



APPROVAL SHEET

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

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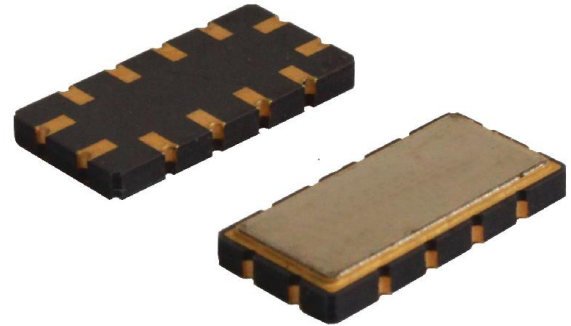


Part No.	:	SF1609
Pages	:	6
Date	:	2016/10/25
Revision	:	1.0

Prepared by:	刘建伟
Checked by:	卢翠
Approved by:	张健

Application

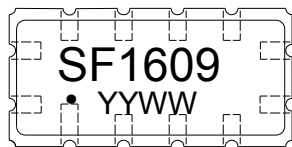
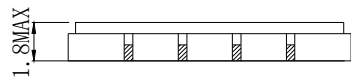
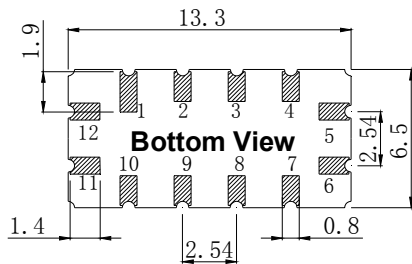
- Low -loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Passband 0.75MHz



Features

- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 13.30x6.50x1.80mm³
- Package Code QCC12
- **Electrostatic Sensitive Device(ESD)**

Package Dimensions (Unit: mm)



Pin Configuration

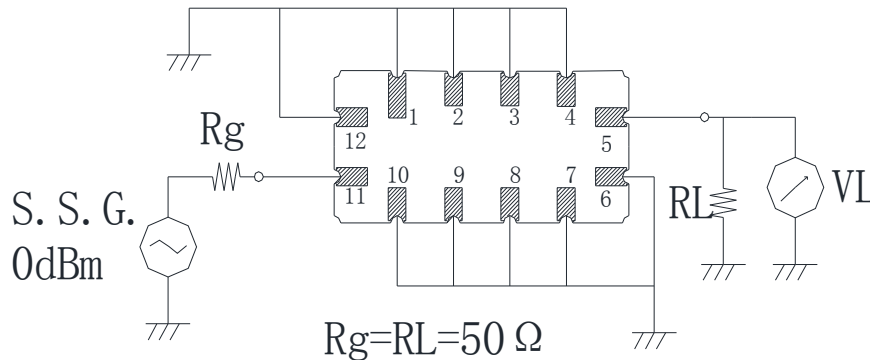
Pin No.	Description
11	Input
5	Output
1,2,3,4,6,7,8,9,10,12	Ground

Marking Description

S	Trademark
F	SAW Filter
1609	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	-55 ~ +85	°C
Storage Temperature	T_{stg}	-65 ~ +100	°C
RF Power Dissipation	P	10	dBm

Electronic Characteristics

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

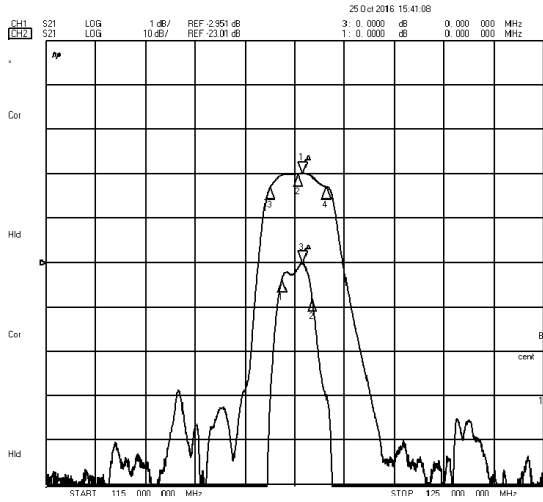
Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

