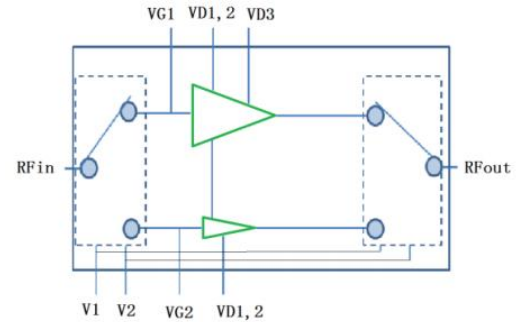


Performance

- Frequency: 5~13GHz
- Typical Signal Gain: Mode 1: 32dB; Mode 2: 17dB
- Typical Pout: Mode 1: 41dBm@28V;
Mode 2: 27dBm@28V
- Typical PAE: Mode 1: 35%; Mode 2: 15%
- Bias: Mode 1: $V_d=28V$, $I_{dq}=0.65A@-2V_g$;
Mode 2: $V_d=28V$, $I_{dq}=0.10A@-2V_g$
- Mode: CW operation is not allowed
- Technology: 0.25um HEMT
- Size: 3.5*3.0mm*0.08mm

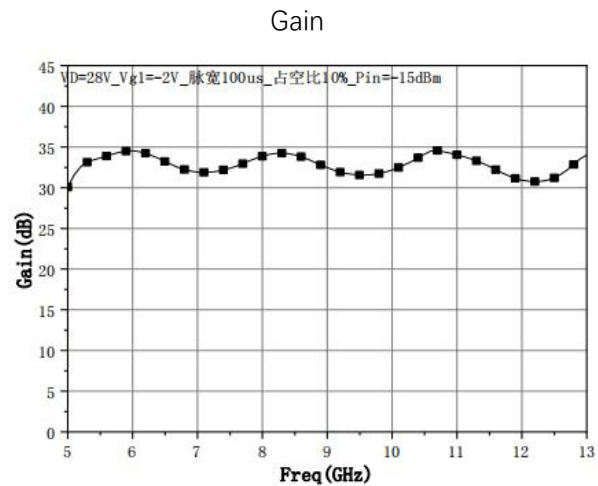
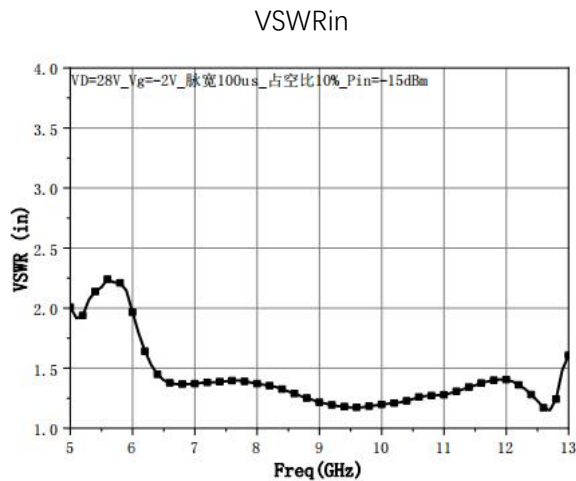
Function Diagram



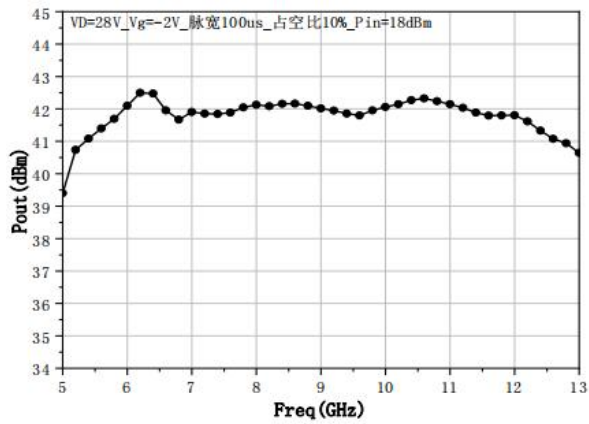
Electrical Specifications ($T_A=25^\circ C$, Mode 1: $V_d=28V$, $I_{dq}=0.65A$, F: 5~13GHz, D.C=10%;
Mode 2: $V_d=28V$, $I_{dq}=0.1A$, F: 5~13GHz, CW)

Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	32/17	-	dB
Gp	Power Gain	-	23/9	-	dB
Pout	Saturated Power	-	41/27	-	dBm
PAE	Power Added Efficiency	-	35/15	-	%

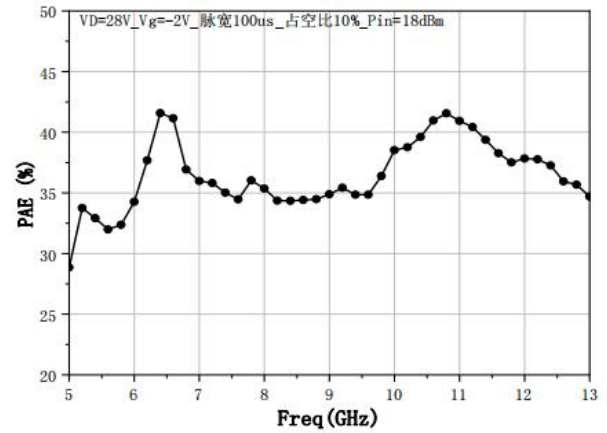
Test Curves (Mode 1)



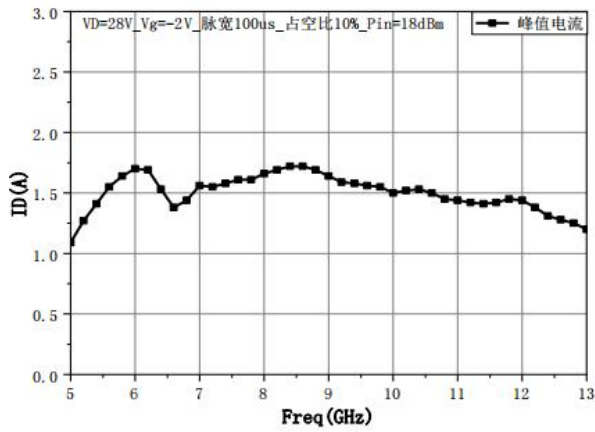
Pout



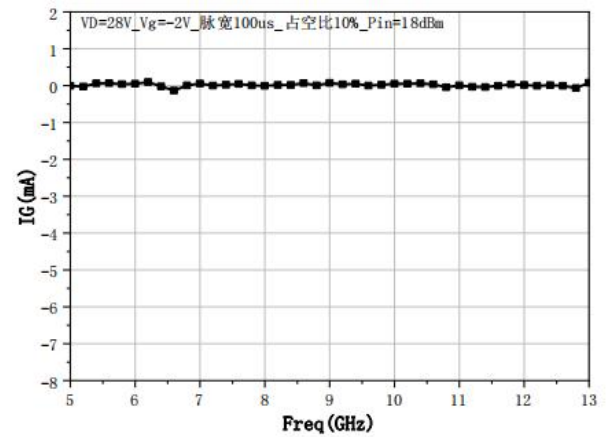
PAE



Id

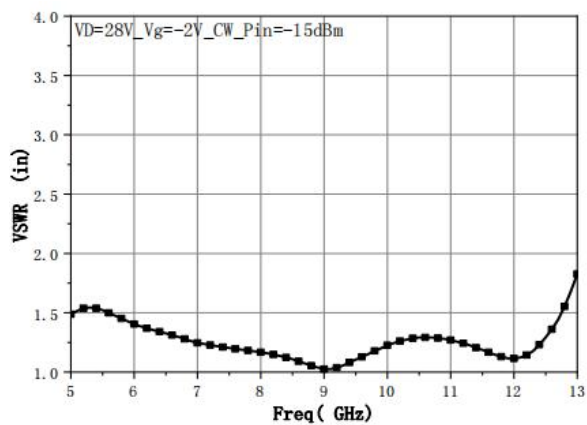


Ig

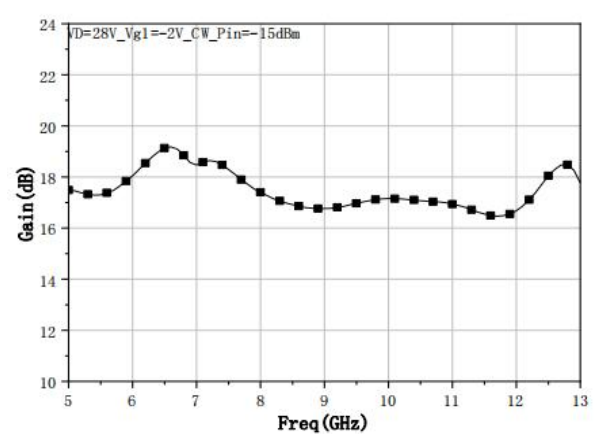


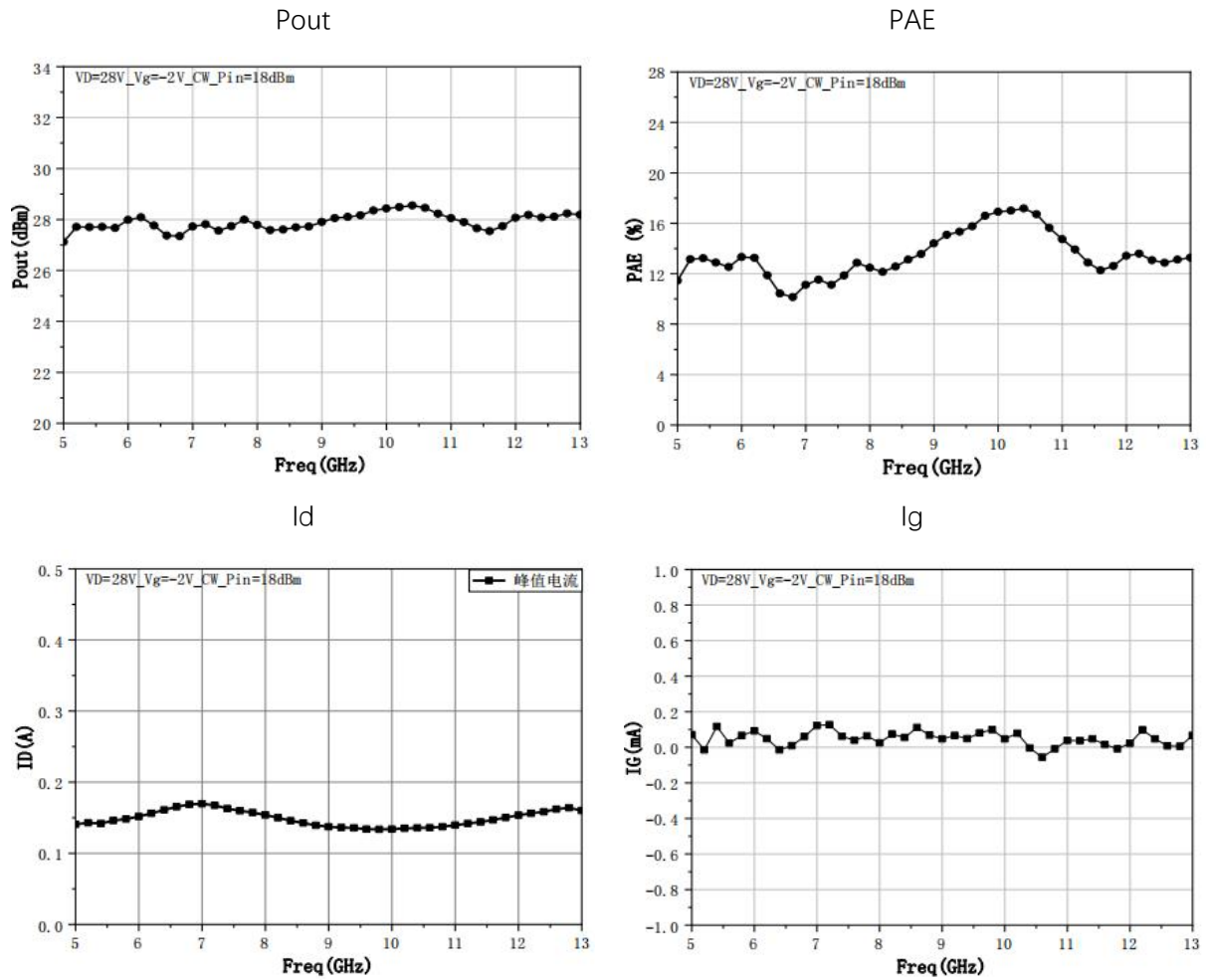
Test Curves (Mode 2)

