



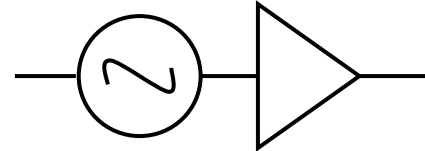
## Voltage Controlled Oscillator

## RJVC02

### Description

RJVC02 is 2.0 - 6.0 GHz, voltage controlled oscillator. It can operate at 1.8 V supply and consumes only 1.0 mA current. The tuning bandwidth of the oscillator is 4 GHz with good phase noise performance.

### Functional Diagram



The RJV02 have designed on the CMOS 0.18 um Process. The die area of the chip is very small.

### Applications

CDMA  
WLAN

### Key Features

Large tuning bandwidth  
Low cost, low power  
Good phase noise  
Small Size

### Electrical Specification

Conditions:  $V_{cc} = 1.8\text{ V}$ ,  $V_{tune} = 0.55\text{-}1.25\text{ V}$  &  $T_A = 25\text{ }^\circ\text{C}$

Parameter	Min	Typical	Max	Comment	Units
Frequency	2.0		6.0		GHz
Vout		11.48			V
Phase Noise @ 100 kHz		-80			dBc/Hz
Tuning bandwidth		4			GHz
Supply Voltage		1.8			V
Frequency Pushing		170			MHz/V
Tuning Sensitivity		80			MHz/V
Supply Current		1			mA
Tuning Voltage	0.55		1.25		V

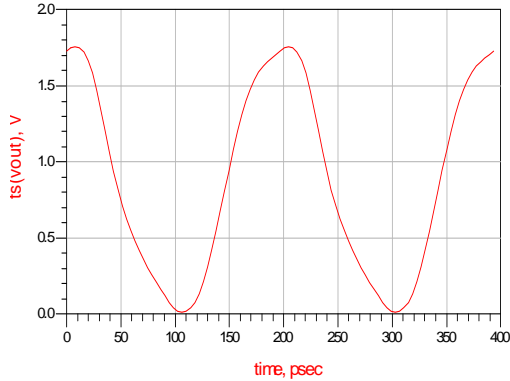


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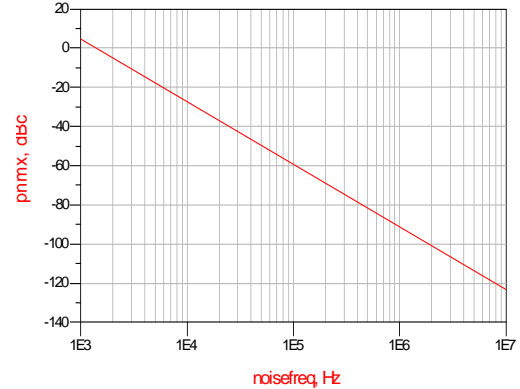
# RJVC02

## Simulated Results

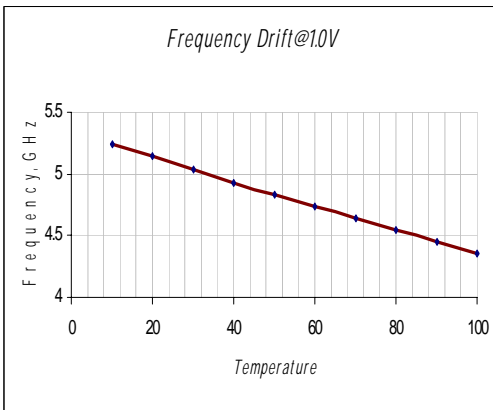
### Output Voltage



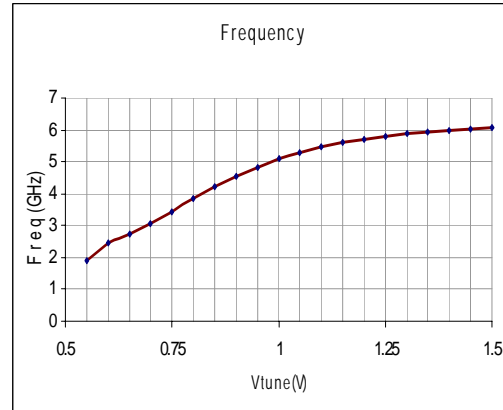
### Phase Noise



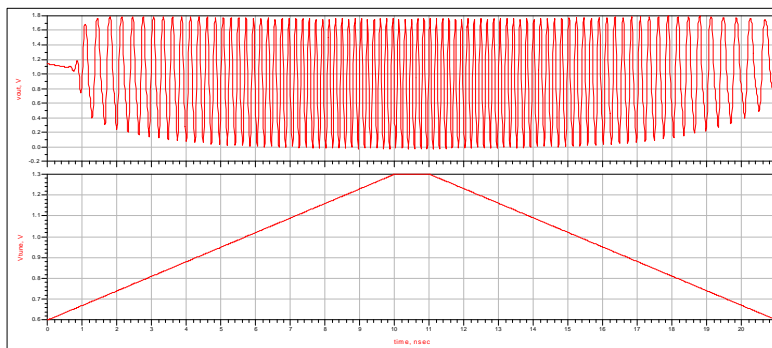
### Frequency Drift@1.0V



### Frequency



## Vtune Vs Freq





**Voltage Controlled Oscillator**

**RJVC02**

**Layout**

