

规格书编号

SPEC NO :

产品规格书

SPECIFICATION

CUSTOMER 客户: _____
PRODUCT 产品: _____ SAW RESONATOR
MODEL NO 型号: _____ HDR430.5M S3B
PREPARED 编制: _____ CHECKED 审核: _____
APPROVED 批准: _____ DATE 日期: _____ 2012-7-18

| | | |
|-------------------------|-------------|---------|
| 客户确认 CUSTOMER RECEIVED: | | |
| 审核 CHECKED | 批准 APPROVED | 日期 DATE |
| | | |

无锡市好达电子有限公司
Shoulder Electronics Limited

1. SCOPE

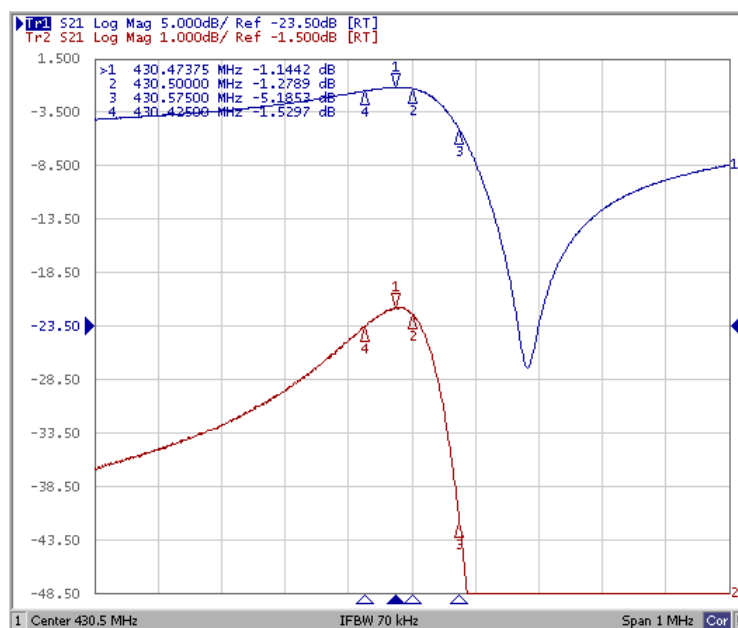
This specification shall cover the characteristics of 1-port SAW resonator with 430.50M used for remote-control security.

2. ELECTRICAL SPECIFICATION

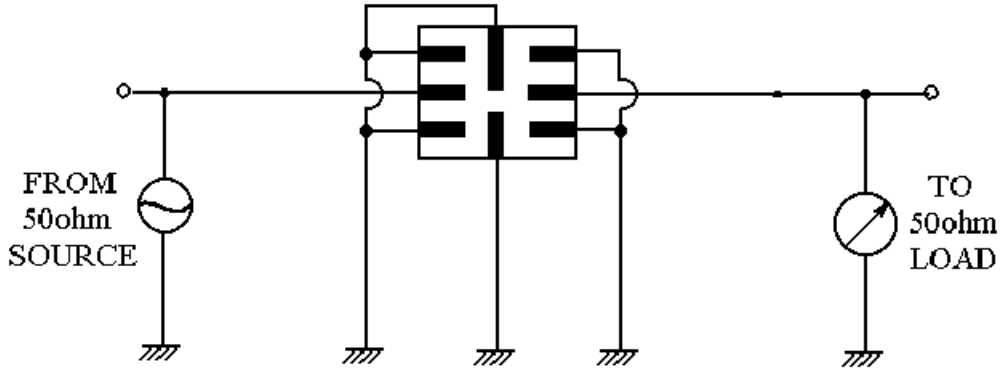
| | |
|-----------------------|----------------|
| DC Voltage VDC | 10V |
| AC Voltage Vpp | 10V50Hz/60Hz |
| Operation temperature | -40°C to +85°C |
| Storage temperature | -45°C to +85°C |
| RF Power Dissipation | 0dBm |

