

APPROVAL SHEET

SHENZHEN PUWEI TECHNOLOGY CO.,LTD.

PURE-V
TECH



Product Description: SAW Filter 1615 MHz SMD 3.0×3.0mm (BW=20.0MHz)

Part No.	PV6G15D
Pages	7
Date	2022/04/12
Revision	2.0

Prepared by:	
Checked by:	张勃
Approved by:	



Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 20 MHz

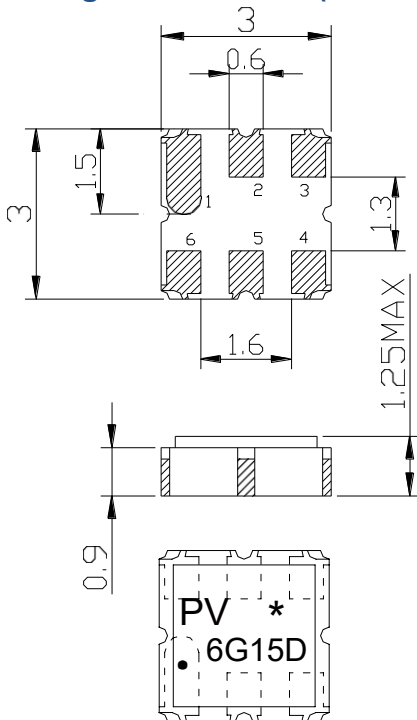
Features

- RoHS compatible
- Package size 3.00x3.00x1.25mm³
- Package Code DCC6C
- Electrostatic Sensitive Device(ESD)

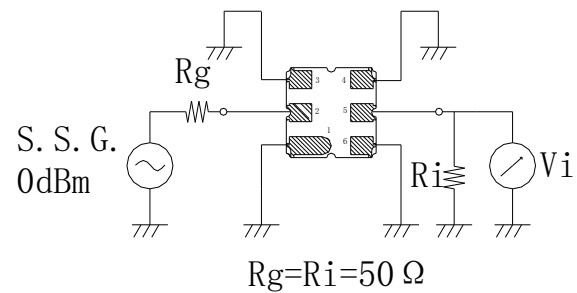
Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	3	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	°C
RF Power Dissipation	P	10	dBm

Package Dimensions (Unit: mm)



Test Circuit (Bottom View)



Pin Configuration

2	Input
5	Output
1, 3, 4, 6	Ground

- Top View, Laser Marking

- "PV": Manufacturer's mark "6G15D": Part number ".": Terminal 1
- "*": Lot number (The code shown below varies in a 4-year cycle)

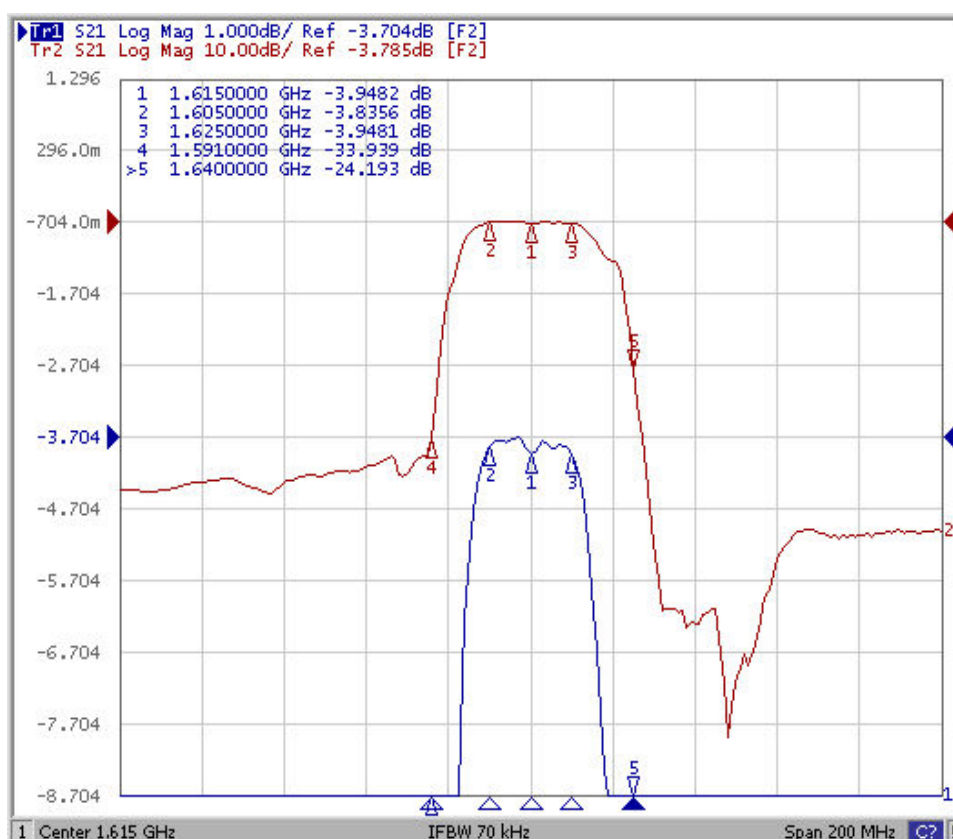
Code	1	2	3	4	5	6	7	8	9	10	11	12
2021	a	b	c	d	e	f	g	h	i	j	k	m
2022	n	p	q	r	s	t	u	v	w	x	y	z
2023	A	B	C	D	E	F	G	H	J	K	L	M
2024	N	P	Q	R	S	T	U	V	W	X	Y	Z

