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Part No.	:	SFR433D
Pages	:	7
Date	:	2013/03/21
Revision	:	1.0





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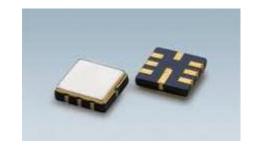
History Record

Date	Part No.	Version No.	Modify Content	Remark

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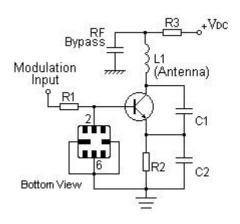
Features

- 1-port Resonator
- Ceramic Package for Surface Mounted Technology (SMT)
- RoHS compatible
- Package size 5.00x5.00x1.50mm³
- Package Code QCC8C
- Electrostatic Sensitive Device(ESD)

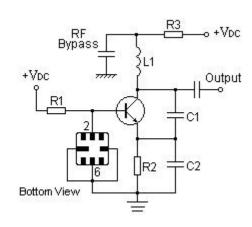


Application

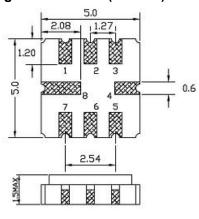
Typical Low-Power Transmitter Application

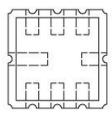


Typical Local Oscillator Application



Package Dimensions (QCC8C)

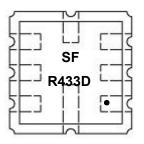




Pin Configuration

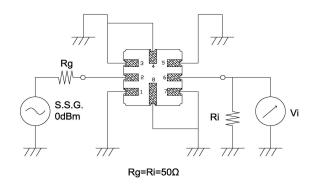
2	Input/ Output		
6	Output/ Input		
1,3,5,7	To be Grounded		
4,8	Case Ground		

Marking Description

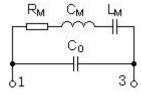


•	Pin 4	
R SAW Resonator		
SFR433D	Part Number	

Test Circuit



Equivalent LC Model



Performance

Maximum Rating

ltem		Value	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

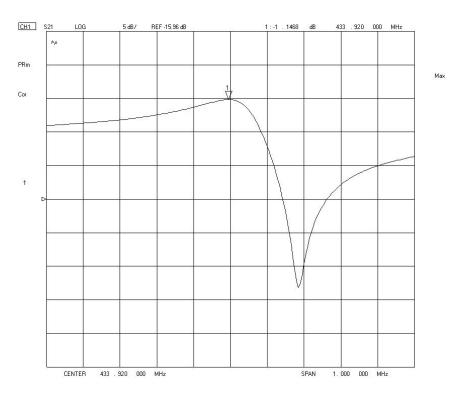
Electronic Characteristics

Test Temperature: 25°C±2°C

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

	ltem:		Minimum	Typical	Maximum	Unit
Center	Absolute Frequency	fc		433.92		MHz
Frequency	Tolerance from 433.92MHz	△fc		±75		KHz
Insertion Loss(n	nin)	IL		1.2	1.7	dB
Quality Factor	Unloaded Q	Qu		16090		
Quality Factor	50Ω Loaded Q	QL		1800		
Frequency Aging	' ' Angollita Vallia dilring tha First yaar			≤10		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			ΜΩ
	Motional Resistance	R _M		13.0	22.0	Ω
RF Equivalent	Motional Inductance	L _M		74.4		μН
RLC Model	Motional Capacitance	См		1.81		fF
	Static Capacitance	C ₀	2.3	2.6	2.9	pF

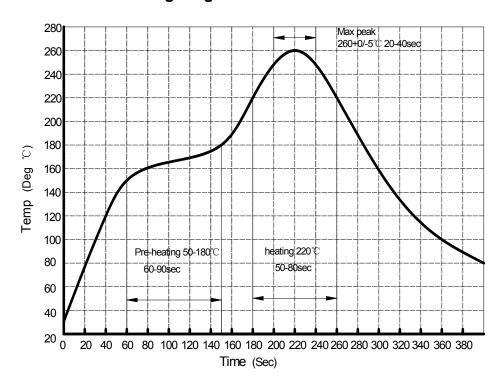
Frequency Response



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 SFR433D 433.92MHz

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.

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