RoHS compliant

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SPECIFICATION

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1. SCOPE

This specification shall cover the characteristics of 1-port SAW resonator with 433.92M used for remote-control security.

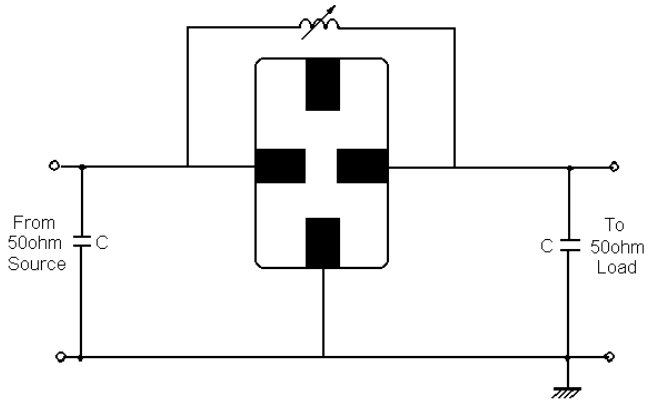
2. ELECTRICAL SPECIFICATION

DC Voltage VDC	10V
AC Voltage Vpp	10V50Hz/60Hz
Operation temperature	-20℃ to +70℃
Storage temperature	-45℃ to +85℃
RF Power Dissipation	0dBm

2.2Electronic Characteristics

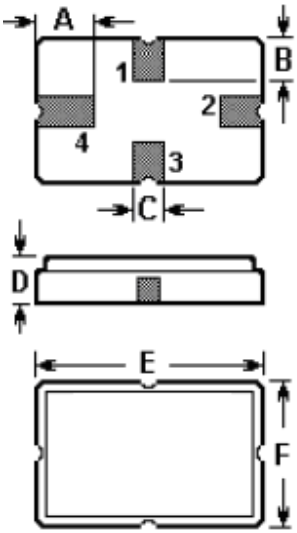
Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	433.845	433.920	433.995
Insertion Loss		dB		1.5	2.5
Quality Factor Unload Q			8000	12800	
50Ω Loaded Q			1000	2000	
Temperature Stability	Turnover Temperature	℃	10	25	40
	Turnover Frequency	KHz		fo	
	Freq.temp.Coefficient	ppm/℃ 2		0.032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
RF Equivalent RLC Model	Motional Resistance R1	Ω		21	26
	Motional Inductance L1	μH		95.995	
	Motional Capacitance C1	fF		1.4014	
Pin 1 to Pin 2 Staic Capacitance		pF	1.7	2.0	2.3
Transducer Static Capacitance		pF		1.95	

3. TEST CIRCUIT



4. DIMENSION

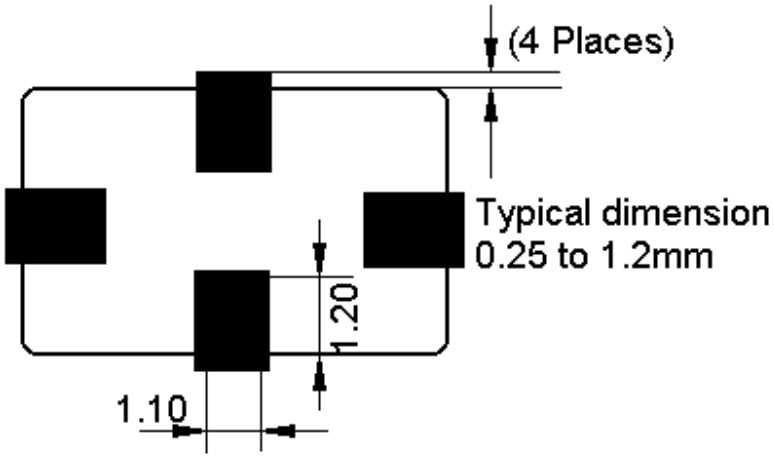
4-1 Typical dimension (unit: mm)



Sign	Data (unit: mm)	Sign	Data (unit: mm)
A	1.2±0.1	D	1.4±0.1
B	0.8±0.1	E	5.0±0.1
C	0.5	F	3.5±0.1

Pin	Configuration
1	Input / Output
3	Output / Input
2/4	Case Ground

4-2 Typical circuit board land patter



5. ENVIRONMENTAL CHARACTERISTICS

5-1 Temperature cycling

Subject the device to a low temperature of -40℃for 30 minutes. Following by a high temperature of +25℃ for 5 Minutes and a higher temperature of +85℃ for 30 Minutes. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in 2.2.

5-2 Resistance to solder heat

Submerge the device terminals into the solder bath at 260℃ ±5℃ for 10±1 sec. Then release the device into the room conditions for 4 hours. It shall meet the specifications in 2.2.

5-3 Solderability

Submerge the device terminals into the solder bath at 245℃ ±5℃ for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 2.2.

5-4 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1 m 3 times. the resonator shall fulfill the specifications in 2.2.

5-5 Vibration

Subject the device to the vibration for 2 hour each in x,y and z axes with the amplitude of 1.5 mm at 10 to 55 hz. The resonator 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.