

APPROVAL SHEET

SHENZHEN PUWEI TECHNOLOGY CO.,LTD.

PURE-V
TECH



Product Description: SAW Filter 1618 MHz SMD 3.0×3.0×1.25mm (BW=16 MHz)

Part No.	PV6G18E
Pages	7
Date	2022/02/16
Revision	1.0

Prepared by:	
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Approved by:	



REACH

History Record

Date	Part No.	Version No.	Modify Content	Remark

Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 16 MHz

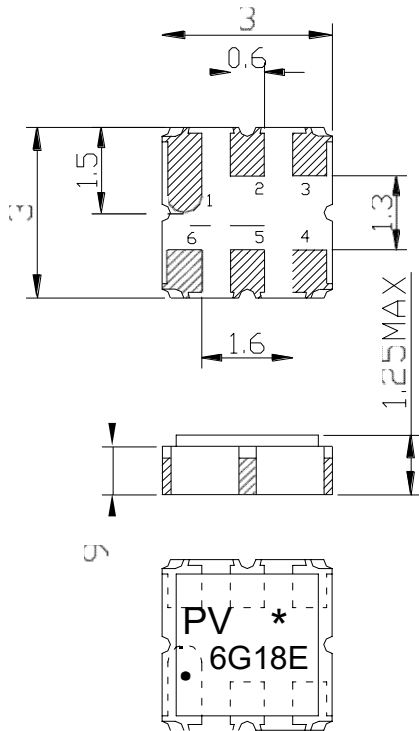
Features

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

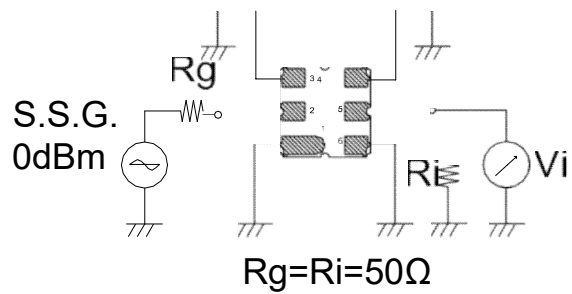
Maximum Rating

Item		Value	Unit
DC Voltage	V _{DC}	5	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C
RF Power Dissipation	P	20	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 "6G18E": Part number "·": Terminal 1

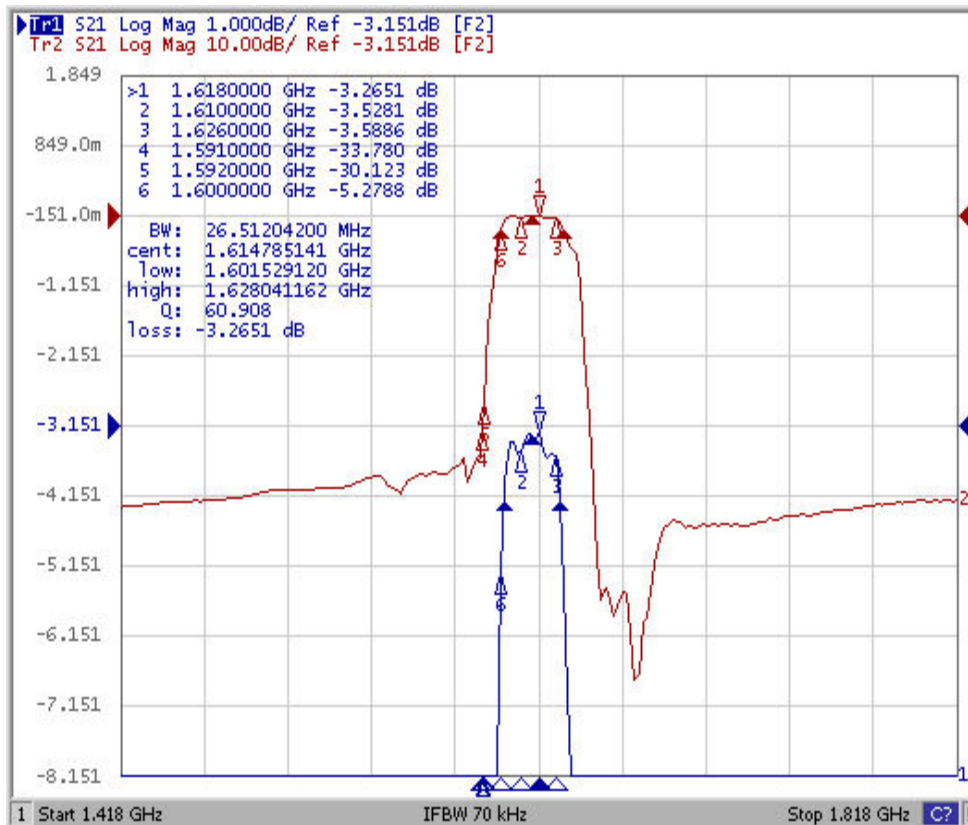
"*": Lot number (The code shown below varies in a 4-year cycle)

