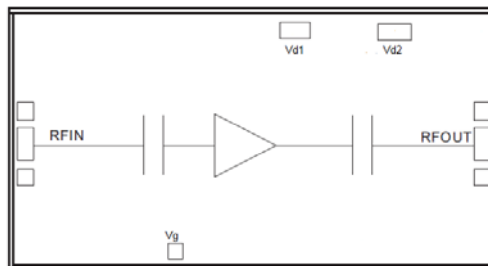


**Features**

- Frequency: 2-6GHz
- Small Signal Gain: 20dB
- P-1dB: 31.5dBm
- Psat: 32dBm
- Power Supply: +8V@365mA
- Input/Output: 50Ω
- Die Size: 2.53 x 1.84 x 0.1 mm

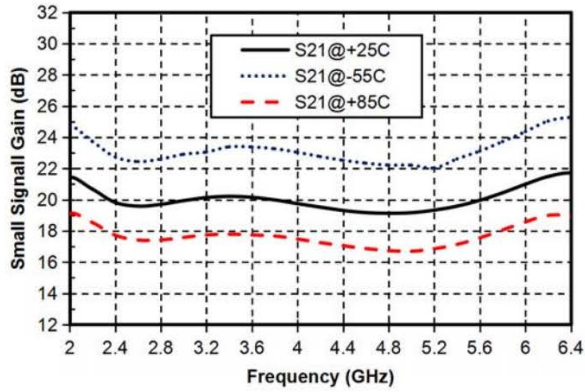
**Functional Block Diagram**

**Typical Applications**

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

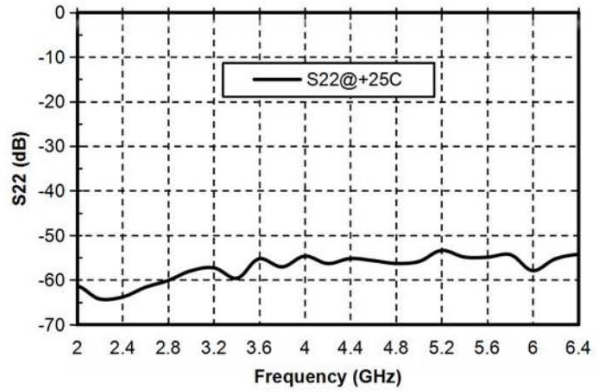
**Electrical Specifications**
**TA = +25°C, Vd = +8V, Vg=-0.65V, Ids=365mA**

Parameters	Min.	Typ.	Max.	Units
<b>Frequency</b>	<b>2-6</b>			<b>GHz</b>
<b>Small Signal Gain</b>	-	<b>20</b>	-	<b>dB</b>
<b>Gain Flatness</b>	<b>±1.1</b>			<b>dB</b>
<b>P-1dB</b>	-	<b>31.5</b>	-	<b>dBm</b>
<b>Psat</b>	-	<b>32</b>	-	<b>dBm</b>
<b>PAE</b>		<b>40</b>		<b>%</b>
<b>Input Return Loss</b>	-	<b>22</b>	-	<b>dB</b>
<b>Output Return Loss</b>	-	<b>8.5</b>	-	<b>dB</b>
<b>* Adjust VG (-2V-0V), Recommended gate voltage -0.65V.</b>				

