

Features

- Frequency: 6-18GHz
- Small Signal Gain: 21.5dB
- Gain Flatness: ± 0.75 dB
- P-1dB: 24.5dBm
- Psat: 25dBm
- Power Supply: +5V @ 220mA
- Input/Output: 50 Ω
- Die Size: 2.3 x 1.5 x 0.1 mm

Typical Applications

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

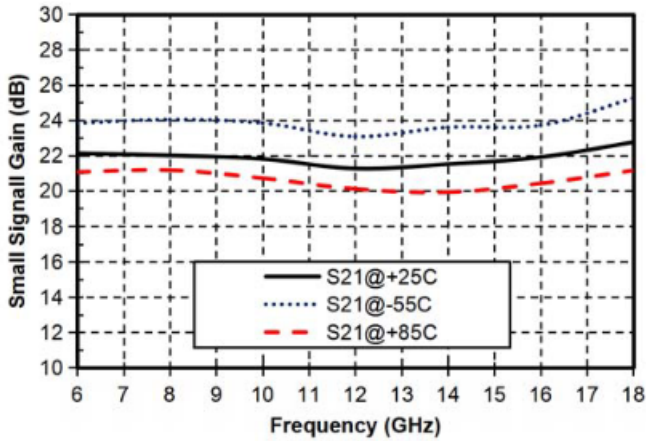
Electrical Specifications

TA = +25°C, Vd = +5V

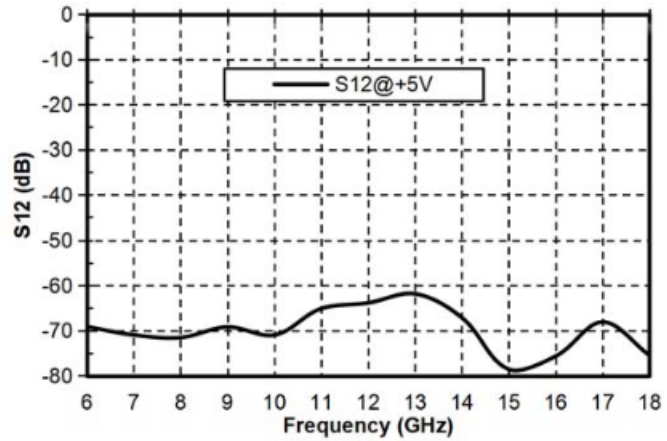
Parameters	Min.	Typ.	Max.	Units
Frequency		6-18		GHz
Small Signal Gain	21	21.5	22.5	dB
Gain Flatness		± 0.75		dB
Reverse Isolation		69		dB
P1dB		24.5		dBm
Psat		25.5		dBm
Input Return Loss	15	18		dB
Output Return Loss	12	16		dB
Quiescent Current		220		mA

By tuning the Vg terminal voltage -2V~0V, the recommended gate voltage is -0.8V.

