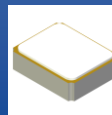


SMD 1227.6 MHZ SAW FILTER



AFII-SW-0073-Q

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2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

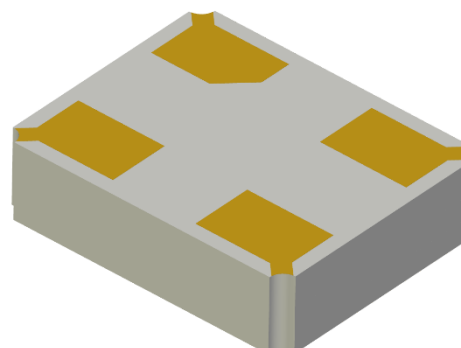
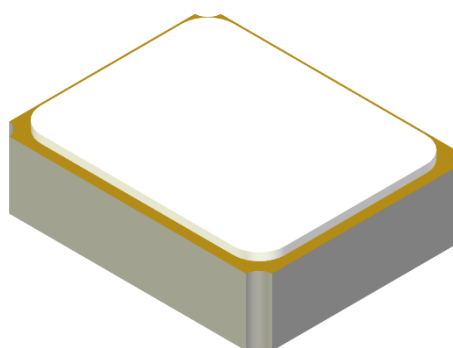
Features

- AEC-Q200 Qualified
- Supports GNSS L2 Band
- 2.0 x 1.6 x 0.6 mm in Size
- Low Insertion Loss: 1.4 dB
- Out-of-Band Rejection: > 31 dB
- Maximum Input Power: +17 dBm

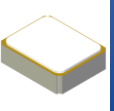
Applications

- High-Precision GNSS Modules
- RTK Systems
- Automotive Transportation & Telematics
- Asset Tracking / Fleet Management
- UAVs, Robotics & Autonomous Vehicles
- Micro-Mobility Solutions
- Precision Agriculture

Product Image



SMD 1227.6 MHZ SAW FILTER



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2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Electrical Specification

Parameters	Minimum	Typical	Maximum	Units	Notes
Center Frequency(f_c)	-	1227	-	MHz	-
VSWR	-	1.92	2.32		1217.6 ~ 1237.6MHz
Insertion Loss ⁽¹⁾	-	1.4	1.8	dB	1217.6 ~ 1237.6MHz
Amplitude Ripple ⁽¹⁾	-	0.3	1.5		1217.6 ~ 1237.6MHz
Group Delay ⁽¹⁾	-	15	25	ns	1217.6 ~ 1237.6MHz
Group Delay Ripple ⁽¹⁾	-	4	15	ns	1217.6 ~ 1237.6MHz
Attenuation ⁽²⁾ (Reference level from 0 dB)	25	31	-	dB	300 ~1152 MHz
	30	33	-		1302 ~1900 MHz
	25	33	-		1900 ~3000 MHz
Input Power Level	-	10	-	dBm	

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

(2) Averaged values of linear S-Parameters at +25°C

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

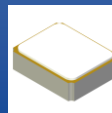
Mechanical Specification

Parameters	Specifications
Filter Dimension	2.0 x 1.6 x 0.6 mm
Mounting Type	Surface Mount

Environmental Specification

Parameters	Specifications
Operating Temperature Range	-55°C ~ +105°C
Storage Temperature Range	-55°C ~ +105°C
MSL level	1
RoHS Compliant	Yes

SMD 1227.6 MHZ SAW FILTER



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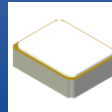
2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Ordering Information

Part Number	Description
AFII-SW-0073-Q	SMD 1227.6 MHZ SAW FILTER on Cut Tape
AFII-SW-0073-Q-T	SMD 1227.6 MHZ SAW FILTER on Tape & Reel
AFII-SW-0073-Q-EVB	SMD 1227.6 MHZ SAW FILTER Evaluation Board

