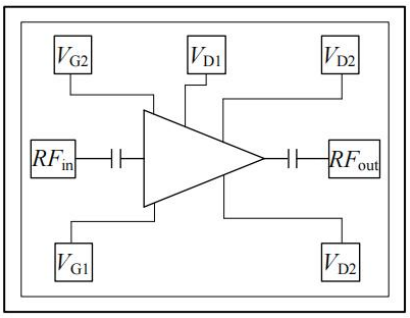
Performance

- Frequency: 19.5~21.5GHz
- Typical Signal Gain: 27dB
- Typical Pout: 35.5dBm
- Typical PAE: 45%
- Typical Operating Current: 390mA
- Bias: -2.2V,-2.2V,20V/-1.6V,-2.6V,18V
- Technology: 0.15um PHEMT
- Size: 2.4*1.3mm*0.05mm

Function Diagram

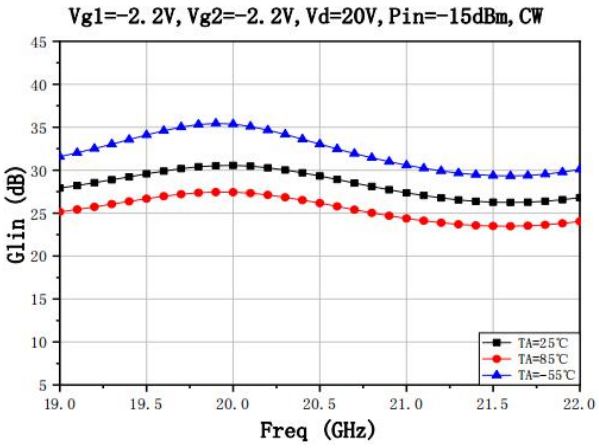


Electrical Specifications (T_A=25℃, V_d=20V,Vg=-2.2V, F:19.5~21.5GHz)

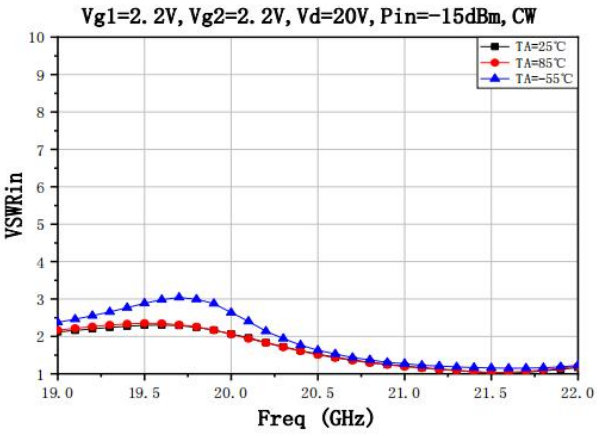
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	27	-	dB
Gp	Power Gain	-	18.5	-	dB
Pout	Saturated Power	-	35.5	-	dBm
Id	Dynamic Current	-	390	-	mA
Rth	Thermal Resistance	-	7.0	-	℃/W

