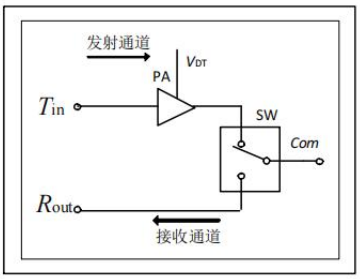
Performance

- Frequency: 32~40GHz
- Typical Signal Gain: 21dB
- Typical Pout: 31dBm@18V
- Typical PAE: 22.5%
- Bias: 18V, -1.8V (Typ.)
- Technology: 0.15um HEMT
- Size: 3.8*2.2mm*0.05mm

Function Diagram

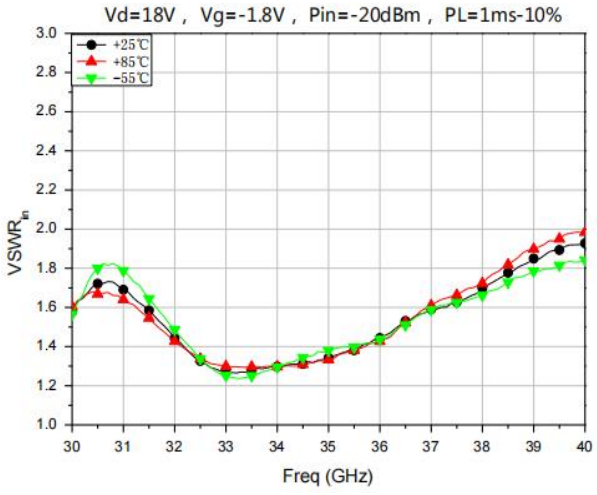


Electrical Specifications (T_A=25℃,Vd=18V,Vg=-1.8V,V1/V2=-28V/0V,F: 32~40GHz,D.C=50%)

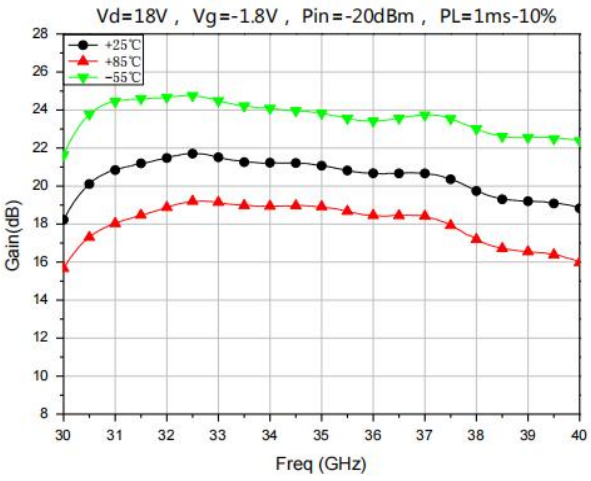
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	21	-	dB
Gp	Power Gain	-	16.5	-	dB
Pout	Saturated Power	-	31	-	dBm
Id	Dynamic Current	-	265	-	mA
PAE	Power Added Efficiency	-	22.5	-	%

Test Curves

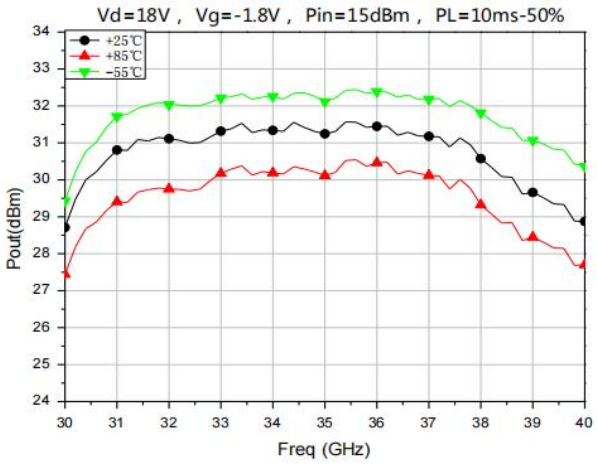
VSWRin (on test fixture)



