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Part No.	:	SFR315H
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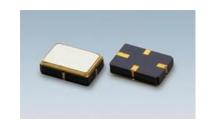
History Record

Date	Part No.	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> 2013/3/21

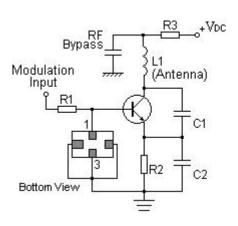
Features

- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 5.00x3.50x1.50mm³
- Package Code QCC4A

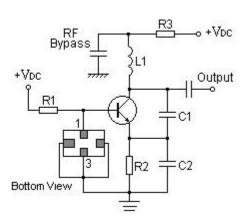


Application

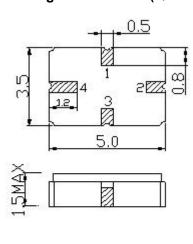
Typical Low-Power Transmitter Application

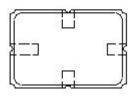


Typical Local Oscillator Application



Package Dimensions (QCC4A)



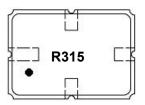


Pin Configuration

Pin No.	Description		
1	Input/Output		
3	Output/Input		
2,4	Case Ground		

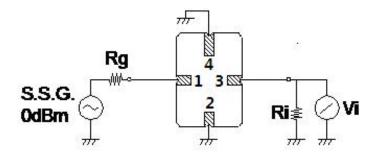
Marking Description

SAW Resonator SFR315H 315.0MHz



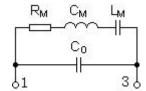
•	Pin 4		
R	SAW Resonator		
315	Part Number		

Test Circuit



Rg=Ri=50Ω

Equivalent LC Model



Performance

Maximum Rating

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

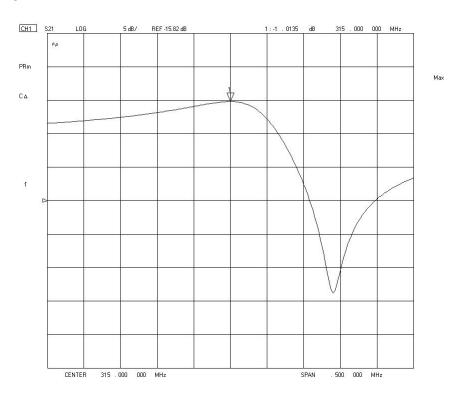
Electronic Characteristics

Test Temperature: 25°C±2°C

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

	ltem		Minimum	Typical	Maximum	Unit
Center	Absolute Frequency	fc		315.00		MHz
Frequency	Tolerance from 315.00MHz	△fc		±75		KHz
Insertion Loss(r	nin)	IL		1.1	1.6	dB
Quality Factor	Unloaded Q	Q _U		14943		
Quality Factor	50Ω Loaded Q	Q_L		1565		
Frequency Aging	. Ansolute value officione First Year			≤10		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			МΩ
RF Equivalent	Motional Resistance	R _M		12.0	22.0	Ω
	Motional Inductance	L _M		88.4		μН
RLC Model	Motional Capacitance	См		2.89		fF
	Static Capacitance	C ₀	3.7	4.0	4.3	pF

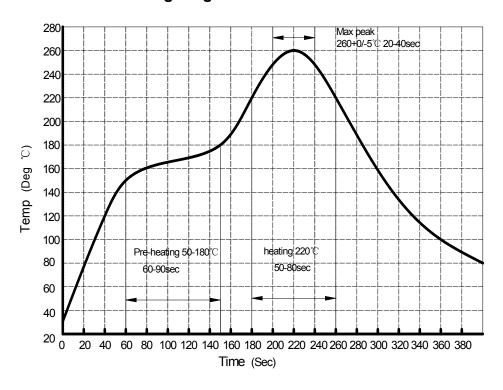
Frequency Response



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 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: 3.0s5.0s Depth: DIP2/3 , SMD1/5
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



SAW Resonator SFR315H 315.0MHz

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-

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