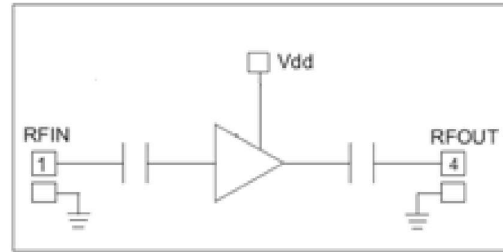


### Performance

- Frequency: 40~50GHz
- Noise Figure: 2.0dB
- Typical Gain: 18dB
- Typical P-1: 0dBm
- VSWR<sub>in/out</sub>: 2.2/1.8
- Voltage: V<sub>d</sub>=+5V
- Technology: 0.10um Low Noise PHEMT
- Size: 1.34\*0.8mm\*0.1mm

### Function Diagram

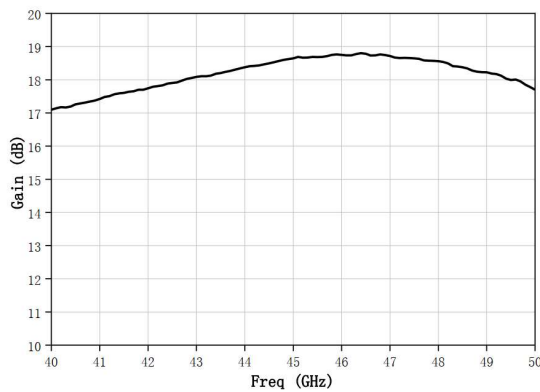


### Electrical Specifications (V<sub>d</sub>=5V, F: 40-50GHz)

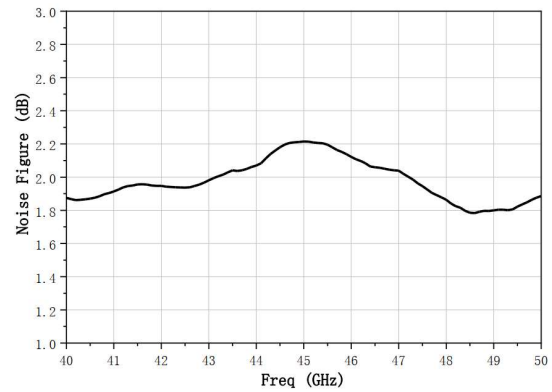
Symbol	Parameter	Min	Typical	Max	Unit
G	Small Signal Gain	16	18	-	dB
NF	Noise Figure	-	2.0	2.5	dB
VSWR <sub>in</sub>	Input VSWR	-	2.2	3	-
VSWR <sub>out</sub>	Output VSWR	-	1.8	2.5	-
P-1	P <sub>out</sub> at 1dB compression	-2	2	-	dBm
I <sub>d</sub>	Drain Current	-	11	15	mA

### Test Curves

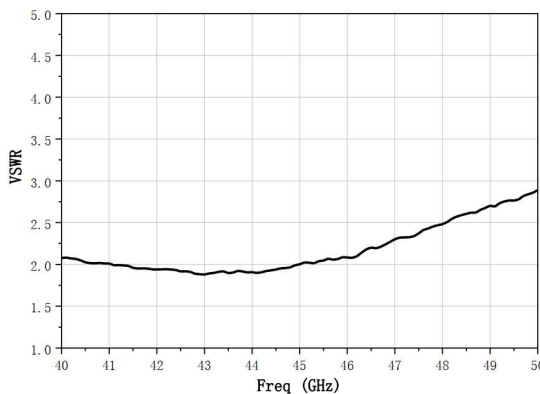
Small Signal Gain vs. Freq.



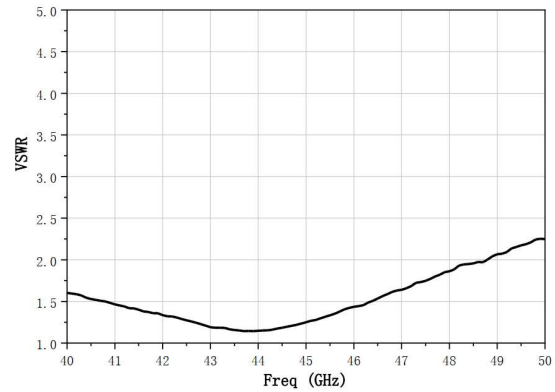
Noise Figure vs. Freq.



