



# 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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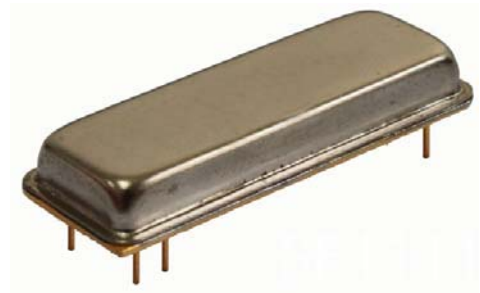


Part No.	:	SF1525
Pages	:	6
Date	:	2015/6/24
Revision	:	1.0

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

**Application**

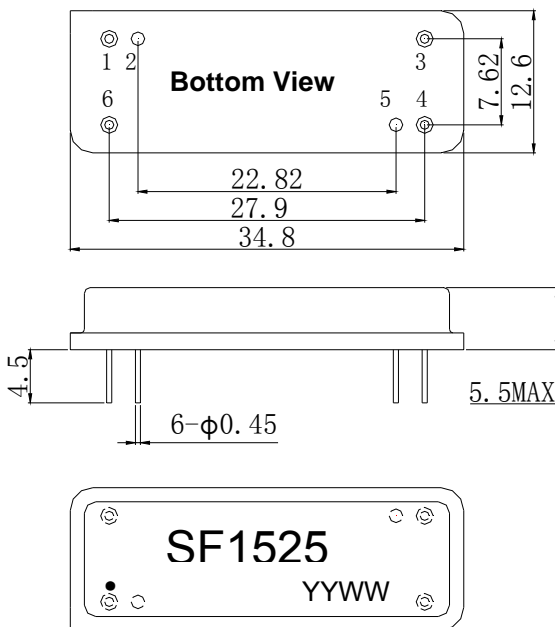
- High-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Passband 11 MHz
- Low Shape factor



**Features**

- RoHS compatible
- Package size 34.8x12.6x5.50mm<sup>3</sup>
- Package Code DIP3512
- Electrostatic Sensitive Device(ESD)

**Package Dimensions (Unit: mm)**



**Pin Configuration**

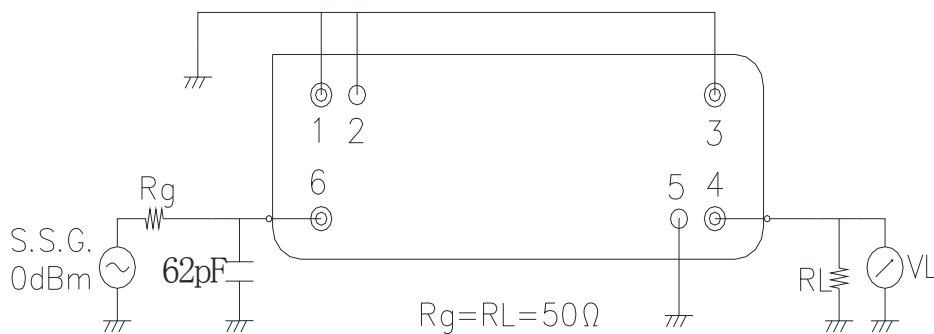
Pin No.	Description
6	Input
4	Output
1,2,3,5	Ground

**Marking Description**

<b>S</b>	Trademark
<b>F</b>	SAW Filter
<b>1525</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(Bottom View)**



**Performance****Maximum Rating**

Item		Value	Unit
DC Voltage	V <sub>DC</sub>	3	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T <sub>stg</sub>	-55 ~ +125	°C
RF Power Dissipation	P	10	dBm

**Electronic Characteristics**

Test Temperature: 25°C ± 2°C

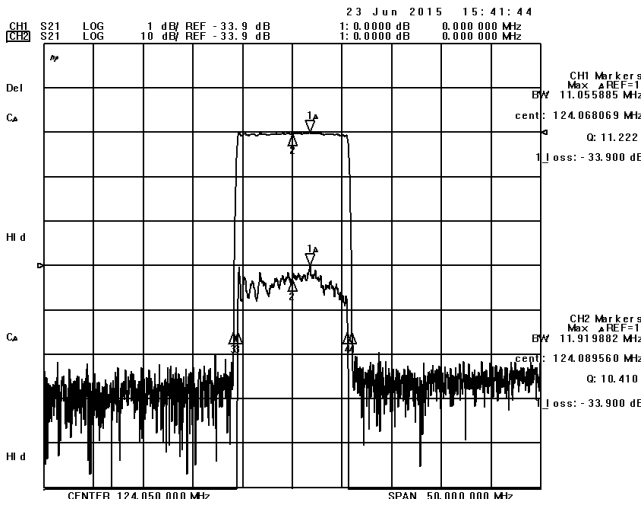
Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

