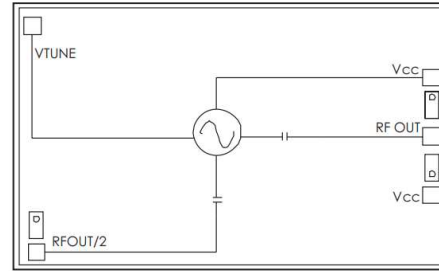


### Performance

- Dual paths output:  $F_0=8.9\sim 9.8\text{GHz}$   
 $F_0/2=4.45\sim 4.9\text{GHz}$
- Output Power: +11dBm
- Noise figure: -112dBc/Hz @ 100KHz Typ
- Chip size: 2.5\*1.6\*0.1mm

### Function Diagram

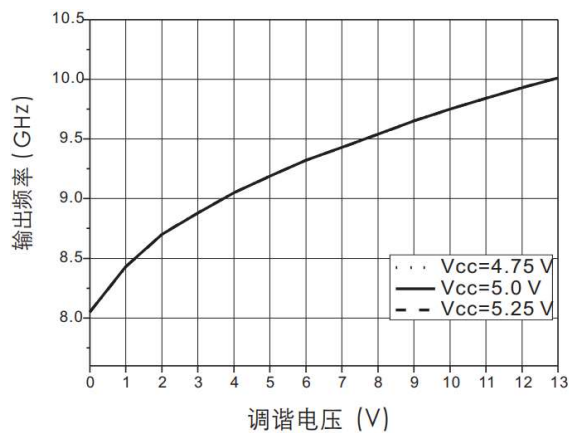


### Electrical Specifications (Ta=+25°C, Vcc=+5V)

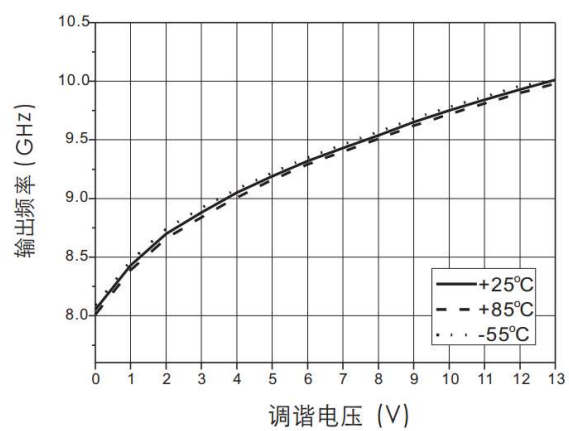
Parameter		Min	Typical	Max	Unit
Frequency Range	F0	8.9~9.8			GHz
	F0/2	4.45~4.9			GHz
Output Power	RFOUT	8	11	14	dBm
	RFOUT/2	3	6.5	10	dBm
Noise figure@100KHz, VTUNE=+5V@RFOUT		-	-112	-	dBc/Hz
Tuning Voltage		2	-	13	V
Harmonics	1/2	-	-30	-	dBc
	2 <sup>nd</sup>	-	-10	-	dBc
Frequency Pulling (12dB RL)		-	8	-	MHz
Pushing Frequency Factor @ VTUNE=5V		-	15	-	MHz/V
Frequency Shift		-	0.8	-	MHz/°C
Operating Current		160	220	240	mA

### Test Curves (Die chip test)

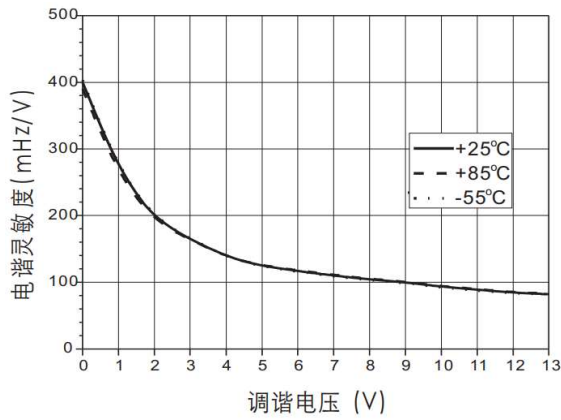
Output Freq vs. Tuning Voltage, TA=+25°C



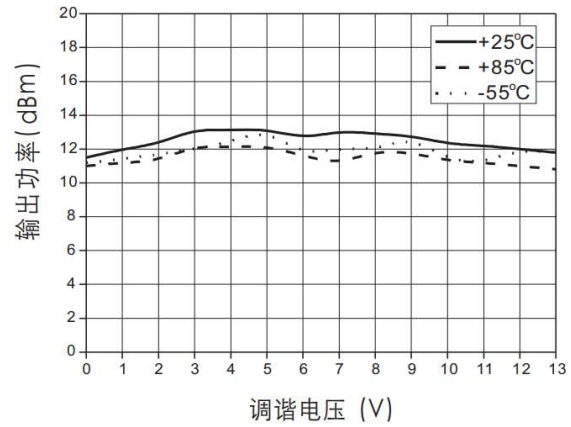
Output Freq vs. Tuning Voltage, Vcc=+5V



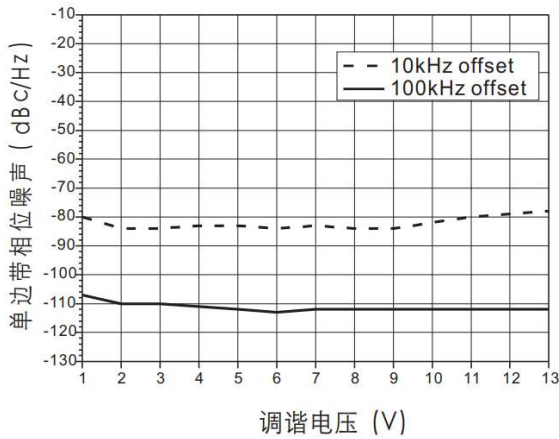
Electronic tuning sensitivity vs. Tuning Voltage  
Vcc=+5V



