1. SCOPE

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

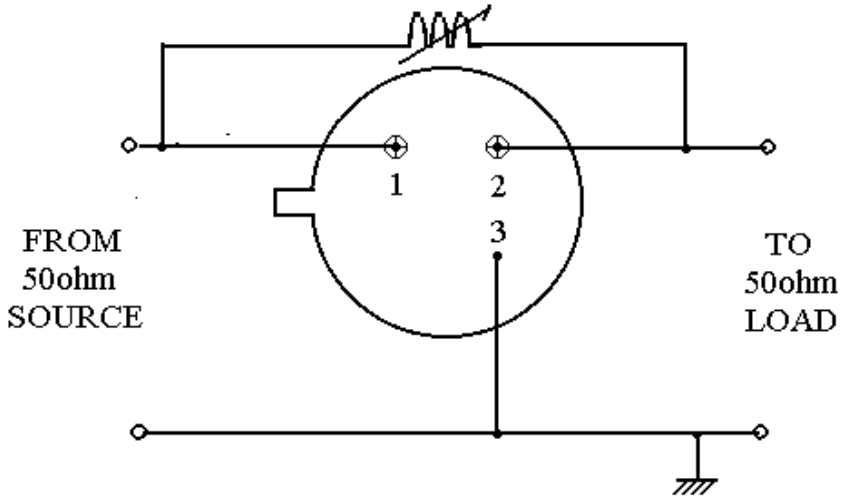
2. ELECTRICAL SPECIFICATION

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

Electronic Characteristics

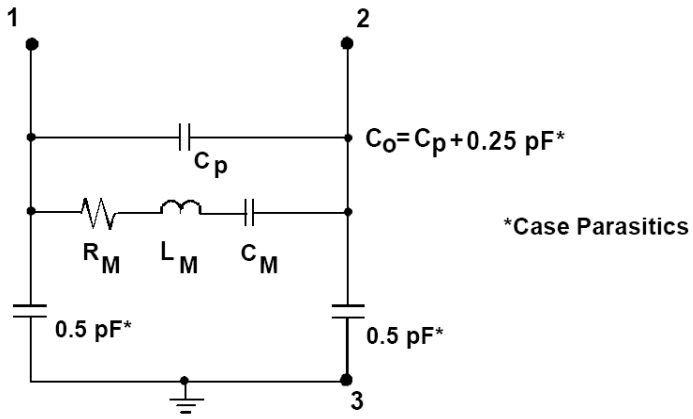
Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	433.845	433.920	433.995
Insertion Loss		dB		1.5	2.5
Quality Factor Unload Q				12,800	
50Ω Loaded Q				2,000	
Temperature Stability	Turnover Temperature	℃	20	35	50
	Turnover Frequency	KHz		fo±1.3	
	Freq.temp.Coefficient	ppm/℃2		0.032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
RF Equivalent RLC Model	Motional Resistance R_M	Ω		18	26
	Motional Inductance L_M	μH		86	
	Motional Capacitance C_M	pF		1.5	
Pin 1 to Pin 2 Staic Capacitance Co		pF	1.7	2.0	2.3
Transducer Static Capacitance Cp		pF		1.9	

3. TEST CIRCUIT

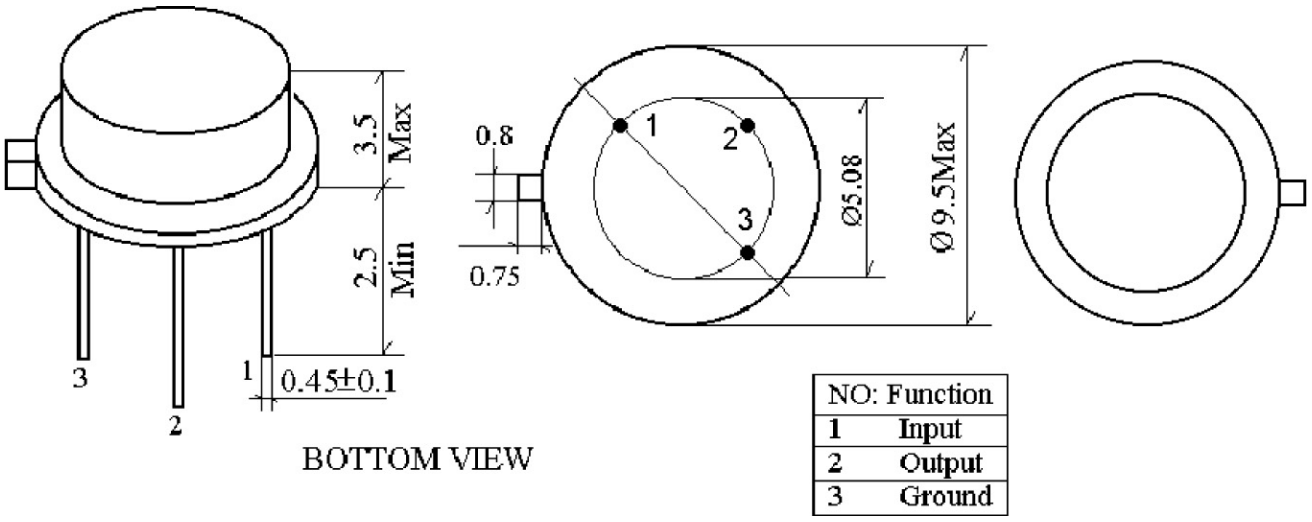


4. EQUIVALENT LC MODEL

The following equivalent LC model is Valid near resonance



5. DIMENSION



NO:	Function
1	Input
2	Output
3	Ground

6. ENVIRONMENTAL CHARACTERISTICS

6-1 High temperature exposure

Subject the device to +85℃ for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

6-2 Low temperature exposure

Subject the device to -20℃ for 16 hours. Then release the device into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in table 1.

6-3 Temperature cycling

Subject the device to a low temperature of -40℃for 30 minutes. Following

by a high temperature of +80℃ for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in table 1.

6-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 260℃ ±10℃ for 10±1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in table 1.

6-5 Solderability

Subject the device terminals into the solder bath at 245℃ ±5℃ for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in table 1.

6-6 Mechanical shock

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

6-7 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.

6-8 Lead fatigue

5-8-1 Pulling test

Weight along with the direction of lead without an shock 1kg. The device shall satisfy all the initial Characteristics.

5-8-2 Bending test

Lead shall be subject to withstand against 90℃ bending with 450g weight 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.

7. REMARK

7.1 Static voltage

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

7.2 Ultrasonic cleaning

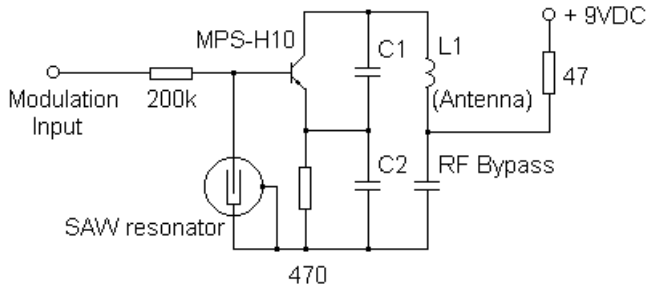
Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

7.3 Soldering

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

8.Typical Application Circuit

Typical low-power Transmitter Application



Typical Local Oscillator Application

