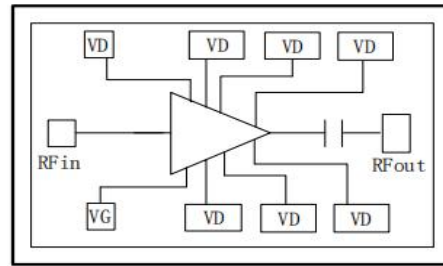


Performance

- Frequency: 12~18GHz、32~36GHz
- Typical Signal Gain: 29dB、25dB
- Typical Pout: 42.5dBm、34dBm
- Typical PAE: 40%、30%
- Bias: 24V, -2V
- Technology: 0.15um HEMT
- Size: 1.75*2.8mm*0.05mm

Function Diagram



Electrical Specifications (TA=25°C, Vd=24V, Vg=-2V, F: 12~18GHz, PL(300us、20%))

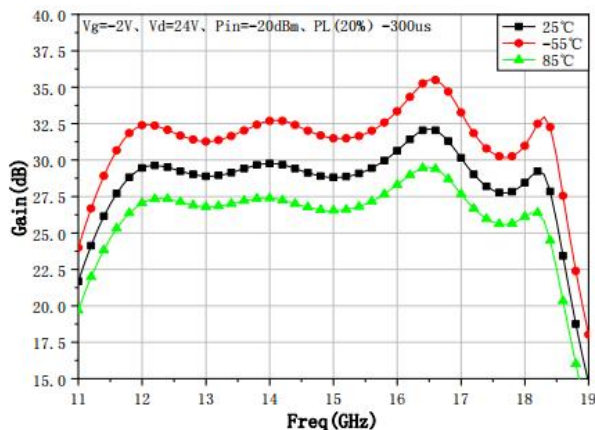
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	29	-	dB
Gp	Power Gain	-	24.5	-	dB
Pout	Saturated Power	-	42.5	-	dBm
Id	Dynamic current	-	2	-	A

(TA=25°C, Vd=24V, Vg=-2V, F: 32~36GHz, PL(300us、20%))

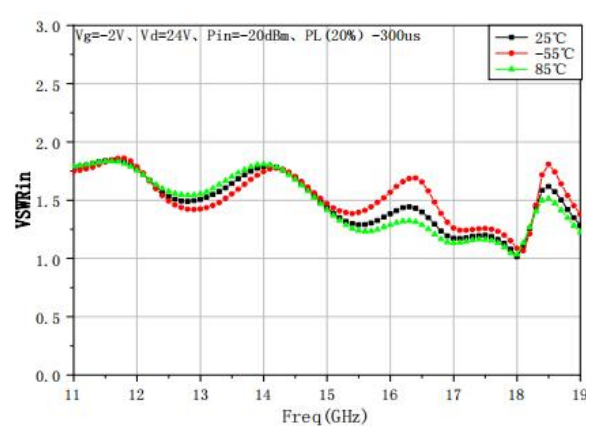
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	25	-	dB
Gp	Power Gain	-	18	-	dB
Pout	Saturated Power	-	34	-	dBm
Id	Dynamic current	-	0.35	-	A

Test Curves (12~18GHz)

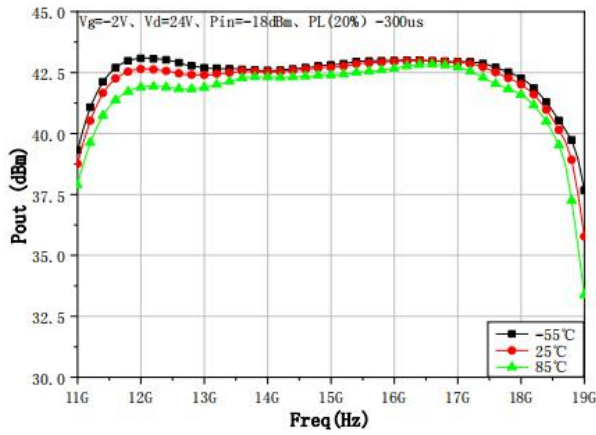
Small Signal Gain@ Different Temp.



