



# APPROVAL SHEET

Approval Specification	Customer's Approval Certificate
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<b>Part No.:</b>	<b>Date:</b>
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Part No.	:	SFR315K
Pages	:	7
Date	:	2015/1/21
Revision	:	1.0

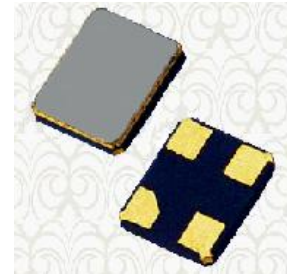
<b>Prepared by:</b>	
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### History Record

Date	Part No.	Version No.	Modify Content	Remark

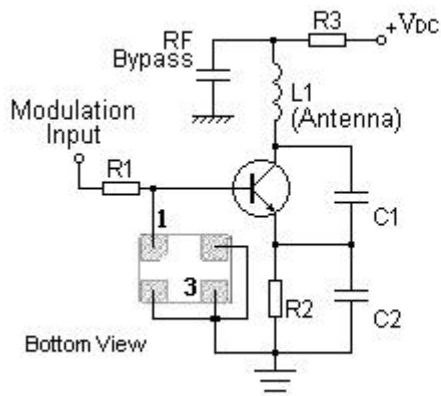
**Features**

- 1-port Resonator
- Ceramic Package for **Surface Mounted Technology (SMT)**
- **RoHS** compatible
- Package size 3.20x2.50x0.70mm<sup>3</sup>
- **Electrostatic Sensitive Device(ESD)**

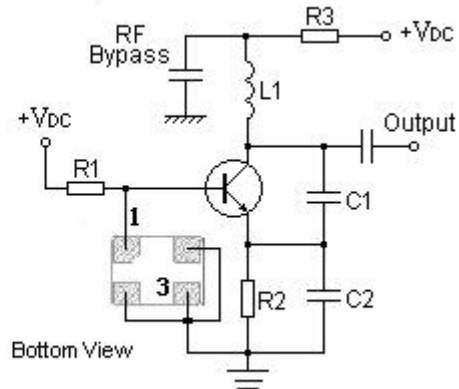


**Application**

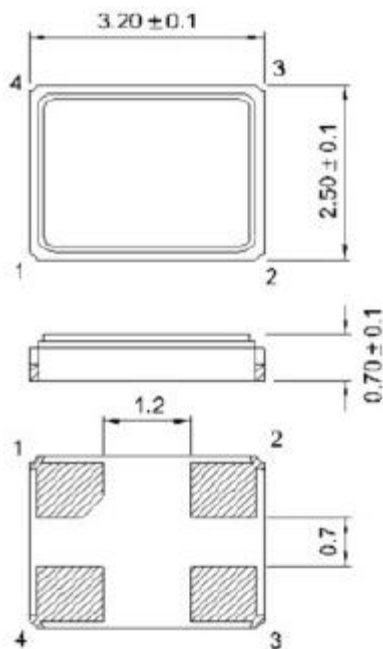
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



**Package Dimensions (DCC4C)**



**Pin Configuration**

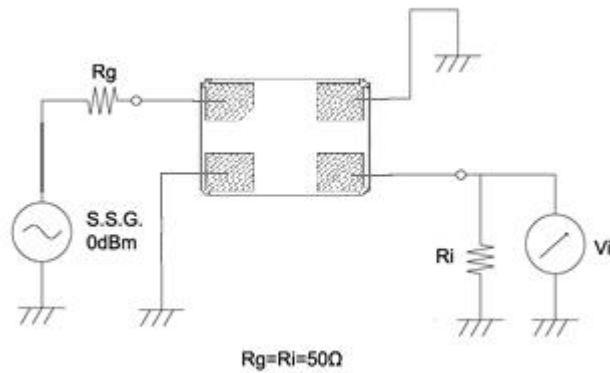
<b>1</b>	Input/ Output
<b>3</b>	Output/ Input
<b>2,4</b>	Ground

## Marki

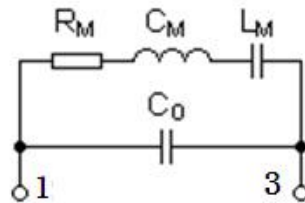


<b>SF</b>	Trademark
<b>R</b>	SAW Resonator
<b>315K</b>	Part number

## Test Circuit



## Equivalent LC Model



## Performance

## Maximum Rating

Item		Value	Unit
DC Voltage	$V_{DC}$	$\pm 30$	V
Operation Temperature	T	-40 ~ +85	°C
Storage Temperature	$T_{stg}$	-40 ~ +85	°C
RF Power Dissipation	P	15	dBm

## Electronic Characteristics

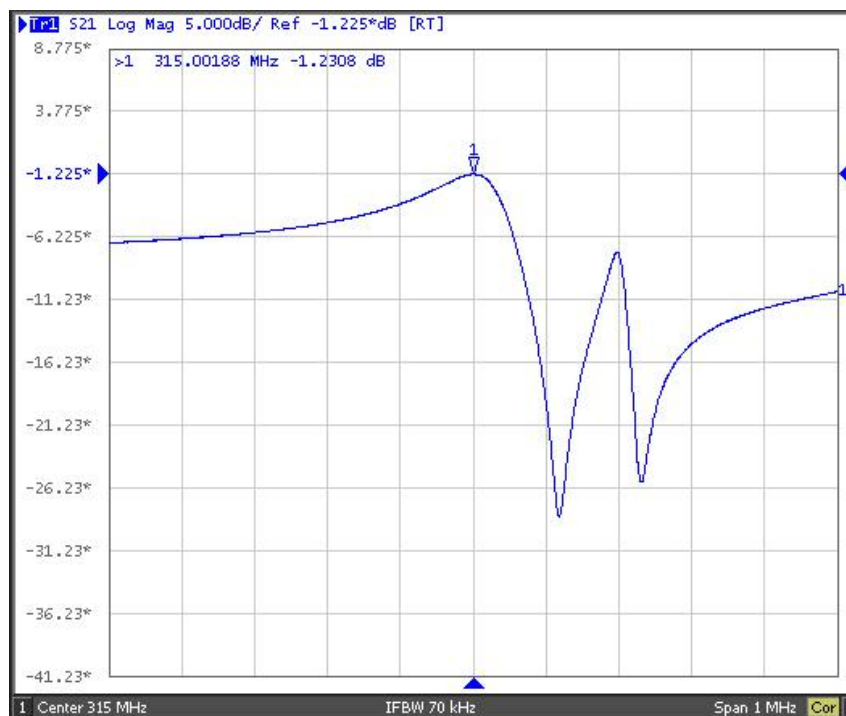
Test Temperature: 25°C±2°C

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	$f_c$		315.00		MHz
	Tolerance from 315.00MHz	$\Delta f_c$		±75		KHz
Insertion Loss(min)		IL		1.3	2.0	dB
Quality Factor	Unloaded Q	$Q_u$		21571		
	50Ω Loaded Q	$Q_L$		3559		
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	$R_M$		19.7	22.0	Ω
	Motional Inductance	$L_M$		215.5		μH
	Motional Capacitance	$C_M$		1.18		fF
	Static Capacitance	$C_0$	1.80	2.08	2.4	pF

## Frequency Response





**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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