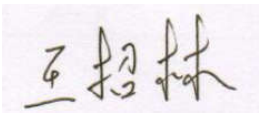
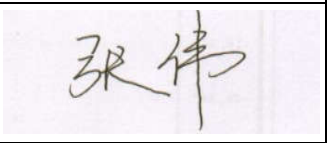
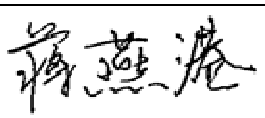
APPROVAL SHEET

Approval Specification		Customer's Approval Certificate
TO:		**Checked & Approved by:**
Part No.:		**Date:**
Customer's Part No.:		Please return this copy as a certification of your approval

BEIJING ZHONGXUN SIFANG SCIENCE & TECHNOLOGY CO.,LTD.

RoHS compliance | Pb free | REACH

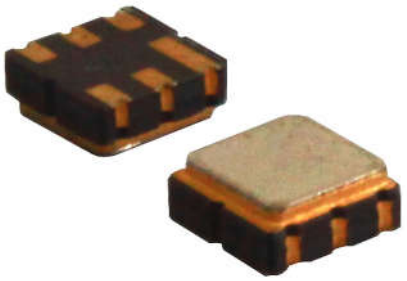
Prepared by:	
Checked by:	
Approved by:	

Part No.	:	SF9535
Pages	:	7
Date	:	2017/08/7
Revision	:	1.0

History Record

Date	Part No.	Version No.	Modify Content	Remark

Application

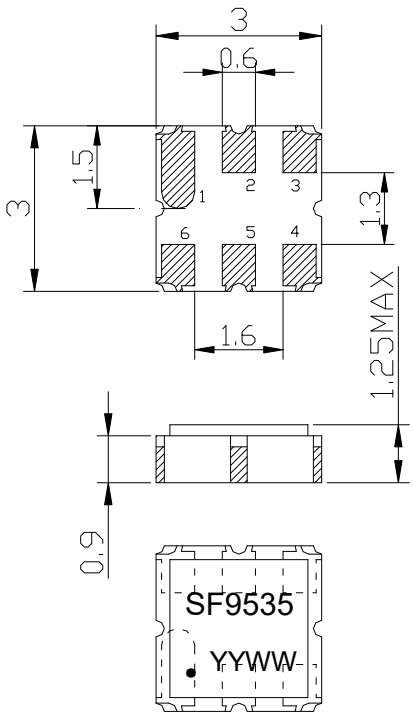


- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 12.0 MHz

Features

- Ceramic Package for **S**urface **M**ounted **T**echnology (**SMT**)
- **RoHS** compatible
- Package size 3.00x3.00x1.25mm^3
- Package Code DCC6C
- **E**lectrostatic **S**ensitive **D**evice(**ESD)**

Package Dimensions (Unit: mm)



Pin Configuration

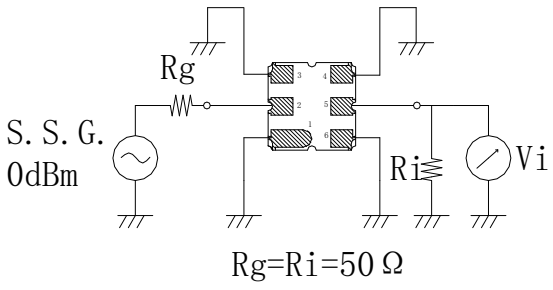
Pin No.	Description
2	Input
5	Output
1,3,4,6	Ground

Marking Description

S	Trademark
F	SAW Filter
9535	Part Number
●	Pin 1
* **YYWW**	Year Code & Week Code

*Fig： If the products produced in 06th week of 2012,
The year code & week code is 1206.
This item is optional.

