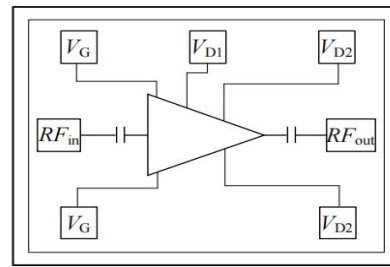


Performance

- Frequency: 19.5~21.5GHz
- Typical Signal Gain: 25dB
- Typical Pout: 35.5dBm
- Typical Operating Current: 380mA
- Bias: 20V, -1.8V
- Technology: 0.15um HEMT
- Size: 2.3*1.3mm*0.05mm

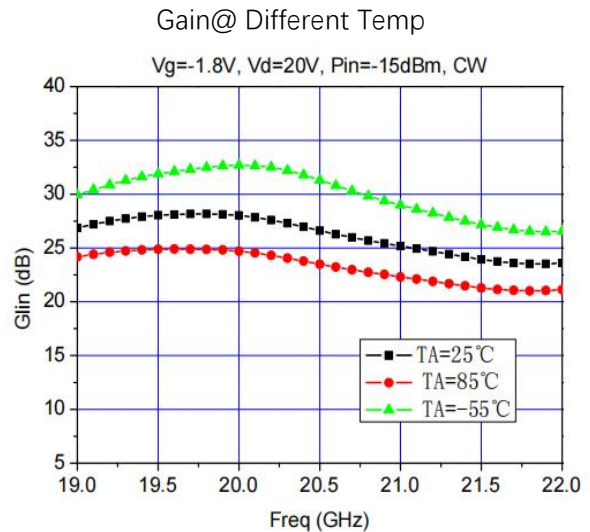
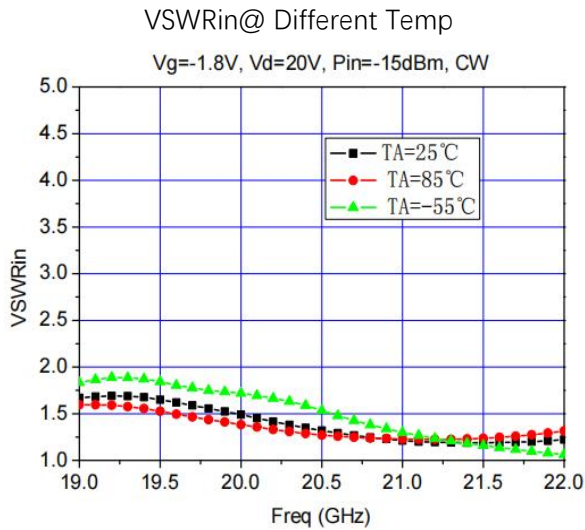
Function Diagram



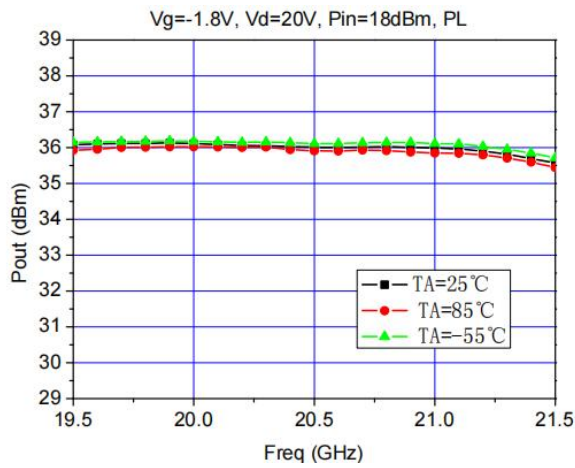
Electrical Specifications (TA=25°C, Vd=20V, Vg= -1.8V, F:19.5~21.5GHz)

| Symbol | Parameter | Min | Typical | Max | Unit |
|--------|--------------------|-----|---------|-----|------|
| G | Small Signal Gain | - | 25 | - | dB |
| Gp | Power Gain | - | 17.5 | - | dB |
| Pout | Saturated Power | - | 35.5 | - | dBm |
| Id | Dynamic Current | - | 380 | - | mA |
| Rth | Thermal Resistance | - | 6.5 | - | °C/W |