2.2 Electronic Characteristics

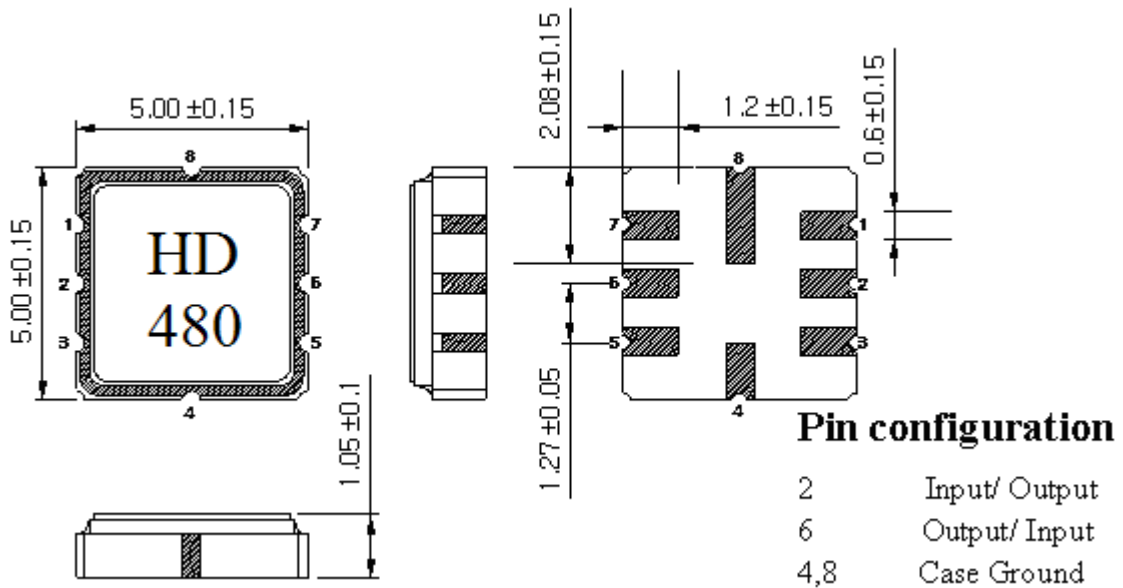
| Item | Unites | Minimum | Typical | Maximum | |
|-------------------------------|-------------------------|---------------------|---------|---------|----|
| Center Frequency | MHz | 430.425 | 430.500 | 430.575 | |
| Insertion Loss | dB | | 1.5 | 2.5 | |
| Quality Factor Unload Q | | 8000 | 12800 | | |
| 50 Ω Loaded Q | | 1000 | 2000 | | |
| Temperature | Turnover Temperature | °C | 10 | 25 | 40 |
| Stability | Freq.temp.Coefficient | ppm/°C ² | 0.032 | | |
| Frequency Aging | ppm/yr | | <± 10 | | |
| DC. Insulation Resistance | MΩ | 1.0 | | | |
| RF Equivalent RLC Model | Motional Resistance R1 | Ω | 16 | 26 | |
| | Motional Inductance L1 | μ H | 77.403 | | |
| | Motional Capacitance C1 | fF | 1.7658 | | |
| Transducer Static Capacitance | pF | | 2.0 | | |



3. TEST CIRCUIT



4. DIMENSION



5. ENVIRONMENTAL CHARACTERISTICS

5-1 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of $+25^{\circ}\text{C}$ for 5 Minutes and a higher temperature of $+85^{\circ}\text{C}$ for 30 Minutes. Then release the device into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in 2.2.

5-2 Resistance to solder heat

Submerge the device terminals into the solder bath at $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$ for 10 ± 1 sec.

Then release the device into the room conditions for 4 hours. It shall meet the specifications in 2.2.

5-3 Solderability

Submerge 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 soldering pad must be covered with new solder. It shall meet the specifications in 2.2.

5-4 Mechanical shock

Drop the device randomly onto the concrete floor from the height of 1 m 3 times. the resonator shall fulfill the specifications in 2.2.