Test Circuit（Bottom View）



Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	5	V
Operation Temperature	T	-40 ~ +85	℃
Storage Temperature	T_{stg}	-40 ~ +85	℃
RF Power Dissipation	P	20	dBm

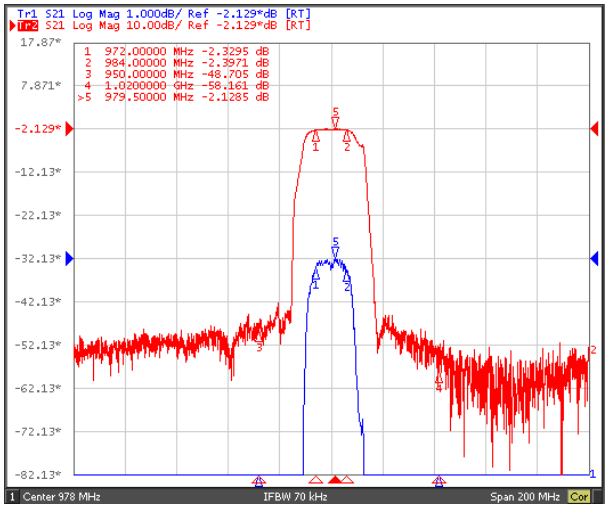
Electronic Characteristics

Test Temperature: 25℃±2℃
Terminating source impedance: 50Ω
Terminating load impedance: 50Ω

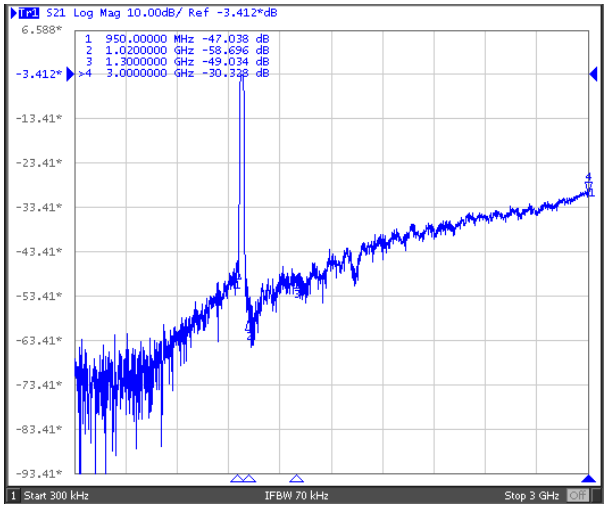
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		978.00		MHz
Insertion Loss(min)	IL		2.2	3.0	dB
Insertion Loss 972.00 - 984.00MHz	IL		2.4	3.5	dB
Amplitude Ripple (p-p) 972.00 - 984.00MHz	△α		0.5	1.2	dB
40dB Bandwidth	BW_{40dB}		32.1	36.0	MHz
Group Delay Ripple 972.00 - 984.00MHz	GDR		20.0	50.0	ns
Absolute Attenuation	α				
DC - 950.00 MHz		40.0	45.0		dB
1020.00 - 1300.00 MHz		40.0	45.0		dB
1300.00 - 3000.00 MHz		20.0	25.0		dB
Input VSWR 972.00 - 984.00MHz			1.4:1	2.0:1	/
Output VSWR 972.00 - 984.00MHz			1.4:1	2.0:1	/

