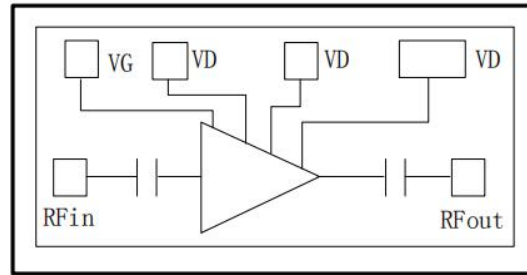


Performance

- Frequency: 47~52GHz
- Typical Signal Gain: 23dB
- Typical Pout: 25dBm@15V
- Mode: CW
- Bias: 15V, -2V, 120mA (Typ.)
- Technology: 0.1um GaN HEMT
- Size: 2.4*1.1mm*0.05mm

Function Diagram

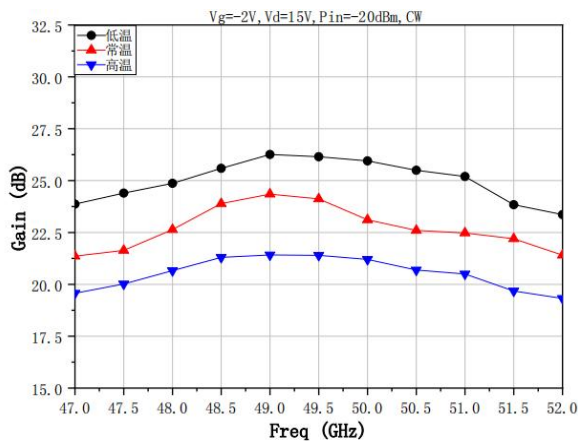


Electrical Specifications (TA=25°C,CW)

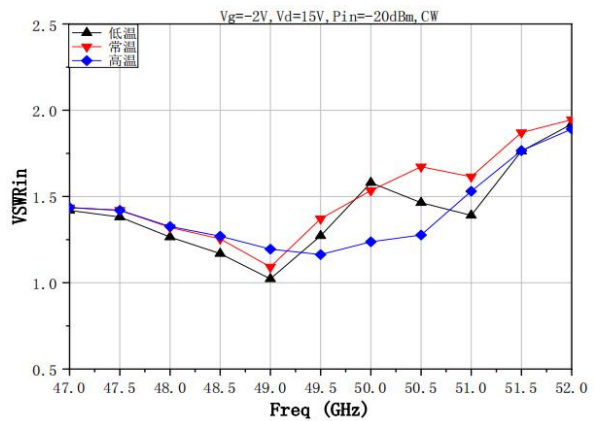
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	23	-	dB
Gp	Power Gain	-	20	-	dB
Pout	Saturated Power	-	25	-	dBm
PAE	Power Added Efficiency	-	15	-	%
VSWRin	VSWRin	-	2	-	-

