

Features

- Frequency: 8-12GHz
- Small Signal Gain: 22dB
- Gain Flatness: ± 0.6 dB
- P-1dB: 33.5dBm
- Psat: 34dBm
- Power Supply: +8V@550mA
- Input/Output: 50 Ω
- Die Size: 2.7 x 2.0 x 0.1 mm

Typical Applications

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

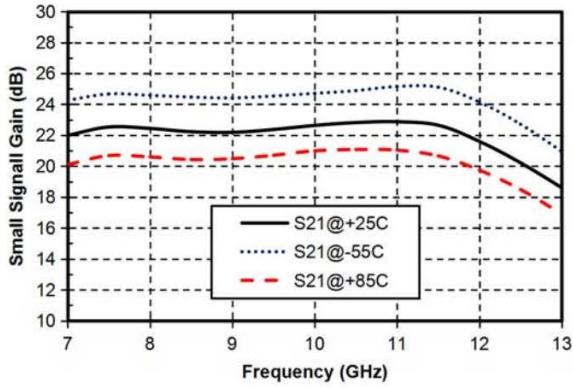
Electrical Specifications

TA = +25°C, Vd = +8V, *Ids=550mA

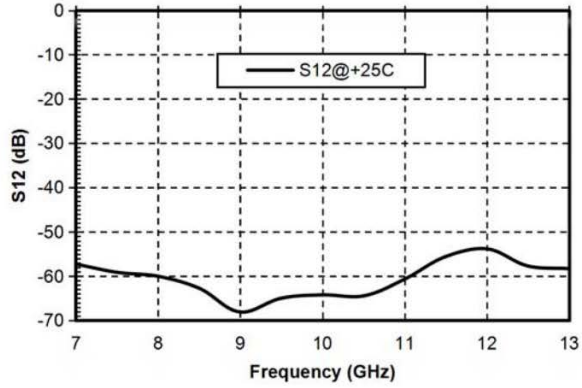
Parameters	Min.	Typ.	Max.	Units
Frequency	8-12			GHz
Small Signal Gain	-	22	-	dB
Gain Flatness	± 0.6			dB
P-1dB	-	33.5	-	dBm
Psat	-	34	-	dBm
Input Return Loss		20		dB
Output Return Loss		10		dB
Quiescent Current		550		mA
* Adjust Vg (-2V-0V), Recommended Vg -0.75V.				



