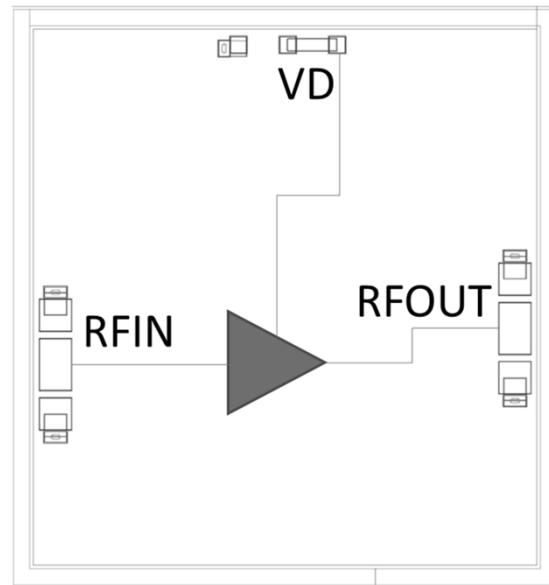


**Features**

- Frequency: 18GHz - 40GHz
- Small Signal Gain: 26.5dB
- Gain Flatness:  $\leq \pm 1.5$ dB
- Noise Figure < 2dB
- P1dB: > 7 dBm
- Single Voltage Supply: +4V/72mA
- Input/Output: 50Ω
- Die Size: 1.6 x 1.7 x 0.05 mm

**Typical Applications**

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

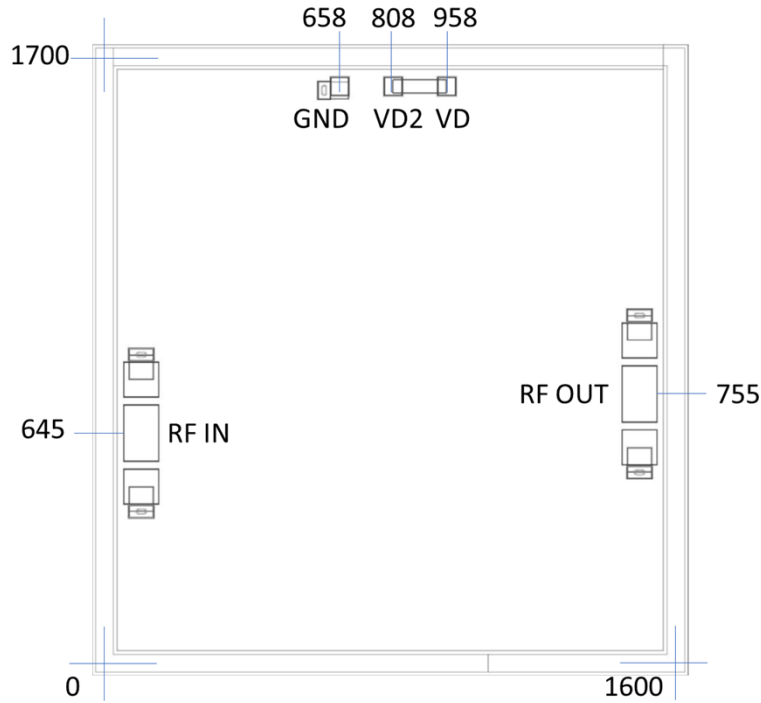
**Functional Block Diagram**

**Electrical Specifications**

TA = +25°C, VD = +4V, ID = 72mA

Parameters	Min.	Typ.	Max.	Min.	Typ.	Max.	Units
Frequency		18-23			23-40		GHz
Small Signal Gain		27			26.5		dB
Gain Flatness		$\pm 1.0$			$\pm 1.5$		dB
Noise Figure		< 2			< 2		dB
Output 1dB Compression (P1dB)		> 7			> 10		dBm
Input Return Loss		> 3			> 3		dB
Output Return Loss		> 8			> 5		dB



