



# APPROVAL SHEET

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

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

Tel: +86-010-58937383  
 Fax: +86-010-58937263  
 E-mail: [bjzxsf@bjzxsf.net](mailto: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



|          |   |           |
|----------|---|-----------|
| Part No. | : | SF0325    |
| Pages    | : | 6         |
| Date     | : | 2013/1/31 |
| Revision | : | 1.0       |

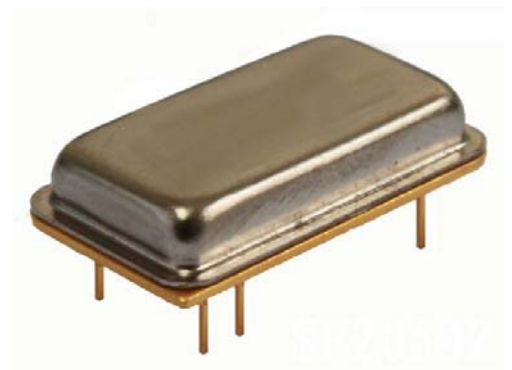
|                     |     |
|---------------------|-----|
| <b>Prepared by:</b> | 郑宝琴 |
| <b>Checked by:</b>  |     |
| <b>Approved by:</b> |     |

**Application**

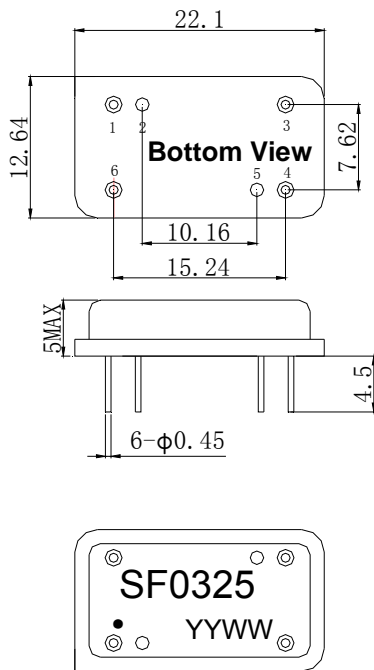
- Low Shape Factor
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 18 MHz

**Features**

- RoHS compatible
- Package size 22.1x12.64x5.00mm<sup>3</sup>
- Package Code DIP2212J
- Electrostatic Sensitive Device(ESD)



**Package Dimensions (Unit: mm)**



**Pin Configuration**

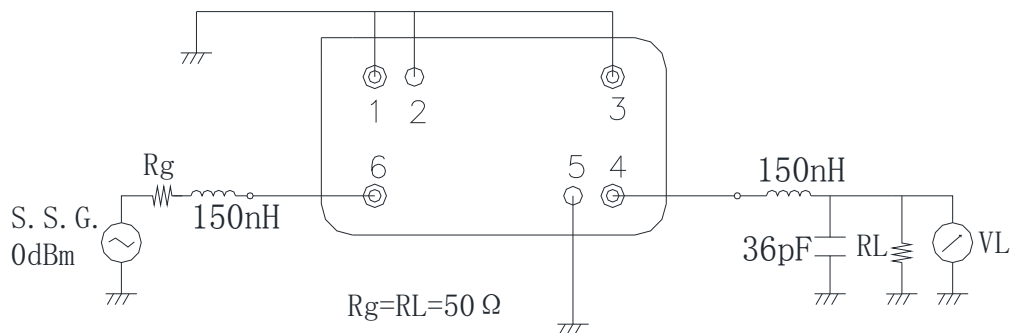
| Pin No. | Description |
|---------|-------------|
| 6       | Input       |
| 4       | Output      |
| 1,2,3,5 | Ground      |

**Marking Description**

|             |                       |
|-------------|-----------------------|
| <b>S</b>    | Trademark             |
| <b>F</b>    | SAW Filter            |
| <b>0325</b> | Part Number           |
| ●           | Pin 1                 |
| <b>YYWW</b> | Year Code & Week Code |

\*Fig: If the products produced in 06<sup>th</sup> week of 2012, The year code & week code is 1206.

**Test Circuit(Bottom View)**



**Performance****Maximum Rating**

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

**Electronic Characteristics**

Test Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

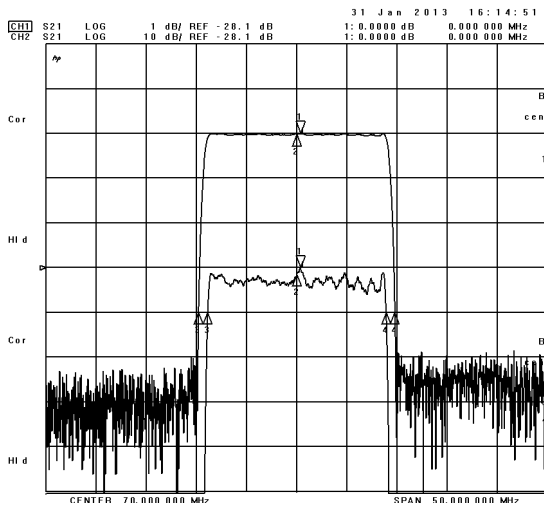
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

