



# APPROVAL SHEET

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

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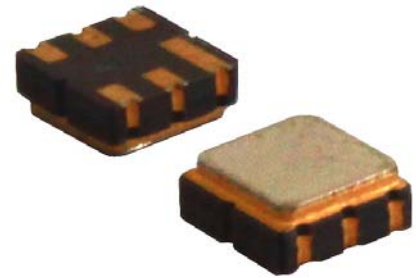


Part No.	:	SF9104
Pages	:	6
Date	:	2013/4/24
Revision	:	1.0

<b>Prepared by:</b>	
<b>Checked by:</b>	
<b>Approved by:</b>	

**Application**

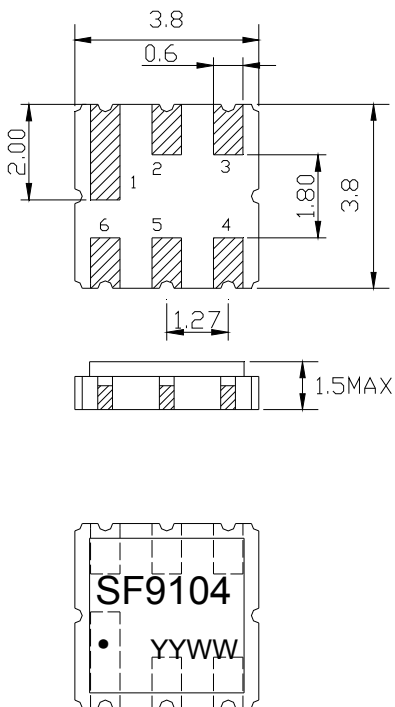
- Low-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable passband 31 MHz



**Features**

- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 3.80x3.80x1.50mm<sup>3</sup>
- Package Code DCC6
- **Electrostatic Sensitive Device(ESD)**

**Package Dimensions (DCC6)**



**Pin Configuration**

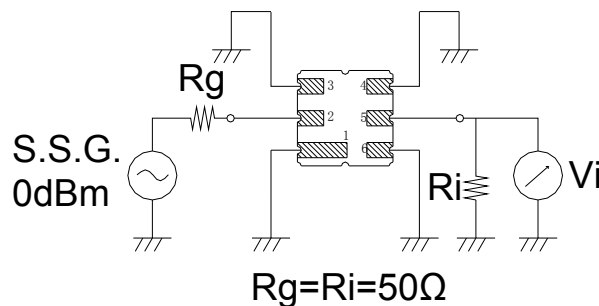
Pin No.	Description
2	Input
5	Output
1,3,4,6	Ground

**Marking Description**

<b>S</b>	Trademark
<b>F</b>	SAW Filter
<b>9104</b>	Part Number
●	Pin 1
<b>YYWW</b>	Year Code & Week Code

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

**Test Circuit**



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

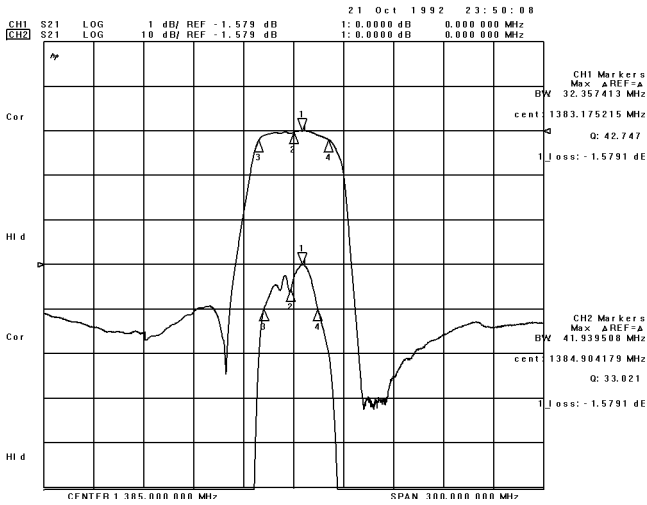
Terminating source impedance:  $50\Omega$