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

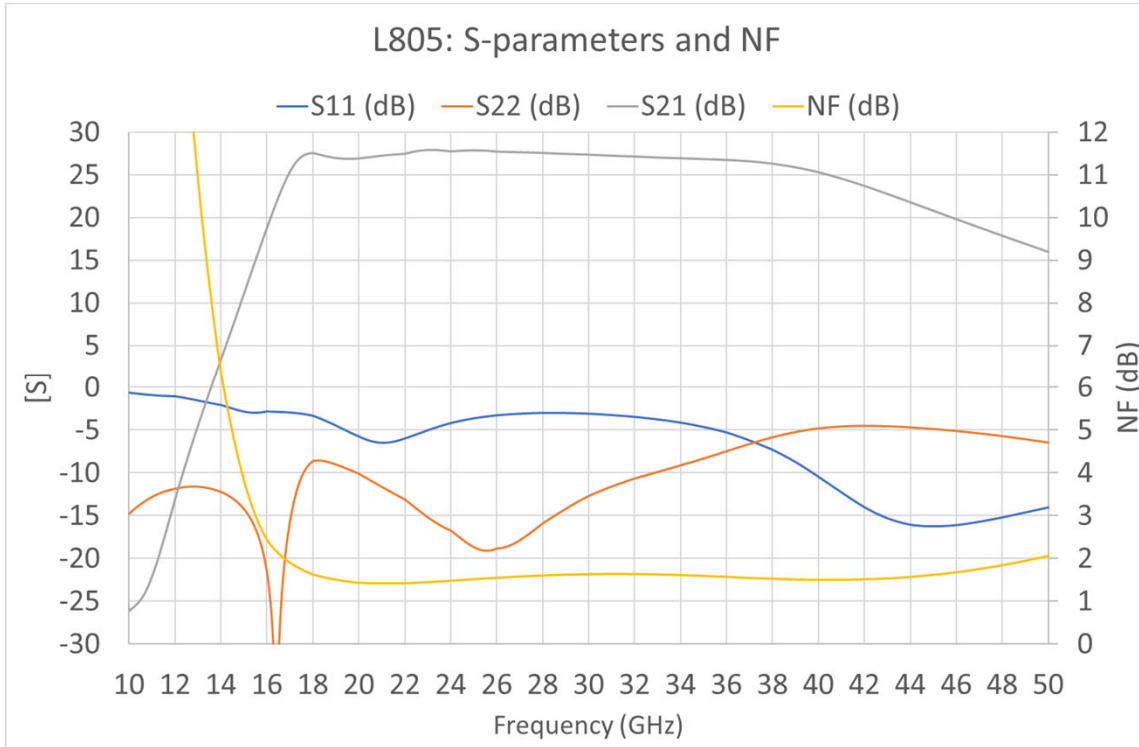


### Pad Description

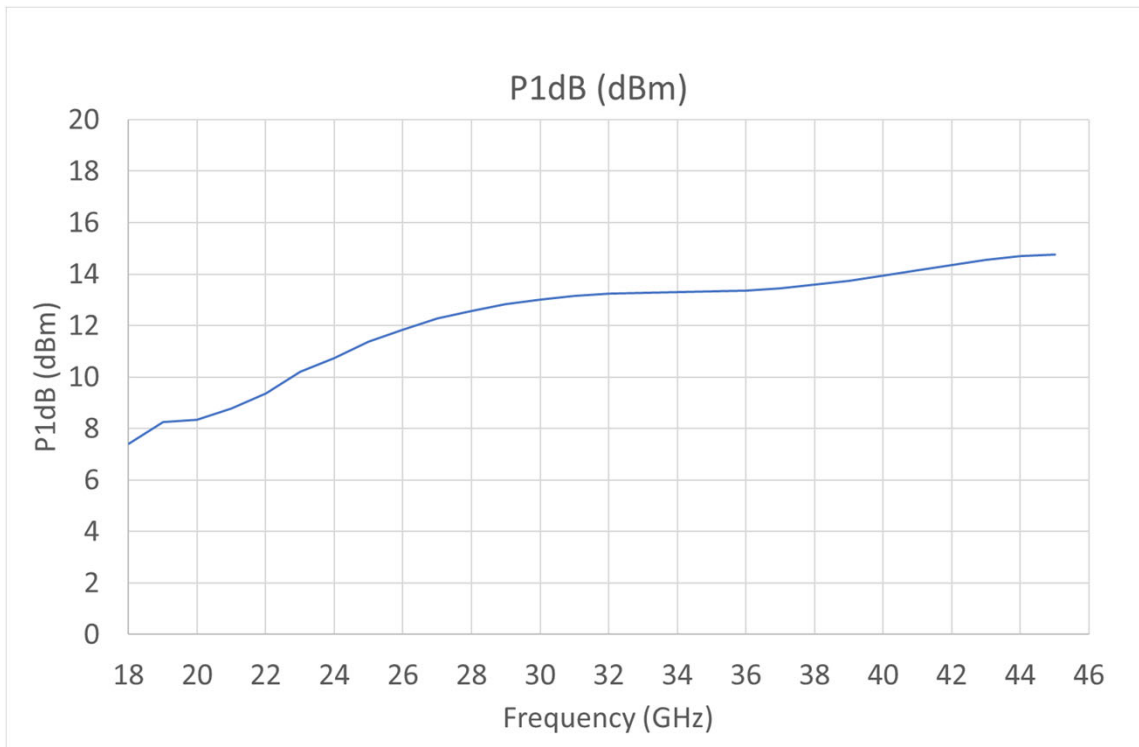
No	Function	Description
1	RF IN	Signal input terminal, connected to 50Ω circuit
2	RF OUT	Signal output terminal, connected to 50Ω circuit
9	VD, VD2	Single bias voltage. VD2 is extra pad.
10	GND	Ground pad.



