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.	:	SF1454
Pages	:	6
Date	:	2015/1/9
Revision	:	1.0

Prepared by:	梁浩
Checked by:	
Approved by:	

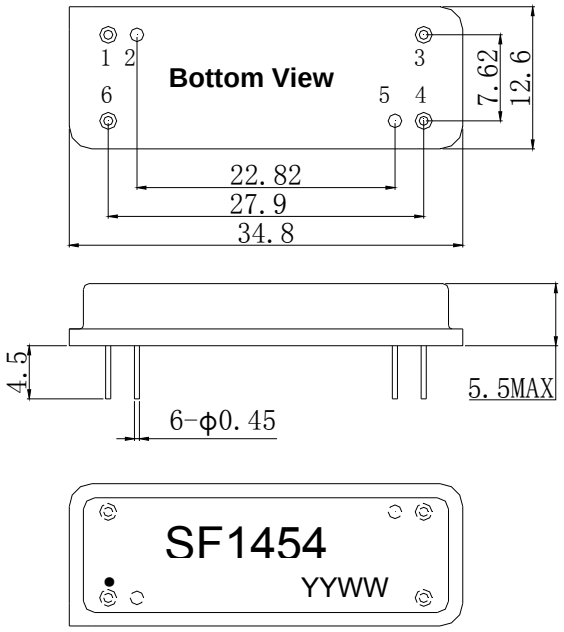
Application

- High-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Passband 4.65 MHz
- Low Shape factor

Features

- **RoHS** compatible
- Package size 34.8x12.6x5.50mm^3
- Package Code DIP3512
- **E**lectrostatic **S**ensitive **D**evice(**ESD)**

Package Dimensions (Unit: mm)



Pin Configuration

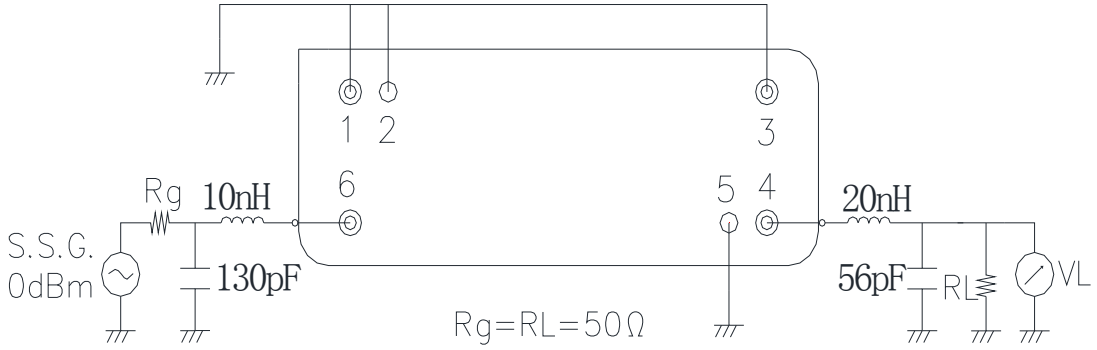
Pin No.	Description
6	Input
4	Output
1,2,3,5	Ground

Marking Description

S	Trademark
F	SAW Filter
1454	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 ~ +85	℃
Storage Temperature	T_{stg}	-55 ~ +125	℃
RF Power Dissipation	P	10	dBm

Electronic Characteristics

Test Temperature: 25℃±2℃

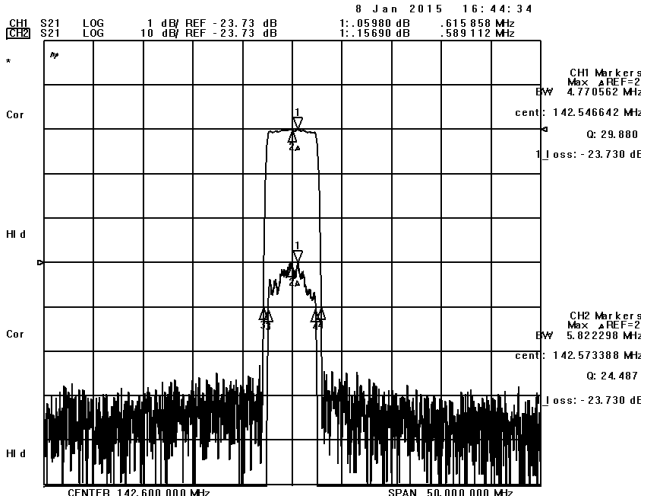
Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

