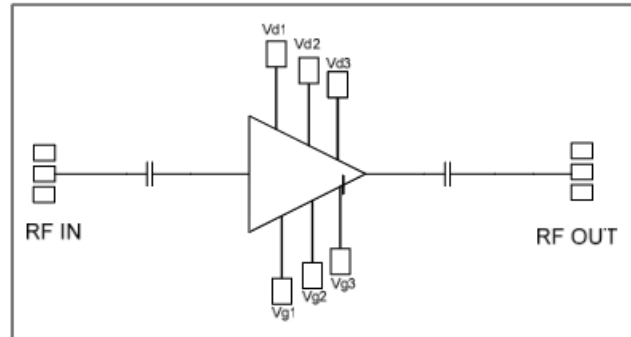


Features

- Frequency: 8-12GHz
- Small Signal Gain: 24.5dB
- Gain Flatness: ± 1.0 dB
- P1dB: 28dBm
- Psat: 28.5dBm
- Power Supply: +8V @ 135mA
- Input/Output: 50 Ω
- Die Size: 2.53 x 1.52 x 0.1 mm

Functional Block Diagram

Typical Applications

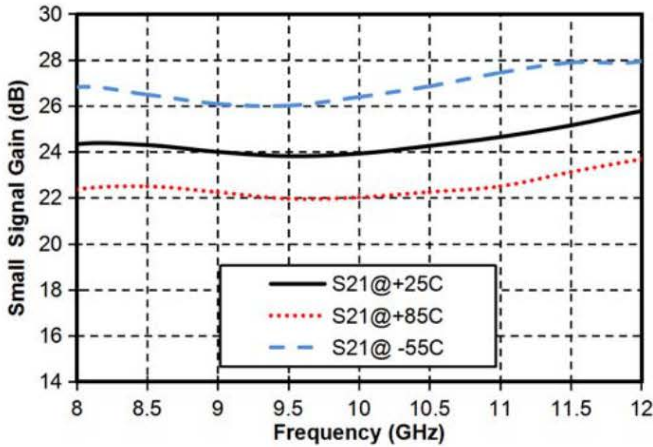
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications
TA = +25°C, Vd = +5V, Ids=135mA

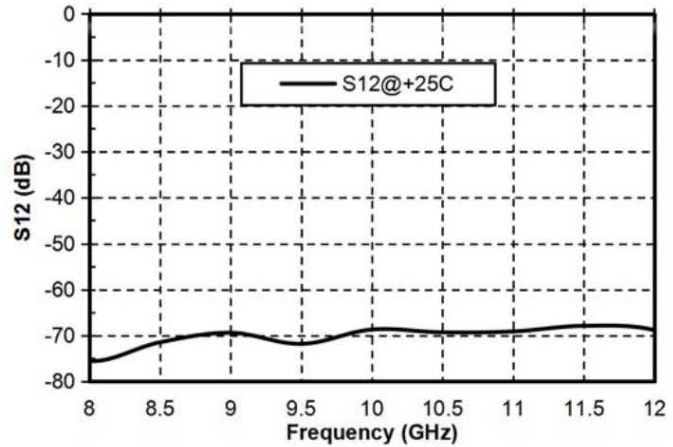
Parameters	Min.	Typ.	Max.	Units
Frequency		8-12		GHz
Small Signal Gain	23.5	24.5	25.5	dB
Gain Flatness		± 1.0		dB
P1dB		28		dBm
Psat		28.5		dBm
Input Return Loss		24		dB
Output Return Loss		10		dB
Quiescent Current		135		mA
Efficiency		34~40		%

By tuning Vg terminal voltage -2V~0V, Vg terminal voltage recommended -0.9V.