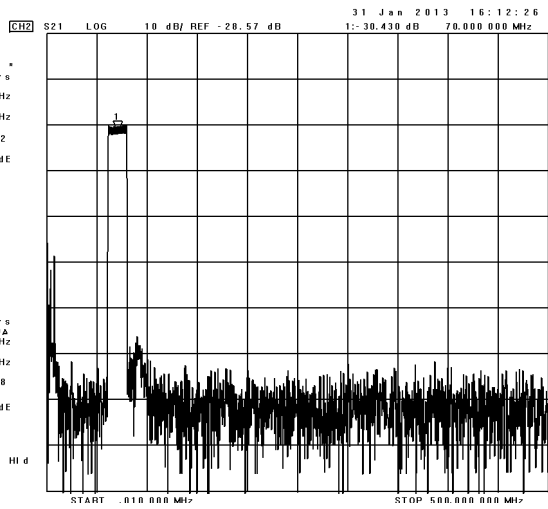
| Item                                     |                  | Minimum | Typical | Maximum | Unit |
|--|------------------|---------|---------|---------|------|
| Center Frequency                         | fc               |         | 70.00   |         | MHz  |
| Insertion Loss(min)                      | IL               |         | 28.1    | 30.0    | dB   |
| Amplitude Ripple (p-p)<br>61.50-78.50MHz | $\Delta\alpha$   |         | 0.5     | 1.0     | dB   |
| 1 dB Bandwidth                           | $BW_{1dB}$       | 17.0    | 17.7    |         | MHz  |
| 3 dB Bandwidth                           | $BW_{3dB}$       | 18.0    | 18.1    |         | MHz  |
| 40 dB Bandwidth                          | $BW_{40dB}$      |         | 19.6    | 20.0    | MHz  |
| Group Delay Ripple<br>61.50-78.50MHz     | GDR              |         | 90.0    | 150.0   | ns   |
| Absolute Delay<br>70.00MHz               |                  |         | 1.9     | 2.5     | us   |
| Absolute Attenuation                     | $\alpha$         |         |         |         |      |
|  | 10.00-55.00 MHz  | 45.0    | 50.0    |         | dB   |
|  | 95.00-500.00 MHz | 45.0    | 50.0    |         | dB   |

Frequency Characteristics

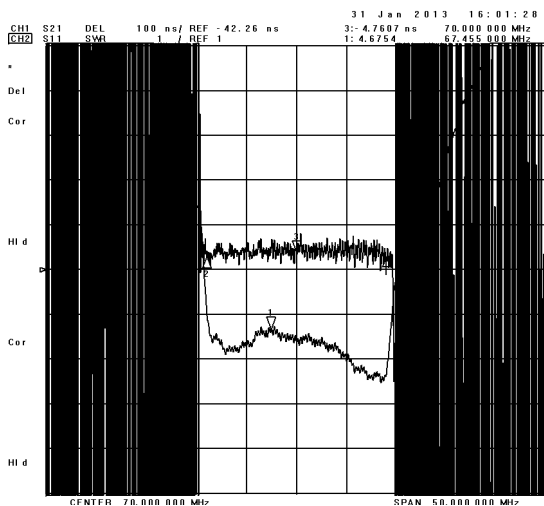
Frequency Response



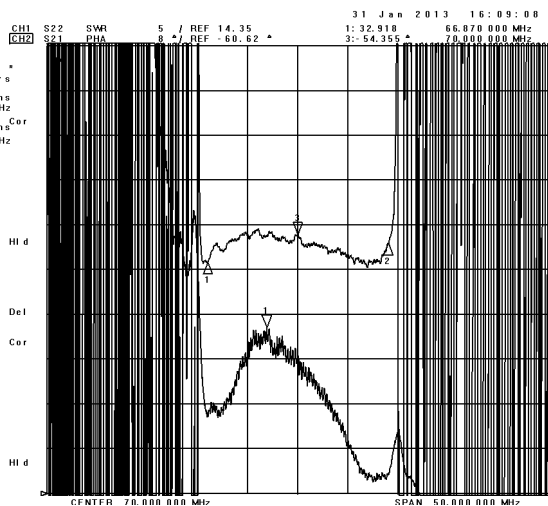
Frequency Response (wideband)