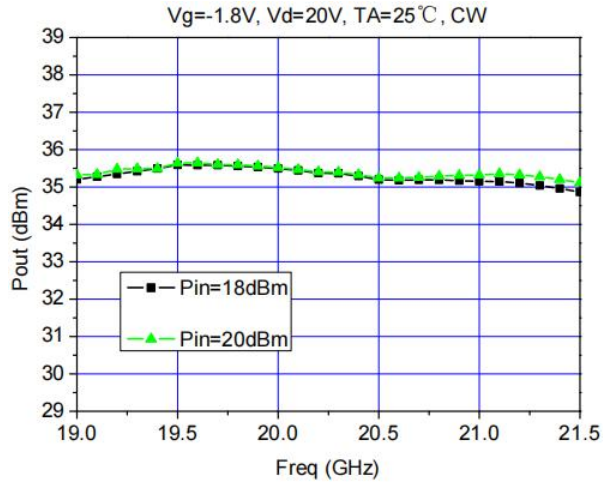
Test Curves



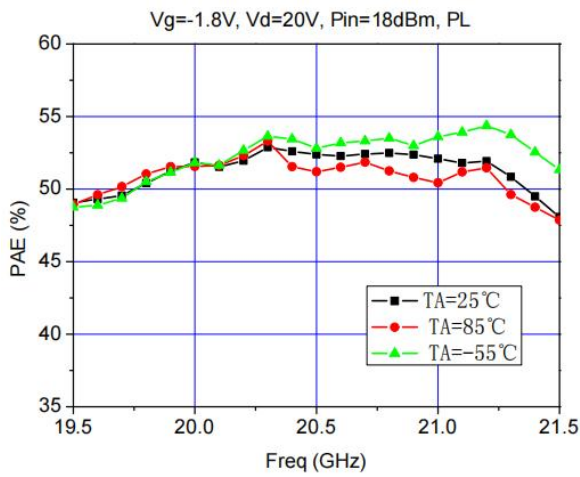
Pout@ Different Temp



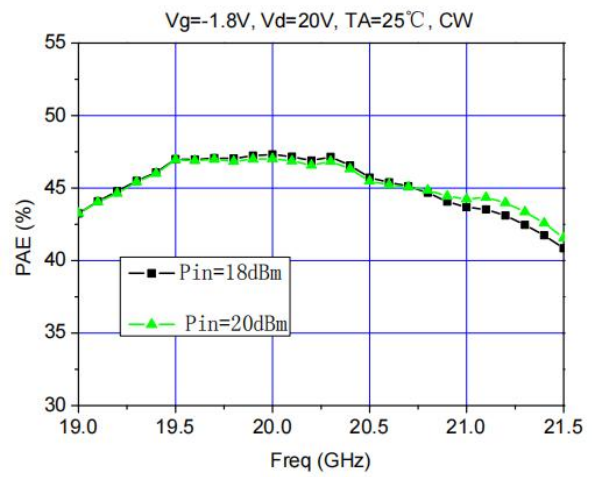
Pout@ Different Pin



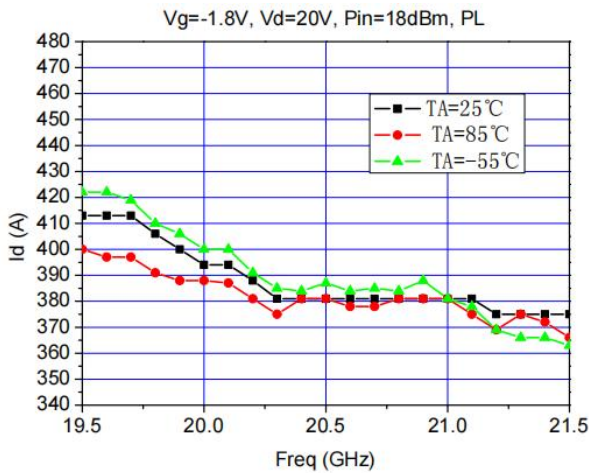
PAE@ Different Temp



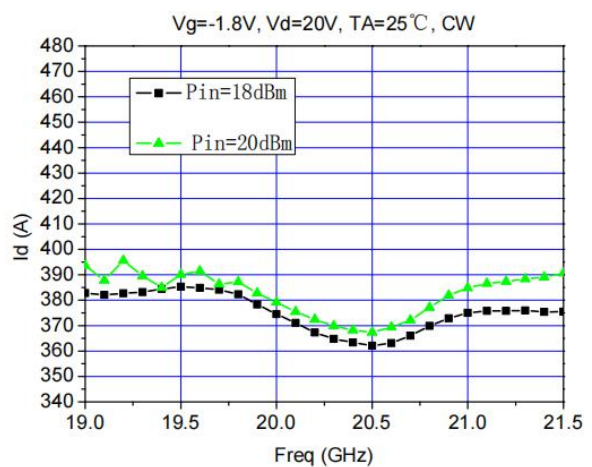
PAE@ Different Pin

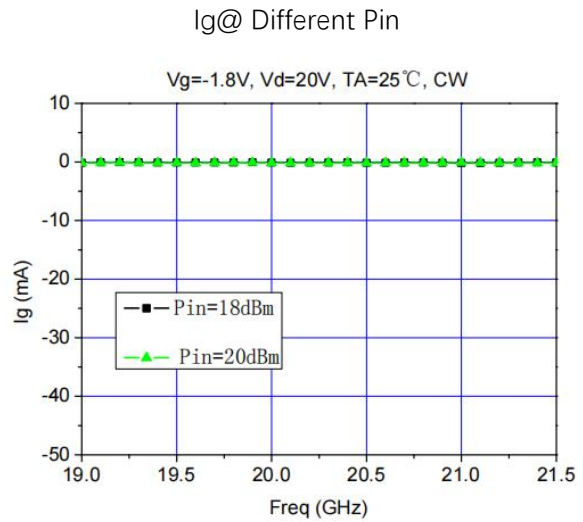
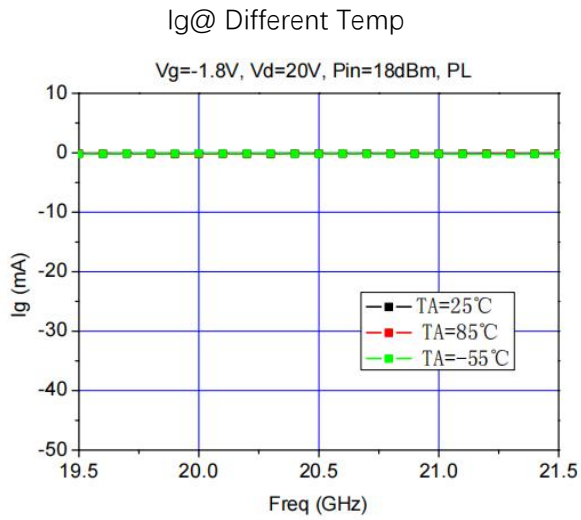


Id@ Different Temp



Id@ Different Pin