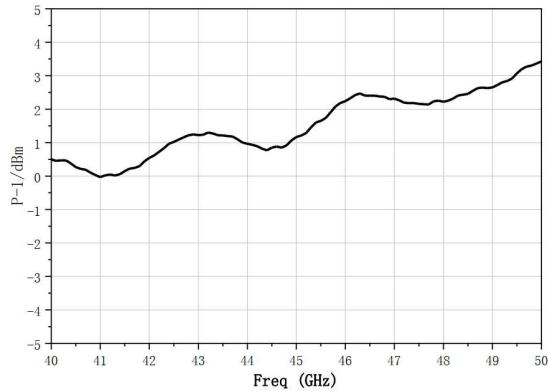
Input VSWR vs. Freq.



Output VSWR vs. Freq.



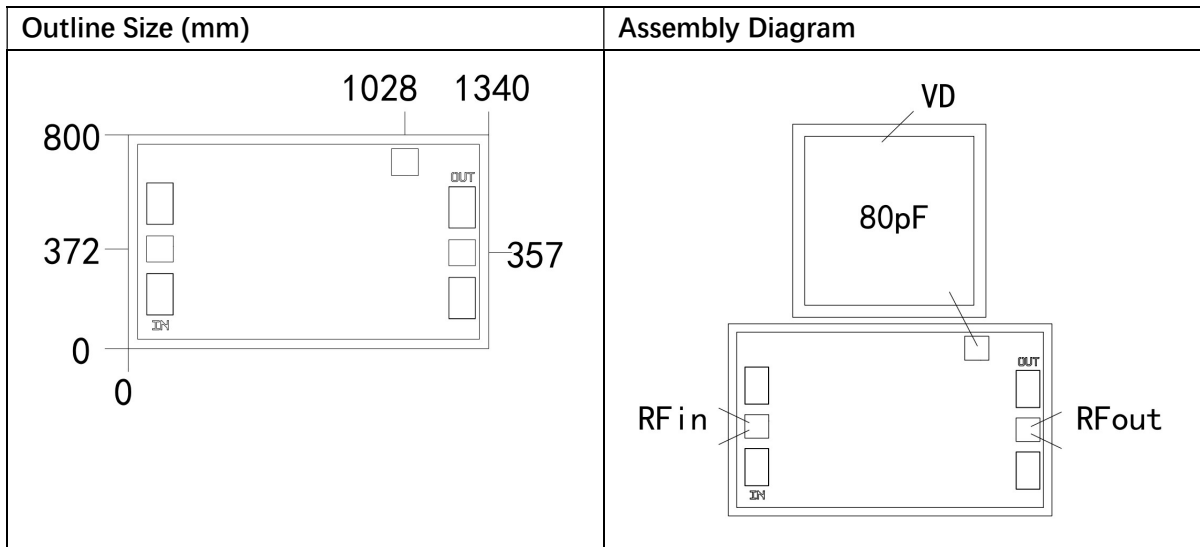
P-1 vs. Freq.



**Absolute Max Ratings (TA=25°C)**

Symbol	Parameter	Value	Remark
Vd	Drain Voltage	7V	
Pin	Input Power	17dBm	
Tch	Channel Temperature	150°C	
Tm	Mounting Temperature	290°C	30sec, N2 protection
Tstg	Storage Temperature	-55~150°C	

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



**Pin Definition**

Number	Description
RFin	RF input port, connect to 50 ohm system, no block capacitor needed
RFout	RF output port, connect to 50 ohm system, no block capacitor needed
Vdd	Amplifier drain bias, connect to external 80pF capacitor
GND	Bottom must be well connected with RF and DC ground