SPEC NO.: RFS-613M

Specification

TO:STE1108
Model Name: SAW FILTER
PART NO: SSF70N02D2212
CUSTOMER PART NO.:

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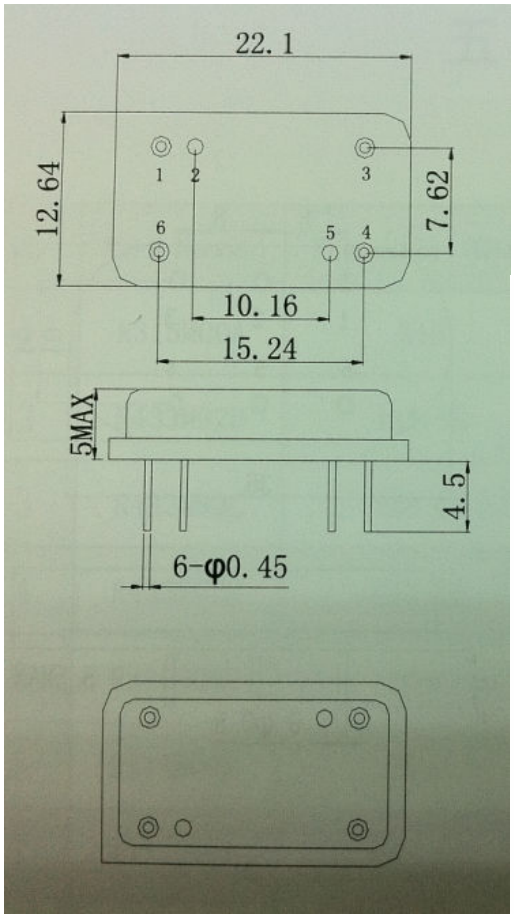
1. Package Dimension

(D2212)



Pin No.	Description
6	Input
4	Output
1,2,3,5	Ground

Marking Description

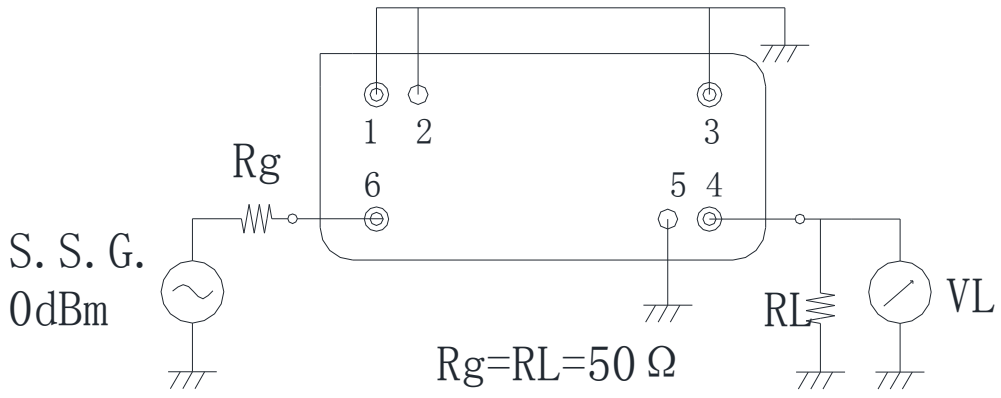
S	Trademark
SF	SAW Filter
70N02	Part Number
YYM	Year Code & Month Code
XXX	Serial No.