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

SMD 1227.6 MHZ SAW FILTER



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Request Samples

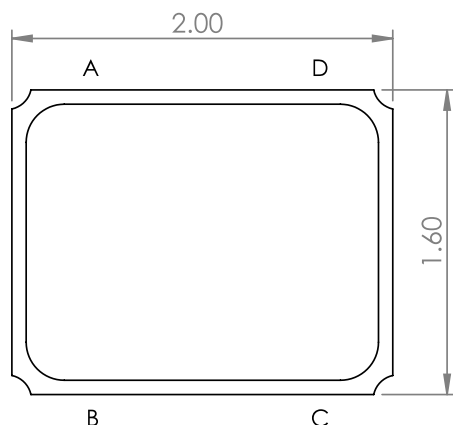


Check Inventory

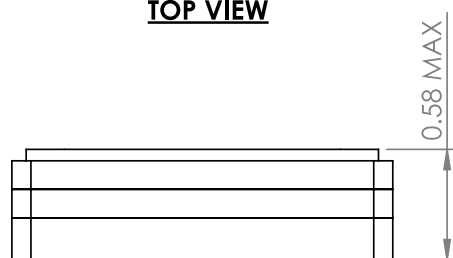


2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

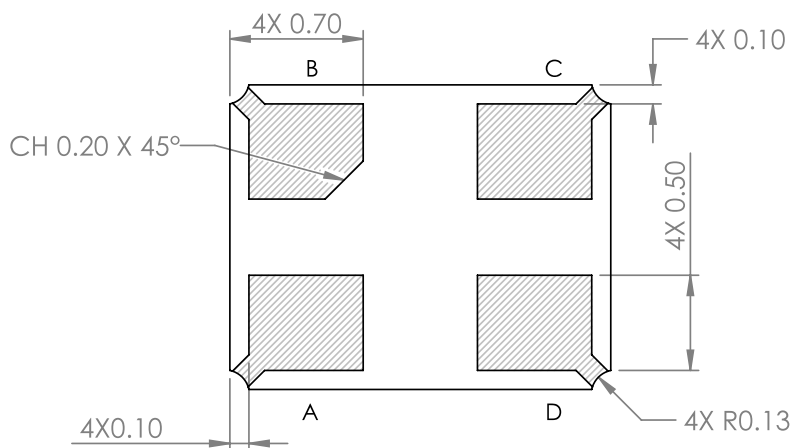
Product Dimensions



TOP VIEW

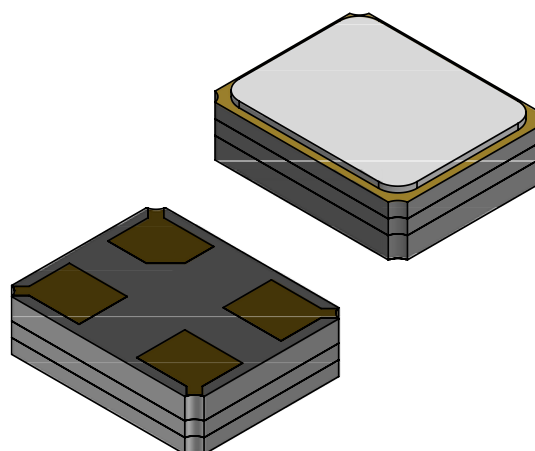


FRONT VIEW



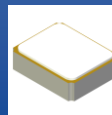
BOTTOM VIEW

PIN #	FUNCTION
B	INPUT
D	OUTPUT
A,C	GROUND



Unit : mm

SMD 1227.6 MHZ SAW FILTER



