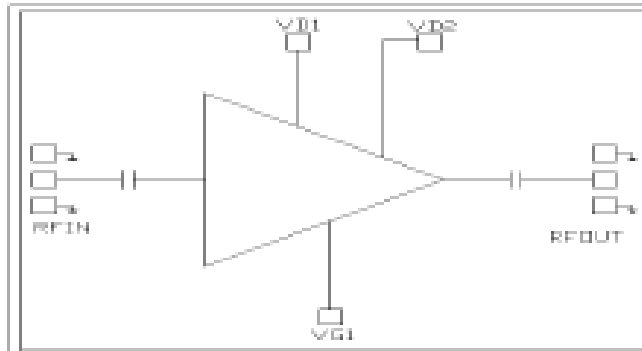


Features

- Frequency: 29-31GHz
- Small Signal Gain: 15dB
- P1dB: 26dBm
- Psat: 26.5dBm
- Power Supply: +5.5V/290mA
- Input/Output: 50Ω
- Die Size: 2.0 x 1.2 x 0.1 mm

Functional Block Diagram

Typical Applications

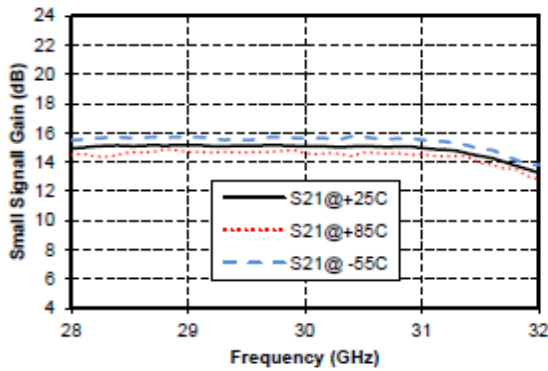
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

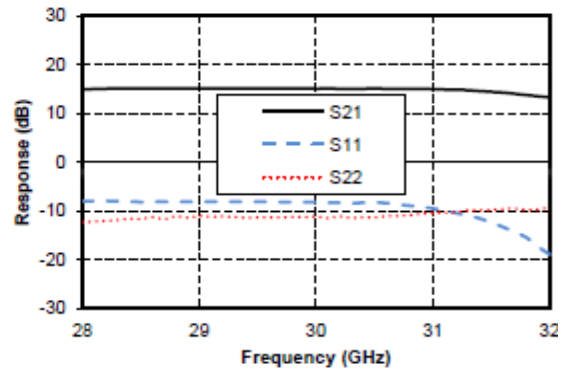
TA = +25°C, Vd = +5.5V

Parameters	Min.	Typ.	Max.	Units
Frequency	29-31			GHz
Small Signal Gain	14.9	15	15.1	dB
Gain Flatness		±0.1		dB
Output 1dB Compression (P1dB)	25.9	26	26.3	dBm
Saturated Output Power (Psat)	26.4	26.5	26.8	dBm
Input Return Loss		8		dB
Output Return Loss		11		dB
Static Current		290		mA
* Adjust VG (-2V-0V) to obtain device current of 290mA.				