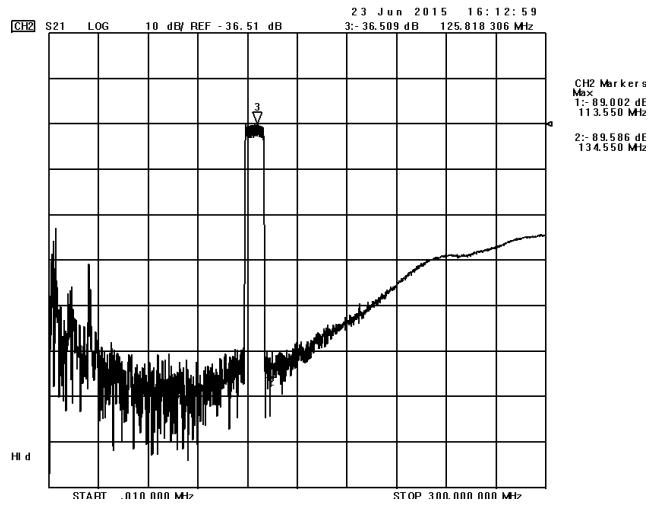
Item		Minimum	Typical	Maximum	Unit
Center Frequency	f <sub>c</sub>	123.9	124.05	124.2	MHz
Insertion Loss(min)	IL		33.9	35.0	dB
Amplitude Ripple	Δα		0.8	1.5	dB
1 dB Bandwidth	BW <sub>1dB</sub>		10.95		MHz
1.5 dB Bandwidth	BW <sub>1.5dB</sub>	11.00	11.05		MHz
3 dB Bandwidth	BW <sub>3dB</sub>	11.10	11.18		MHz
30 dB Bandwidth	BW <sub>30dB</sub>		11.78	11.80	MHz
45 dB Bandwidth	BW <sub>45dB</sub>		11.92	12.20	MHz
50 dB Bandwidth	BW <sub>50dB</sub>		11.98	12.50	MHz
Absolute Delay	AD		3.74	4.0	us
Phase Linearity	119.05-129.05MHz		5.0	10.0	deg
Absolute Attenuation	α				
	113.55MHz	50.0	52.0		dB
	134.55MHz	50.0	53.0		dB

Frequency Characteristics

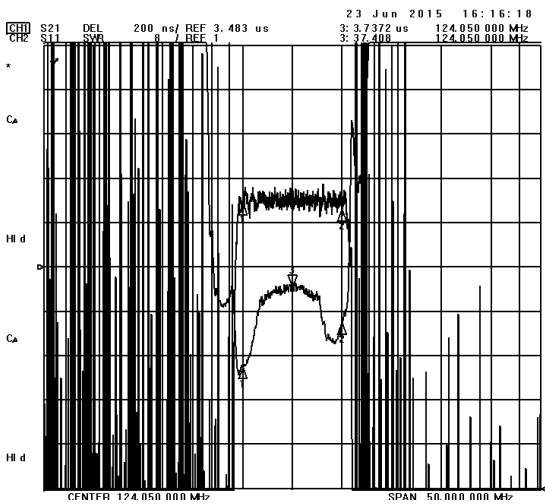
Frequency Response



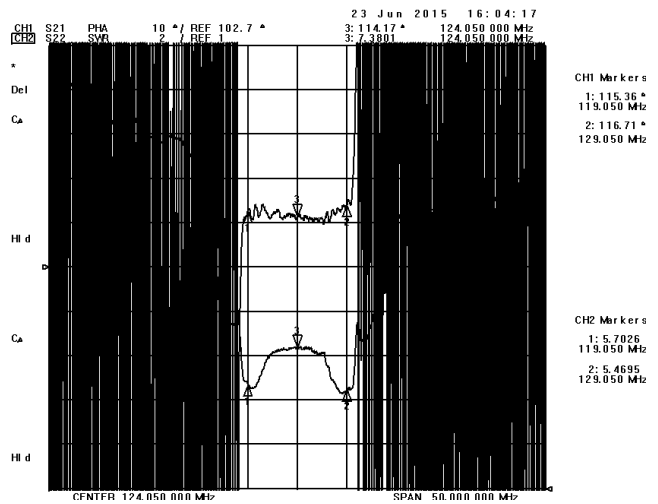
Frequency Response (wideband)



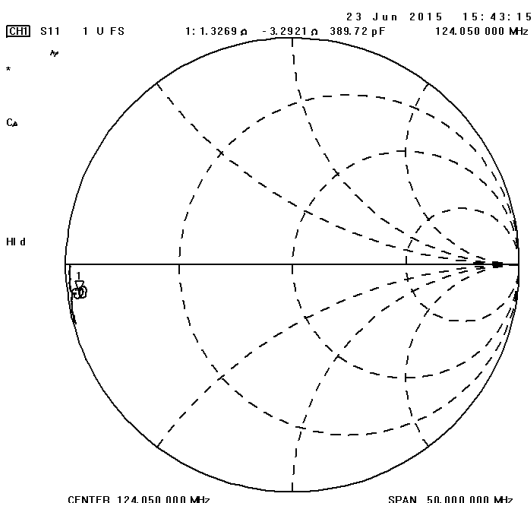
Delay Ripple & S11 VSWR



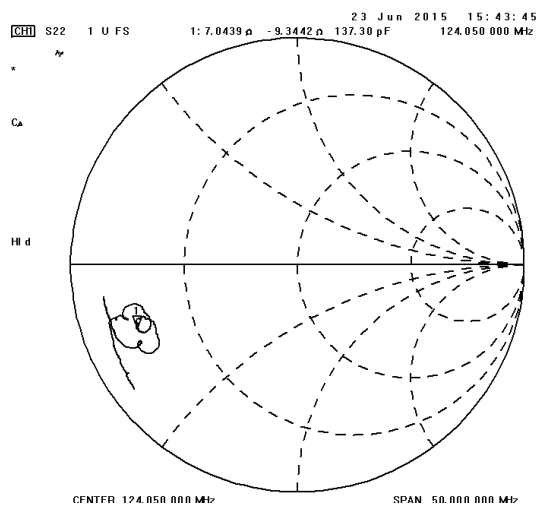
Phase Linearity & S22 VSWR



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°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

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.