AFII-SW-0073-Q

Request Samples

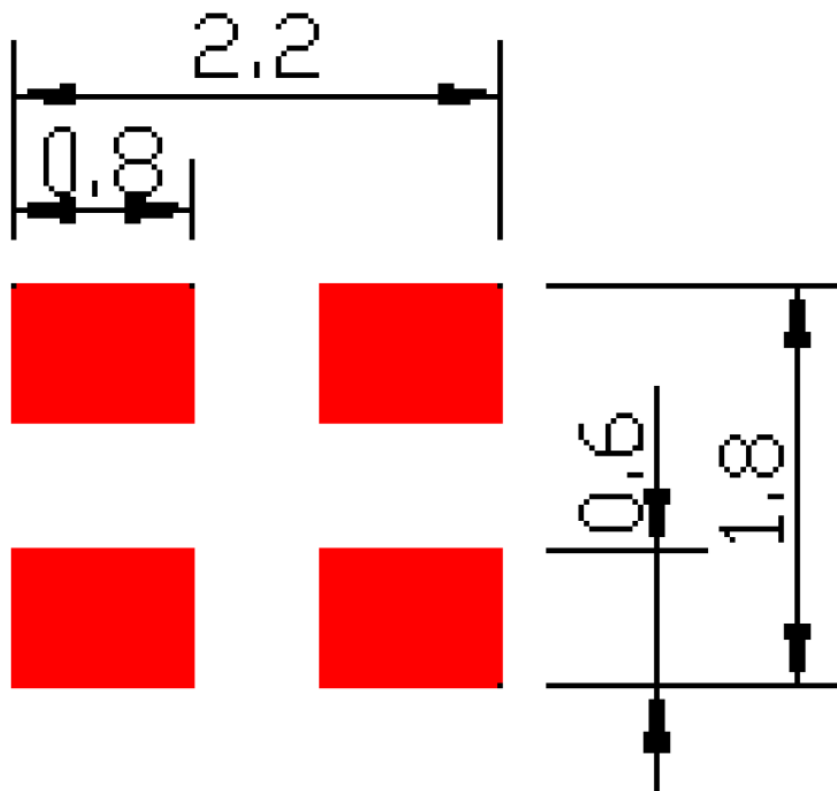


Check Inventory



2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

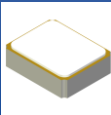
Recommended Land Pattern



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

SMD 1227.6 MHZ SAW FILTER



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Request Samples

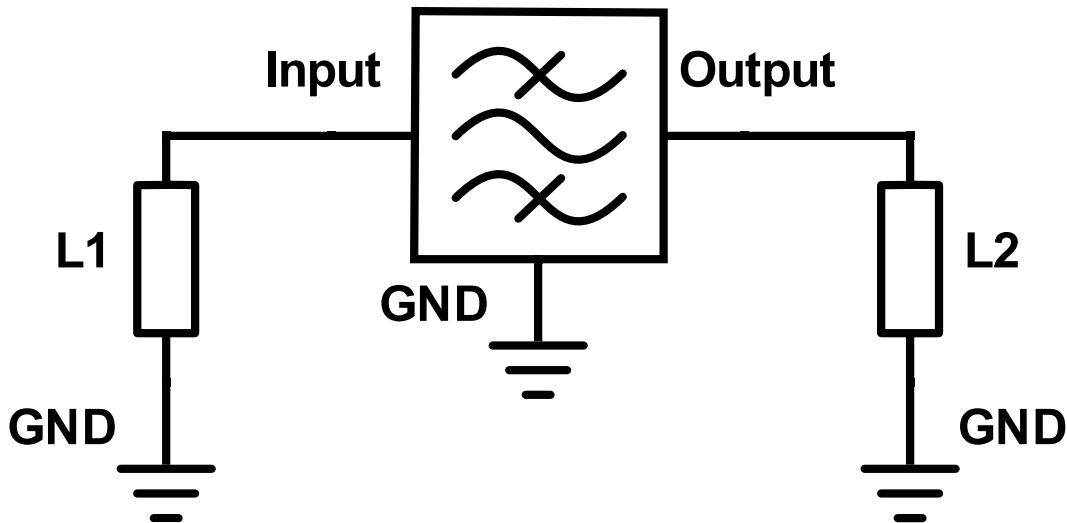


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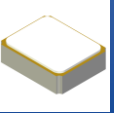
2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Measurement Circuit