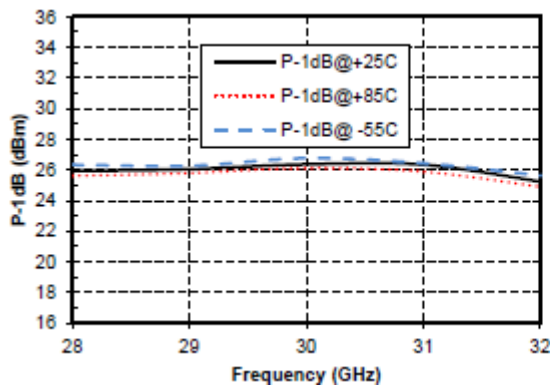
Gain vs. Frequency



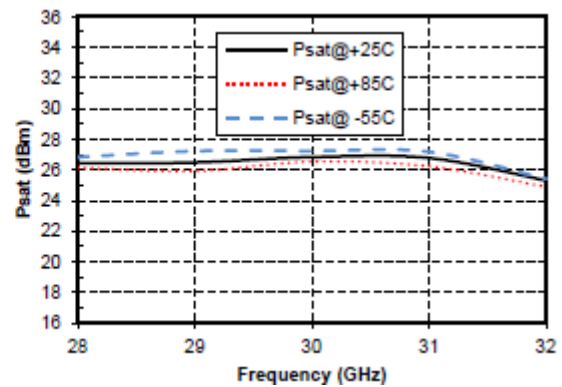
Gain&Return Loss vs. Frequency



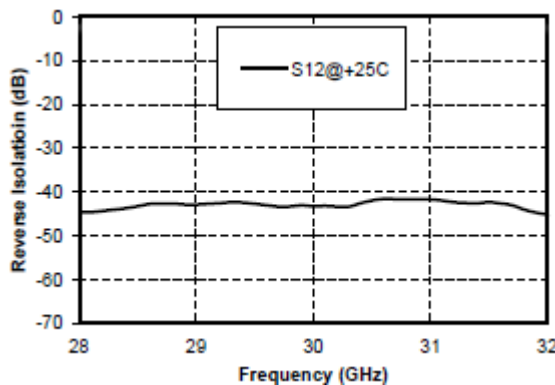
P1dB vs. Frequency



Psat vs. Frequency

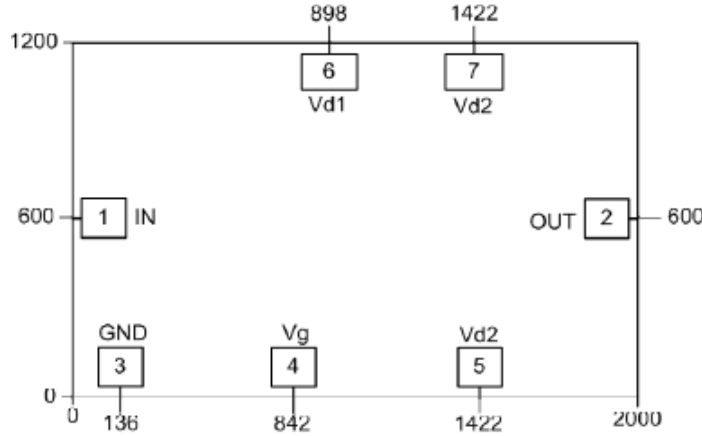


Reverse Isolation vs. Frequency





Outline Drawing:
All Dimensions in μm

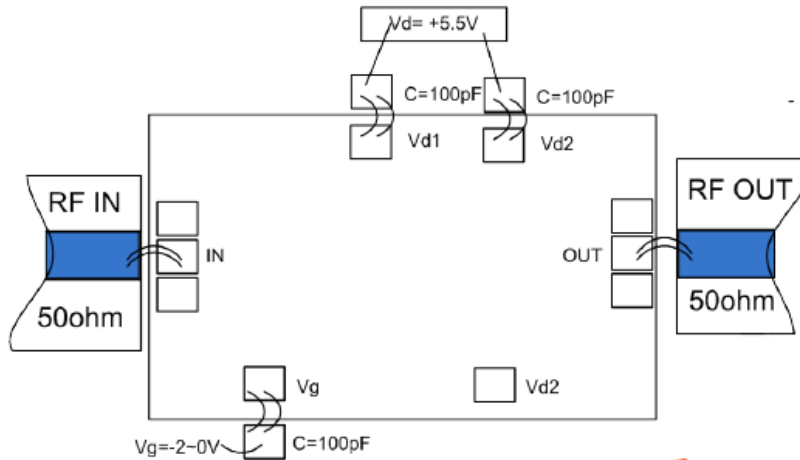


Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal; no blocking capacitor required.	
2	RF OUT	RF signal output terminal; no blocking capacitor required.	
6	Vd1	Amplifier drain bias; external 100pF bypass capacitor required.	
5, 7	Vd2	Amplifier drain bias; external 100pF bypass capacitor required.	
4	Vg	Amplifier gate bias; external 100pF bypass capacitor required.	
3	GND	Ground point for probe test.	
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 gate bias: -3V
3. Maximum input power: +18dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C