Terminating load impedance:  $50\Omega$

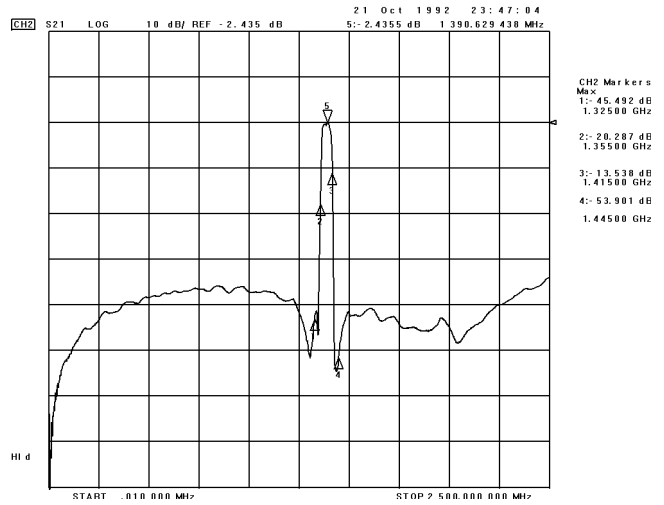
Item		Minimum	Typical	Maximum	Unit
Center Frequency	$f_c$		1385.0		MHz
Insertion Loss(min)	IL		1.6	3.0	dB
Amplitude Ripple (p-p) 1371.00-1399.00MHz	$\Delta a$		0.9	1.0	dB
1 dB Bandwidth	$BW_{1dB}$	31.0	34.0		MHz
2dB Bandwidth	$BW_{2dB}$	39.0	42.0		MHz
Absolute Delay 1385.00MHz			20.0	30.0	nsec
Absolute Attenuation	$a$				
	DC -1325.00 MHz	32.0	36.0		dB
	1325.00-1355.00 MHz	8.0	17.0		dB
	1415.00-1445.00MHz	8.0	11.0		dB
	1445.00-2300.00MHz	32.0	34.0		dB
Input VSWR 1371.00-1399.00MHz			1.96:1	2.00:1	/
Output VSWR 1371.00-1399.00MHz			1.86:1	2.00:1	/

Frequency Characteristics

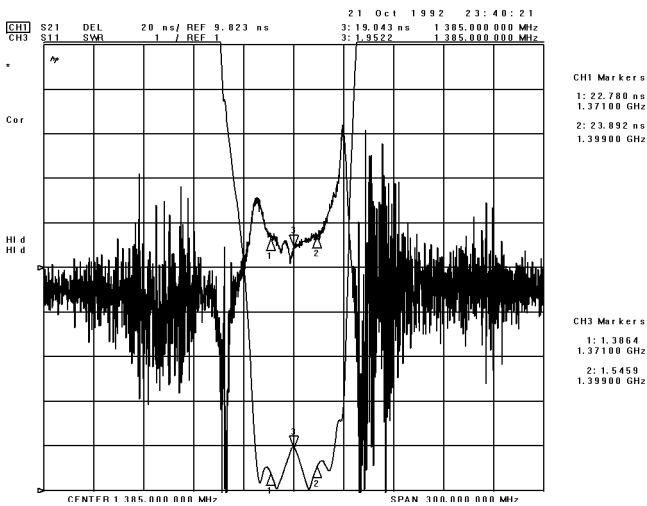
Frequency Response



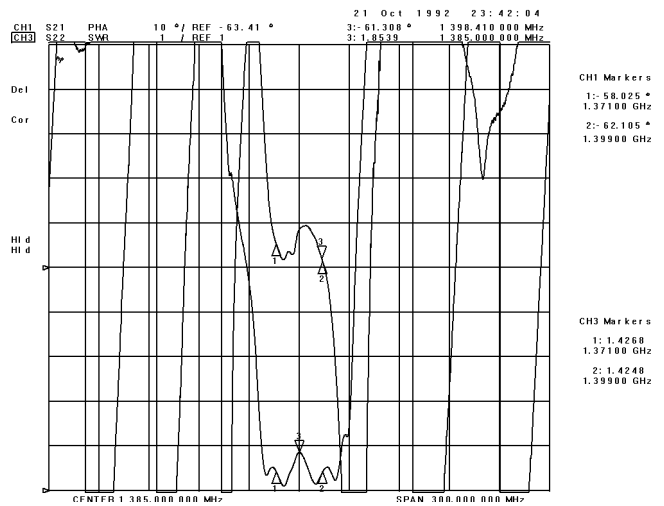
Frequency Response (wideband)