Port	Matching Component
Input (Pin B)	L1: 11 nH
Output (Pin D)	L2: 11 nH

SMD 1227.6 MHZ SAW FILTER



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Request Samples



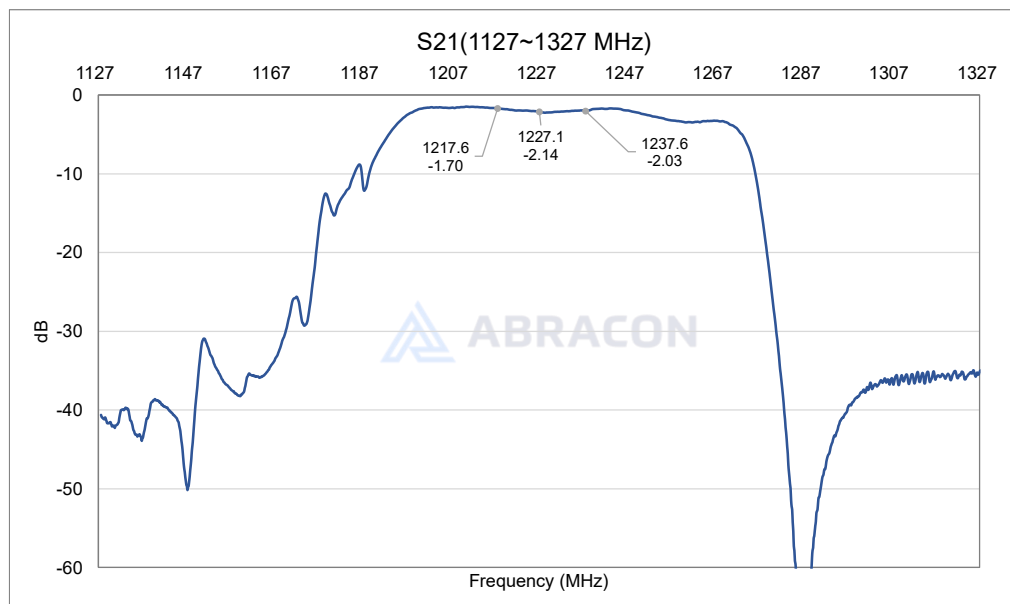
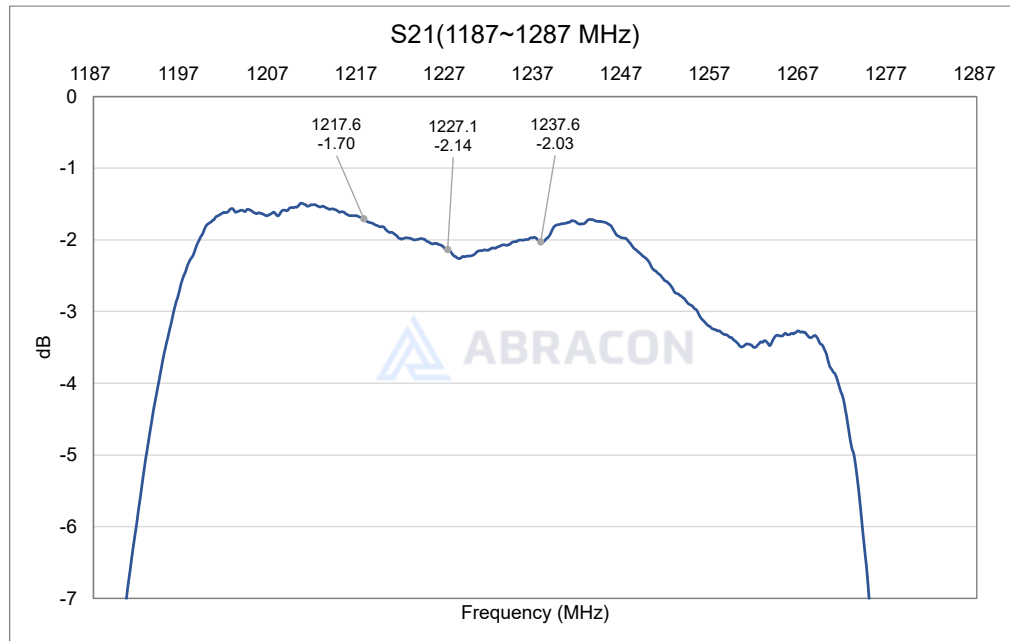
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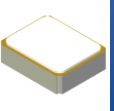
2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Frequency Characteristics

