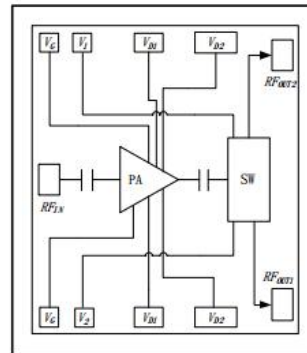


Performance

- Frequency: 8~12GHz
- Typical Signal Gain: 32dB
- Typical Pout: 44dBm@28V
- Typical PAE: 40%
- Typical Operating Current: 2.5A
- Bias: 28V, -2.0V (Typ.)
- Technology: 0.25um HEMT
- Mode: Pulse
- Size: 3.3*4.2mm*0.08mm

Function Diagram



Electrical Specifications

($T_A=25^\circ\text{C}$, $V_d=28\text{V}$, $V_g=-2.0\text{V}$, F: 8~12GHz, $\text{Pin}=22\text{dBm}$, $T=2\text{ms}$, $D=10\%$, Heat station temp. 70°C)

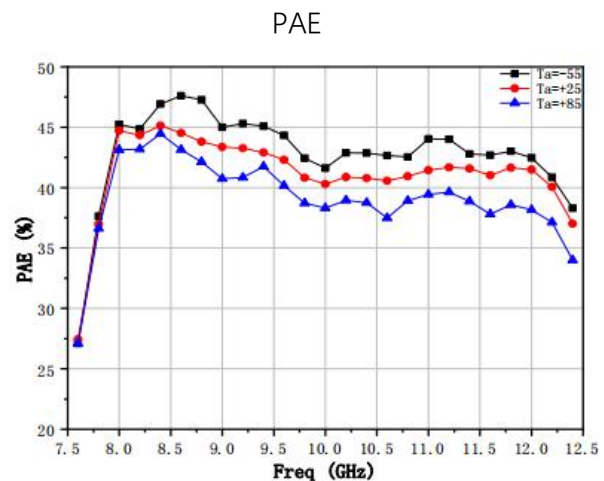
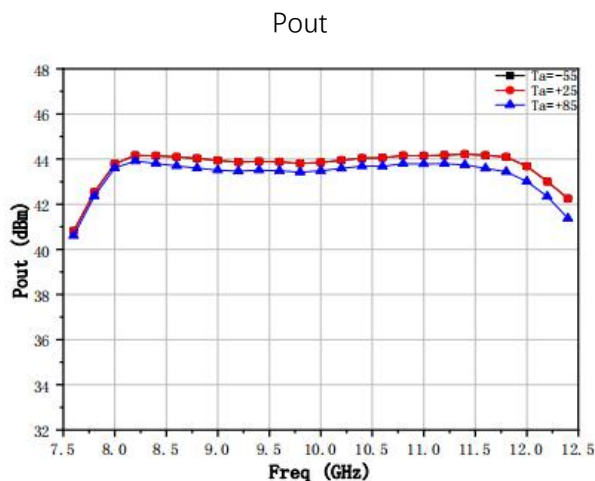
Symbol	Parameter	Min	Typical	Max	Unit
Pout	Saturated Power	-	44	-	dBm
Gp	Power Gain	-	22	-	dB
Id	Dynamic current	-	2.2	-	A
PAE	Power Added Efficiency	-	40	-	%

Electrical Specifications

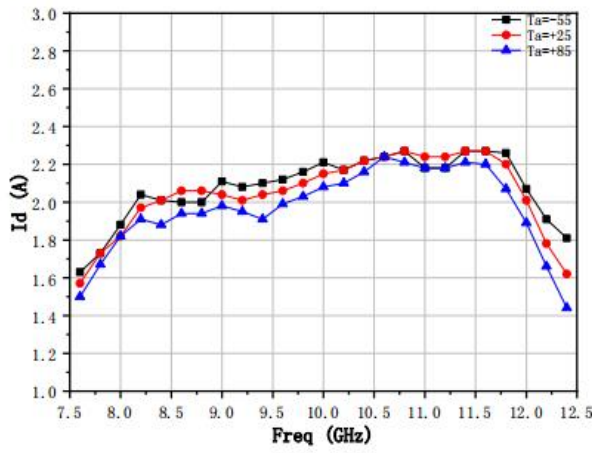
($T_A=25^\circ\text{C}$, $V_d=28\text{V}$, $V_g=-2.0\text{V}$, F: 8~12GHz, $\text{Pin}=-15\text{dBm}$, $T=2\text{ms}$, $D=10\%$, Heat station temp. 70°C)

Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	32	-	dB
VSWRin	VSWRin	-	2.0	-	-
Idq	Static Current	-	1.0	-	A
Rth	Thermal Resistance	-	3.0	-	$^\circ\text{C}/\text{W}$

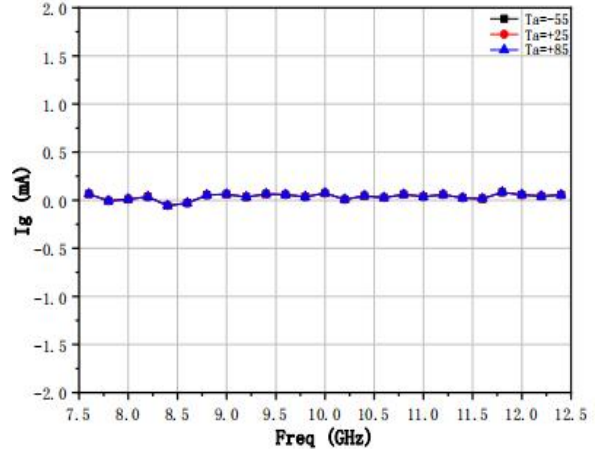
Big signal test curve @ different temperatures



I_d

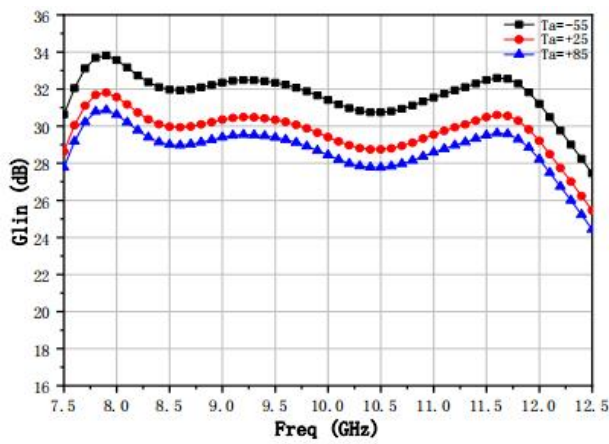


I_g

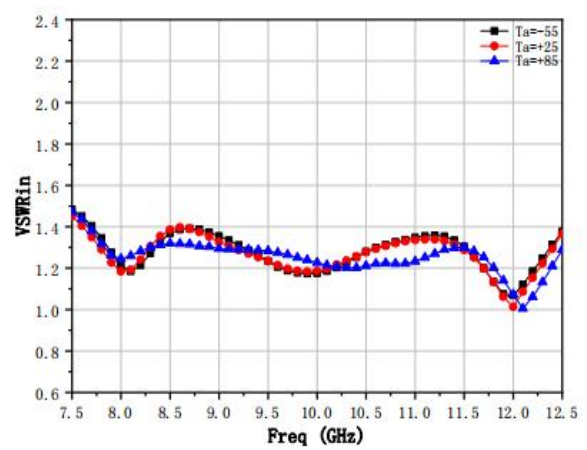


Small signal test curve @ different temperatures

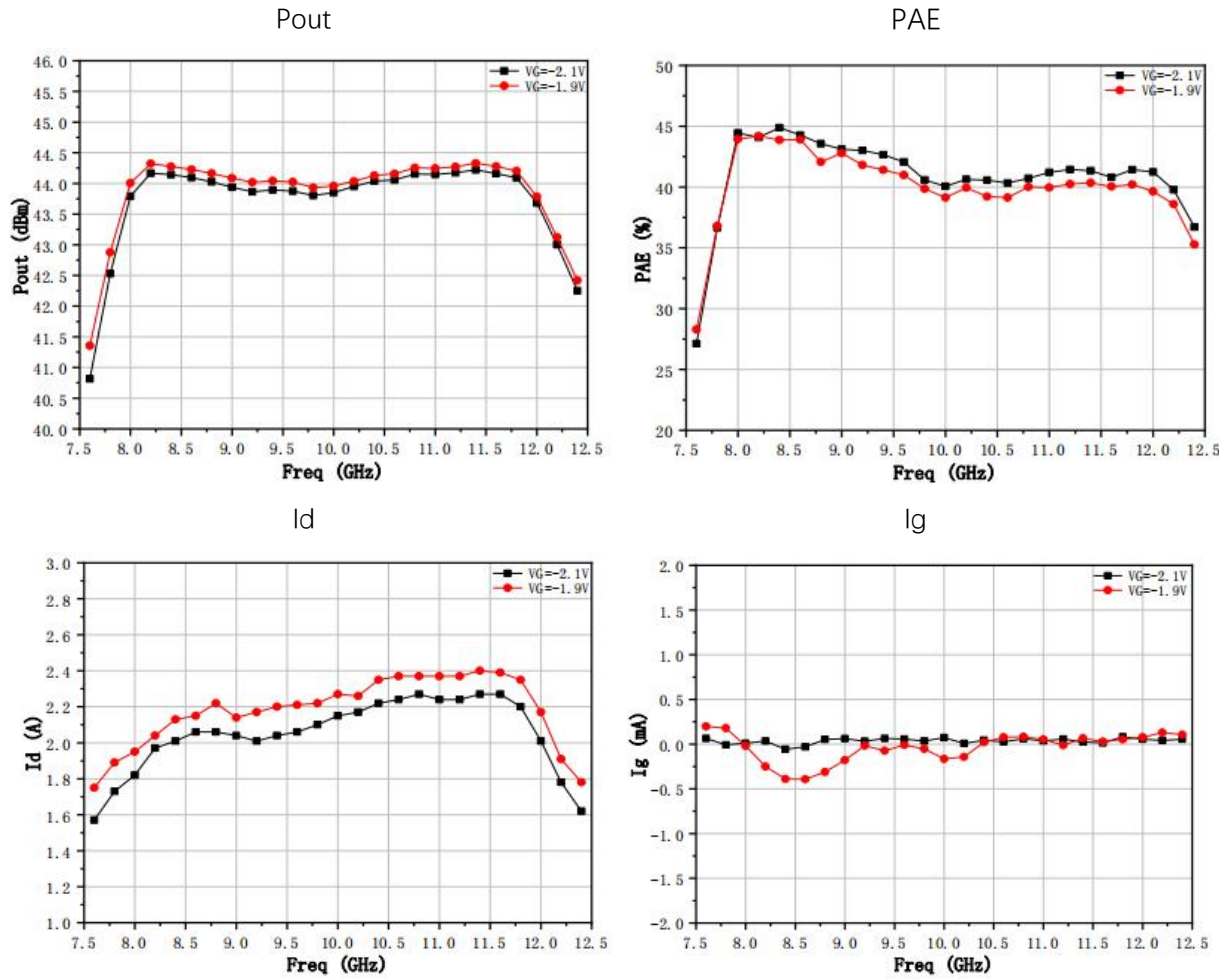
Gain



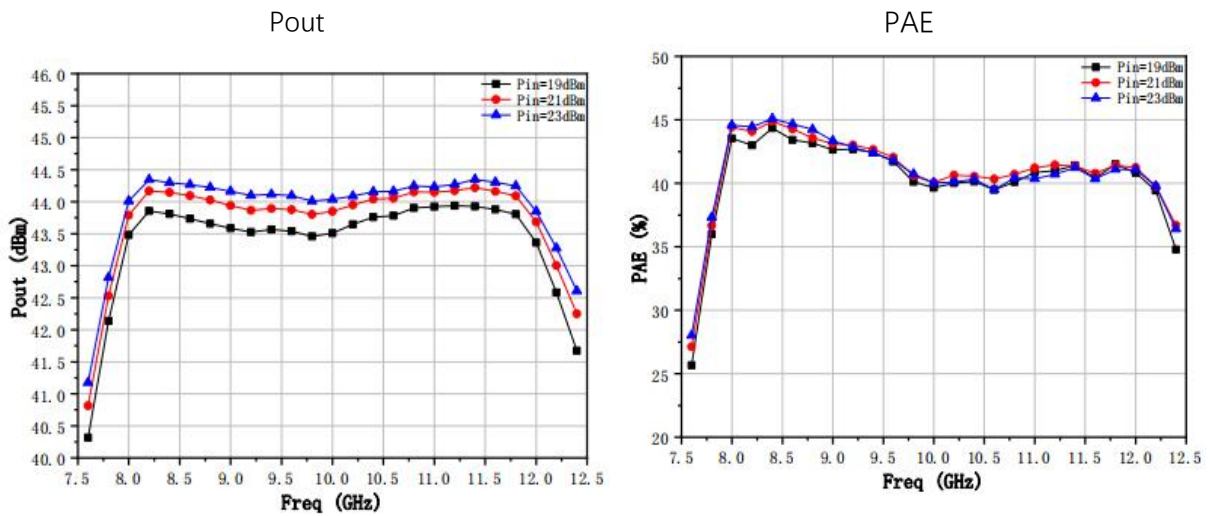
