中讯四方 ™
ZHONG XUN SI FANG

# APPROVAL SHEET

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

## BEIJING ZHONGXUN SIFANG SCIENCE & TECHNOLOGY CO.,LTD.

Tel:     +86-010-58937383
Fax:     +86-010-58937263
E-mail：bjzxsf@bjzxsf.net
Website:  http://www.bjzxsf.net
Add:     No 201, Block A. Building 3. Yongjie Beilu
         Yongfeng high-tech industrial base
         Haidian District Beijing city

RoHS compliance  Pb free

| Part No. | : | SF3236 |
|---|---|---|
| Pages | : | 6 |
| Date | : | 2014/5/26 |
| Revision | : | 1.1 |

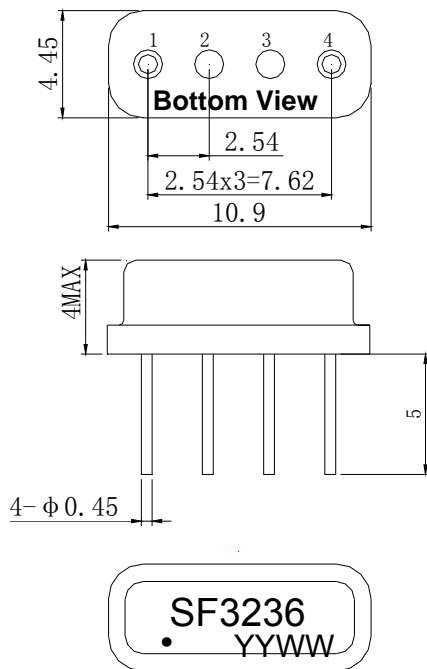| | |
|---|---|
| **Prepared by:** | 梁浩 |
| **Checked by:** | |
| **Approved by:** | |

## Application

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 5.0 MHz

## Features

- **RoHS** compatible
- Package size 10.9x4.45x4.00mm$^3$
- Package Code SC04-06
- **E**lectrostatic **S**ensitive **D**evice(**ESD)**

## Package Dimensions (Unit: mm)

4.45

1  2  3  4

**Bottom View**

2.54

2.54x3=7.62

10.9

4MAX

5

4− φ0.45

SF3236
• YYWW

## Test Circuit(Bottom View)

Rg  8.2nH

S.S.G.
0dBm

16nH

1  2  3  4

16nH  8.2nH

RL  VL

Rg=RL=50Ω

## Pin Configuration

| Pin No. | Description |
|---------|-------------|
| 1 | Input |
| 4 | Output |
| 2,3 | Ground |

## Marking Description

| S | Trademark |
|---|-----------|
| **F** | SAW Filter |
| **3236** | 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.
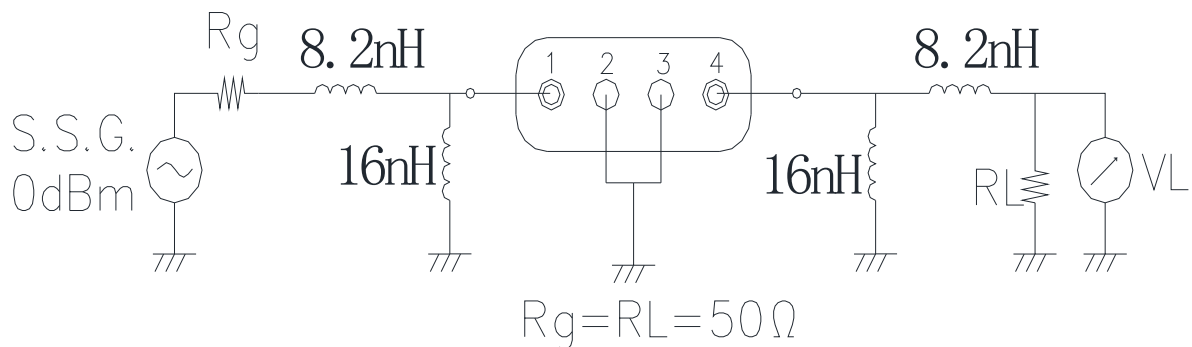
## Performance

### Maximum Rating

| Item | | Value | Unit |
|---|---|---|---|
| DC Voltage | $V_{DC}$ | 3 | V |
| Operation Temperature | T | -40 ~ +85 | ℃ |
| Storage Temperature | $T_{stg}$ | -55 ~ +125 | ℃ |
| RF Power Dissipation | P | 10 | dBm |

