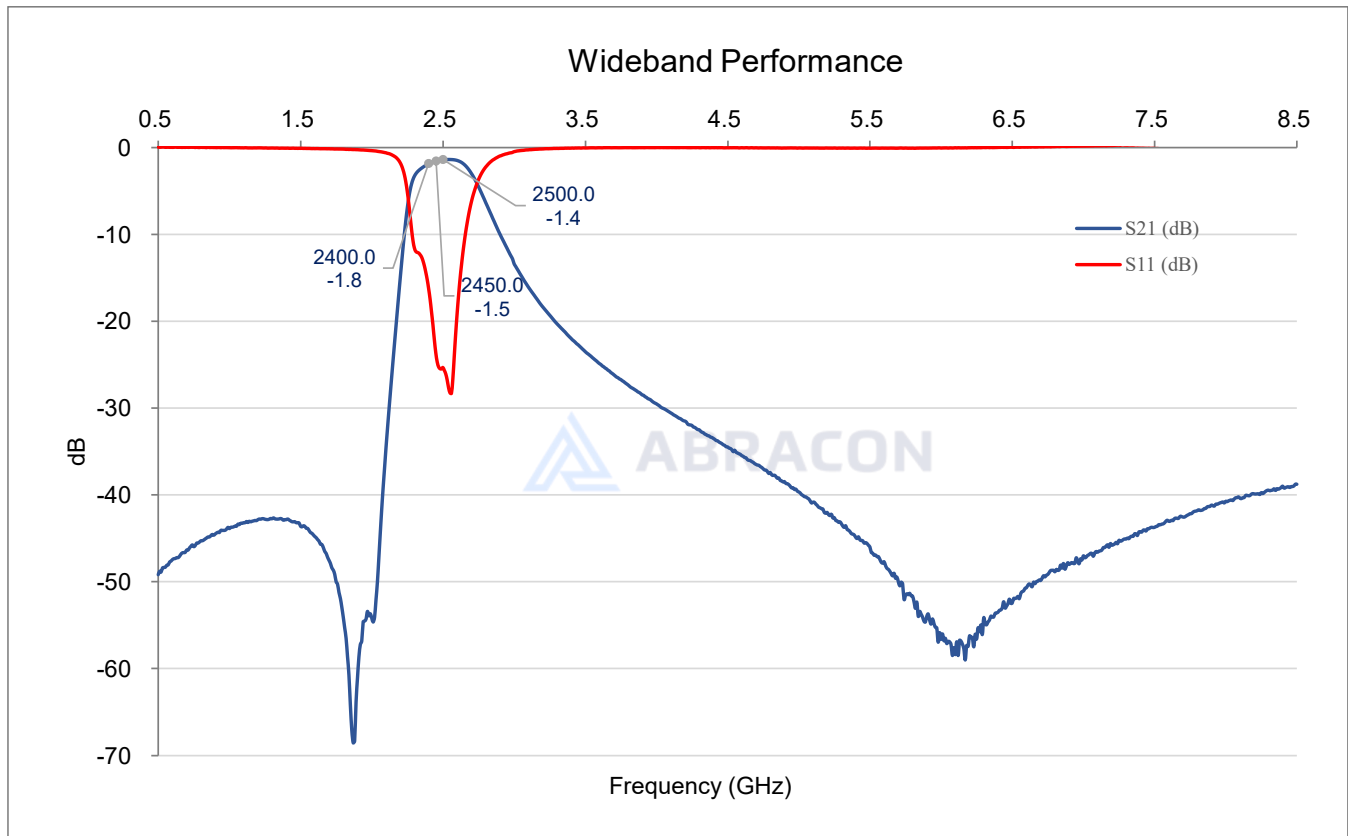


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Frequency Characteristics



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Reflow Profile [JEDEC J-STD-020]