S21 narrow band



SMD 1227.6 MHZ SAW FILTER



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Request Samples

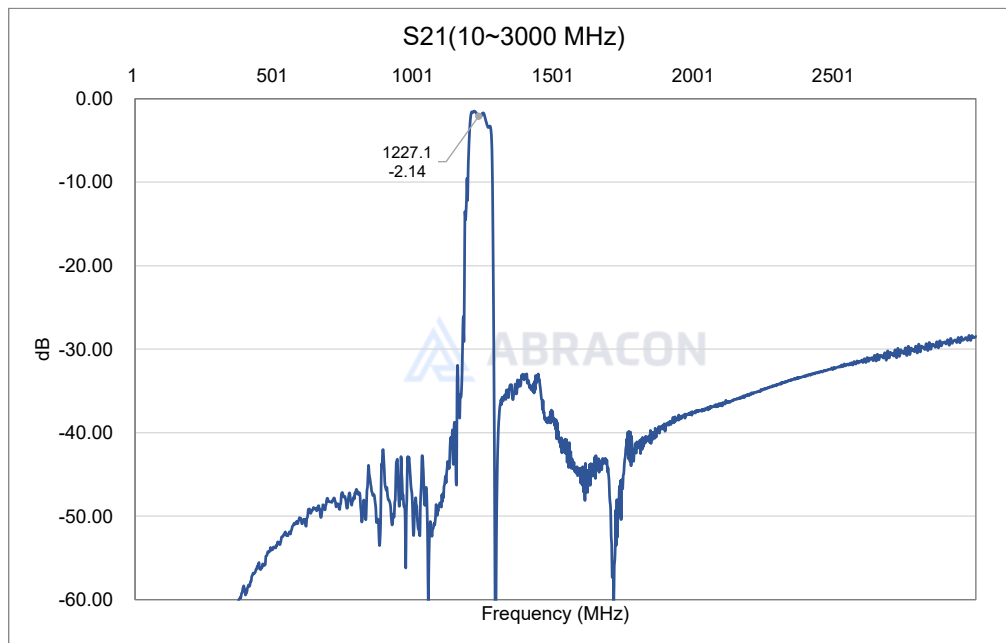


Check Inventory

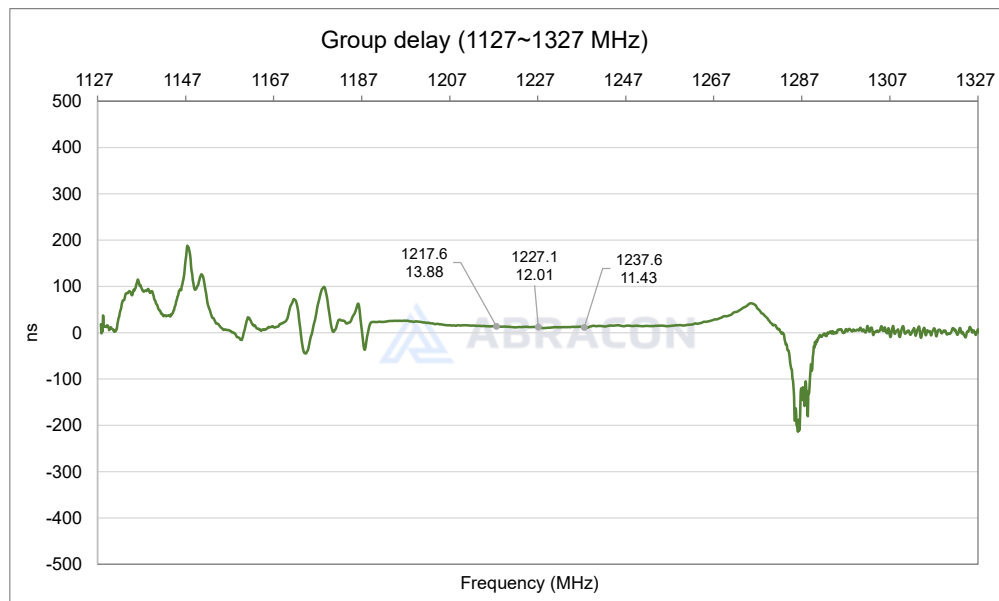


2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

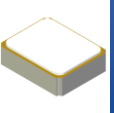