5-5 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 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.

7. Packing

7.1 Dimensions

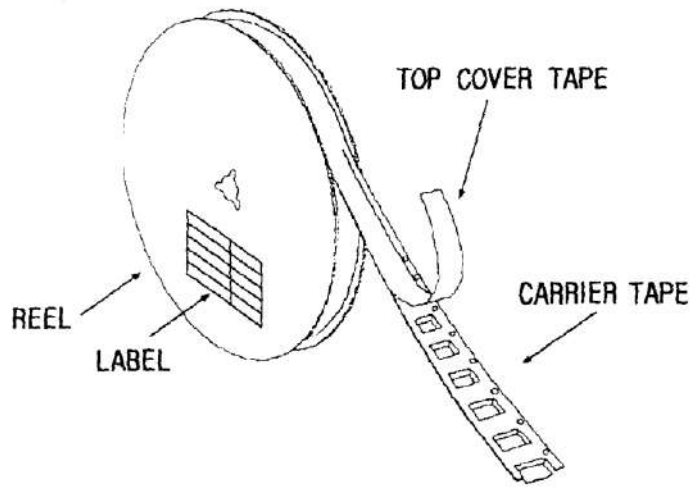
- (1) Carrier Tape: Figure 1
- (2) Reel: Figure 2
- (3) The product shall be packed properly not to be damaged during transportation and storage.

7.2 Reeling Quantity

1000 pcs/reel 7''
3000 pcs/reel 13''

7.3 Taping Structure

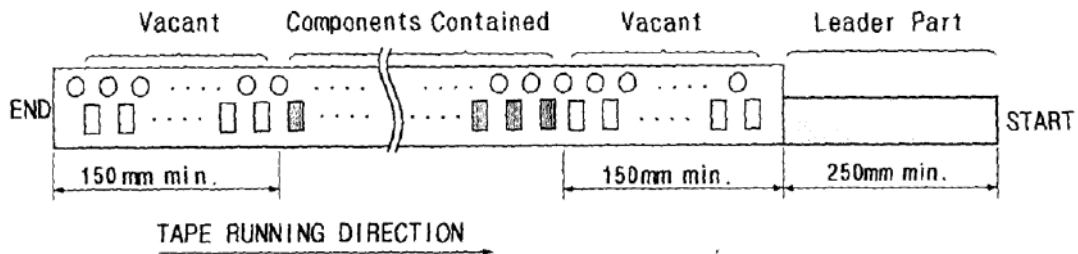
- (1) The tape shall be wound around the reel in the direction shown below.



(2) Label

| | |
|-------------------|--|
| Device Name | |
| User Product Name | |
| Quantity | |
| Lot No. | |

(3) Leader part and vacant position specifications.



8. TAPE SPECIFICATIONS

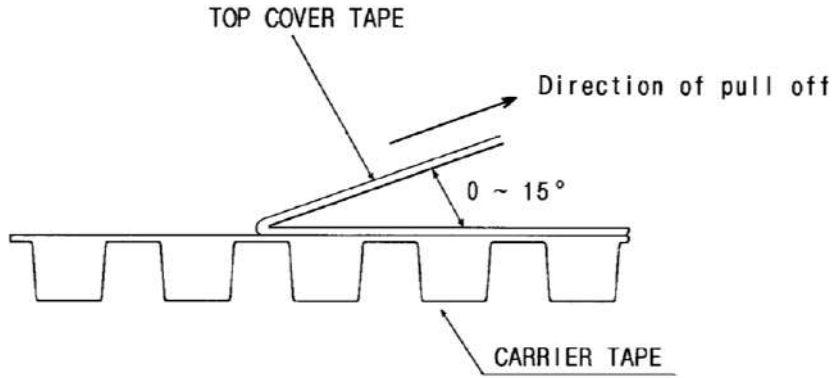
8.1 Tensile Strength of Carrier Tape: 4.4N/mm width