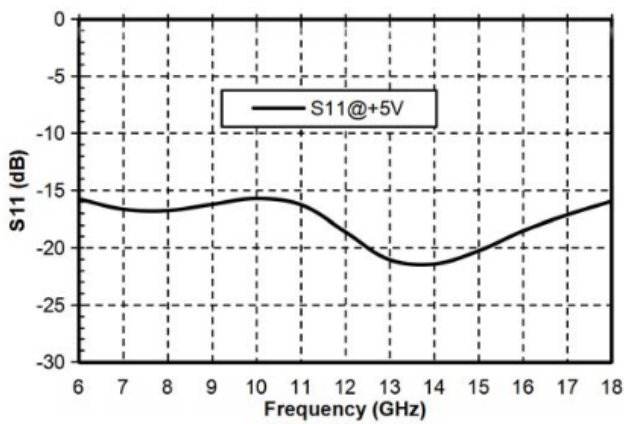
Gain vs. temperature



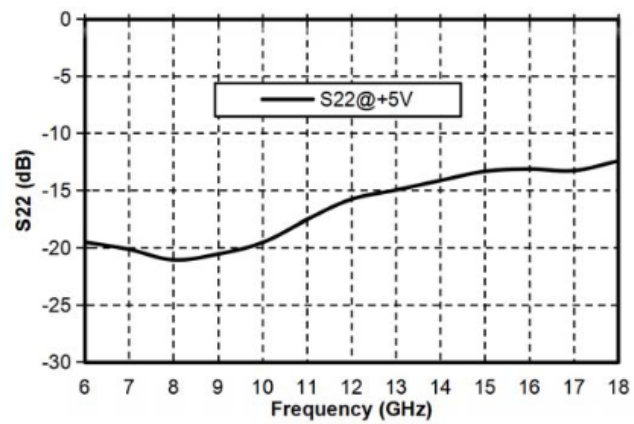
Reverse Isolation vs. voltage



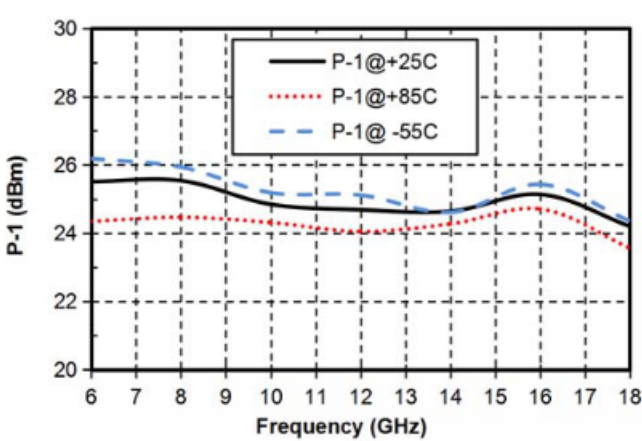
Input Return Loss vs. Frequency



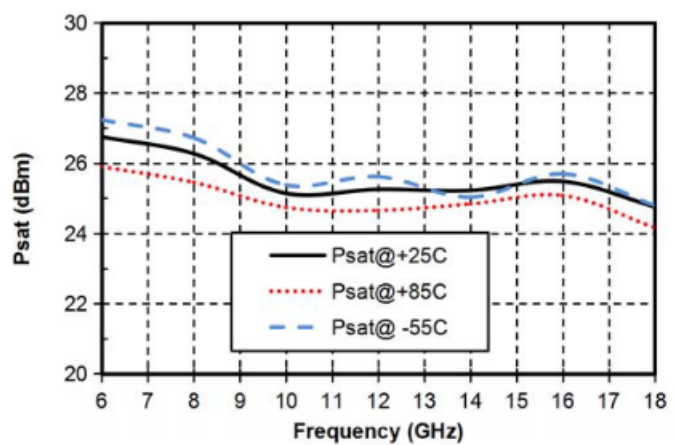
Output Return Loss vs. Frequency



P-1dB vs. Frequency

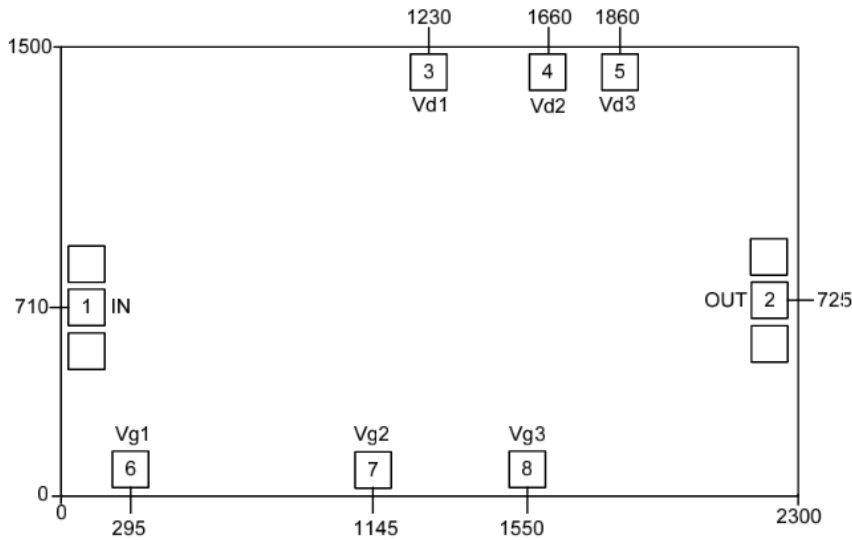


Psat vs. Frequency





