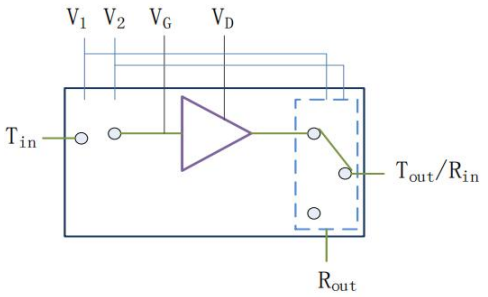
Performance

- Frequency: 2~18GHz
- Typical Signal Gain: Mode 1: 23dB
- Typical Pout:Mode 1: 39dBm@28V
- Typical PAE: Mode 1: 15%
- Receiving I.L (Typ.) 1: 1.6dB
- Receiving Input/Output VSWR (Typ.): Mode 2: 2
- Bias: Mode 1: Idq=1A@-1.8Vg
- Technology: 0.25um HEMT
- Size: 5.0*4.0mm*0.08mm

Function Diagram

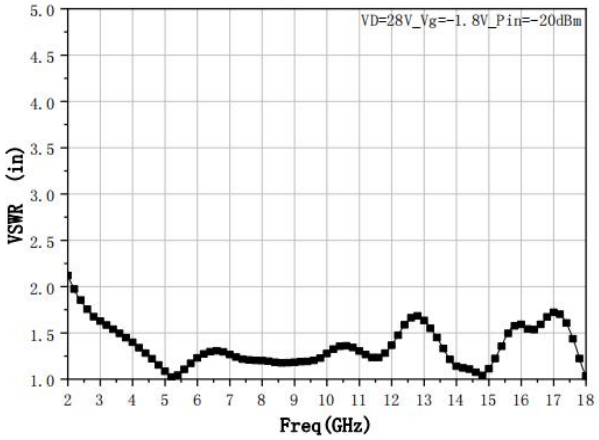


Electrical Specifications (Mode 1：TA=25℃, Vd=28V,Idq=1.1A, F: 2~18GHz,CW)

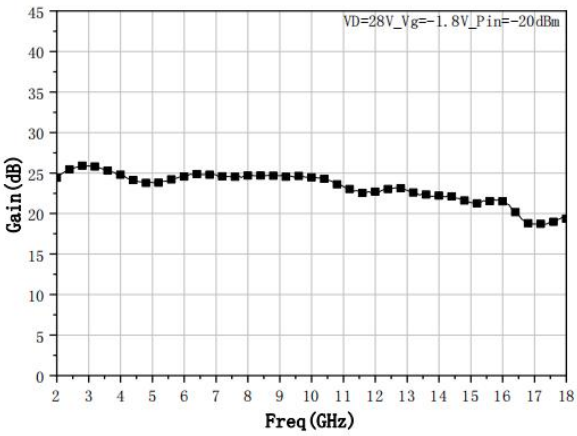
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	23	-	dB
Gp	Power Gain	-	14	-	dB
Pout	Saturated Power	-	39	-	dBm
PAE	Power Added Efficiency	-	15	-	%

Test Curves (Transmitting Channel)