Test Curves

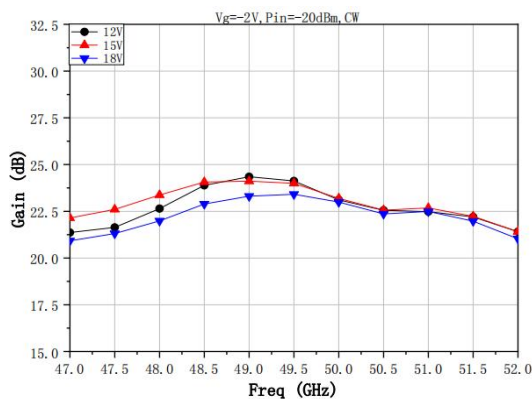
Small Signal Gain@ Different Temp



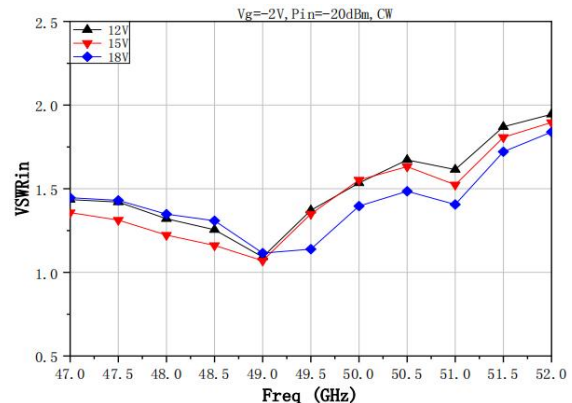
VSWRin@ Different Temp



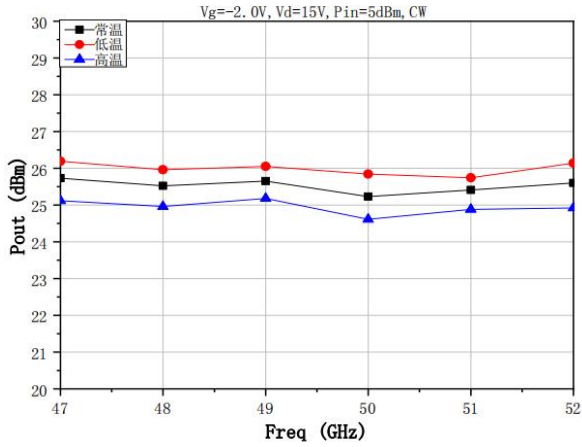
Small Signal Gain@ Different Vd



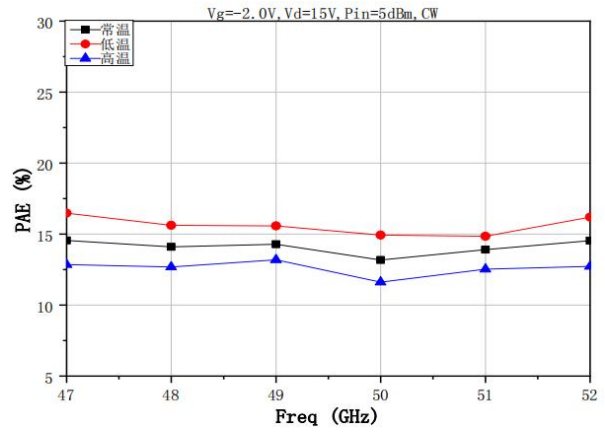
VSWRin@ Different Vd



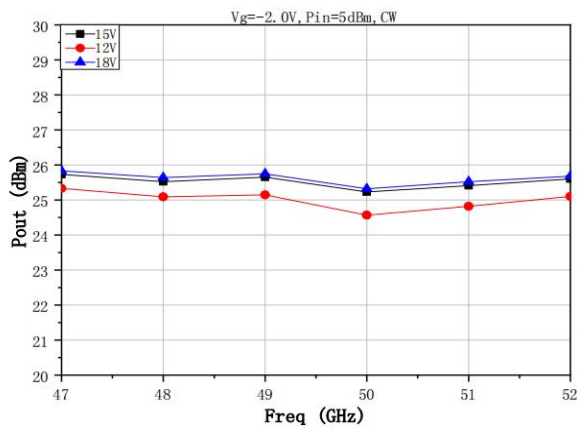
Pout@ Different Temp



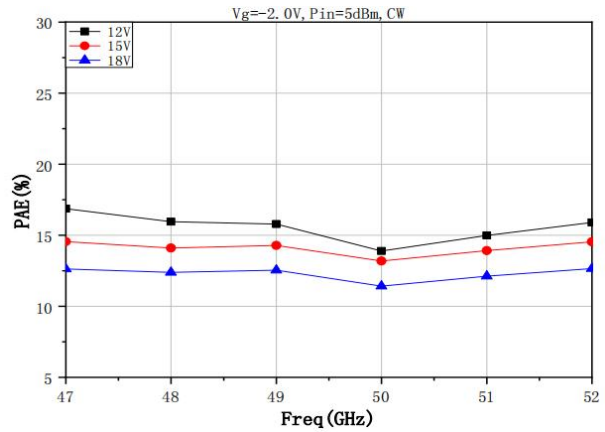
PAE@ Different Temp



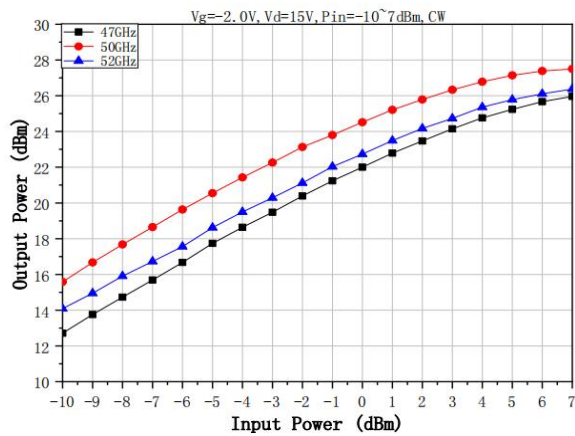
Pout@ Different Vd



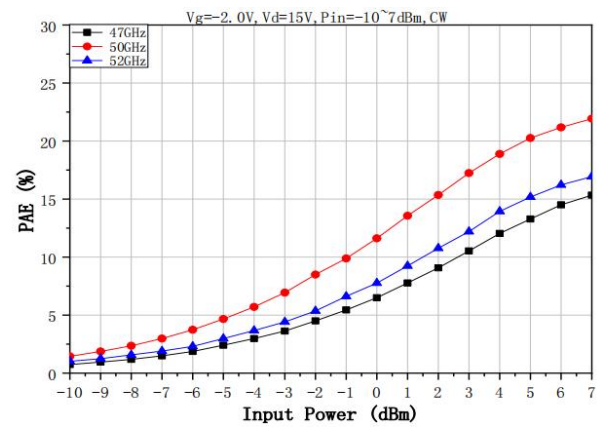
PAE@ Different Vd



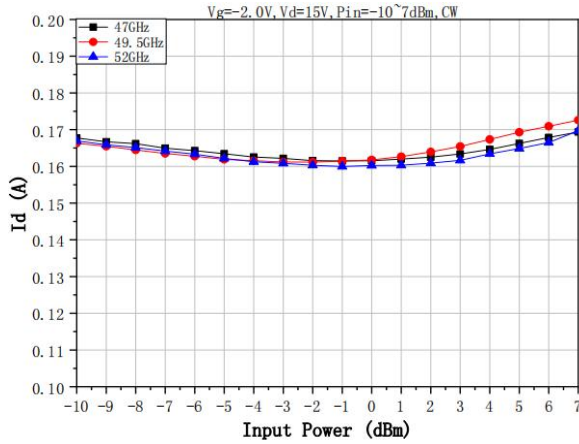
Pout@ Different Pin



