

Features

- Frequency: 33-37GHz
- Small Signal Gain: 20dB
- P1dB: 33dBm
- Psat: 33dBm
- Power Supply: +6V@1300mA
- Input/Output: 50Ω
- Die Size: 2.35 x 2.91 x 0.1 mm

Typical Applications

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

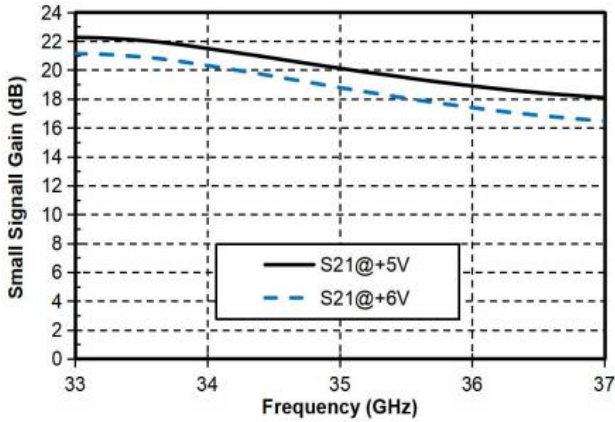

Electrical Specifications

TA = +25°C, Vd = +6V, Vg = -0.7V, Ids=1300mA

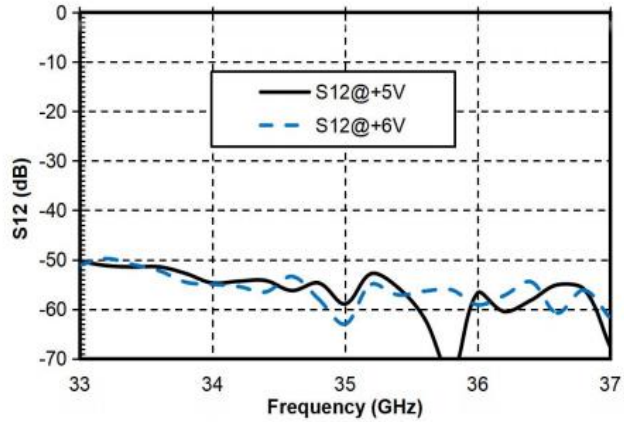
Parameters	Min.	Typ.	Max.	Units
Frequency	33-37			GHz
Small Signal Gain	-	20	-	dB
Gain Flatness	±2.2			dB
P1dB	-	33	-	dBm
Psat	-	33	-	dBm
Input Return Loss	-	16	-	dB
Output Return Loss	-	11.5	-	dB
*By tuning the Vg terminal voltage -2V~0V, the recommended gate voltage is -0.7V.				



