

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: _____ HDR360M S20
PREPARED 编制: _____ CHECKED 审核: _____
APPROVED 批准: _____ DATE 日期: _____ 2011-5-5

| | | |
|-------------------------|-------------|---------|
| 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 is applied to a SAW resonator designed for the stabilization of transmitters such as garage door openers and security transmitters.

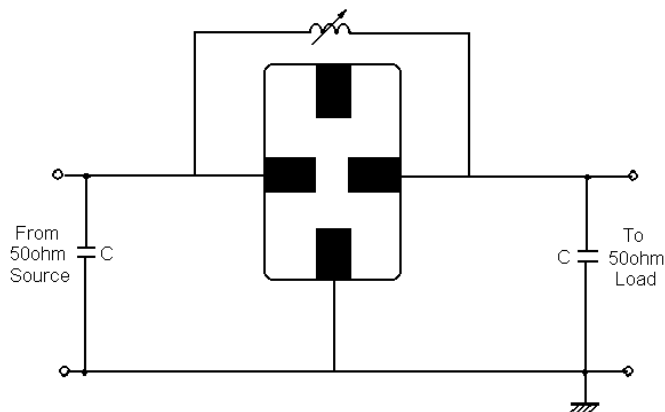
2. ELECTRICAL SPECIFICATION

| | |
|-----------------------|----------------|
| DC Voltage VDC | 30V |
| AC Voltage Vpp | 10V50Hz/60Hz |
| Operation temperature | -40°C to +85°C |
| Storage temperature | -45°C to +85°C |
| RF Power Dissipation | 0dBm |

Electronic Characteristics

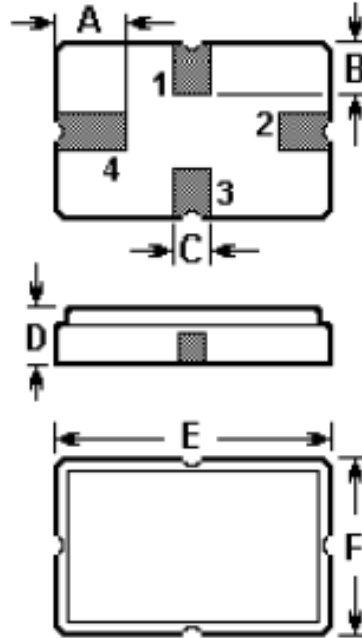
| Item | | Unites | Minimum | Typical | Maximum | Sym |
|---|--------------------------------------|---------------------|---------|-----------|---------|---------|
| Center Frequency | | MHz | 359.925 | 360.000 | 360.075 | f_c |
| Insertion Loss (in 50ohm system) | | dB | | 1.5 | 2.2 | IL |
| Quality Factor | Unloaded Q | | 8000 | 13900 | | Q_u |
| | 50 Ω LoadedQ | | 1000 | 2000 | | Q_L |
| Temperature Stability | Turnover Temperature | °C | 10 | 25 | 40 | T_o |
| | Turnover Frequency | MHz | | f_c | | f_o |
| | Frequency Temperature Coefficient | ppm/°C ² | | 0.037 | | FTC |
| Frequency Aging | Absolute Value during the First year | ppm/yr | | ≤ 10 | | $ f_A $ |
| DC Insulation Resistance between any two Pins | | M Ω | 1.0 | | | |
| RF Equivalent RLC Model | Motional Resistance | Ω | | 19 | 26 | R_m |
| | Motinal Inductance | $\square H$ | | 125.72 | | L_m |
| | Motinal Capacitance | fF | | 1.2914 | | C_m |
| | Pin 1to pin2 Static Capacitance | pF | 1.5 | 2.0 | 2.5 | C_o |
| Transducer Static Capacitance | | pF | | 1.7 | | C_p |

3. TEST CIRCUIT



4. DIMENSION

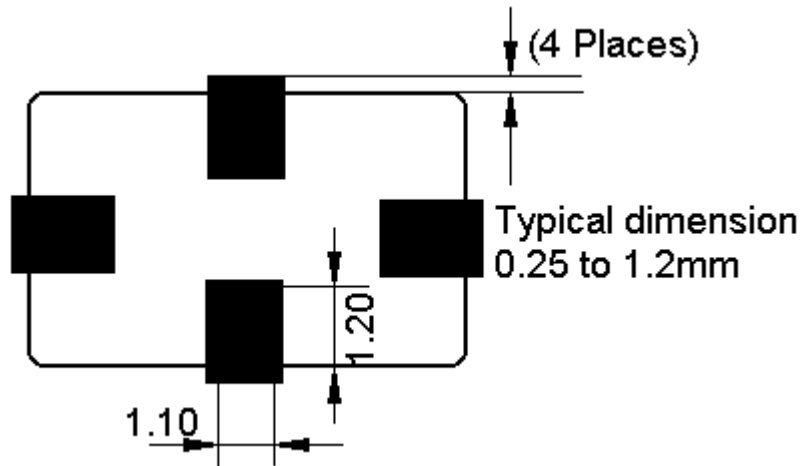
4-1 Typical dimension(unit: mm)



| Sign | Data (unit: mm) | Sign | Data (unit: mm) |
|------|-----------------|------|-----------------|
| A | 1.2±0.1 | D | 1.4±0.1 |
| B | 0.8±0.1 | E | 5.0±0.1 |
| C | 0.5 | F | 3.5±0.1 |

| Pin | Configuration |
|-----|----------------|
| 1 | Input / Output |
| 3 | Output / Input |
| 2/4 | Case Ground |

4-2 Typical circuit board land patter



5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the device to +85°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 table 1.

5-2 Low temperature exposure

Subject the device to -20°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 table 1.

5-3 Temperature cycling

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of +80°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 table 1.

5-4 Resistance to solder heat

Dip the device terminals no closer than 1.5mm into the solder bath at 260°C ±10°C for 10±1 sec. Then release the device into the room conditions for 4 hours. The device shall meet the specifications in table 1.

5-5 Solderability

Subject the device terminals into the solder bath at 245°C ±5°C for 5s, More than 95% area of the terminals must be covered with new solder. It shall meet the specifications in table 1.

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 table 1.

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 table 1.

5-8 Lead fatigue

5-8-1 Pulling test

Weight along with the direction of lead without an shock 1kg. The device shall satisfy all the initial Characteristics.

5-8-2 Bending test

Lead shall be subject to withstand against 90°C bending with 450g weight in the direction of thickness. This operation shall be done toward both directions. The device shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

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

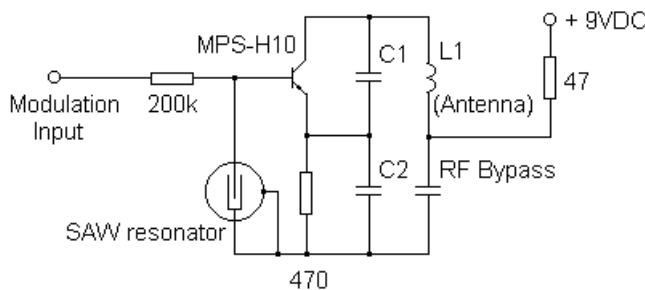
Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

6.3 Soldering

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

7. TYPICAL APPLICATION CIRCUITS

Typical low-power Transmitter Application



Typical Local Oscillator Application

