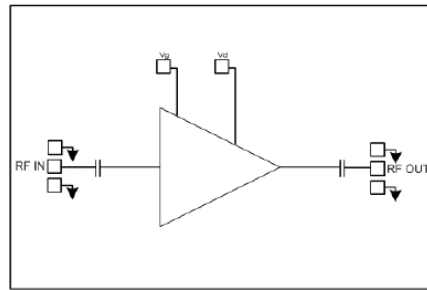


Features

- Frequency: 15-50GHz
- Small Signal Gain: 18.5dB
- P1dB: 18.5dBm
- Psat: 19.5dBm
- Power Supply: +5V/190mA
- Input/Output: 50Ω
- Die Size: 1.9 x 1.25 x 0.1 mm

Functional Block Diagram

Typical Applications

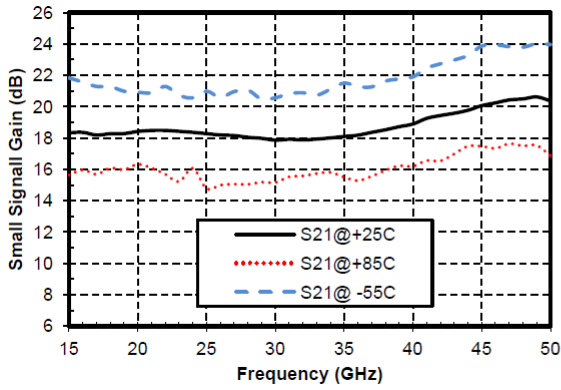
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

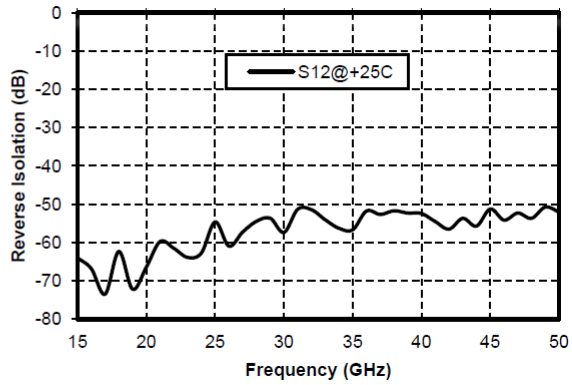
TA = +25°C, Vd = +5V, Ids=190mA

Parameters	Min.	Typ.	Max.	Units
Frequency	15-50			GHz
Small Signal Gain	17.5	18.5	20.5	dB
Gain Flatness		±1.5		dB
Output 1dB Compression (P1dB)	16.5	18.5	20	dBm
Saturated Output Power (Psat)	17.5	19.5	21	dBm
Input Return Loss	12	16		dB
Output Return Loss	11.5	18		dB