### Electronic Characteristics

Test Temperature:   25℃±2℃

Terminating source impedance:   50Ω

Terminating load impedance:   50Ω

| Item | | Minimum | Typical | Maximum | Unit |
|---|---|---|---|---|---|
| Center Frequency | fc | | 348.0 | | MHz |
| Insertion Loss | IL | | 11.5 | 12.0 | dB |
| Amplitude Ripple (p-p) 345.11-350.89MHz | △α | | 0.8 | 1.0 | dB |
| 1 dB Bandwidth | $BW_{1dB}$ | 5.0 | 6.5 | | MHz |
| 45 dB Bandwidth | $BW_{45dB}$ | | 13.8 | 14.0 | MHz |
| Absolute Attenuation | α | | | | |
| 200.00-340.00 MHz | | 40.0 | 43.0 | | dB |
| 356.00-500.00 MHz | | 40.0 | 43.0 | | dB |

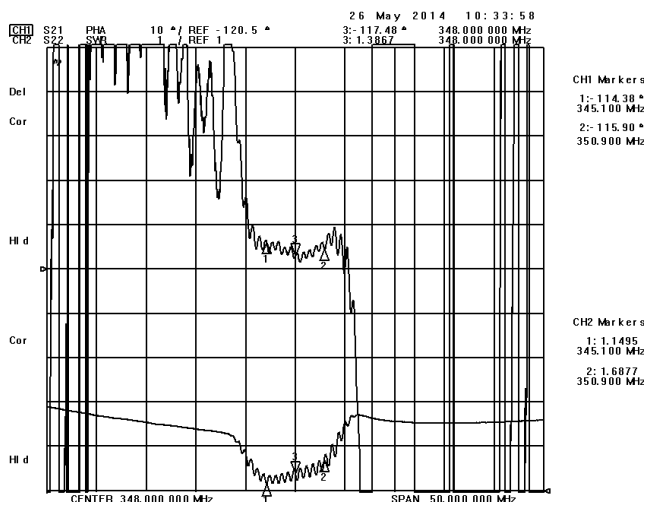### Frequency Characteristics

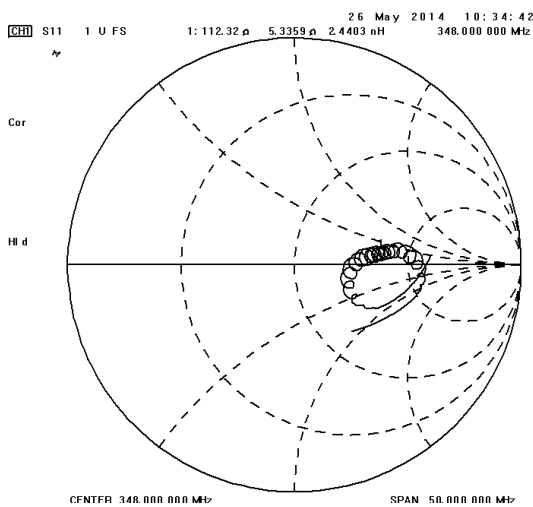Frequency Response
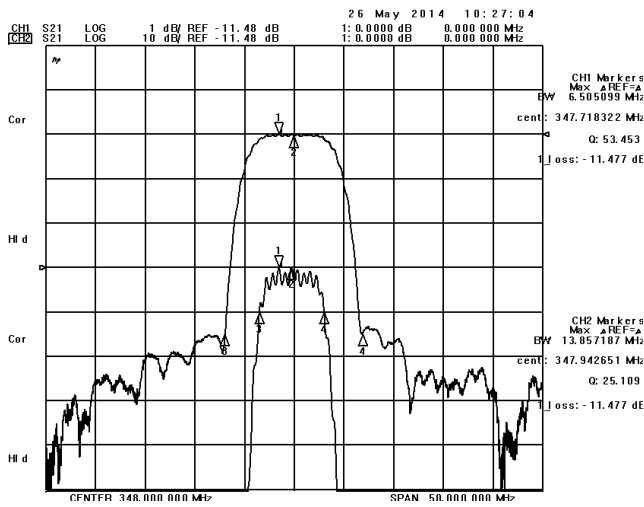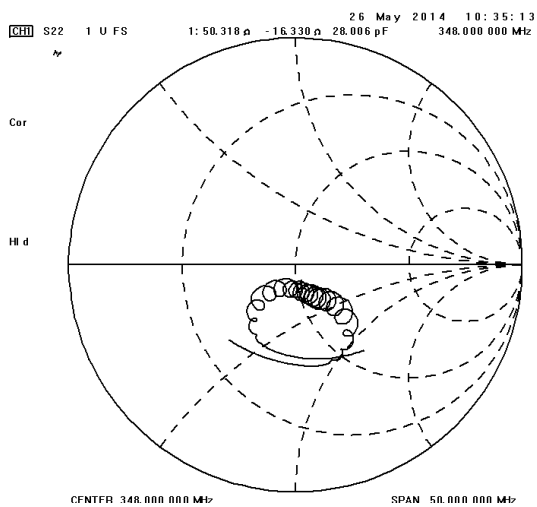