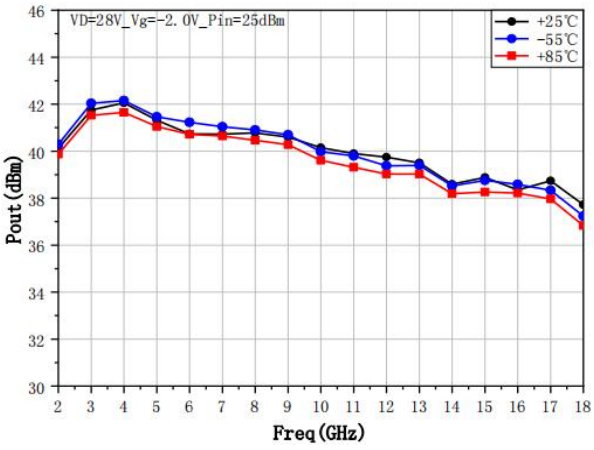
VSWRin



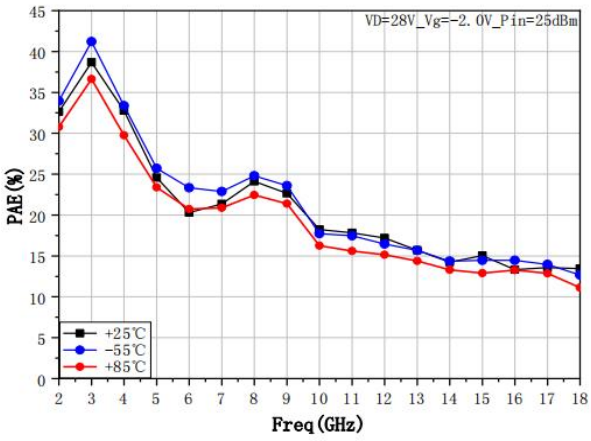
Gain



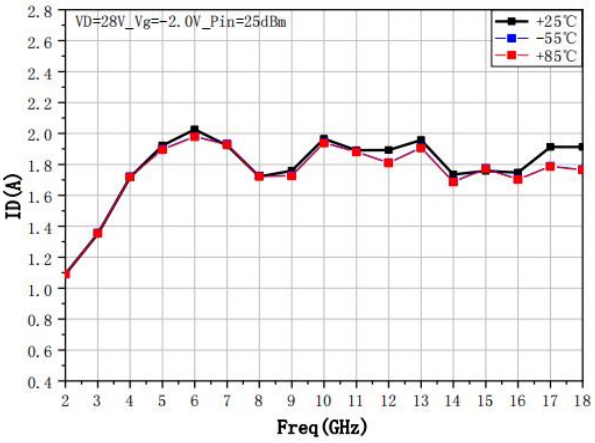
Pout



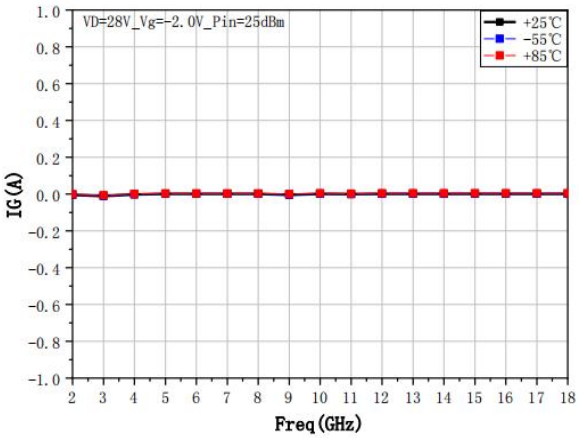
PAE



Id

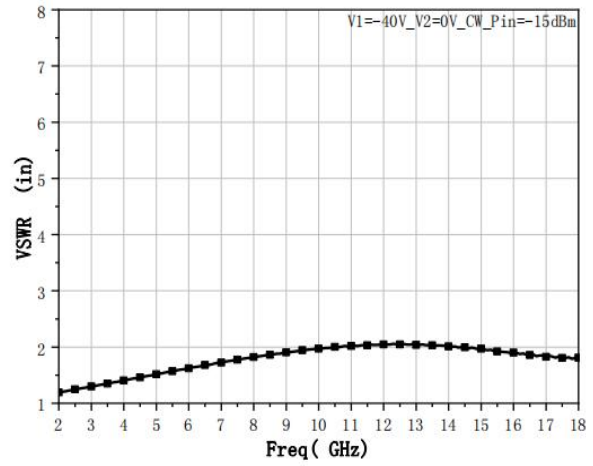


Ig

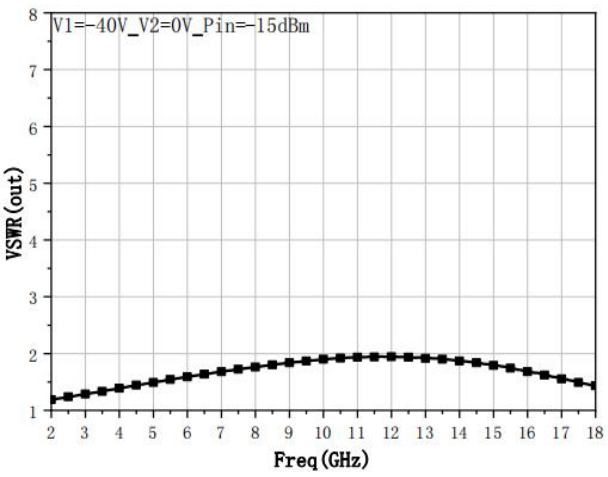


Test Curves (Receiving Channel)

