

Features

- Frequency: 32-42GHz
- Small Signal Gain: 22dB
- P1dB: 24.5dBm
- Psat: 25dBm
- Power Supply: +5V@210mA
- Input/Output: 50Ω
- Die Size: 2.12 x 1.1 x 0.1 mm

Typical Applications

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

Electrical Specifications

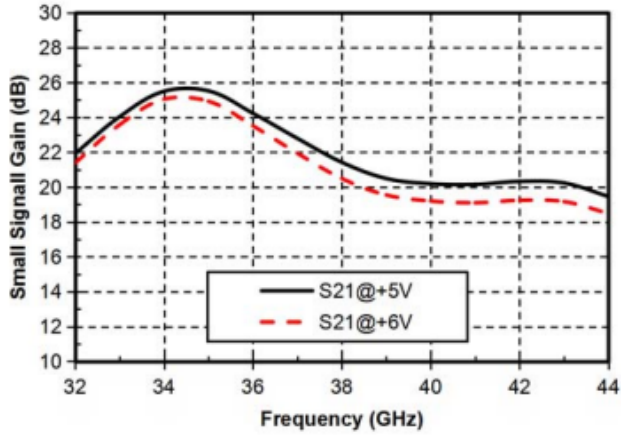
TA = +25°C, Vd = +5V, Ids=210mA

Parameters	Min.	Typ.	Max.	Units
Frequency		32-42		GHz
Small Signal Gain		22		dB
Gain Flatness		±2.5		dB
P1dB		24.5		dBm
Psat		25		dBm
Input Return Loss		13		dB
Output Return Loss		7		dB

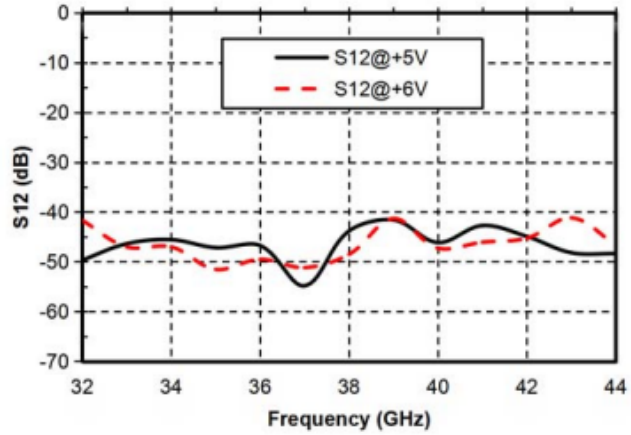
*Adjust Vg during -2V~0V, recommended Vg is around -0.75V.



