

# APPROVAL SHEET

RoHS Compliant  
Lead free  
Lead-free soldering

用户名称 CUSTOMER:

产品描述 DESCRIPTION:

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SAW RESONATOR 433.92MHz

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# SAW RESONATOR

## 1. Scope

Ideal for 433.92MHz Remote-control and Wireless Security Transmitters

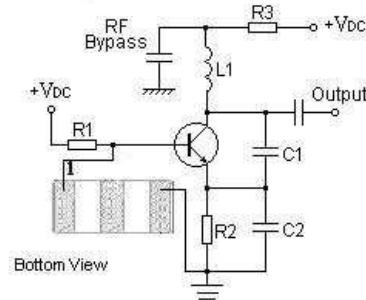
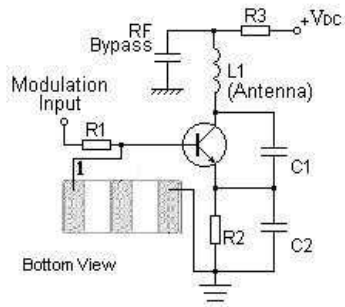
Very Low Series Resistance

Quartz Stability

Rugged, Hermetic, Low-Profile

Typical Low-Power Transmitter Application

Typical Local Oscillator Application



## 2. Electrical Specification

### 2.1 Maximum Rating

Rating	Value	Units
CW RF Power Dissipation	+0	dBm
DC Voltage between Any Two Pins	$\pm 10$	V
Case Temperature	-40 to +85	$^{\circ}\text{C}$

## SAW RESONATOR

### 2.2 Electronic Characteristics

Test Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

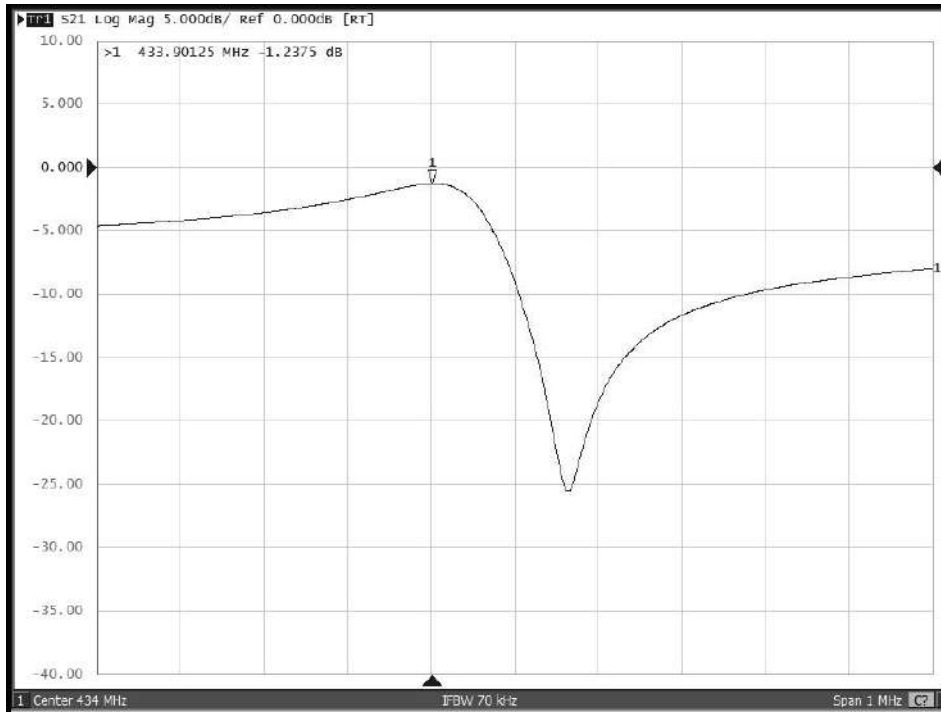
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