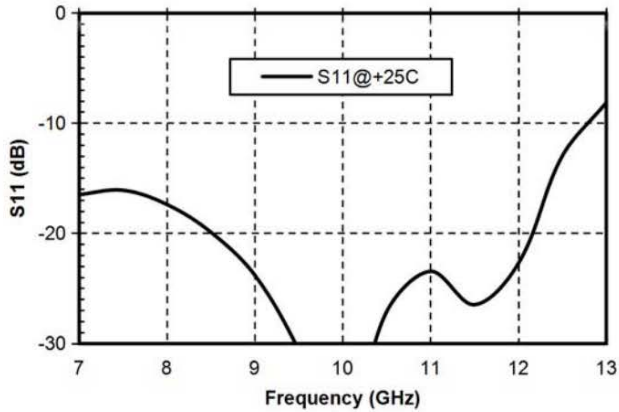
Gain vs. Frequency



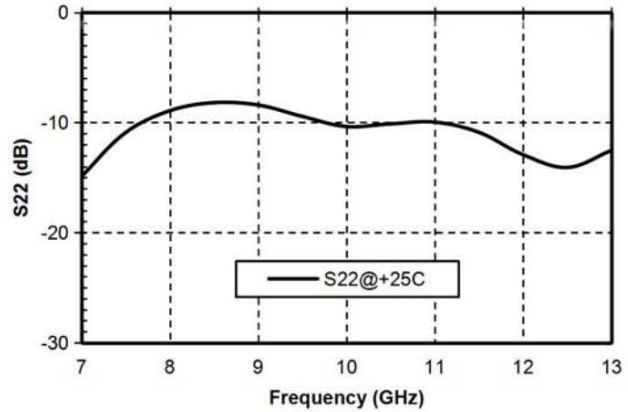
Isolation vs. Frequency



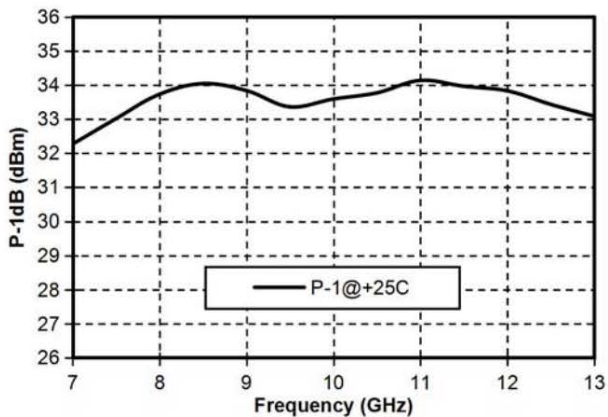
Input Return Loss vs. Frequency



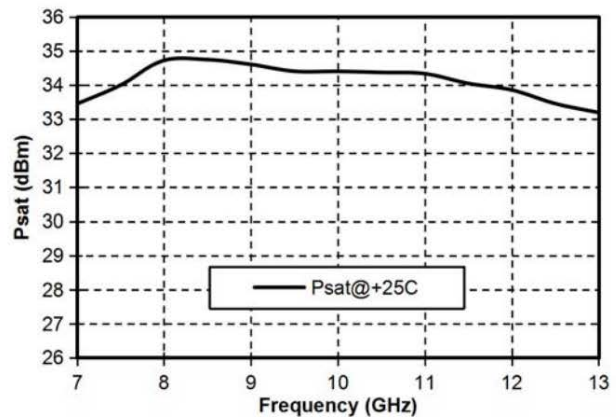
Output Return Loss vs. Frequency



P-1dB vs. Frequency

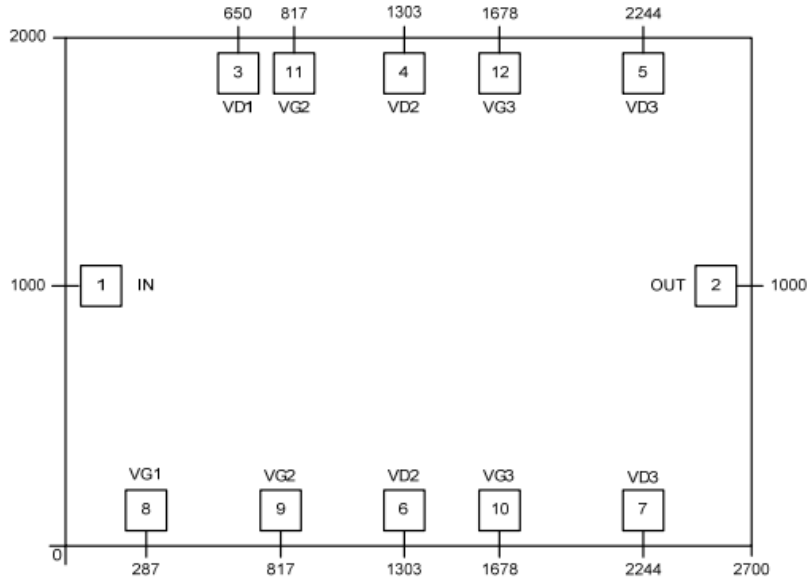


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

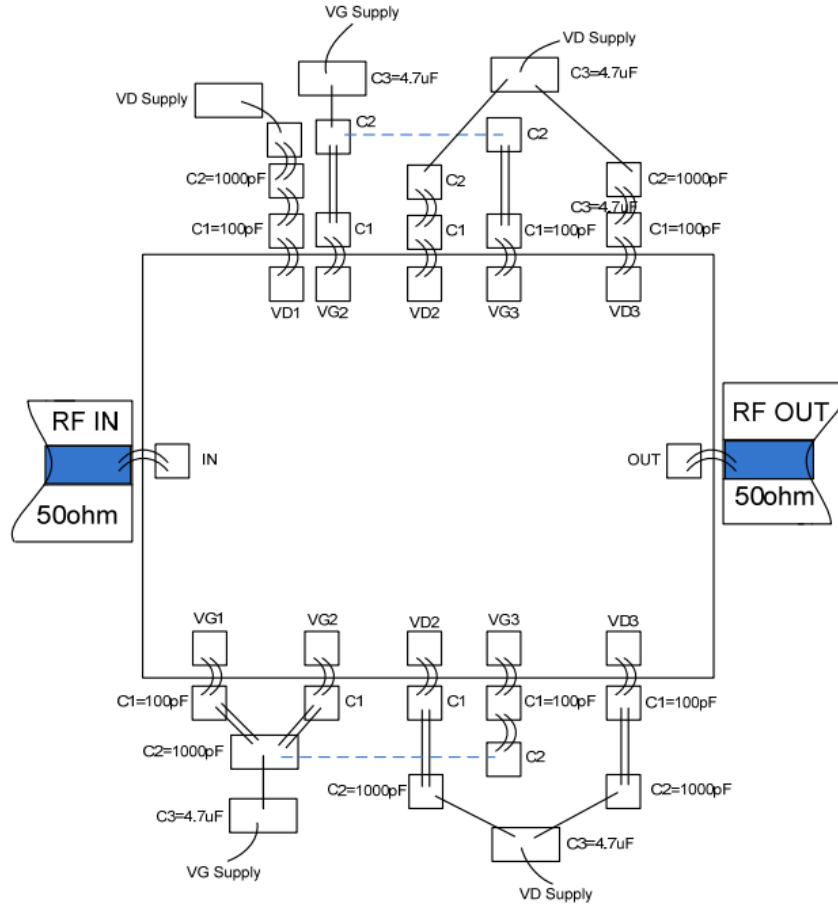


Pad Description

Pad	Function	Description
1	RF IN	Signal input terminal; no blocking capacitor required.
2	RF OUT	Signal output terminal; no blocking capacitor required.
3, 4, 5, 6, 7	Vd1, Vd2	Amplifier drain bias; external 100pF, 1000pF, 4.7uF bypass capacitor required.
8, 9, 10, 11, 12	Vg1, Vg2	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



Note:

- C1 100pF
- C2 1000pF
- C3 4.7uF

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: +10V
2. Maximum input power: +25dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C