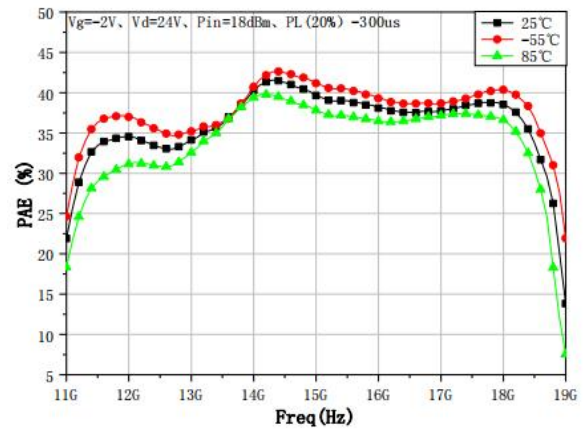
VSWRin@ Different Temp.



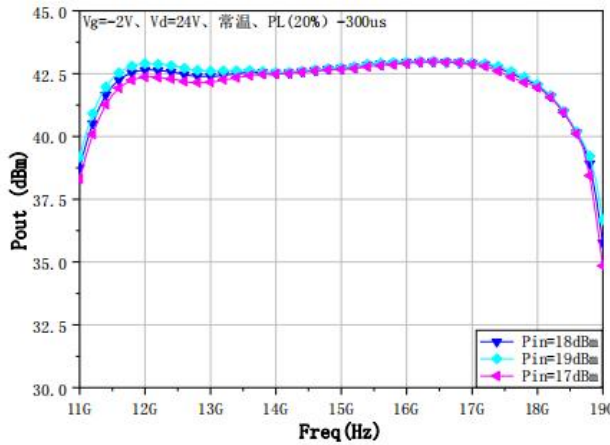
Pout @ Different Temp.



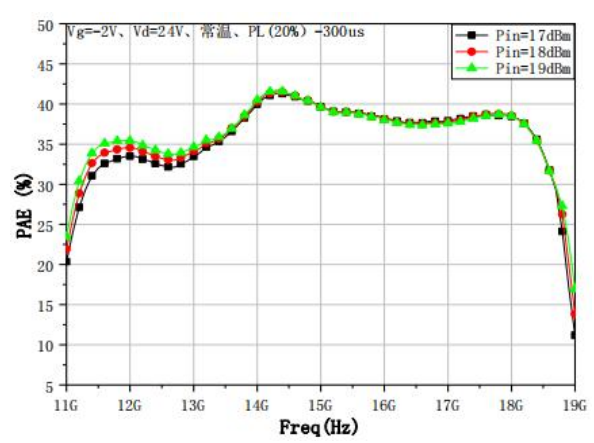
PAE @ Different Temp.



