

## Features

Noise Figure: 4.5dB

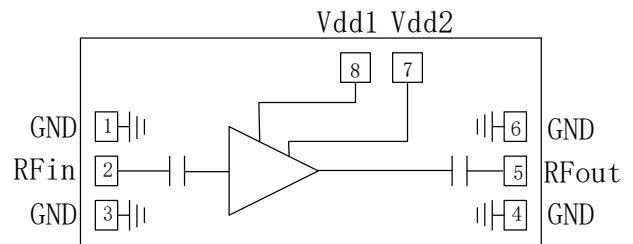
Gain: 23.5dB

Output P1dB: +21dBm

Psat : 22dBm

Supply Current: +5V @132Ma

## Functional Diagram



## General Description

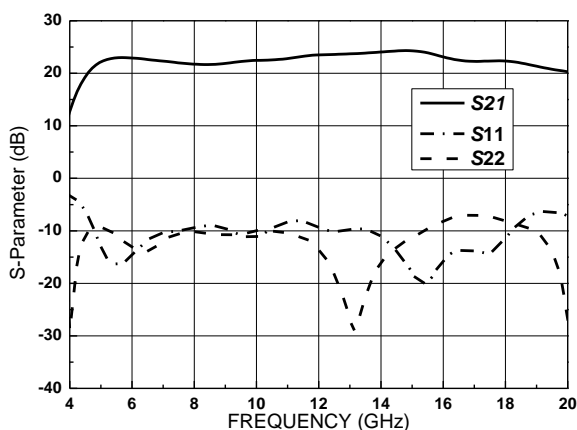
MWG109 is a drive amplifier designed and manufactured by GaAs pHEMT process with output power of 22dBm. The driving amplifier operates at 6-18GHz and is powered by +5V Vdd. The normal operating current is 132mA, providing a small signal gain of 23.5dB.

### Electrical Specification, TA = +25°C, Vdd = +5.0V

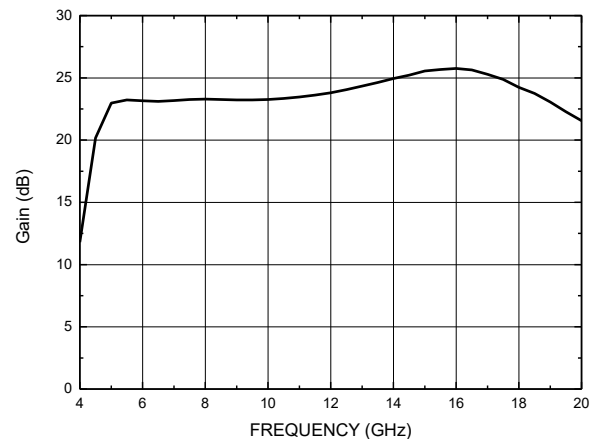
Parameter	Min	Typ	Max	Units
Bandwidth	6		18	GHz
Noise Figure		4.5		dB
Gain	22	23.5	25	dB
Gain Flatness		±1.3		dB
Input Return Loss		11		dB
Output Return Loss		10		dB
Output Power for 1dB Compression		21		dBm
Output 3 <sup>rd</sup> Intercept Point		32.5		dBm
Saturation Output Power		22		dBm
Supply Current (@Vdd=5V)		132		mA

