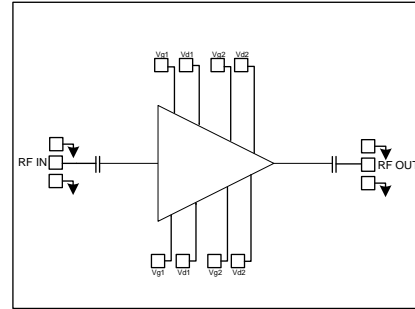


Features

- Frequency: 18-28GHz
- Small Signal Gain: 13dB
- P1dB: 29dBm
- Psat: 30.5dBm
- Power Supply: 6V@630mA~ 7V@600mA
- Input/Output: 50Ω
- Die Size: 2.1 x 1.3 x 0.1 mm

Functional Block Diagram

Typical Applications

- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

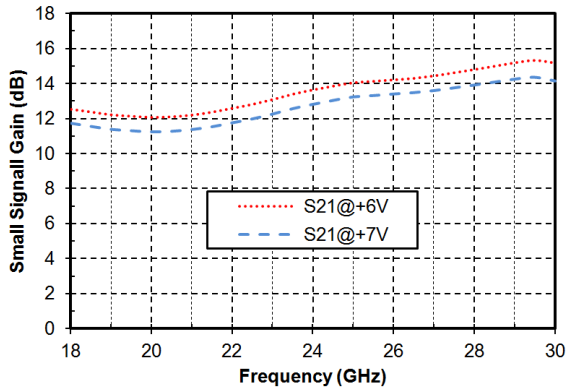
TA = +25°C, Vd = +7V, Vg=-0.8V, Ids=600mA

Parameters	Min.	Typ.	Max.	Units
Frequency	18-28			GHz
Small Signal Gain	11.5	13	14	dB
Gain Flatness		±0.75		dB
Output 1dB Compression (P1dB)	28.5	29	30.5	dBm
Saturated Output Power (Psat)	30	30.5	31	dBm
Input Return Loss	12	17		dB
Output Return Loss	19	24		dB

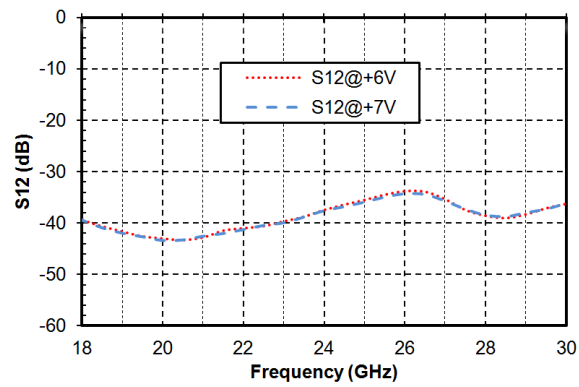
*Adjust Vg during -2V~0V, recommended Vg is around -0.8V.