VSWRin



Gain





Absolute Max Ratings (TA=25°C)

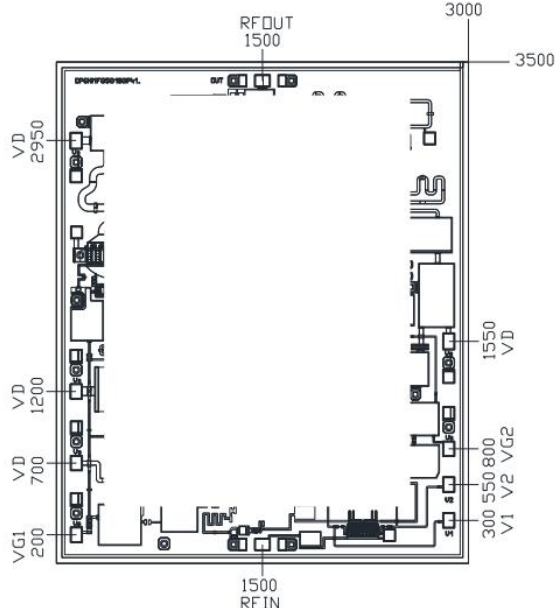
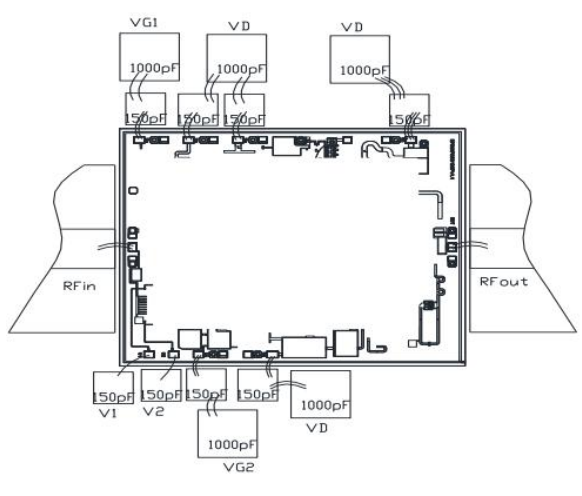
Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Id	Drain Current	Mode 1: 2.5A ; Mode 2: 0.4A	
Vg	Gage Voltage	Mode 1: 10mA ; Mode 2: 10mA	
Pd	DC Power	Mode 1: 50W ; Mode 2: 10W	25°C
Tch	Channel Temperature	225°C	
Tstg	Storage Temperature	-55~175°C	
Tm	Mounting Temperature	300°C	1 min, N2 Protection
Tc	Operating Temperature	-55~150°C	

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

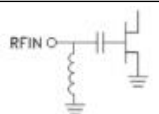
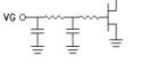
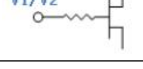
Truth Table

Operating Status	Vd	Vg1	Vg2	V1	V2
Mode 1	28V	-2V	-5V	0V	-28V
Mode 2	28V	-5V	-2V	-28V	0V

Note: Mode 1 is pulse high power, Mode 2 is CW small Power.

Outline Drawing	Assembly Drawing
	

Pads Definition

Pad	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.	
VG1、VG2	Amp gate bias, external 1000pF capacitor is needed	
VD1,2、VD3	Amp drain bias, external 150pF capacitor is needed	
V1、V2	Switch control of High/Lower PA.	
GND	Bottom must connect to RF and DC ground	