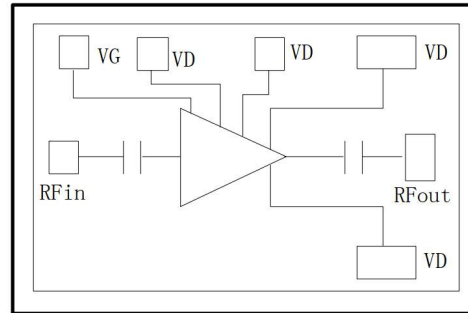


### Performance

- Frequency: 8~12GHz
- Typical Signal Gain: 30dB
- Typical Pout: 44dBm @ 28V
- Typical PAE: 43%
- Bias: 28V, -2V (Typ.)
- Mode: CW is allowed
- Technology: 0.25um HEMT
- Size: 2.5\*2.7mm\*0.08mm

### Function Diagram

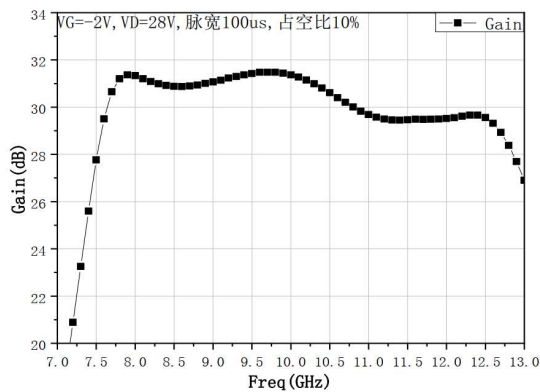


### Electrical Specifications (TA=25°C, Vd=28V, Idq=2.0A, F: 8~12GHz, PW=100us, DC=10%)

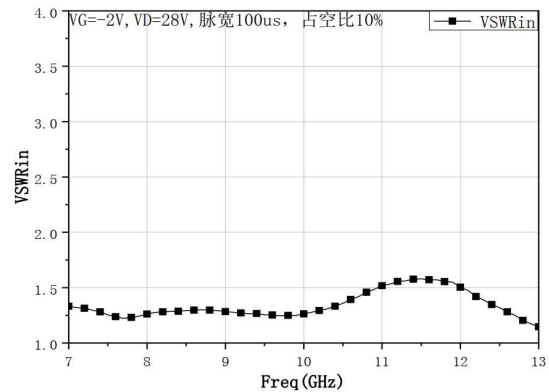
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	30	-	dB
Gp	Power Gain	-	23	-	dB
Pout	Saturated Power	-	44	-	dBm
PAE	Power Added Efficiency	-	43	-	%
Rth	Thermal Resistance	-	-	2.5	°C/W

### Test Curves

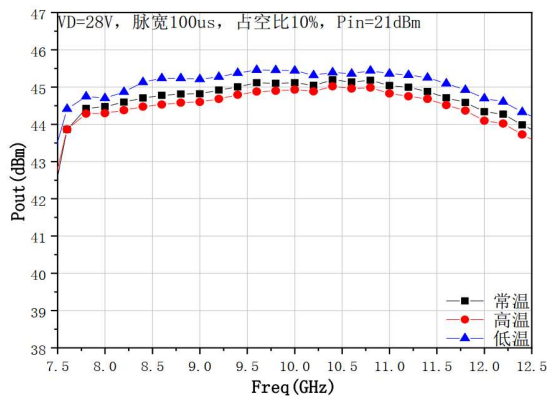
Small Signal Gain vs. Freq



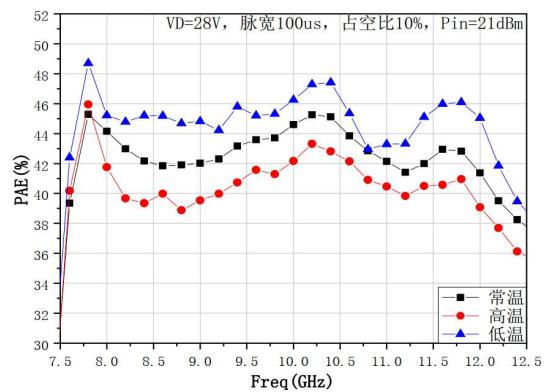
Input VSWR vs. Freq



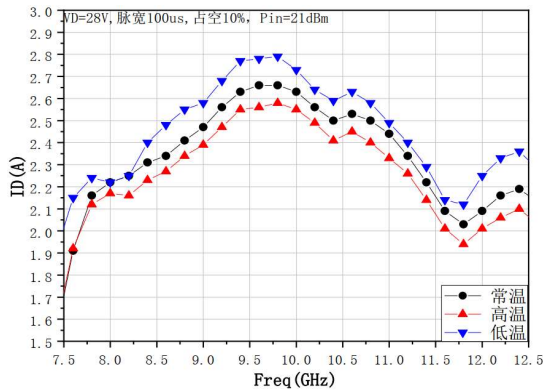
Output Power @ Room/High/Low Temp.



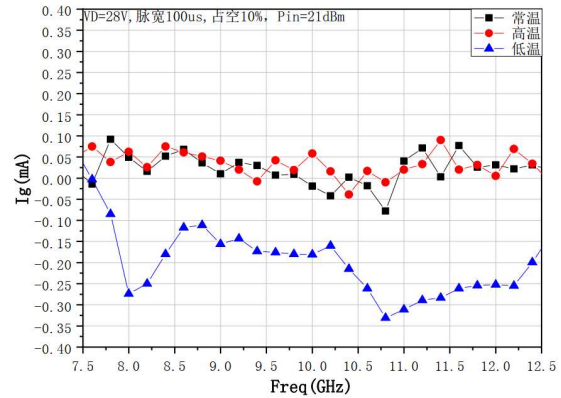
PAE @ Room/High/Low Temp.