## Test Results

S\_Parameter

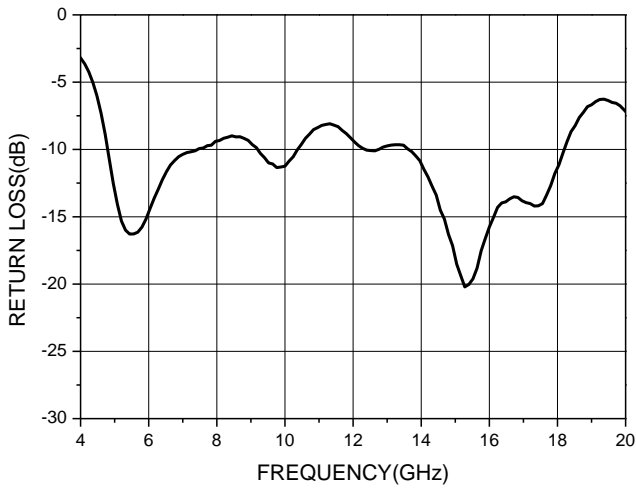


Gain

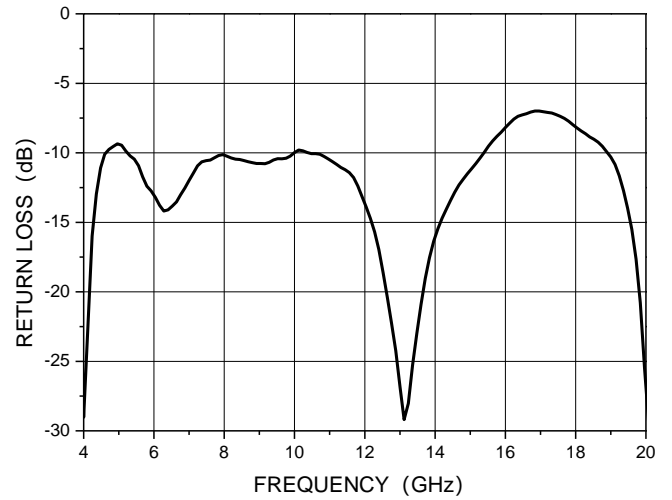




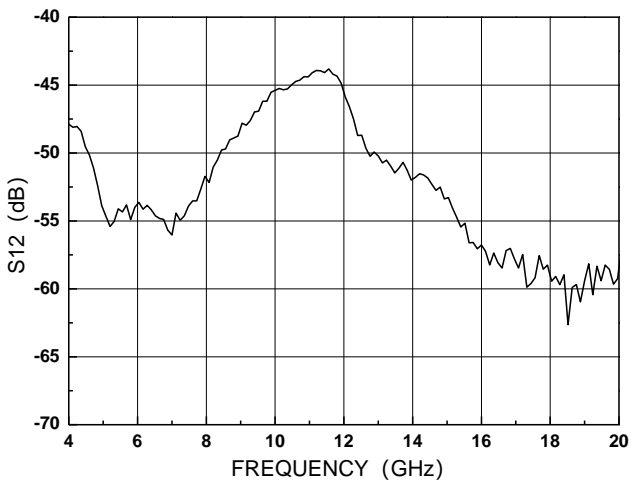
Input Return Loss



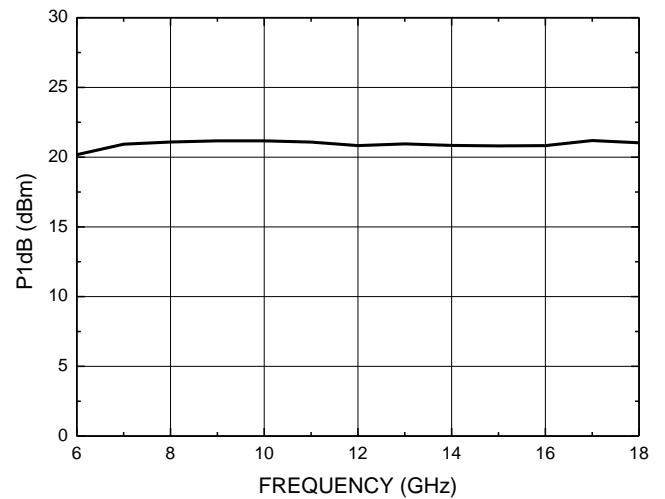
Output Return Loss



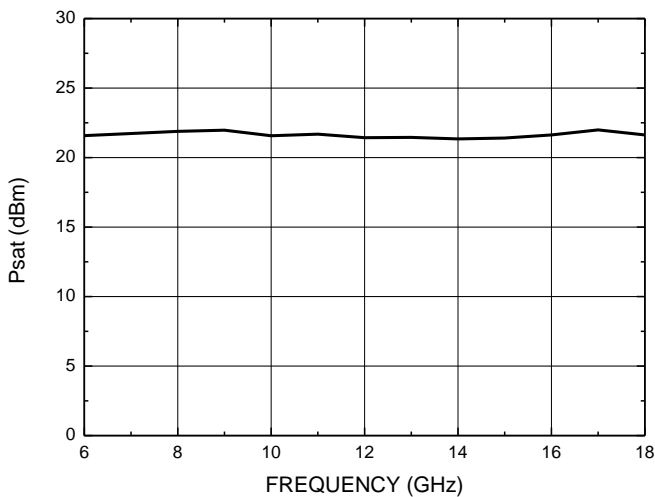
Isolation



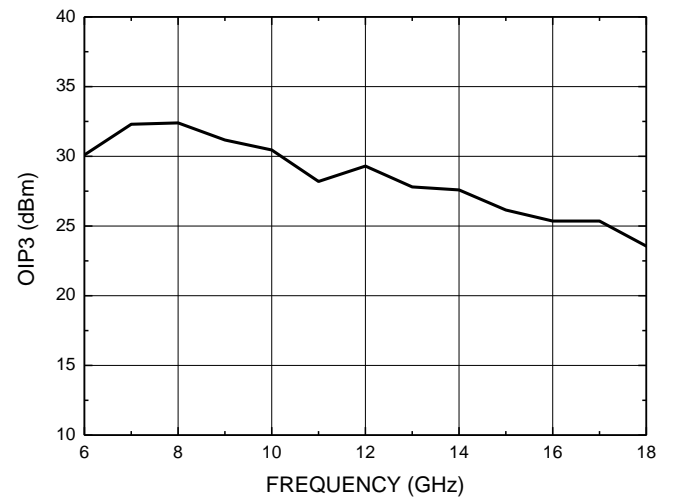
Output P1dB



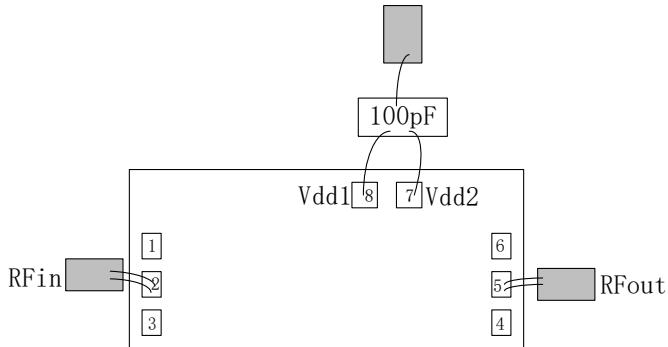
Psat



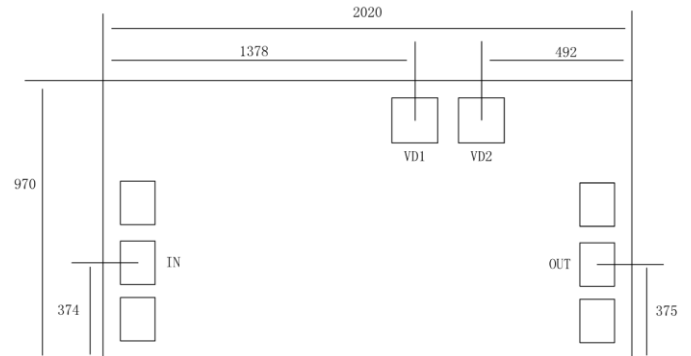
OIP3



### Assembly Diagram



### Chip Size (unit:um):



### Pin Description

Pin NO.	Function	Description
1、 3、 4、 6	GND	Connect to RF/DC Ground
2	RF/IN	RF input, external 50Ohm system
5	RF/OUT	RF output, external 50Ohm system.
7、 8	Vdd	Amplifier power supply plus 100pF capacitor

### Absolute Maximum Ratings

Voltage	6V
RF Input Power	3dBm
Storage Temperature	-65 - +150°C
Operating Temperature	-55 - +85°C