

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

BEIJING ZHONGXUN SIFANG SCIENCE & TECHNOLOGY CO.,LTD.

Tel: +86-010-58937383 Fax: +86-010-58937263 E-mail: zxsf_sales@163.com

QQ: 3037058772

Website: http://www.sfsaw.com
Add: No 201, Block A. Building 3. Yongjie Beilu

Yongfeng high-tech industrial base

Haidian District Beijing city

Part No.	:	SFR3824
Pages	:	7
Date	:	2013/5/29
Revision	:	1.0



Prepared by:	五段林
Checked by:	张伟
Approved by:	商或港

History Record

Version No.	Modify Content	Remark

Please read notes at the end of this document. -2 - <u>www.bjzxsf.net</u> <u>www. sfsaw.com</u> 2013/5/29

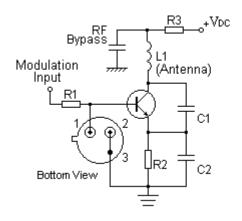
Features

- 1-port Resonator
- Metal Case for **TO-39**
- RoHS compatible
- Package Code TO-39
- Electrostatic Sensitive Device(ESD)

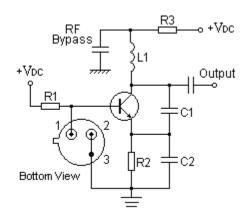


Application

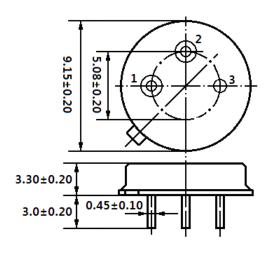
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



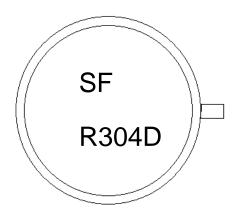
Package Dimensions (TO-39)



Pin Configuration

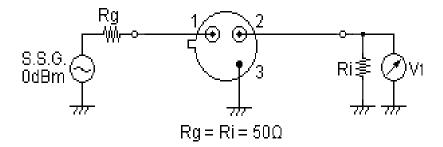
1	Input/ Output			
2	Output/ Input			
3	Case Ground			

Marking

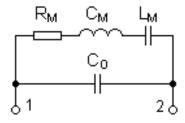


SF	Trademark	
R	SAW Resonator	
304D	Part Number	

Test Circuit



Equivalent LC Model



Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	±30	V
Operation Temperature	Т	-40 ~ +85	°C
Storage Temperature	T _{stg}	-40 ~ +85	°C
RF Power Dissipation	Р	15	dBm

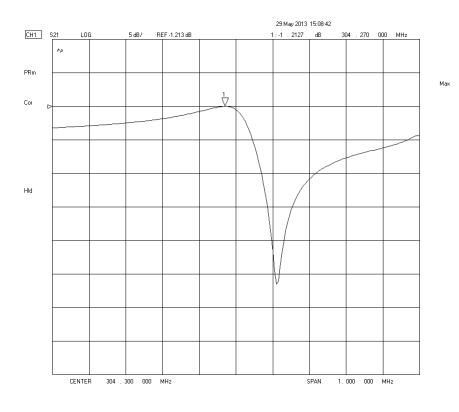
Electronic Characteristics

Test Temperature: 25°C±2°C

Terminating source impedance: 50Ω Terminating load impedance: 50Ω

Item			Minimum	Typical	Maximum	Unit
Center	Absolute Frequency	fc		304.300		MHz
Frequency	Tolerance from304.300MHz	△fc		±75		KHz
Insertion Loss(n	nin)	IL		1.3	1.8	dB
Quality Factor	Unloaded Q	Q _U		17468		
Quality Factor	50Ω Loaded Q	QL		2360		
Frequency Aging	' ' Ansolute value duting the First Year			≤10		ppm/yr
DC Insulation Resistance between Any Two Pins		1.0			МΩ	
	Motional Resistance	R _M		14	26	Ω
RF Equivalent	Motional Inductance	L _M		138		μН
RLC Model	Motional Capacitance	См		1.97		fF
	Static Capacitance	C ₀	2.5	2.8	3.1	pF

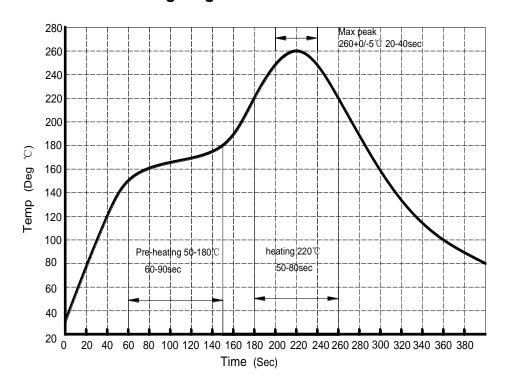
Frequency Response



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: -40°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=-40°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 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: 3.0s5.0s Depth: DIP2/3 , SMD1/5		
7	(1)Thickness of PCB:1mm , Solder condition: 260°C±5°C , Duration: 10±1 Resistance to Soldering Heat (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.

Please read notes at the end of this document. -7 - www.bjzxsf.net www.sfsaw.com 2013/5/29