Test Curves

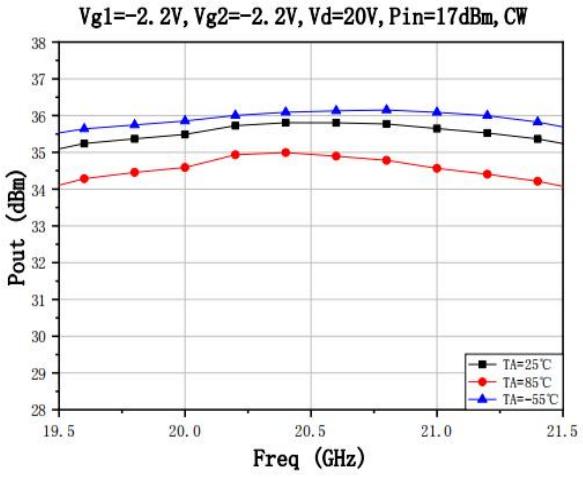
Small Signal Gain@ Different Temp



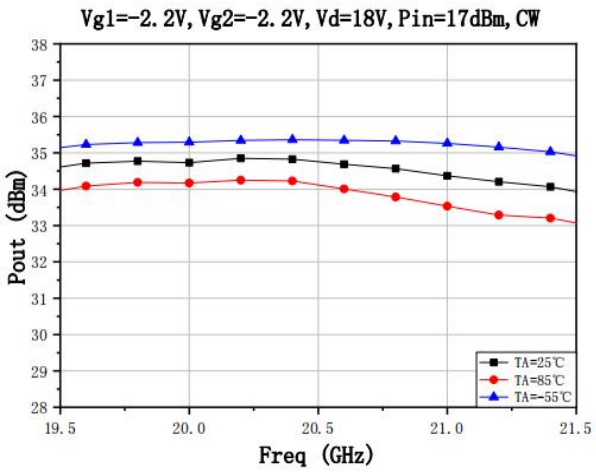
VSWRin@ Different Temp



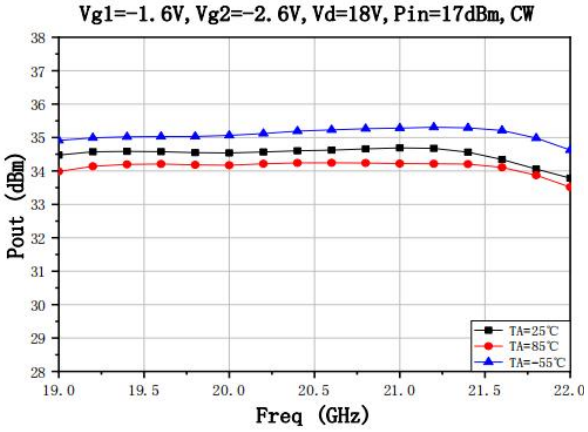
Pout@ Different Temp



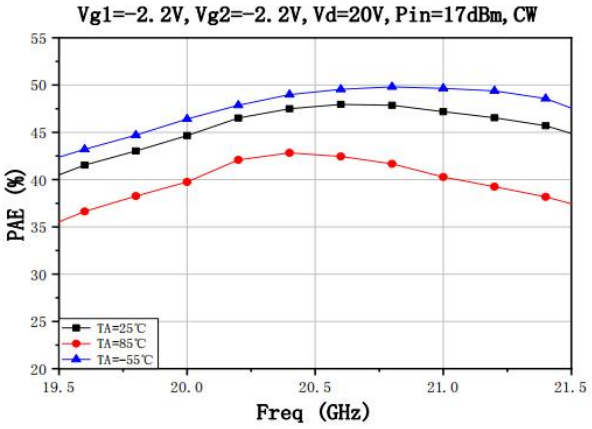
Pout@ Different Temp



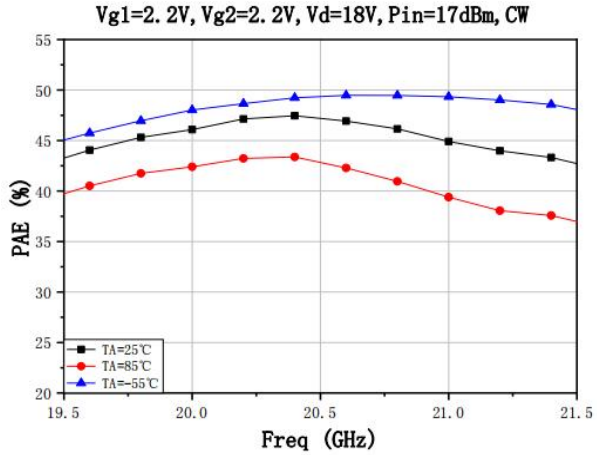
Pout@ Different Temp



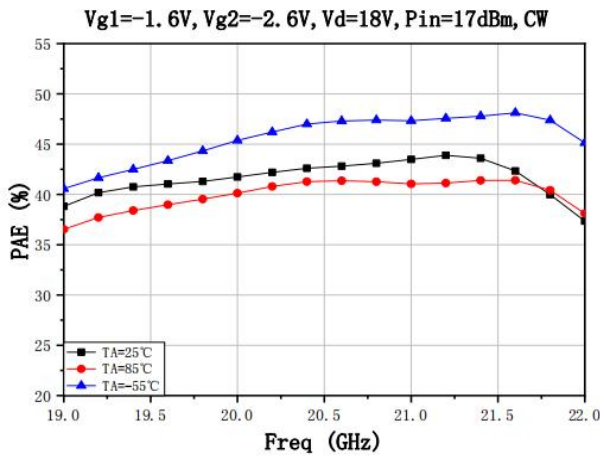
PAE@ Different Temp



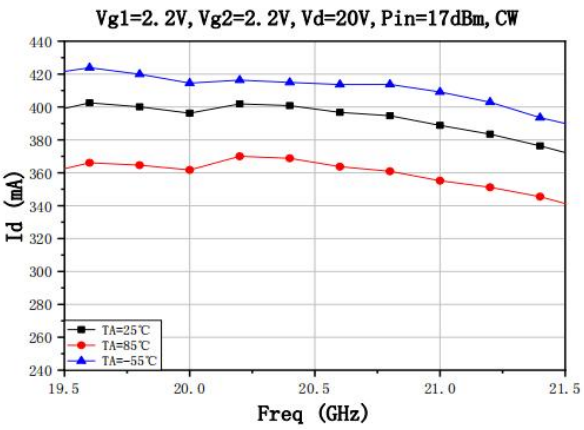
PAE@ Different Temp



