



SAW Components

Data Sheet

CQTSF1591M00.00

| | |
|---|-------|
| Customer's Approval Certificate | |
| Complies with Directive 2002/95/EC (RoHS) | |
| Please return this Page Via email as a certification of Your approval | |
| Checked & Approval by: | Date: |
| | |

Hangzhou Freq-control Electronics Technology Co.,Ltd.

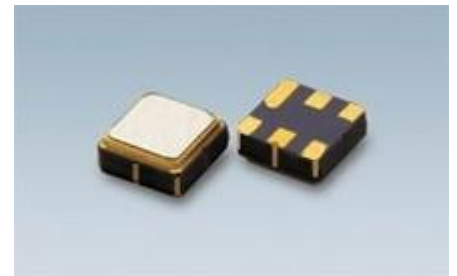
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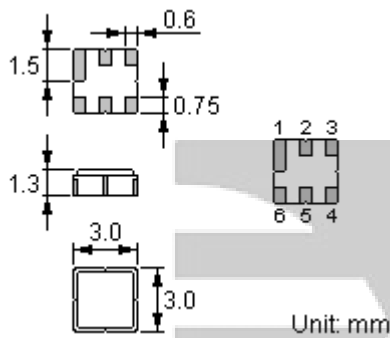
Features

- Low-loss RF filter for mobile systems
- Low amplitude ripple
- No matching network required for operation at 50Ω
- Ceramic package for **Surface Mounted Technology (SMT)**
- Lead-free production and **RoHS** compliant



Package Dimensions

Ceramic Package: **DCC6C**



Pin Configuration

| | |
|------------|--------|
| 2 | Input |
| 5 | Output |
| 1, 3, 4, 6 | Ground |

Maximum Ratings

| Rating | | Value | Unit |
|-----------------------------|-----------|-----------|------|
| Input Power Level | P | 10 | dBm |
| DC Voltage | V_{DC} | 5 | V |
| Operating Temperature Range | T_A | -40 ~ +85 | °C |
| Storage Temperature Range | T_{stg} | -40 ~ +85 | °C |

