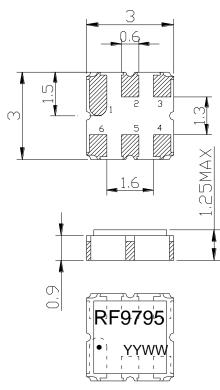
#### **Application**

- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 2.0 MHz

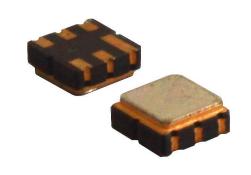
#### **Features**

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 3.00x3.00x1.25mm<sup>3</sup>
- Package Code DCC6C
- Electrostatic Sensitive Device(ESD)

# Package Dimensions (Unit: mm)



#### **Test Circuit (Bottom View)**



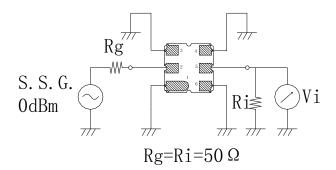
# **Pin Configuration**

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

### **Marking Description**

| D.F. | R                     | Manufacturer |  |
|------|-----------------------|--------------|--|
| RF   | F                     | SAW Filter   |  |
| 9795 | Part Number           |              |  |
| •    | Pin 1                 |              |  |
| YYWW | Year Code & Week Code |              |  |

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



#### **Performance**

# **Maximum Rating**

| Item                  | Value            | Unit       |               |
|-----------------------|------------------|------------|---------------|
| DC Voltage            | $V_{DC}$         | 3          | V             |
| Operation Temperature | Т                | -40 ~ +85  | $^{\circ}$    |
| Storage Temperature   | T <sub>stg</sub> | -55 ~ +125 | ${\mathbb C}$ |
| RF Power Dissipation  | Р                | 10         | dBm           |

### **Electronic Characteristics**

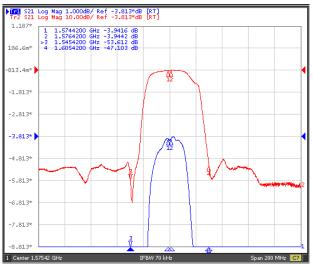
Test Temperature:  $25^{\circ}C \pm 2^{\circ}C$ 

Terminating source impedance:  $50\Omega$ Terminating load impedance:  $50\Omega$ 

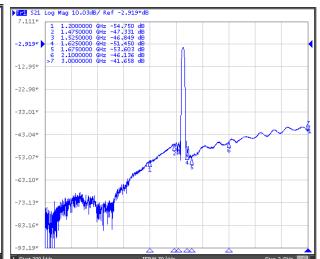
| Item   | Minimum       | Typical | Maximum | Unit  |     |
|--|---------------|---------|---------|-------|-----|
| Center Frequency                               | fc            |         | 1575.42 |       | MHz |
| Insertion Loss<br>1574.42 – 1576.42MHz         | IL            |         | 4.0     | 4.5   | dB  |
| Amplitude Ripple (p-p)<br>1574.42 – 1576.42MHz | $\triangle a$ |         | 0.3     | 1.0   | dB  |
| Group Delay Ripple 1574.42 – 1576.42MHz        | GDR           |         | 5.0     | 20.0  | ns  |
| Absolute Attenuation                           | а             |         |         |       |     |
| DC - 1200.00 MHz                               |               | 45.0    | 50.0    |       | dB  |
| 1200.00 - 1475.42 MHz                          |               | 35.0    | 40.0    |       | dB  |
| 1525.42 MHZ                                    |               | 35.0    | 40.0    |       | dB  |
| 1545.42 MHZ                                    |               | 35.0    | 40.0    |       | dB  |
| 1555.42 MHZ                                    |               | 7.0     | 15.0    |       | dB  |
| 1595.42 MHZ                                    |               | 3.0     | 6.0     |       | dB  |
| 1605.42 MHZ                                    |               | 35.0    | 40.0    |       | dB  |
| 1625.42 MHZ                                    |               | 35.0    | 40.0    |       | dB  |
| 1675.42 -2100.00 MHz                           |               | 40.0    | 45.0    |       | dB  |
| 2100.00- 3000.00 MHz                           |               | 30.0    | 35.0    |       | dB  |
| Input VSWR 1574.42 – 1576.42MHz                |               |         | 1.5:1   | 2.0:1 | /   |
| Output VSWR<br>1574.42 – 1576.42MHz            |               |         | 1.5:1   | 2.0:1 | /   |