Frequency Characteristics

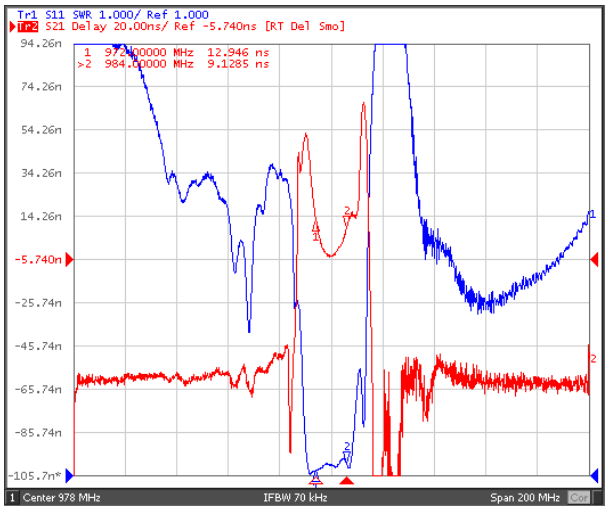
Frequency Response



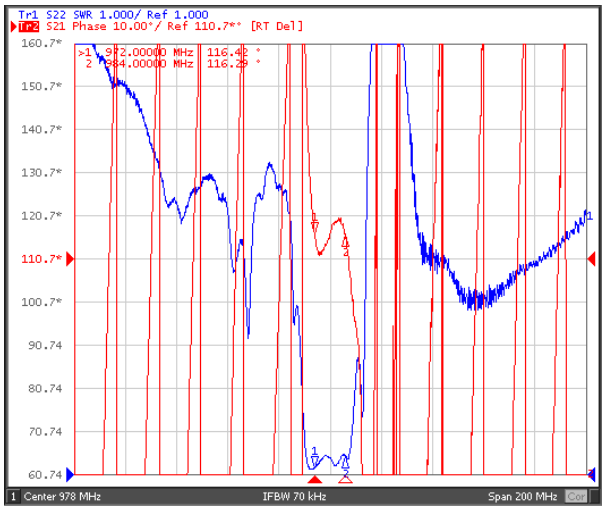
Frequency Response（wideband）



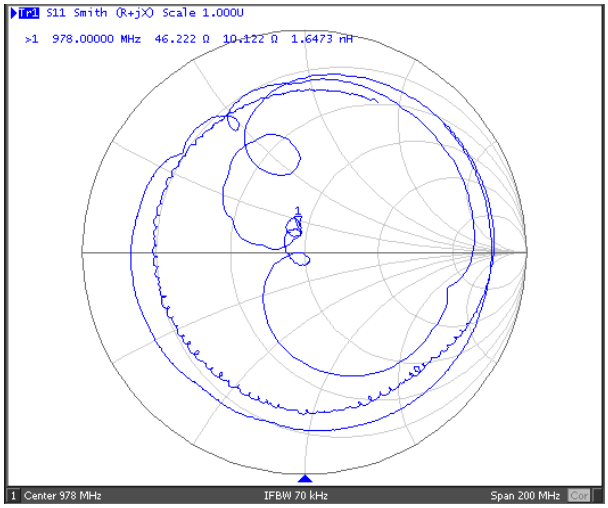
Delay Ripple & S11 VSWR



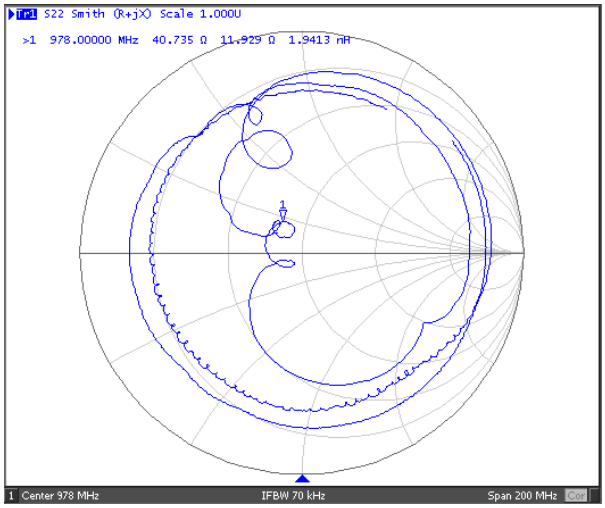
Phase Linearity & S22 VSWR



S11 Smith Chart



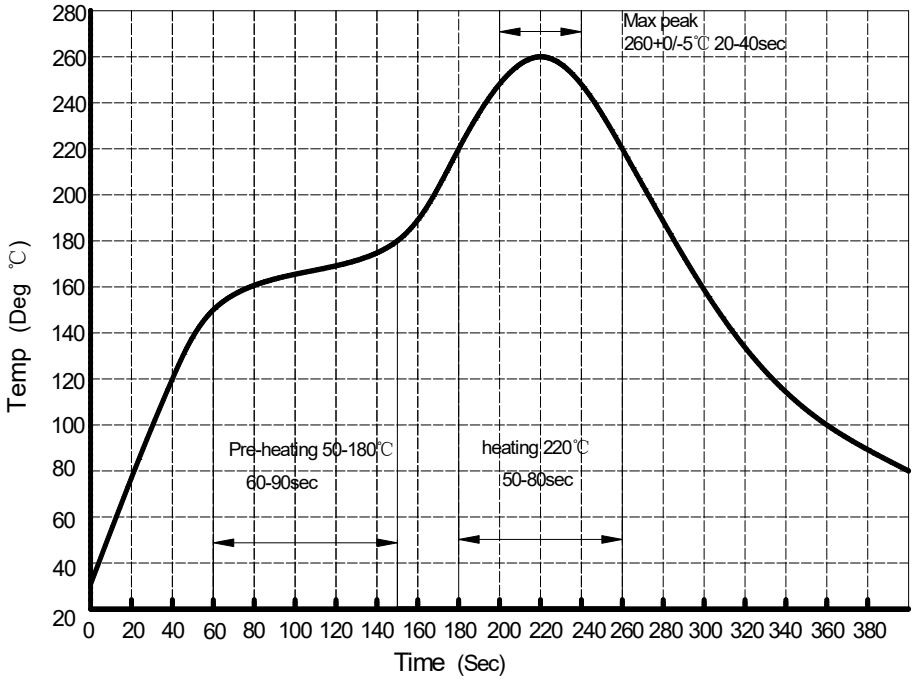
S22 Smith Chart



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

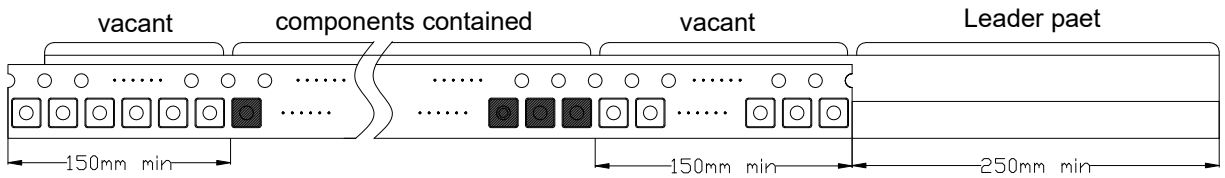
No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: 85℃±2℃ , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: –55℃±3℃ , Duration: 250h ,Recovery time: 2h±0.5h