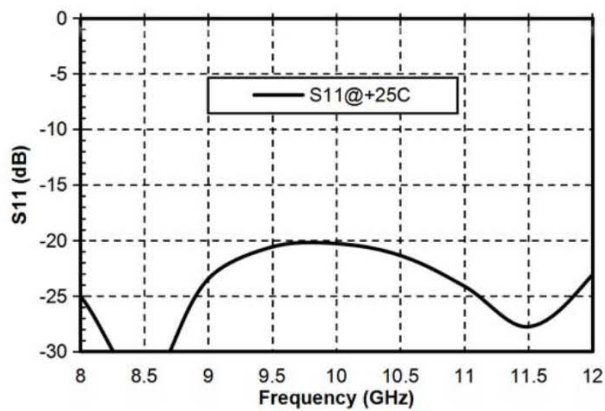
Gain vs. Frequency



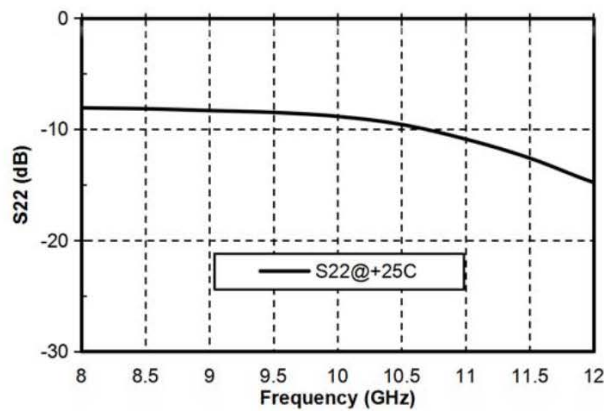
Reverse Isolation vs. Frequency



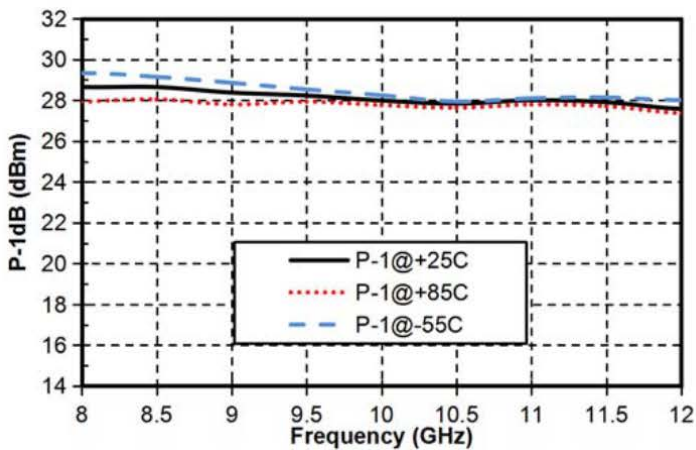
Input Return Loss vs. Frequency



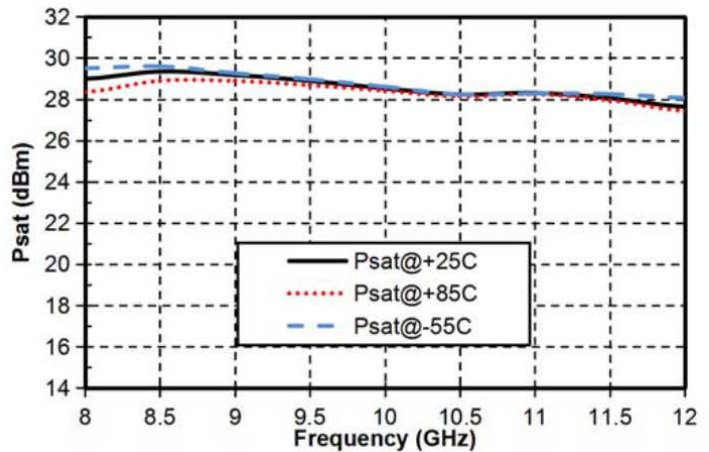
Output Return Loss vs. Frequency



P-1dB vs. Frequency

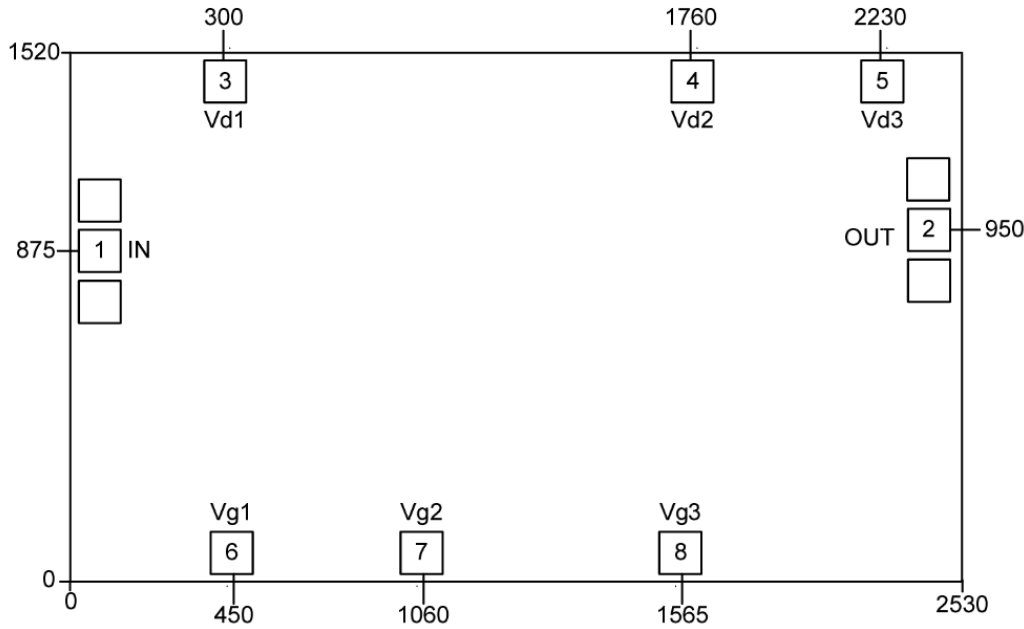


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

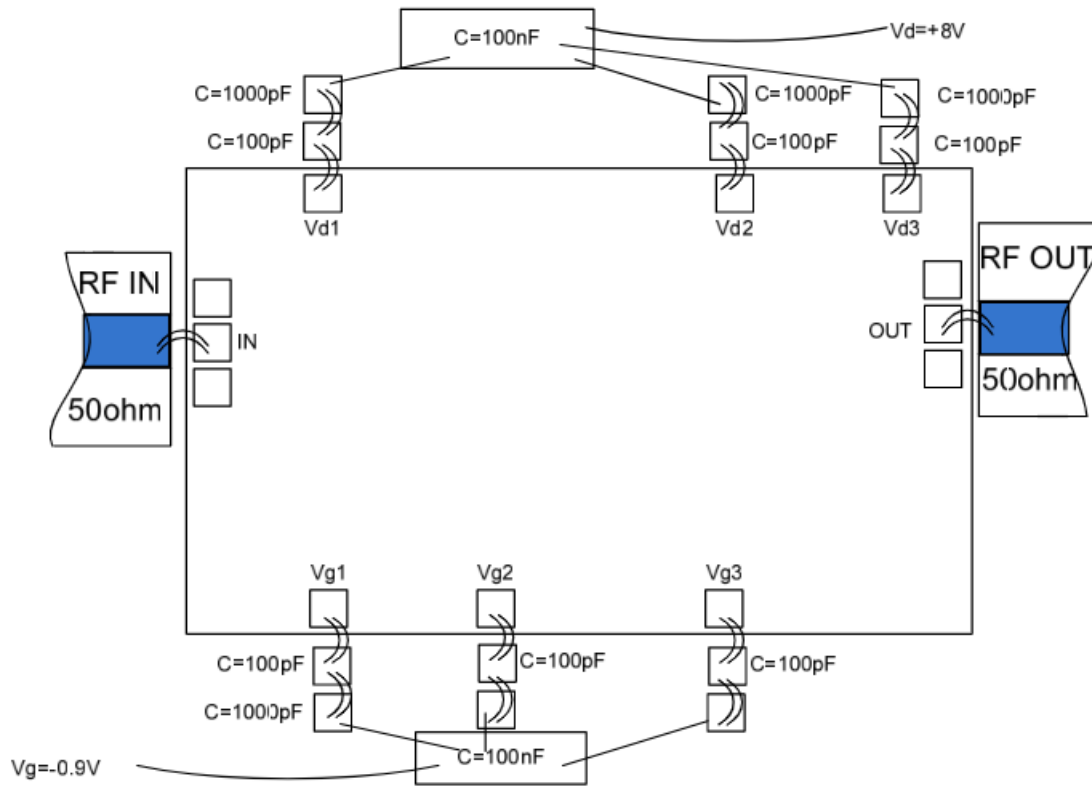


Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, no blocking capacitor required
2	RF OUT	RF signal output terminal, no blocking capacitor required
3,4,5	Vd1,Vd2,Vd3	Amplifier drain bias, connected to external 100pF 1000pF 100nF bypass capacitor.
6,7,8	Vg1,Vg2,Vg3	Amplifier gate bias, connected to external 100pF 1000pF 100nF 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 μm²
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: +12V
2. Maximum input power: +25dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C