

APPROVAL SHEET

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

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| Part No. | : | SF9606 |
|----------|---|------------|
| Pages | : | 7 |
| Date | : | 2013/11/12 |
| Revision | : | 1.0 |



| Prepared by: | 直接 |
|--------------|---------|
| Checked by: | 杨玄伟 |
| Approved by: | 21/8/90 |

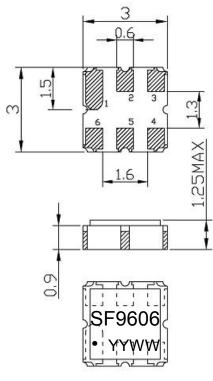
Application

- Low-loss SAW component for mobile systems
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 25.0 MHz

Features

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 3.00x3.00x1.25mm³
- Package Code DCC6C
- Electrostatic Sensitive Device(ESD)

Package Dimensions (DCC6C)



Pin Configuration

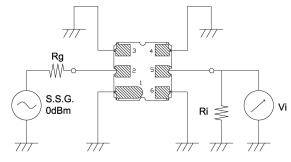
| Pin No. | Description |
|---------|-------------|
| 2 | Input |
| 5 | Output |
| 1,3,4,6 | Case Ground |

Marking Description

| SF | SF | Trademark | |
|------|-----------------------|------------|--|
| | F | SAW Filter | |
| 9606 | Part Number | | |
| • | Pin 1 | | |
| YYWW | Year Code & Week Code | | |

*Fig: If the products produced in 06th week of 2015, The year code & week code is 1506.

Test Circuit (Bottom View)



Rg=Ri=50Ω

Performance

Maximum Rating

| ltem | | Value | Unit |
|-----------------------|------------------|------------|---------------|
| DC Voltage | V _{DC} | 3 | V |
| Operation Temperature | Т | -40 ~ +85 | ${\mathbb C}$ |
| Storage Temperature | T _{stg} | -55 ~ +125 | ${\mathbb C}$ |
| RF Power Dissipation | Р | 10 | dBm |

Electronic Characteristics

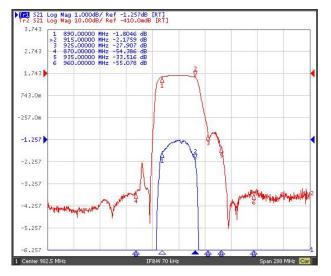
Test Temperature: $25^{\circ}C \pm 2^{\circ}C$

Terminating source impedance: 50Ω Terminating load impedance: 50Ω

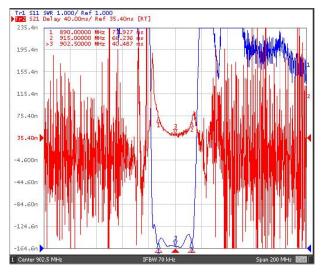
| Item | | Minimum | Typical | Maximum | Unit |
|-------------------------------------------|-----|---------|---------|---------|------|
| Center Frequency | fc | | 902.5 | | MHz |
| Insertion Loss(min) | IL | | 1.4 | 2.0 | dB |
| Insertion Loss 890.00 - 915.00MHz | IL | | 2.2 | 3.5 | dB |
| Amplitude Ripple (p-p) 890.00 - 915.00MHz | Δa | | 0.9 | 2.0 | dB |
| Group Delay Ripple 890.00 - 915.00MHz | GDR | | 40.0 | 100.0 | ns |
| Absolute Attenuation | α | | | | |
| DC- 700.00 MHz | | 45.0 | 52.0 | | dB |
| 700.00 - 870.00 MHz | | 45.0 | 52.0 | | dB |
| 870.00 - 880.00 MHz | | 30.0 | 40.0 | | dB |
| 925.00 - 945.00 MHz | | 20.0 | 25.0 | | dB |
| 945.00 - 2000.00 MHz | | 45.0 | 50.0 | | dB |
| 2000.00 - 3000.00 MHz | | 30.0 | 35.0 | | dB |
| Input VSWR 890.00 - 915.00MHz | | | 1.7:1 | 2.0:1 | 1 |
| Output VSWR 890.00 - 915.00MHz | | | 1.7:1 | 2.0:1 | 1 |