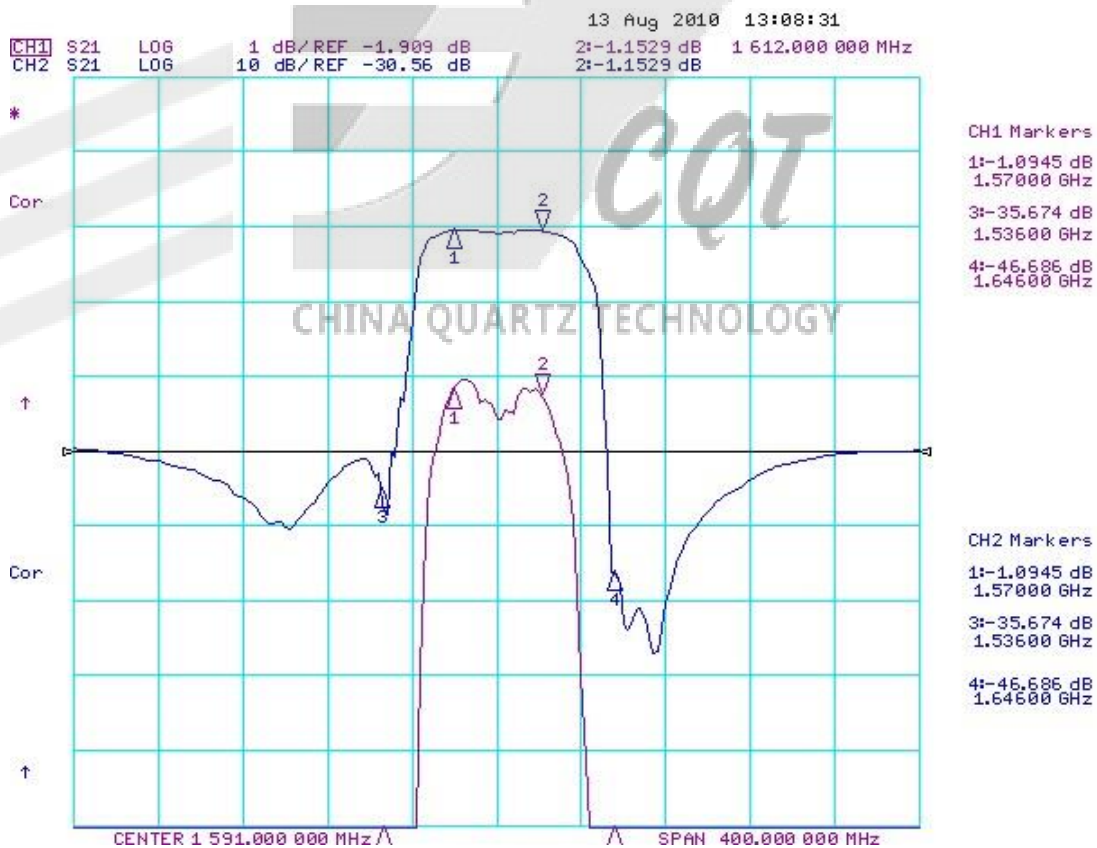
Electrical Characteristics

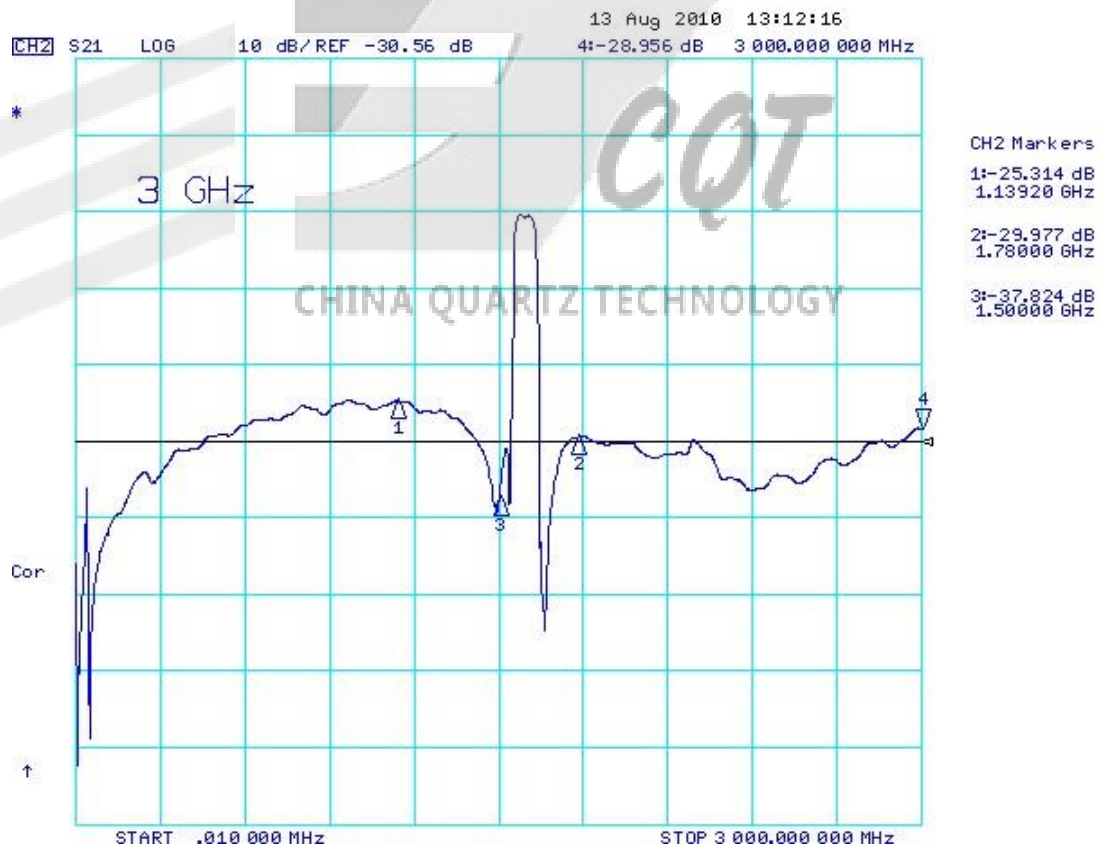
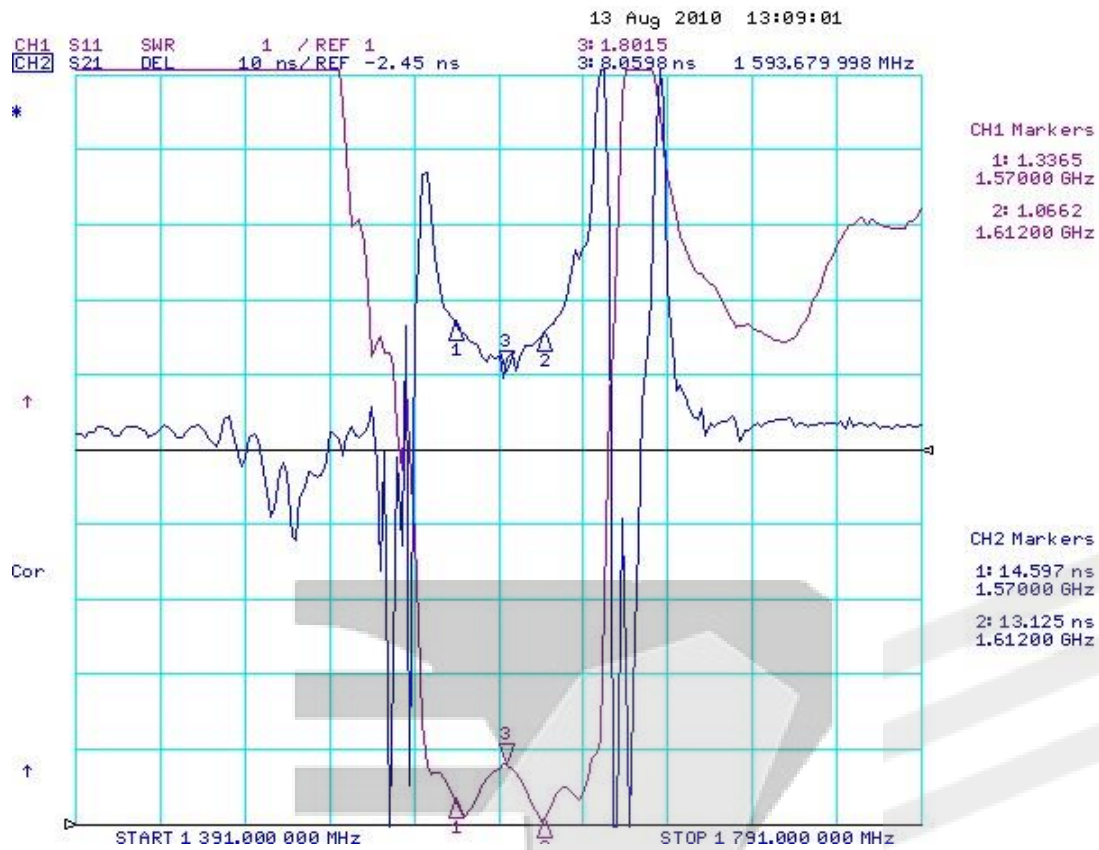
| Item | | Minimum | Typical | Maximum | Unit |
|------------------------------------|--|---------|---------|---------|----------|
| Center Frequency | f_c | | 1591 | | MHz |
| Insertion Loss | IL | | | | |
| | 1570.00 1612.00 MHz | -- | 1.5 | 2.5 | dB |
| Group Delay Ripple | 1570.00 1612.00 MHz | | 10 | 40 | ns |
| Absolute Attenuation | α | | | | |
| | DC 1500.00 MHz | 22 | 25 | | dB |
| | 1536 MHz | 30 | | | dB |
| | 1646 MHz | 30 | | | dB |
| | 1700.00 1800.00 MHz | 25 | 29 | | dB |
| | 1800.00 3000.00 MHz | 22 | 28 | | dB |
| Amplitude Ripple (p-p) | 1570.00 1612.00 MHz $\Delta \alpha$ | | 0.5 | 1.0 | dB |
| Input VSWR | 1570.00 1612.00 MHz | | 1.8 : 1 | 2.0 : 1 | |
| Output VSWR | 1570.00 1612.00 MHz z | | 1.8 : 1 | 2.0 : 1 | |
| Input / Output Impedance (Nominal) | | | 50 | | Ω |

