

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: \_\_\_\_\_ HDR293.125M-S3

PREPARED 编 制: \_\_\_\_\_ CHECKED 审 核: \_\_\_\_\_

APPROVED 批 准: \_\_\_\_\_ D A T E 日 期: \_\_\_\_\_ 2006-5-11

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

## 更改历史记录 History Record

更改日期 Date	规格书编号 Spec. No.	产品型号 Part No.	客户产品型号 Customer No.	更改内容描述 Modify Content	备注 Remark

## 1. SCOPE

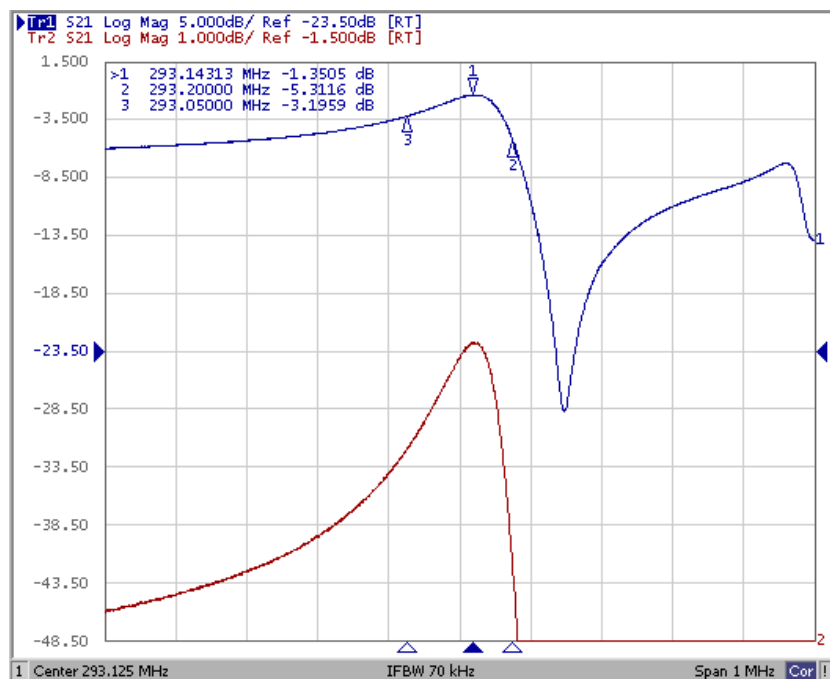
This specification shall cover the characteristics of 1-port SAW resonator with 293.125M used for remote-control security.

## 2. ELECTRICAL SPECIFICATION

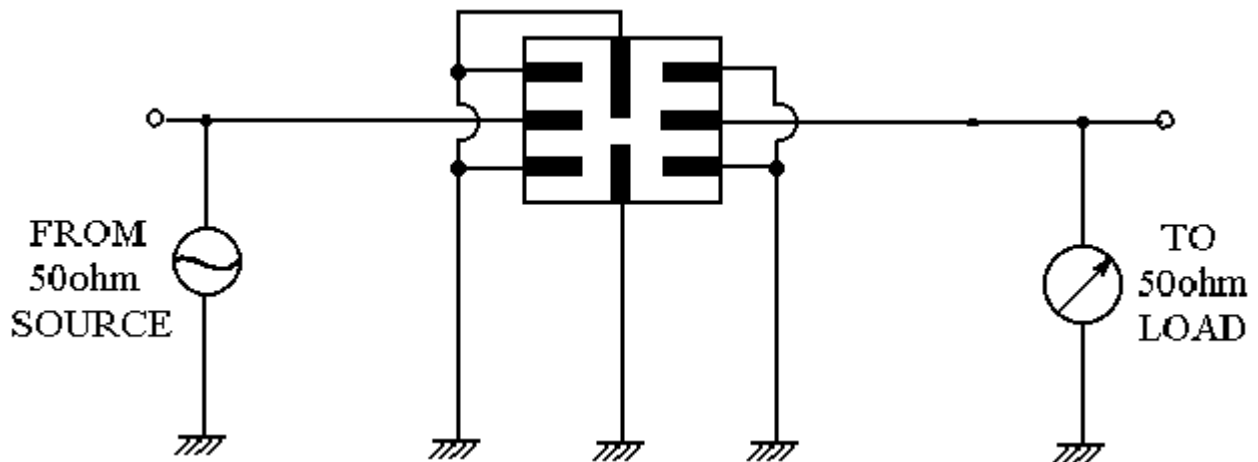
DC Voltage VDC	10V
AC Voltage Vpp	10V50Hz/60Hz
Operation temperature	-20℃ to +85℃
Storage temperature	-45℃ to +85℃
RF Power Dissipation	0dBm