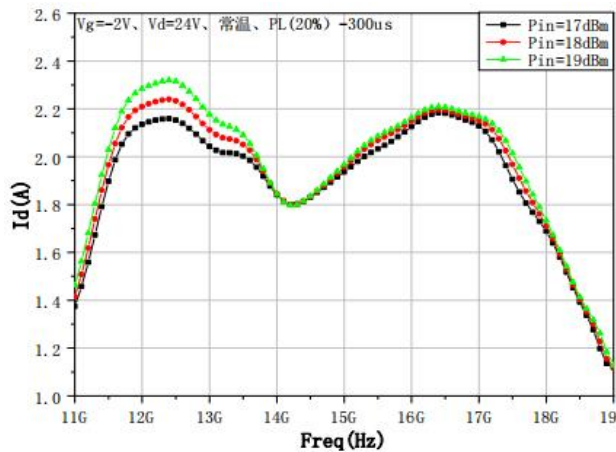
Pout @ Different Pin



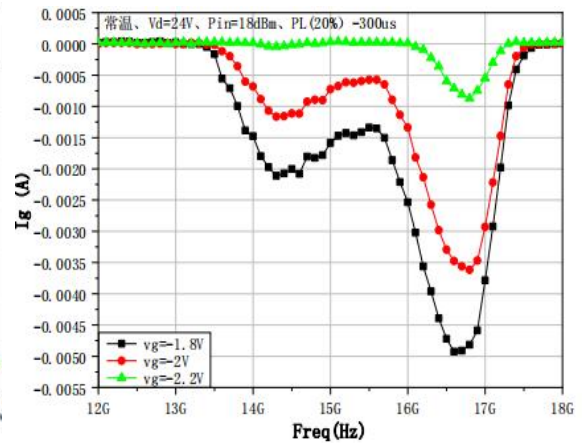
PAE @ Different Pin



Id @ Different Pin

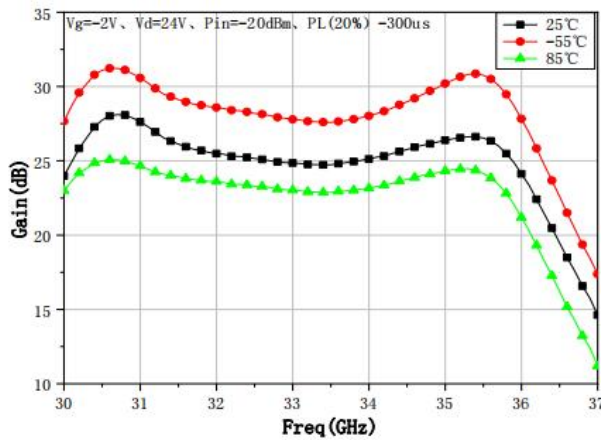


Ig @ Different Vg

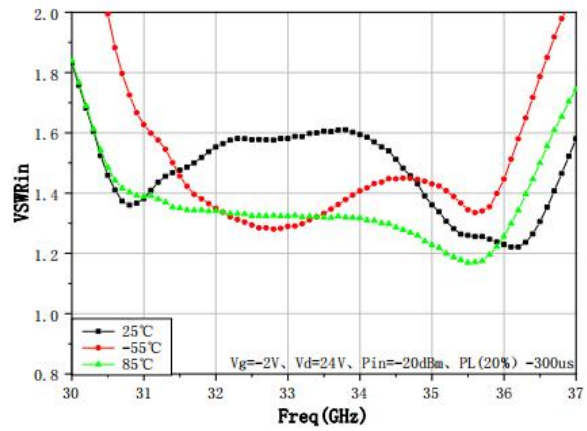


Test Curves (32~36GHz)

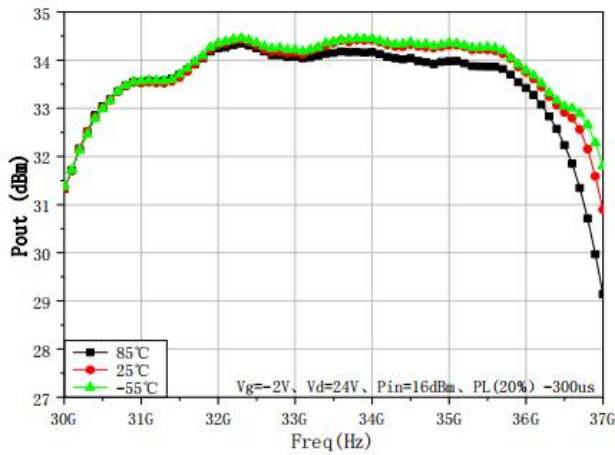
Small Signal Gain@ Different Temp.



