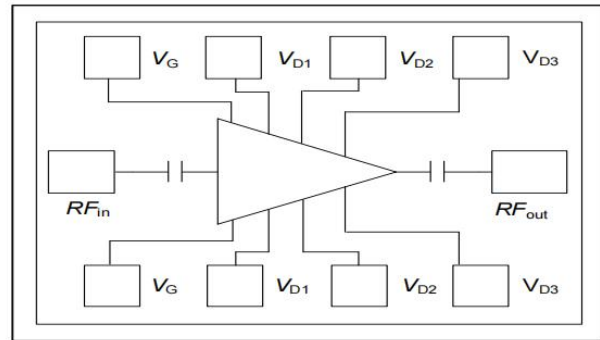


Performance

- Frequency: 47~52GHz
- Typical Signal Gain: 15dB
- Typical Pout: 37.5dBm
- Typical PAE: 24%
- Static Operating Current: 0.4A
- Dynamic Operating Current: 1.2A
- Bias: 20V
- Technology: 0.13um GaN HEMT
- Size: 3.1*1.9mm*0.05mm

Function Diagram

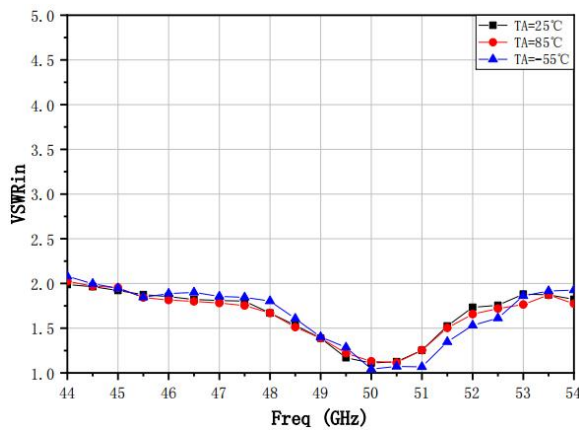


Electrical Specifications (T_A=25°C, V_d=20V, I_{dq}=0.4A, F=47-52GHz)

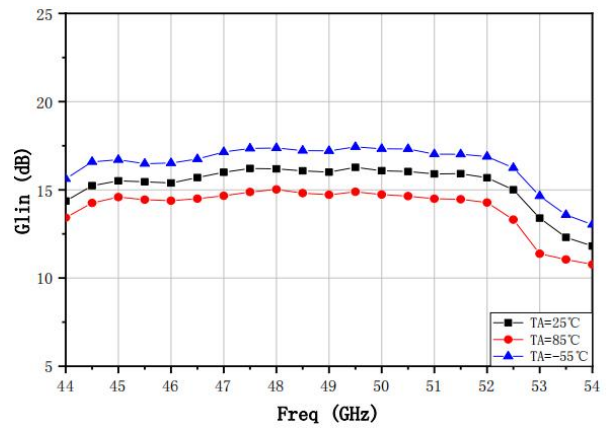
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	-	15	-	dB
G _p	Power Gain	-	12.5	-	dB
P _{out}	Saturated Power	-	37.5	-	dBm
PAE	Power Added Efficiency	-	24	-	%
VSWR _{in}	VSWR _{in}	-	2	-	-

