



# APPROVAL SHEET

Approval Specification	Customer's Approval Certificate
<b>TO:</b>  <b>Part No.:</b>  <b>Customer's Part No.:</b>	Please return this copy as a certification of your approval  <b>Checked &amp; Approved by:</b>  <b>Date:</b>

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Part No.	:	SF0158
Pages	:	6
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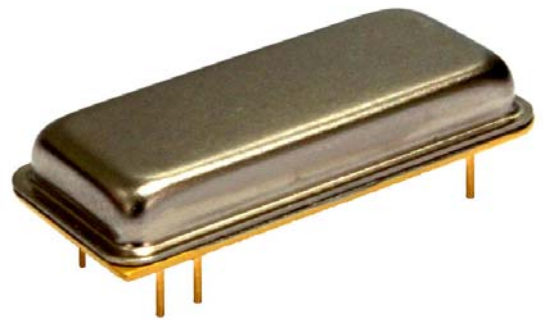
<b>Prepared by:</b>	郑宝琴
<b>Checked by:</b>	
<b>Approved by:</b>	

**Application**

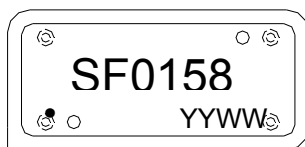
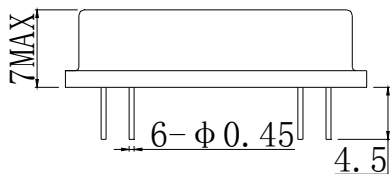
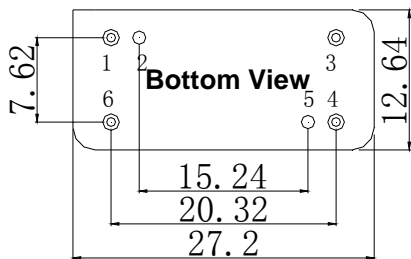
- Low Shape Factor
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 4.4 MHz

**Features**

- RoHS compatible
- Package size 27.2x12.64x7.00mm<sup>3</sup>
- Package Code DIP2712J
- Electrostatic Sensitive Device(ESD)



**Package Dimensions (Unit: mm)**



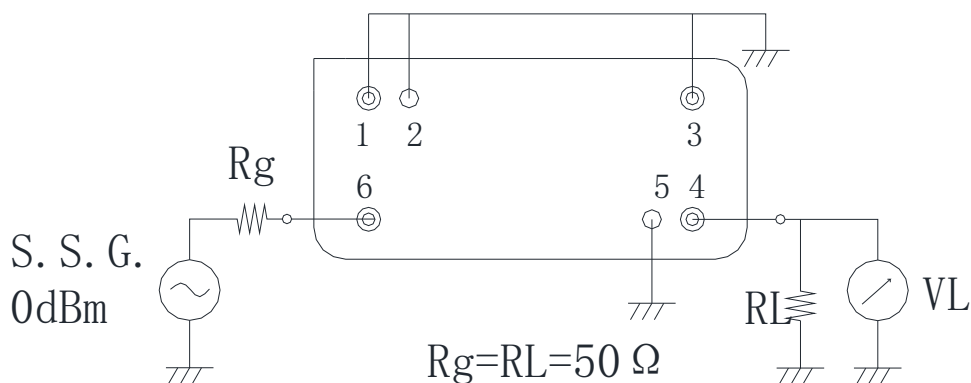
**Pin Configuration**

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

**Marking Description**

<b>S</b>	Trademark
<b>F</b>	SAW Filter
<b>0158</b>	Part Number
●	Pin 1
<b>YYWW</b>	Year Code & Week Code

**Test Circuit(Bottom View)**



\*Fig: If the products produced in 06<sup>th</sup> week of 2012, The year code & week code is 1206.

**Performance****Maximum Rating**

Item		Value	Unit
DC Voltage	$V_{DC}$	3	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-55 ~ +125	°C
RF Power Dissipation	P	10	dBm

**Electronic Characteristics**

Test Temperature:  $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

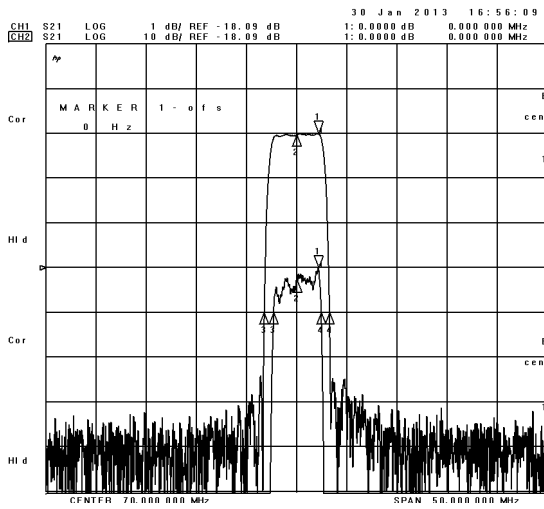
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