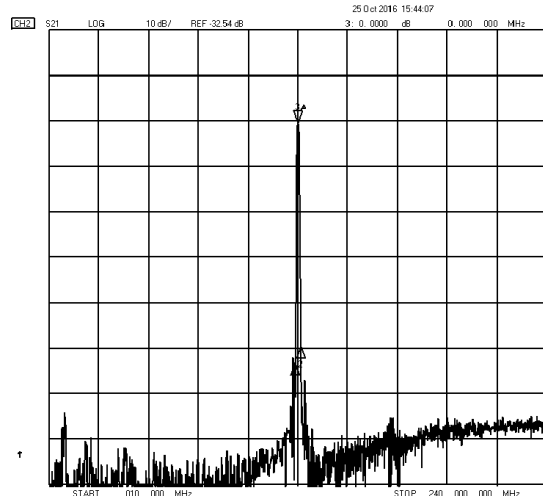
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f_c		120.00		MHz
Insertion Loss(min)	IL		3.0	4.0	dB
Amplitude Ripple (p-p) 119.740-120.346 MHz	$\Delta\alpha$		0.8	1.0	dB
3 dB Bandwidth	BW_{3dB}	0.75	1.12		MHz
Absolute Attenuation	α				
	DC-118.50MHz	45	48		dB
	121.50-240.00MHz	45	55		dB
Input VSWR	119.740-120.346 MHz		1.7:1	2.5:1	/
Output VSWR	119.740-120.346 MHz		1.8:1	2.5:1	/

Frequency Characteristics

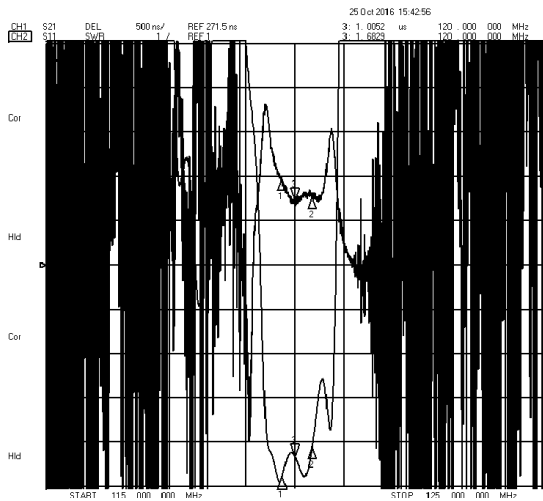
Frequency Response



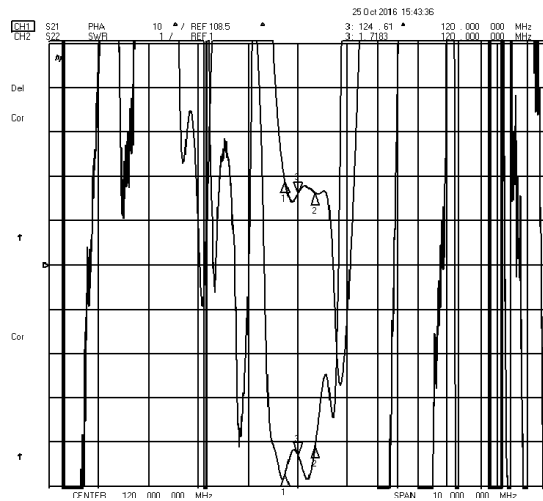
Frequency Response (wideband)



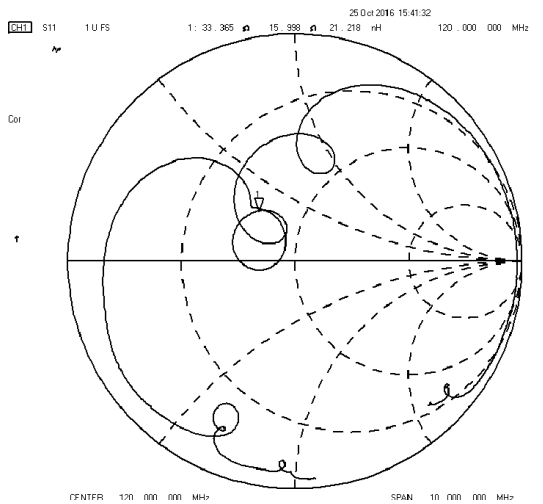
Delay Ripple & S11 VSWR



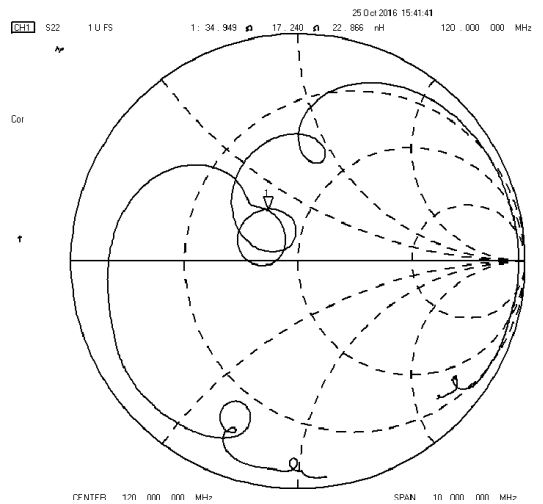
Phase Linearity & S22 VSWR



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.