



SAW Components

Data Sheet

CQTSF433M92.00

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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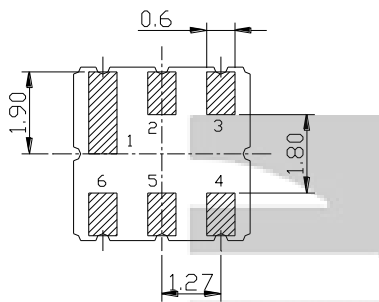
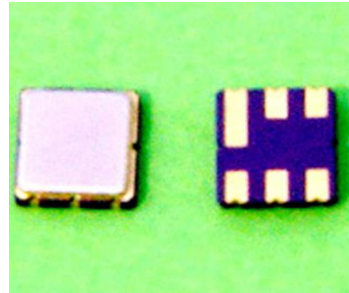
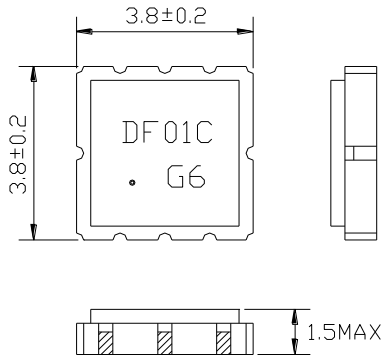
FAX:0086-571-85803724

sales@csimc-freqcontrol.com

1. Package Dimension

(S31)

Unit: mm



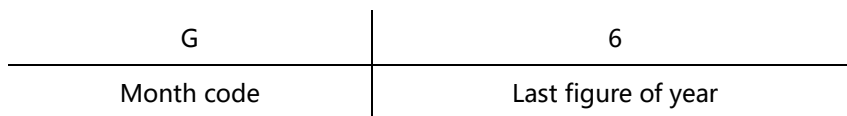
Pin No.	Function
Pin 2	Input
Pin 5	Output
Others	Ground

2. Marking

XXXX
·G6

- (1) Ink Marking or Laser Marking
- (2) XXXX: Model code
- (3) C: Series code
- (4) ·: Pin 1 Identifier
- (5) G6: Date code

CHINA QUARTZ TECHNOLOGY



Month	1	2	3	4	5	6	7	8	9	10	11	12
Month code	A	B	C	D	E	F	G	H	I	J	K	L

e.g.: " G6 " means July of 2006

3. Performance

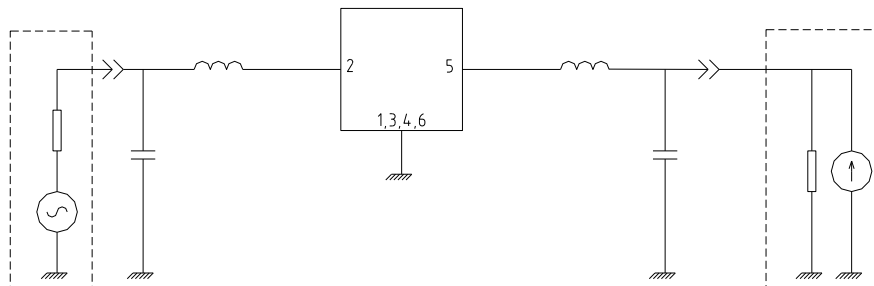
3.1 Maximum Rating

Item	Value
Operation Temperature Range	-40°C to +85°C
Storage Temperature Range	-45°C to +85°C
DC Permissive Voltage	10V DC max.
Maximum Input Power	10 dBm