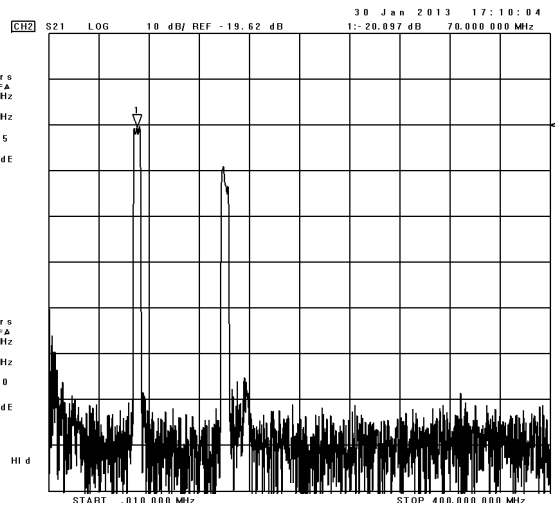
Item		Minimum	Typical	Maximum	Unit
Center Frequency	$f_c$	69.9	70.0	70.1	MHz
Insertion Loss(min)	IL		18.5	20.0	dB
Amplitude Ripple (p-p) 67.80-72.20MHz	$\Delta\alpha$		0.7	1.0	dB
1 dB Bandwidth	$BW_{1dB}$	4.5	4.7		MHz
3 dB Bandwidth	$BW_{3dB}$	5.0	5.1		MHz
40 dB Bandwidth	$BW_{40dB}$		6.5	7.0	MHz
Group Delay Ripple 67.80-72.20MHz	GDR		200.0	250.0	ns
Absolute Delay 70.00MHz			2.3	3.0	us
Absolute Attenuation	$\alpha$				
	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

Frequency Characteristics

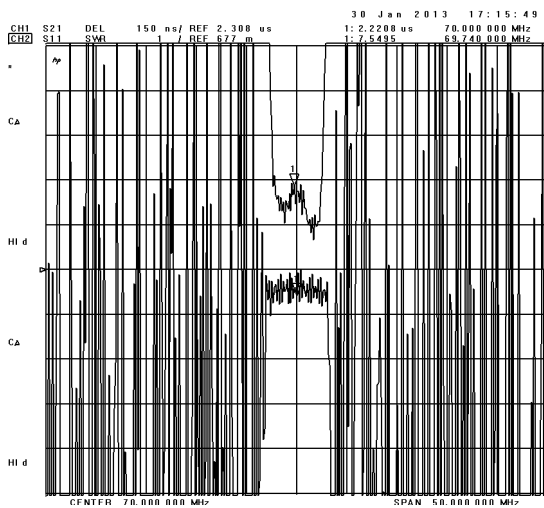
Frequency Response



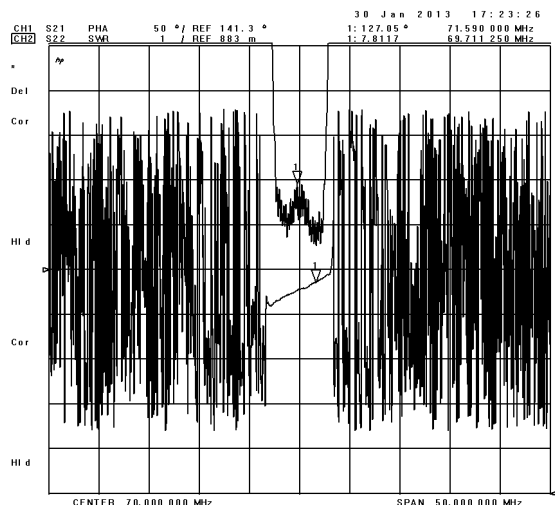
Frequency Response (wideband)