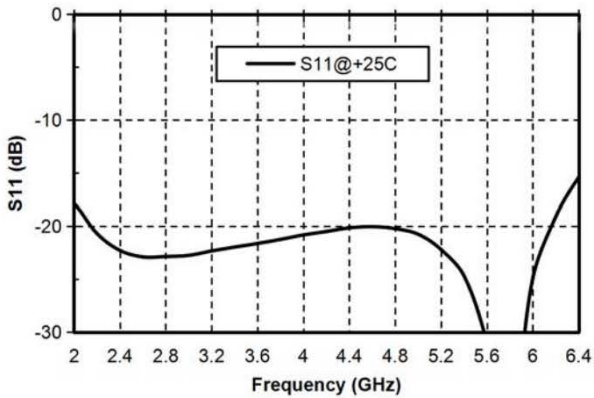
### Gain vs. Frequency



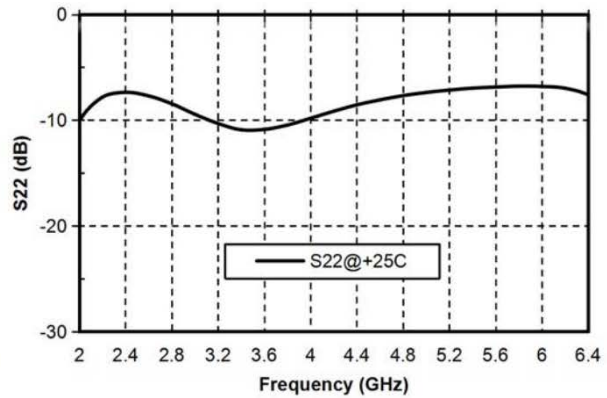
### Isolation vs. Frequency



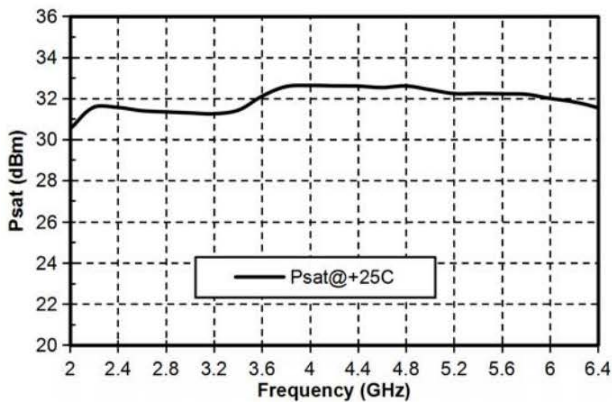
### Input Return Loss vs. Frequency



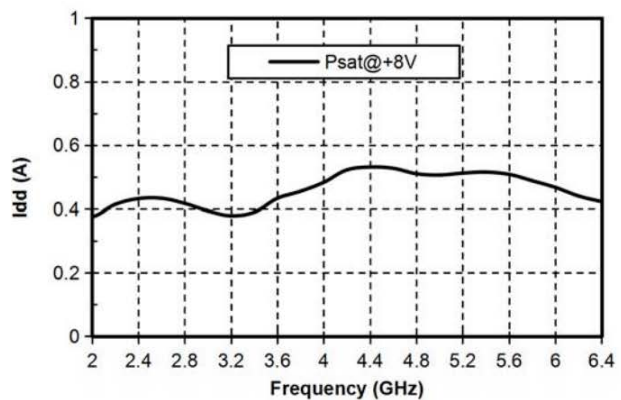
### Output Return Loss vs. Frequency



### Psat vs. Frequency

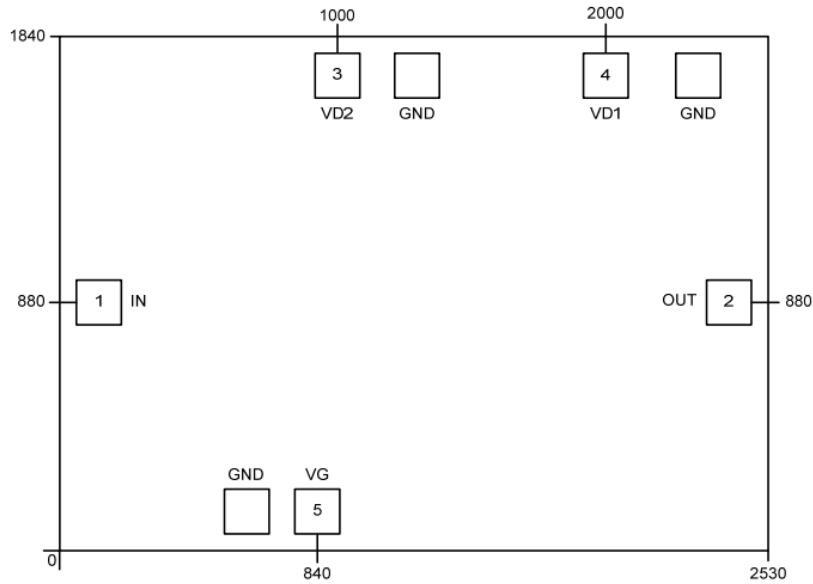


### Idd vs. Frequency





### Outline Drawing: All Dimensions in $\mu\text{m}$

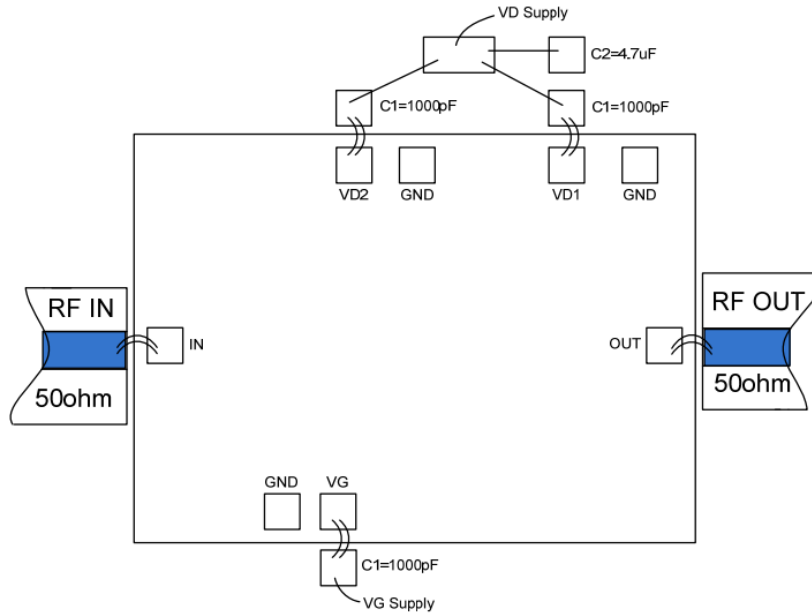


### Pad Description

Pad	Function	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit; no blocking capacitor required.
2	RF OUT	Signal output terminal, connected to 50Ω circuit; no blocking capacitor required.
3, 4	VD1-2	Amplifier drain bias; external 1000pF, 4.7uF bypass capacitor required.
5	VG	Amplifier gate bias; external 1000pF bypass capacitor required.
Die bottom	GND	Die bottom must be connected to RF/DC ground.



### Assembly Drawing



**Note:**

- C1 1000pF
- C2 4.7uF

**Notes:**

1. Die thickness: 100um
2. Typical bond pad is 100\*100  $\mu\text{m}^2$
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: +10V
2. Maximum gate bias: -3V
3. Maximum input power: +25dBm
4. Operating temperature: -55°C to +85°C
5. Storage temperature: -65°C to +150°C