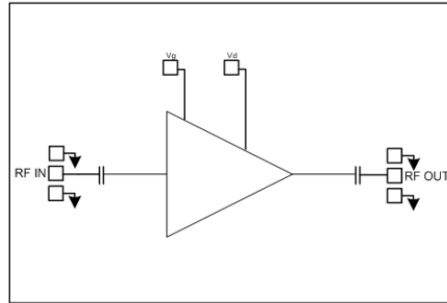


Features

- Frequency: 27-31GHz
- Small Signal Gain: 27dB
- P1dB: 23dBm
- Psat: 24dBm
- Power Supply: +5V/120mA
- Input/Output: 50Ω
- Die Size: 1.75 x 0.8 x 0.1 mm

Functional Block Diagram

Typical Applications

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

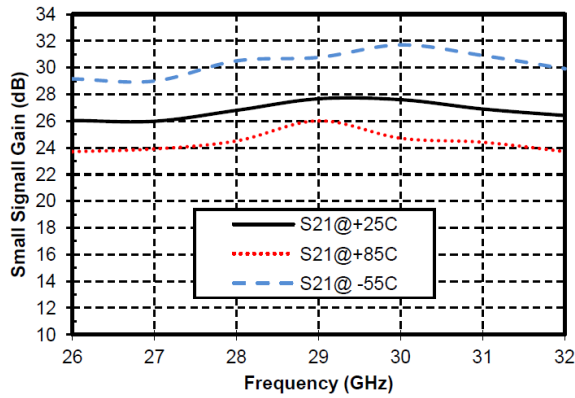
Electrical Specifications

TA = +25°C, Vd = +5V

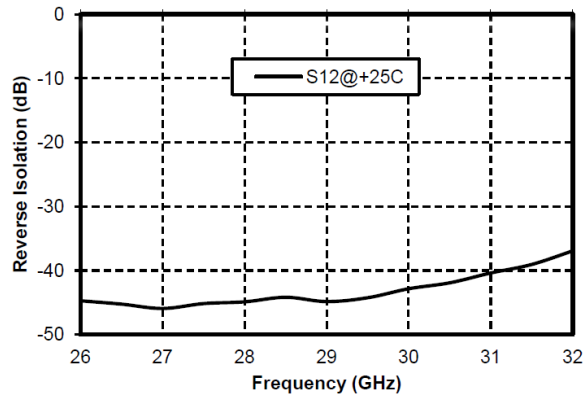
Parameters	Min.	Typ.	Max.	Units
Frequency	27-31			GHz
Small Signal Gain	26.5	27	27.5	dB
Gain Flatness		±0.5		dB
Output 1dB Compression (P1dB)	22.5	23	23.5	dBm
Saturated Output Power (Psat)	23.5	24	24.5	dBm
Input Return Loss	11	14		dB
Output Return Loss	11	15		dB

