
Approved by:

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SPECIFICATION

PRODUCT: SAW RESONATOR

MODEL: HDR433MS3(SM-3)

MARKING: HD451



SHOULDER ELECTRONICS LIMITED

1. SCOPE

This specification shall cover the characteristics of 1-port SAW resonator with 433.92M used for remote-control security.

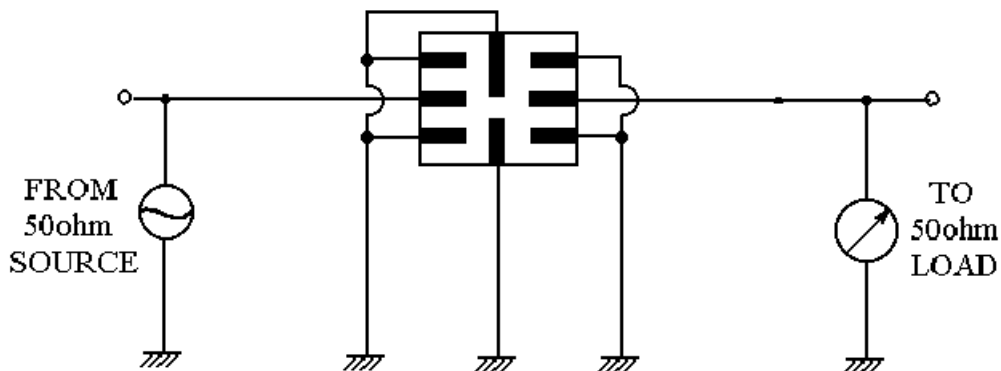
2. ELECTRICAL SPECIFICATION

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

Electronic Characteristics

Item	Unites	Minimum	Typical	Maximum	
Center Frequency	MHz	433.770	433.920	434.070	
Insertion Loss	dB		1.5	2.5	
Quality Factor Unload Q			12,800		
50 Ω Loaded Q			1,000		
Temperature	Turnover Temperature	°C	10	25	40
Stability	Turnover Frequency	KHz		f _o	
	Freq.temp.Coefficient	ppm/°C ²		0.032	
Frequency Aging	ppm/yr		<±10		
DC. Insulation Resistance	M Ω	1.0			
RF Equivalent RLC Model	Motional Resistance R1	Ω		18	26
	Motional Inductance L1	μ H		86	
	Motional Capacitance C1	pF		1.5	
Pin 1 to Pin 2 Staic Capacitance	pF	1.7	2.0	2.3	
Transducer Static Capacitance	pF		1.9		

3. TEST CIRCUIT



5-5 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 filter 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.