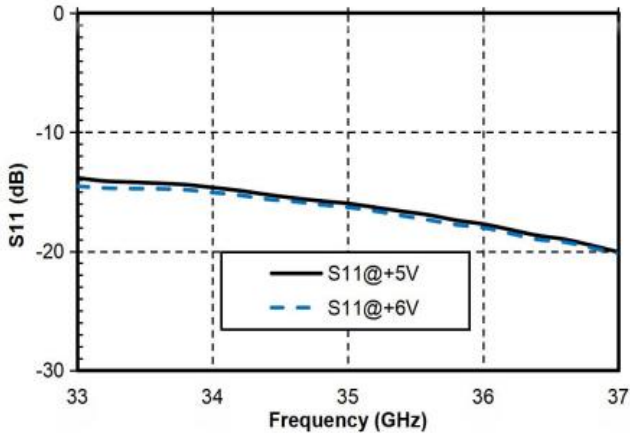
Gain vs. Frequency



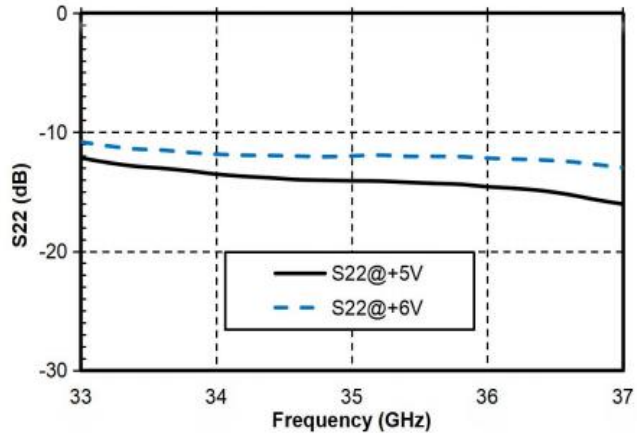
Reverse Isolation vs. Frequency



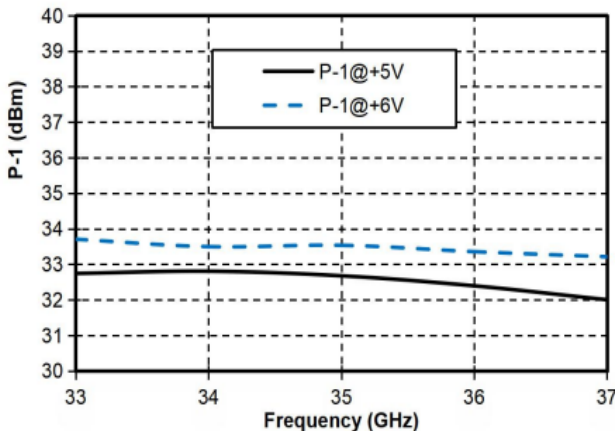
Input Return Loss vs. Frequency



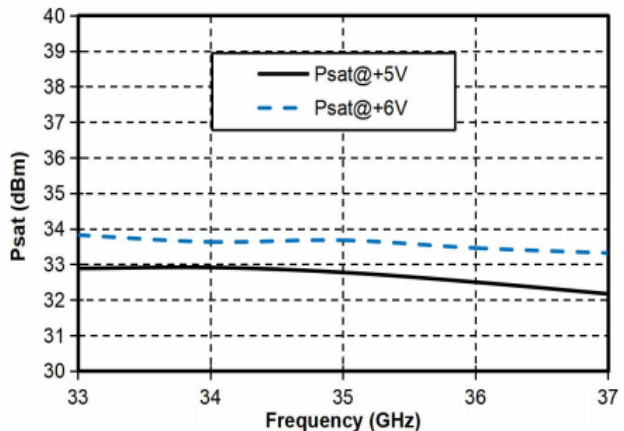
Output Return Loss vs. Frequency



P1dB vs. Frequency

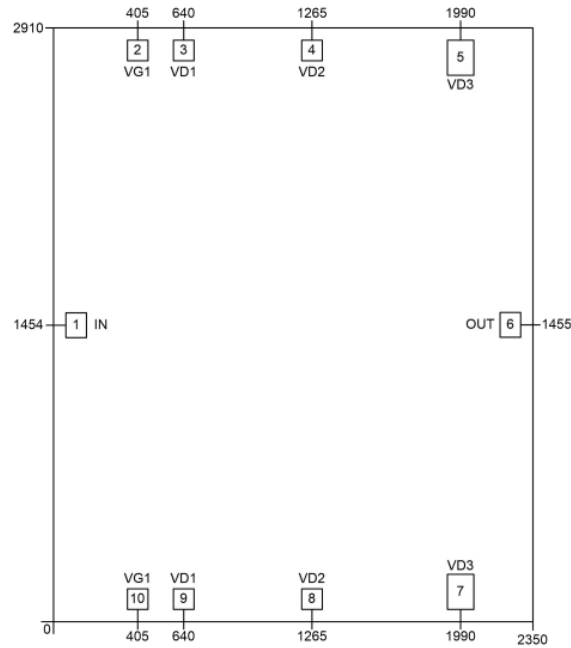


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

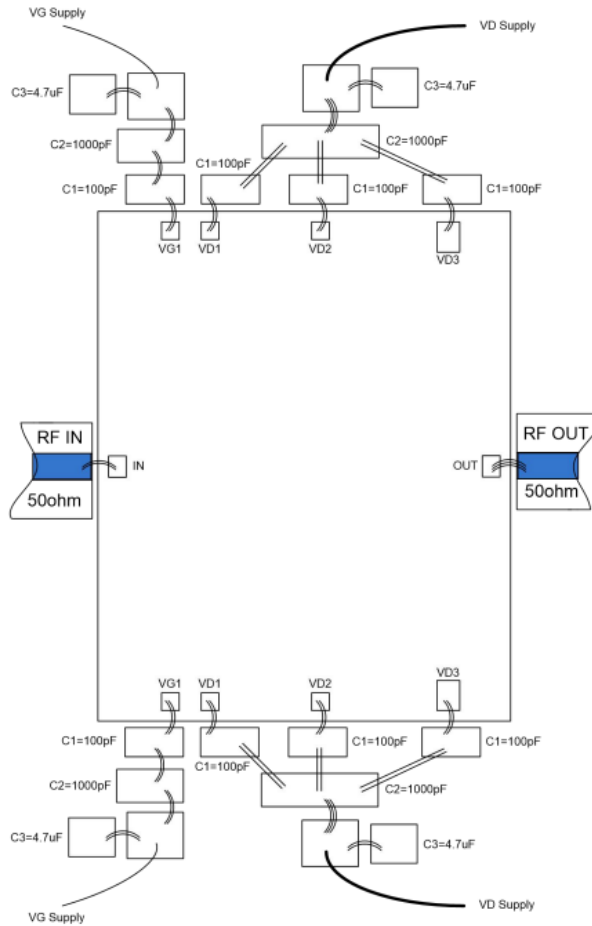


Pad Description

Pad	Function	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit ; no blocking capacitor required.
6	RF OUT	Signal output terminal, connected to 50Ω circuit ; no blocking capacitor required.
3,4,5,7,8,9	Vd1~3	Amplifier drain bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
2,10	Vg1	Amplifier gate bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
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 bias: -3V
3. Maximum input power: +25dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C