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

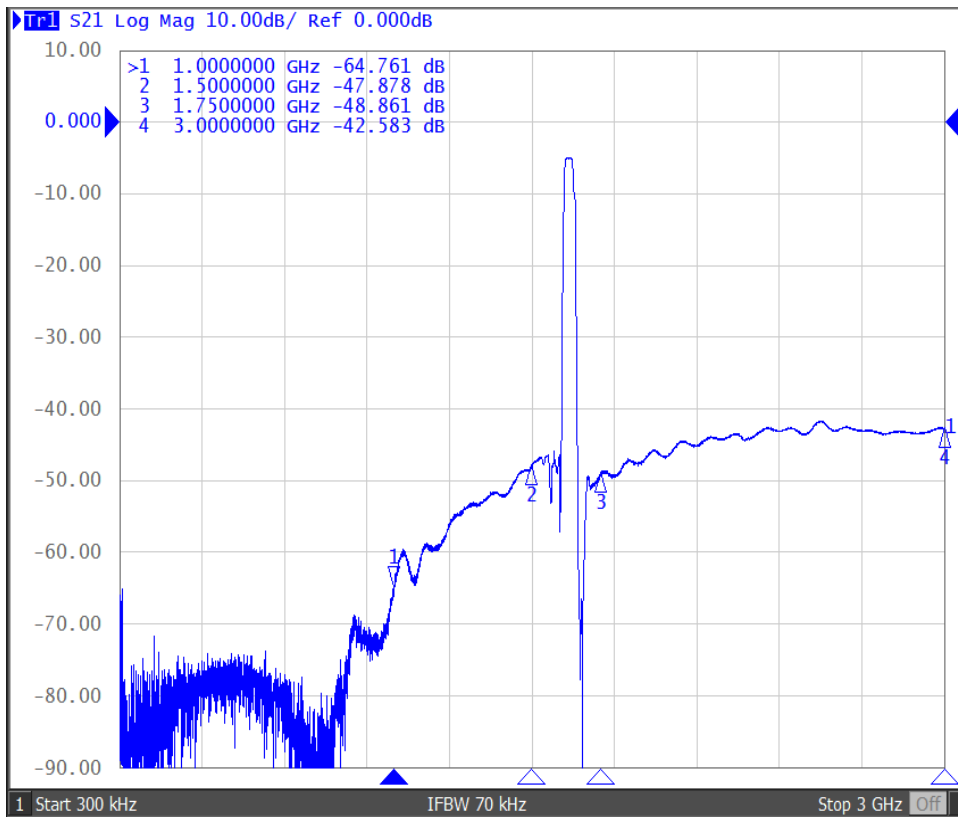
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		1618.00		MHz
Insertion Loss(min)	IL		3.2	4.0	dB
Insertion Loss	1610.00 - 1626.00MHz	IL	3.2	3.3	dB
Amplitude Ripple (p-p)	1610.00 - 1626.00MHz	$\Delta\alpha$	0.2	1.0	dB
Group Delay Ripple	1610.00 - 1626.00MHz	GDR	5	20	ns
Absolute Attenuation	α				
	DC - 1100.00 MHz	50.0	58.0		dB
	1100.00 - 1585.00 MHz	25.0	40.0		dB
	1655.00 - 1825.00 MHz	30.0	48.0		dB
	1825.00 - 1900.00 MHz	35.0	42.0		dB
	2000.00 - 2500.00 MHz	32.0	38.0		dB
	2500.00 - 3000.00MHz	30.0	35.0		dB
Input VSWR	1610.00 - 1626.00MHz		1.7	2.0	/
Output VSWR	1610.00 - 1626.00MHz		1.7	2.0	/

