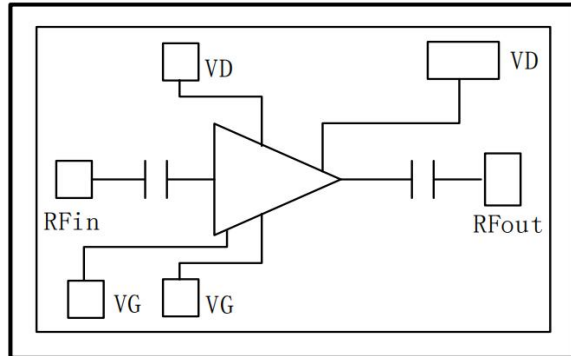


Performance

- Frequency: 2~18GHz
- Typical Signal Gain: 24dB
- Typical Pout: 43dBm@40V
- Typical PAE: 20%
- Power Gain: 16dB
- VSWR: 2.5
- Static Current: 1.8A
- Dynamic Current: 3.0A
- Bias: 40V, -1.8V (Typ.)
- Mode: CW
- Size: 3.7mm*5.0mm*0.08mm

Function Diagram

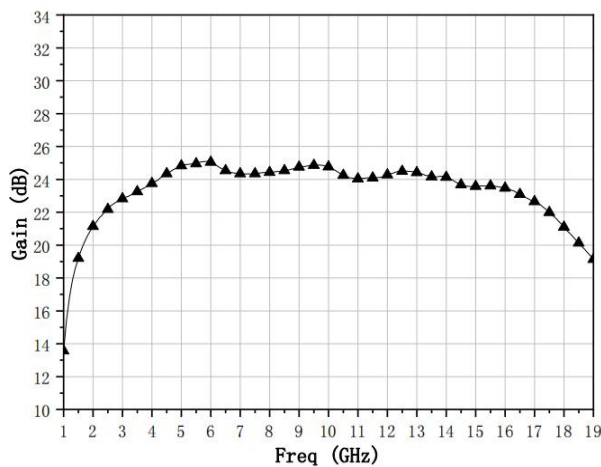


Electrical Specifications (TA=25°C, Vd=40V, Idq=1.8A, F: 2~18GHz, CW)

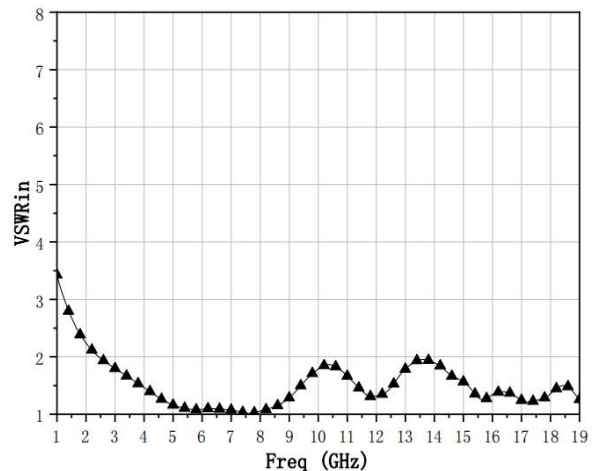
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	21	24	26	dB
Gp	Power Gain	15.5	16	17.5	dB
Pout	Saturated Power	42.5	43	44.5	dBm
PAE	Power Added Efficiency	17	20	35	%
Id	Dynamic Current	1.5	2.8	3.1	A
VSWRin	Small Signal VSWRin	1.1	1.8	2.5	-
Rth	Thermal Resistance	1.2	1.3	1.4	°C/W