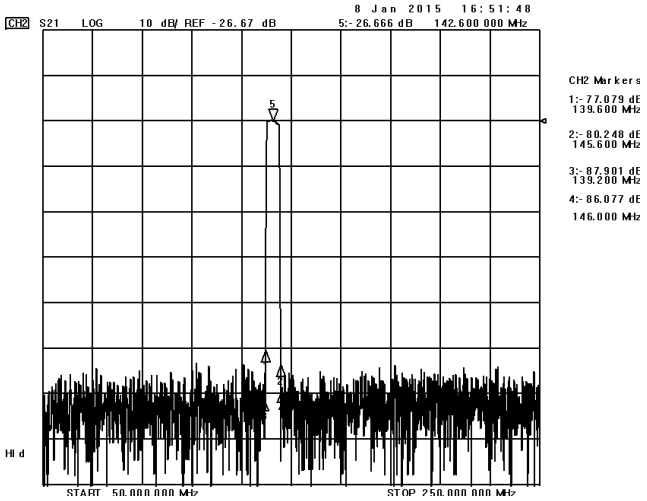
Item		Minimum	Typical	Maximum	Unit
Center Frequency	fc		142.6		MHz
Insertion Loss(min)	IL		23.8	26.5	dB
Amplitude Ripple (p-p) 140.45-144.75MHz	△α		0.9	1.2	dB
1 dB Bandwidth(Rel. to fc)	BW_{1dB}	4.65	4.77		MHz
3 dB Bandwidth(Rel. to fc)	BW_{3dB}		5.03		MHz
40 dB Bandwidth(Rel. to fc)	BW_{40dB}		5.80		MHz
50 dB Bandwidth(Rel. to fc)	BW_{50dB}		5.91	6.20	MHz
Absolute Delay	AD		4.0	4.5	us
Group Delay Ripple 140.45-144.75MHz	GDR		270	300	ns
Absolute Attenuation	α				
135.20MHz		50.0	68.0		dB
139.20MHz		50.0	63.0		dB
139.60MHz		46.0	48.0		dB
145.60MHz		46.0	51.0		dB
146.00MHz		50.0	65.0		dB
150.00MHz		50.0	70.0		dB