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

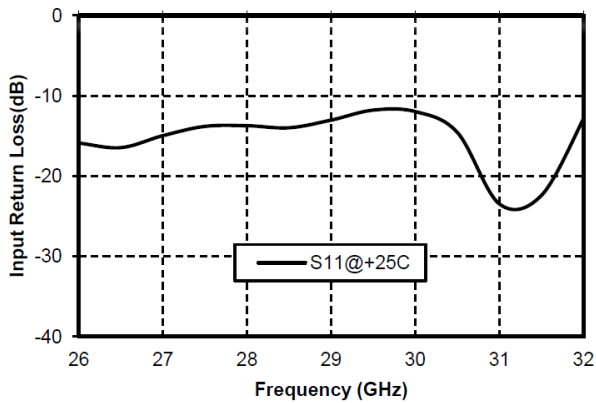
Gain vs. Frequency



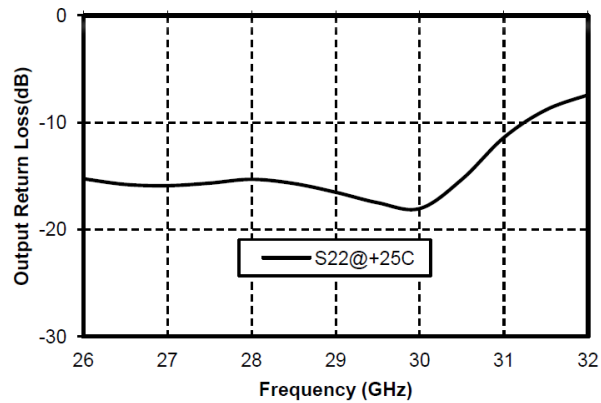
Reverse Isolation vs. Frequency



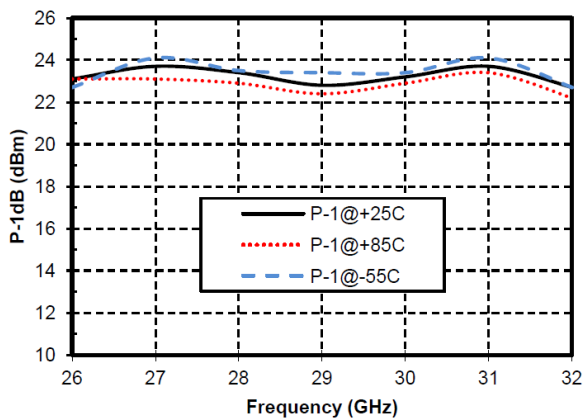
Input Return Loss vs. Frequency



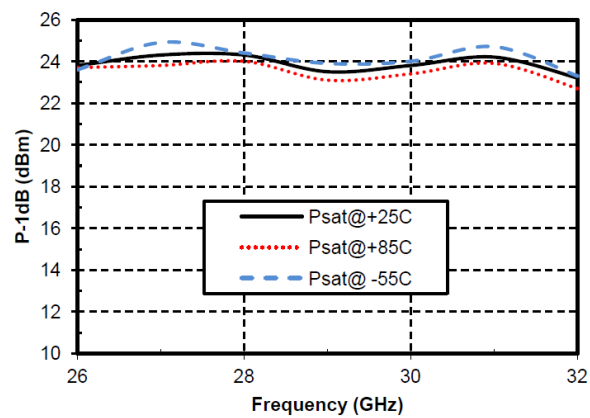
Output Return Loss vs. Frequency



P-1dB vs. Frequency

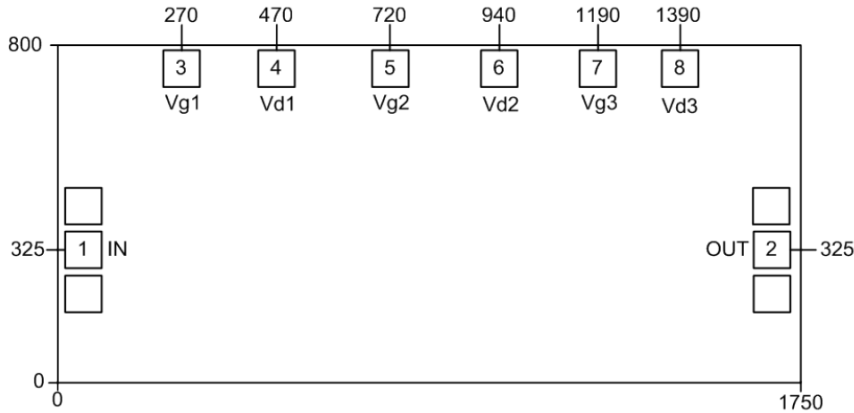


Psat vs. Frequency





Outline Drawing: All Dimensions in um

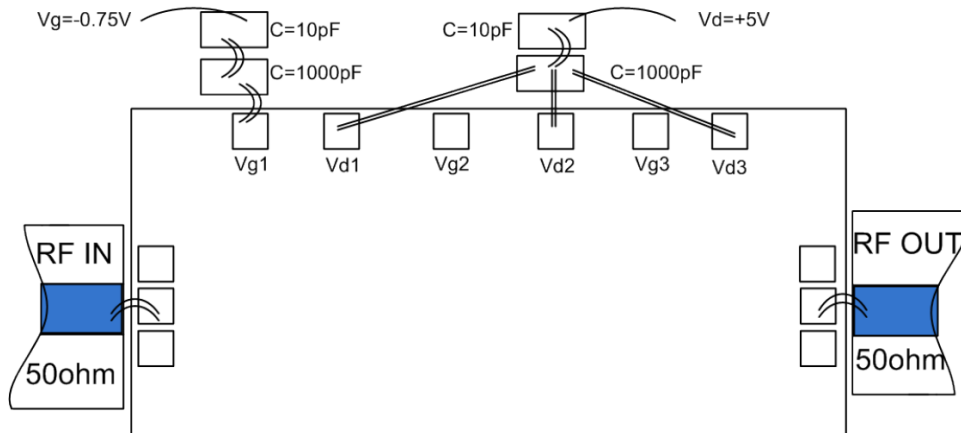


Pad Description

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
4,6,8	VD1~3	Amplifier drain bias, connected to external 10pF and 1000pF bypass capacitor.
3	VG	Amplifier gate bias, connected to external 10pF and 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 gate voltage: -3V
3. Maximum input power: +20dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C