

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: \_\_\_\_\_ HDR□□□D

PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_

APPROVED 批准: \_\_\_\_\_ D A T E 日期: \_\_\_\_\_ 2015-7-16

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

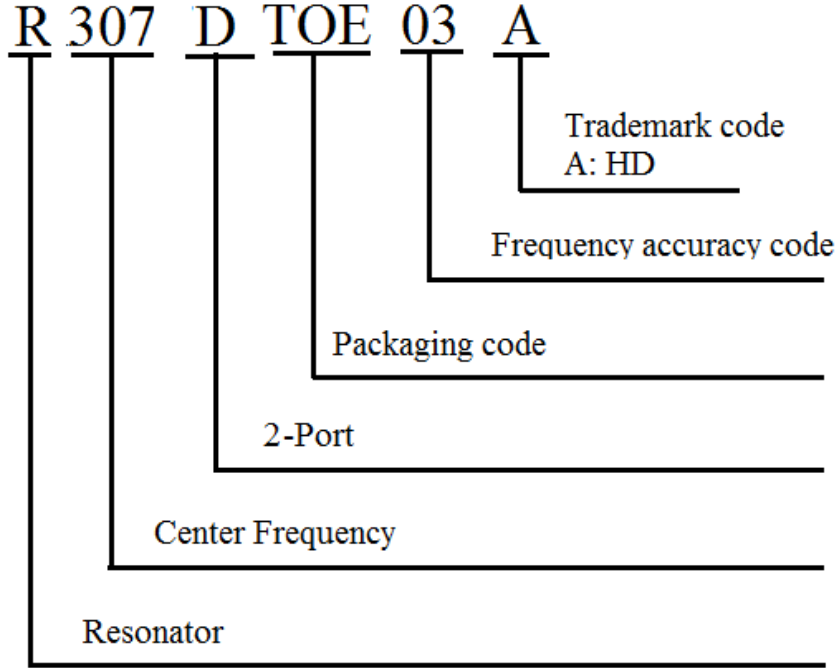
## 更改历史记录 History Record

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 2-port SAW resonator with R□□□D used for remote-control security.

**2. naming rule(below P/N is just an example)**



**2.1 Frequency accuracy list**

Code	Frequency accuracy	Code	Frequency accuracy	Code	Frequency accuracy	Code	Frequency accuracy
1	±75	24	-90~+50	62	-75~-150	83	+75~+250
2	±50	25	-75~+150	63	-75~-200	84	+100~+250
3	±100	26	-75~+200	64	-75~-250	85	0~+250
4	±150	27	-65~+30	65	0~-150	86	0~+75
5	±250	28	-70~+40	66	0~-250	87	+75~+200
6	±73	29	-70~+50	67	-100~-250	88	+85~+250
7	±80	30	-75~+40	68	-75~-100	89	0~+150
8	±25	31	-80~+75	69	-85~-250	90	+85~+150
9	±70	32	-10~+140	70	0~-100	91	0~+85
10	±15	33	-85~+65	71	-150~-250	92	+150~+250
11	±30	34	-75~+100	72	-76~-150	93	+50~+85
12	±60	35	-75~+85	73	0~-50	94	+51~+75
14	±20	36	-85~+250	76	0~-75	95	+76~+150
15	-60~-20	37	-70~+30	77	0~-85	96	+10~+75
21	-85~+50	50	+30~-100	80	0~+100	97	-10~+50
22	-75~+50	60	-85~-150	81	+50~+150	98	0~+50
23	-110~+40	61	-50~-250	82	+75~+150	99	0~+70

