1. SCOPE

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

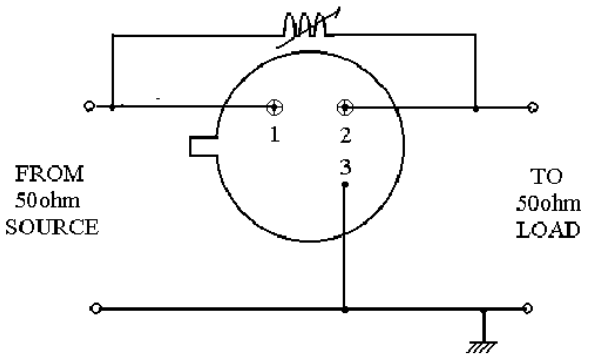
2. ELECTRICAL SPECIFICATION

DC Voltage VDC	**10V**
AC Voltage Vpp	**10V50Hz/60Hz**
Operation temperature	**-4℃ to +85℃**
Storage temperature	**-45℃ to +85℃**
RF Power Dissipation	**0dBm**

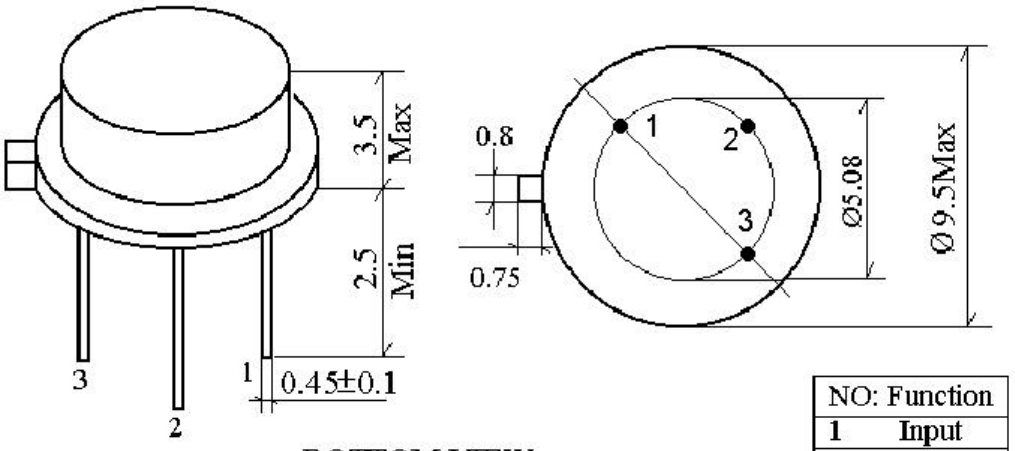
Electronic Characteristics

Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	303.725	303.825	303.925
Insertion Loss		dB		1.5	2.5
Quality Factor Unload Q				11,000	
50Ω Loaded Q				2,000	
Temperature Stability	Turnover Temperature	℃		39	
	Turnover Frequency	KHz		fo±2.7	
	Freq.temp.Coefficient	ppm/℃2		0.032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
Motional Resistance R1		Ω		10	26
RF Equivalent RLC Model Motional Inductance L1		μH		86	
Motional Capacitance C1		pF		1.56	
Shunt Static Capacitance		pF	1.7	2.0	2.3

3. TEST CIRCUIT



4. DIMENSION



NO:	Function
1	Input
2	Output
3	Ground

5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the device to +80℃ for 96 hours. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-2 Moisture

Keep the device at 40℃ and 95% rh for 96 hours. then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-3 Low temperature exposure

Subject the device to -20℃ for 96 hours. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-4 Temperature cycling

Subject the device to a low temperature of -55℃ for 30 minutes. Following by a high 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 table 1.

5-5 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 270℃ ±10℃ for 10±1 sec. Then release the device into the room conditions for 1 to 2 hours. The Filter shall meet the specifications in table 1.

5-6 Mechanical shock

Drop the device randomly onto the concrete floor from the height of

30cm 3 times. the device shall fulfill the specifications in table 1.

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 table 1.

5-8 Lead fatigue

5-8-1 Pulling test

Weight along with the direction of lead without an shock 3 kg. The device shall satisfy all the initial Characteristics.

5-8-2 Bending test

Lead shall be subject to withstand against 90℃ bending in the direction of thickness. This operation shall be done toward both direction. The device shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

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.