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：HDR422M2 S20

PREPARED 编 制： CHECKED 审 核：

APPROVED 批 准： D A T E 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

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 R422M2 used for remote-control security.

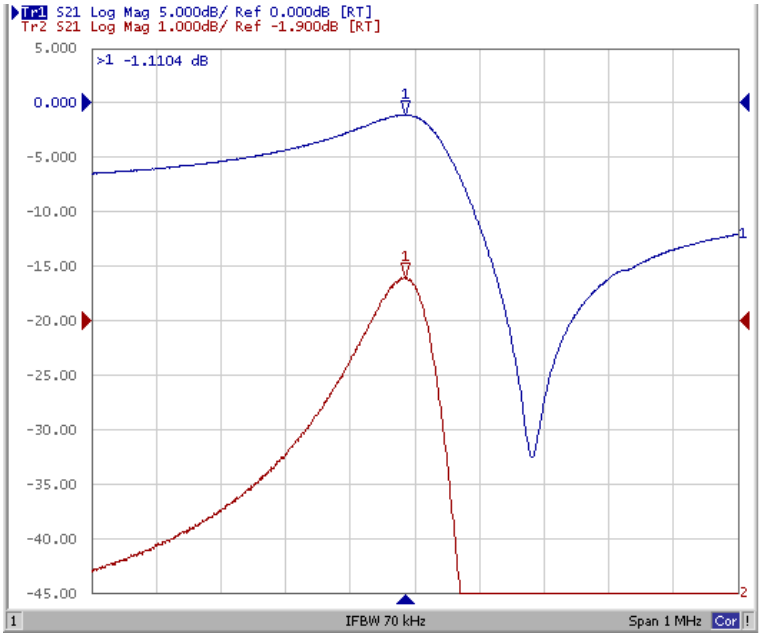
2. Electrical Specification

2.1 Maximum Rating

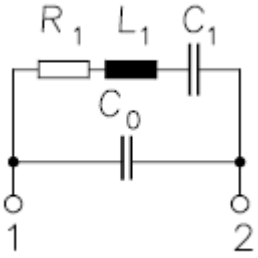
DC Voltage VDC	10V
AC Voltage Vpp	10V 50Hz/60Hz
Operation temperature	-40℃ to +85℃
Storage temperature	-45℃ to +85℃
Source Power	0dBm

2.2 Electronic Characteristics

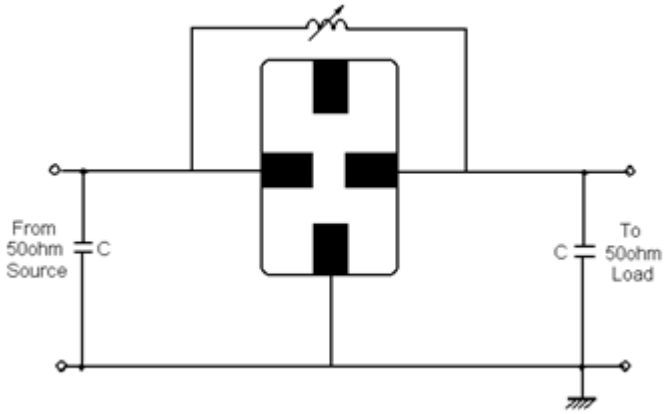
Item		Unites	Minimum	Typical	Maximum
Center Frequency		MHz	421.925	422.000	422.075
Insertion Loss		dB		1.4	1.9
Quality Factor	Unload Q		8000	12800	
	50Ω Loaded Q		1000	2000	
Temperature Stability	Turnover Temperature	℃	10	25	40
	Freq.temp.Coefficient	ppm/℃		0.032	
Frequency Aging		ppm/yr		<±10	
DC. Insulation Resistance		MΩ	1.0		
Transducer Static Capacitance C0		pF		2.13	



2.3 Equivalent LC Model

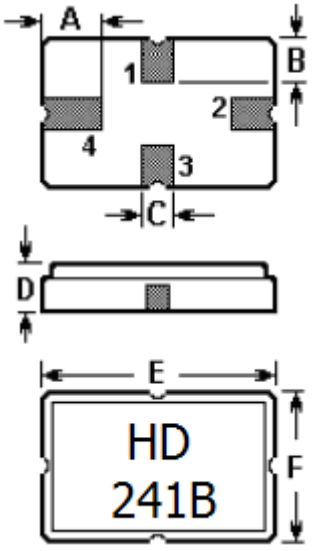


3. Test Circuit



4. Dimension

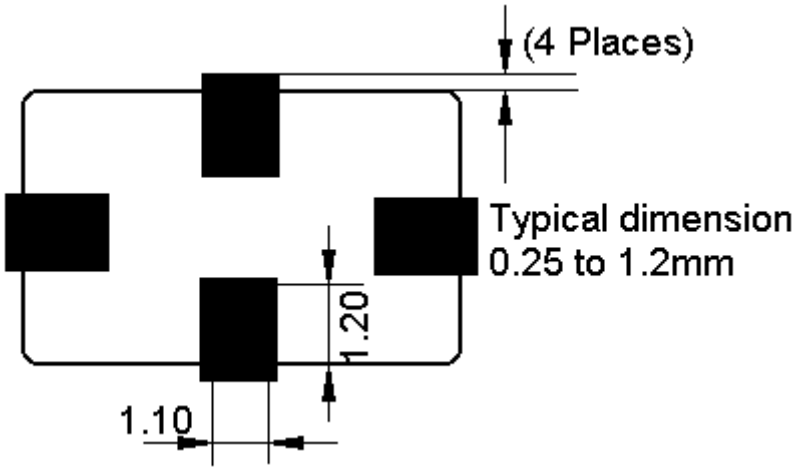
4-1 Typical dimension(unit: mm)



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. Environment Characteristic

5-1 Thermal Shock:

The components shall remain within the electrical specifications after being kept at the condition of heat cycle conditions: TA=-40℃±3℃, TB=85℃±2℃, t1=t2=30min, switch time≤3min& cycle time : 100 times, recovery time: 2h±0.5h.

5-2 Resistance to solder heat

Submerge the device terminals into the solder bath at 260℃ ±5℃ 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 Solder ability

Submerge the device terminals into the solder bath at 245℃ ±5℃ 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 The Temperature Storage:

5.3.1 High Temperature Storage: The components shall remain within the electrical

specifications after being kept at the 85℃±2℃for 96h±4h, recovery time : 2h±0.5h.

5.3.2 Low Temperature Storage: The components shall remain within the electrical specifications after being kept at the –40℃±3℃for 96h±4h, recovery time : 2h±0.5h.

5-5 Humidity test:

The components shall remain within the electrical specifications after being kept at the condition of ambient temperature 60℃±2℃, and 90~96% RH for 96h±4h.

5-6 Mechanical shock

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

5-7 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.