



# 深圳市凯越翔电子有限公司

## 声表谐振器规格书

|         |            |
|---------|------------|
| 产品名称:   | 声表谐振器      |
| 产品型号:   | T0-39/R315 |
| 产品参数:   | ± 75KHZ    |
| 原厂型号:   | KT0R3150   |
| 凯越翔技术部: | 董宗全        |

### 客户确认栏

|               |                |
|---------------|----------------|
| 认证印章<br>年 月 日 | 负责人印章<br>年 月 日 |
|---------------|----------------|

### 1. SCOPE

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

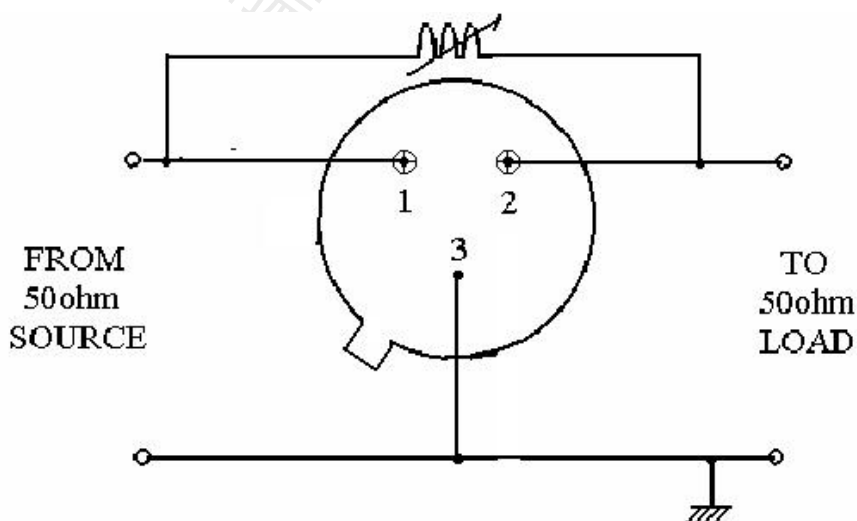
### 2. ELECTRICAL SPECIFICATION

|                       |                |
|-----------------------|----------------|
| DC Voltage VDC        | 10V            |
| AC Voltage Vpp        | 10V50Hz/60Hz   |
| Operation temperature | -20°C to +70°C |
| Storage temperature   | -40°C to +85°C |
| RF Power Dissipation  | 0dBm           |

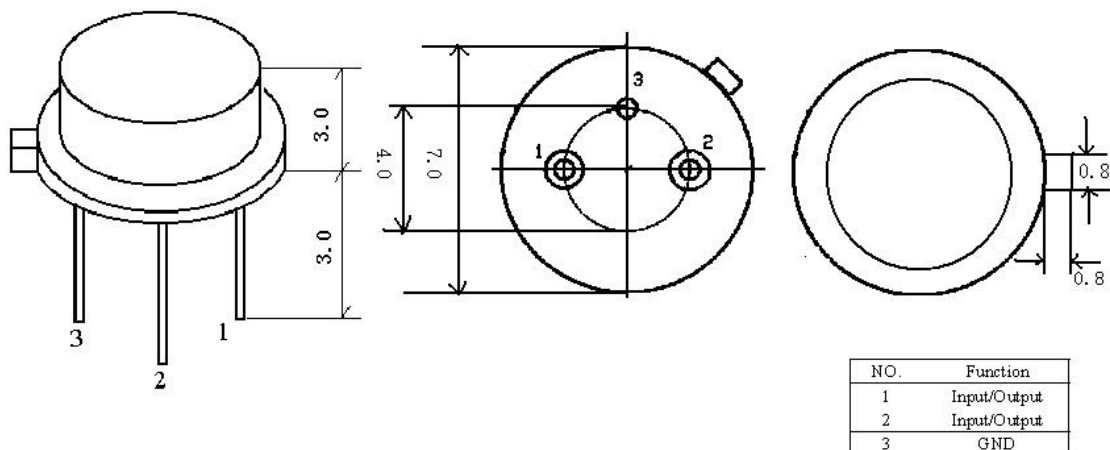
#### 2.2 Electronic Characteristics

| Item                          | Unites                  | Minimum             | Typical | Maximum |    |
|-------------------------------|-------------------------|---------------------|---------|---------|----|
| Center Frequency              | MHz                     | 314.925             | 315     | 315.075 |    |
| Insertion Loss                | dB                      |                     | 1.5     | 2.5     |    |
| Quality Factor Unload Q       |                         | 5000                | 12800   |         |    |
| 50 Ω Loaded Q                 |                         | 1000                | 2000    |         |    |
| Temperature Stability         | Turnover Temperature    | °C                  | 10      | 25      | 40 |
|                               | Freq.temp.Coefficient   | ppm/°C <sup>2</sup> |         | 0.032   |    |
| Frequency Aging               | ppm/yr                  |                     | <±10    |         |    |
| DC. Insulation Resistance     | MΩ                      | 1.0                 |         |         |    |
| RF Equivalent RLC Model       | Motional Resistance R1  | Ω                   | 19      | 26      |    |
|                               | Motional Inductance L1  | μ H                 | 92.929  |         |    |
|                               | Motional Capacitance C1 | fF                  | 1.4475  |         |    |
| Transducer Static Capacitance | pF                      |                     | 1.95    |         |    |

### 3. TEST CIRCUIT



## 4. DIMENSION



## 5. ENVIRONMENTAL CHARACTERISTICS

### 5-1 High temperature exposure

Subject the device to  $+85^{\circ}\text{C}$  for 16 hours. Then release the resonator 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  $-45^{\circ}\text{C}$  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.

## 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.

|     |     |     |     |     |     |
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| 拟 制 | 成望生 | 审 核 | 董宗全 | 批 准 | 谢为亮 |
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