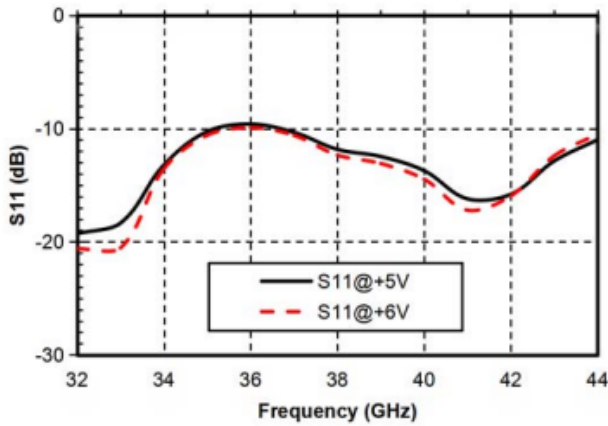
Gain vs. Frequency



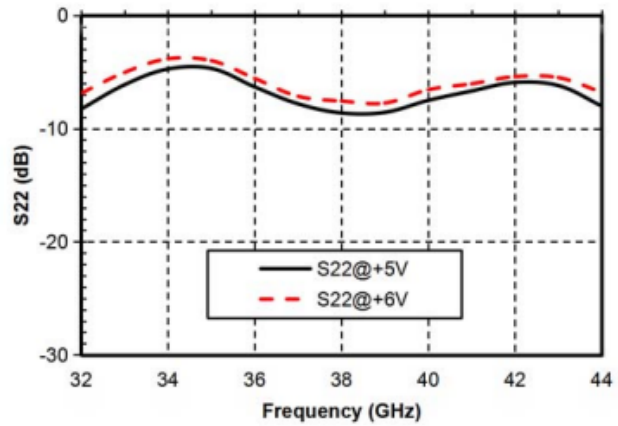
Reverse Isolation vs. Frequency



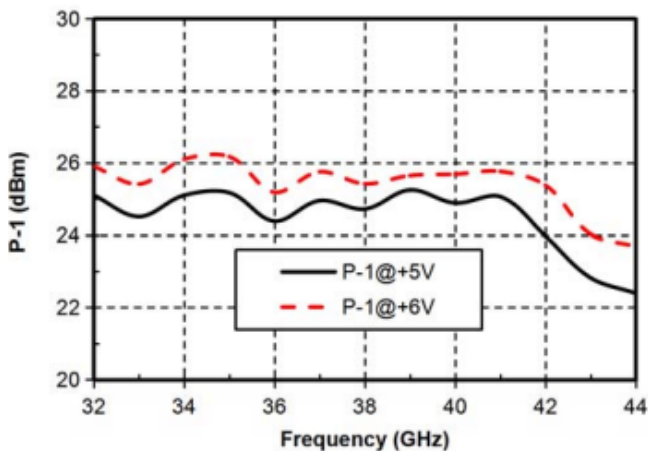
Input Return Loss vs. Frequency



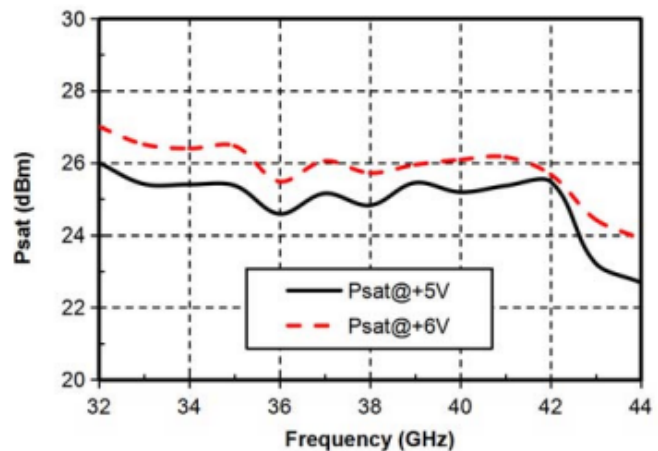
Output Return Loss vs. Frequency



P-1 vs. Frequency

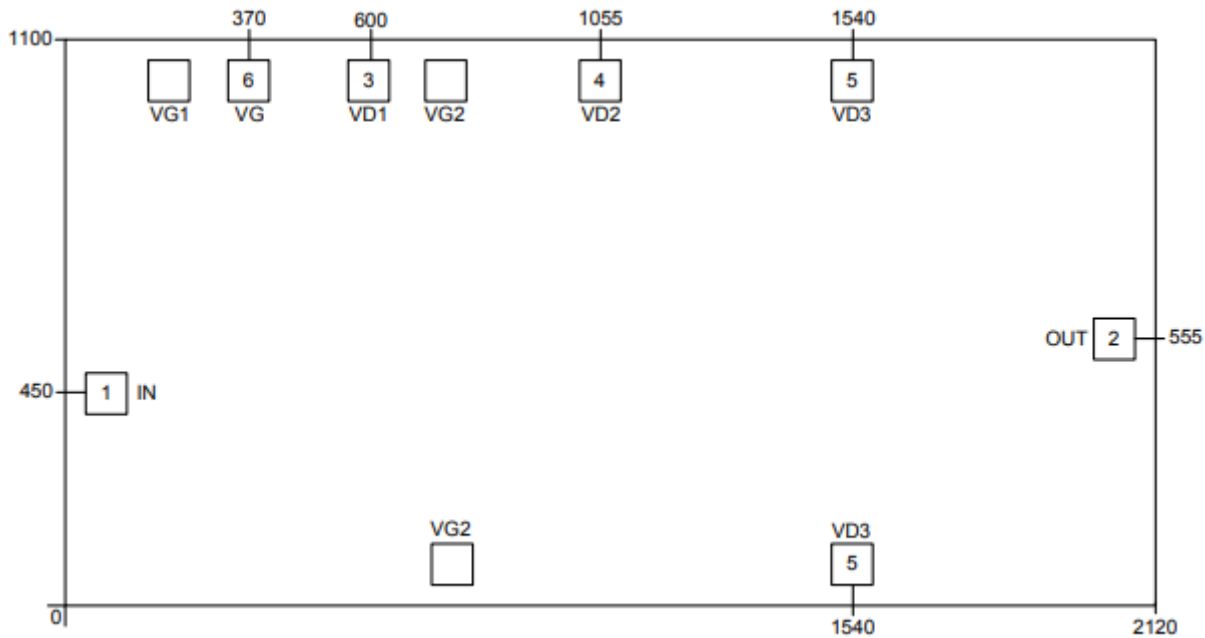


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