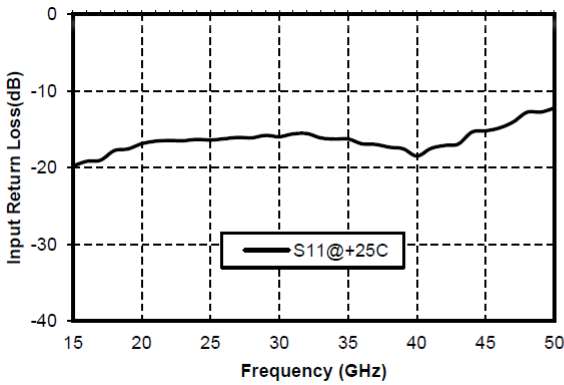
Gain vs. Frequency



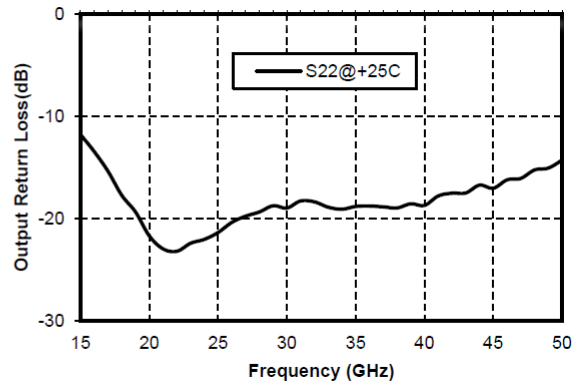
Reverse Isolation vs. Frequency



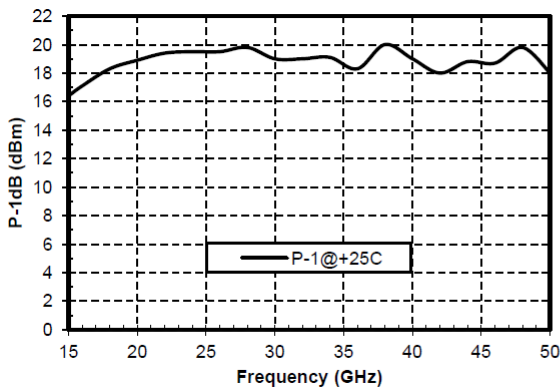
Input Return Loss vs. Frequency



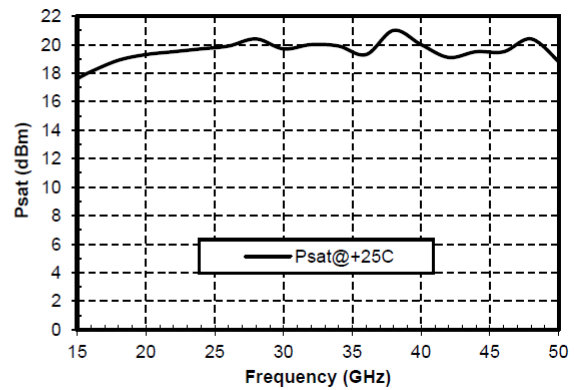
Output Return Loss vs. Frequency



P-1dB vs. Frequency

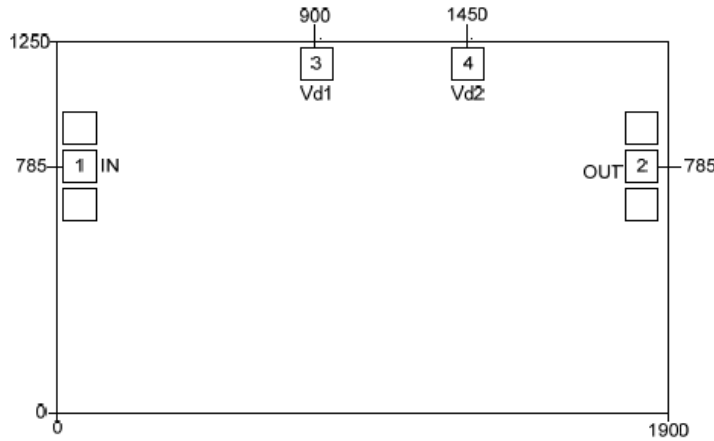


Psat vs. Frequency





Outline Drawing: All Dimensions in μm

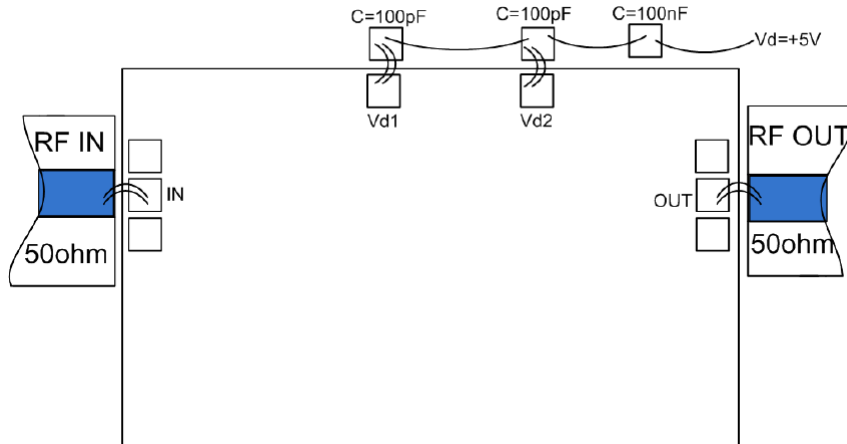


Pad Description

PAD	Function	Description
1	RF IN	RF signal input terminal, connect to 50Ω, no blocking capacitor required
2	RF OUT	RF signal output terminal, connect to 50Ω, no blocking capacitor required
3,4	VD1, VD2	Amplifier drain bias, connected to external 100pF and 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 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 input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C