Test Curves

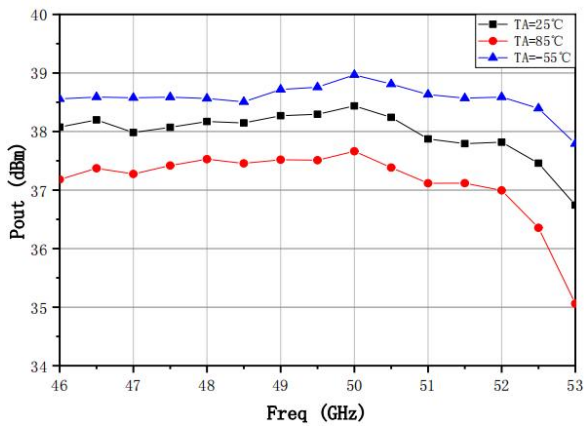
VSWR_{in}@ Different Temp



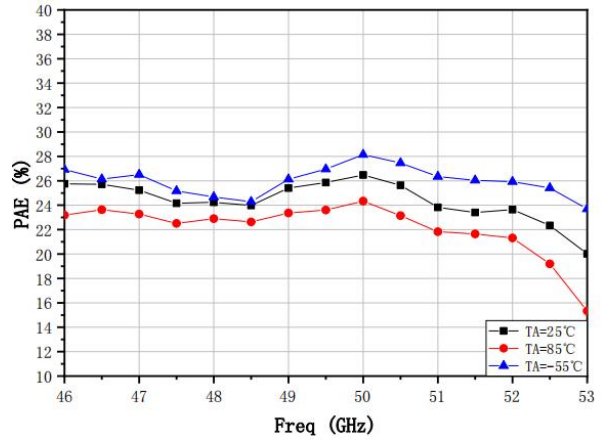
Small Signal Gain@ Different Temp



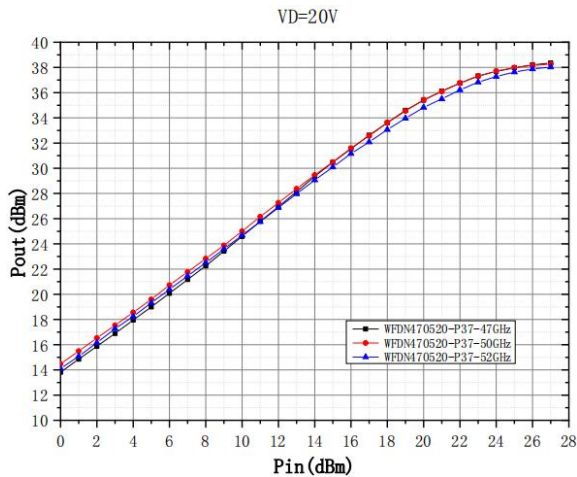
Pout@ Different Temp



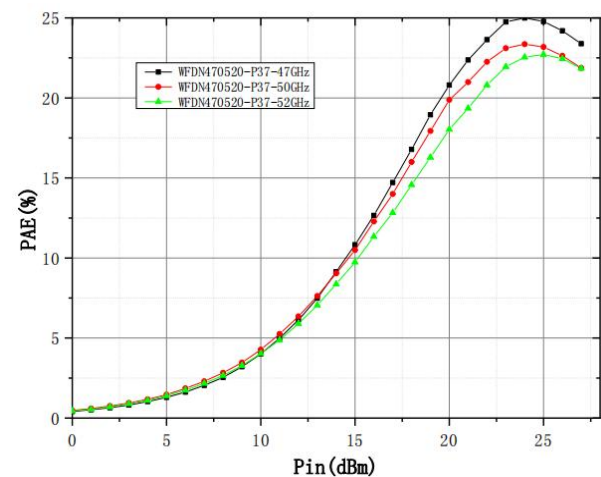
PAE@ Different Temp



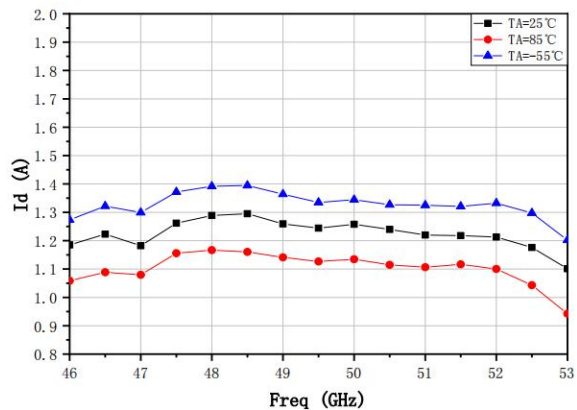
Pout@ Different Pin



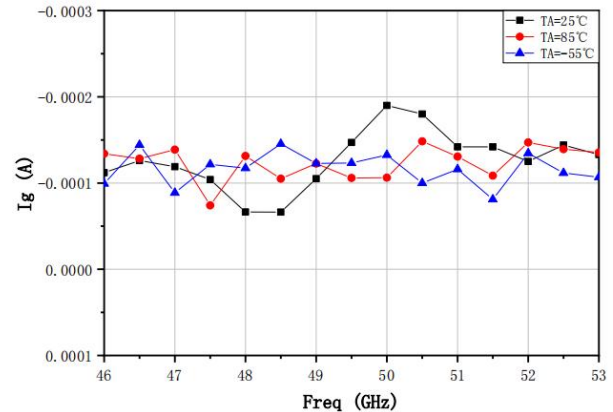
PAE@ Different Pin



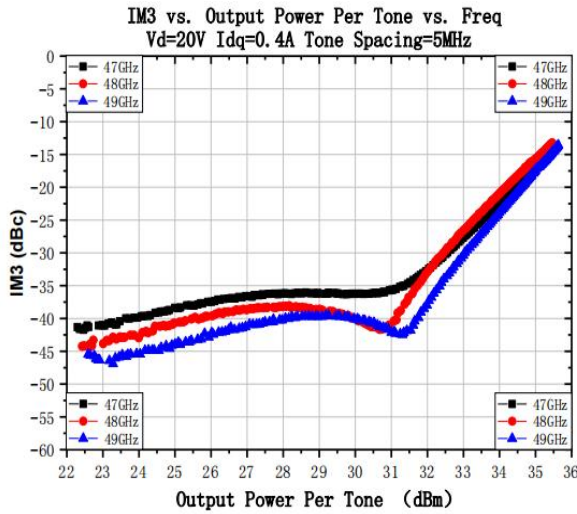
Id@ Different Temp



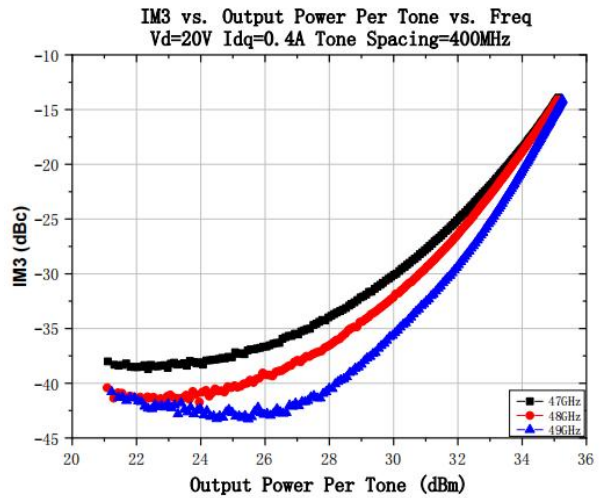
Ig@ Different Temp



IM3 VS pout/per tone



IM3 VS pout/per tone

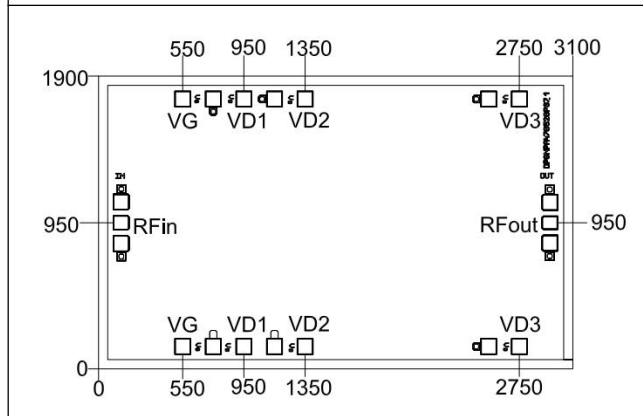


Absolute Max Ratings (TA=25°C)

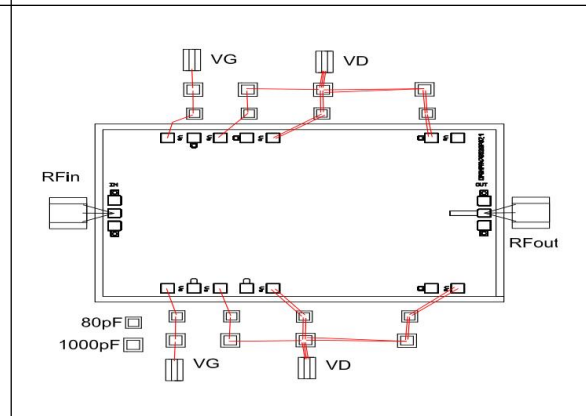
Symbol	Parameter	Value	Remark
Vd	Drain Voltage	24V	
Id	Drain Current	1.5A	
Pd	DC Power	30W	
Pin	Input Power	32dBm	
Tch	Channel Temperature	200°C	
Tm	Mounting Temperature	310°C	30 s, N2 Protection
Tstg	Storage Temperature	-65~150°C	

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





Outline Drawing



Assembly Drawing



Pads Definition

Pad	Description	Equivalent Circuit
RFin	RF Signal input, connect to 50ohm system, no need block capacitor.	
RFout	RF Signal output, connect to 50ohm system, no need block capacitor.	
VG	Amp gate bias, external 80pF, 1000pF, 10uF capacitor is needed	
VD1、VD2、VD3	Amp drain bias, external 80pF, 1000pF, 10uF capacitor is needed	
GND	Bottom must connect to RF and DC ground	