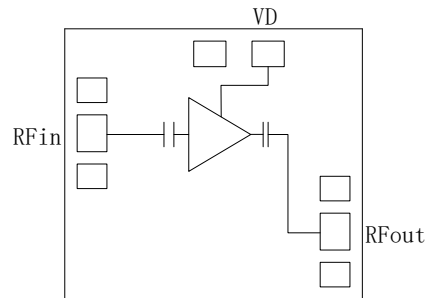


## Features

Noise Figure: 4dB  
Gain: 9dB  
Output P1dB: +18dBm  
Supply Current: +5V @49mA  
Chip Size: 1200 $\mu$ m $\times$ 1100 $\mu$ m

## Functional Diagram



## General Description

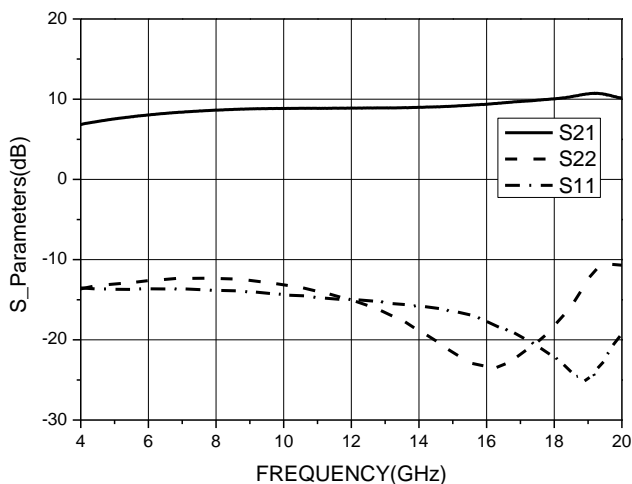
MWG111 is a drive amplifier designed and manufactured by GaAs pHEMT process and output P1dB to 18dBm. The drive amplifier operates at 6-18GHz and is powered by +5V Vdd. The normal operating current is 49mA. It provides a small signal gain of 9dB. The gain is positive slope to compensate for the decrease of high frequency gain.

## Electrical Specifications, $T_A = +25^\circ\text{C}$ , $V_{dd} = +5.0\text{V}$

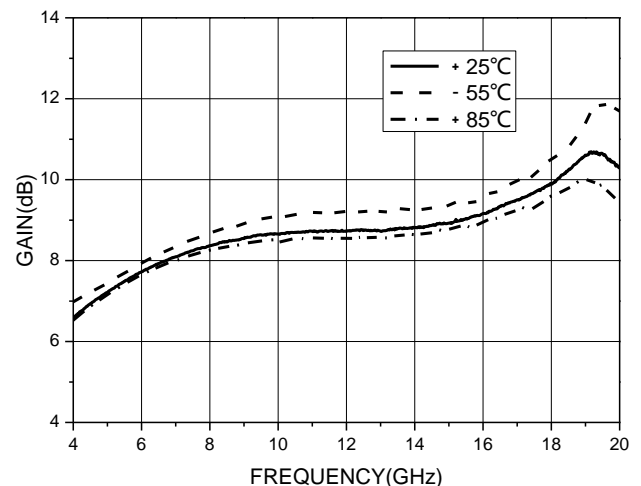
Parameter	Min	Typ	Max	Units
Bandwidth	6		18	GHz
Noise Figure		4		dB
Gain		9		dB
Gain Flatness		$\pm 1$		dB
Input Return Loss	14	16		dB
Output Return Loss	12	15		dB
Output Power for 1dB Compression		18		dBm
Supply Current (@Vdd=5V)		49		mA