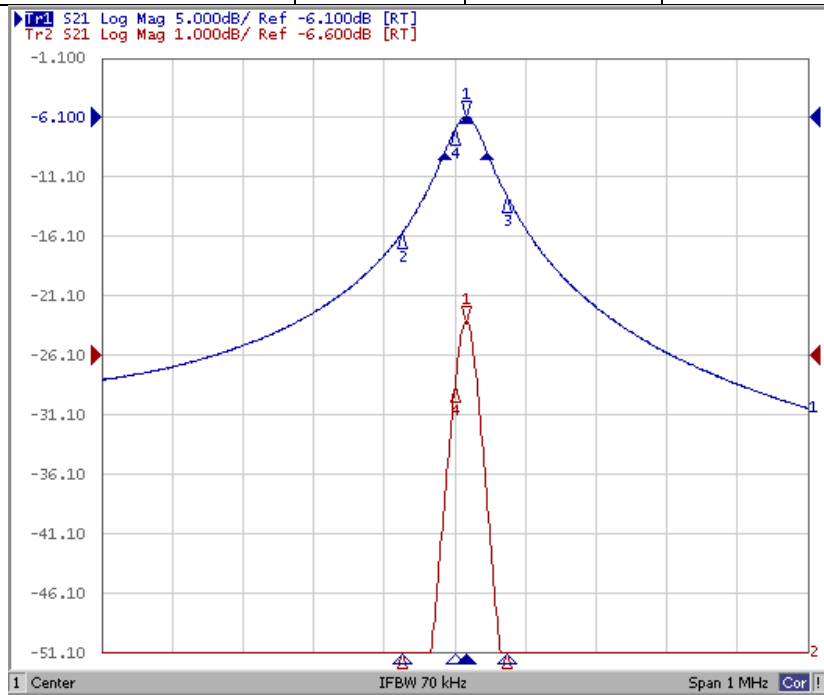
### 3. Electrical Specification

#### 3.1 Maximum Rating

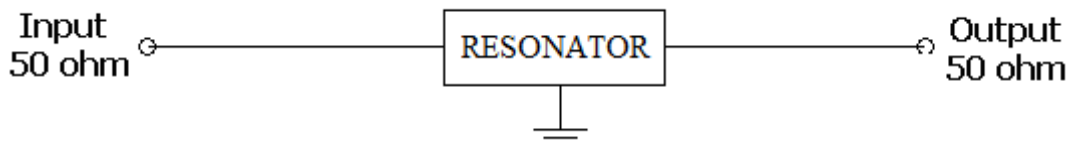
DC Voltage VDC	10V
AC Voltage Vpp	10V 50Hz/60Hz
Operation temperature	-40°C to +85°C
Storage temperature	-45°C to +85°C
Max Input Power	10dBm

#### 3.2 Electronic Characteristics

Item	Unites	Min	Typ	Max
Center Frequency	MHz	From 150M to 1000M customers can choose any of frequency		
Frequency accuracy	KHz	According to specific models		
Insertion Loss	dB		6.0	8.0
Quality Factor	Unload Q		12000	
	50Ω Loaded Q		6300	
Temperature	Turnover Temperature	°C	10	25
Stability	Freq.temp.Coefficient	ppm/°C		0.032
Frequency Aging		ppm/yr		<±10
DC. Insulation Resistance		MΩ	1.0	



#### 3.3 Test Circuit



## **4. ENVIRONMENTAL CHARACTERISTICS**

### **4.1 High temperature exposure**

Subject the device to +85°C for 16 hours. Then release the filter into the room conditions for 24 hours prior to the measurement. It shall fulfill the specifications in 2-2.

### **4.2 Low temperature exposure**

Subject the device to -40°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.

### **4.3 Temperature cycling**

Subject the device to a low temperature of -40°C for 30 minutes. Following by a high temperature of +85°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.

### **4.4 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 2-2.

### **4.5 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 2-2.

### **4.6 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.

### **4.7 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.

## **5. REMARK**

### **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**

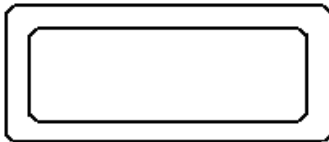
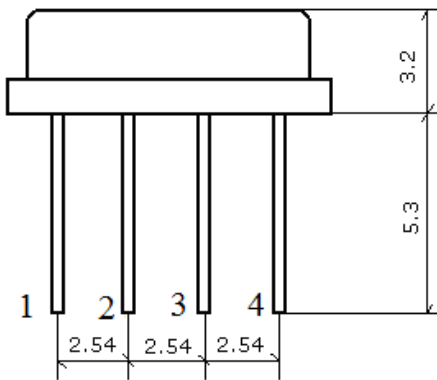
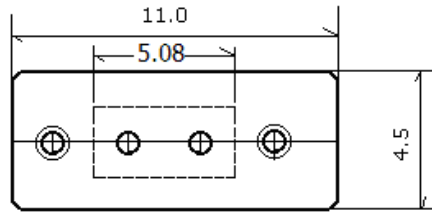
Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

### **5.3 Soldering**

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

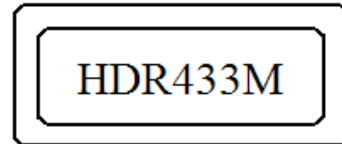
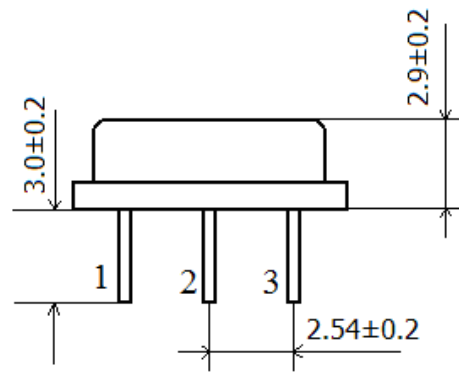
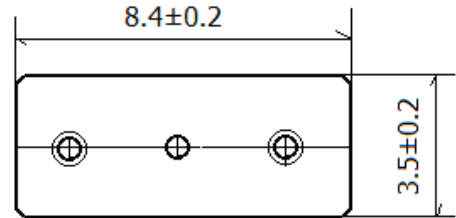
**6. Dimension**