1.2 Marking

2. Performance

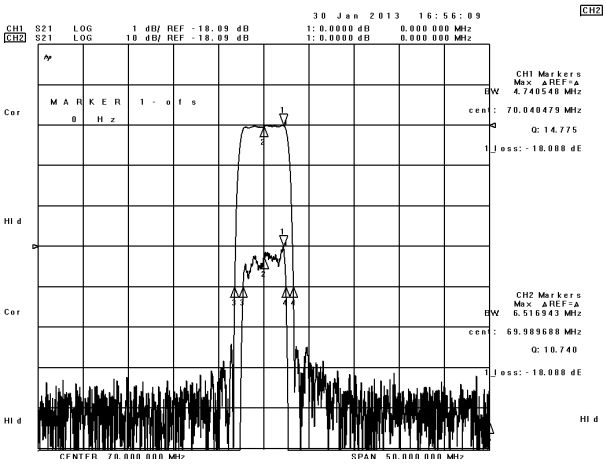
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc	69.9	70.0	70.1	MHz
Insertion Loss(min)	IL		18.5	20.0	dB
Amplitude Ripple (p-p) 67.80-72.20MHz	△α		0.7	1.0	dB
1 dB Bandwidth	BW_{1dB}	4.5	4.7		MHz
3 dB Bandwidth	BW_{3dB}	5.0	5.1		MHz
40 dB Bandwidth	BW_{40dB}		6.5	7.0	MHz
Group Delay Ripple 67.80-72.20MHz	GDR		200.0	250.0	ns
Absolute Delay 70.00MHz			2.3	3.0	us
Absolute Attenuation	α				
25.00-65.00 MHz		50.0	57.0		dB
76.00-130.00MHz		50.0	57.0		dB
160.00-400.00 MHz		50.0	57.0		dB