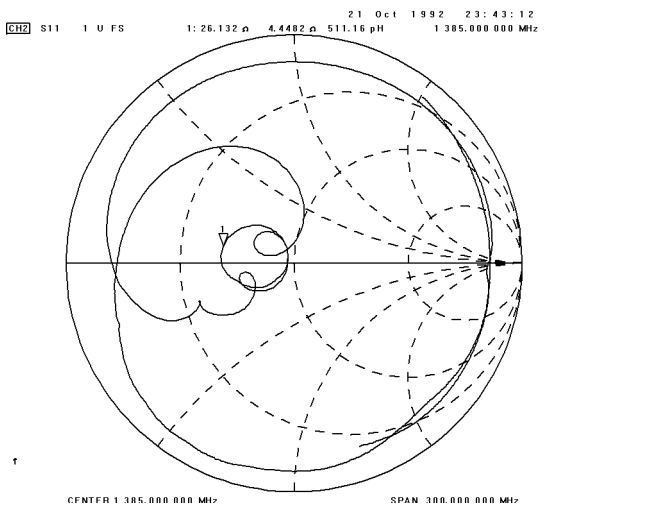
Delay Ripple & S11 VSWR



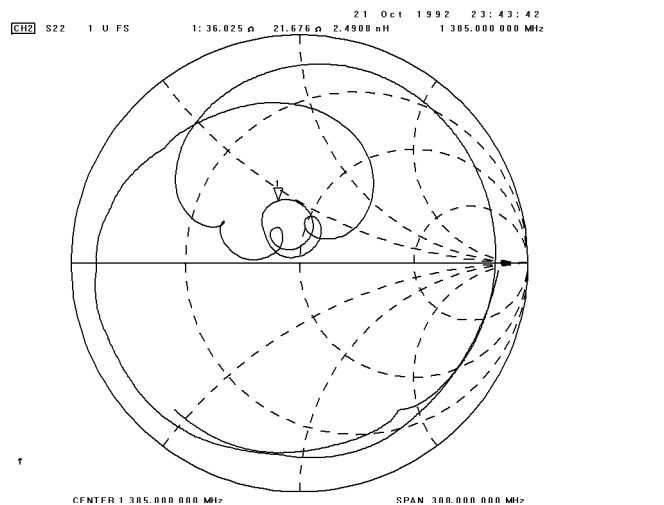
Phase Linearity & S22 VSWR



S11 Smith Chart



S22 Smith Chart





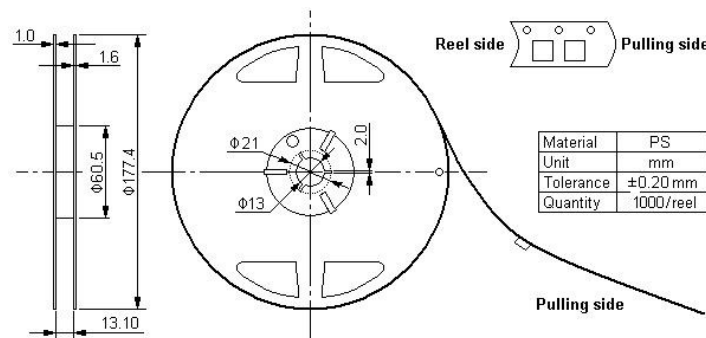
**Packing Information**

Carrier Tape



\* B0: 5.35 for QCC8C; 4.15 for DCC6/QCC8B; 3.35 for DCC6C/QCC8D

Reel Dimensions



Outer Packing

Type	Quantity	Dimension	Description	Weight
Internal box	1000	190×188×42	carton box	0.18
External box	10000	235×205×210	2 reel / internal box 5 boxes / external box	

Unit: mm

Unit: kg

**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.