Solder paste: Sn/3.0Ag/0.5Cu

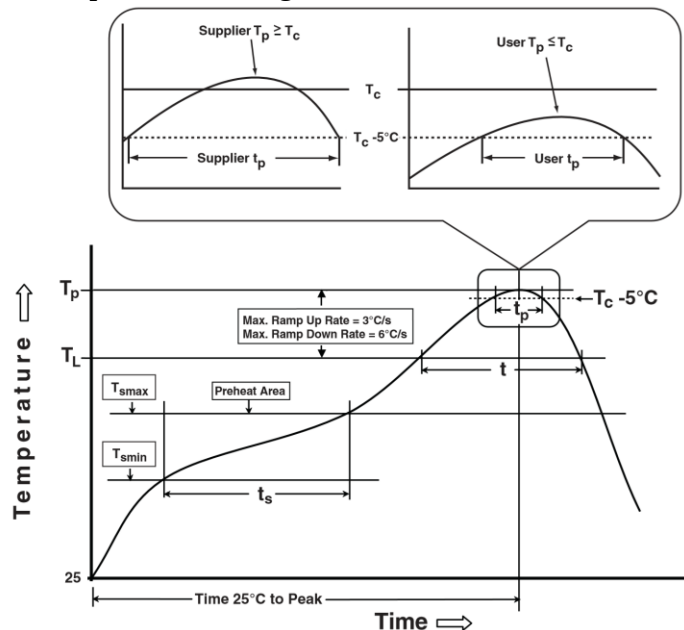


Table 1

SnPb Eutectic Process

Classification Temperatures (T_c)

Package Thickness	Volume mm ³ <350	Volume mm ³ ≥ 350
<2.5mm	235°C	220°C
≥ 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	200°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	217°C
Time at Liquidous (T _L)	60 – 150 sec.	60 – 150 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.	10 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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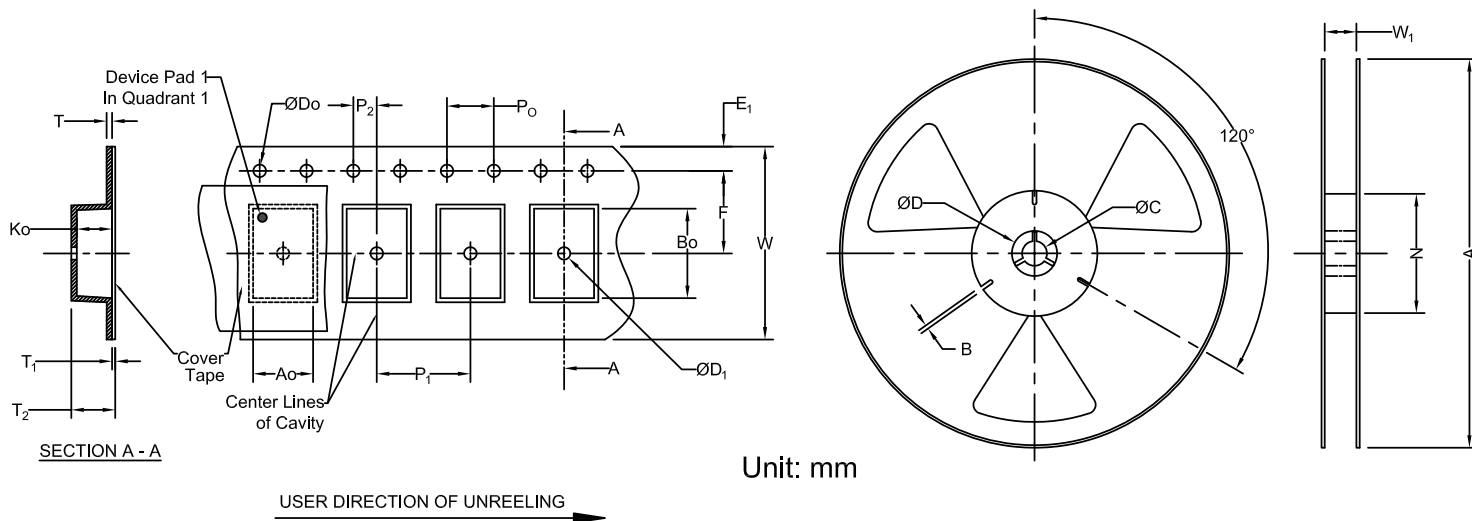
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Packaging

Tape & Reel Dimension 2520(1008)



Carrier Tape Specifications (mm)

E1	D0	P0	P2	F	P1	W	A0	B0	T ₂	Reel Qty
1.75 ± 0.1	1.5 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	3.5 ± 0.05	2.0 ± 0.05	8.0 ± 0.3	2.3 ± 0.1	2.8 ± 0.1	0.27 Max	3,000

Reel Specifications (mm)

A	W ₁	N	C
178 ± 2.0	8.4 +1.5/-0.0	58 ± 2.0	13.5 ± 0.2

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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