



SAW Components
Data Sheet
CQTSF2142M50.01

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.

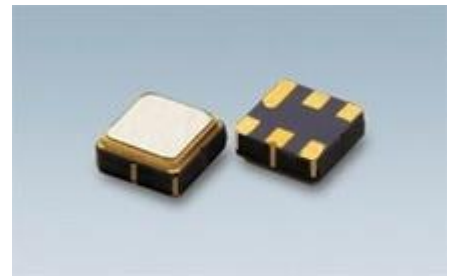
TEL:0086-571-85803723

FAX:0086-571-85803724

sales@@csimc-freqcontrol.com

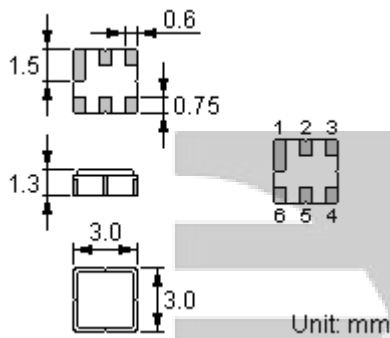
Features

- 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



1.Package Dimensions

Ceramic Package: **DCC6C**



Pin Configuration

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

2.Marking

DSF*
.XXXX

- (1) Laser Marking
- (2) D: Manufacture's logo
- (3) SF: SAW Filter
- (4) XXXX: Part Number
- (5) : Pin 1 Identifier
- (6) *: Lot number (The code shown below varies in a 4-year cycle)

Code	1	2	3	4	5	6	7	8	9	10	11	12
2009	A	B	C	D	E	F	G	H	J	K	L	M
2010	N	P	Q	R	S	T	U	V	W	X	Y	Z
2011	a	b	c	d	e	f	g	h	i	j	k	m
2012	n	p	q	r	s	t	u	v	w	x	y	z

3. Maximum Ratings

Rating		Value	Unit
Input Power Level	P	11 dBm CW , $T_a=85^{\circ}\text{C}$, life time > 10 years	
DC Voltage	V_{DC}	12	V
Operating Temperature Range	T_A	-40 ~ +85	$^{\circ}\text{C}$
Storage Temperature Range	T_{stg}	-40 ~ +85	$^{\circ}\text{C}$

