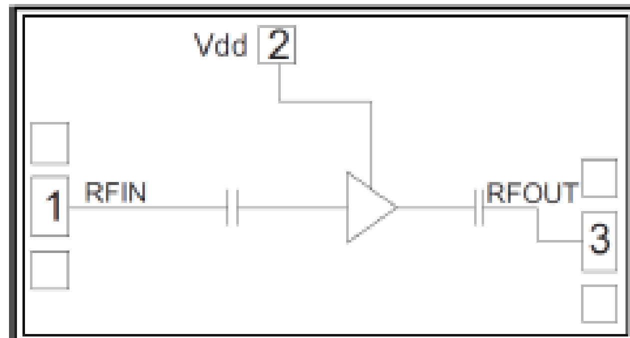
GaAs MMIC
Driver Amplifier
6-18GHz

Features

- Single Biasing Voltage (Self Biased)
- Frequency: 6-18GHz
- Small Signal Gain: 19.5dB
- Gain Flatness: ≤±0.5dB
- P1dB: 21dBm
- Psat: 22dBm
- Power Supply: +5V/130mA
- Input/Output: 50Ω
- Die Size: 1.65 x 1.15 x 0.1 mm

Functional Block Diagram



Typical Applications

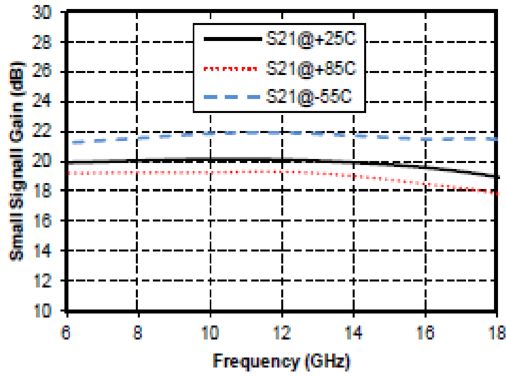
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

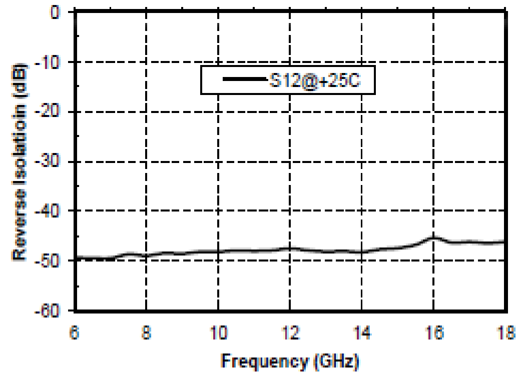
TA = +25ºC, Vd = +5V

Parameters	Min.	Typ.	Max.	Units
Frequency		6-18		GHz
Small Signal Gain	19	19.5	20	dB
Gain Flatness		±0.5		dB
Output 1dB Compression (P1dB)	21	21	21.5	dBm
Saturated Output Power (Psat)	21.5	22	22.5	dBm
Input Return Loss	17	22	-	dB
Output Return Loss	12	15	-	dB
Static Current		130		mA

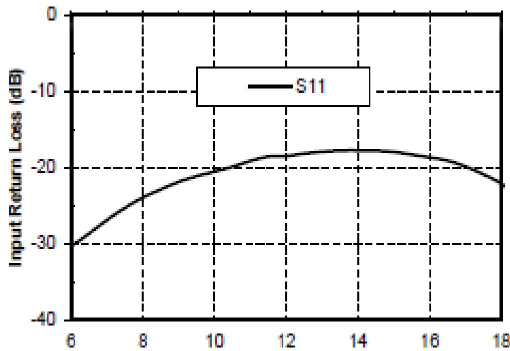
Gain vs. Frequency



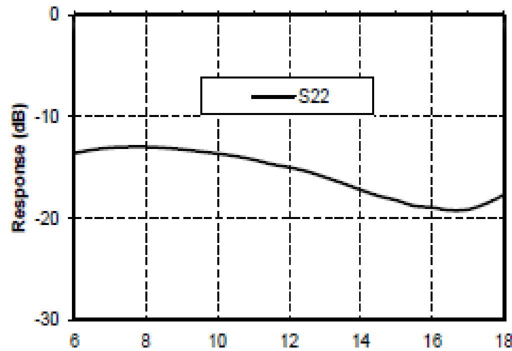
Reverse Isolation vs. Frequency



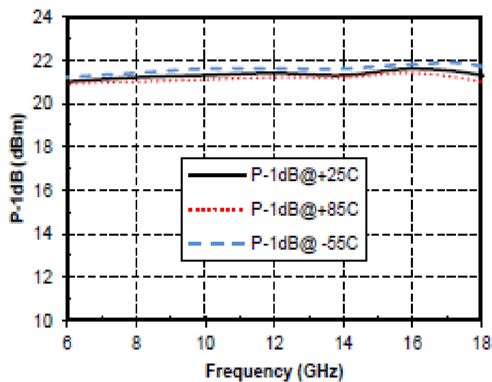
Input Return Loss vs. Frequency



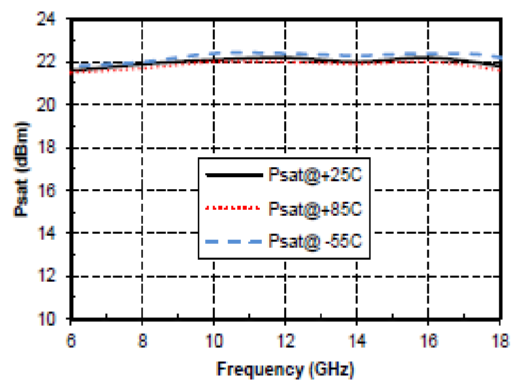
Output Return Loss vs. Frequency



P1dB vs. Frequency

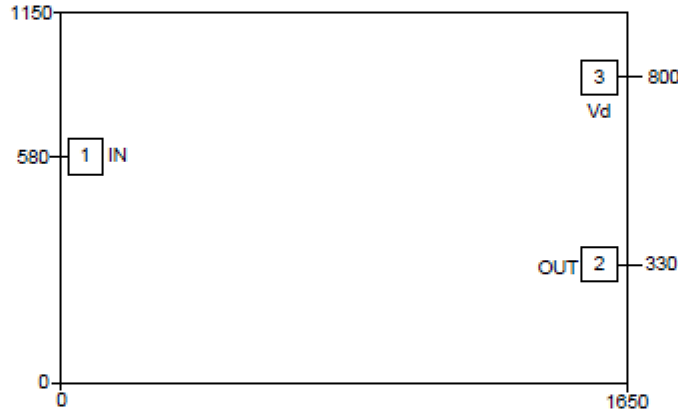


Psat vs. Frequency



Outline Drawing:

All Dimensions in µm



Pad Description

Pad	Function	Description	Equivalent Circuit
1	RF IN	RF signal input terminal; no blocking capacitor required.	RF IN
2	RF OUT	RF signal output terminal; no blocking capacitor required.	RF OUT
3	Vd	Amplifier drain bias; external 100pF bypass capacitor required.	Vdd
Die bottom	GND	Die bottom must be connected to RF/DC ground.	GND

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
4. Operating temperature: -55℃ to +85℃
5. Storage temperature: -65℃ to +150℃