1.SCOPE

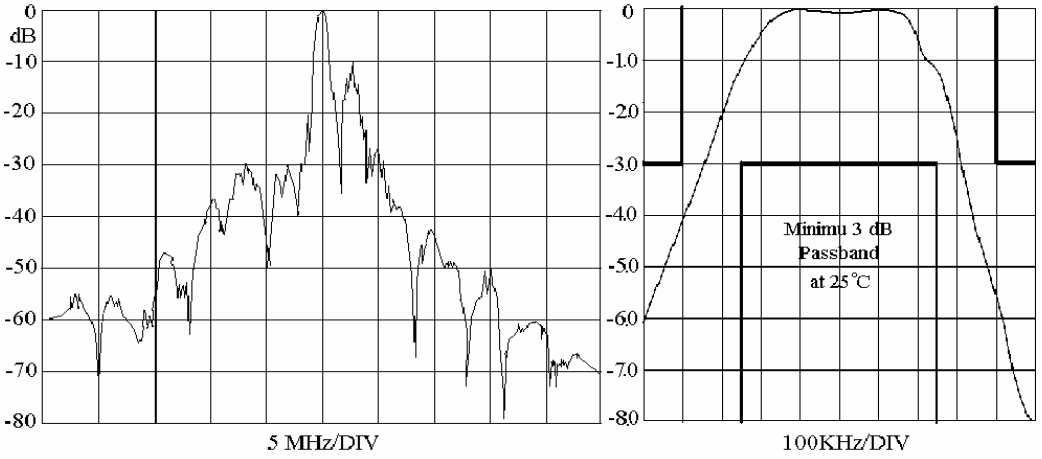
This specification shall cover the characteristics of SAW filter with 447.725MHz used for remote-control security.

2. ELECTRICAL SPECIFICATION

DC Voltage VDC	**10V**
AC Voltage Vpp	**10V50Hz/60Hz**
Storage temperature	**-45℃ to +85℃**
RF Power Dissipation	**0dBm**

Electronic Characteristics

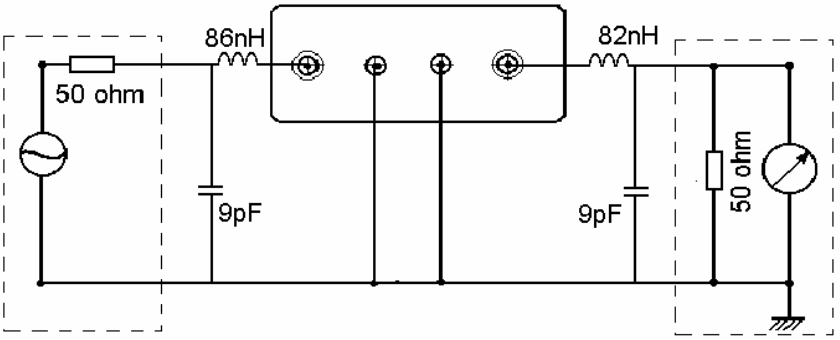
2-1.Type frequency response



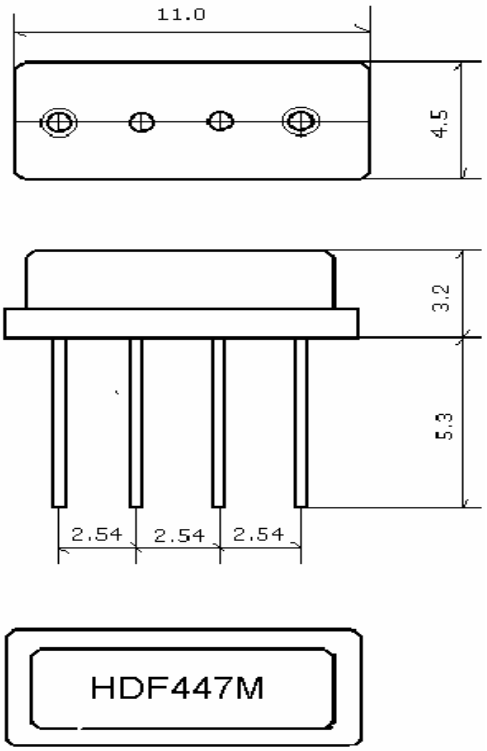
2-2.Electrical characteristics

Characteristics		Sym	Notes	Min.	Typical	Max.	Units
Center Frequency	Absolute Frequency	Fc	1.2	447.650	447.725	447.800	M Hz
	tolerance from Nominal	Δfc				±80	KHz
Insertion Loss		IL	1		1.7	3.0	dB
3dB Bandwidth		BW_3	1.2	500	700	800	KHz
Rejection	At fo-21.4MHz (Image)		1	40	50		dB
	At fo-10.7 MHz (LO)			16	40		
	Ultimate				80		
Temperature characteristics	Operating case temp.	Tc	3.4	-35		+85	℃
	Tumover temp.	To		22	37	62	℃
	Tumover Frequency	fo			fc		MHz
	Freq.temp.coefficient	FTC			0.032		ppm/℃
Frequency aging			5		<±10		ppm/y

3. TEST CIRCUIT



4. DIMENSION



5. ENVIRONMENTAL CHARACTERISTICS

5-1 High temperature exposure

Subject the filter to +80℃ for 96 hours. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-2 Moisture

Keep the filter at 40℃ and 95% rh for 96 hours. Then release the filter into the room

conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-3 Low temperature exposure

Subject the filter to -20℃ for 96 hours. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall fulfill the specifications in table 1.

5-4 Temperature cycling

Subject the filter to a low temperature of -55℃ for 30 minutes. Following by a high temperature of +85℃ for 30 Minutes. Then release the filter into the room conditions for 1 to 2 hours prior to the measurement. It shall meet the specifications in table 1.

5-5 Resistance to solder heat

Dip the filter terminals no closer than 1.5mm into the solder bath at 27℃ ±10℃ for 10±1 sec. Then release the Filter into the room conditions for 1 to 2 hours. The Filter shall meet the specifications in table 1.

5-6 Mechanical shock

Drop the filter randomly onto the concrete floor from the height of 30cm 3 times. The filter shall fulfill the specifications in table 1.

5-7 Vibration

Subject the filter 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 filter shall fulfill the specifications in table 1.

5-8 Lead fatigue

6-8-1 Pulling test

Weight along with the direction of lead without an shock 3 kg. The filter shall satisfy all the initial Characteristics.

6-8-2 Bending test

Lead shall be subject to withstand against 90℃ bending in the direction of thickness. This operation shall be done toward both directions. The filter shall show no evidence of damage and shall satisfy all the initial electrical characteristics.

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.