S21 Wide Band



Group Delay



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Request Samples

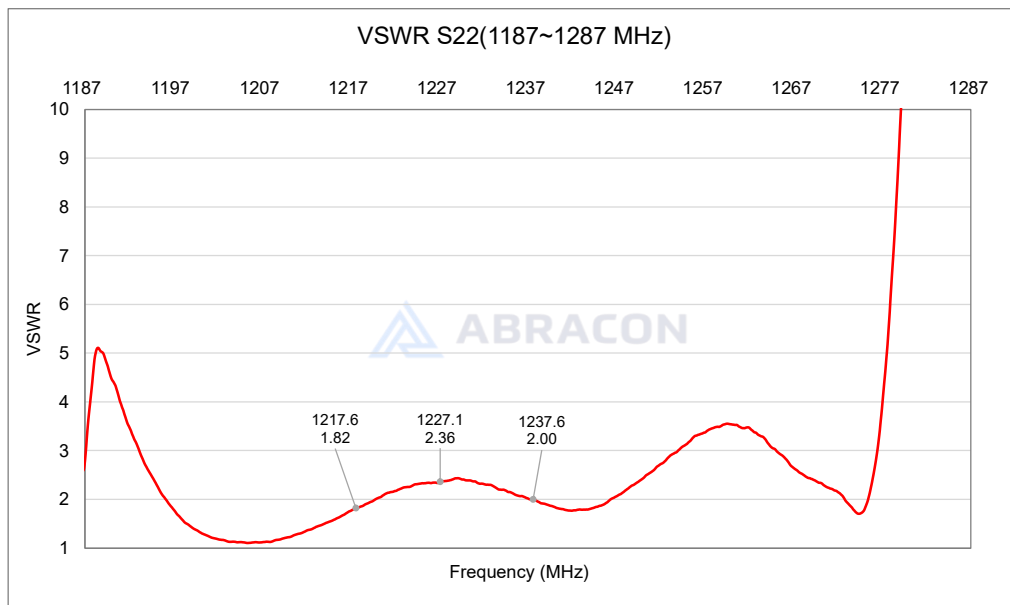
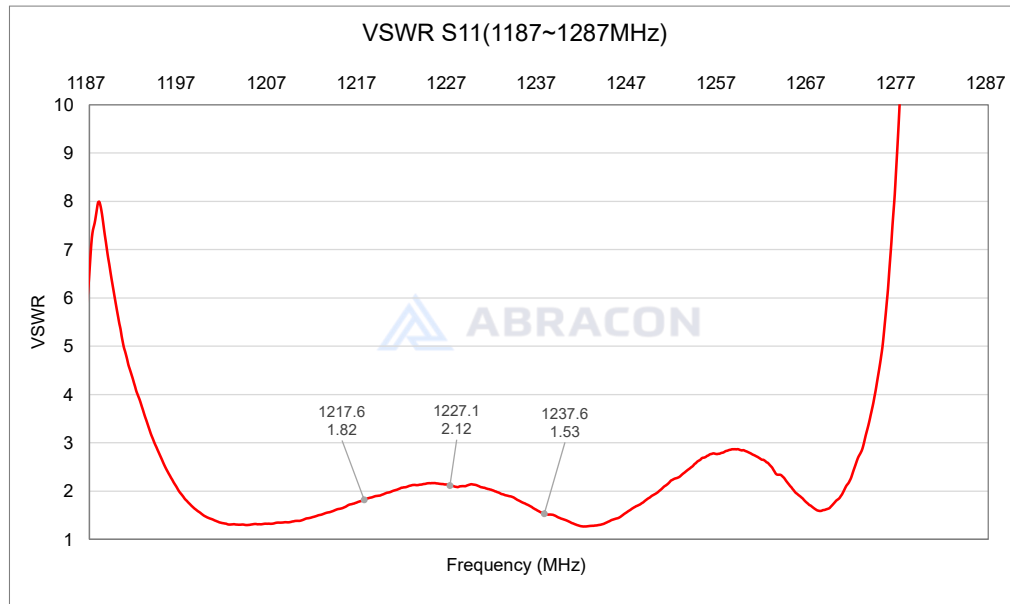


Check Inventory

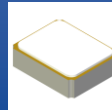


2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

VSWR (S11 & S22)



