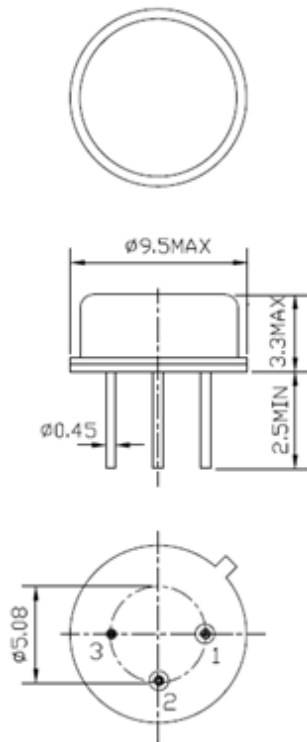


IS SR TO39

1. Package Dimension



Unit: mm



Package Material	
CAP	Cu plating Ni
BASE	Cu plating Ni

Pin No.	Function
1.	Input
2.	Output
3.	Ground

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

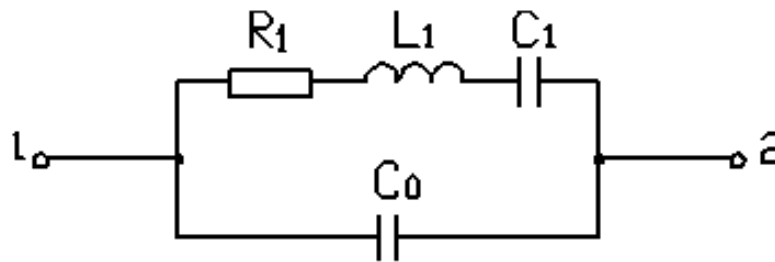
Rating		Value	Unit
Operating Temperature Range	T_A	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-45 ~ +85	°C
DC Voltage (between any Terminals)	V_{DC}	10	V
RF Power (in BW)	P	0	dBm
ESD Voltage (HB)	V_{ESD}	150	V

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	—	1.5	2.5
Quality Factor	—	—	—	—
Unloaded Q	—	—	12,800	—
50Ω Loaded Q	—	—	2,000	—
Temperature Stability	—	—	—	—
Turnover Temperature	□	20	35	50
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	—	18	26
Motional Inductance L_1	μH	—	86	—
Motional Capacitance C_1	fF	—	1.5	—
Pin1 to Pin2 Static Capacitance C_0	pF	1.7	2.0	2.3
Transducer Static Capacitance C_0	pF	—	1.9	—

3.3 Equivalent LC Model



4. Performance

4.1 Mechanical Shock:

The components shall remain within the electrical specifications after 1000 shocks, acceleration 392 m/s², duration 6 milliseconds.

4.2 Vibration Fatigue:

The components shall remain within the electrical specifications after loaded vibration at 20 Hz, amplitude 1.5 mm, for 2 hours.

4.3 Terminal Strength:

The components shall remain within the electrical specifications after pulled 2 kgs weight for 10 seconds towards an axis of each terminal.

4.4 High Temperature Storage:

The components shall remain within the electrical specifications after being kept at the 85°C ± 2°C for 16 hours, then kept at room temperature for 2 hours.

4.5 Low Temperature Storage:

The components shall remain within the electrical specifications after being kept at the -20°C ± 2°C for 16 hours, then kept at room temperature for 2 hours.

4.6 Temperature Cycle:

The components shall remain within the electrical specifications after 5 cycles of high and low temperature testing (one cycle: 80°C for 30 minutes → 25°C for 5 minutes → -40°C for 30 minutes) then kept at room temperature for 2 hours.

4.7 Humidity Test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 40 ± 2°C, and 90~95% RH for 48 hours, then kept at room temperature and normal humidity for 2 hours.

4.8 Solder-heat Resistance:

The components shall remain within the electrical specifications after dipped in the solder at 260°C for 10 ± 1 seconds, then kept at room temperature for 2 hours. (Terminal must be dipped leaving 1.5 mm from the case).

4.9 Solderability:

Solderability of terminal shall be kept at more than 80% after dipped in the solder flux at 245°C ± 5°C for 5 ± 1 seconds.

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.