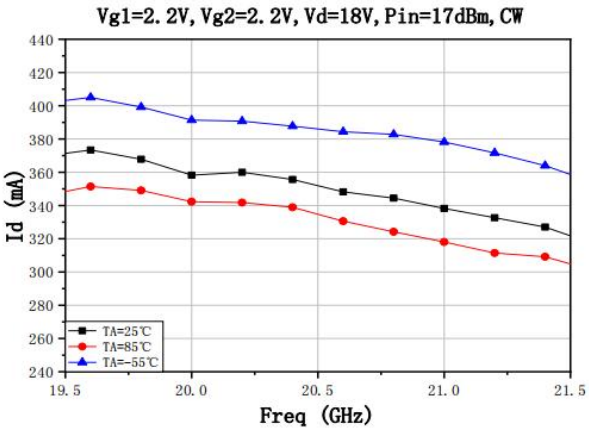
PAE@ Different Temp



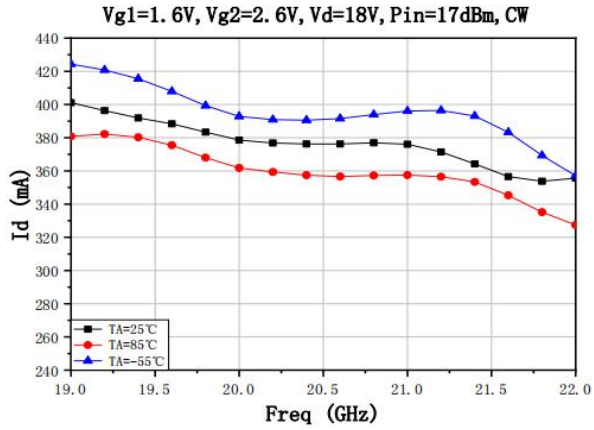
Id@ Different Temp



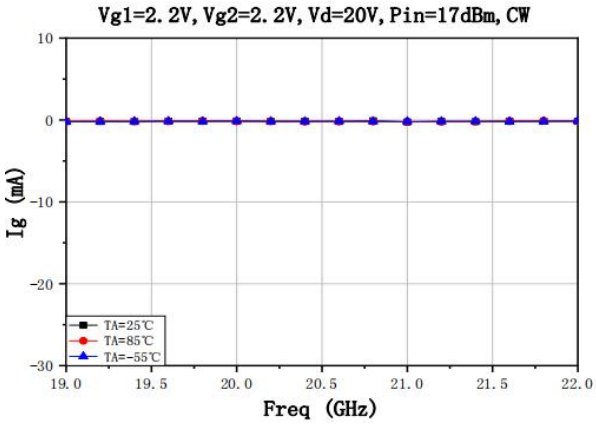
Id@ Different Temp



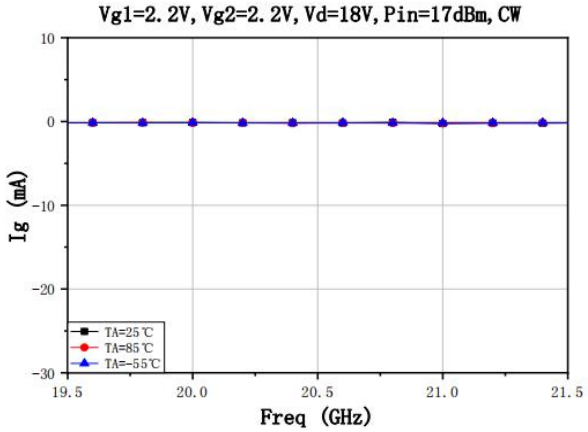
Id@ Different Temp



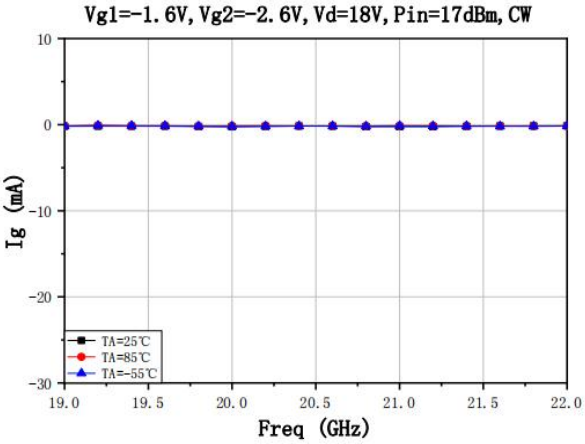
Ig@ Different Temp



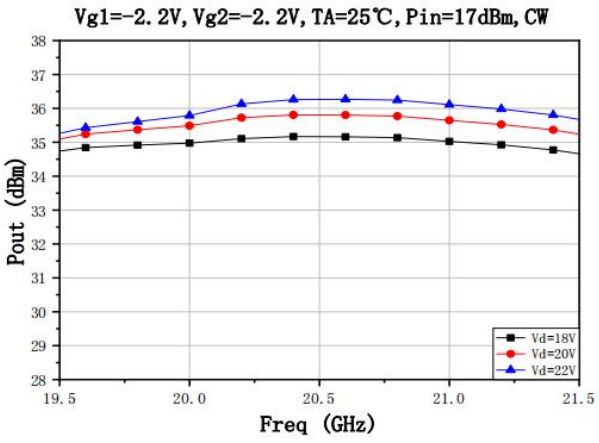
Ig@ Different Temp



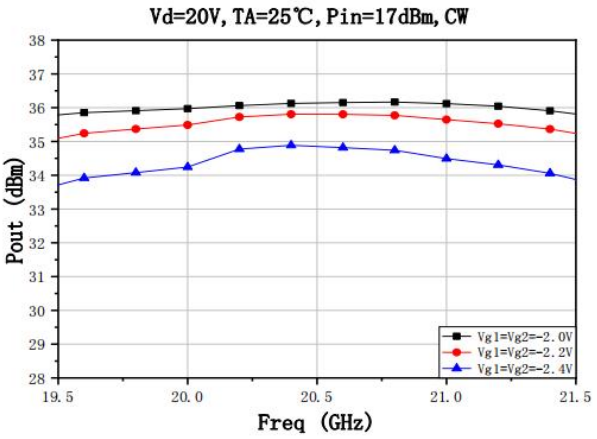
Ig@ Different Temp



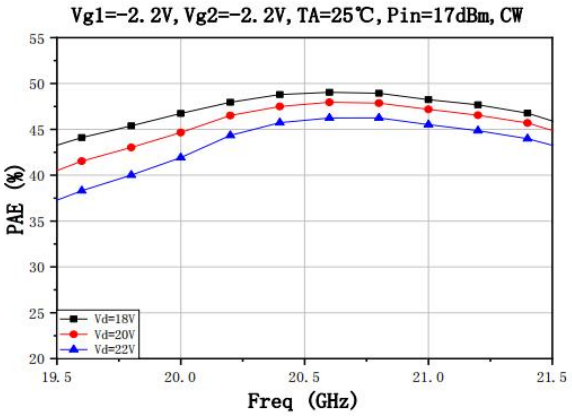
Pout@ Different Vd