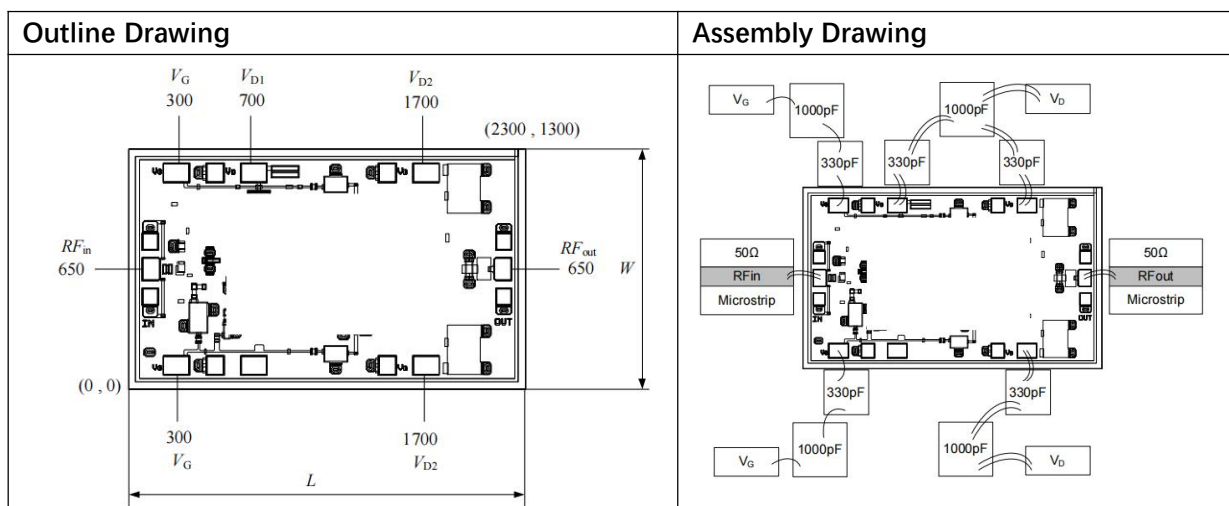




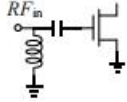
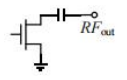
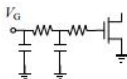

Absolute Max Ratings (TA=25°C)

| 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°C | |
| Tm | Mounting Temperature | 290°C | 1 min, N2 Protection |
| Tstg | Storage Temperature | -65~150°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, 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 | |