Frequency Characteristics

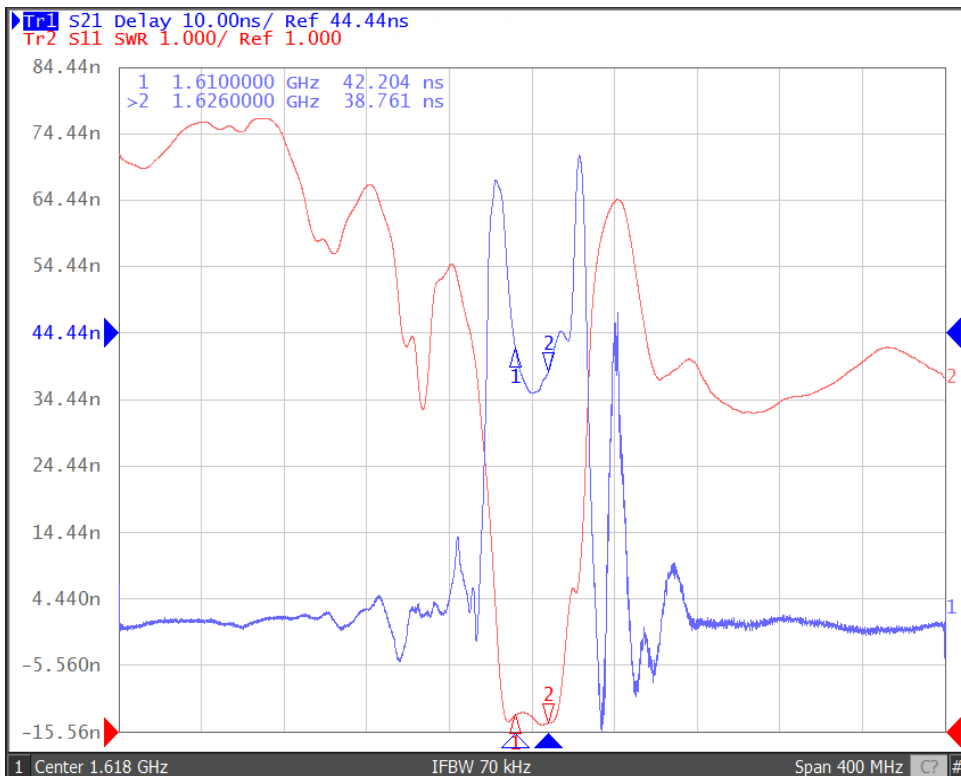


Frequency Characteristics

Frequency Response (wideband)

