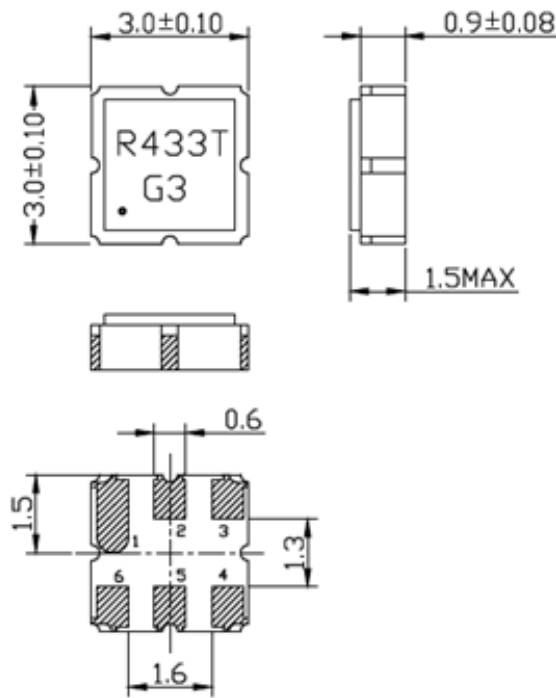


# IS SR DCC6C

## 1. Package Dimension



Unit: mm



Pin No.	Function
2	Input
5	Output
Others	GND

## 2. Marking

IS SR	Item code
433M92	Frequency

### 3. Performance

#### 3.1 Application

One-port SAW Resonator for Wireless Remote Controller.

Center frequency: 433.92MHz

#### 3.2 Maximum Rating

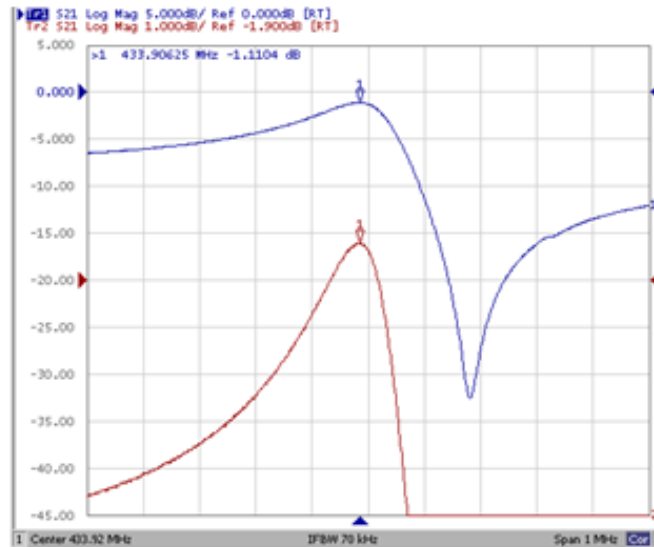
Rating		Value	Unit
Operating Temperature Range	$T_A$	-40 ~ +85	°C
Storage Temperature Range	$T_{stg}$	-45 ~ +85	°C
DC Voltage (between any Terminals)	$V_{DC}$	10	V
RF Power (in BW)	$P$	0	dBm
ESD Voltage (HB)	$V_{ESD}$	150	V

Electrostatic Sensitive Device (ESD)

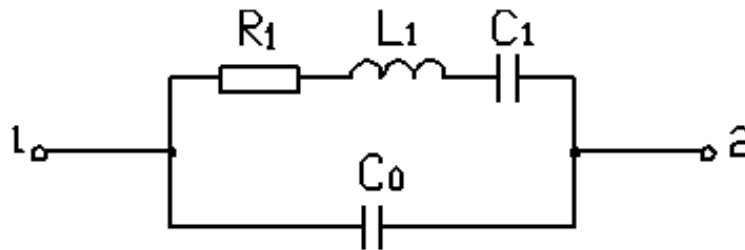
#### 3.3 Electronic Characteristics

Item	Unit	Minimum	Typical	Maximum
Center Frequency ( $f_0$ )	MHz	433.845	433.920	433.995
Insertion Loss	dB	—	1.4	1.9
Quality Factor	—	—	—	—
Unloaded Q	—	8,000	12,800	—
50Ω Loaded Q	—	1,000	2,000	—
Temperature Stability	—	—	—	—
Turnover Temperature	□	10	25	40
Turnover Frequency	KHz	—	$f_0 \pm 1.3$	—
Frequency Temperature Coefficient	ppm/□2	—	0.032	—
Frequency Aging	ppm/yr	—	<±10	—
DC Insulation Resistance	MΩ	1.0	—	—
RF Equivalent RLC Model	—	—	—	—
Motional Resistance $R_1$	Ω	—	17	26
Motional Inductance $L_1$	μH	—	70.743	—
Motional Capacitance $C_1$	fF	—	1.9	—
Pin1 to Pin2 Static Capacitance $C_0$	pF	—	2.0	—

### 3.3 Frequency Characteristics



### 3.4 Equivalent LC Model



## 4. Performance

#### 4.1 Thermal Shock:

The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions:  $T_A = -40^{\circ}\text{C} \pm 3^{\circ}\text{C}$ ,  $T_B = 85^{\circ}\text{C} \pm 2^{\circ}\text{C}$ ,  $t_1 = t_2 = 30\text{min}$ , switch time  $\leq 3\text{min}$  & cycle time : 100 times, recovery time:  $2\text{h} \pm 0.5\text{h}$ .

#### 4.2 Resistance to solder heat

Submerge the device terminals into the solder bath at  $260 \pm 5$  for  $10 \pm 1$  sec. Then release the device into the room conditions for 4 hours. It shall meet the specifications in 3.3.

#### 4.3 Solder ability

Submerge the device terminals into the solder bath at  $245 \pm 5$  for 5s, More than 95% area of the soldering pad must be covered with new solder. It shall meet the specifications in 3.3

#### 4.4 The Temperature Storage:

4.3.1 High Temperature Storage: The components shall remain within the electrical specifications after being kept at the  $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$  for  $96\text{h} \pm 4\text{h}$ , recovery time :  $2\text{h} \pm 0.5\text{h}$ .

4.3.2 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the  $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$  for  $96\text{h} \pm 4\text{h}$ , recovery time :  $2\text{h} \pm 0.5\text{h}$ .

#### 4.5 Humidity test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature  $60^{\circ}\text{C}\pm 2^{\circ}\text{C}$ , and 90~96% RH for 96h $\pm$ 4h.

#### 4.6 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1m for 3 times.

The resonator shall fulfill the specifications in 3.3.

#### 4.7 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 3.3.

### 5. Remarks

#### 5.1 Static voltage:

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

#### 5.2 Ultrasonic cleaning:

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

#### 5.3 Soldering:

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

### 6. Packing

#### 6.1 Dimensions

(1) Carrier Tape: Figure 1

(2) Reel: Figure 2

(3) The product shall be packed properly not to be damaged during transportation and storage.

#### 6.2 Reeling Quantity

1000 pcs/reel 7"

3000 pcs/reel 13"

#### 6.3 Taping Structure

(1) The tape shall be wound around the reel in the direction shown below.