**F11**



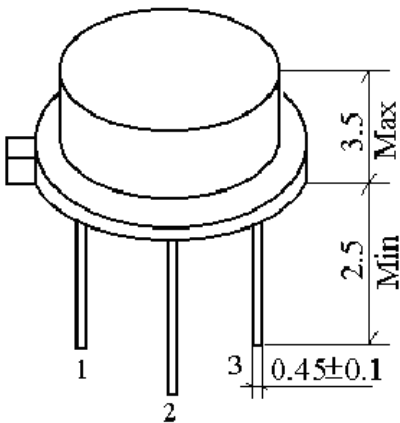
Pin configuration  
 1. Input  
 4. Output  
 2,3 Ground

**D11**

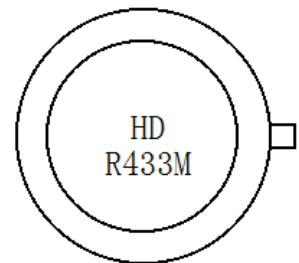
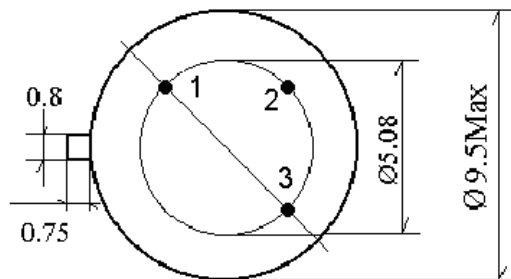


