

Features

- Frequency Range: 34-36 GHz
- Typical Power Output: 17 dBm
- Typical Input Power: 1 dBm
- Internal and External Harmonic and Clutter Suppression: $\geq 40\text{dBc}@DC-50\text{GHz}$
- Operating Voltage: +5V
- Input/Output: 50Ohm
- Die Size: 3 x 2.2 x 0.1 mm

Typical Applications

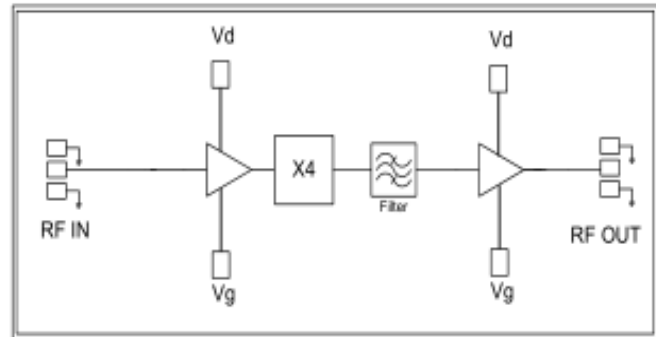
- Test Instrumentation
- Microwave Radio & VSAT
- Military & Space
- Telecom Infrastructure
- Fiber Optics

Electrical Specifications

TA = +25°C, Vdd = 5V, Pin = 1dBm

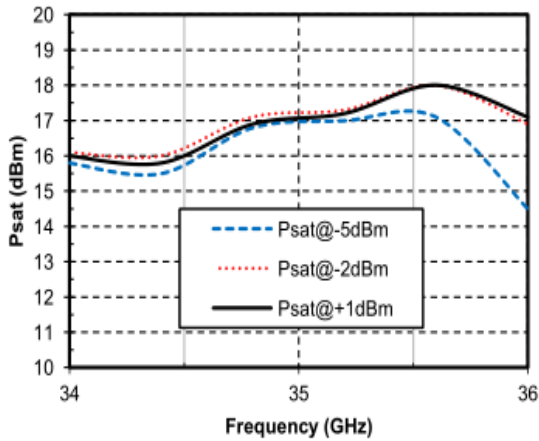
Parameters	Min.	Typ.	Max.	Units
Input Frequency Range		8.5-9		GHz
Output Frequency Range		34-36		GHz
Output Power	16	17	18	dBm
Fundamental Wave Suppression		40		dBc
Second-order Harmonic Suppression		40		dBc
Third-order Harmonic Suppression		40		dBc
Input Return Loss	10	15	-	dB
Output Return Loss	13	20	-	dB

