HR3/4N

61.24/67.24MHz One-Port SAW Resonator For the US channel RF modulator

Approved by:
Checked by:
Issued by:

SPECIFICATION

PRODUCT: SAW RESONATOR

MODEL: HR3/4N SF712

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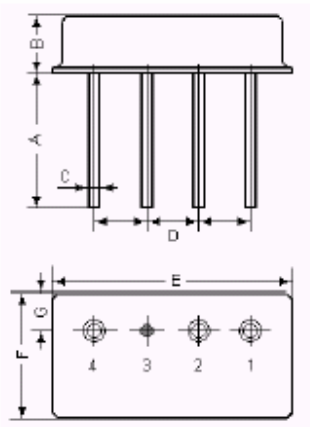
HR3/4N

61.24/67.24MHz One-Port SAW Resonator For the US channel RF modulator

The .HR3/4N is a true one-port，surface-acoustic-wave (**SAW**) resonator in a low-profile **CW-2** ase which applies to the US channel RF modulator. c

1. Package Dimension (CW-2)



Pin	**Connection**
1	3CH
2	4CH
3	Case Ground
4	Common

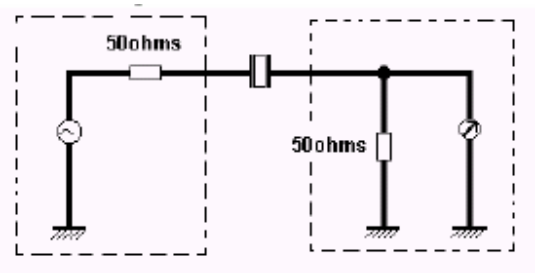
Sign	**Data (unit: mm)**	**Sign**	**Data (unit:mm)**
A	5.0/8.0	E 12.0	
B	3.5	F 7.2	
C	0.5	G 2.0	
D	2.54		

2.Marking

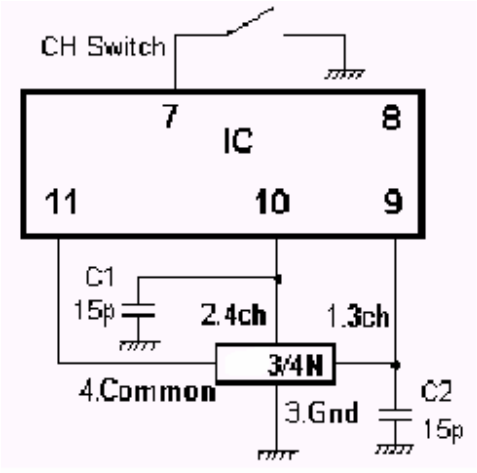
HR3/4N

Color: Black or Blue

3 Measuring Circuit for Resonant Loss



4.Typical Application Circuit



5.Performance

5-1.Electric Characteristics

Reference temperature shall be 25+2℃.

Item	**Specification**	**Remarks**

Resonant Frequency	**3ch**	**61.24+0.08MHz**	**Measured by HP8711A**
	4ch	**67.24+0.08MHz**	
Resonator Loss	**3ch**	**3.8dB Typical** **5.0 dB Max**	
	4ch		
Parallel Capacitance	**3ch**	**4.5+1.0 pF**	**Measured by LCR Meter HP4275A**
	4ch		
Temp Coef. for Freq.		**±8 ppm/℃ Max**	**-10℃ to +60℃**

5-2.Maximum Rating

Item	Terminals to Measure	Maximum rating	Remarks
DC Voltage	**3ch – Common** **4ch – Common**	**10V** **10V**	
Pulse Impressing	**Between each terminal**	**10V**	**1/60 sec. Max**
AC Voltage	**Between each terminal**	**10Vp-p**	**Commercial Frequency**
Operation Temp.		**-10℃ to +60℃**	
Storage Temp.		**-40℃ to +80℃**	
Level	**3ch- common** **4ch- common**	**0.2mW** **(Posc=I2Re)**	**I: Oscillation Current** **Re: Oscillation Imp**

5-3 Environmental Characteristics

Item	Condition	Judgment
High Temperature Storage	**80℃ for 500 hours**	Kept in the room temperature and normal humidity for 1 hour **Resonator Frequency Shift | △ fr | ≤ 45kHz** **Resonator Loss After test Ar≤6.0dB**
Low Temperature Storage	**-40℃ for 500 hours**	
Moisture Load	**6 VDC among 3ch,4ch and Common pins. 40℃ and 90％ RH for 500 hours**	
Pressure Cook	**2 atm,120℃ and 97％ RH for 96 hours**	
Temperature Cycle	**5 cycles** **(1 cycles:-20℃ for 0.5 hour then 70℃ for 0.5 hour)**	
Resistance to Soldering Heat	**Dipping terminals into Methanol than 1.6mm from** the stem. 260℃ for 10seconds	

5-4. Mechanical Characteristics

Item	Condition	Judgment

Vibration	**Vibration of 1000 rpm, amplitude 1.5mm X, Y, Z, directions for 1 hour**	**Kept in the room temperature and normal humidity for 1 hour Resonant Frequency Shift|△fr | ≤45kH Resonator Loss After test Ar≤6.0dB**
Mechanical Shock	**3 trials of natural dropping from the height of 1 meter on to an board**	
Lead Bending	**90° bending and returning to the initial position, twice, 0.5kg**	
Lead Pull	**Pulled 2kgs weight for 5 seconds towards an axis of each terminal**	
Solderbility	**Dipping terminals into Methanol (JIS-K-501) of rosin(JIS-K-5902) Then, into molten solder at 230+5℃ for 3+0.5℃ seconds**	**More than 95％ of Terminal surface Covered smooth solder**