VSWRin

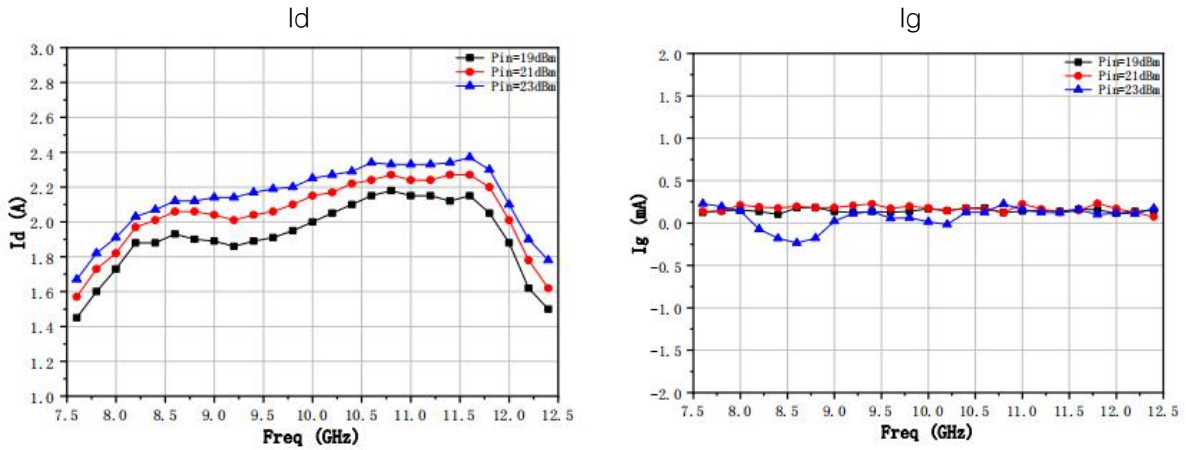


Big signal test curve @ different grid voltage conditions

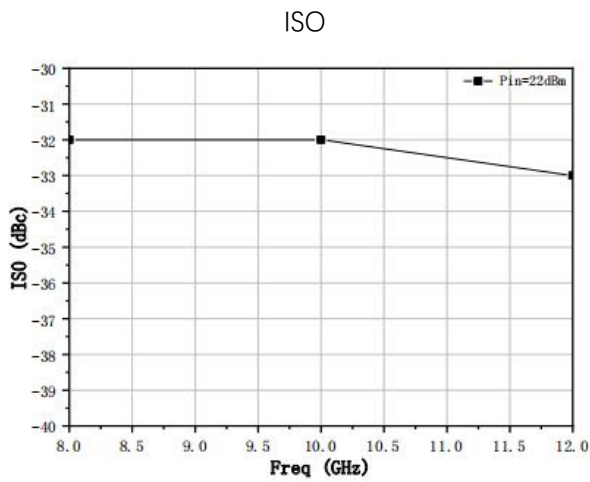


Big signal test curve @ different pin conditions





Test Curve (ISO)