8.2 Top Cover Tape Adhesion (See the below figure)

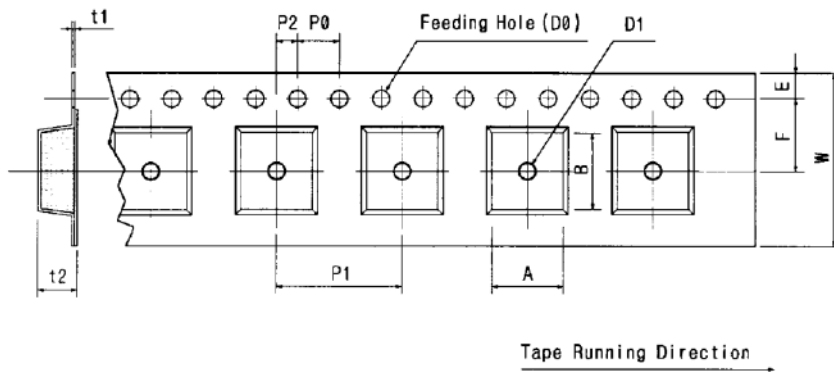
(1) pull off angle: 0~15°

(2) speed: 300mm/min.

(3) force: 20~70g



[Figure 1] Carrier Tape Dimensions

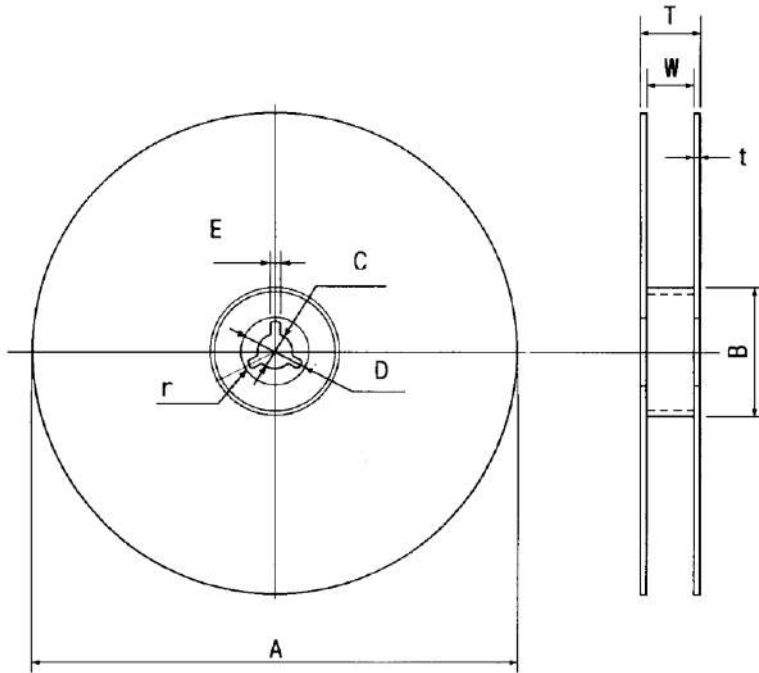


[Unit:mm]

| W | F | E | P0 | P1 | P2 | D0 | D1 | t1 | t2 | A | B |
|------|-------|------|------|------|-------|------|-------|-------|------|------|------|
| 12.0 | 5.5 | 1.75 | 4.0 | 8.0 | 2.0 | Ø1.5 | Ø1.0 | 0.3 | 2.10 | 6.40 | 5.20 |
| ±0.3 | ±0.05 | ±0.1 | ±0.1 | ±0.1 | ±0.05 | ±0.1 | ±0.25 | ±0.05 | ±0.1 | ±0.1 | ±0.1 |

[Figure 2]

[Unit:mm]



| A | B | C | D | E | W | t | r |
|------|------|------|------|------|------|------|------|
| Ø330 | Ø100 | Ø13 | Ø21 | 2 | 13 | 3 | 1.0 |
| ±1.0 | ±0.5 | ±0.5 | ±0.8 | ±0.5 | ±0.3 | max. | max. |