Electronic Characteristics Test Temperature: 25°C ± 2°C

Terminating source impedance: 50 Ω

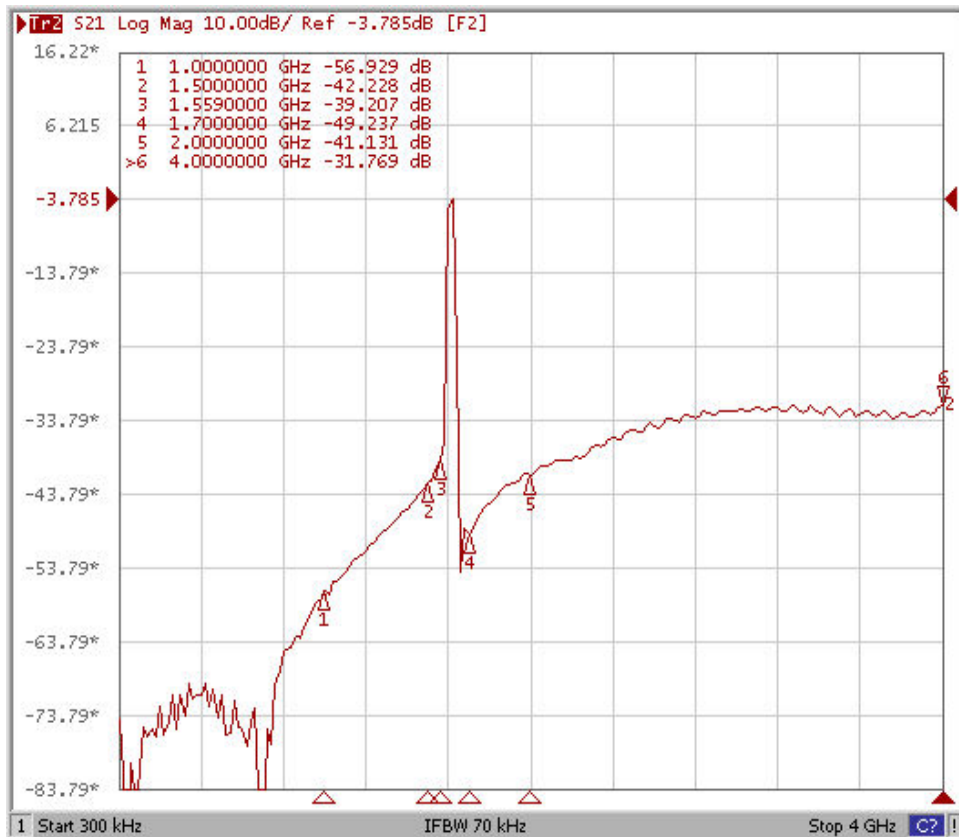
Item	Minimum	Typical	Maximum	Unit
Center Frequency fc		1615.0		MHz
Insertion Loss(min)		4.0	4.3	dB
Insertion Loss 1605.00 - 1625.00 MHz		4.0	4.4	dB
Amplitude Ripple (p-p) 1605.00 - 1625.00 MHz	$\Delta\alpha$	0.3	1.0	dB
Absolute Attenuation	α			
DC - 1000.00 MHz	50.0	55.0		dB
1000.00 - 1500.00 MHz	40.0	42.0		dB
1559.00 - 1591.00 MHz	30.0	33.0		dB
1700.00 - 2000.00 MHz	38.0	40.0		dB
2000.00 - 4000.00 MHz	30.0	32.0		dB
Input VSWR 1605.00 - 1625.00 MHz		1.8:1	2.0:1	/
Output VSWR 1605.00 - 1625.00 MHz		1.8:1	2.0:1	/