RoHS Compliant

Electrostatic Sensitive Device

Typical Frequency Response





Stability Characteristics

| | Test item | Condition of test |
|---|---------------------------|--|
| 1 | Mechanical shock | (a) Drops: 3 times on concrete floor (b) Height: 1.0 m |
| 2 | Vibration resistance | (a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours |
| 3 | Moisture resistance | (a) Condition: 40°C, 90~95% R.H. (b) Duration: 96 hours (c) Wait 4 hours before measurement |
| 4 | Climatic sequence | (a) +70°C for 16 hours (b) +55°C for 24 hours, 90~95% R.H. (c) -25°C for 2 hours (d) +40°C for 24 hours, 90~95% R.H. (e) Wait 4 hours before measurement |
| 5 | High temperature exposure | (a) Temperature: 70°C (b) Duration: 250 hours (c) Wait 4 hours before measurement |
| 6 | Thermal impact | (a) +70°C for 30 minutes ⇒ -25°C for 30 minutes repeated 3 times (b) Wait 4 hours before measurement |

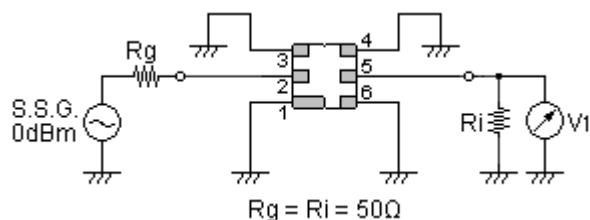
Requirements: The SAW filter shall remain within the electrical specifications after tests.

Remarks

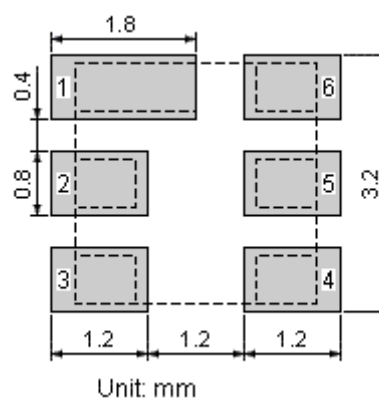
- SAW devices should not be used in any type of fluid such as water, oil, organic solvent, etc.
- Be certain not to apply voltage exceeding the rated voltage of components.
- Do not operate outside the recommended operating temperature range of components.
- Sudden change of temperature shall be avoided, deterioration of the characteristics can occur.
- Be careful of soldering temperature and duration of components when soldering.
- Do not place soldering iron on the body of components.
- Be careful not to subject the terminals or leads of components to excessive force.
- SAW devices are electrostatic sensitive. Please avoid static voltage during operation and storage.
- Ultrasonic cleaning shall be avoided. Ultrasonic vibration may cause destruction of components.