Functional Block Diagram

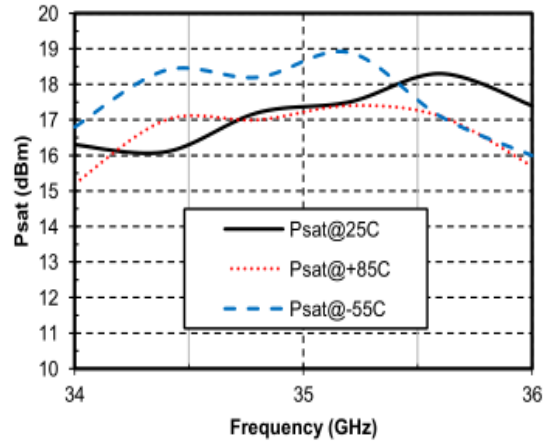




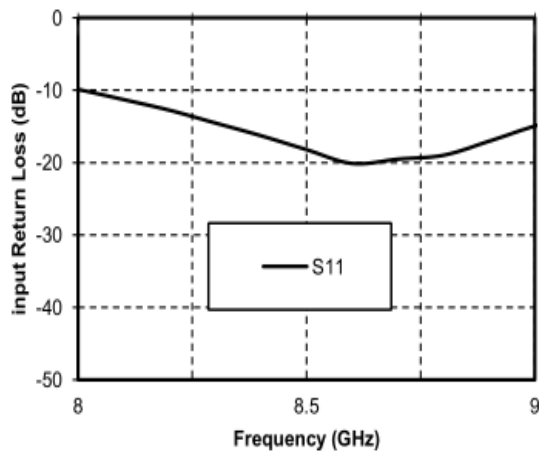
Output Power vs. Input Power



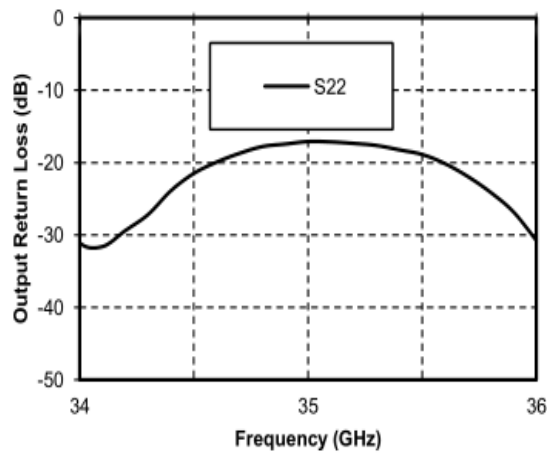
Output Power vs. Temperature @Pin=+1dBm



Input Return Loss vs. Frequency



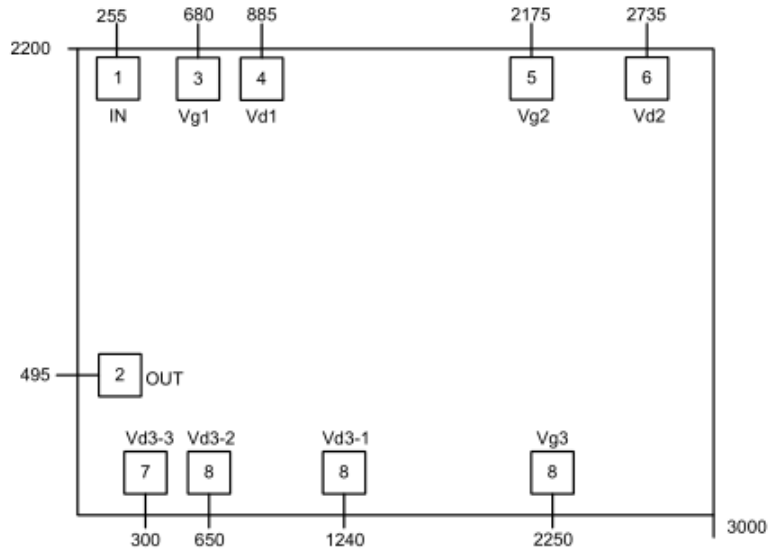
Output Return Loss vs. Frequency



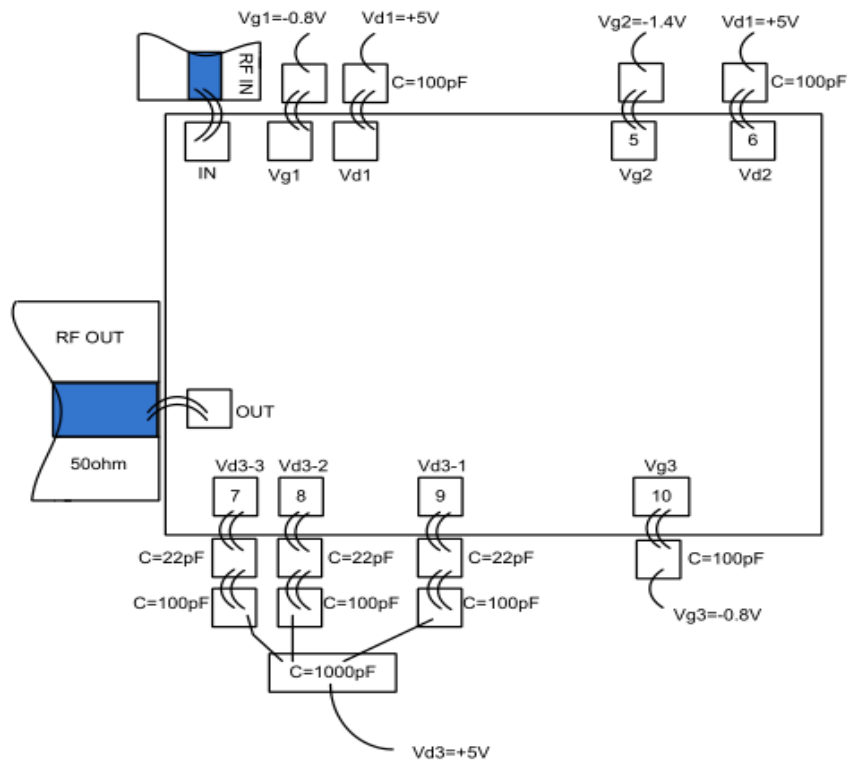


Outline Drawing:

All Dimensions in μm



Assembly Drawing:





Pad Description

Pad Number	Function	Description
1	RF IN	RF input
2	OUT	RF output
3, 5, 10	Vg1, Vg2, Vg3	Amplifier gate bias; connected to external 100pF bypass capacitor.
4, 6, 7, 8, 9	Vd1, Vd2, Vd3-3, Vd3-2, Vd3-1	Amplifier drain bias, connected to external 100pF bypass capacitor.
Die bottom	GND	Die bottom must be connected to RF/DC ground.

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 is grounded
6. No connection required for unlabeled bond pads

Maximum Ratings:

1. Max input power: +20dBm
2. Max operating range: +8V
3. Operating temperature: -55°C to +85°C
4. Storage temperature: -65°C to +150°C