

APPROVAL SHEET

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

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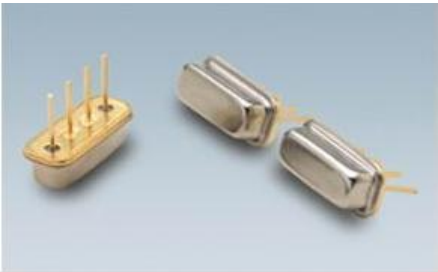
Add: No.5 Zhuangcun Road, Xiner Community,
Shajing Street, Baoan District, Shenzhen



Part No.	:	SFR435A
Pages	:	4
Date	:	2016/8/1
Revision	:	2.0

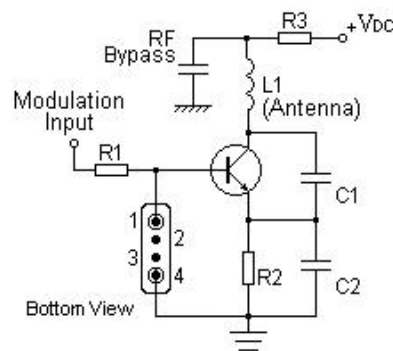
Features

- 1-port Resonator
- Metal Case for **SC04-06**
- **RoHS** compatible
- Package Code SC04-06
- Electrostatic Sensitive Device(**ESD**)

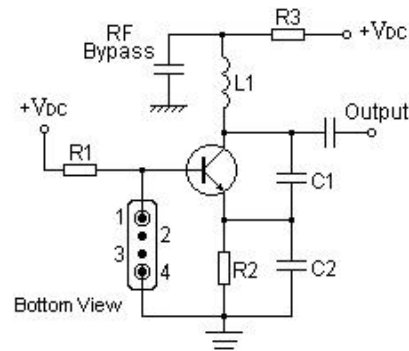


Application

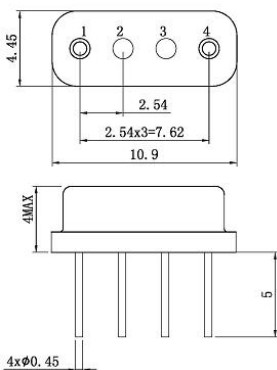
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



Package Dimensions (SC04-06)



Pin Configuration

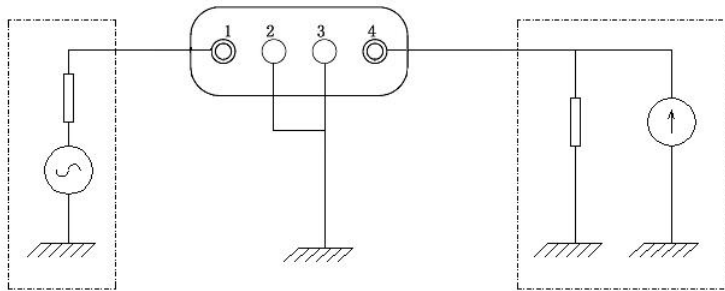
1	Input/ Output
4	Output/ Input
2,3	Case Ground

Marking

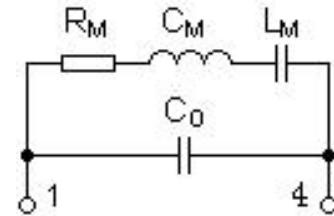


SF	Trademark
R	SAW Resonator
435A	Part number

Test Circuit



Equivalent LC Model



Performance

Maximum Rating

Item		Value	Unit
DC Voltage	V_{DC}	± 30	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	T_{stg}	-40 ~ +85	°C
RF Power Dissipation	P	25	dBm

Electronic Characteristics

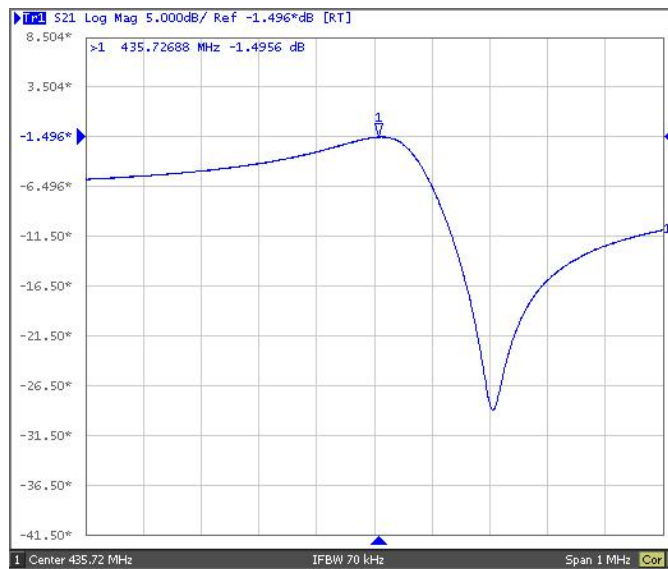
Test Temperature: $25^{\circ}\text{C} \pm 2^{\circ}\text{C}$

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	f_c		435.72		MHz
	Tolerance from 435.72MHz	Δf_c		± 75		KHz
Insertion Loss(min)		IL		1.5	2.0	dB
Quality Factor	Unloaded Q	Q_U		21023		
	50Ω Loaded Q	Q_L		3731		
Frequency Aging	Absolute Value during the First Year	$ f_A $		≤ 10		ppm/yr
DC Insulation Resistance between Any Two Pins			1.0			MΩ
RF Equivalent RLC Model	Motional Resistance	R_M		21.5	23.0	Ω
	Motional Inductance	L_M		165.8		μH
	Motional Capacitance	C_M		0.89		fF
	Static Capacitance	C_0	1.05	1.25	1.45	pF

Frequency Response



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

No.	Test item	Test condition
1	Temperature Storage	(1) Temperature: $85^{\circ}\text{C} \pm 2^{\circ}\text{C}$, Duration: 250h , Recovery time: $2\text{h} \pm 0.5\text{h}$ (2) Temperature: $-40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, Duration: 250h , Recovery time: $2\text{h} \pm 0.5\text{h}$
2	Humidity Test	Conditions: $60^{\circ}\text{C} \pm 2^{\circ}\text{C}$, 90~95% RH Duration: 250h
3	Thermal Shock	Heat cycle conditions: $\text{TA} = -40^{\circ}\text{C} \pm 3^{\circ}\text{C}$, $\text{TB} = 85^{\circ}\text{C} \pm 2^{\circ}\text{C}$, $t_1 = t_2 = 30\text{min}$, Switch time: $\leq 3\text{min}$, Cycle time: 100 times , Recovery time : $2\text{h} \pm 0.5\text{h}$.
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: $245^{\circ}\text{C} \pm 5^{\circ}\text{C}$ Duration: 3.0s--5.0s Depth: DIP--2/3 , SMD--1/5
7	Resistance to Soldering Heat	(1) Thickness of PCB: 1mm , Solder condition: $260^{\circ}\text{C} \pm 5^{\circ}\text{C}$, Duration: $10 \pm 1\text{s}$ (2) Temperature of Soldering Iron: $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$, Duration: 3~4s , Recovery time : $2 \pm 0.5\text{h}$

Notes

- 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.
- Static voltage** between signal load and ground may cause deterioration and destruction of the component. Please avoid static voltage.
- Ultrasonic cleaning** may cause deterioration and destruction of the component. Please avoid ultrasonic cleaning.
- Only leads of component may **be soldered**. Please avoid soldering another part of component.
- 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.