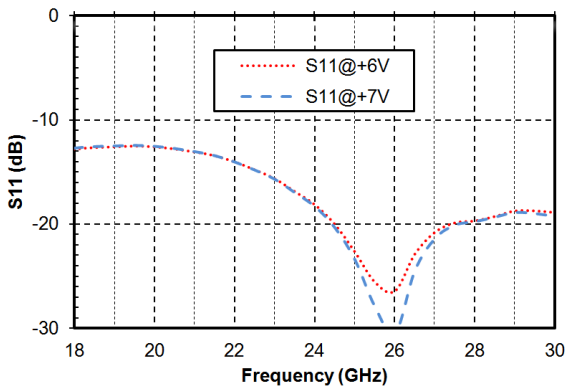
Gain vs. Frequency



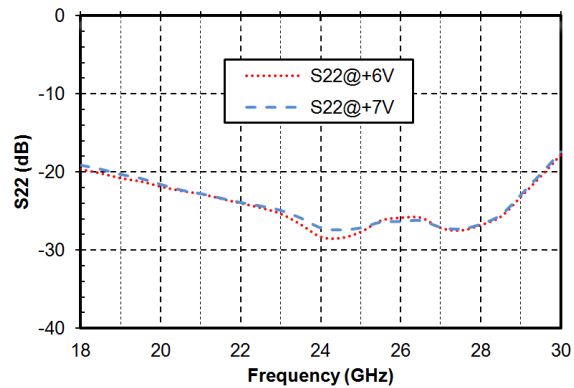
Reverse Isolation vs. Frequency



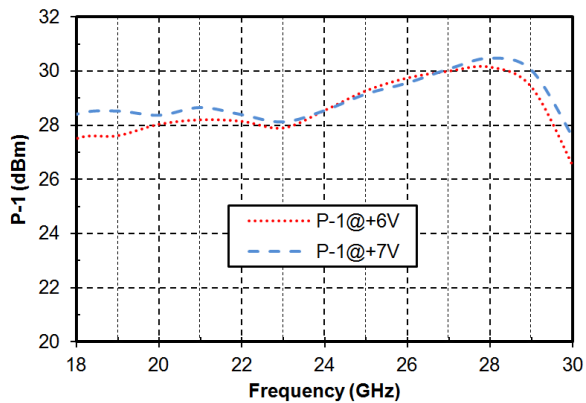
Input Return Loss vs. Frequency



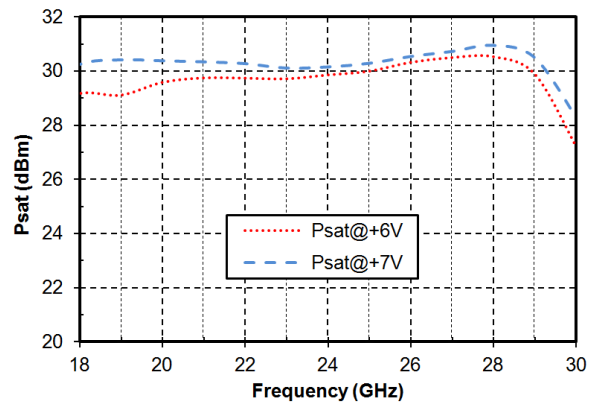
Output Return Loss vs. Frequency



P-1dB vs. Frequency

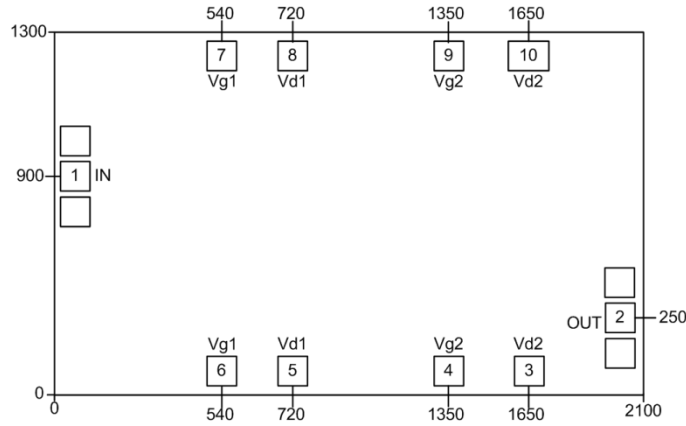


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

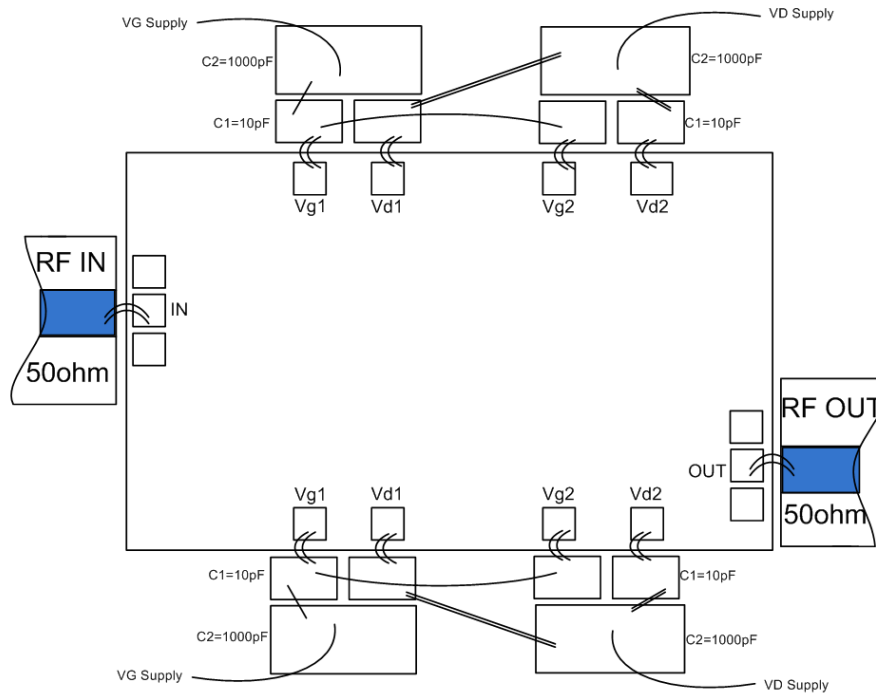


Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, connect to 50Ω circuit, no blocking capacitor required
2	RF OUT	RF signal output terminal, connect to 50Ω circuit, no blocking capacitor required
3,5,8,10	VD1~2	Amplifier drain bias, connected to external 10pF and 1000pF bypass capacitor.
4,6,7,9	VG1~2	Amplifier gate bias, connected to external 10pF and 1000pF bypass capacitor.
Die Bottom	GND	Die bottom must be connected to RF/DC ground



Assembly Drawing



Notes:

1. Die thickness: 100um
2. Typical bond pad is 100*100 μm^2
3. Bond pad metalization: Gold
4. Backside metalization: Gold
5. Backside of the die (GND)
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. Maximum drain voltage: +9V
2. Maximum gate voltage: -3V
3. Maximum input power: +25dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C