Frequency Characteristics

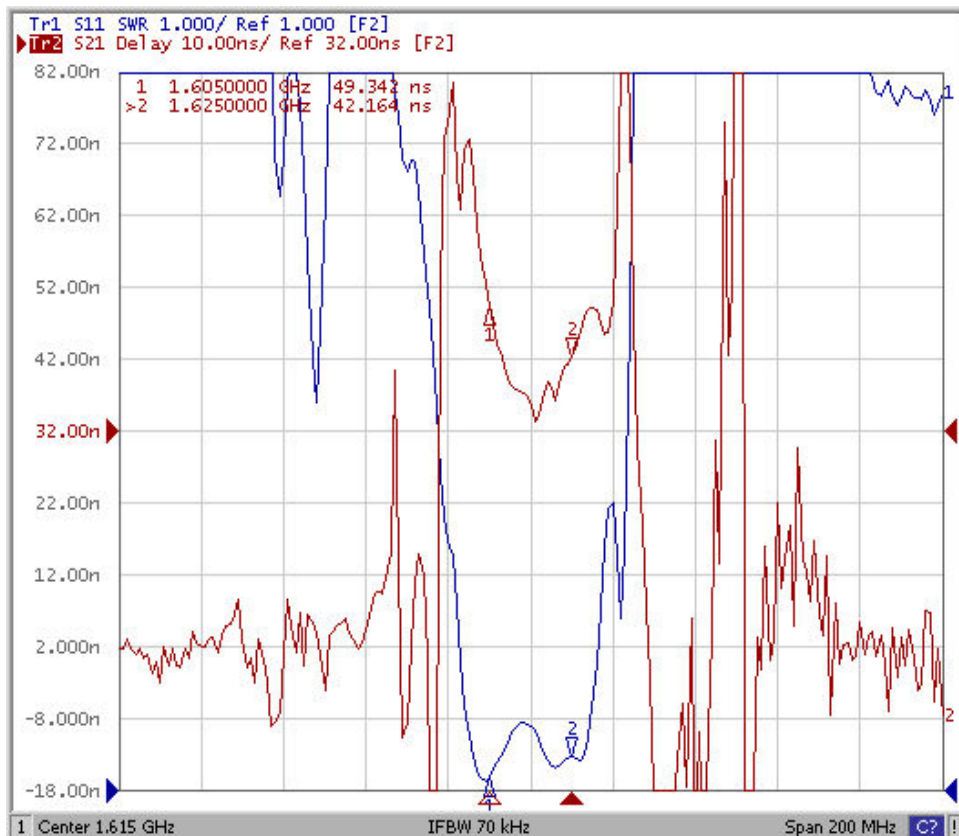


Frequency Characteristics

Frequency Response (wideband)

