



APPROVAL SHEET

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

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Part No.	:	SF0409
Pages	:	6
Date	:	2014/4/28
Revision	:	1.0

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Application

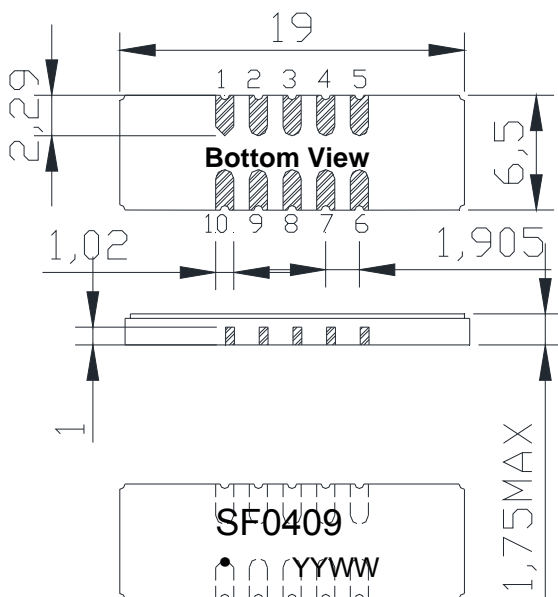
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 4 MHz

Features

- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 19.00x6.50x1.75mm³
- Package Code SMD19

- **Electrostatic Sensitive Device(ESD)**

Package Dimensions (Unit: mm)



Pin Configuration

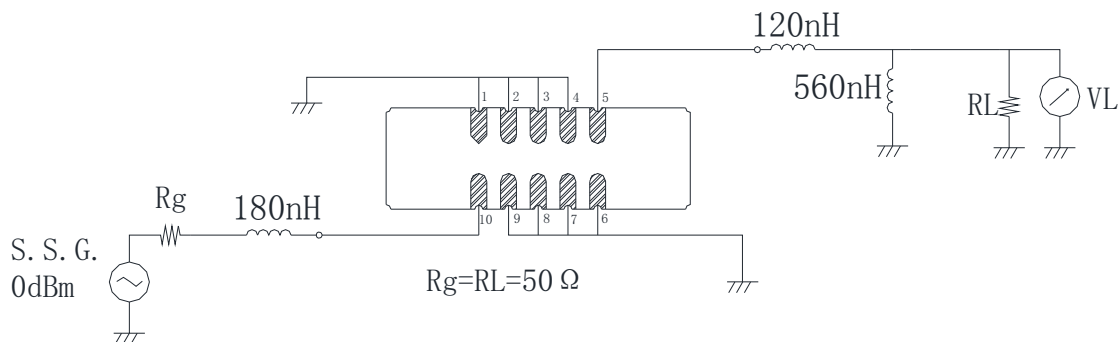
Pin No.	Description
10	Input
5	Output
1,2,3,4,6,7,8,9	Ground

Marking Description

S	Trademark
F	SAW Filter
0409	Part Number
●	Pin 1
YYWW	Year Code & Week Code

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

Test Circuit(Bottom View)



Performance**Maximum Rating**

Item		Value	Unit
DC Voltage	V _{DC}	3	V
Operation Temperature	T	-40 ~ +70	°C
Storage Temperature	T _{stg}	-55 ~ +125	°C
RF Power Dissipation	P	10	dBm

Electronic Characteristics

Test Temperature: 25°C ± 2°C

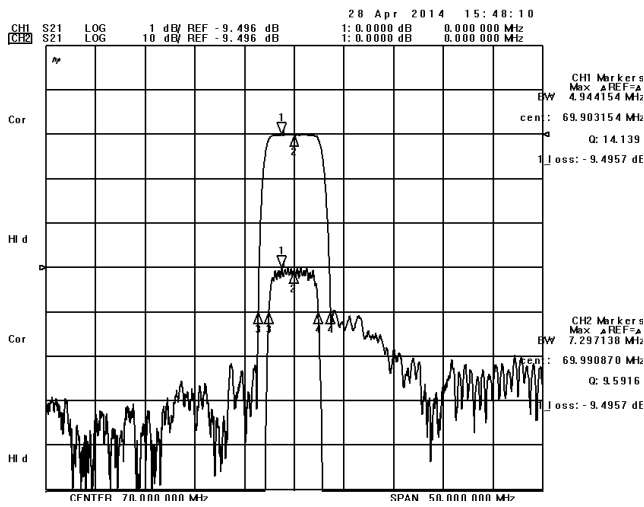
Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