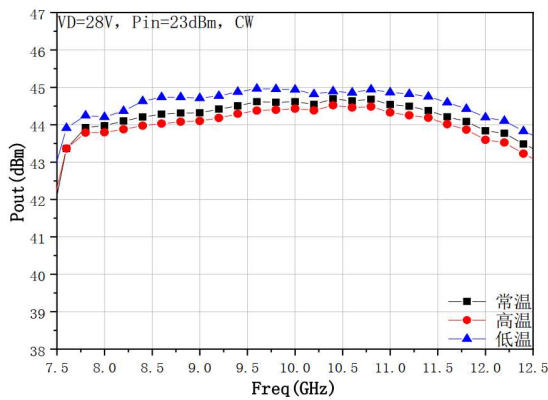
Drain Current vs. Freq



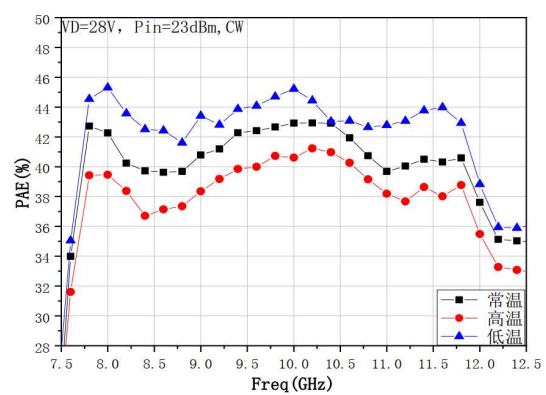
Grid Current vs. Freq



Pout CW vs. Freq



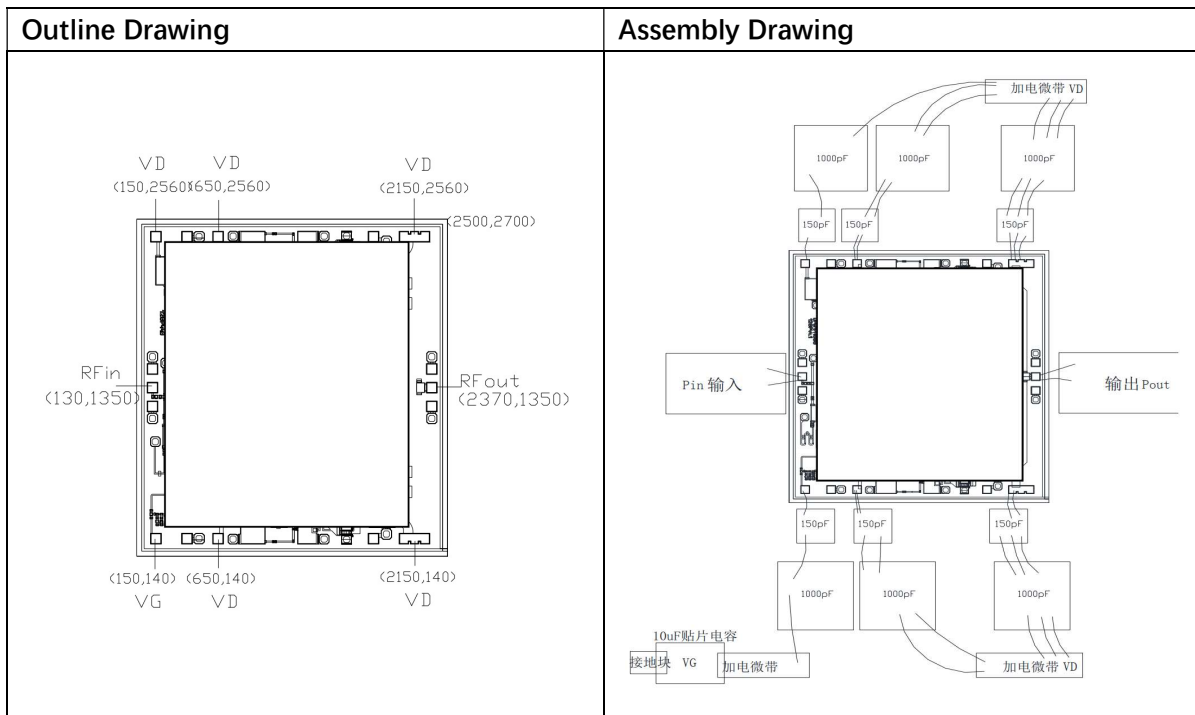
PAE CW vs. Freq



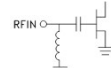

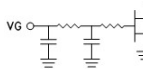

**Absolute Max Ratings (TA=25°C)**

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Id	Drain Current	4.0A	
Vg	Grid Voltage	-10V	
Ig	Grid Current	10mA	
Pd	DC Power	35W	
Pin	Input Power	25dBm	
Tch	Channel Temperature	225°C	
Tm	Mounting Temperature	310°C	1min, N2 Protection
Tstg	Storage Temperature	-55~175°C	

Exceeding any one or combination of these limits may cause permanent damage.



### Pads Definition

Pin	Description	Equivalent Circuit
RFin	RF Signal input, connect to 50ohm system, no need block capacitor	
Rfout	RF Signal output, connect to 50ohm system, no need block capacitor	
VG	Amp gate bias, external 150pF, 1000pF capacitor is needed	
VD	Amp drain bias, external 150pF, 1000pF capacitor is needed	
GND	Bottom must connect to RF and DC ground	