### Electronic Characteristics

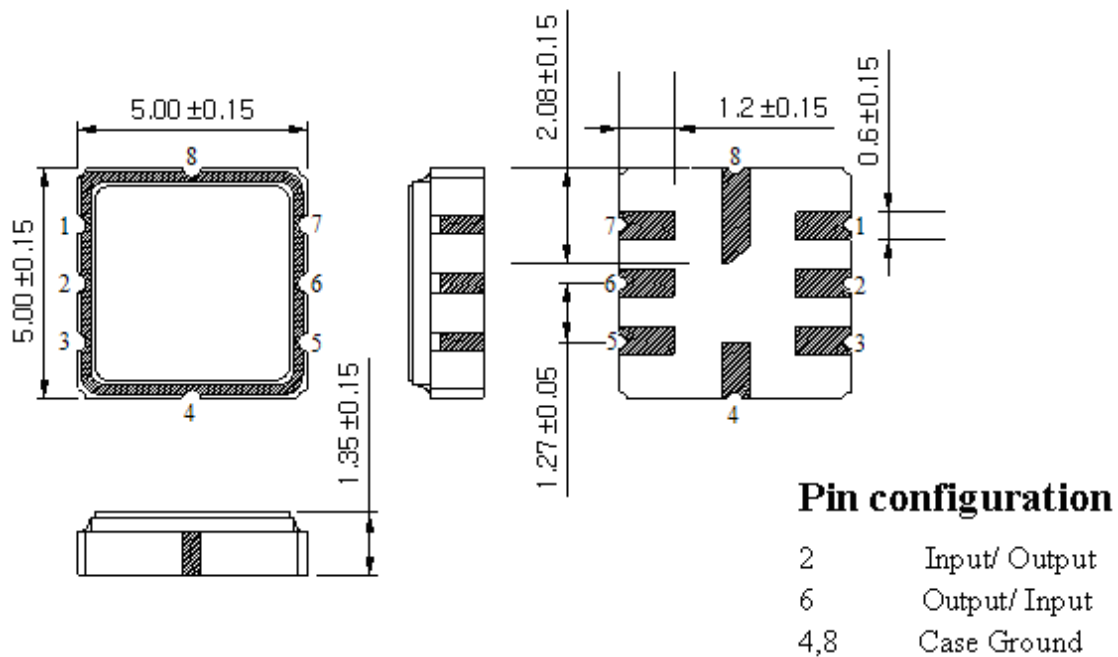
Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	293.050	293.125	293.200
Insertion Loss		dB	-	1.5	2.5
Quality Factor Unload Q			8000	12000	-
50Ω Loaded Q			1000	2000	-
Temperature	Turnover Temperature	℃	-	39	-
Stability	Freq.temp.Coefficient	ppm/℃ <sup>2</sup>	-	0.032	-
Frequency Aging		ppm/yr	-	≤±10	-
DC. Insulation Resistance		MΩ	1.0	-	-
RF Equivalent RLC Model	Motional Resistance R1	Ω	-	16	26
	Motional Inductance L1	μ H	-	138.46	-
	Motional Capacitance C1	fF	-	2.1292	-
Transducer Static Capacitance		pF	-	2.6	-



### 3. TEST CIRCUIT



### 4. DIMENSION



### 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  $-40^{\circ}\text{C}$  for 30 minutes. Following by a high temperature of  $+80^{\circ}\text{C}$  for 30 Minutes. Then release the device into the room conditions for 24 hours prior to the measurement. It shall meet the specifications in table 1.

#### 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 table 1.

#### 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 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.

## 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.