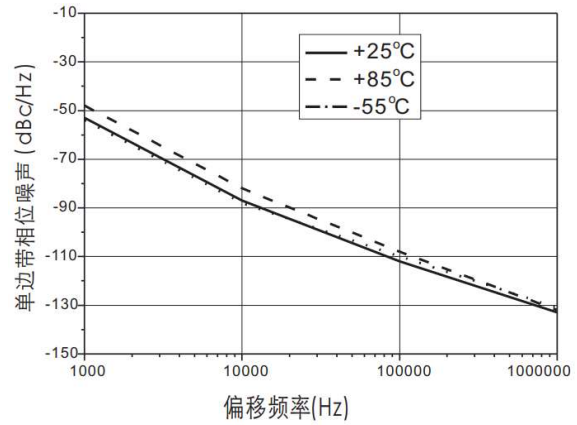
Output Power vs. Tuning Voltage, Vcc=+5V



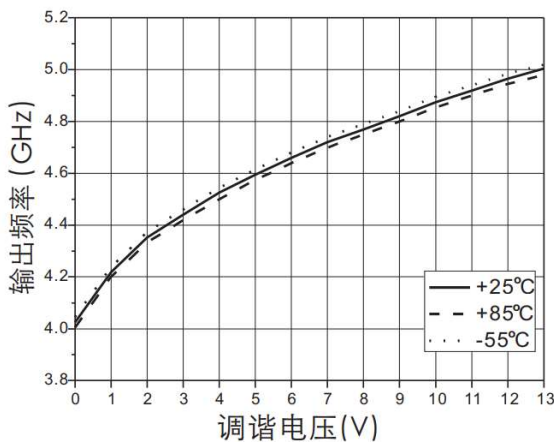
SSB Noise Figure vs. Tuning Voltage



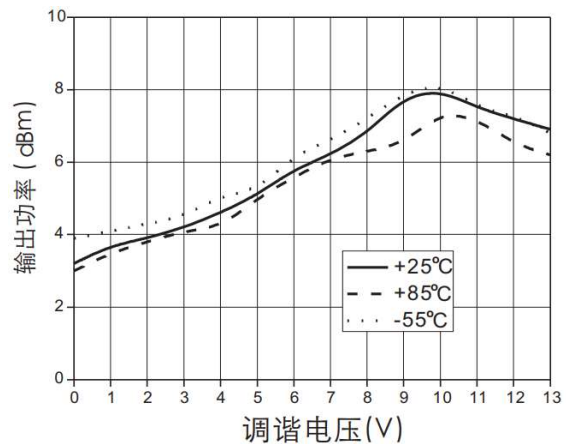
SSB Noise Figure vs. Vtune=+5V



RFOUT/2 Frequency vs. Tuning Voltage  
Vcc=+5V



RFOUT/2 Output Power vs. Tuning Voltage  
Vcc=+5V



### Absolute Ratings

Vcc	+5.5Vdc
Vtune	0~+15V
Junction Temperature	175°C
Storage Temperature	-65°C~+150°C
Operating Temperature	-55°C~+125°C
Static Protection	Class 1A

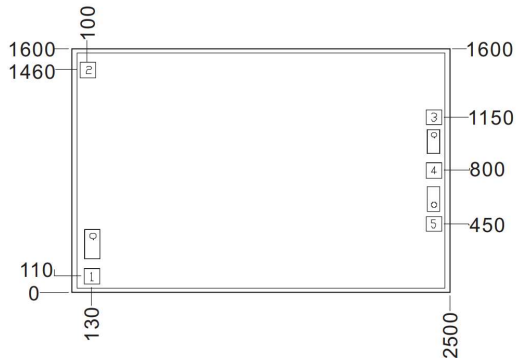
### Typical Operating Current

Vcc(V)	ICC(mA)
4.75	175
5.0	200
5.25	225



ELECTROSTATIC SENSITIVE DEVICE  
OBSERVE HANDLING PRECAUTIONS

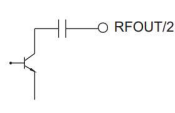
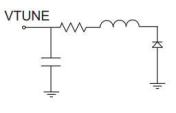
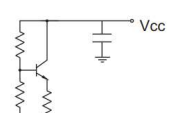
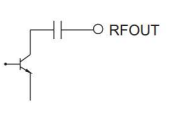
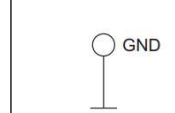
### Outline Size



### Note:

1. Unit: um
2. Bottom side is gold plated
3. Bottom side is GND
4. Bonding pads is gold plated, Pad size: 100\*100(um)
5. Don't bonding on thru holds
6. Tolerance: ±50um

### Bonding Pads Definition

Number	1	2	3,5	4	Bottom
Symbol	RFOUT/2	VTUNE	Vcc	RF OUT	GND
Description	1/2 harmonic output (block capacitor included)	Tuning Voltage port	Current port, +5V	RF output port (block capacitor included)	Bottom must be grounded
Equivalent Circuit					

### Assembly Drawing