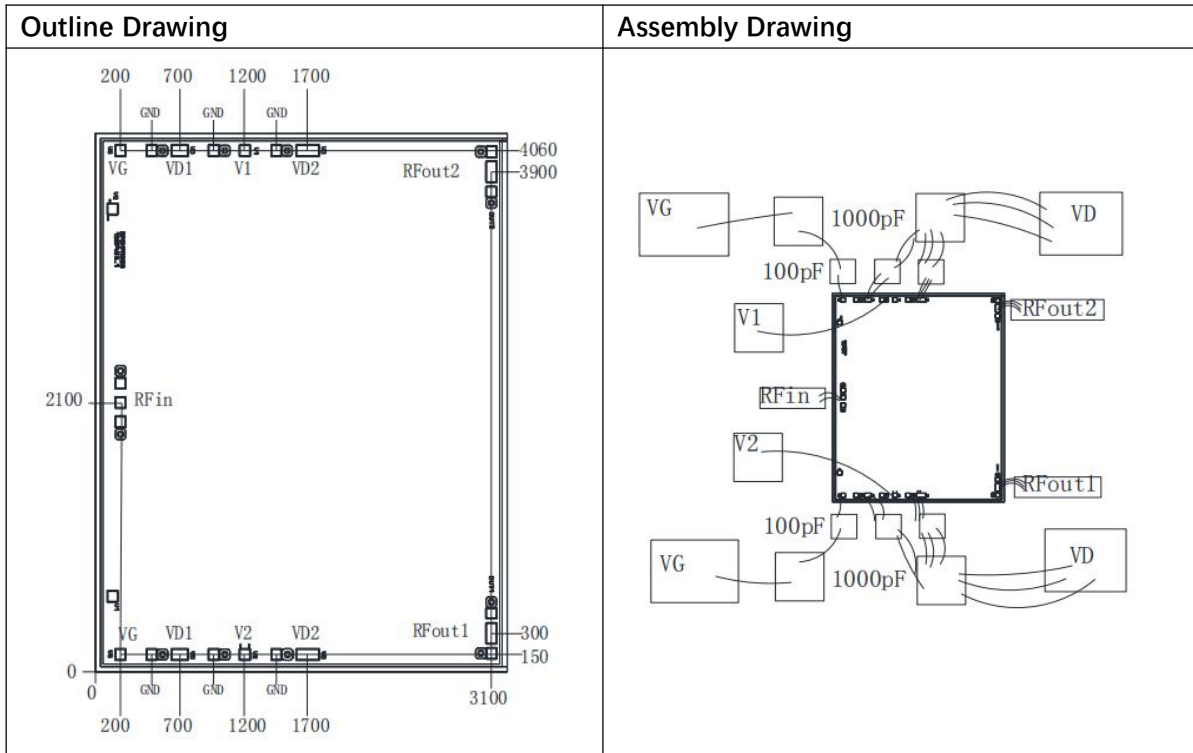
Absolute Max Ratings (TA=25°C)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	32V	
Vg	Grid Voltage	-10V	
Pd	DC Power	160W	
Pin	Input Power	31dBm	
Tch	Channel Temperature	225°C	1,2
Tm	Mounting Temperature	310°C	30 s, N2 Protection
Tstg	Storage Temperature	-65~150°C	


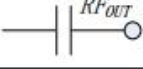
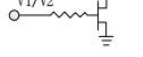
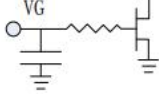
Exceeding any one or combination of these limits may cause permanent damage.

Truth Table

V1	V2	RFin-RFout 1	RFin-RFout 2
28V	0V	TURN-OFF	TURN-ON
0V	28V	TURN-ON	TURN-OFF



Pads Definition

Pad	Description	Equivalent Circuit
RFin	RF Signal input, connect to 50ohm system, no need block capacitor.	
RFout 1, RFout 2	RF Signal output, connect to 50ohm system, no need block capacitor.	
V1, V2	Switch gate bias, no external capacitors needed.	
VG	Amp gate bias, external 100pF, 1000pF capacitor is needed	
VD1, VD2	Amp drain bias, external 100pF, 1000pF capacitor is needed	