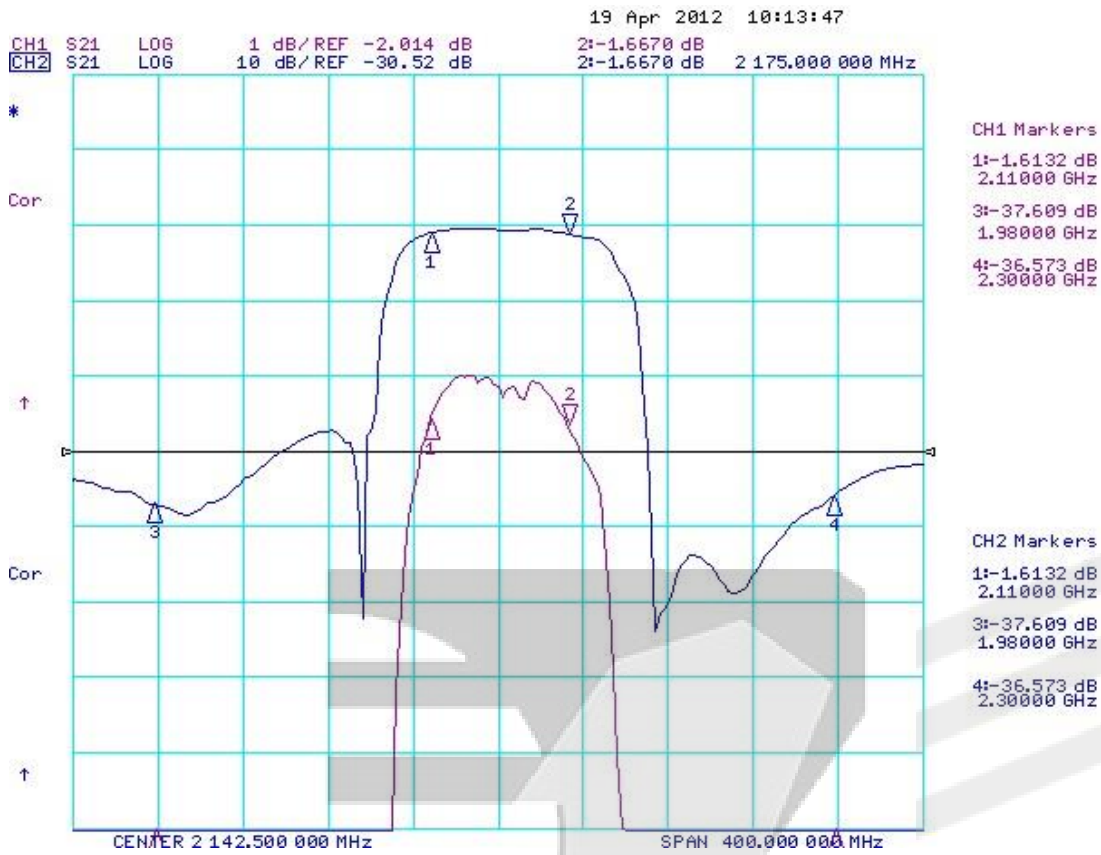
Electrical Characteristics

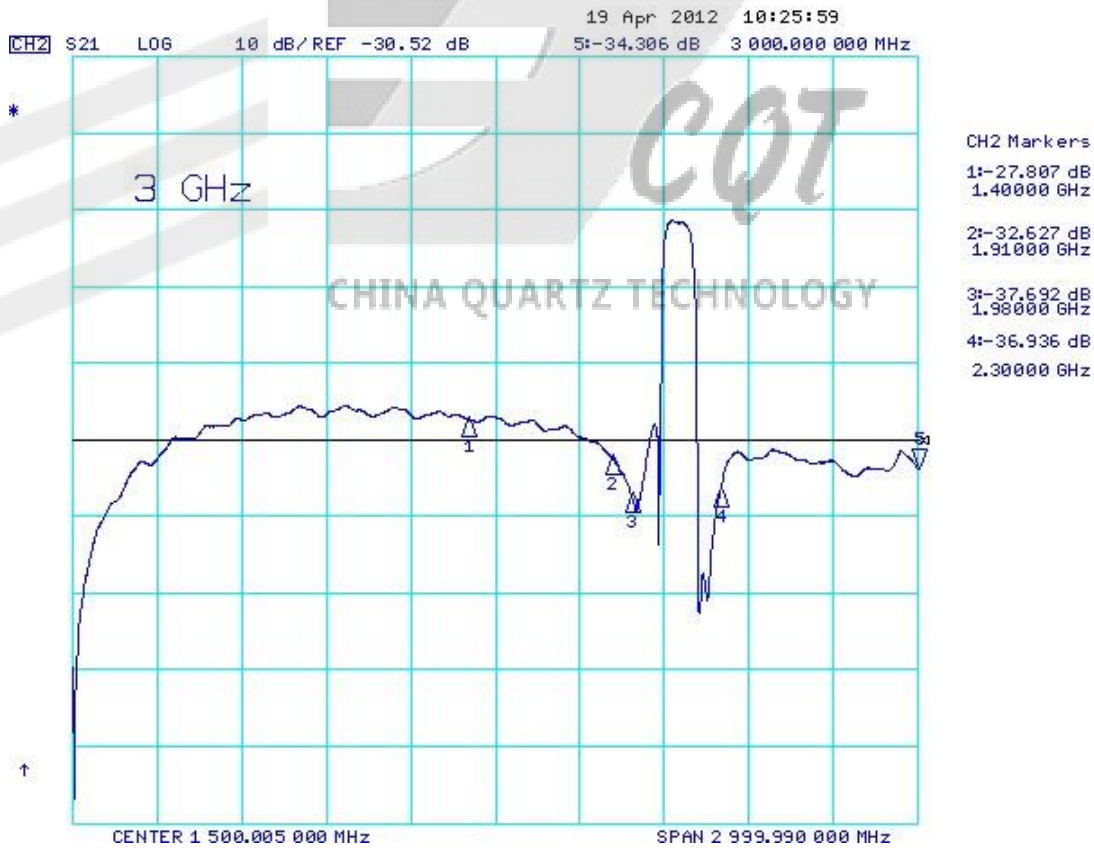
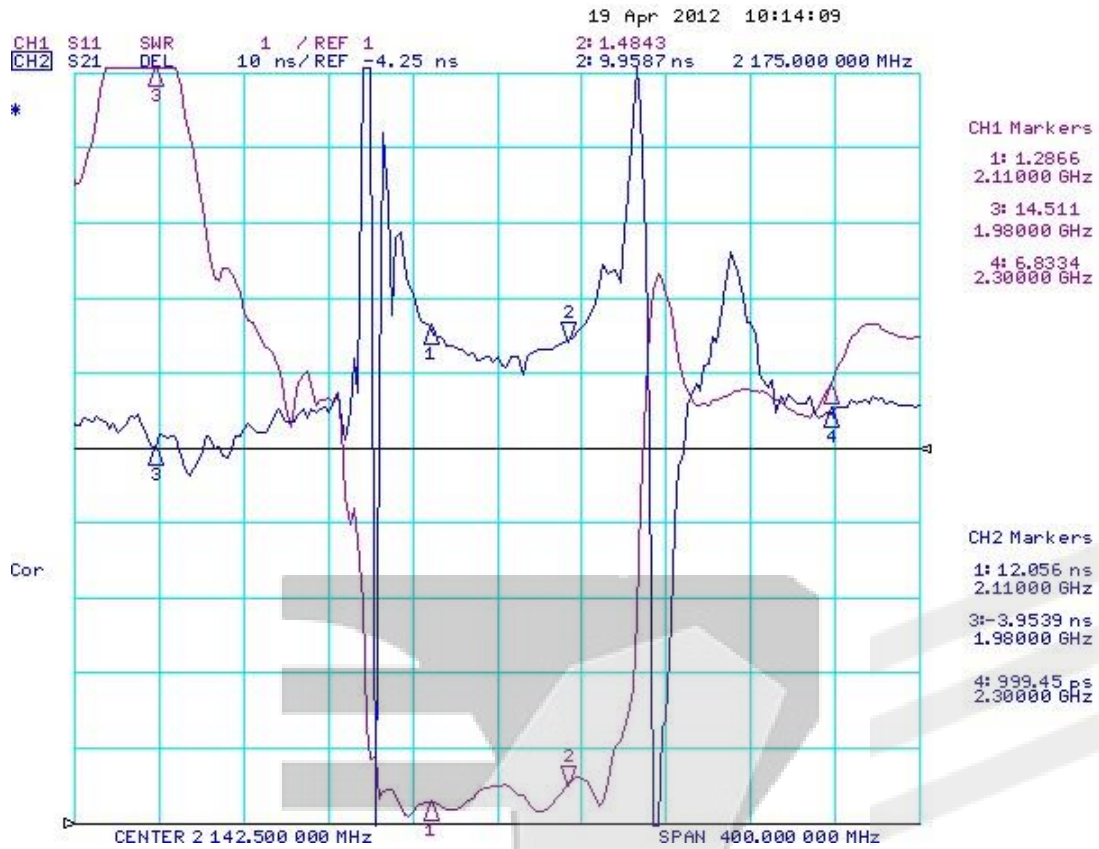
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_c		2142.5		MHz
Insertion Loss	IL				
	2110.00 ... 2175.00 MHz	--	1.8	3.5	dB
Group Delay Ripple	2110.00 ... 2175.00 MHz		10	40	ns
Absolute Attenuation	α				
	0.30 ... 1400.00 MHz	22	25		dB
	1400.00 ... 1910.00 MHz	25	27		dB
	1900.00 ... 1980.00 MHz	28	30		dB
	2300.00 ... 3700.00 MHz	25	30		dB
	3700.00 ... 5300.00 MHz	20	25		dB
	5300.00 ... 5700.00 MHz	15	20		dB
Amplitude Ripple (p-p)	2110.00 ... 2175.00 MHz $\Delta\alpha$		1.0	1.5	dB
Input VSWR	2110.00 ... 2175.00 MHz		1.5 : 1	2.0 : 1	
Output VSWR	2110.00 ... 2175.00 MHz		1.5 : 1	2.0 : 1	
Input / Output Impedance (Nominal)			50		Ω