SMD 1227.6 MHZ SAW FILTER



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Request Samples



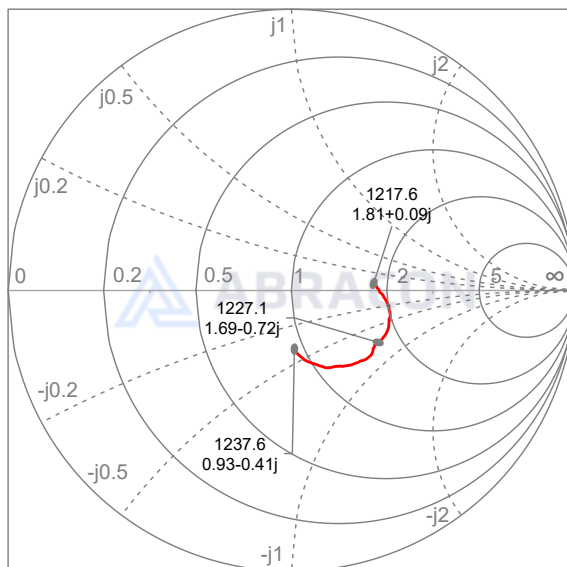
Check Inventory



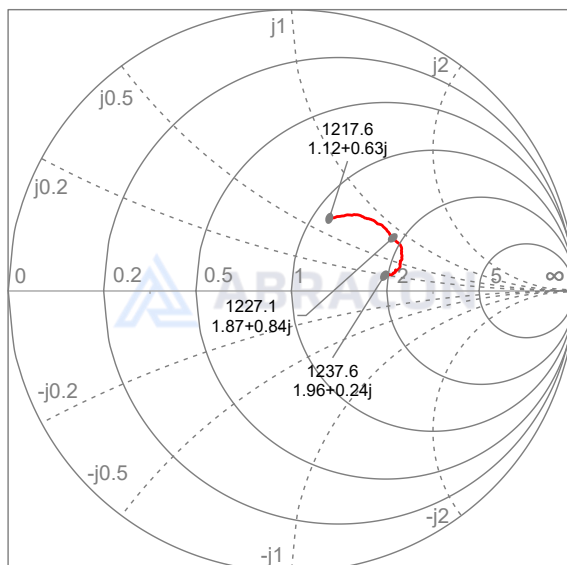
2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Smith Chart (S11 & S22)

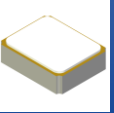
Smith chart S11 (1217~1237MHz)



Smith chart S22 (1217~1237MHz)



SMD 1227.6 MHZ SAW FILTER



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Request Samples



Check Inventory



2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Reflow Profile [JEDEC J-STD-020]

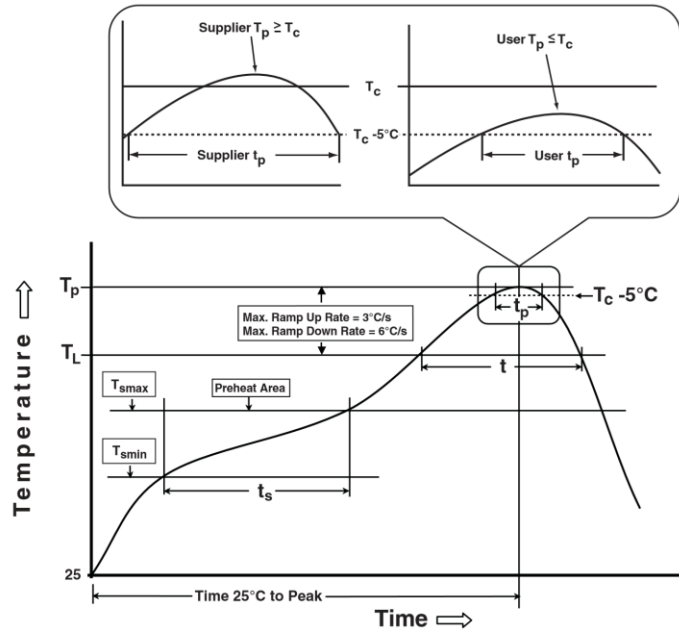


Table 1

SnPb Eutectic Process
Classification Temperatures (T_c)