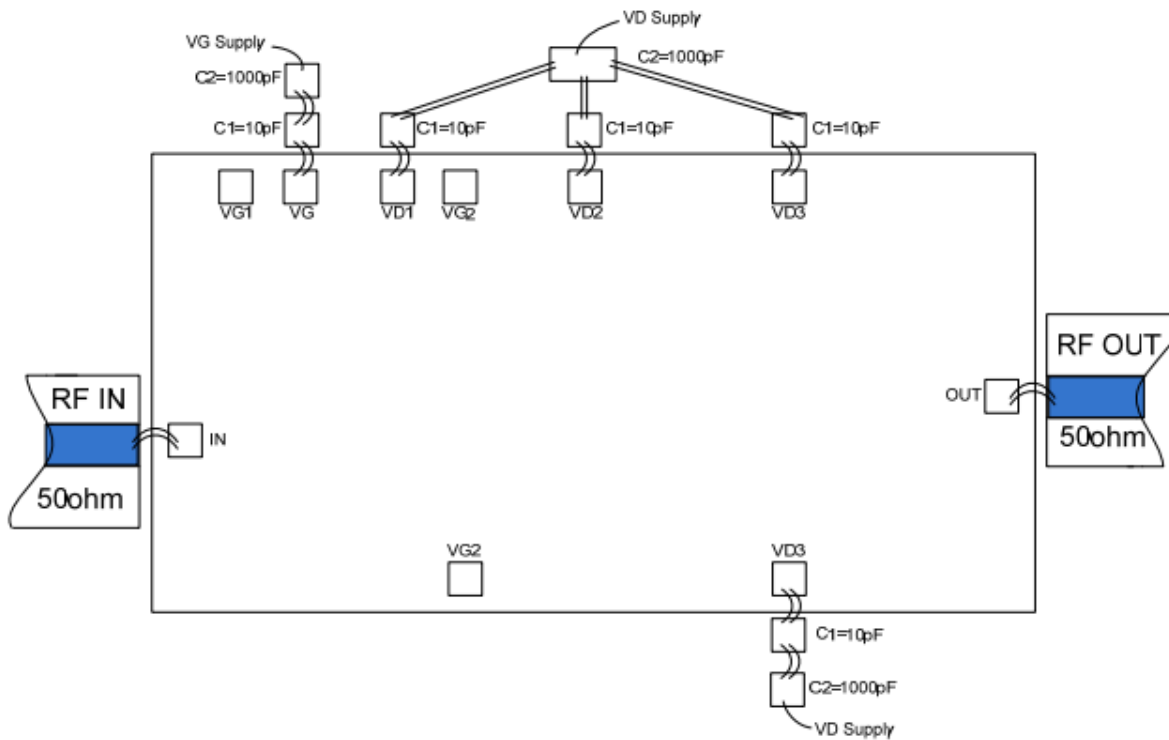


Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required
2	RF OUT	RF signal output terminal, no blocking capacitor required
3-5	Vd1, Vd2, Vd3	Amplifier drain bias, connected to external 10pF, 1000pF bypass capacitor.
6	Vg1	Amplifier gate bias, connected to external 10pF, 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: +7V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C