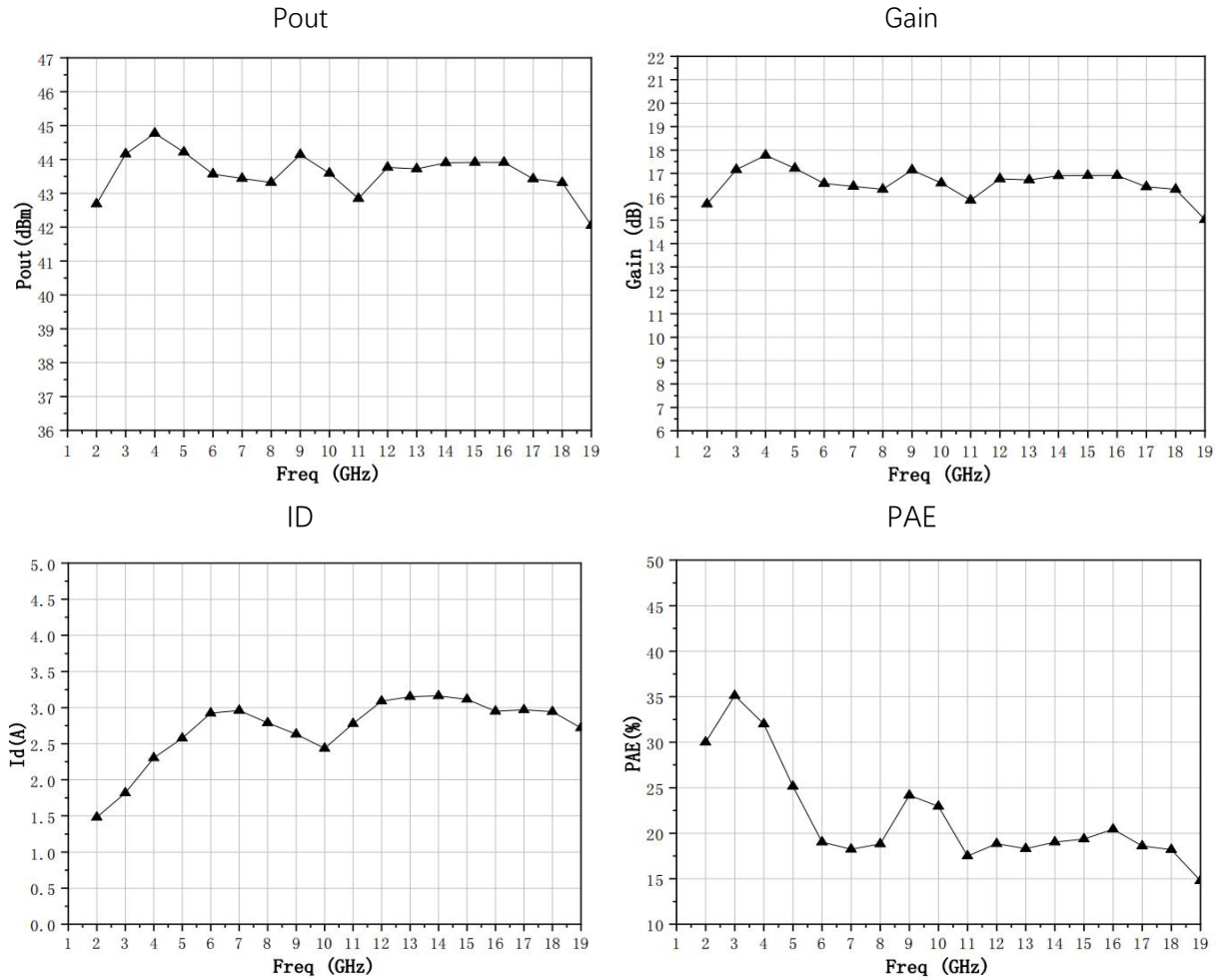
Test Curves

Small Signal Gain



VSWRin

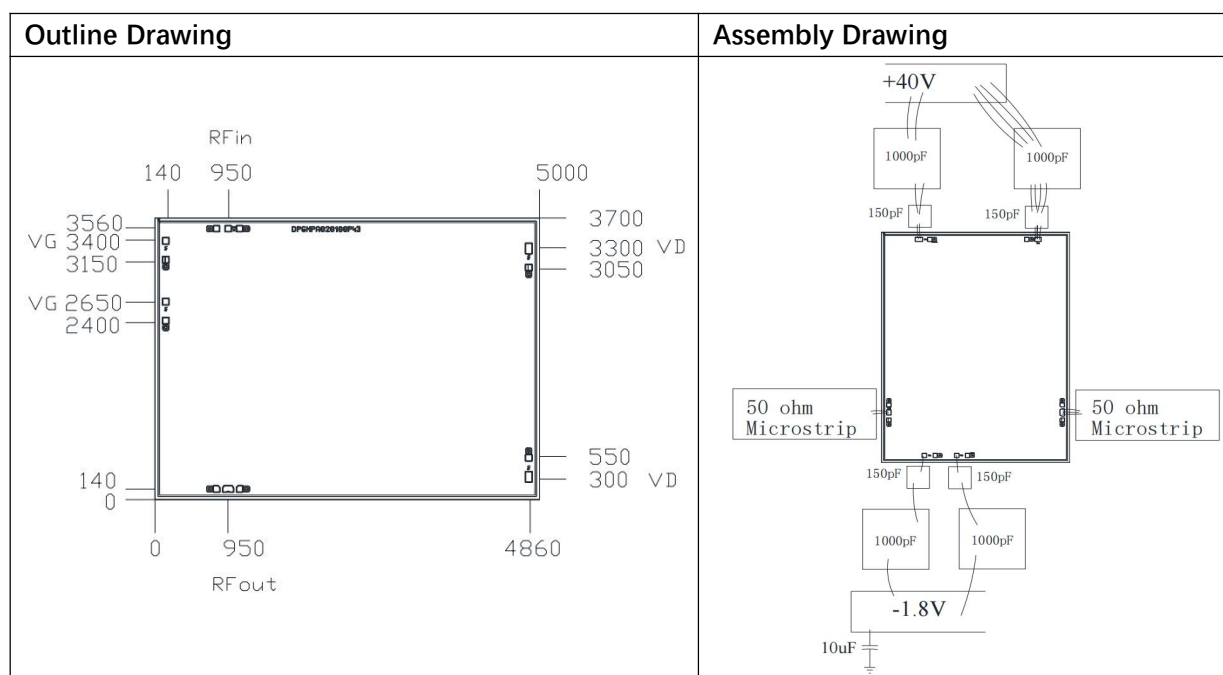




Absolute Max Ratings (TA=25°C)

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	44V	
Id	Drain Current	3.5A	
Vg	Gage Voltage	-10V	
Ig	Gate Current	30mA	
Pd	DC Power	100W	
Pin	Input Power	32dBm	
Tch	Channel Temperature	225°C	
Tm	Mounting Temperature	310°C	1 min, N2 Protection
Tstg	Storage Temperature	-55~150°C	

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



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 150pF, 1000pF, 10uF capacitor is needed	
VD	Amp drain bias, external 150pF, 1000pF capacitor is needed	
GND	Bottom must connect to RF and DC ground	

Precautions

- a) The chip works with dual power supplies, and the negative power should be added first, then the positive power; when the power is off, the positive power should be cut off first, and then the negative power should be cut off;
- b) Good grounding and heat dissipation are required during use, control the sintering void rate of the heat sink, there is no void under the die, and avoid using conductive adhesive for bonding;
- c) The chip is an electrostatic sensitive device. During use, transportation and operation, you should pay attention to anti-static, and avoid violent collisions and drops to avoid damage to the product;
- d) When using it, it is recommended to install decoupling capacitors according to the recommended assembly diagram;
- e) Gold wires with a diameter of 25 μm should be used for the power feed, input and output interconnection of the chip;
- f) This product is a hydrogen-sensitive device with a hydrogen resistance of 20,000ppm. It is recommended to pay attention to controlling the hydrogen concentration in the sealed cavity when using it.