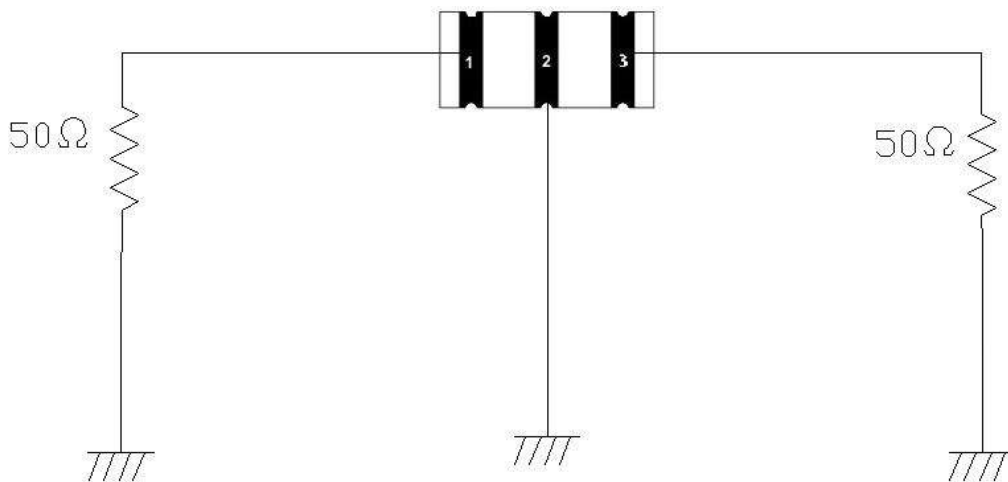
Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	$f_c$	433.845	433.92	433.995	MHz
	Tolerance from 433.92MHz	$\Delta f_c$		$\pm 75$		kHz
Insertion Loss(min)		IL		1.2	2.5	dB
Quality Factor	Unloaded Q	$Q_U$		11000		
	50 $\Omega$ Loaded Q	$Q_L$		2000		
Temperature Stability	Turnover Temperature	$T_0$		39		$^{\circ}\text{C}$
	Turnover Frequency	$f_0$		$f_c+8.4$		kHz
	Frequency Temperature Coefficient	FTC		0.032		ppm/ $^{\circ}\text{C}$
Frequency Aging	Absolute Value during the First Year	$ f_A $			10	ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			$\text{M}\Omega$
RF Equivalent RLC Model	Motional Resistance	$R_M$		18	26	$\Omega$
	Motional Inductance	$L_M$		86		$\mu\text{H}$
	Motional Capacitance	$C_M$		1.56		fF
	Static Capacitance	$C_0$	1.7	2.0	2.3	pF

# SAW RESONATOR

## 2.3 Frequency Response



## 3. TEST CIRCUIT



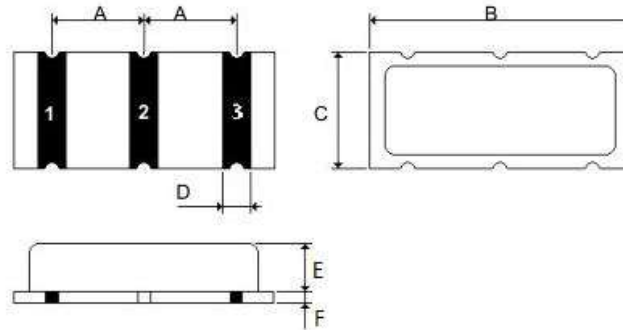
## 4. DIMENSION

### 7.5x3.5mm

Pin No.	Function*
1	Input / output
2	Ground
3	Output / input

	Dimension
A	2.50
B	7.50
C	3.50
D	1.00
E	1.35
F	0.65

Unit: mm  
Tolerance:  $\pm 0.3\text{mm}$



## 5. Environment Characteristic

### 5-1 High temperature exposure

Subject the device to  $+85^{\circ}\text{C}$  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  $-40^{\circ}\text{C}$  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  $-40^{\circ}\text{C}$  for 30 minutes. Following by a high temperature of  $+85^{\circ}\text{C}$  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  $260^{\circ}\text{C} \pm 10^{\circ}\text{C}$  for  $10 \pm 1$  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  $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$  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.