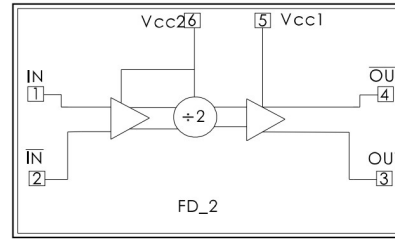


Performance

- Frequency: 10-20GHz
- Operating Voltage: +5V
Operating Current: 75mA
- Output Power: -4dBm
- Chip size: 1.2*0.8*0.1mm

Function Diagram

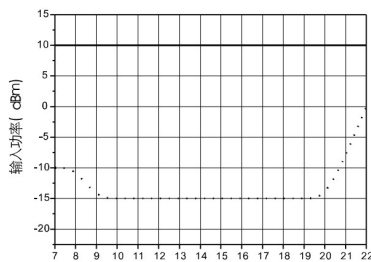


Electrical Specifications (Ta=+25°C, Vcc=+5V)

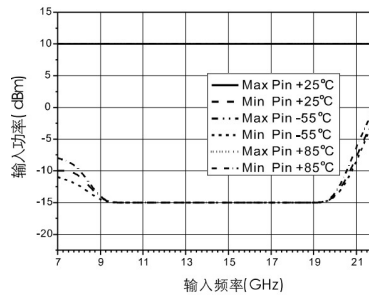
Parameter	Operating Condition	Min	Typical	Max	Unit
Max Input Frequency		20	-	22	GHz
Min Input Frequency	Sin-wave input	7	-	10	GHz
Input Power Range	Fin=7~9GHz	-10	-	+10	dBm
	Fin=9~20GHz	-15	-	+10	dBm
Output Power	Fin=15GHz	-5	-4	-	dBm
Reverse Leakage	OUT, $\overline{\text{OUT}}$, Terminated	-	55	-	dB
SSB Phase noise (100KHz offset)	Pin=0dBm, Fin=15GHz	-	-146	-	dBc/Hz
Operating Current		65	75	85	mA

Test Curves (Die chip testing)

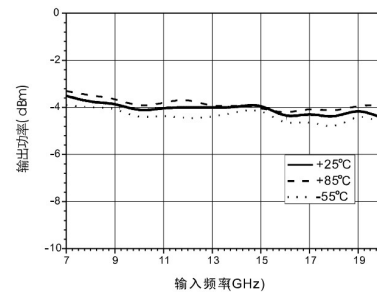
Input Sensitivity Window T=+25°C



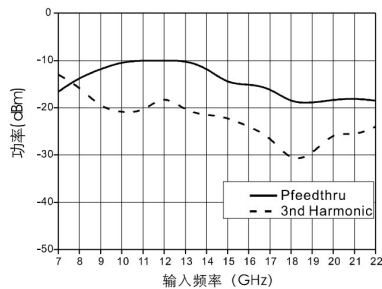
Input Sensitivity Window vs. Temp



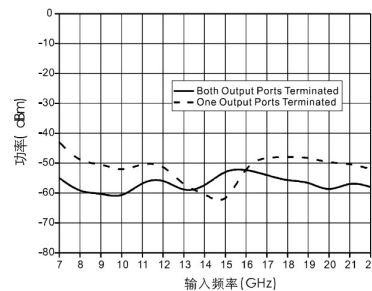
Output Power vs. Temp



Output Harmonic, Pin=0dBm, T=+25°C



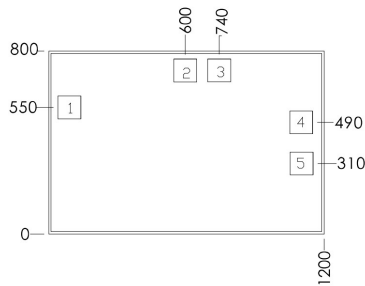
Reverse Leakage, Pin=0dBm, T=+25°C



Absolute Max Ratings

Vcc	+5.5Vdc
Pin	13dBm
Tj	175°C
Tstg	-65~+150°C
To	-55~+125°C
HBM	Class 1A

Outline Size



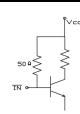
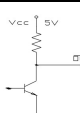
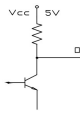
Note:

1. Unit: μm
2. Bottom side is gold plated
3. Bottom side is GND
4. Bonding pads is gold plated, size: $100 \times 100 (\mu\text{m})$
5. Don't bonding on thru holes
6. Tolerance: $\pm 50 \mu\text{m}$

Typical Operating Current

Vcc (V)	Icc (mA)
4.75	65
5.0	75
5.25	85

Bonding Pads Definition

Number	Symbol	Description	Equivalent Circuits
1	$\overline{\text{IN}}$	RF input (external block capacitor needed)	
2, 3	Vcc 2, Vcc 1	Current +5V	-
4	$\overline{\text{OUT}}$	Frequency divider signal output (external block capacitor needed) 180° phase different with Pad 5.	
5	OUT	Frequency divider signal output (external block capacitor needed)	

Assembly