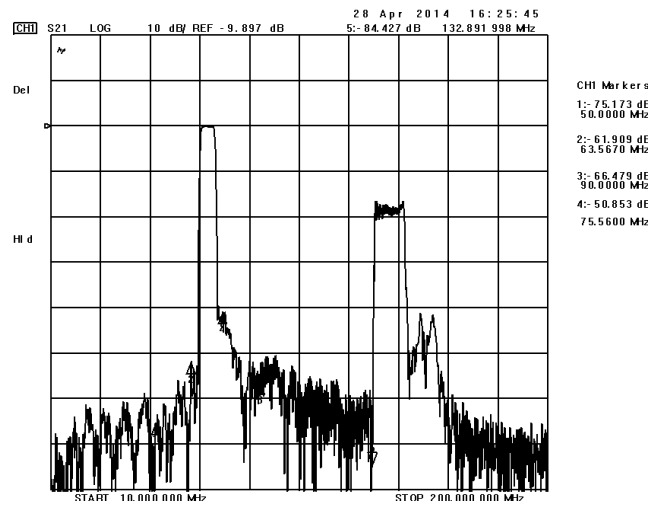
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f _c	69.9	70.0	70.1	MHz
Insertion Loss(min)	IL		9.5	10.0	dB
Amplitude Ripple	Δα		0.4	1.0	dB
1 dB Bandwidth	BW _{1dB}	4.53	4.84		MHz
40 dB Bandwidth	BW _{40dB}		7.3	10.0	MHz
Shape Factor	BW _{40dB} /BW _{3dB}		1.6	2.0	/
Phase Linearity	68.00-72.00MHz		4	10	deg
Absolute Attenuation	α				
	50.00-65.00MHz	40.0	55.0		dB
	75.00-90.00MHz	38.0	40.0		dB

Frequency Characteristics

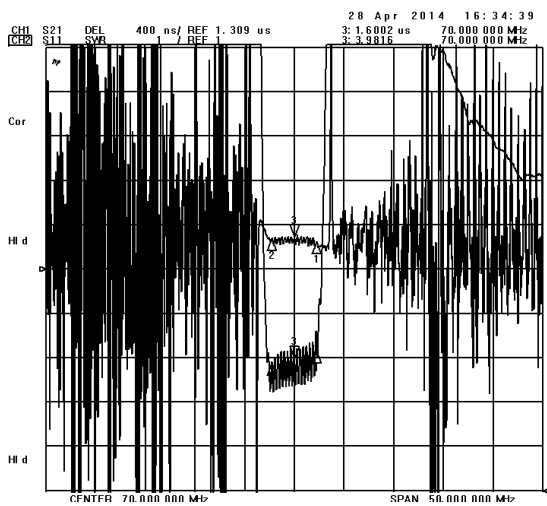
Frequency Response



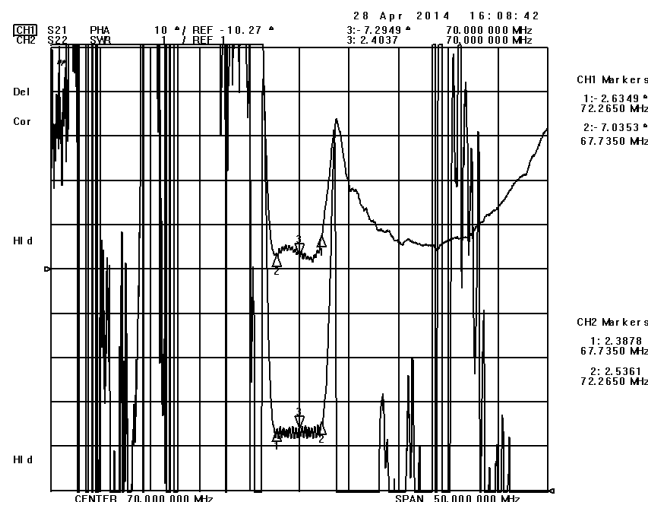
Frequency Response (wideband)



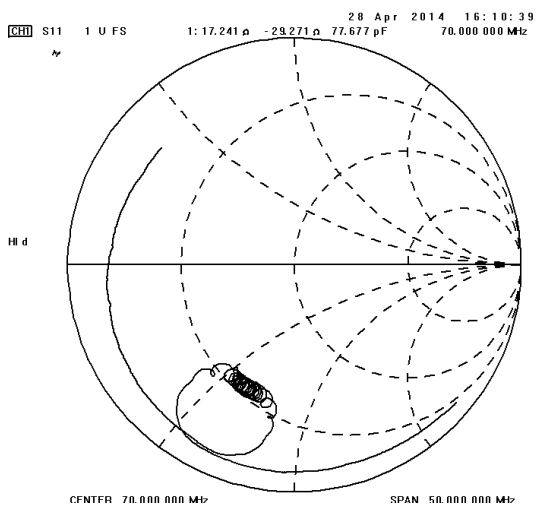
Delay Ripple & S11 VSWR



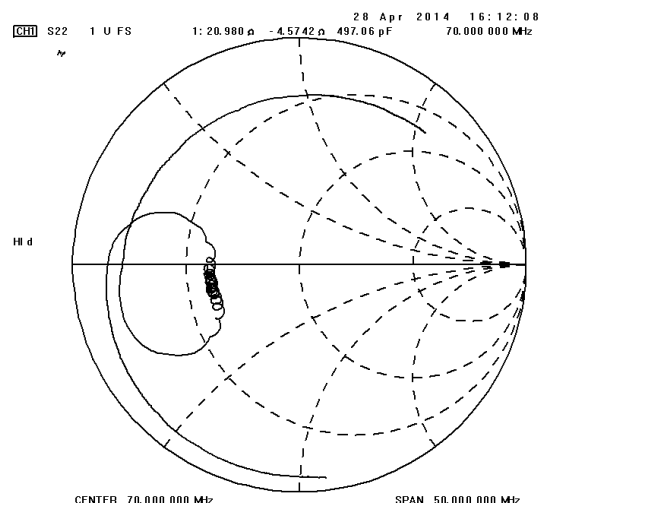
Phase Linearity & S22 VSWR



S11 Smith Chart



S22 Smith Chart



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.