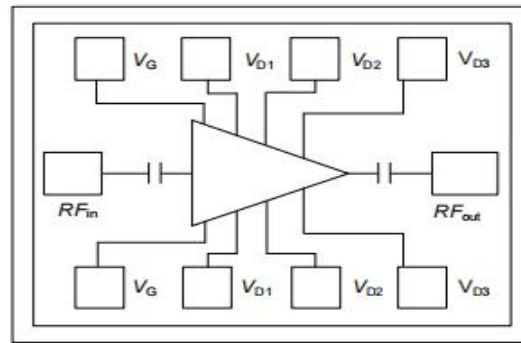


### Performance

- Frequency: 8~12GHz
- Typical Signal Gain: 34dB
- Typical Pout: 48dBm
- PAE: 40%
- Static operating current: 3.0A
- Dynamic operating current: 6.0A
- Bias: 28V, -2V(Typ.)
- Technology: GaN HEMT
- Size: 3.5\*3.8mm\*0.08mm

### Function Diagram

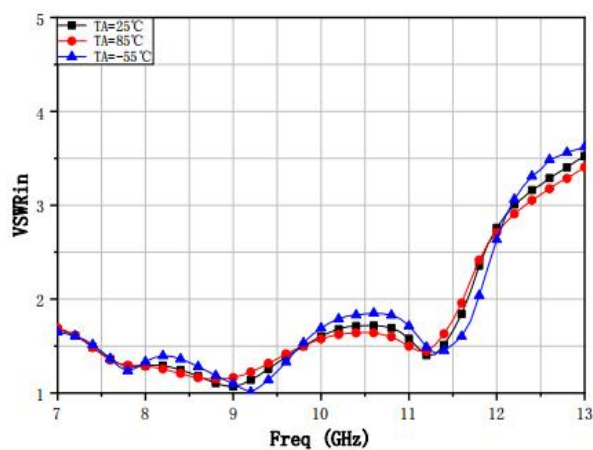


### Electrical Specifications (T<sub>A</sub>=25°C, V<sub>d</sub>=28V, V<sub>g</sub>= -1.8V, F: 8~12GHz)

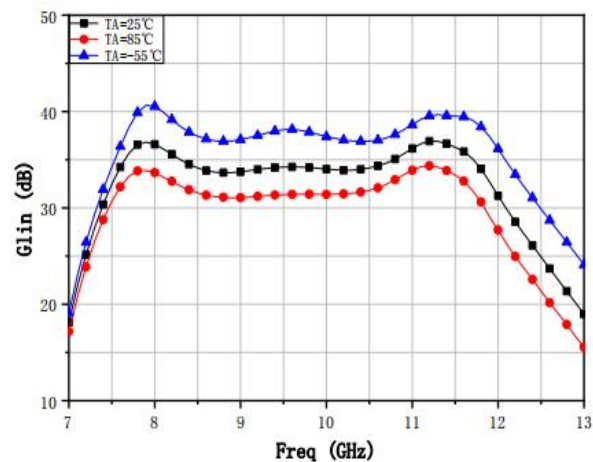
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	35	-	dB
G <sub>p</sub>	Power Gain	-	21	-	dB
P <sub>out</sub>	Saturated Power	-	48	-	dBm
I <sub>d</sub>	Dynamic current	-	6.0	-	A
R <sub>th</sub>	Thermal Resistance	-	1.2	-	°C/W

