



APPROVAL SHEET

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

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Part No.	:	SF1472
Pages	:	7
Date	:	2015/2/27
Revision	:	1.0

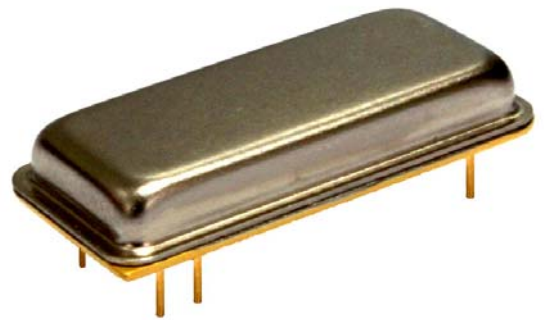
Prepared by:	梁浩
Checked by:	
Approved by:	

Application

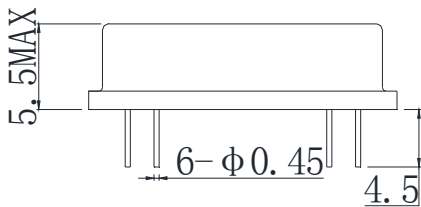
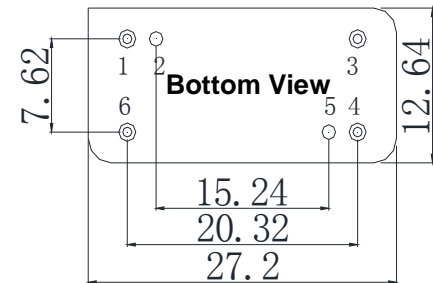
- High-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Low Shape factor

Features

- RoHS compatible
- Package size 27.2x12.64x7.00mm³
- Package Code DIP2712
- Electrostatic Sensitive Device(ESD)



Package Dimensions (Unit: mm)



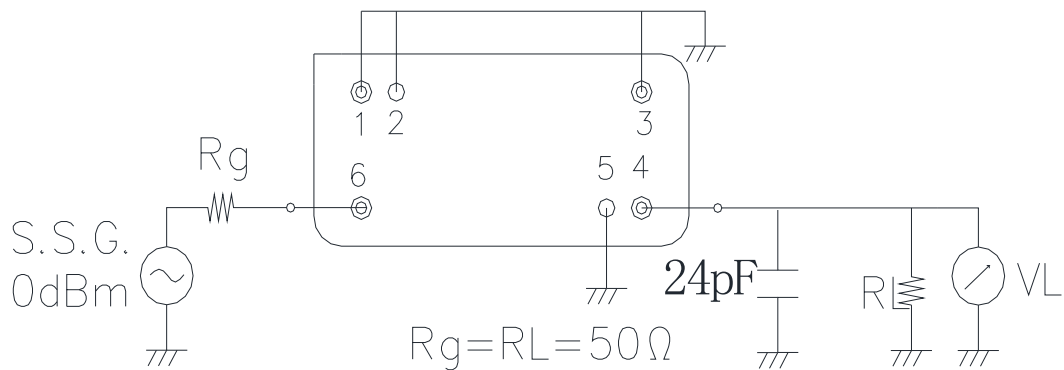
Pin Configuration

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

Marking Description

S	Trademark
F	SAW Filter
1472	Part Number
●	Pin 1
YYWW	Year Code & Week Code

Test Circuit(Bottom View)



*Fig: If the products produced in 06th 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 CharacteristicsTest 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	fc	119.8	120.0	120.2	MHz
Insertion Loss(min)	IL		28.9	30.0	dB
Amplitude Ripple	$\Delta\alpha$		0.7	1.5	dB
1 .5dB Bandwidth	$BW_{1.5dB}$	4.8	4.82		MHz
3dB Bandwidth	BW_{3dB}		5.0		MHz
16dB Bandwidth	BW_{16dB}		5.5	5.6	MHz
30dB Bandwidth	BW_{30dB}		5.74	5.8	MHz
40 dB Bandwidth	BW_{40dB}		5.85	6.0	MHz
Absolute Delay	AD		3.35	3.5	us