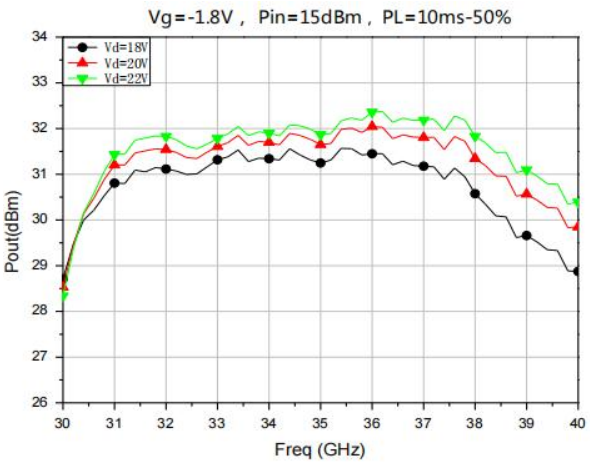
Gain (on test fixture)



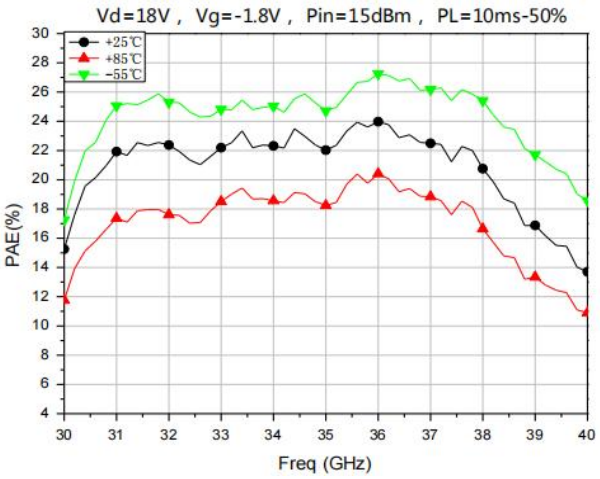
Pout 1（on test fixture）



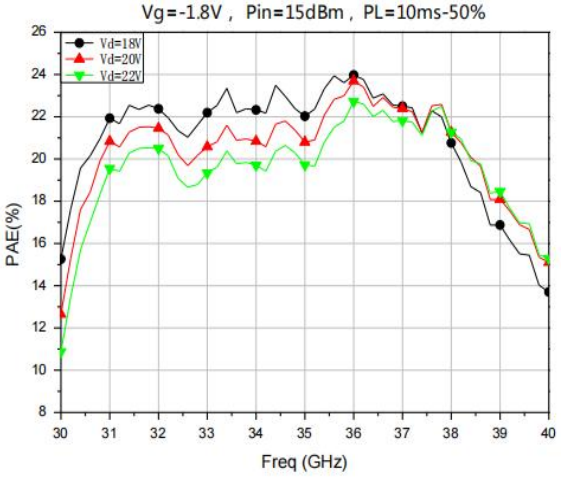
Pout 2（on test fixture）



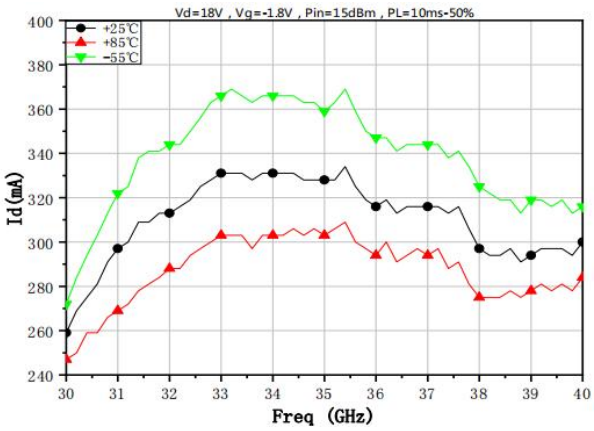
PAE 1（on test fixture）



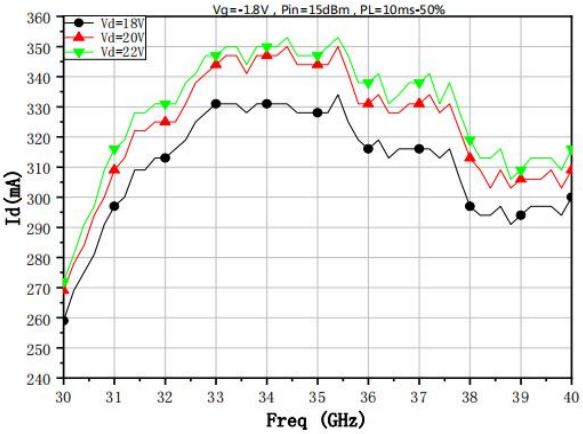
PAE 2（on test fixture）



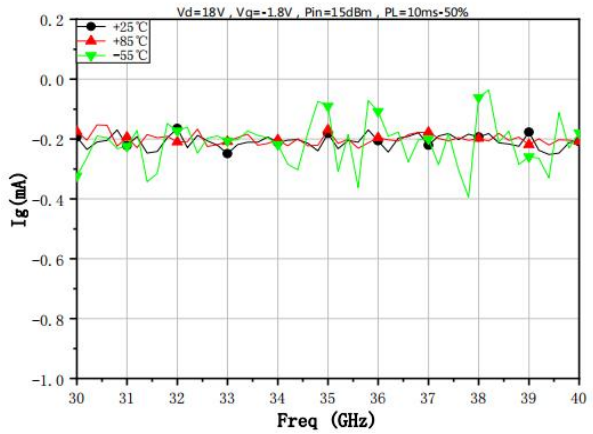
ID 1（on test fixture）



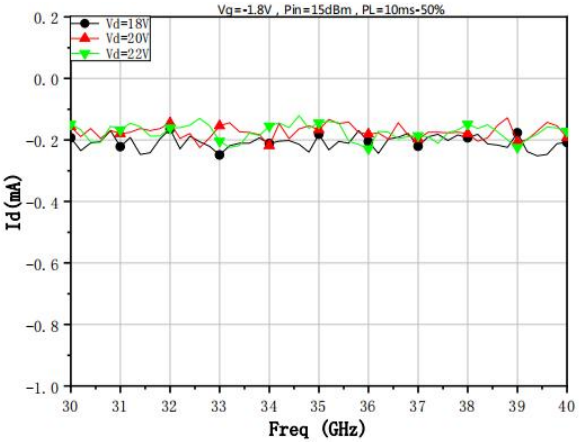
ID 2（on test fixture）



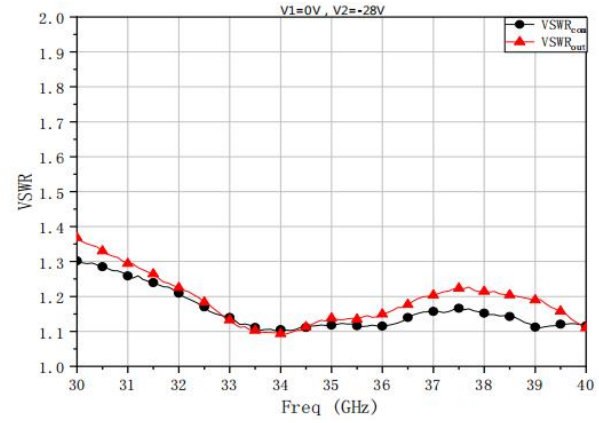
Ig 1（on test fixture）



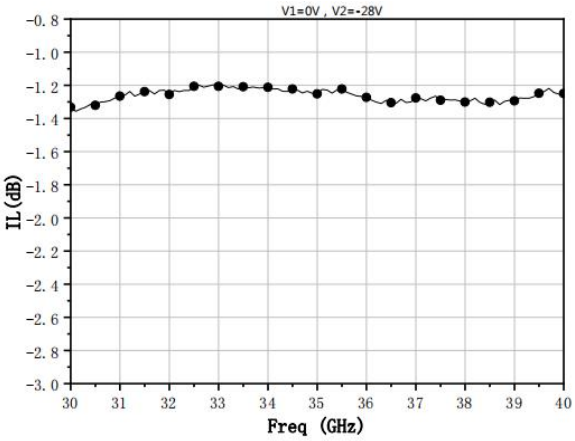
Ig 2（on test fixture）