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

Table 2

Pb-Free Process
Classification Temperatures (T_c)

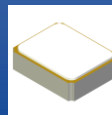
Package Thickness	Volume mm^3 <350	Volume mm^3 350-2000	Volume mm^3 >2000
<1.6mm	260°C	260°C	260°C
1.6mm - 2.5mm	260°C	250°C	245°C
>2.5mm	250°C	245°C	245°C

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Preheat / soak		
Temperature minimum (T_{smmin})	100°C	150°C
Temperature maximum (T_{smmax})	150°C	180°C
Time (T_{smmin} to T_{smmax}) (t_s)	60 – 120 sec.	60 – 90 sec.
Average ramp-up rate (T_{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_{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.

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Request Samples



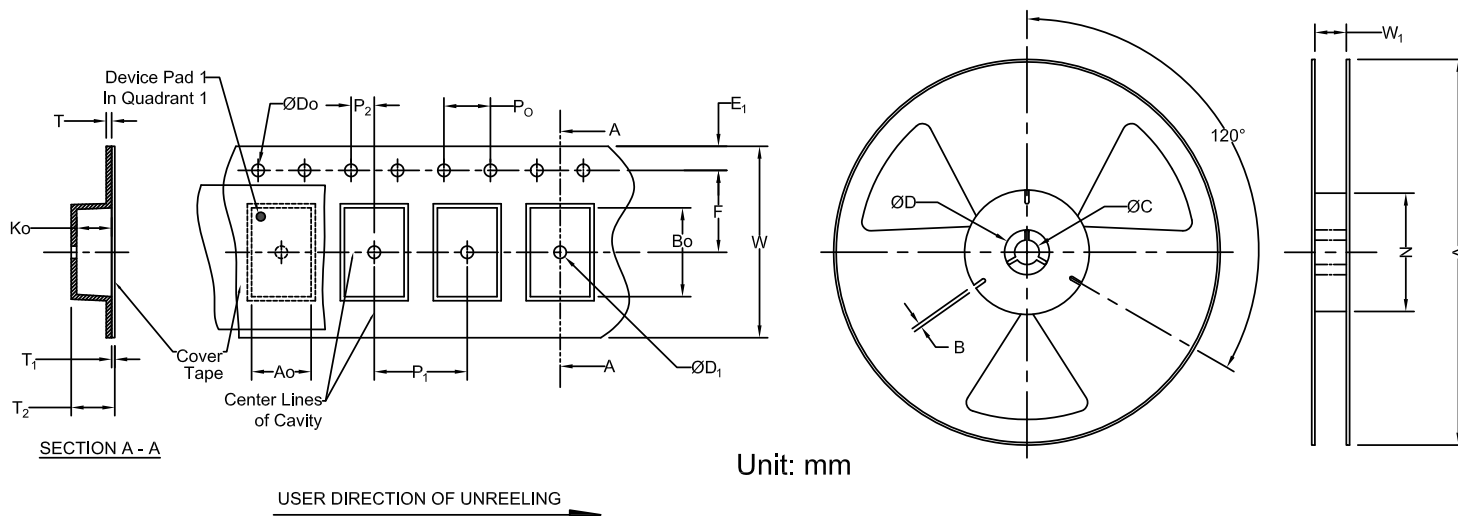
Check Inventory



2.0 x 1.6 x 0.6 mm
RoHS Compliant
MSL Level = 1

Packaging

Tape & Reel Dimension



Carrier Tape Specifications (mm)

Do	D1	E1	P0	P2	F	P1	W	A0	B0	K0	Reel Qty
1.55 ± 0.05	0.50 ± 0.05	1.75 ± 0.1	4.0 ± 0.1	2.0 ± 0.05	3.5 ± 0.05	4.0 ± 0.1	8.0 ± 0.3	1.9 ± 0.05	2.3 ± 0.05	0.9 ± 0.05	3,000

Reel Specifications (mm)

A	W1	N	C
330.0 ± 1.0	12.0 ± 0.15	100 ± 0.15	13.0 ± 0.15

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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