Frequency Characteristics

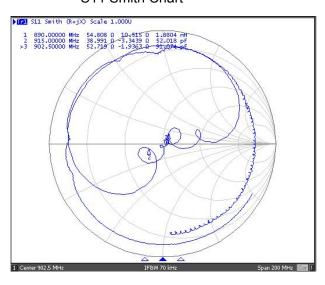
Frequency Response



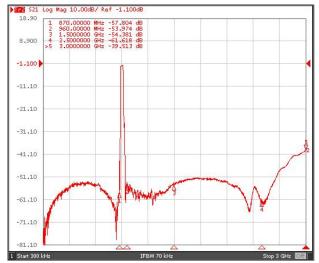
Delay Ripple & S11 VSWR



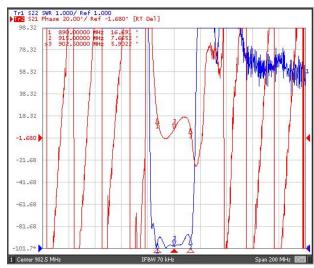
S11 Smith Chart



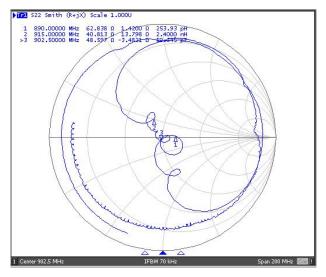
Frequency Response (wideband)



Phase Linearity & S22 VSWR



S22 Smith Chart



Please read notes at the end of this documen

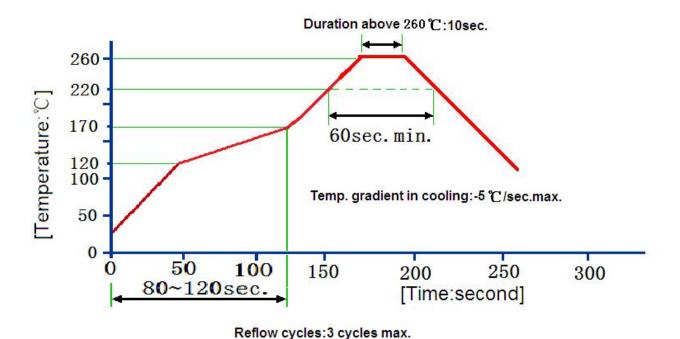
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Reliability (The SAW components shall remain electrical performance after tests)

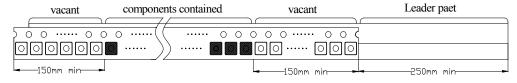
| No. | Test item | Test condition | | |
|-----|---------------------|-----------------------------------------------------------------------|--|--|
| 1 | Temperature | (1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h | | |
| | Storage | (2) Temperature: –55℃±3℃, Duration: 250h, Recovery time: 2h±0.5h | | |
| 2 | Humidity Test | Conditions: 60 ℃±2 ℃ , 90~95% RH | | |
| | Thormal Chook | Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch | | |
| 3 | Thermal Shock | time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h. | | |
| 4 | Vibration Fations | Frequency of vibration: 10~55Hz Amplitude:1.5mm | | |
| 4 | Vibration Fatigue | Directions: X,Y and Z Duration: 2h | | |
| 5 | Drop Test | Cycle time: 10 times Height: 1.0m | | |
| | | , | | |
| 6 | Solder Ability Test | Temperature: 245°C±5°C Duration: 3.0s5.0s | | |
| | Solder Ability Test | Depth: DIP2/3 , SMD1/5 | | |
| | | (1)Thickness of PCB:1mm , Solder condition: 260℃±5℃ , Duration: 10±1s | | |
| | Resistance to | | | |
| 7 | Soldering Heat | (2)Temperature of Soldering Iron: 350 ℃ ±10 ℃, Duration: 3~4s, | | |
| | | Recovery time: 2 ± 0.5h | | |

Recommended Reflow Soldering Diagram



Packing Information

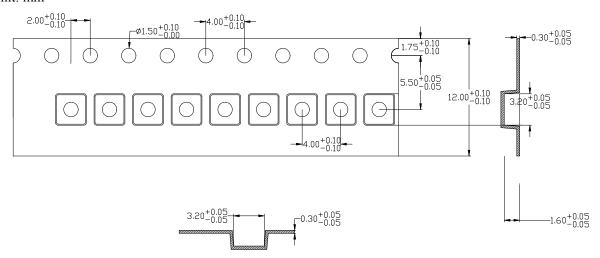
Carrier Tape



TAPE RUNNING DIRECTION

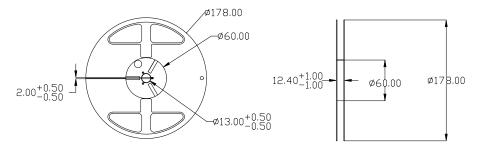
Reel Dimensions

Unit: mm



Outer Packing

Unit: mm



3000 pcs/reel

| Туре | Quantity | Dimension | Description | Weight |
|--------------|----------|-------------|-------------------------------------|--------|
| Internal box | 6000 | 190×188×42 | carton box 2 reel / internal box | 0.50 |
| External box | 30000 | 235×205×210 | 5 boxes / external box | 2.77 |

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Unit: mm Unit: kg

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.

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