### Test Curves

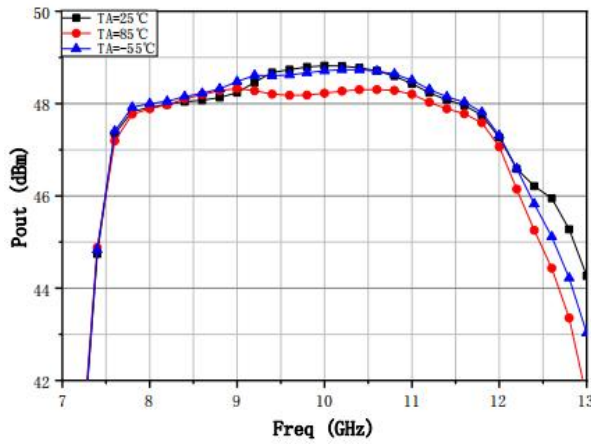
VSWR<sub>in</sub>@ Different Temp



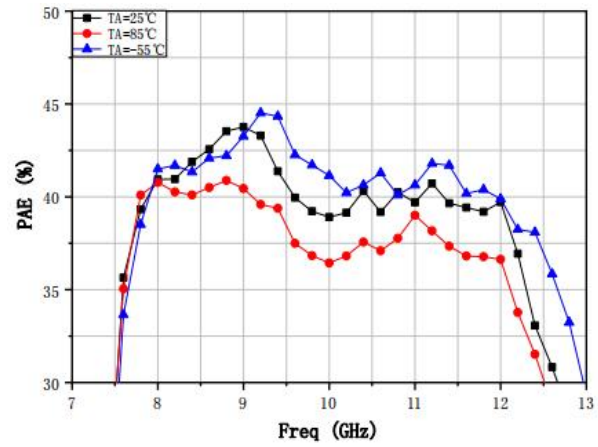
Small Signal Gain@ Different Temp



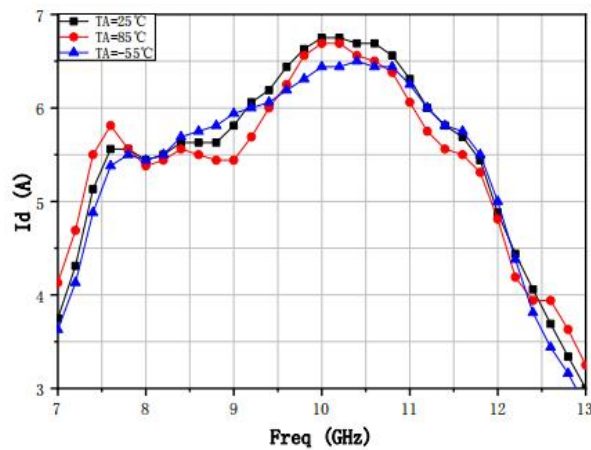
Pout@ Different Temp



PAE@ Different Temp



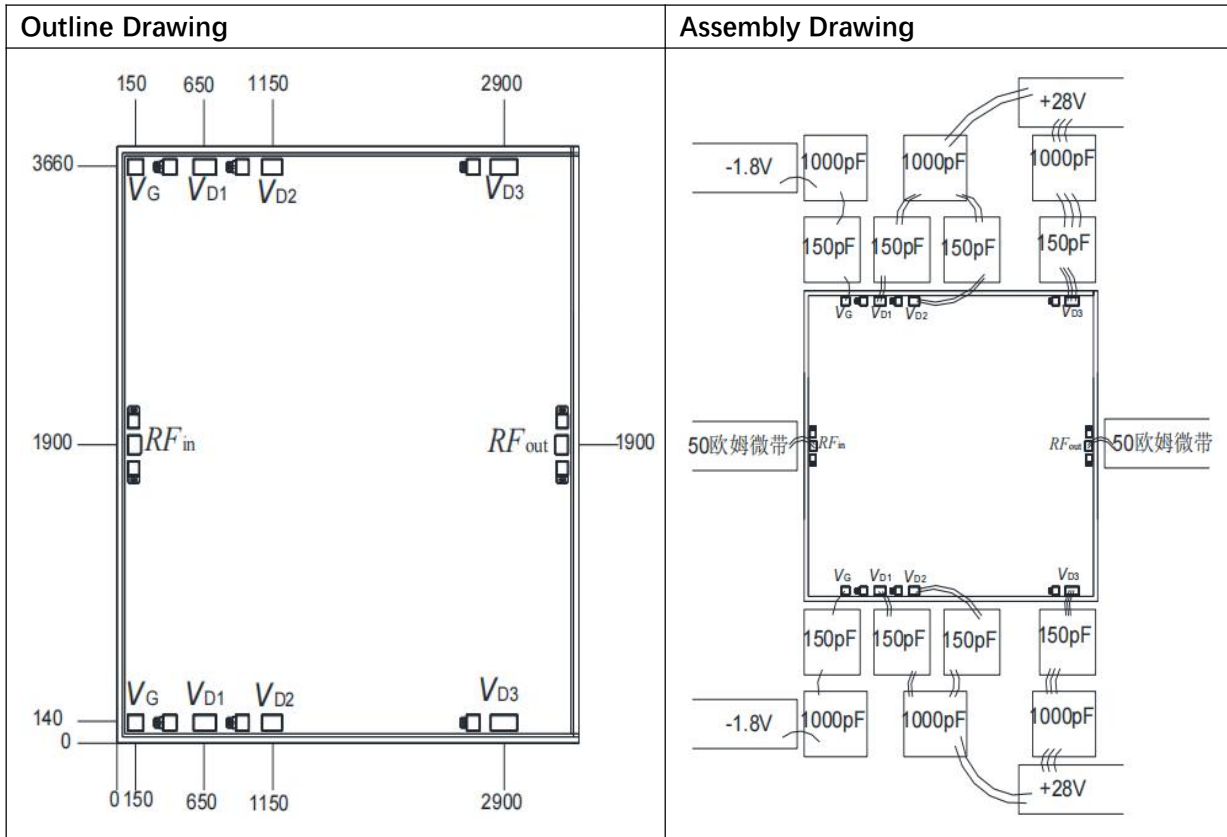
Id



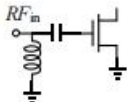
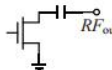
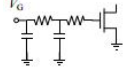

#### Absolute Max Ratings (TA=25°C)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Vg	Gage Voltage	-5V	
Pd	DC Power	130W	25°C
Pin	Input Power	30dBm	
Tch	Channel Temperature	225°C	
Tm	Mounting Temperature	310°C	30 s, N2 Protection
Tstg	Storage Temperature	-65~150°C	

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



### Pads Definition

Pad	Description	Equivalent Circuit
RF <sub>in</sub>	RF Signal input, connect to 50ohm system, block capacitor is needed if there's external DC applied on this pad.	
RF <sub>out</sub>	RF Signal output, connect to 50ohm system, no need block capacitor.	
V <sub>G</sub>	Amp gate bias, external 150pF, 1000pF capacitor is needed	
V <sub>D1</sub> 、V <sub>D2</sub> 、V <sub>D3</sub>	Amp drain bias, external 150pF, 1000pF capacitor is needed	
GND	Bottom must connect to RF and DC ground	