## Test Results

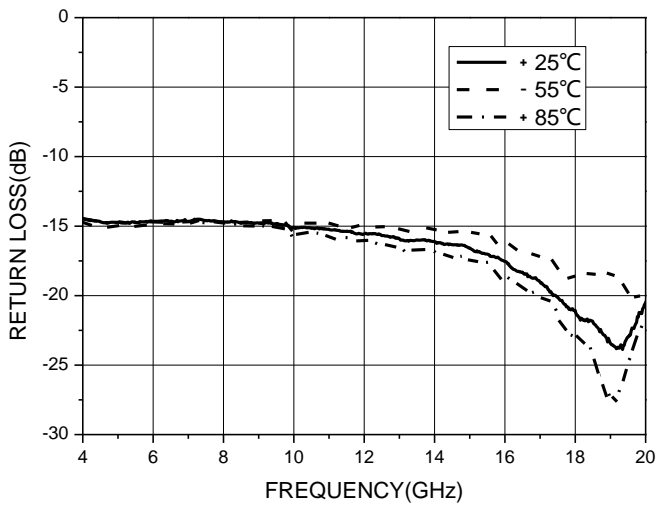
**S\_Parameter**



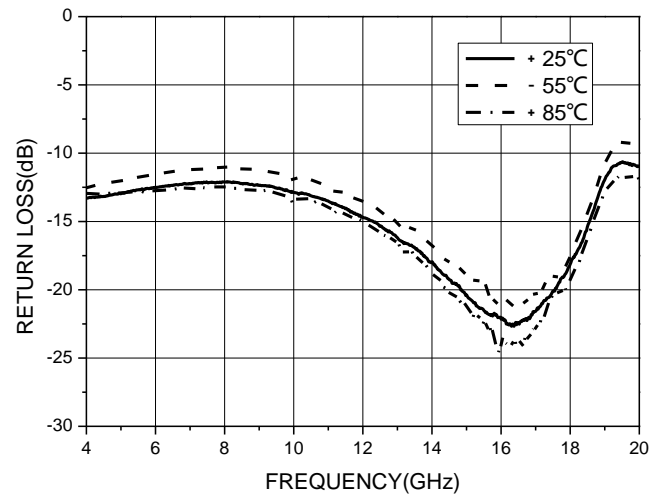
**Gain**



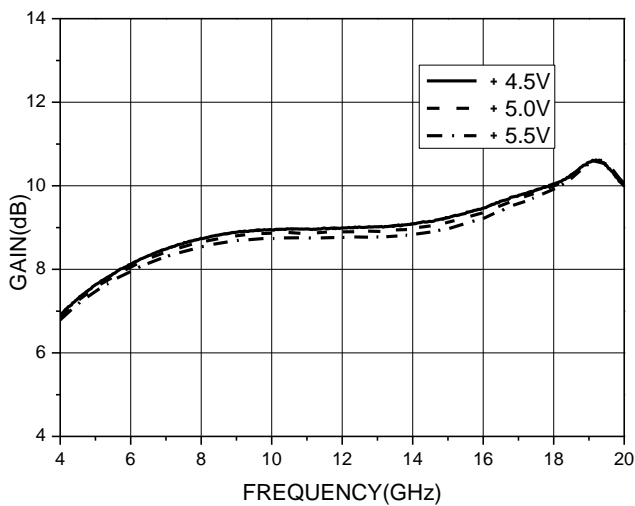
**Input Return Loss**



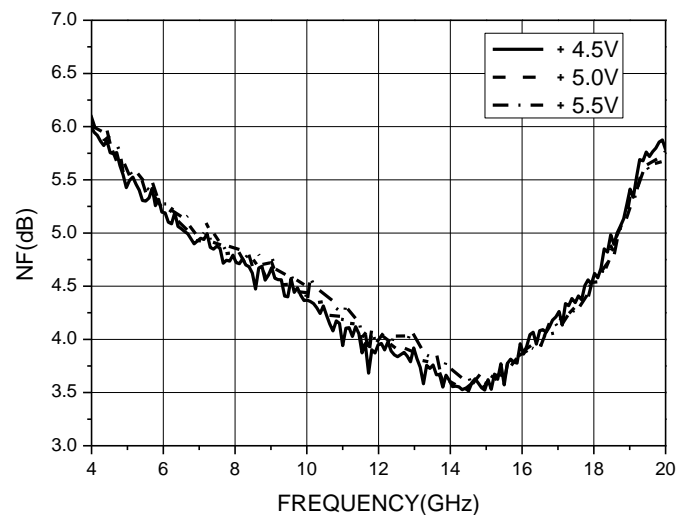
**Input Return Loss**



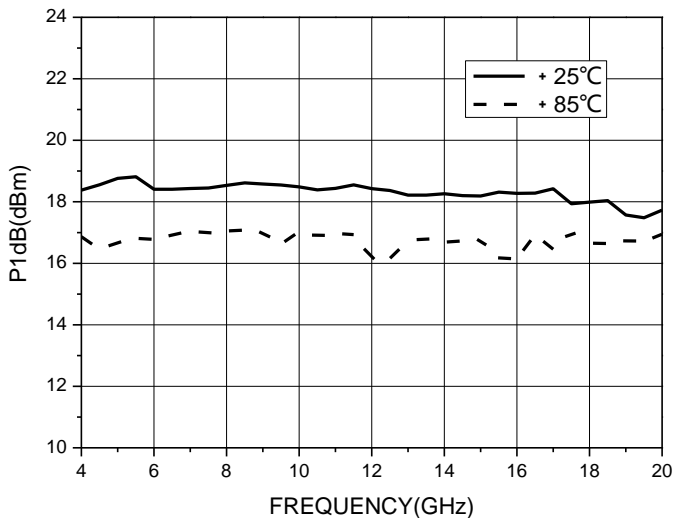
**Gain**



**Noise Figure**

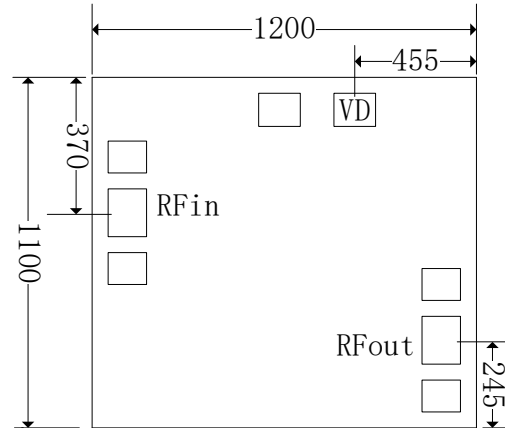
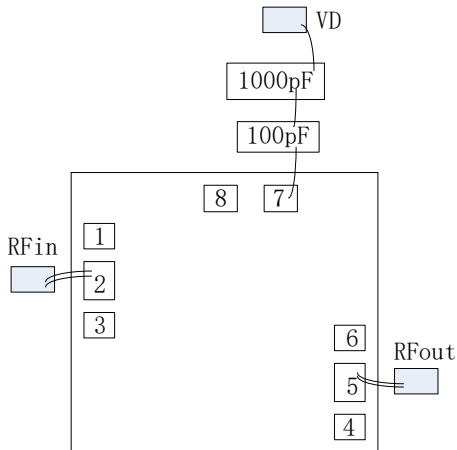


**Output P1dB**



## Chip Size

## Assembly Diagram



## Pin Description

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

## Absolute Maximum Ratings

Voltage	6V
RF Input Power	15dBm
Storage Temperature	-65 - +150°C
Operating Temperature	-55 - +85°C