

# 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:

# BEIJING ZHONGXUN SIFANG SCIENCE & TECHNOLOGY CO.,LTD.

Tel: +86-010-58937383
Fax: +86-010-58937263
E-mail: bjzxsf@bjzxsf.net
Website: http://www.bjzxsf.net

Add: No 201, Block A. Building 3. Yongjie Beilu

Yongfeng high-tech industrial base Haidian District Beijing city

Part No.	:	SF1623
Pages	:	6
Date	:	2017/1/4
Revision	:	1.0



Prepared by:	刘菲
Checked by:	g la g
Approved by:	马拉上

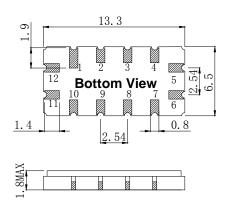
#### **Application**

- High-loss SAW component
- Low amplitude ripple
- Sharp rejections at both out-bands
- Usable Passband 60.0 MHz

#### **Features**

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 13.30x6.50x1.80mm<sup>3</sup>
- Package Code QCC12
- Electrostatic Sensitive Device(ESD)

#### Package Dimensions (Unit: mm)





#### **Test Circuit(Bottom View)**

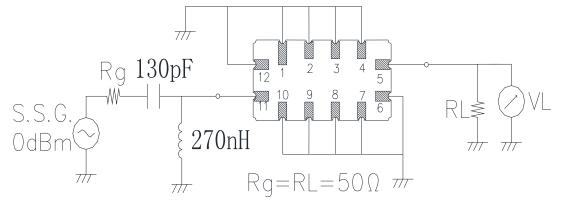


Pin No.	Description		
11	Input		
5	Output		
1,2,3,4,6,7,8,9,10,12	Ground		

#### **Marking Description**

s	Trademark	
F	SAW Filter	
1623	Part Number	
•	Pin 1	
YYWW	Year Code & Week Code	

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



Please read notes at the end of this document.

- 2 -

www.bjzxsf.net

2017/1/4

#### **Performance**

## **Maximum Rating**

Item		Value	Unit
DC Voltage	V <sub>DC</sub>	3	V
Operation Temperature	Т	-55 ~ +85	$^{\circ}$
Storage Temperature	T <sub>stg</sub>	-55 ~ +125	$^{\circ}$
RF Power Dissipation	Р	10	dBm

#### **Electronic Characteristics**

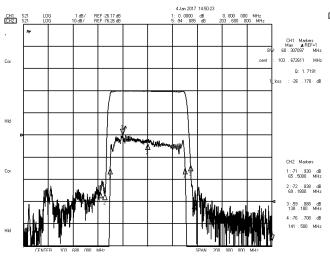
Test Temperature:  $25^{\circ}C \pm 2^{\circ}C$ 

Terminating source impedance:  $50\Omega$  Terminating load impedance:  $50\Omega$ 

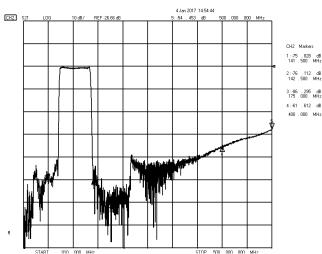
Item	Minimum	Typical	Maximum	Unit	
Center Frequency	fc		103.68		MHz
Insertion Loss(min)	IL		26.3	27.0	dB
Amplitude Ripple	∆a		0.9	1.5	dB
1.5 dB Bandwidth	BW <sub>1.5dB</sub>	60.0	60.2		MHz
Absolute Delay@Fc	AD		0.94		us
Absolute Attenuation	а				
DC-65.5MHz		40	42		dB
65.50-69.18MHz		30	37		dB
138.18-141.50MHz		30	32		dB
141.50-142.50MHz		35	40		dB
142.50-175.00MHz		35	40		dB
175.00-400.00MHz		20	25		dB

#### **Frequency Characteristics**

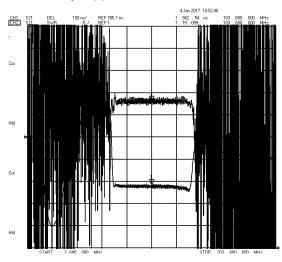
#### Frequency Response



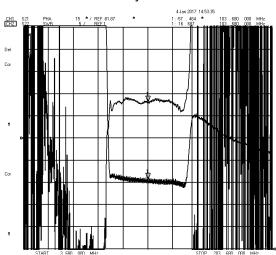
#### Frequency Response (wideband)



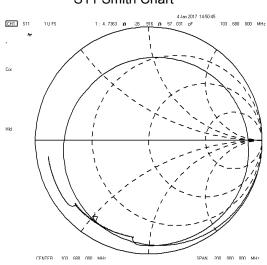
Delay Ripple & S11 VSWR



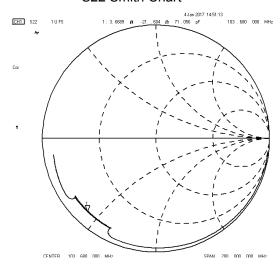
Phase Linearity & S22 VSWR



S11 Smith Chart



S22 Smith Chart



Please read notes at the end of this document.

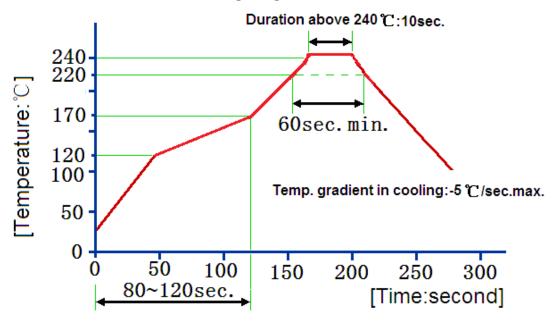
- 4 - www.bjzxsf.net

2017/1/4

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

No.	Test item	Test condition		
4	Temperature	(1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h		
1	Storage	(2) Temperature: –55°C±3°C , 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		
3	THEITHAI SHOCK	time: ≤3min, Cycle time: 100 times, Recovery time: 2h±0.5h.		
4	Vibration Fatigue	Frequency of vibration: 10~55Hz Amplitude:1.5mm		
-	4 Vibration Fatigue	Directions: X,Y and Z Duration: 2h		
5	Drop Test	Cycle time: 10 times Height: 1.0m		
		Temperature: 245 ℃ ±5 ℃ Duration: 3.0s5.0s		
6 Solder Ability Test		Depth: DIP2/3 , SMD1/5		
		(1)Thickness of PCB:1mm , Solder condition: 260 ℃±5 ℃ , Duration: 10±1s		
7	Resistance to Soldering Heat	(2)Temperature of Soldering Iron: 350℃±10℃, Duration: 3~4s,		
		Recovery time : 2 ± 0.5h		

## **Recommended Reflow Soldering Diagram**



Reflow cycles:3 cycles max.

- 5 -

103.68MHz SAW Filter SF1623 60.0MHz Bandwidth

#### **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.

Please read notes at the end of this document.