3.Test Circuit

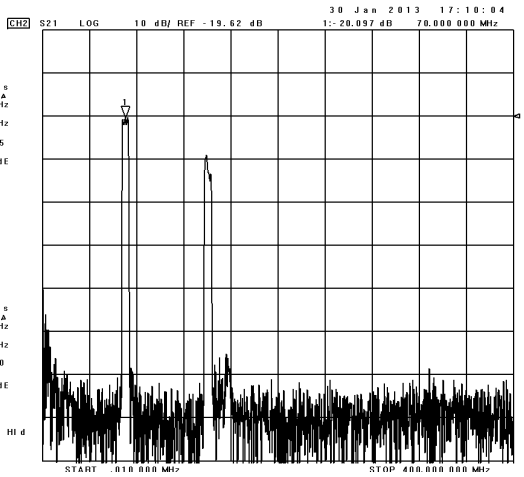


4. Frequency Characteristics

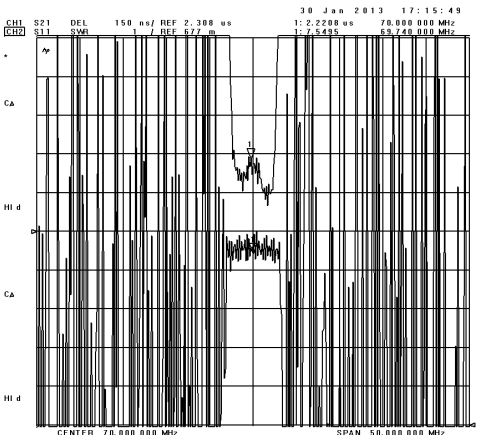
Frequency Response



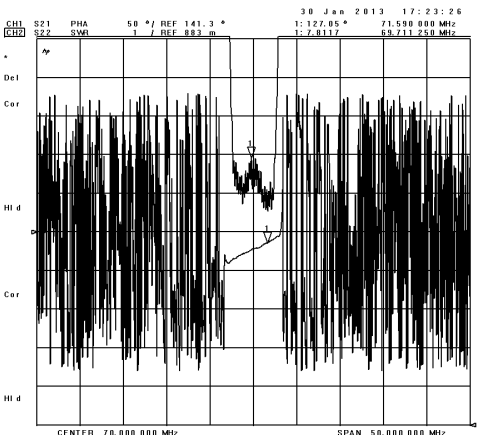
Frequency Response（wideband）



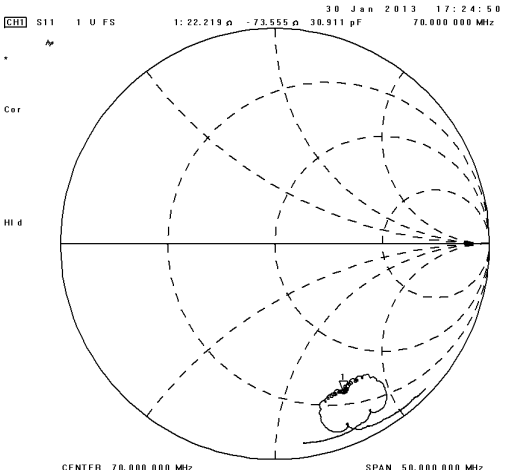
Delay Ripple & S11 VSWR



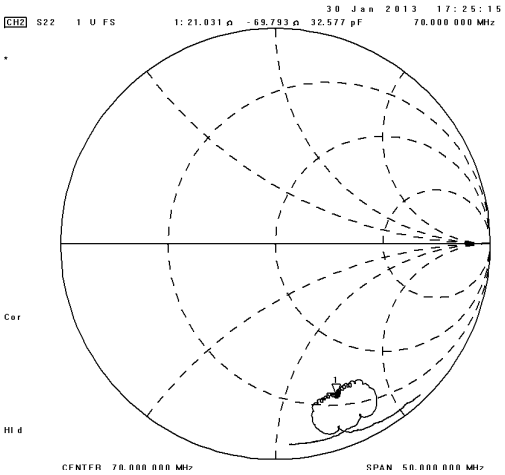
Phase Linearity & S22 VSWR



S11 Smith Chart



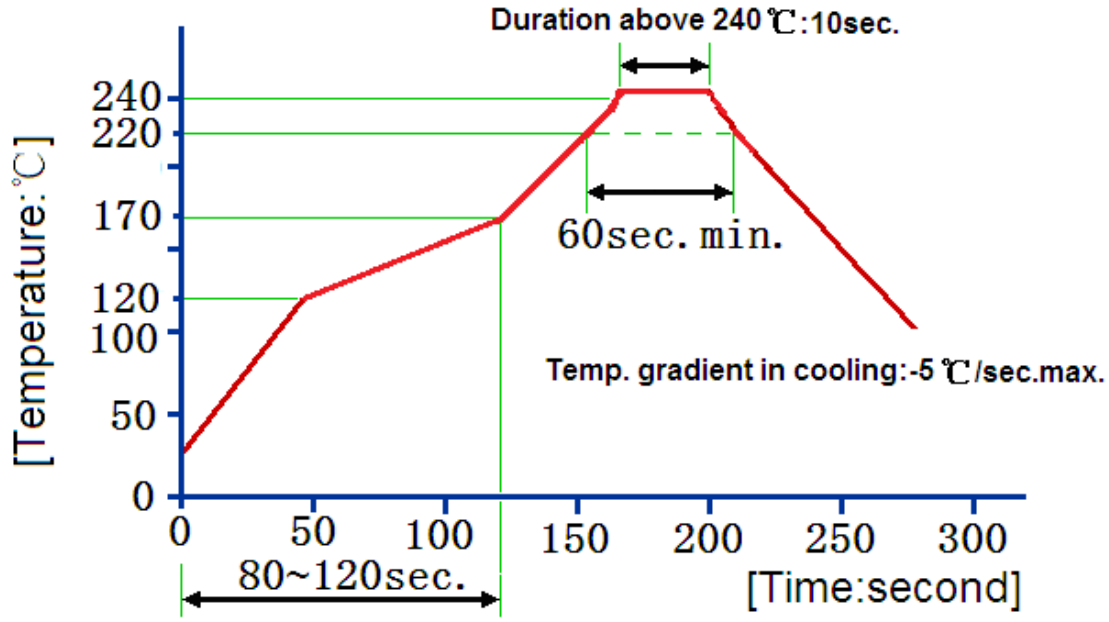
S22 Smith Chart



Reliability（The SAW components shall remain electrical performance after tests）

No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: 85℃±2℃, Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: –55℃±3℃, Duration: 250h ,Recovery time: 2h±0.5h
2	Humidity Test	Conditions: 60℃±2℃, 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, t1=t2=30min, Switch time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.
4	Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm
5	Drop Test	Cycle time: 10 times Height: 1.0m
6	Solder Ability Test	Temperature: 245℃±5℃ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5
7	Resistance to Soldering Heat	(1)Thickness of PCB:1mm , Solder condition: 260℃±5℃, Duration: 10±1s (2)Temperature of Soldering Iron: 350℃±10℃, Duration: 3~4s ,

Recommended Reflow Soldering Diagram



Reflow cycles:3 cycles max.

Notes

1. As a result of the particularity of inner structure of SAW products, it easy to be breakdown by electrostatic, so we should pay attention to **ESD protect** in the test.
2. **Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
3. **Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
4. Only leads of component may **be soldered**. Please avoid soldering another part of component.
5. There is a close relationship between the device's performance and **matching network**. The specifications of this device are based on the test circuit shown above. L and C values may change depending on board layout. Values shown are intended as a guide only.