2	Humidity Test	Conditions: 60℃±2℃ , 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.
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℃±5℃ 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℃±5℃ , Duration: 10±1s (2) Temperature of Soldering Iron: 350℃±10℃, Duration: 3~4s, Recovery time : 2 ± 0.5h

Recommended Reflow Soldering Diagram



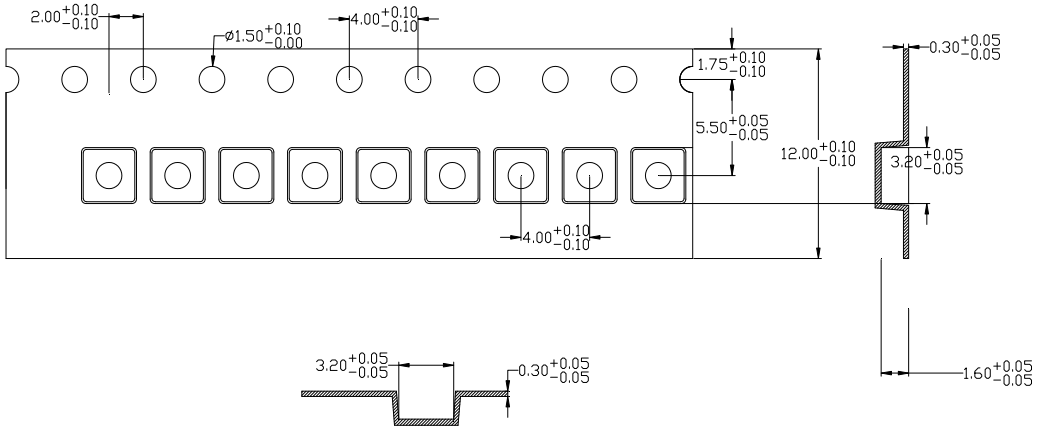
Packing Information

Carrier Tape

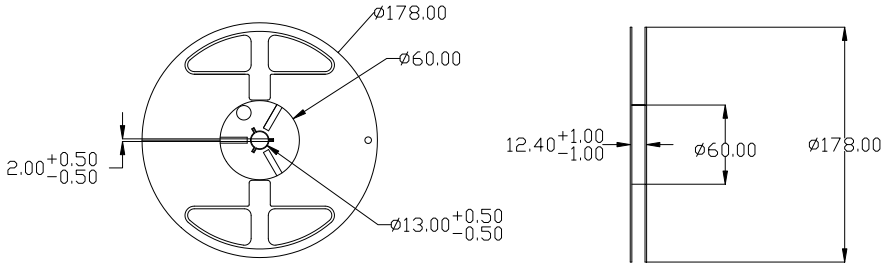


TAPE RUNNING DIRECTION

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.