

P/N: WTL6A20842
SAW RESONATOR 3.2*2.5mm



Customer	WTL
	Approved by: XoXo Lee
	Checked by: Susan He
	Issued by: Sheryl Xia

SPECIFICATION

深圳市维拓精电科技有限公司

Shenzhen WTL Electronic Technology Co.,Ltd

Tel: 86-755-8267 7582 Fax:86-755-8267 9302

www.wtlcrystals.com email: wtl@wtlcrystals.com

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SAW RESONATOR 3.2*2.5mm

1. Scope

This specification shall cover the characteristics of 1-port SAW resonator with R433M used for remote-control security.

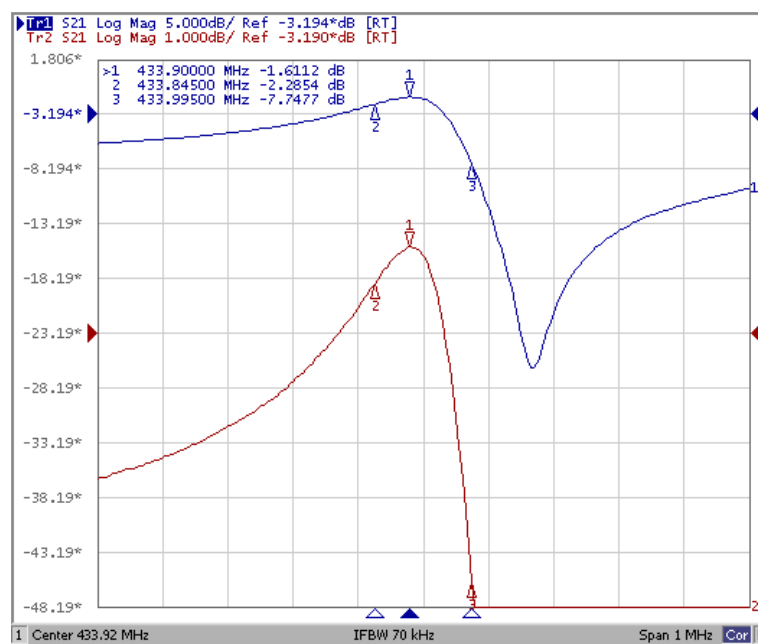
2. Electrical Specification

2.1 Maximum Rating

DC Voltage VDC	10V
AC Voltage Vpp	10V 50Hz/60Hz
Operation temperature	-40°C to +85°C
Storage temperature	-45°C to +85°C
Max Input Power	10dBm

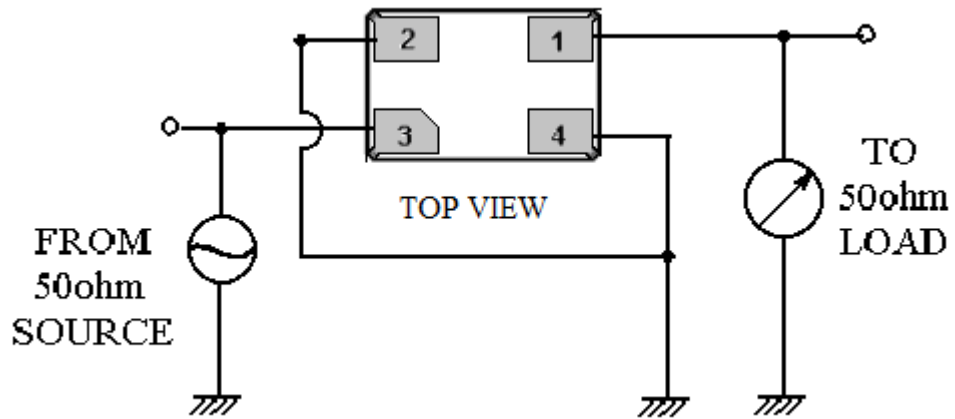
2.2 Electronic Characteristics

Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	433.845	433.920	433.995
Insertion Loss		dB		1.8	2.2
Quality Factor	Unload Q		8300	12000	
	50Ω Loaded Q		850	1500	
Temperature Stability	Turnover Temperature	°C	10	25	40
	Freq.temp.Coefficient	ppm/°C		0.032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
RF Equivalent RLC Model	Motional Resistance R1	Ω		18	26
	Motional Inductance L1	μH		79.82	
	Motional Capacitance C1	fF		1.685	
Transducer Static Capacitance C0		pF		2.3	