Outline Drawing:
All Dimensions in μm

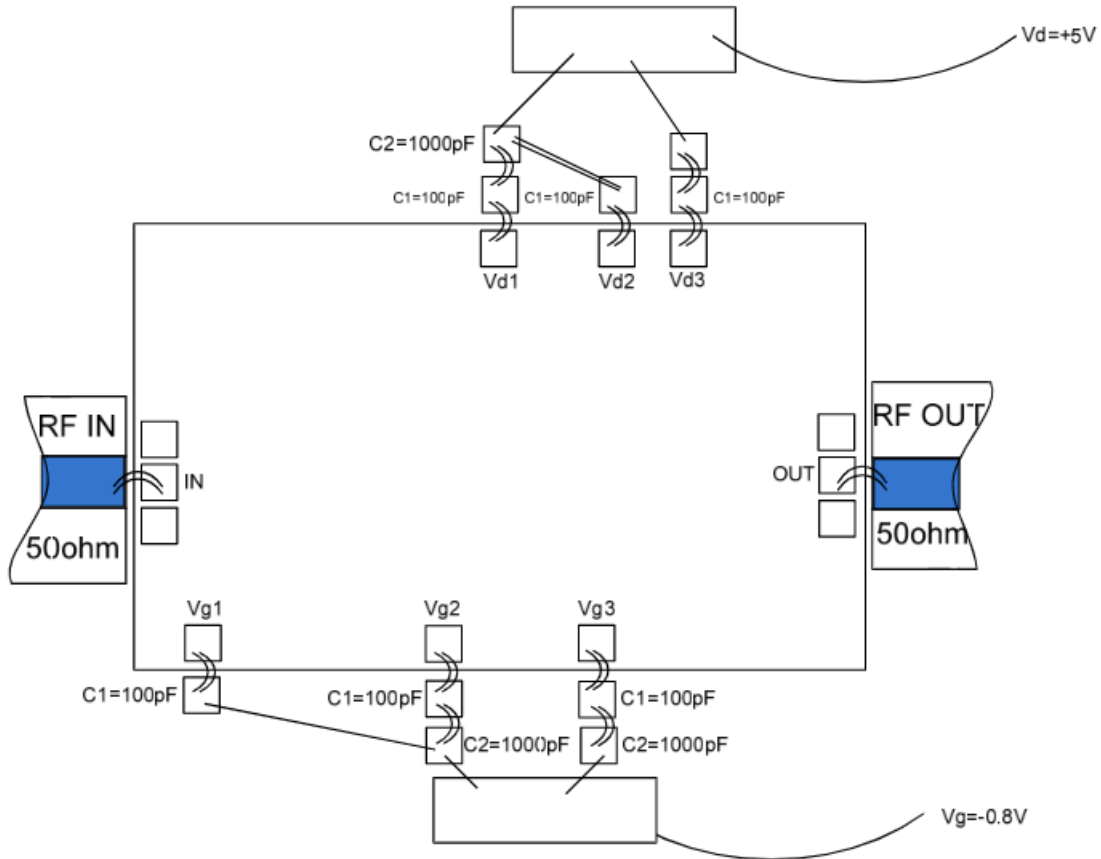


Pad Description

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 bypass capacitor.
6, 7, 8	Vg1,Vg2,Vg3	Amplifier gate bias, connected to external 100pF 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: +8V
2. Maximum input power: +20dBm
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C