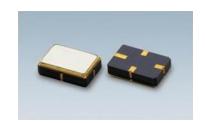


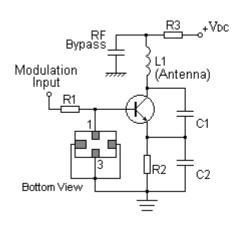
Features

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

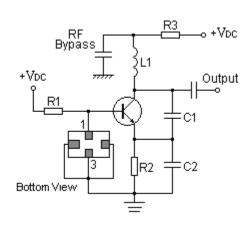


Application

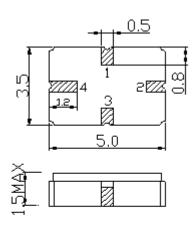
Typical Low-Power Transmitter Application

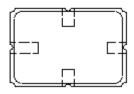


Typical Local Oscillator Application



Package Dimensions (QCC4A)



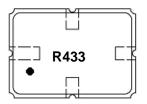


Pin Configuration

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

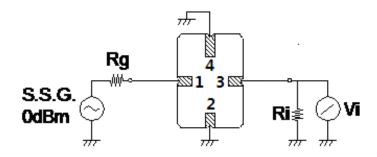


Marking Description



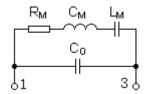
•	Pin 4
R	SAW Resonator
433	Part Number

Test Circuit



Rg=Ri=50Ω

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	Ĵ
RF Power Dissipation	Р	15	dBm



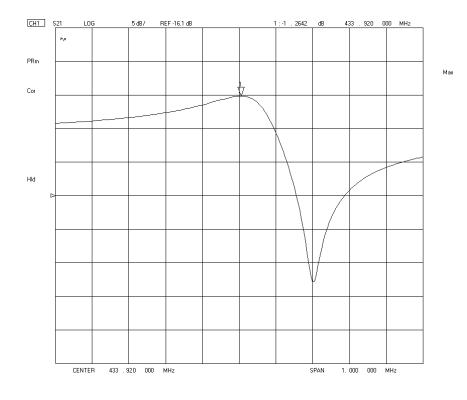
Electronic Characteristics

Test Temperature: 25°C±2°C

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

Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	fc		433.92		MHz
	Tolerance from 433.92MHz	$\triangle f_c$		±75		KHz
Insertion Loss(min) IL		IL		1.3	1.8	dB
Quality Factor	Unloaded Q	Q _U		15174		
Quality Factor	50Ω Loaded Q	QL		1771		
Frequency Aging	Absolute Value during the First Year	f _A		≤10		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			МΩ
RF Equivalent RLC Model	Motional Resistance	R _M		13.0	22.0	Ω
	Motional Inductance	L _M		73.6		μΗ
	Motional Capacitance	См		1.83		fF
	Static Capacitance	C ₀	2.1	2.4	2.7	pF

Frequency Response

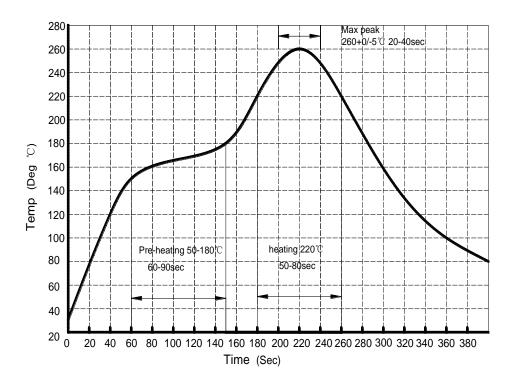




Reliability (The SAW components shall remain electrical performance after tests)

No.	Test item	Test condition
_ Temperature		(1) Temperature: 85°C±2°C , Duration: 250h , Recovery time: 2h±0.5h
1 Storage	(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
		Temperature: 245°C±5°C Duration: 3.0s5.0s
6 Solder Ability Test	Solder Ability Test	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





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.