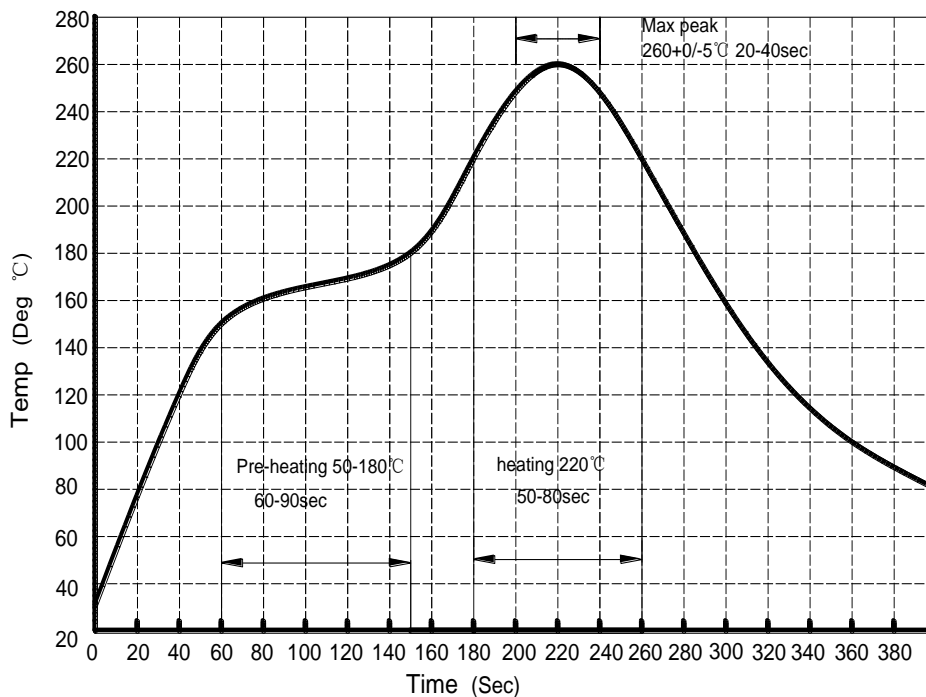


Delay Ripple & S11 VSWR



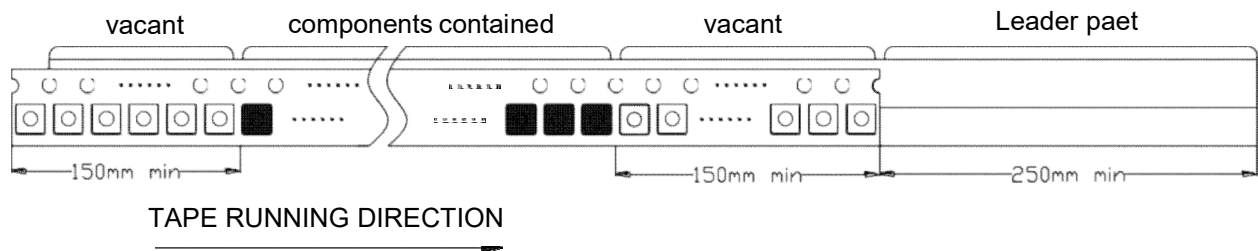
Reliability (The SAW components shall remain electrical performance after tests)

No.	Test item	Test condition	
1	Temperature Storage	(1) Temperature: $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, Duration: 250h , Recovery time: $2\text{h}\pm 0.5\text{h}$ (2) Temperature: $-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$, Duration: 250h ,Recovery time: $2\text{h}\pm 0.5\text{h}$	
2	Humidity Test	Conditions: $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$, 90~95% RH	Duration: 250h
3	Thermal Shock	Heat cycle conditions: $\text{TA}=-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$, $\text{TB}=85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $t_1=t_2=30\text{min}$, Switch time: $\leq 3\text{min}$, Cycle time: 100 times, Recovery time: $2\text{h}\pm 0.5\text{h}$.	
4	Vibration Fatigue	Frequency of vibration: 10~55Hz Directions: X,Y and Z	Amplitude:1.5mm Duration: 2h
5	Drop Test	Cycle time: 10 times	Height: 1.0m
6	Solder Ability Test	Temperature: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Depth: DIP--2/3 , SMD--1/5	Duration: 3.0s--5.0s
7	Resistance to Soldering Heat	(1) Thickness of PCB:1mm , Solder condition: $260^{\circ}\text{C}\pm 5^{\circ}\text{C}$, Duration: $10\pm 1\text{s}$ (2) Temperature of Soldering Iron: $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$, Duration:3~4s, Recovery time : $2\pm 0.5\text{h}$	

Recommended Reflow Soldering Diagram


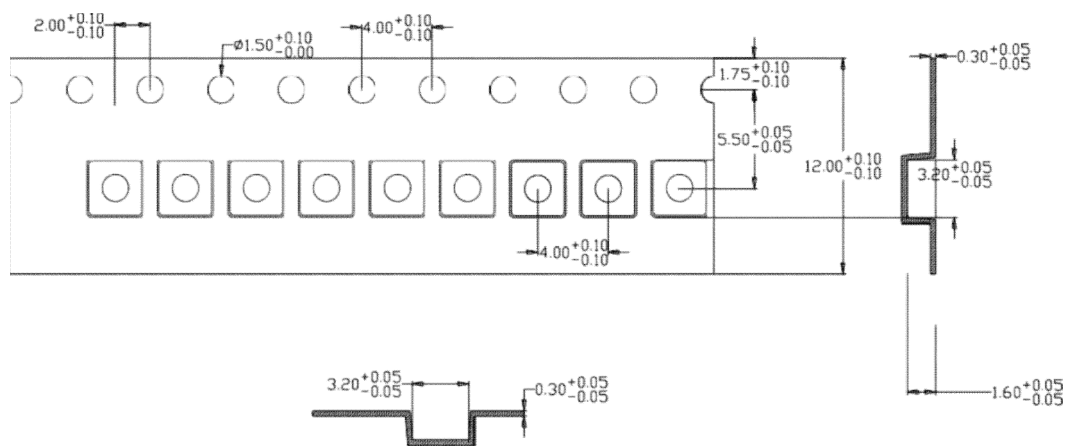
Packing Information

Carrier Tape



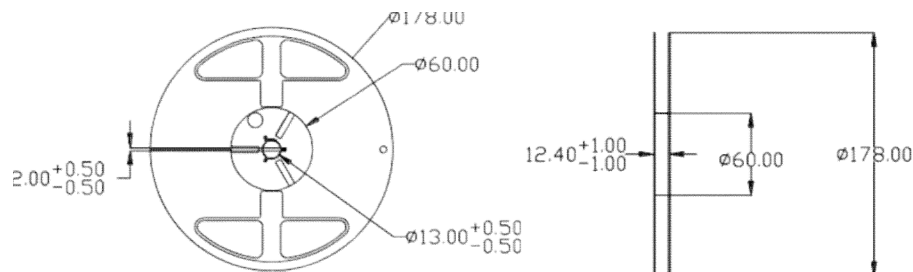
Reel Dimensions

Unit: mm



Outer Packing

Unit: mm



Notes

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to **ESD protect** in the test.
2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may **be soldered**. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.