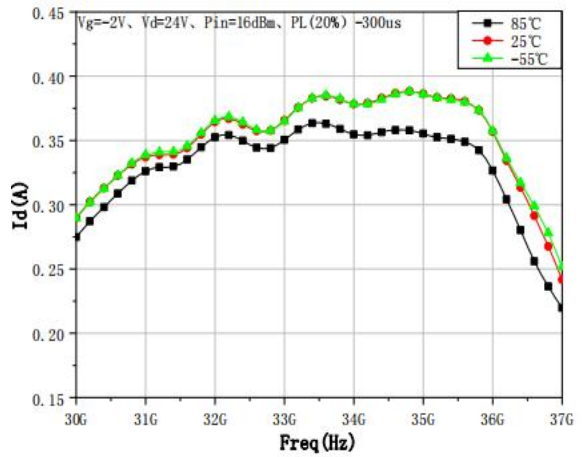
VSWRin@ Different Temp.



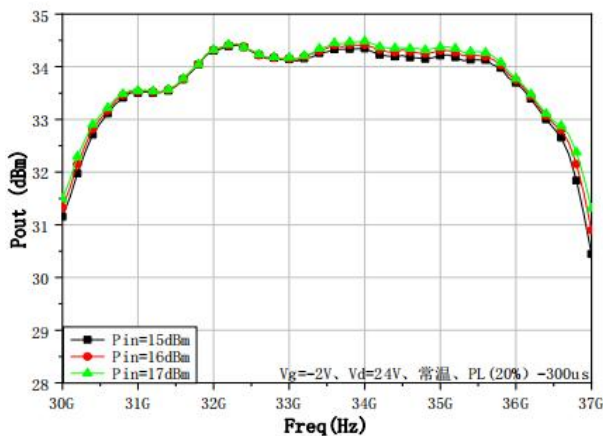
Pout @ Different Temp.



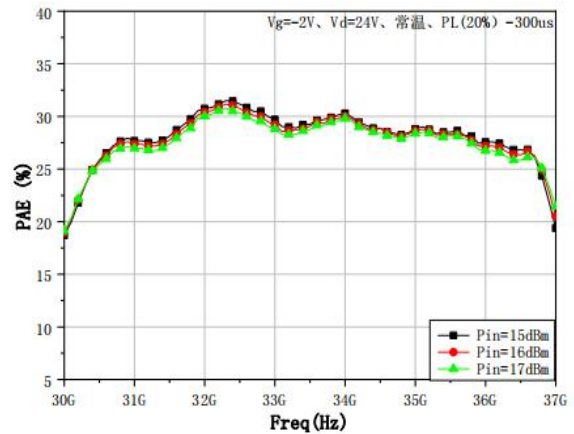
Id @ Different Temp.



