Approval Specification

Complies with Directive 2002/95/EC (RoHS)

TO:

Part No.: DSR61.24/67.24A01-SD06

Customer's Part No.:

Application One-port SAW Resonator for VCR RF-Modulator

Please return this copy as a certification of your approval

Checked & Approval by:

Date:

CETC DEQING HUAYING ELECTRONICS CO., LTD.

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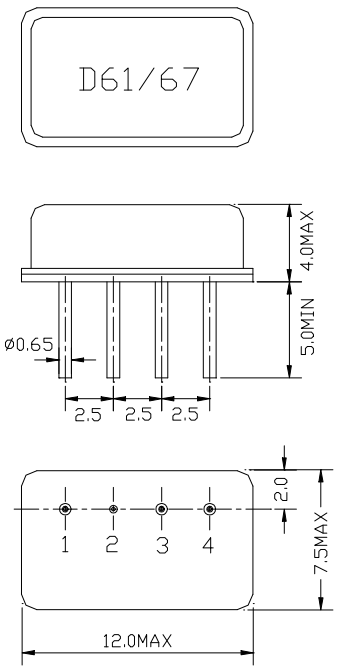
Prepared by:
Checked by:
Approved by:

Old Version	Revision Date	Revision Record	Revisor

Surface **A**coustic **W**ave Components
Approval Specification

1. Package Dimension

(SF-712) Unit: mm



Pin No.	Function
Pin 1	Common
Pin 2	Ground
Pin 3	2CH (NTSC USA 4CH)
Pin 4	1CH (NTSC USA 3CH)

2. Marking

D61/67

1. Black Ink Marking
2. D: Manufacture's logo
3. 61: 3CH Resonant Frequency 61.24MHz
4. 67: 4CH Resonant Frequency 67.24MHz

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3. Performance

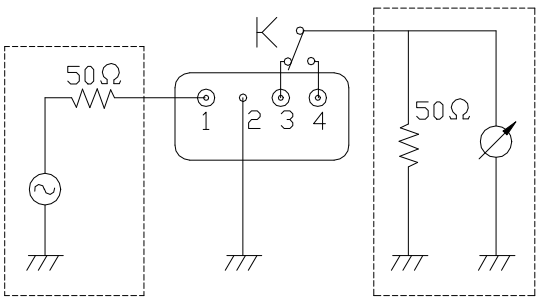
3.1 Electrical Characteristics

Item		Rating	Note
Resonant Frequency	3CH	61.24 ± 0.08 MHz	
	4CH	67.24 ± 0.08 MHz	Measured by HP8711A
Resonant Loss	3CH	4.0 dB max.	
	4CH	4.0 dB max.	
Peak Valley	3CH	30 dB min.	
	4CH	30 dB min.	
Parallel Capacitance	3CH	4.4 ± 1 pF	
	4CH	4.2 ± 1 pF	
Temperature Stability		± 8 ppm/℃	
Resonant frequency shift within operating temperature range		| Δfr | ≦20 KHz	

3.2 Absolute Maximum Ratings (Ta=25℃)

Item	Electrode	Rating	Note
DC Voltage	3CH-Common 4CH-Common	5V 5V	
Instantaneous DC Voltage	Between any two Electrodes	10V	Less then 1/60 sec.
AC Voltage	Between any two Electrodes	10Vp-p	50,60 Hz
Operating Temperature		-10~+60℃	
Storage Temperature		-55~+85℃	
Oscillation Power Level	1CH-Common and 2CH-Common	0.2 mW	Posc=I2Re I: Oscillation Re: Oscillation Resistance

3.3 Test Circuit



Note: Reference temperature shall be 25±2℃. However, the measurement may be carried out at 5℃ to 35℃ unless there is a dispute.

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℃±5℃ for 10±1 seconds.

4.1.2 The components shall remain within the electrical specifications after it soldered by electric iron, solder at 350℃±10℃ for 3~4 seconds, recovery time : 2h±0.5h.

4.2 Thermal Shock:

The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions: TA=-40℃±3℃, TB=85℃±2℃, t1=t2=30min, switch time≤3min & cycle time : 100 times, recovery time : 2h±0.5h.

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℃±2℃for 500 hours, recovery time : 2h±0.5h.

4.3.2 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the –40℃±3℃for 500 hours, recovery time : 2h±0.5h.

4.4 Humidity test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 60℃±2℃, 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℃±5℃ 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.

4.8Terminal 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.