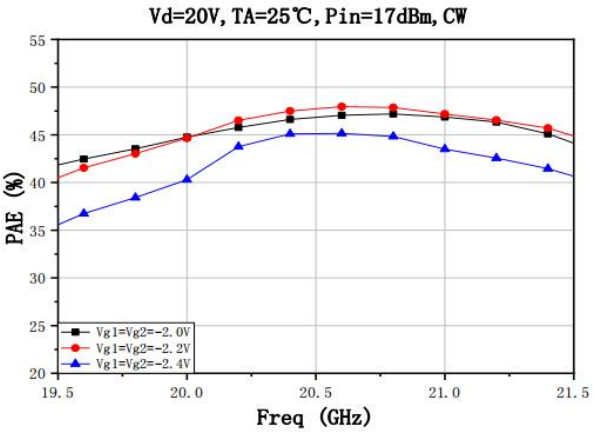
Pout@ Different Vg



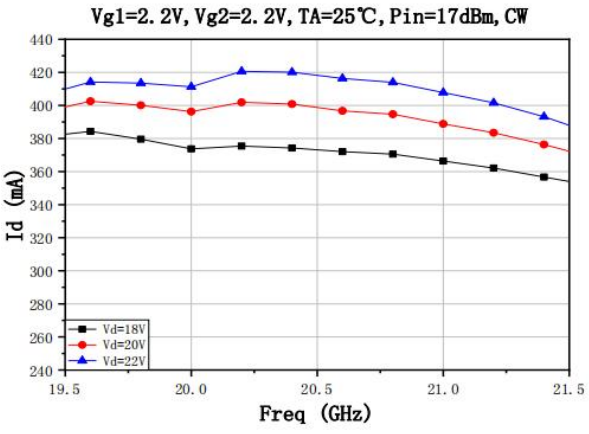
PAE@ Different Vd



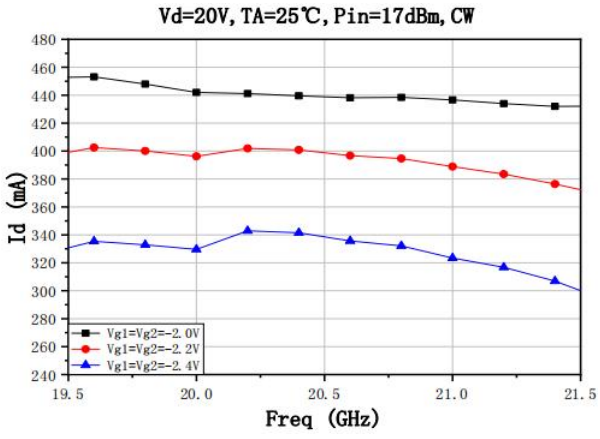
PAE@ Different Vg



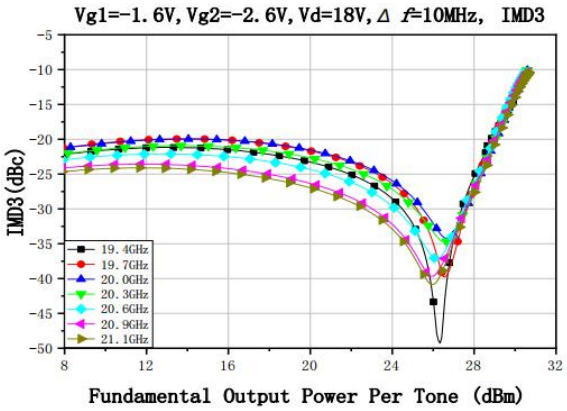
Id@ Different Vd



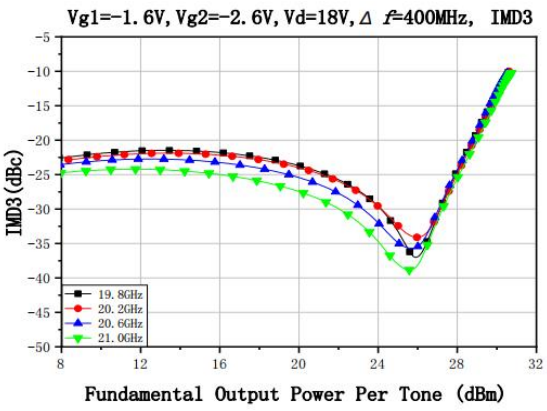
Id@ Different Vg



IM3



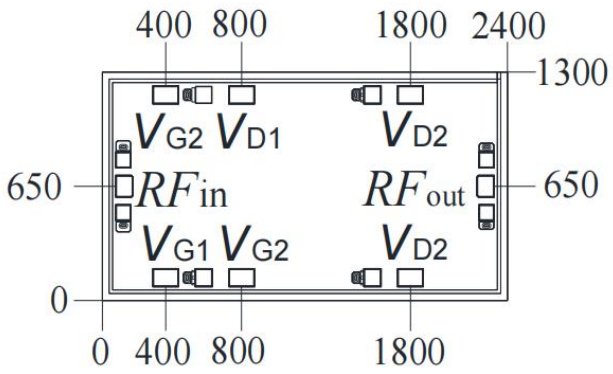
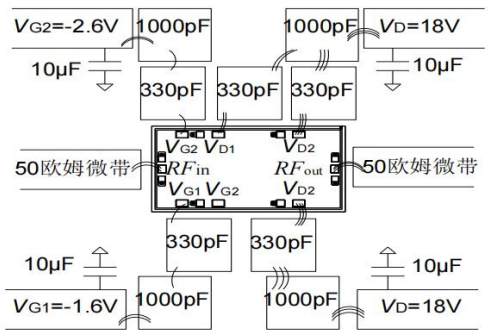
IM3



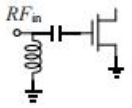
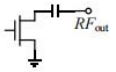
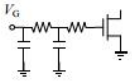
Absolute Max Ratings (T_A=25℃)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	28V	
Id	Drain Current	0.8A	
Pd	DC Power	22.4W	
Pin	Input Power	25dBm	
Tch	Channel Temperature	175℃	
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
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 330pF, 1000pF capacitor is needed	
VD1、VD2	Amp drain bias, external 330pF, 1000pF capacitor is needed	
GND	Bottom must connect to RF and DC ground	