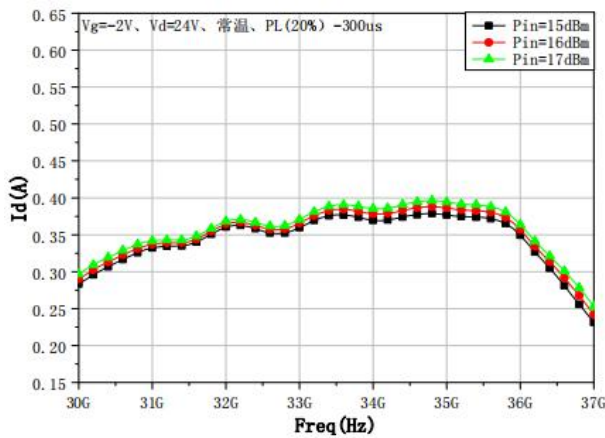
Pout @ Different Pin



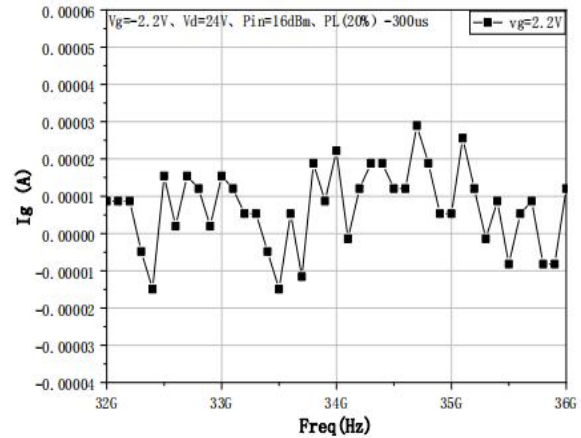
PAE @ Different Pin



Id @ Different Pin



Ig



Absolute Max Ratings (TA=25°C)

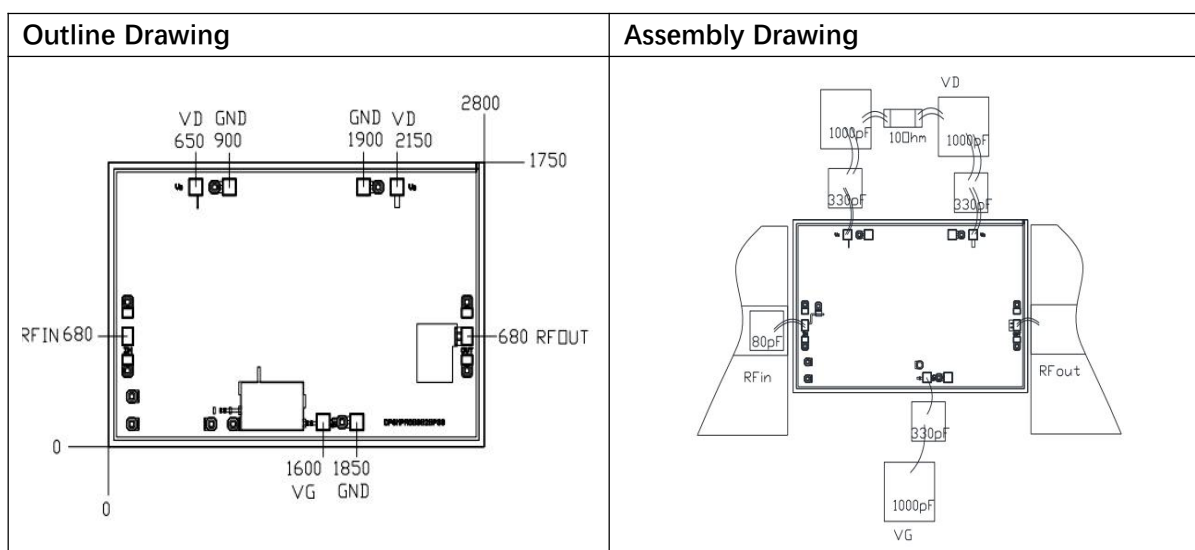
12~18GHz

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	28V	
Id	Drain Current	3A	
Vg	Gage Voltage	-10V	
Ig	Gate Current	10mA	
Pd	DC Power	30W	
Pin	Input Power	20dBm	
Tch	Channel Temperature	175°C	
Tm	Mounting Temperature	310°C	1 min, N2 Protection
Tstg	Storage Temperature	-55~175°C	

32~36GHz

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	28V	
Id	Drain Current	0.5A	
Vg	Gage Voltage	-10V	
Ig	Gate Current	10mA	
Pd	DC Power	10W	
Pin	Input Power	20dBm	
Tch	Channel Temperature	175°C	
Tm	Mounting Temperature	310°C	1 min, N2 Protection
Tstg	Storage Temperature	-55~175°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, need block capacitor.	
RFout	RF Signal output, connect to 50ohm system, no need block capacitor.	
VG	Amp gate bias, external 330pF, 1000pF capacitor is needed	
VD	Amp drain bias, external 330pF, 1000Pf capacitor is needed	
GND	Bottom must connect to RF and DC ground	