Frequency Response（wideband）
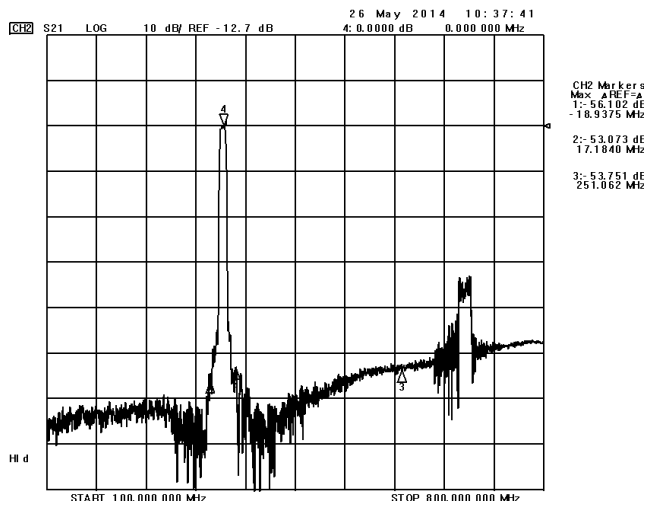


Delay Ripple & S11 VSWR
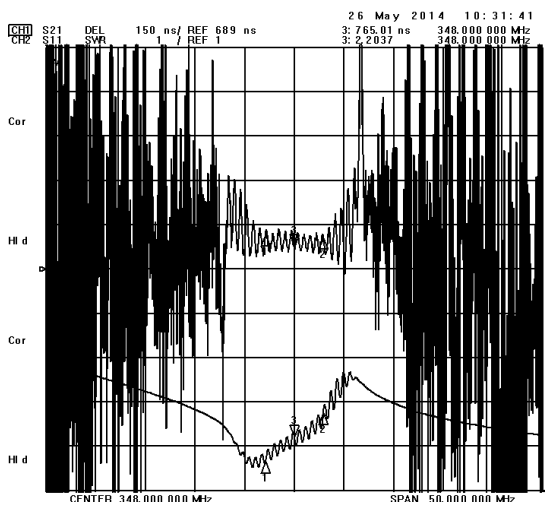


Phase Linearity & S22 VSWR



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<br>(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<br>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<br>Depth: DIP--2/3 , SMD--1/5 |
| 7 | Resistance to Soldering Heat | (1)Thickness of PCB:1mm , Solder condition: 260℃±5℃ , Duration: 10±1s<br>(2)Temperature of Soldering Iron: 350℃±10℃ , Duration: 3~4s ,<br>   Recovery time : 2 ± 0.5h |

## Recommended Reflow Soldering Diagram
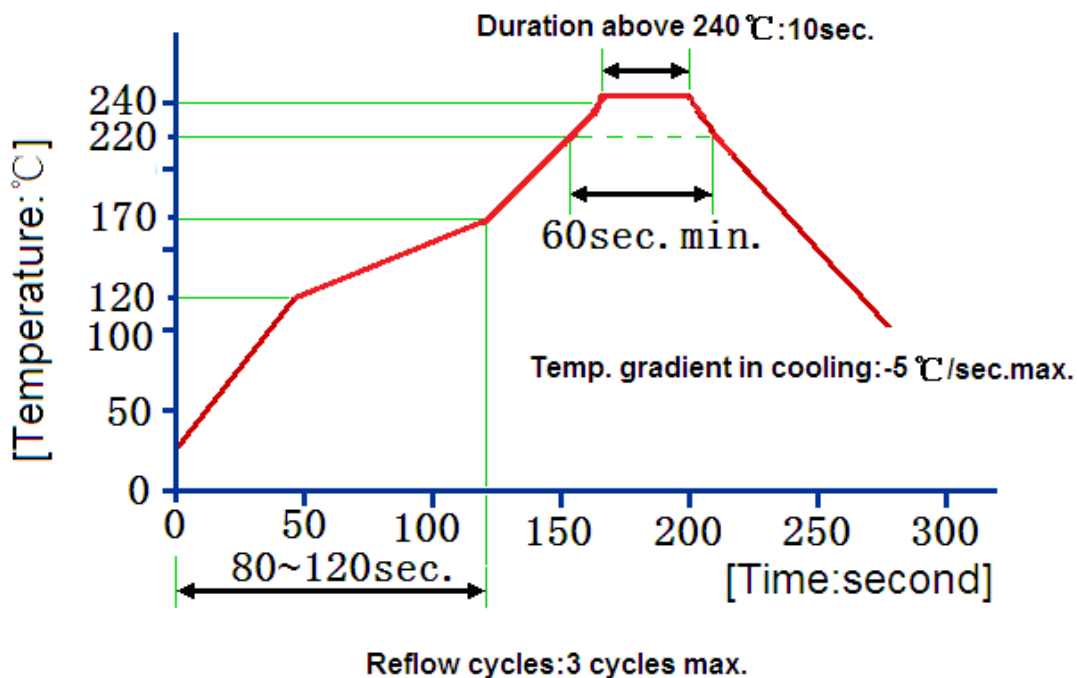
## Notes

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.