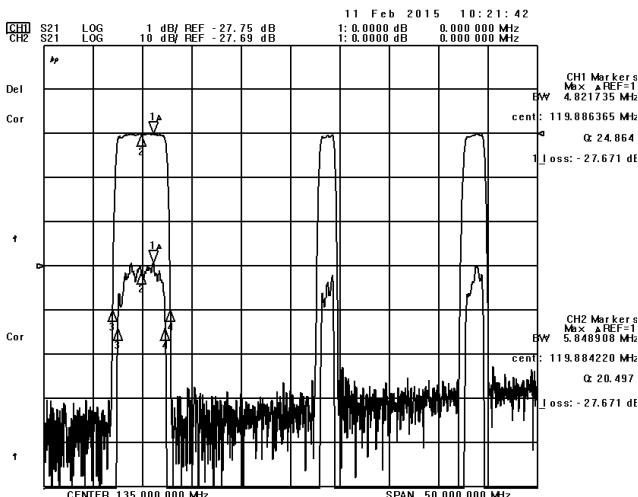
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc	138.6	138.8	140.0	MHz
Insertion Loss(min)	IL		29.2	30.0	dB
Amplitude Ripple	$\Delta\alpha$		0.6	1.5	dB
1 .5dB Bandwidth	$BW_{1.5dB}$	1.2	1.3		MHz
3dB Bandwidth	BW_{3dB}		1.42		MHz
16dB Bandwidth	BW_{16dB}		1.83	2.0	MHz
30dB Bandwidth	BW_{30dB}		2.05	2.2	MHz
40 dB Bandwidth	BW_{40dB}		2.16	2.4	MHz
Absolute Delay	AD		3.37	3.5	us

Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc	153.5	153.7	153.9	MHz
Insertion Loss(min)	IL		28.9	30.0	dB
Amplitude Ripple	$\Delta\alpha$		0.5	1.5	dB
1.5dB Bandwidth	BW _{1.5dB}	1.8	1.82		MHz
16dB Bandwidth	BW _{16dB}		2.46	2.6	MHz
30dB Bandwidth	BW _{30dB}		2.71	2.8	MHz
40 dB Bandwidth	BW _{40dB}		2.83	3.0	MHz
Absolute Delay	AD		3.37	3.5	us

Absolute Attenuation	α				
30-116.9MHz		50.0	55.0		dB
123.1-137.5MHz		50.0	58.0		dB
140.1-151.9MHz		50.0	57.0		dB
155.5-190.0MHz		50.0	56.0		dB

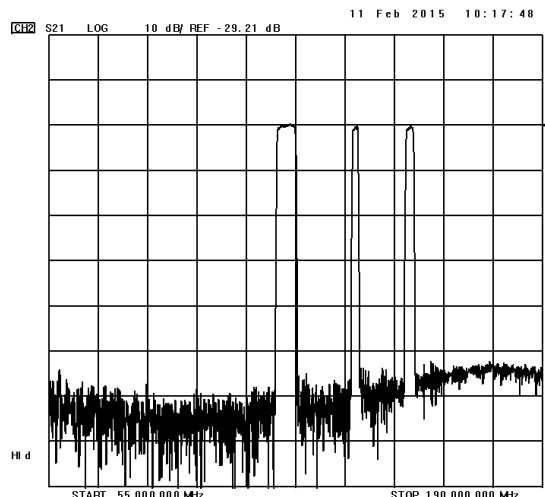
Frequency Characteristics

Frequency Response



Delay Ripple & S11 VSWR

Frequency Response (wideband)

