

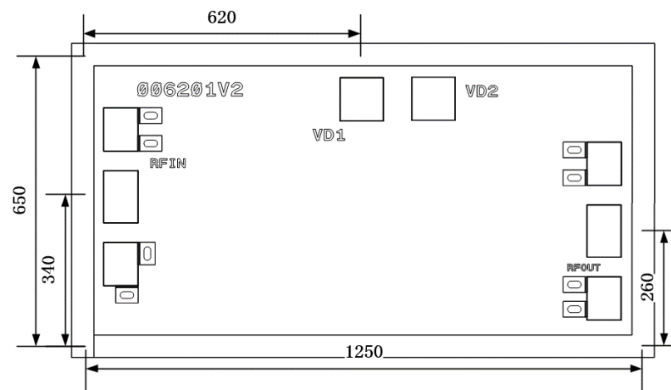
## General Description

MWL004 is a high dynamic range low noise amplifier designed and manufactured using GaAs pHEMT process, self-biased single-supply power supply. This amplifier only needs +3V voltage supply, the normal working current is 45mA, the operating frequency can cover 35GHz to 50GHz, providing 19 dB small signal gain, noise coefficient 2.5 dB, output third-order intermodulation +20dBm, output 1dB compression point to +8dBm.

## Features

- Noise Figure: 2.5dB
- Gain: 19 dB
- Output P1dB: +8dBm
- Supply Current: +3.0V@45mA

## Functional Diagram(Typical bond: 100x120, Unit: um)



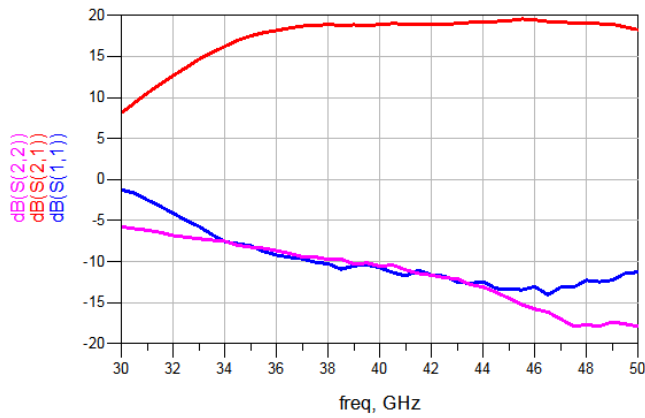
(Die Thickness: 50 um)

## Electrical Specifications, $T_A = +25^\circ\text{C}$ , $V_{d1} = V_{d2} = +3\text{V}$

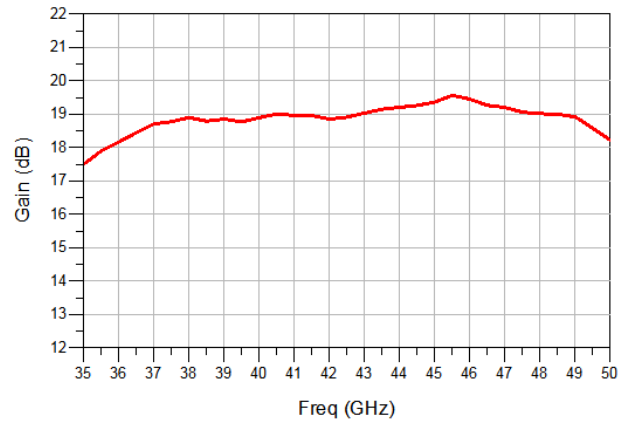
Parameter	Min	Typ	Max	Units
Bandwidth	35		50	GHz
Gain		19		dB
Noise Figure		2.5		dB
Input Return Loss		-10		dB
Output Return Loss		-10		dB
Output Power for 1dB Compression		+8		dBm
OIP3		+20		dBm
Supply Current (@Vdd=3.0V)		45		mA

## Test Results

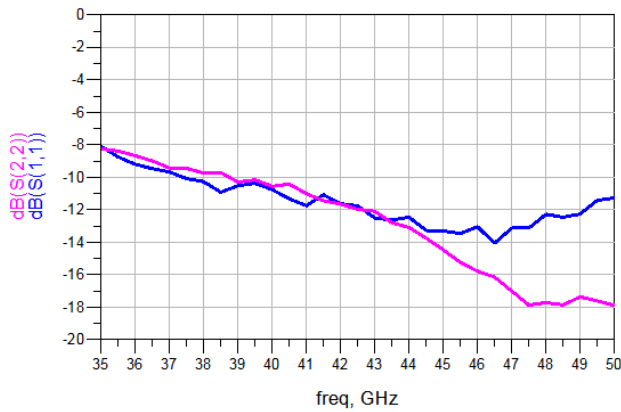
**S\_Parameter**



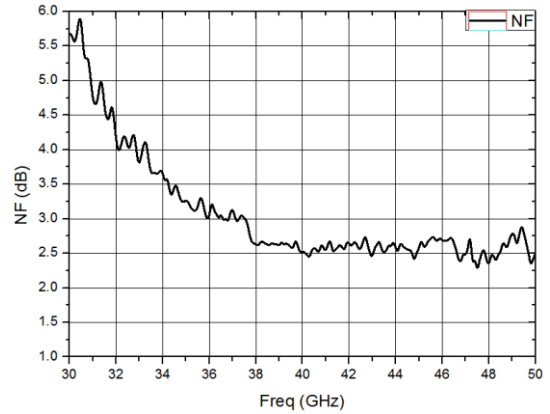
**Gain**



**Input/Output Return Loss**



**Noise Figure**



## Assembly Diagram