CHINA QUARTZ TECHNOLOGY

Test Circuit

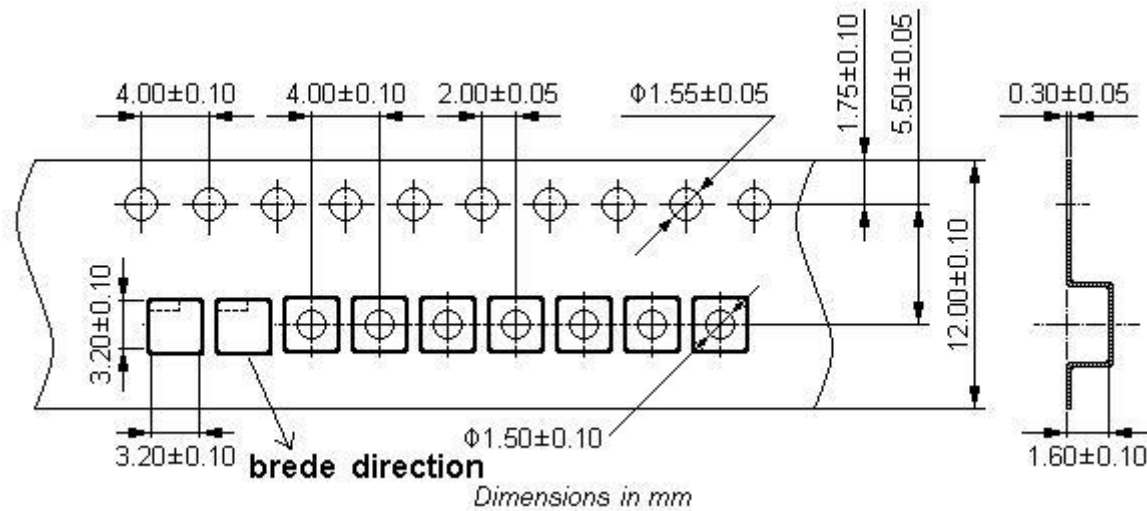


Recommended Land Pattern

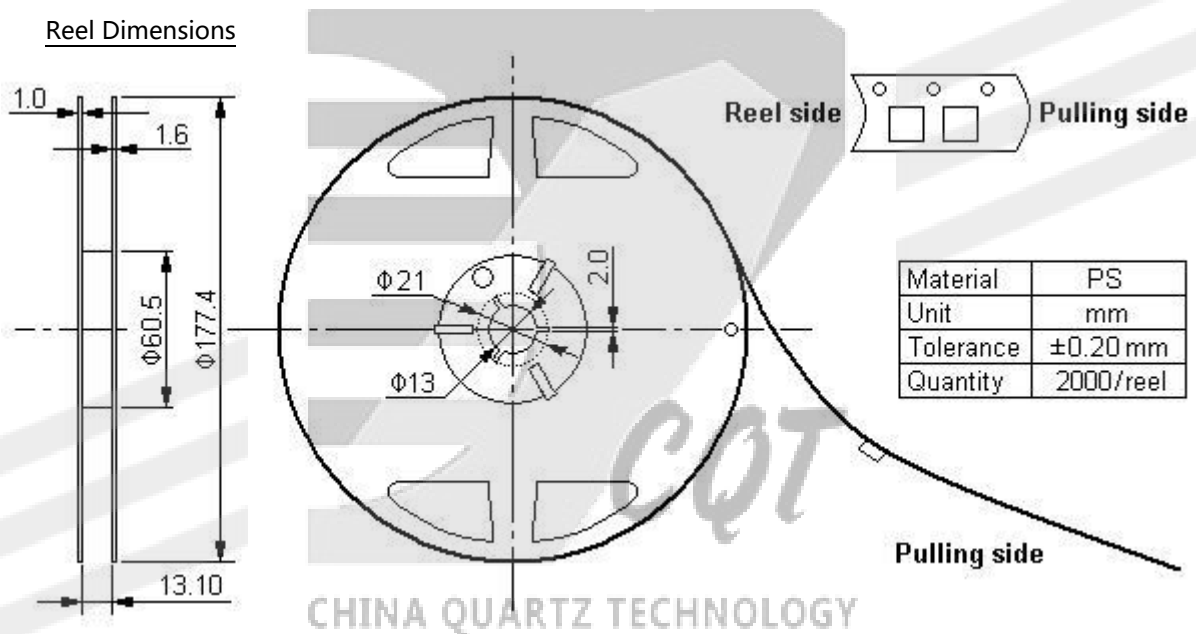


Packing Information

Carrier Tape



Reel Dimensions



Outer Packing

| Type | Quantity | Dimension | Description | Weight |
|---------------|----------|-------------|---|--------|
| Carton Box I | 10000 | 190×190×95 | anti-static plastic bag & carton box | 0.85 |
| Carton Box II | 20000 | 190×190×190 | 1 reel / bag 5 bags / box (10000 pcs) 10 bags / box (20000 pcs) | 1.80 |

Unit: mm

Unit: kg

Recommended Soldering Profile