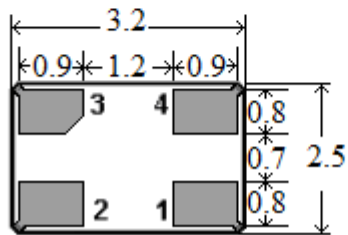
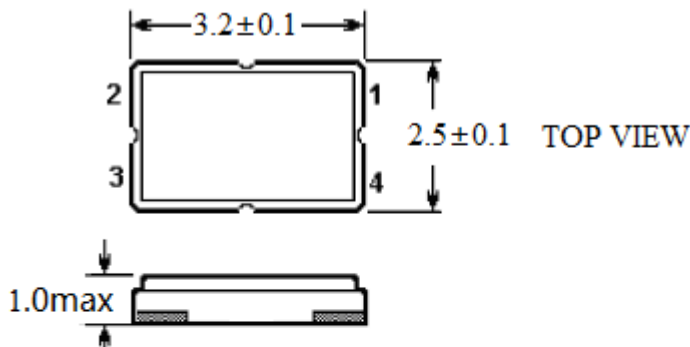


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3. TEST CIRCUIT



4. DIMENSION



BOTTOM VIEW

Pin configuration

- 3. Input/Output
- 1. Output/Input
- 2,4. Ground

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5. Environment Characteristic

5-1 High temperature exposure

Subject the device to +85°C for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

5-2 Low temperature exposure

Subject the device to -40°C for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

5-3 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of +85°C for 30 Minutes. Then release the device into the room conditions

for 24 hours prior to the measurement. It shall meet the specifications in 2-2. 5-

4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 260°C $\pm 10^\circ\text{C}$ for 10 ± 1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in 2-2.

5-5 solderability

Subject the device terminals into the solder bath at 245°C $\pm 5^\circ\text{C}$ for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in 2-2.

5-6 mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m 3 times. the device shall fulfill the specifications in 2-2.

5-7 Vibration

Subject the device to the vibration for 1 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 Hz. The device shall fulfill the specifications in 2-2.

6. Remark

6.1 Static voltage

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

6.2 Ultrasonic cleaning

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

6.3 Soldering

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

7. Packing

7.1 Dimensions

- Carrier Tape: Figure 1
- Reel: Figure 2
- The product shall be packed properly not to be damaged during transportation and storage.

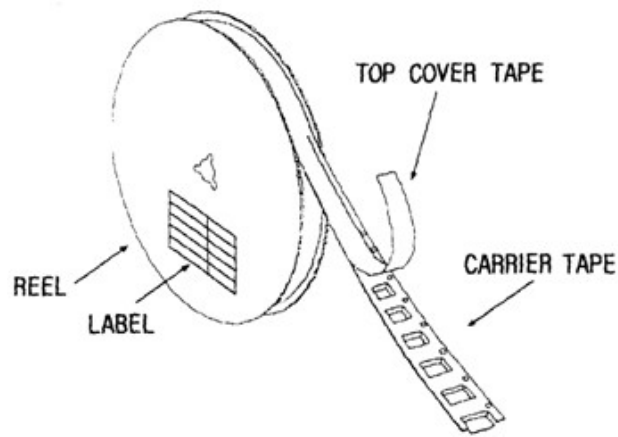
7.2 Reeling Quantity

3000 pcs/reel 7"

7.3 Taping Structure

- The tape shall be wound around the reel in the direction shown below.

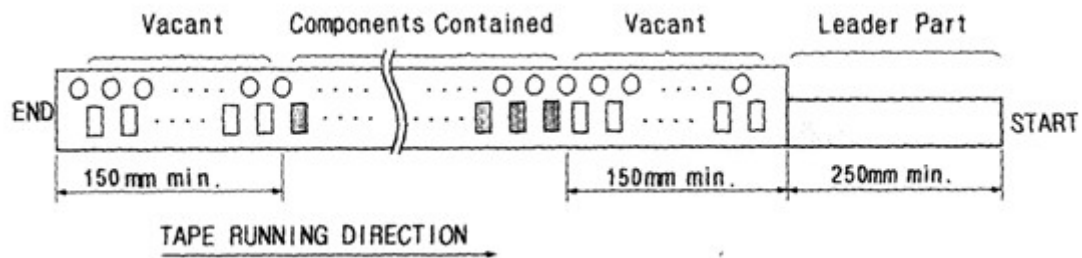
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- Label

Device Name	
User Product Name	
Quantity	
Lot No.	

- Leader part and vacant position specifications.