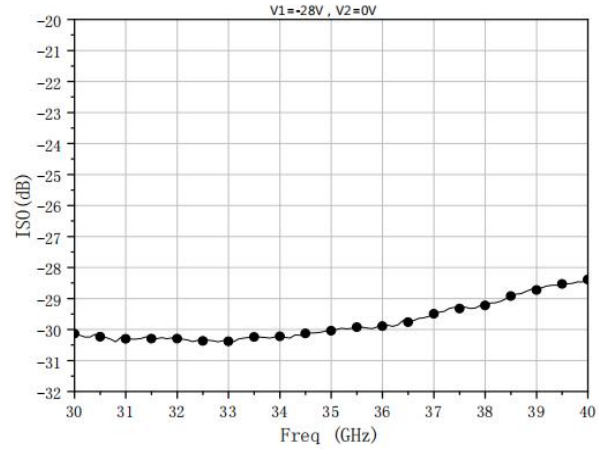
VSWR（on wafer）



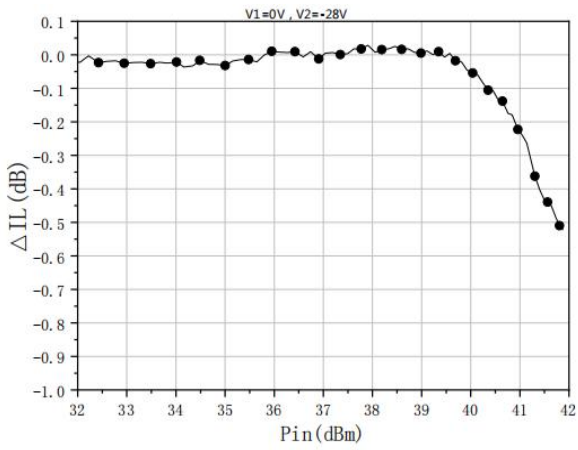
IL（on wafer）



ISO（on wafer）



ΔIL（on wafer）



Truth Table

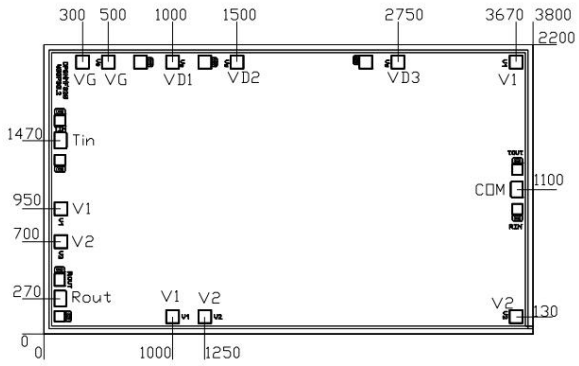
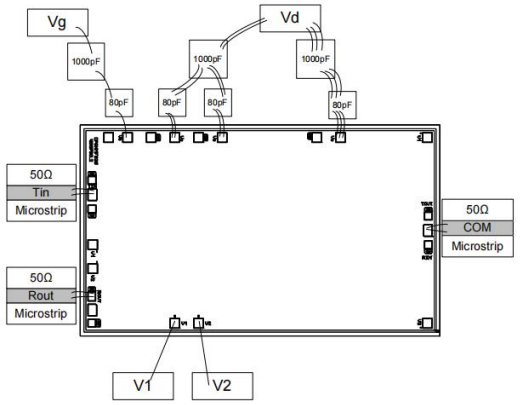
V1	V2	Tin-COM	COM-Rout
0	1	TURN-ON	TURN-OFF
1	0	TURN-OFF	TURN-ON

Note：“0” is low level -30V~-28V，“1” is high level 0V~0.5V.

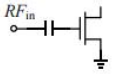
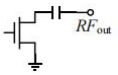
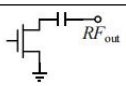
Absolute Max Ratings (T_A=25℃)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	28V	
Id	Drain Current	0.6A	
Vg	Gage Voltage	-10V	
Ig	Gate Current	10mA	
Pd	DC Power	16W	
Pin	Input Power	20dBm	
Tch	Channel Temperature	225℃	
Tm	Mounting Temperature	290℃	1 min, N_2 Protection
Tstg	Storage Temperature	-65~150℃	

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

Outline Drawing	Assembly Drawing
	

Pads Definition

Pad	Description	Equivalent Circuit
Tin	RF Signal input, connect to 50ohm system, no need block capacitor.	
RFout	RF Signal output, connect to 50ohm system, no need block capacitor.	
COM	RF Signal transmitting output/receiving input , connect to 50ohm system, no need block capacitor.	
VG	Amp gate bias, external 80pF, 1000pF capacitor is needed