### **Frequency Characteristics**

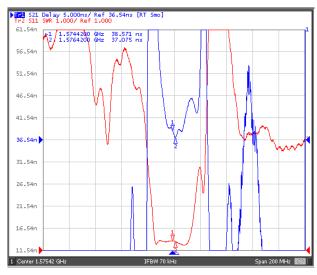
#### Frequency Response



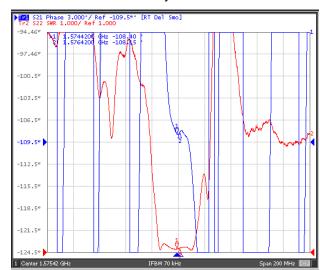
Frequency Response (wideband)



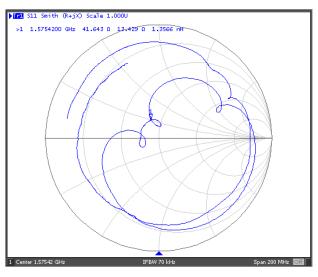
Delay Ripple & S11 VSWR



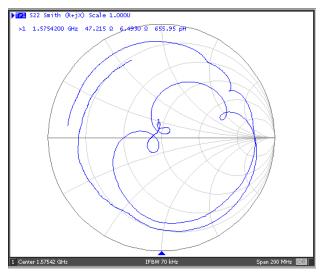
Phase Linearity & S22 VSWR



S11 Smith Chart



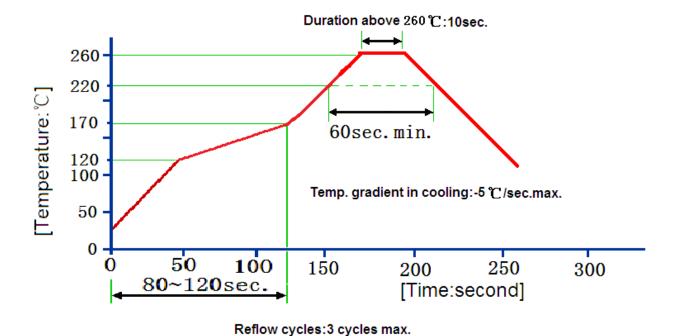
S22 Smith Chart



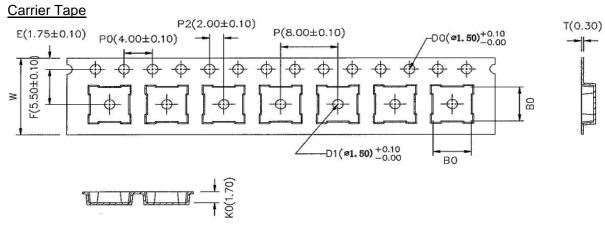
### Reliability (The SAW components shall remain electrical performance after tests)

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

# **Recommended Reflow Soldering Diagram**

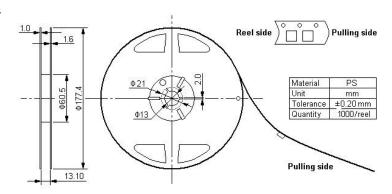


# **Packing Information**



\* B0: 5.35 for QCC8C; 4.15 for DCC6/QCC8B; 3.35 for DCC6C/QCC8D

#### **Reel Dimensions**



#### **Outer Packing**

| Туре         | Quantity | Dimension   | Description                         | Weight |
|--------------|----------|-------------|-------------------------------------|--------|
| Internal box | 1000     | 190×188×42  | carton box<br>2 reel / internal box | 0.18   |
| External box | 10000    | 235×205×210 | 5 boxes / external box              | 1.80   |

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.