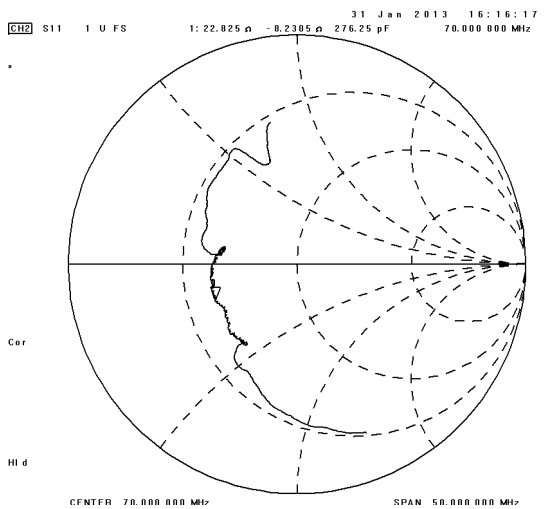
Delay Ripple & S11 VSWR



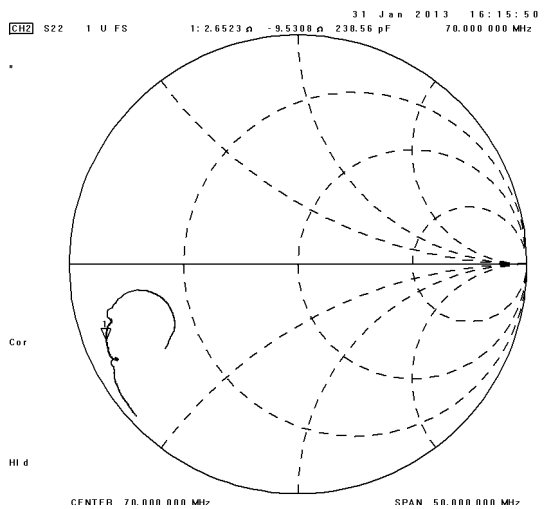
Phase Linearity & S22 VSWR



S11 Smith Chart

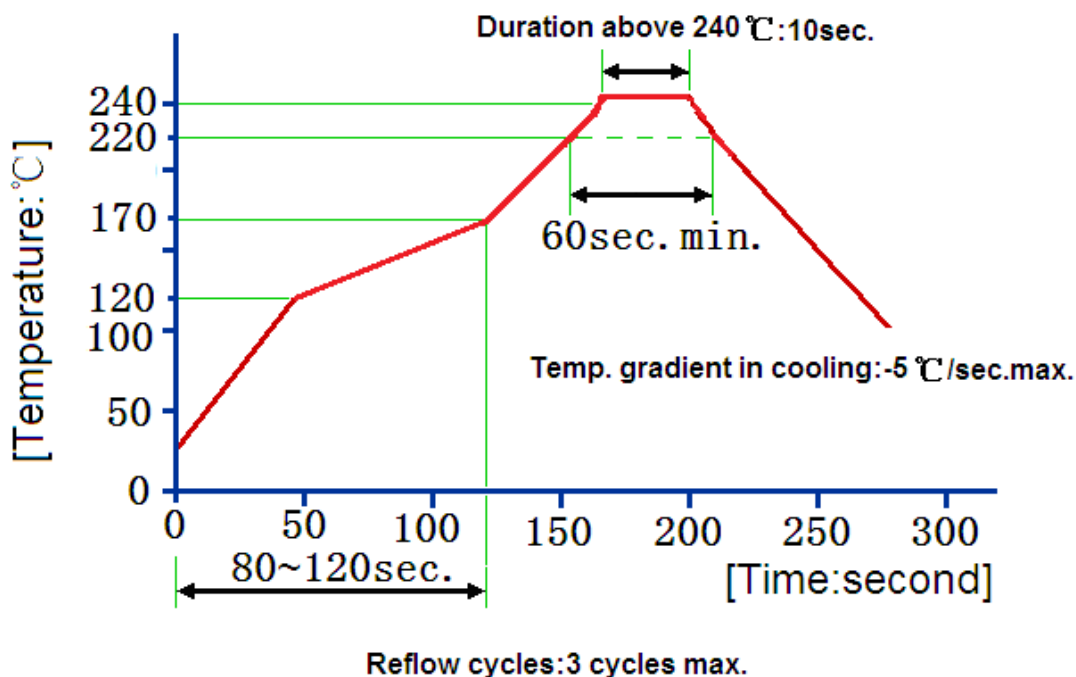


S22 Smith Chart



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

| No. | Test item                    | Test condition   |
|-----|------------------------------|--|
| 1   | Temperature Storage          | (1) Temperature: $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , Duration: 250h, Recovery time: $2\text{h}\pm 0.5\text{h}$<br>(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<br>Duration: 250h  |
| 3   | Thermal Shock                | Heat cycle conditions: $T_A=-55^{\circ}\text{C}\pm 3^{\circ}\text{C}$ , $T_B=85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , $t_1=t_2=30\text{min}$ , 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<br>Directions: X,Y and Z<br>Amplitude: 1.5mm<br>Duration: 2h   |
| 5   | Drop Test                    | Cycle time: 10 times<br>Height: 1.0m   |
| 6   | Solder Ability Test          | Temperature: $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$<br>Depth: DIP--2/3, SMD--1/5<br>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: $10\pm 1\text{s}$<br>(2) Temperature of Soldering Iron: $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$ , Duration: 3~4s,<br>Recovery time : $2 \pm 0.5\text{h}$ |

**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.