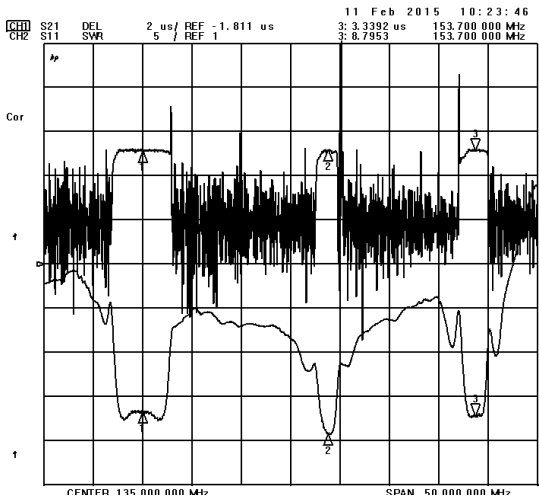


Phase Linearity & S22 VSWR

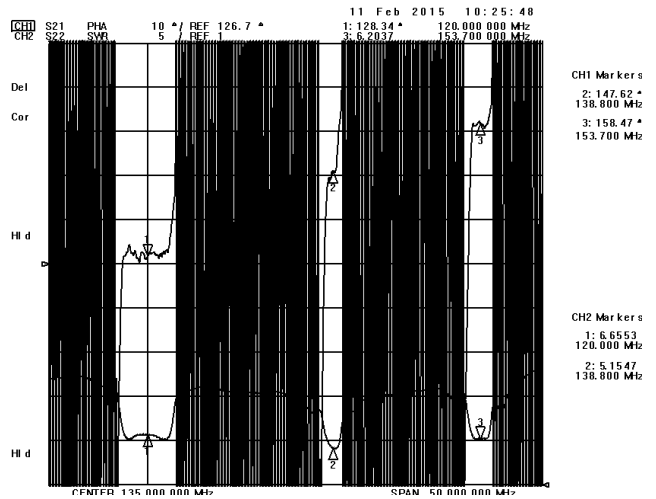
120.00/138.80/153.70MHz SAW Filter

SF1472

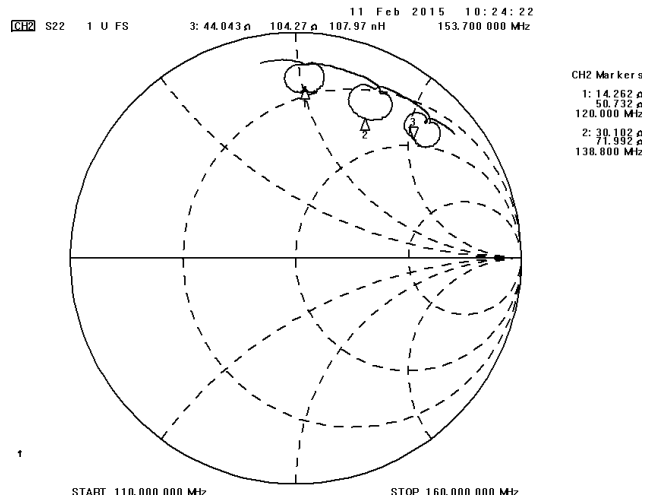
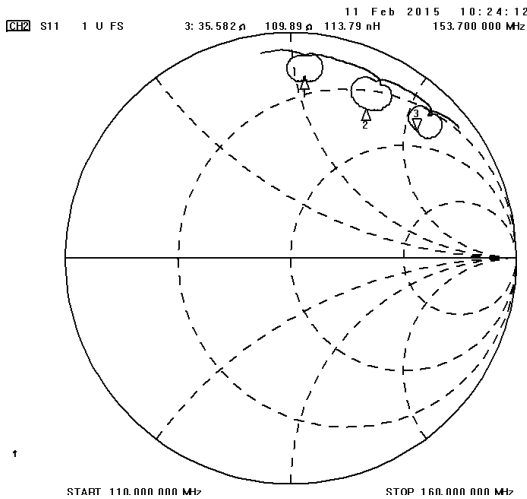
4.8/1.2/1.8 MHz Bandwidth



S11 Smith Chart



S22 Smith Chart

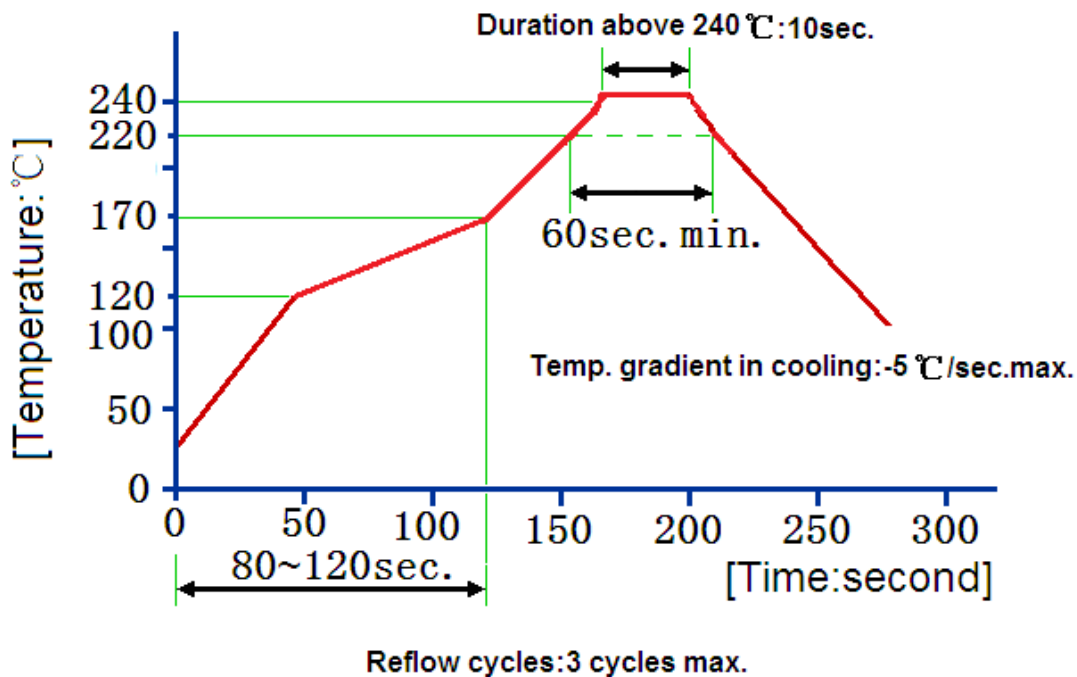


Reliability (The SAW components shall remain electrical performance after tests)

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
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Recommended Reflow Soldering Diagram



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.