

## General Description

MWL006 is a high gain low noise amplifier designed and manufactured by GaAs pHEMT process with self-biased single power supply. This low noise amplifier only needs +3V voltage supply, the normal working current is 82 mA, the operating frequency can cover 36 GHz to 47 GHz, providing 33 dB small signal gain, noise coefficient 3.0 dB, output 1 dB compression point to +11 dBm.

## Features

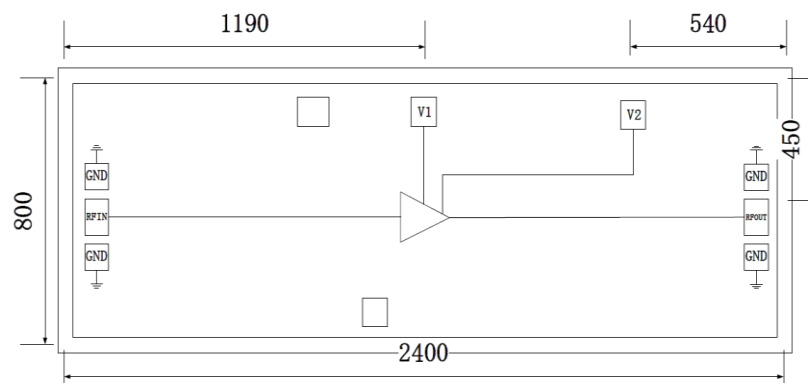
Noise Figure: 3.0 dB

Gain: 33 dB

Output P1dB: +11dBm

Supply Current: +3.0V@82mA

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



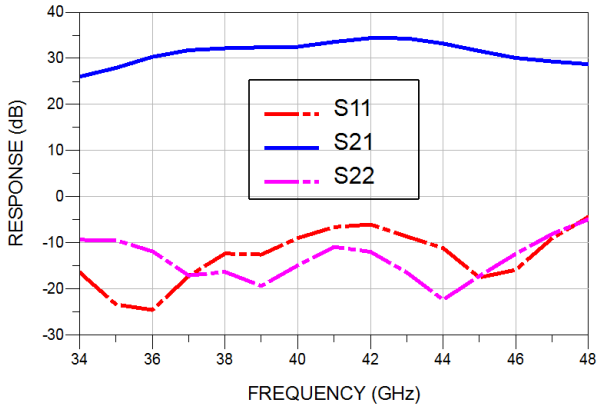
(Die Thickness: 50 um)

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

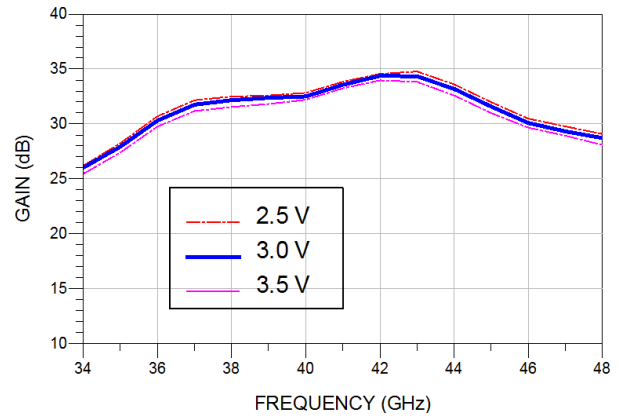
Parameter	Min	Typ	Max	Units
Bandwidth	36		47	GHz
Gain	30	33		dB
Noise Figure		3.0		dB
Input Return Loss	8	12		dB
Output Return Loss	10	15		dB
Output Power for 1dB Compression		+11		dBm
Supply Current (@Vdd=3.0V)		82		mA

## Test Results

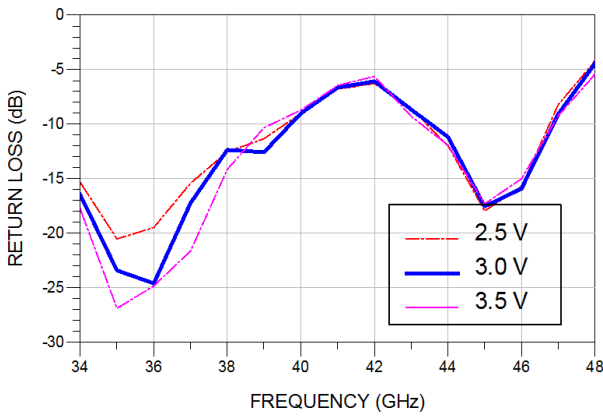
**S\_Parameter**



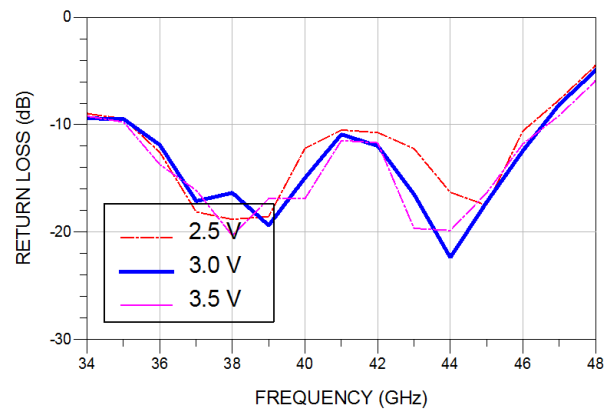
**Gain**



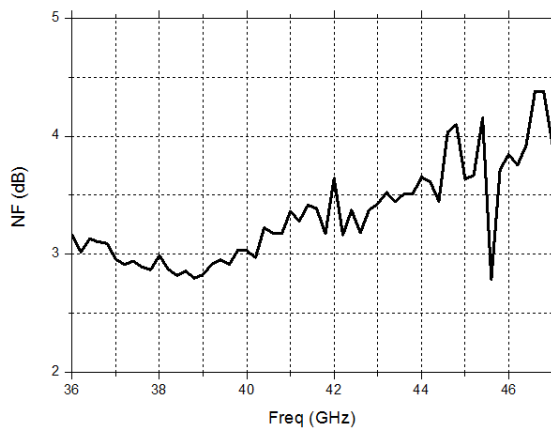
**Input Return Loss**



**Output Return Loss**



**Noise Figure**



**Assembly Diagram**