 **RoHS Compliant**

 **Electrostatic Sensitive Device**

4. Typical Frequency Response





5. Stability Characteristics

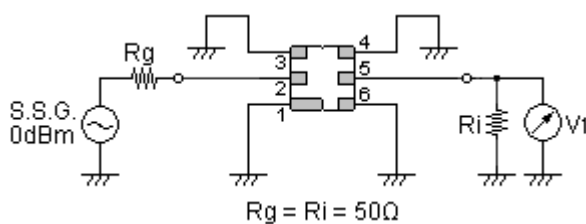
	Test item	Condition of test
1	Mechanical shock	(a) Drops: 3 times on concrete floor (b) Height: 1.0 m
2	Vibration resistance	(a) Frequency of vibration: 10~55Hz (b) Amplitude: 1.5 mm (c) Directions: X,Y and Z (d) Duration: 2 hours
3	Moisture resistance	(a) Condition: 40°C, 90~95% R.H. (b) Duration: 96 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.

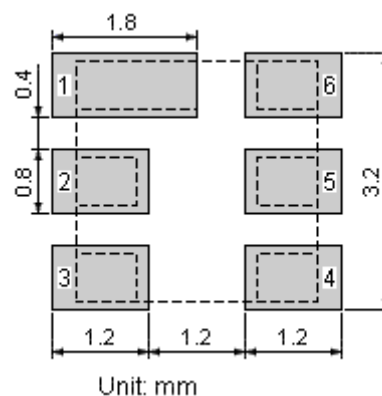
Remarks

- 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.