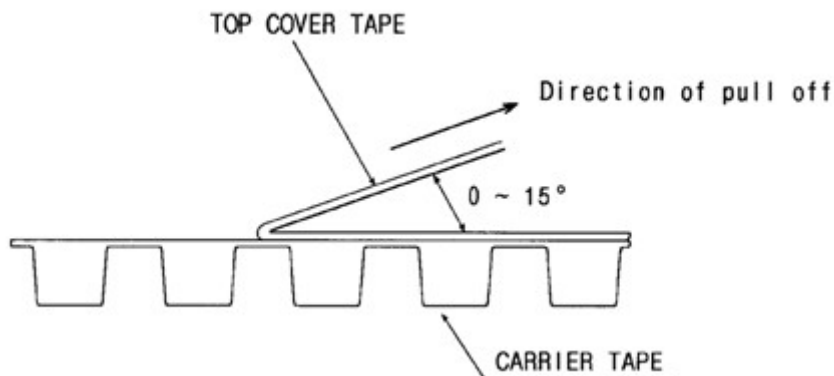


8. TAPE SPECIFICATIONS

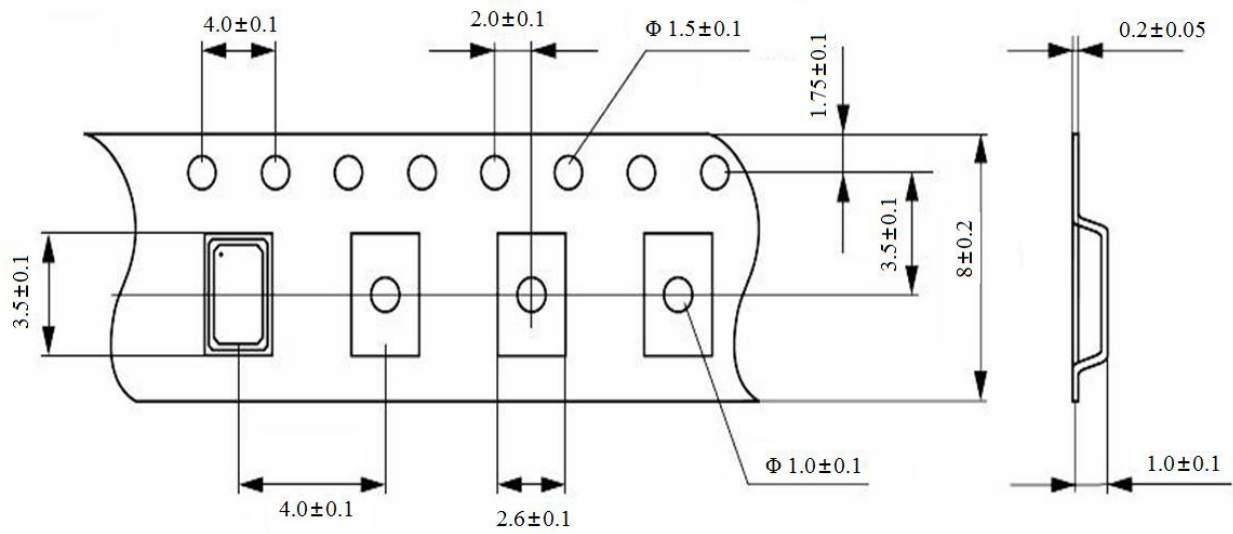
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

8.2 Top Cover Tape Adhesion (See the below figure)

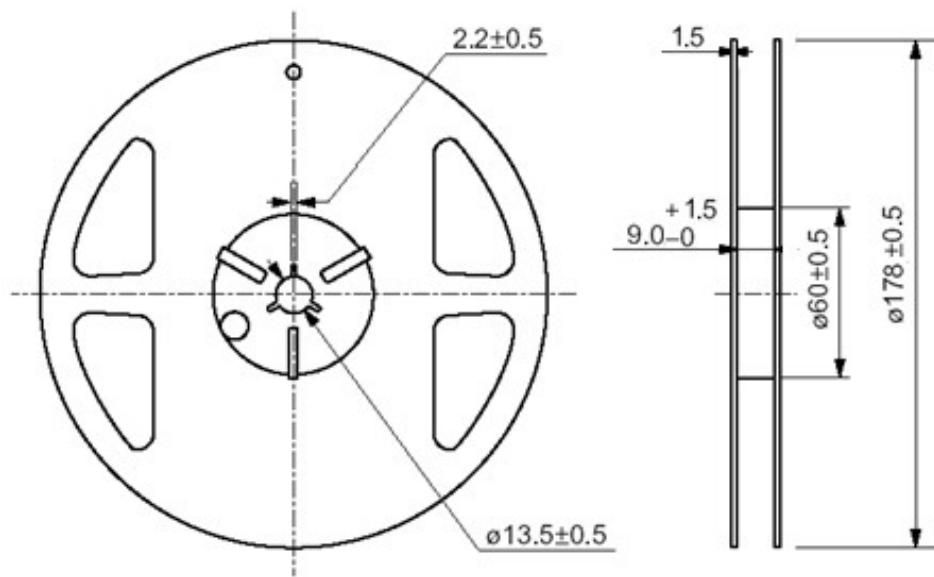
- pull off angle: 0~15°
- speed: 300mm/min.
- force: 20~70g



[Figure 1] Carrier Tape Dimensions



[Figure 2] 3000 pcs/reel



$\phi 178$ Reel Dimension

(in mm)