Pin configuration  
 1. Input  
 3. Output  
 2. Ground

**TO39**

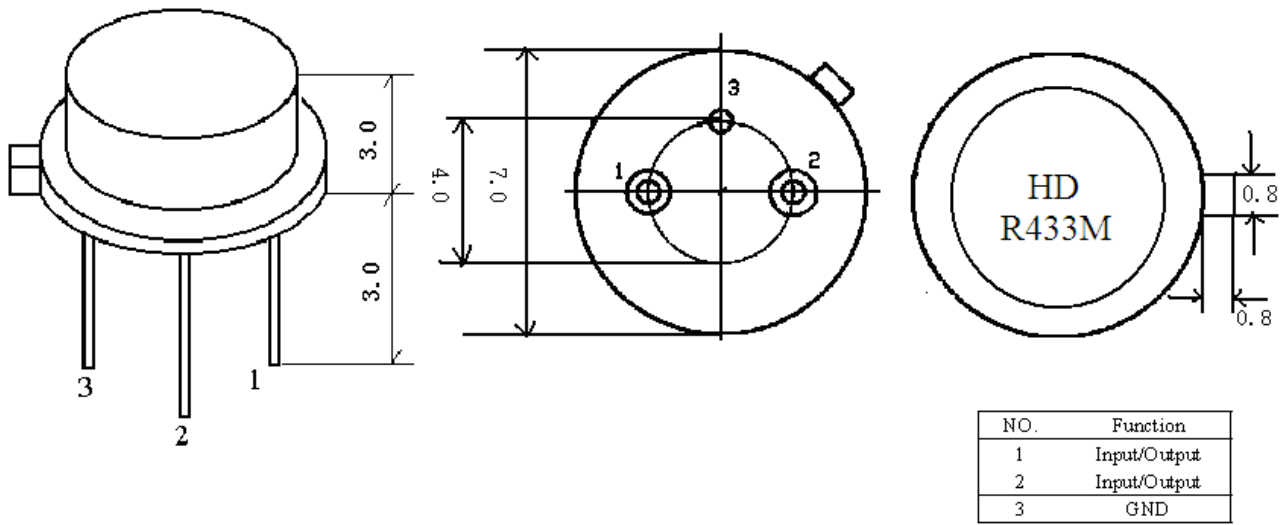


**BOTTOM VIEW**

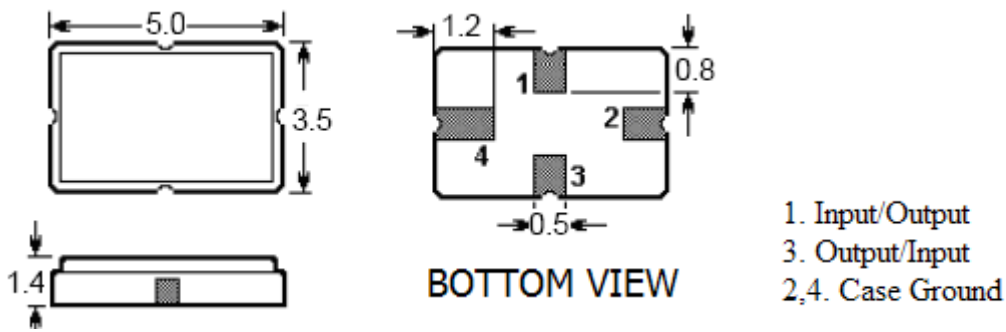


NO:	Function
1	Input
2	Output
3	Ground

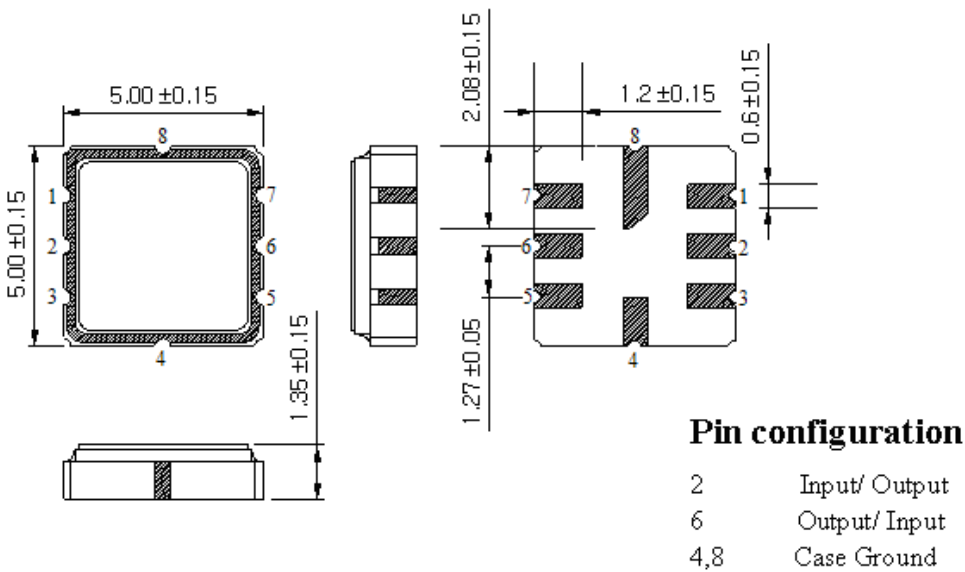
**D12**



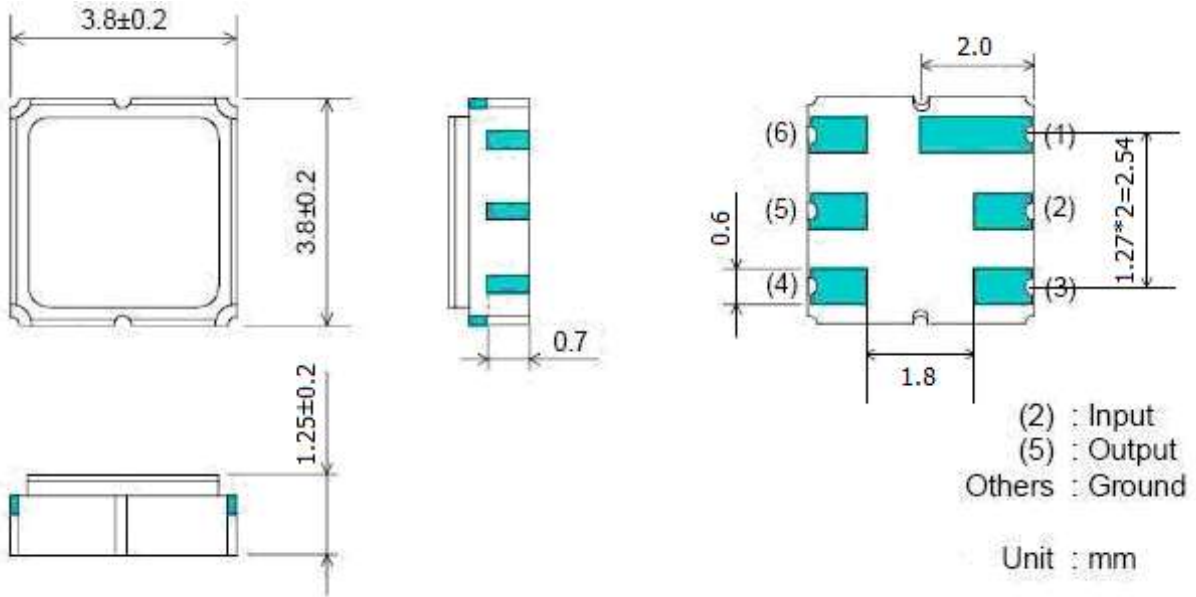
**S20**



**S3**



**S4**



**S6**