### S-parameters and NF

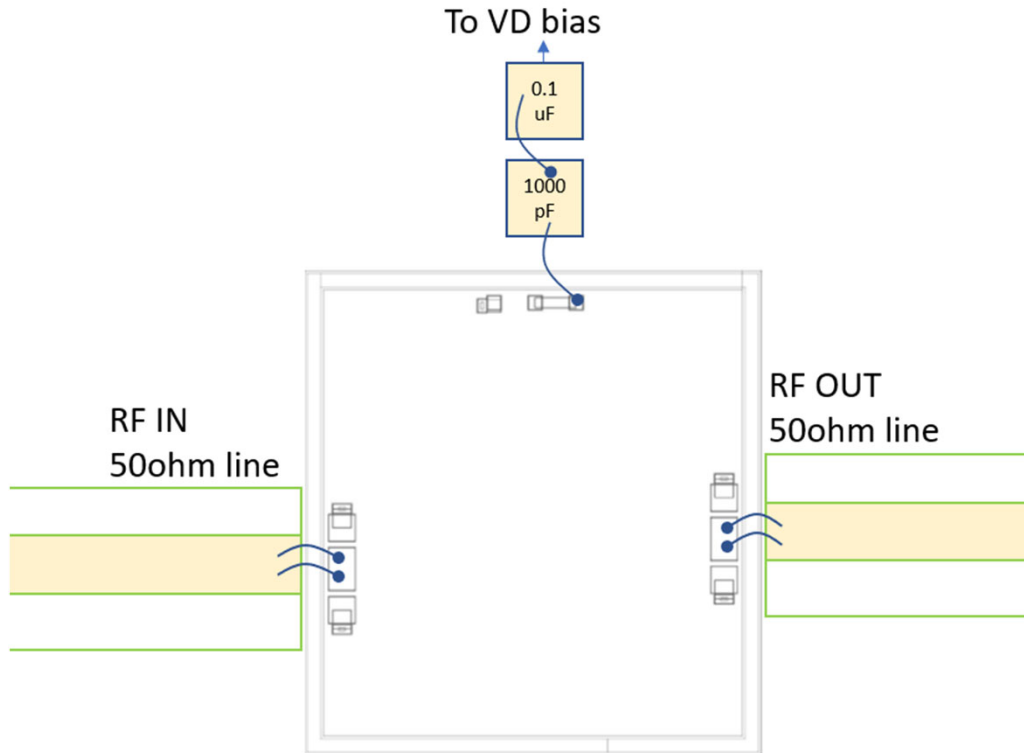


### P1dB





### Assembly Drawing



#### Notes:

1. Die thickness: 50um
2. DC bond pad is 100 x 100  $\mu\text{m}^2$
3. RF IN/OUT bond pad is 100 x 160  $\mu\text{m}^2$
4. Bond pad metalization: Gold
5. Backside metalization: Gold
6. Backside of the die (GND)