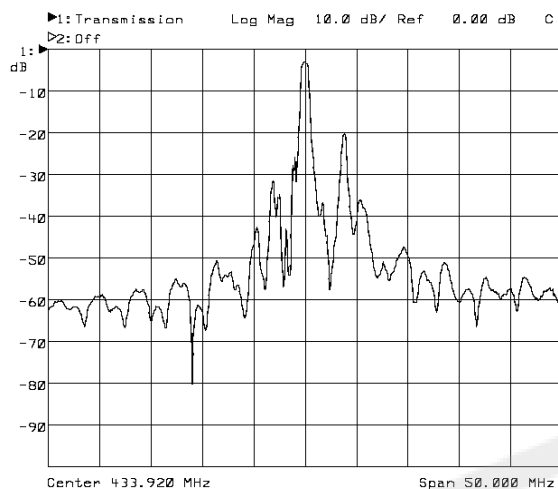
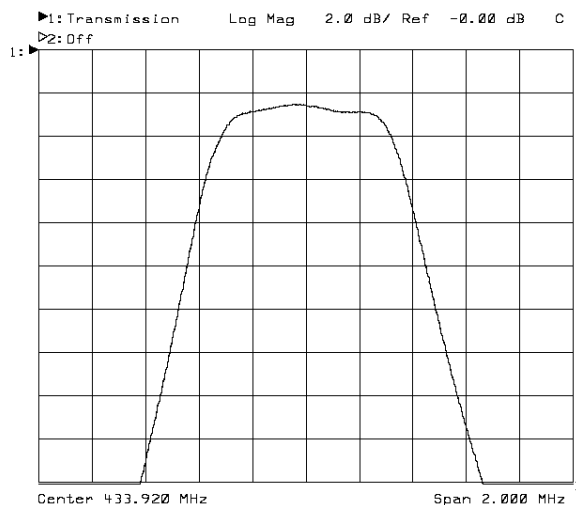
3.2 Electronic Characteristics

Item	Frequency (MHz)	Specification
Center Frequency (fo)	433.92	
Insertion Loss	433.80 ~ 434.12	4.5dB Max.
Passband Ripple	433.76 ~ 434.16	2.0dB Max.
Stop Band Attenuation	10.00~ 414.00	42 dB Min.
	414.00 ~ 428.00	38 dB Min.
	428.00~ 432.92	15 dB Min.
	434.92~ 442.00	10 dB Min.
	442.00 ~ 550.00	35 dB Min.
	550.00 ~ 1000.00	42 dB Min.
Temperature Coefficient of		-0.03 ppm/K ²
External Impedance Match		
Series Inductance L		33 nH
Shunt Capacitance C		5.6 pF

3.3 Test Circuit



3.3 Frequency Characteristics



4. Reliability

4.1 Resistance to Soldering heat:

4.1.1 The components shall remain within the electrical specifications after it soldered on the 1mm-thickness PCB board and dipped in the solder at $260^{\circ}\text{C}\pm 5^{\circ}\text{C}$ for 10 ± 1 seconds.

4.1.2 The components shall remain within the electrical specifications after it soldered by electric iron, solder at $350^{\circ}\text{C}\pm 10^{\circ}\text{C}$ for 3~4 seconds, recovery time : $2\text{h}\pm 0.5\text{h}$.

4.2 Thermal Shock:

The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions: $\text{TA}=-40^{\circ}\text{C}\pm 3^{\circ}\text{C}$, $\text{TB}=85^{\circ}\text{C}\pm 2^{\circ}\text{C}$, $t_1=t_2=30\text{min}$, switch time $\leq 3\text{min}$ & cycle time : 100 times, recovery time : $2\text{h}\pm 0.5\text{h}$.

4.3 The Temperature Storage:

4.3.1 High Temperature Storage: The components shall remain within the electrical specifications after being kept at the $85^{\circ}\text{C}\pm 2^{\circ}\text{C}$ for 500 hours, recovery time : $2\text{h}\pm 0.5\text{h}$.

4.3.2 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the $-40^{\circ}\text{C}\pm 3^{\circ}\text{C}$ for 500 hours, recovery time : $2\text{h}\pm 0.5\text{h}$.

4.4 Humidity test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$, and 90~95% RH for 500 hours.

4.5 Drop test:

The components shall remain within the electrical specifications after random free drops 10 times from height of 1.0 meter onto concrete floor, and the specimens shall meet the electrical specifications in

table 5, external visual inspection.