6. Test Circuit

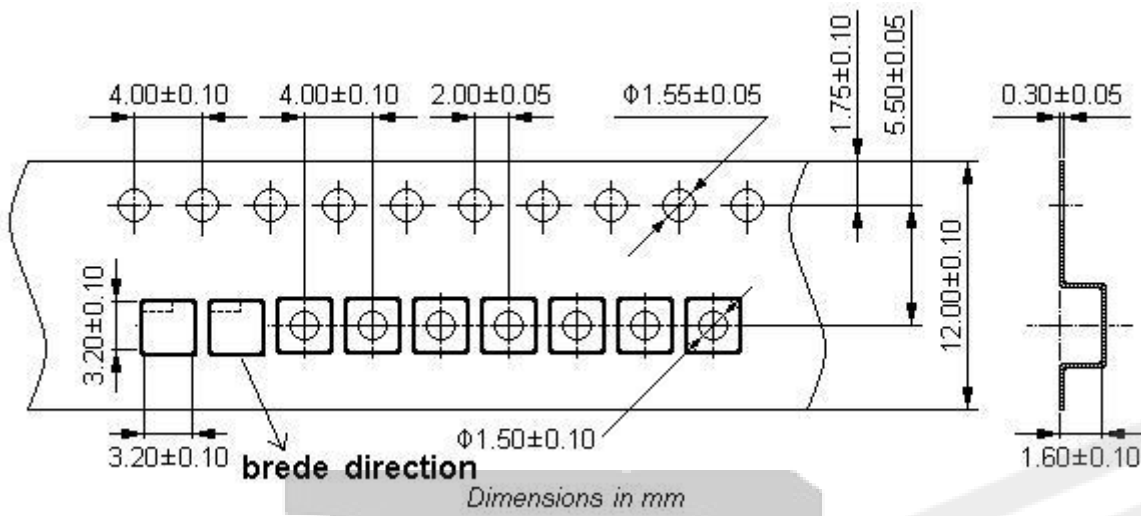


Recommended Land Pattern

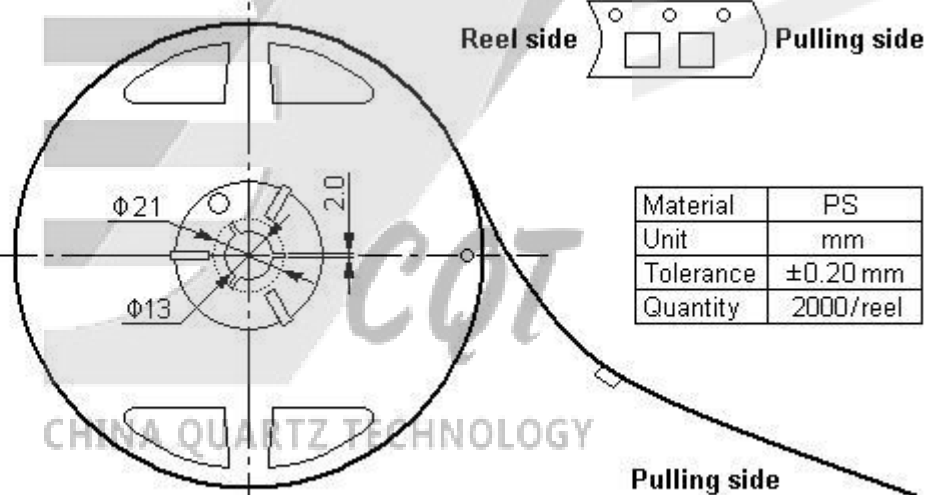
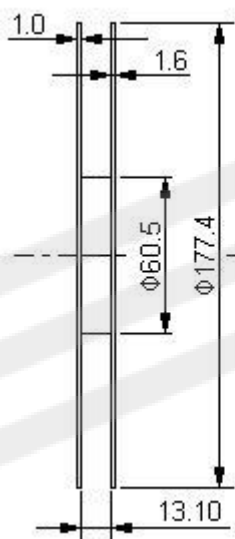


7. Packing Information

Carrier Tape



Reel Dimensions



Material	PS
Unit	mm
Tolerance	±0.20 mm
Quantity	2000/reel

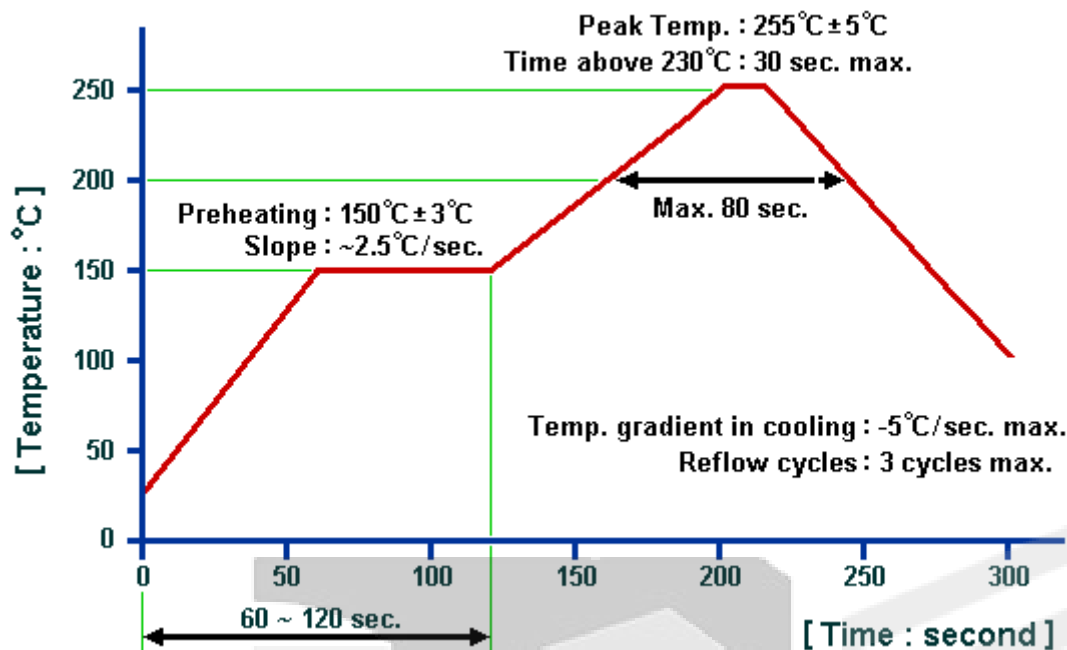
Outer Packing

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



© 2014. All Rights Reserved.

1. The specifications of this device are subject to change or obsolescence without notice.
2. Typically, equipment utilizing this device requires emissions testing and government approval, which is the responsibility of the equipment manufacturer.
3. Our liability is only assumed for the Surface Acoustic Wave (SAW) component(s) per se, not for applications, processes and circuits implemented within components or assemblies.
4. For questions on technology, prices and delivery, please contact our sales offices or e-mail sales@cqtgroup.com.

CHINA QUARTZ TECHNOLOGY