

SAW Resonator UNIT

AW QCC3A Series



Approved by: 黄灏东

Checked by: 杨霞

Issued by: 玉静霞

SPECIFICATION

SJK PN : AW433920QCC3A

深圳市晶科鑫实业有限公司
SHENZHEN CRYSTAL TECHNOLOGY INDUSTRIAL CO., LTD.

SAW Resonator UNIT

AW QCC3A Series



Features

- 1-port Resonator
- Ceramic Package for **Surface Mounted Technology (SMT)**
- RoHS** compatible
- Package size 7.4*3.4*1.8mm³
- Package Code QCC3A
- Electrostatic **Sensitive Device(ESD)**

Performance

1-1. Maximum Rating

Rating		Value	Unit
Source power	P_S	10	dBm
DC voltage between any two pins	V_{DC}	± 30	V
Operating temperature range	T_A	-40 ~ +85	°C
Storage temperature range	T_{stg}	-55 ~ +125	°C

1-2 Electronic Characteristics

Test Temperature: 25°C \pm 2°C

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

Characteristic		Sym	Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	f_c	433.845	433.920	433.995	MHz
	Tolerance from 433.920MHz	Δf_c		± 75		kHz
Insertion Loss (Min)		IL		1.5	2.0	dB
Quality Factor	Unloaded Q	Q_U		18651		
	50Ω Loaded Q	Q_L		1714		
Temperature Stability	Turnover Temperature	T_O	25	40	55	°C
	Turnover Frequency	f_o		f_c		kHz
	Frequency Temperature Coefficient	FTC		0.032		ppm/°C ²
Frequency Aging	Absolute Value during the First Year	$ f_A $		≤ 10		ppm/yr
DC Insulation Resistance between the Two Pins			1.0			MΩ
RF Equivalent RLC Model	Motional Resistance	R_M		15	19	Ω
	Motional Inductance	L_M		129.32		μH
	Motional Capacitance	C_M		1.04		fF
	Pin 1 to Pin 2 Static Capacitance	C_O		2.9		pF

Add: RM#1805, East Wing, TianAn Hi-tech Plaza Phase2, TianAn Cyber Park Shenzhen, China

Tel: (86) 755 88352809 88352810 Fax: (86) 755 88353718 88352499

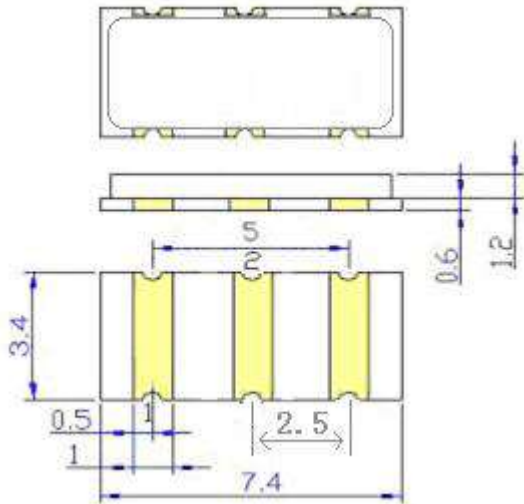
E-mail: sjk@q-crystal.com HTTP://www.q-crystal.com

SAW Resonator UNIT

AW QCC3A Series



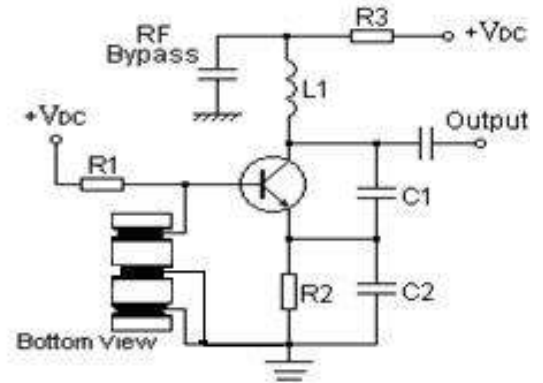
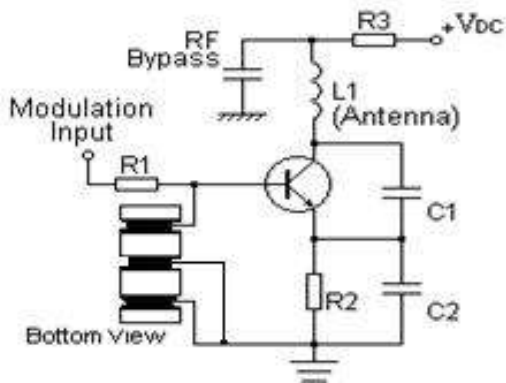
Package Dimension (QCC3A)