4.6 Solderability test:

at the condition of temperature $245^{\circ}\text{C}\pm 5^{\circ}\text{C}$ Depth: DIP 2/3 , SMD 1/5, time: 3.0s-5.0s, 80% or more of the immersed surface shall be covered with solder and well-proportioned.

4.7 Vibration Fatigue:

The components shall remain within the electrical specifications after loaded vibration at 10~55Hz, amplitude 1.5mm, X, Y, Z, direction, for 2 hours.

4.8 Terminal strength:

The force 10 ± 1 seconds of 19.6N is applied to each terminal, and 45° in the same direction 2 times with 2N bending force (Exception: SMD)

4.9 Mechanical Shock:

The components shall remain within the electrical specifications after 1000 shocks, acceleration 392 m/s^2 , duration 6ms.

Note: 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.

5. Remarks

5.1 Static voltage

Static voltage between signal load & ground may cause deterioration & destruction of the component. Please avoid static voltage.

5.2 Ultrasonic cleaning

Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning.

5.3 Soldering

Only leads of component may be soldered. Please avoid soldering another part of component.

6.Packing

6.1 Dimensions

Carrier Tape: Figure 1

Reel: Figure 2

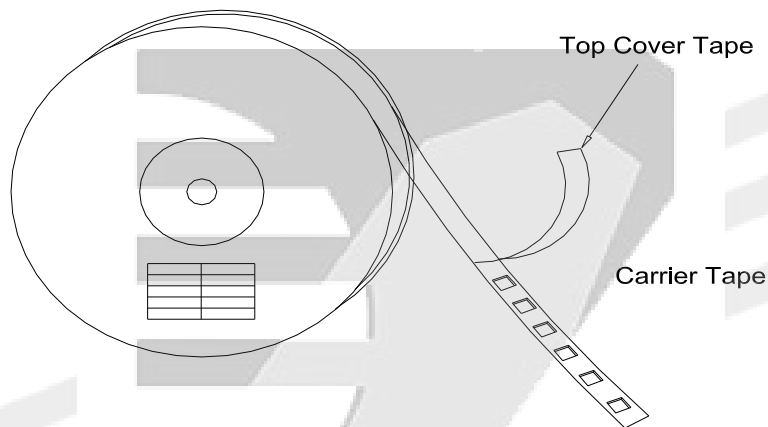
The product shall be packed properly not to be damaged during transportation and storage.

6.2 Reeling Quantity

1,000 pcs/reel

6.3 Taping Structure

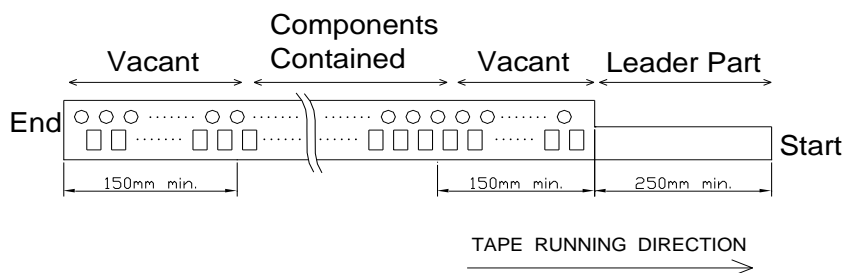
(1) The tape shall be wound around the reel in the direction shown below.



(2) Label

Device Name	
Type	
Quantity	
Lot No.	

(3) Leader part and vacant position specifications.