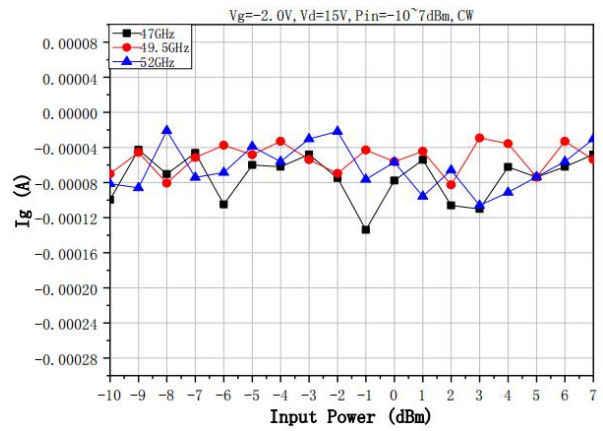
PAE@ Different Pin



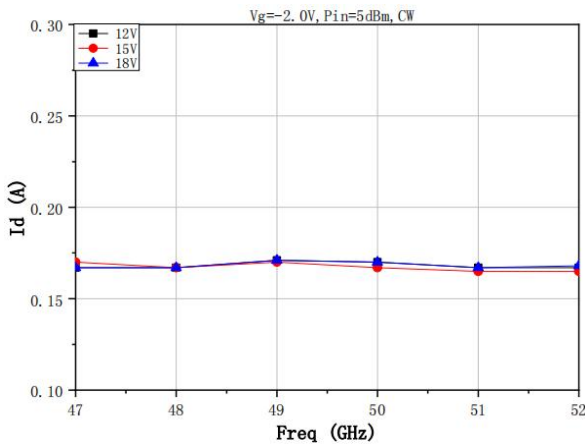
Id@ Different Pin



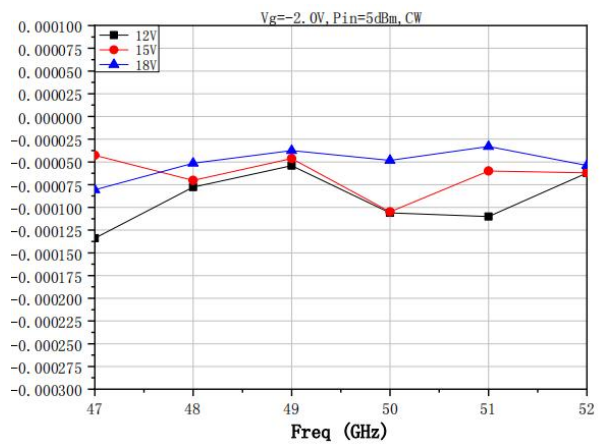
Ig@ Different Pin



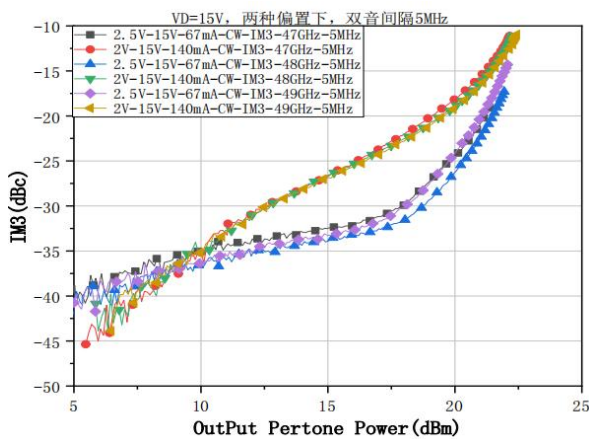
Id@ Different Vd



Ig@ Different Vd



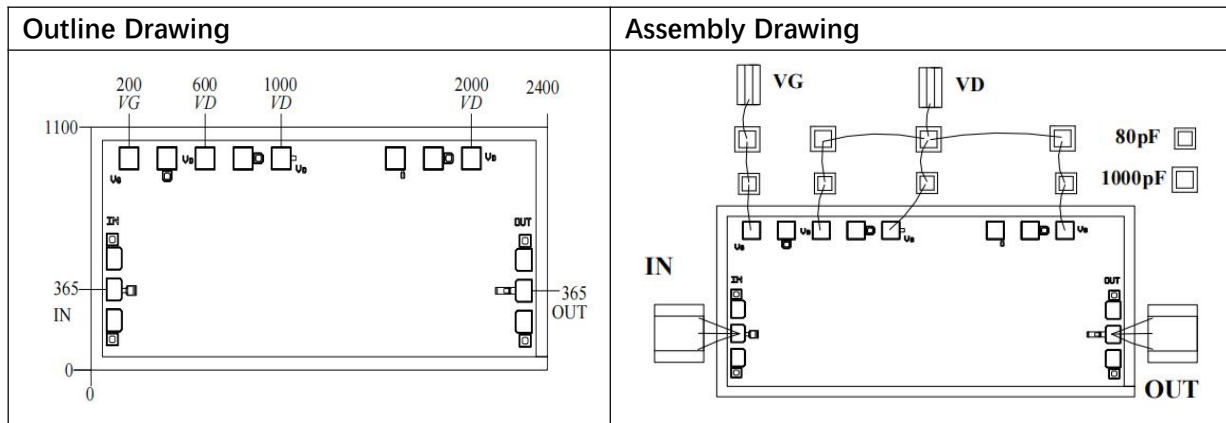
IM3



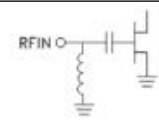

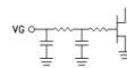

Absolute Max Ratings (TA=25°C)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	20V	
Id	Drain Current	0.3A	
Vg	Gate Voltage	-5V	
Ig	Gate Current	5mA	
Pd	DC Power	4W	
Pin	Input Power	30dBm	
Tch	Channel Temperature	175°C	
Tm	Mounting Temperature	310°C	1 min, N2 Protection
Tstg	Storage Temperature	-55~150°C	

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



Pads Definition

Pad	Description	Equivalent Circuit
RFin	RF Signal input, connect to 50ohm system, block capacitor is needed if there's external DC applied on this pad.	
RFout	RF Signal output, connect to 50ohm system, no need block capacitor.	
VG	Amp gate bias, external 100pF, 1000pF, 10uF decoupling capacitor is needed	
VD	Amp drain bias, external 100pF, 1000pF, 10uF decoupling capacitor is needed	
GND	Bottom must connect to RF and DC ground	