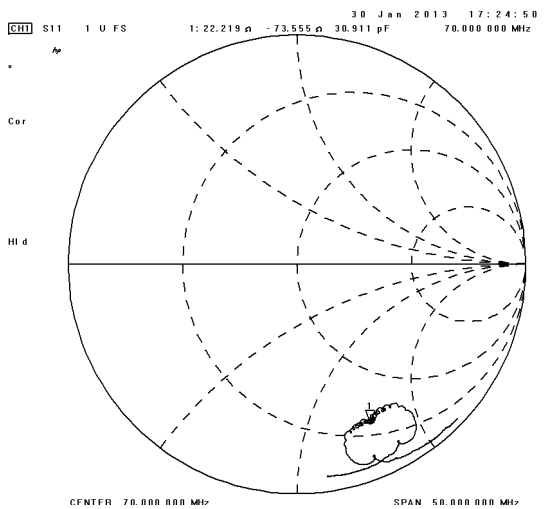
Delay Ripple & S11 VSWR



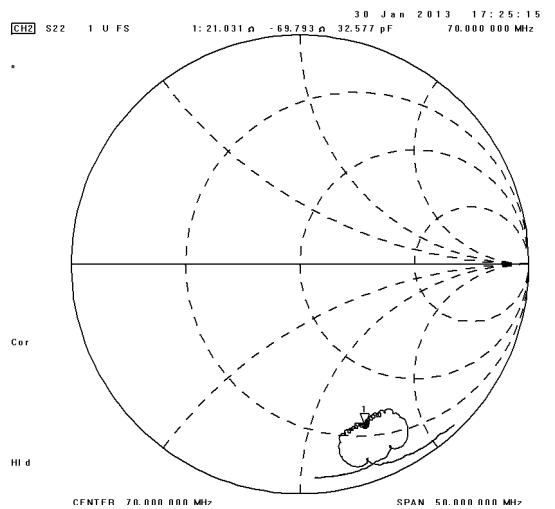
Phase Linearity & S22 VSWR



S11 Smith Chart



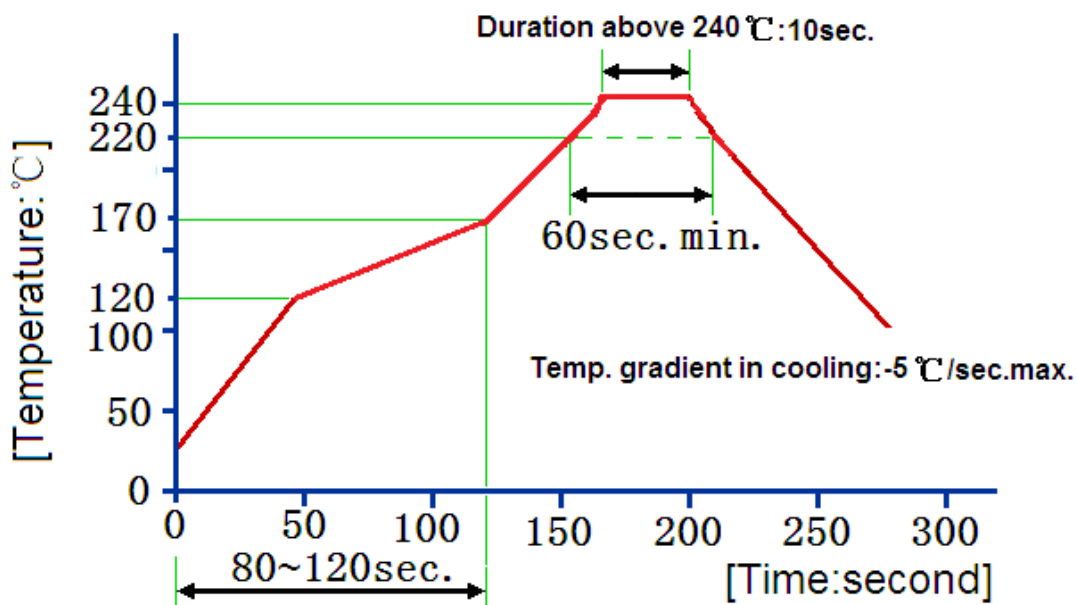
S22 Smith Chart



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

No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: -55°C±3°C , Duration: 250h , Recovery time: 2h±0.5h
2	Humidity Test	Conditions: 60°C±2°C , 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: TA=-55°C±3°C, TB=85°C±2°C, 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 Directions: X,Y and Z Duration: 2h
5	Drop Test	Cycle time: 10 times Height: 1.0m
6	Solder Ability Test	Temperature: 245°C±5°C 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°C±5°C , Duration: 10±1s (2) Temperature of Soldering Iron: 350°C±10°C , Duration: 3~4s , Recovery time : 2 ± 0.5h

## 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.