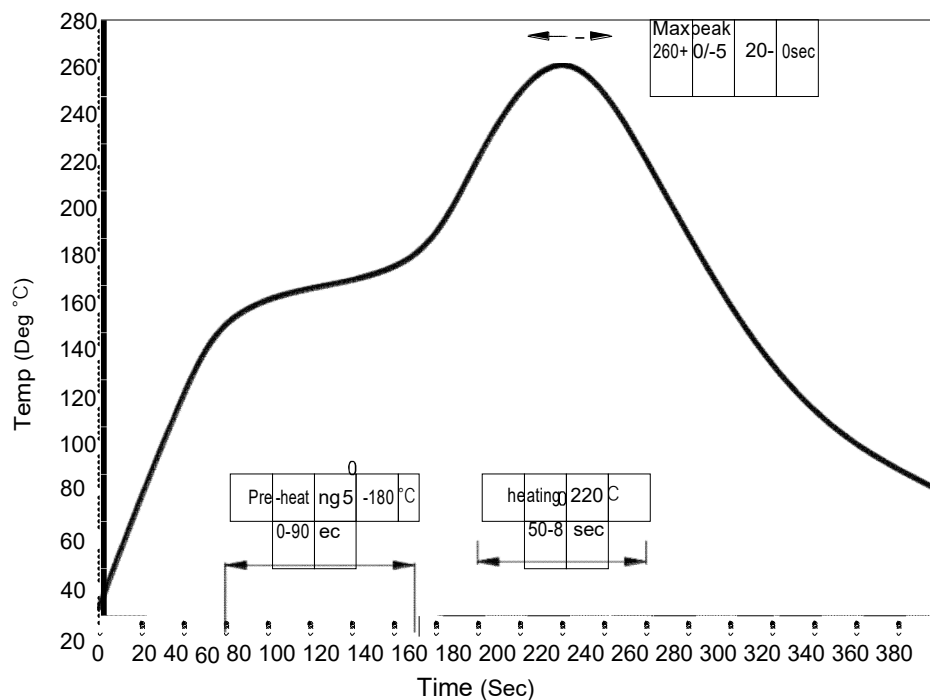


Delay Ripple & S11 VSWR



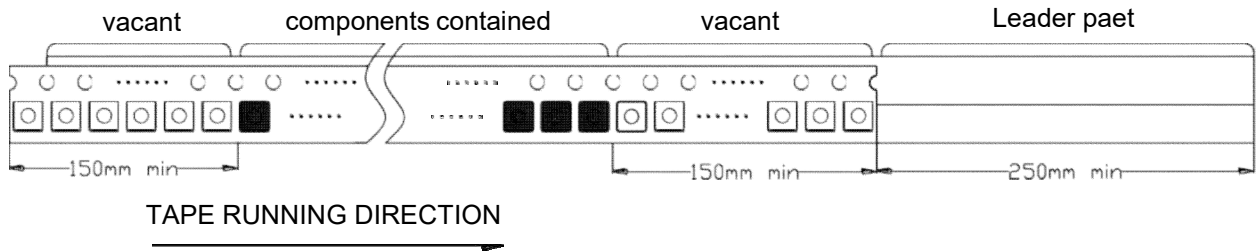
Reliability (The SAW components shall remain electrical performance after tests)

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 Amplitude:1.5mm Directions: X,Y and Z Duration: 2h
5	Drop Test	Cycle time: 10 times Height: 1.0m
6	Solder Ability Test	Temperature: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5
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

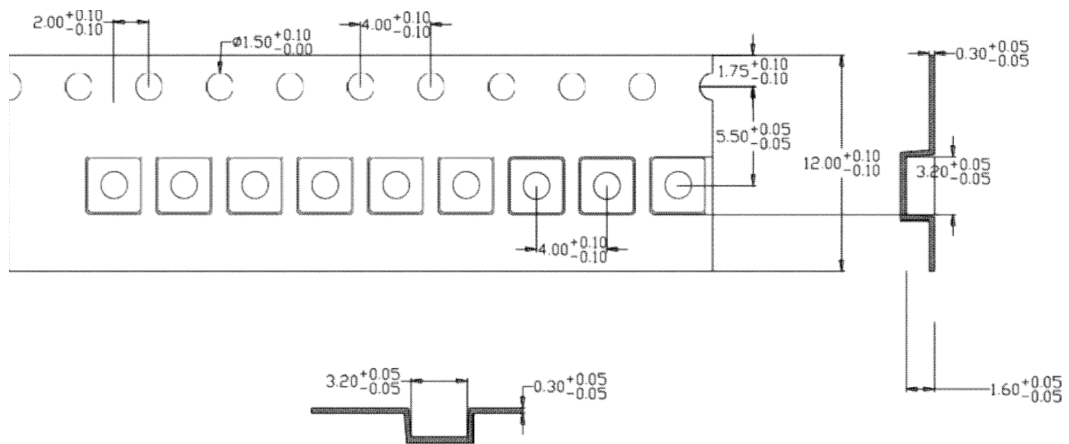
Packing Information

Carrier Tape



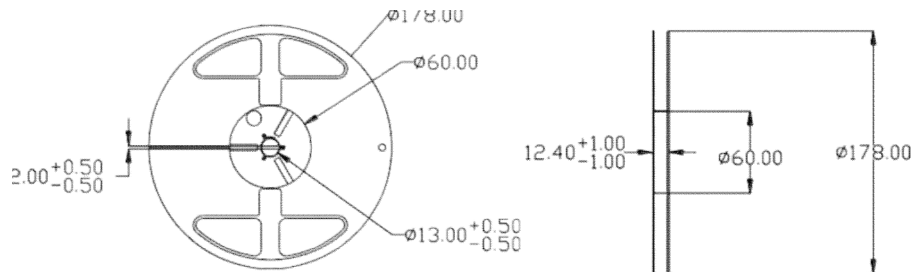
Reel Dimensions

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.