



# APPROVAL SHEET

Approval Specification	Customer's Approval Certificate
<b>TO:</b>	<b>Checked &amp; Approved by:</b>
<b>Part No.:</b>	<b>Date:</b>
<b>Customer's Part No.:</b>	Please return this copy as a certification of your approval

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<b>Prepared by:</b>	
<b>Checked by:</b>	
<b>Approved by:</b>	



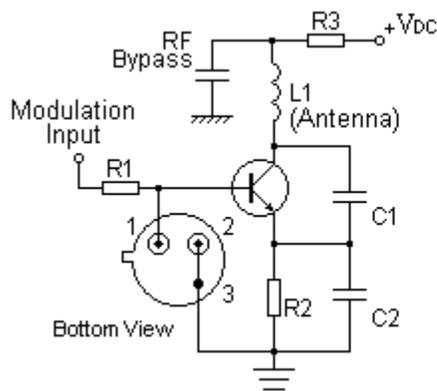
Features

- 1-port Resonator
- Metal Case for TO-39
- RoHS compatible
- Package Code TO-39
- Electrostatic Sensitive Device(ESD)

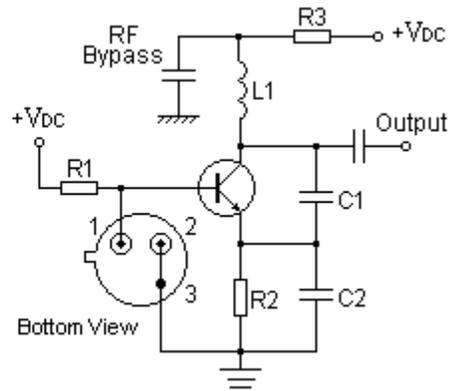


Application

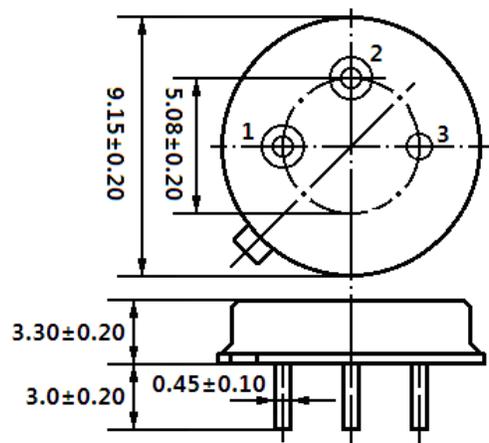
Typical Low-Power Transmitter Application



Typical Local Oscillator Application



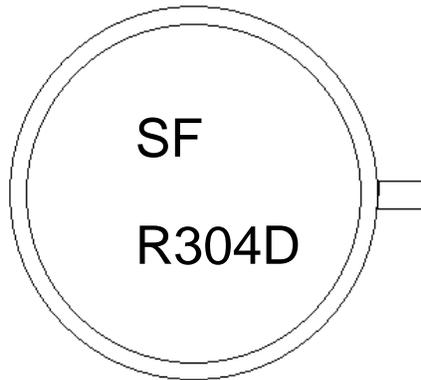
Package Dimensions (TO-39)



Pin Configuration

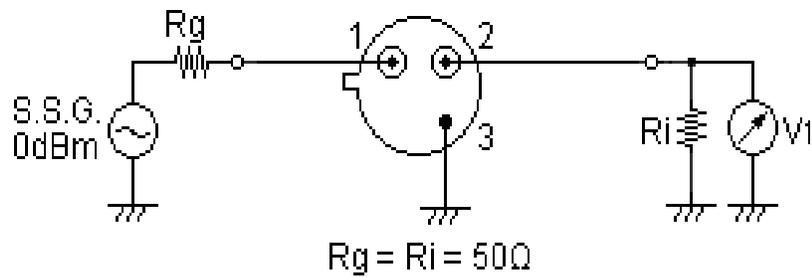
1	Input/ Output
2	Output/ Input
3	Case Ground

## Marking

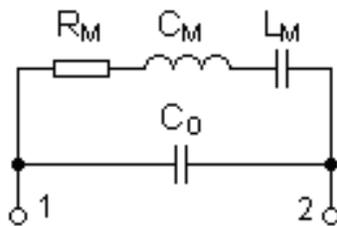


SF	Trademark
R	SAW Resonator
304D	Part Number

## Test Circuit



## Equivalent LC Model



## Performance

## Maximum Rating

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

### Electronic Characteristics

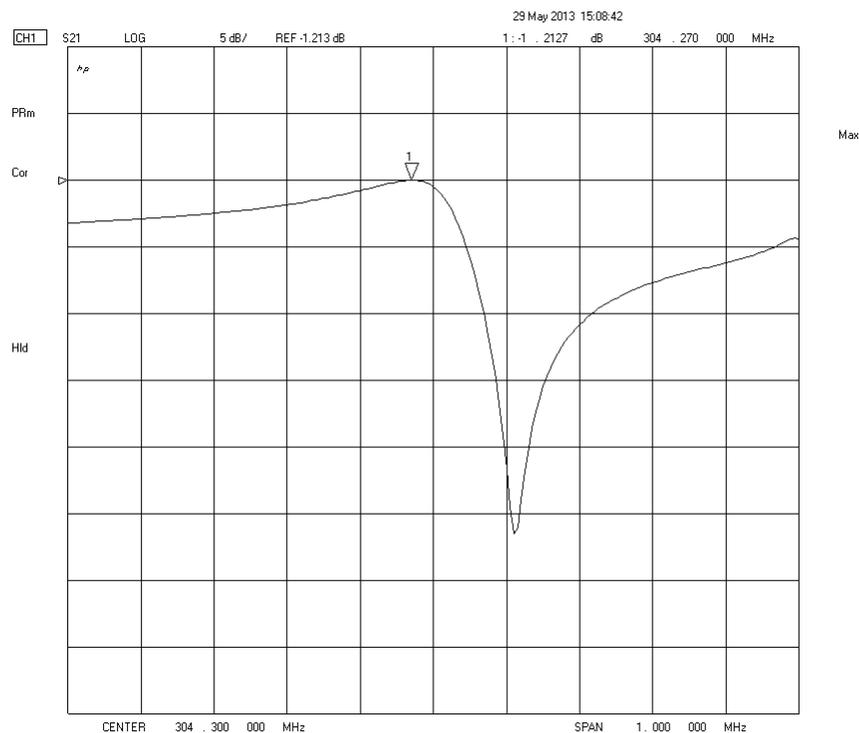
Test Temperature: 25°C±2°C

Terminating source impedance: 50Ω

Terminating load impedance: 50Ω

Item			Minimum	Typical	Maximum	Unit
Center Frequency	Absolute Frequency	$f_c$		304.300		MHz
	Tolerance from 304.300MHz	$\Delta f_c$		±75		KHz
Insertion Loss(min)		IL		1.3	1.8	dB
Quality Factor	Unloaded Q	$Q_U$		17468		
	50Ω Loaded Q	$Q_L$		2360		
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	$R_M$		14	26	Ω
	Motional Inductance	$L_M$		138		μH
	Motional Capacitance	$C_M$		1.97		fF
	Static Capacitance	$C_0$	2.5	2.8	3.1	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.