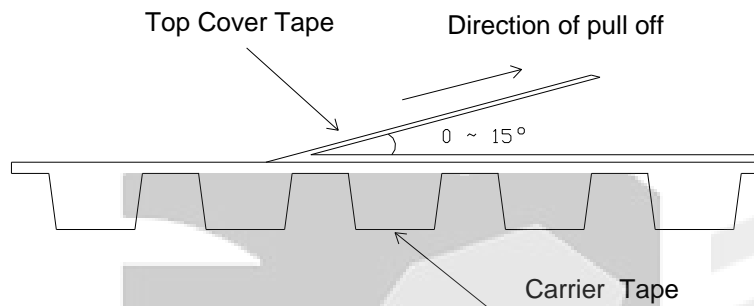


7. Tape Specifications

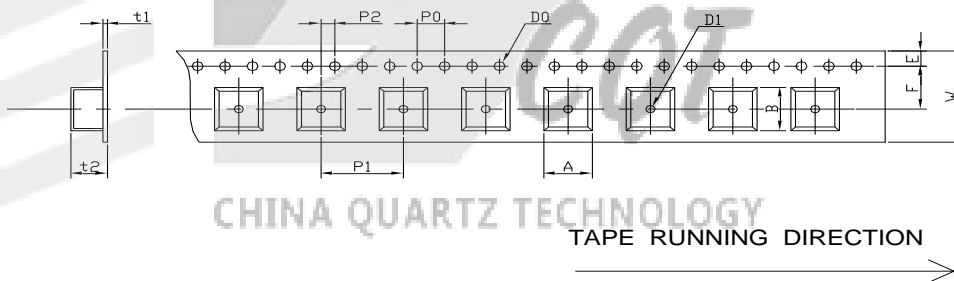
7.1 Tensile Strength of Carrier Tape: 4.4N/mm width

7.2 Top Cover Tape Adhesion (See the below figure)

- (1) pull off angle: 0~15°
- (2) speed: 300mm/min.
- (3) force: 20~70g



[Figure 1] Carrier Tape Dimensions

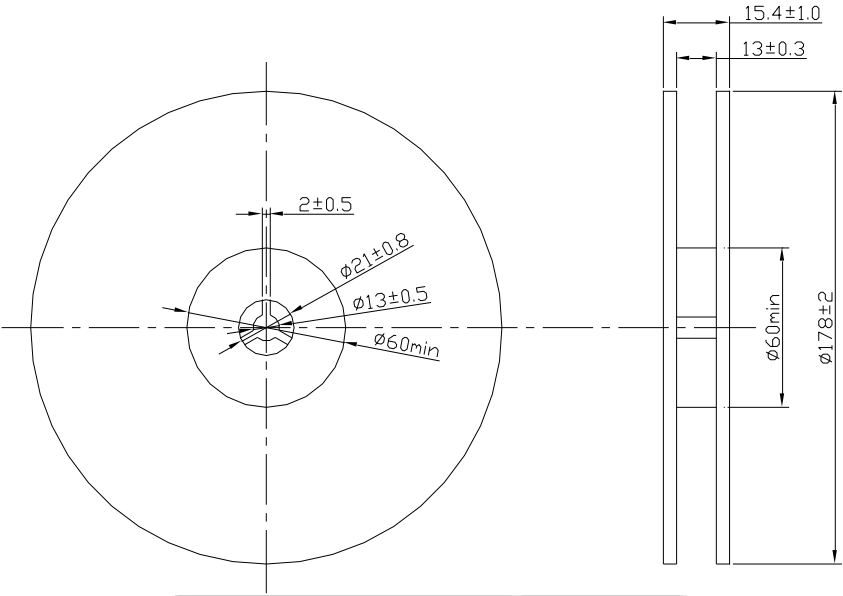


[Unit: mm]

W	F	E	P0	P1	P2	D0	D1	t1	t2	A	B
12.0	5.5	1.75	4.0	8.0	2.0	Φ 1.5	Φ 1.5	0.31	1.95	4.1	4.1
±0.3	±0.1	±0.1	±0.2	±0.1	±0.2	±0.1	±0.25	max.	max.	max.	max.

[Figure 2] Reel Dimensions

[Unit: mm]



[Figure 3] Part Direction