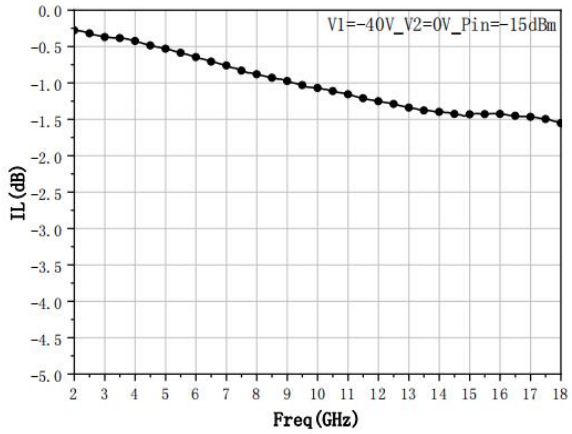
VSWRin



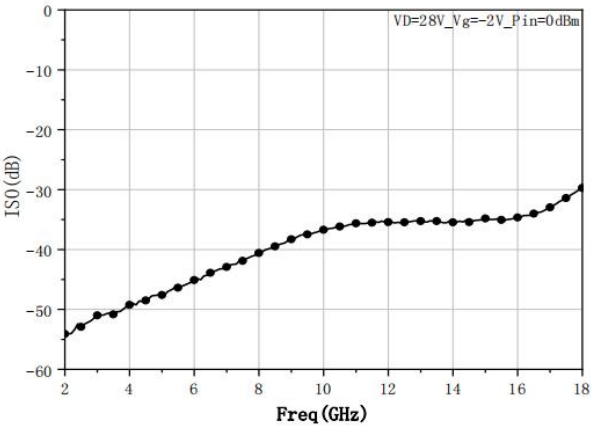
VSWRout



Pout



ISO



Absolute Max Ratings (T_A=25℃)

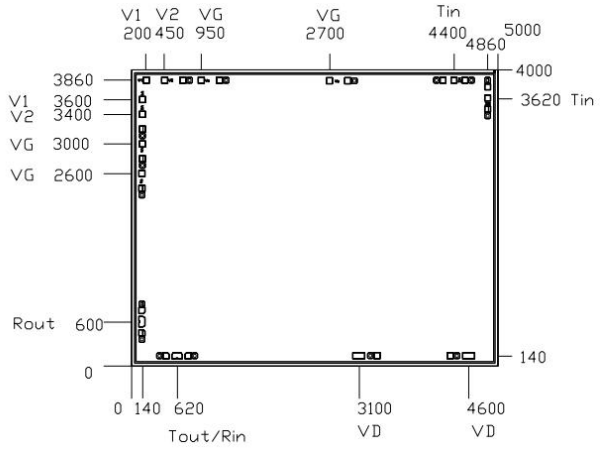
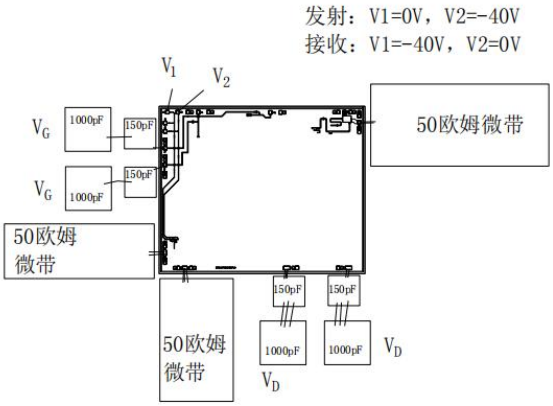
Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Id	Drain Current	Mode 1: 3A	
Vg	Gage Voltage	Mode 1: -10V	
Pd	DC Power	Mode 1: 80W	25℃
Tch	Channel Temperature	225℃	
Tstg	Storage Temperature	-55~175℃	
Tm	Mounting Temperature	300℃	1 min, N_2 Protection
Tc	Operating Temperature	-55~150℃	

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

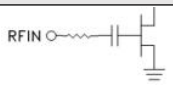
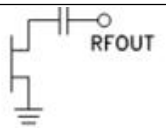
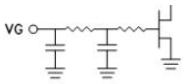
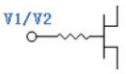
Truth Table

Operating Status	Vd	Vg	V1	V2
Mode 1	28V	-1.8V	0V	-40V
Mode 2	28V	-5V	-40V	0V

Note: Mode 1 is transmitting mode, Mode 2 is receiving mode.

Outline Drawing	Assembly Drawing
	

Pads Definition

Pad	Description	Equivalent Circuit
Tin	Transmitting Channel RF Signal input/output, connect to 50ohm system, no need block capacitor.	
Tout/RFin	Transmitting Channel RF Signal output/Receiving Channel RF Signal input, connect to 50ohm system, no need block capacitor.	
RFout	Receiving Channel RF Signal output, connect to 50ohm system, no need block capacitor.	
VG	Amp gate bias, external 1000pF capacitor is needed	
VD	Amp drain bias, external 100pF capacitor is needed	
V1、V2	Big and small PA switch control	
GND	Bottom must connect to RF and DC ground	