1	Input
3	Output
2	Ground

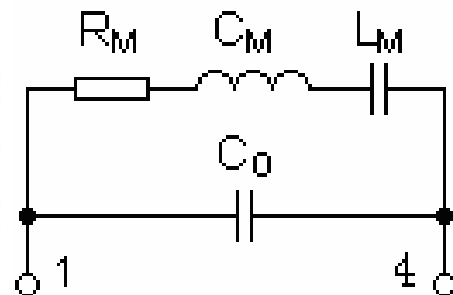
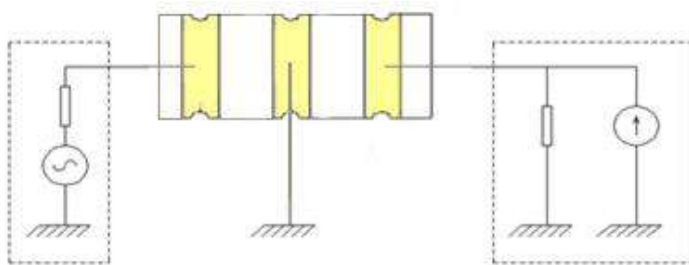
Typical Low-Power Transmitter Application

Typical Local Oscillator Application



Test Circuit

Equivalent LC Model



Add: RM#1805, East Wing, TianAn Hi-tech Plaza Phase2, TianAn Cyber Park Shenzhen, China

Tel: (86) 755 88352809 88352810 Fax: (86) 755 88353718 88352499

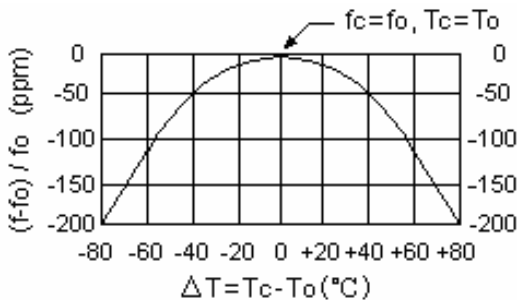
E-mail: sjk@q-crystal.com HTTP://www.q-crystal.com

SAW Resonator UNIT

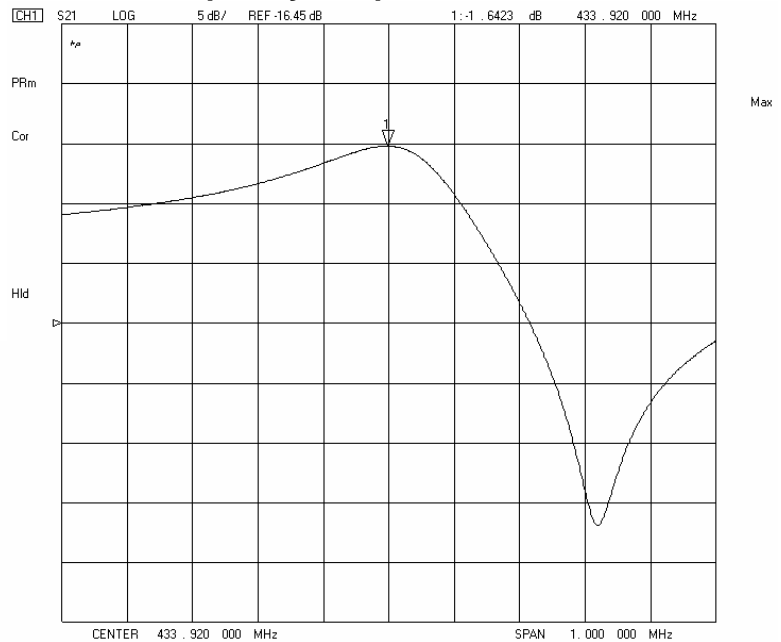
AW QCC3A Series



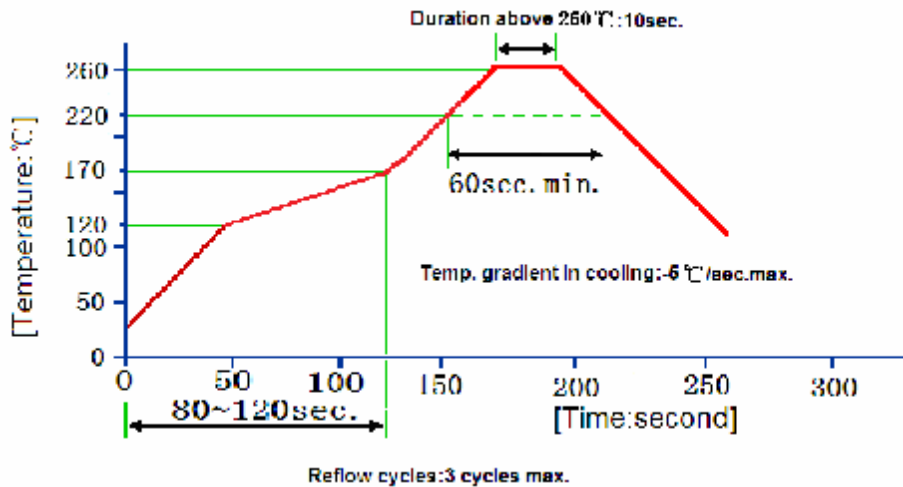
Temperature Characteristics



Frequency Response



Recommended Reflow Soldering Diagram



Note

1. As a result of the particularity of inner structure of SAW products, it is 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.

Add: RM#1805, East Wing, TianAn Hi-tech Plaza Phase2, TianAn Cyber Park Shenzhen, China

Tel: (86) 755 88352809 88352810 Fax: (86) 755 88353718 88352499

E-mail: sjk@q-crystal.com HTTP://www.q-crystal.com