

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: \_\_\_\_\_ HDR154M F11 \_\_\_\_\_  
PREPARED 编制: \_\_\_\_\_ CHECKED 审核: \_\_\_\_\_  
APPROVED 批准: \_\_\_\_\_ DATE 日期: \_\_\_\_\_ 2010-4-27 \_\_\_\_\_

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.

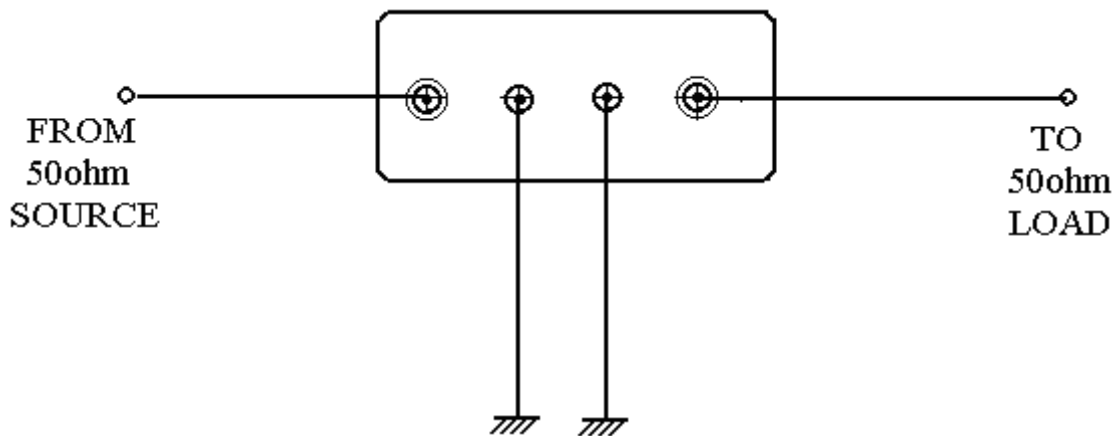
### 2. ELECTRICAL SPECIFICATION

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

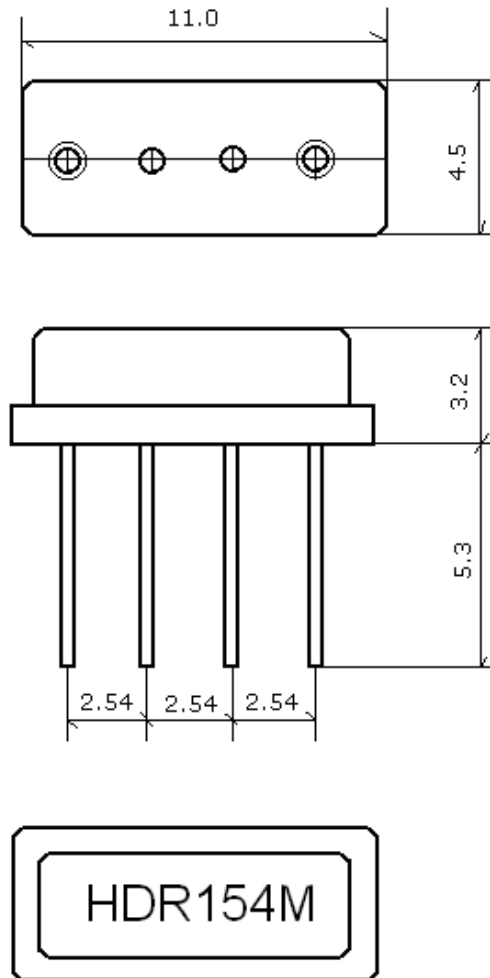
#### 2.2 Electronic Characteristics

Item	Unites	Minimum	Typical	Maximum	
Center Frequency	MHz	153.925	154.000	154.075	
Insertion Loss	dB		2.2	2.5	
Quality Factor Unload Q		14000	14500		
50 Ω Loaded Q		3000	4000		
Temperature	Turnover Temperature	°C	10	25	40
Stability	Freq.temp.Coefficient	ppm/°C <sup>2</sup>	0.037		
Frequency Aging	ppm/yr		<± 10		
DC. Insulation Resistance	MΩ	1.0			
RF Equivalent RLC Model	Motional Resistance R1	Ω	28	30	
	Motional Inductance L1	μ H	532.63		
	Motional Capacitance C1	fF	2.0053		
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 2.2.

##### 5-2 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.

##### 5-3 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.

##### 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 2.2.

##### 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 2.2.

**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 2.2.

**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 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**

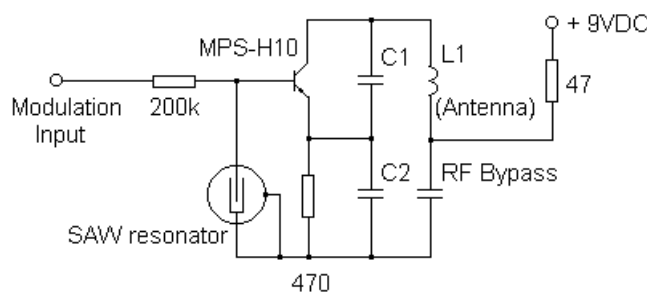
Ultrasonic vibration may cause deterioration & destruction of the component. Please avoid ultrasonic cleaning

**6.3 Soldering**

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

**7. TYPICAL APPLICATION CIRCUITS**

**Typical low-power Transmitter Application**



**Typical Local Oscillator Application**