Frequency Characteristics

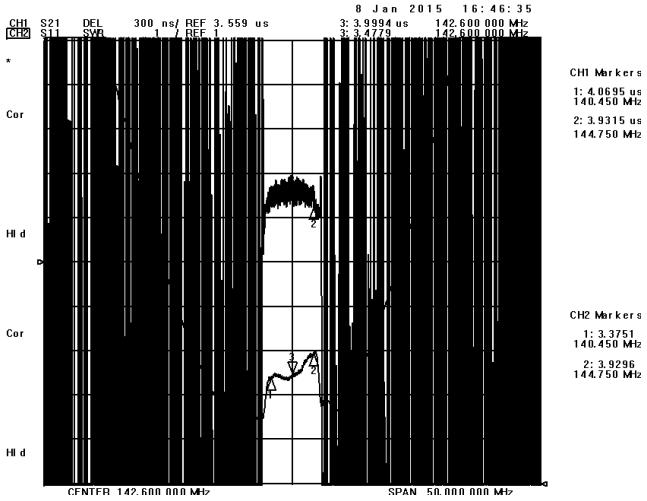
Frequency Response



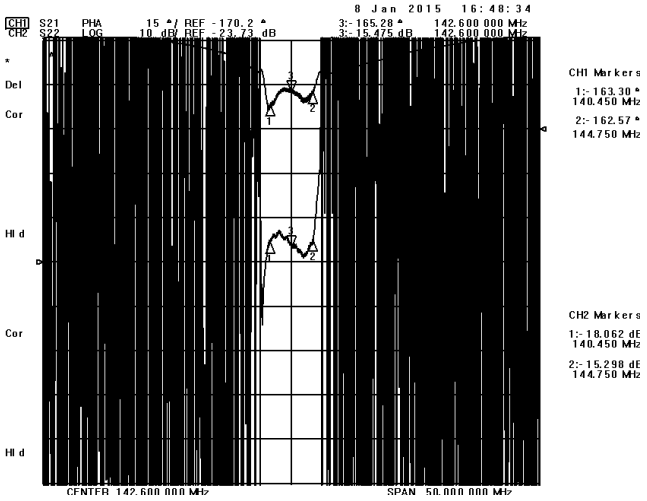
Frequency Response（wideband）



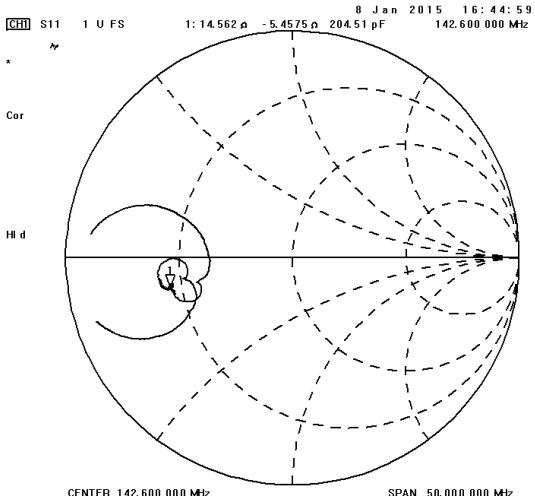
Delay Ripple & S11 VSWR



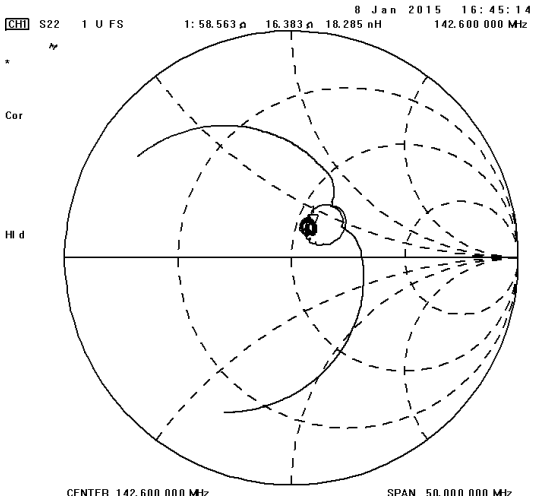
Phase Linearity & S22 VSWR



S11 Smith Chart



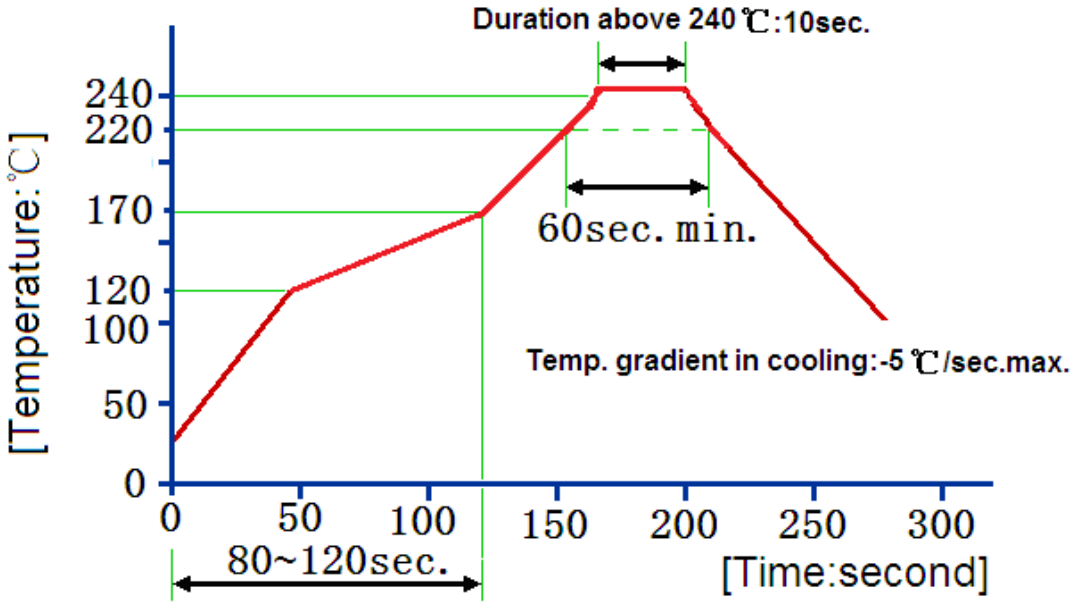
S22 Smith Chart



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

No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: 85℃±2℃ , Duration: 250h , Recovery time: 2h±0.5h (2) Temperature: –55℃±3℃ , Duration: 250h ,Recovery time: 2h±0.5h
2	Humidity Test	Conditions: 60℃±2℃ , 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: TA=-55℃±3℃, TB=85℃±2℃, 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℃±5℃ 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℃±5℃ , Duration: 10±1s (2)Temperature of Soldering Iron: 350℃±10℃ , 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.