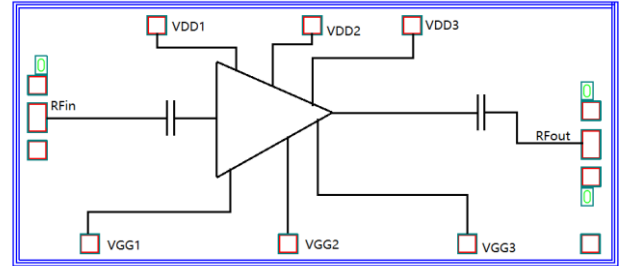


Features

Gain: 28dB
 Output P1dB: 25dBm
 Noise Figure: 2.5dB
 Supply Current: 200mA@+5V, -0.8V
 Chip Size: 3000μm×1290μm

Functional Diagram



General Description

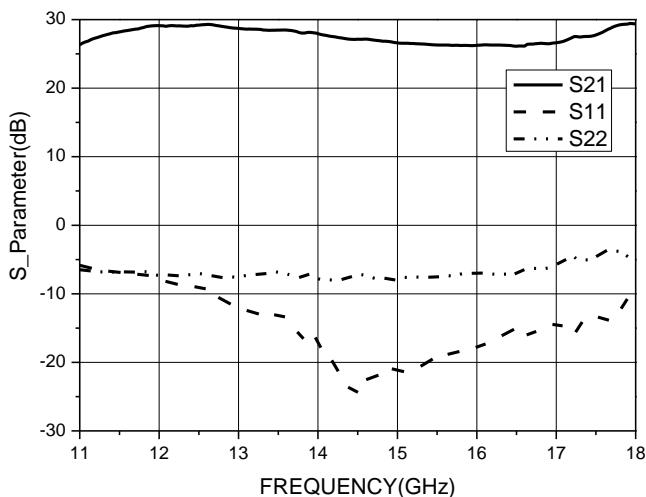
MWG113 is a drive amplifier product designed and manufactured by GaAs pHEMT technology. This power amplifier can cover 12-17 GHz operating frequency band, using +5V voltage Vdd power supply, normal operating current 200 mA, providing 28dB small signal gain, the efficiency can reach 30%.

Electrical Specification, TA = +25°C, Vdd=+5V, Vgg = -0.8V

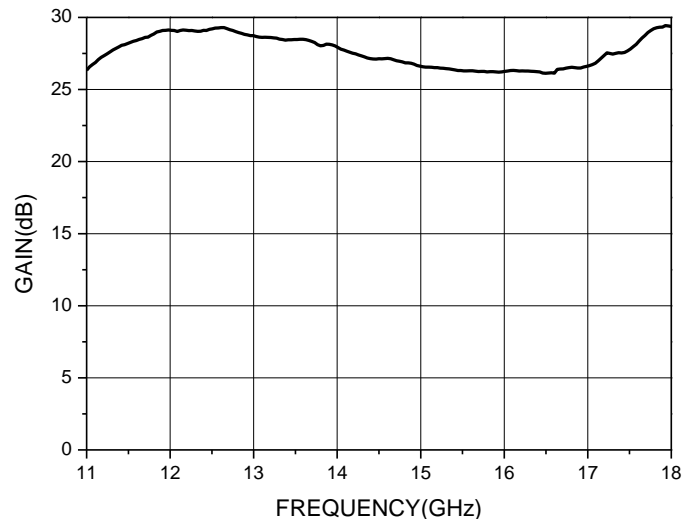
Parameter	Min	Typ	Max	Units
Bandwidth	12		17	GHz
Gain		28		dB
Input Return Loss		15		dB
Output Return Loss		7		dB
Output Power for 1dB Compression		25		dBm
Power Added Efficiency		30%		
Supply Current (@Vdd=5V, Vgg= -0.8V) Supply Current		200		mA

Test Results

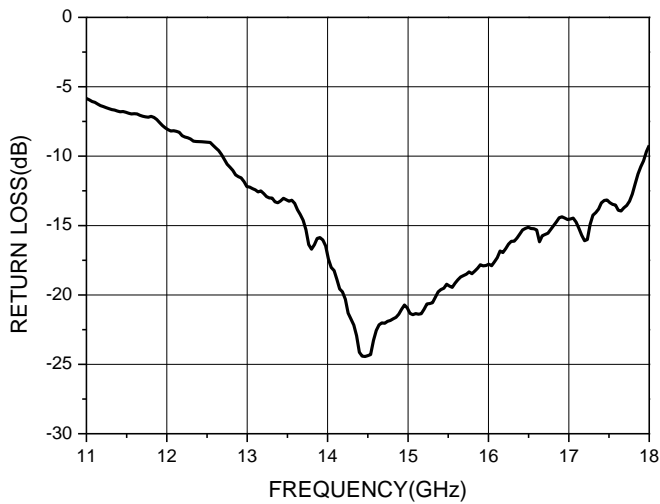
S_Parameter



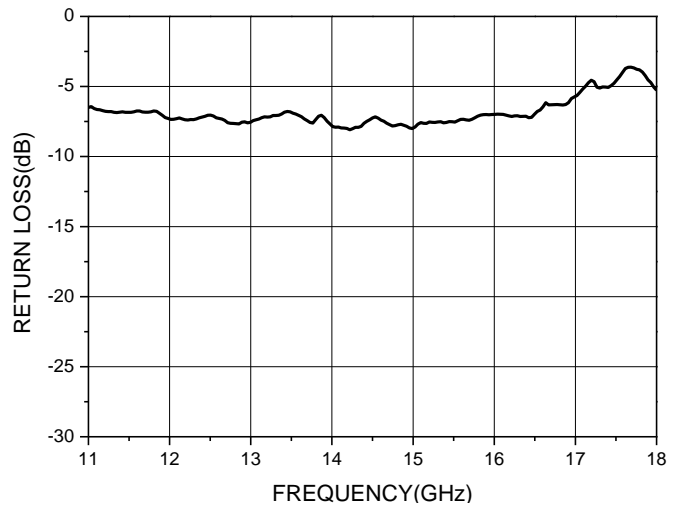
Gain



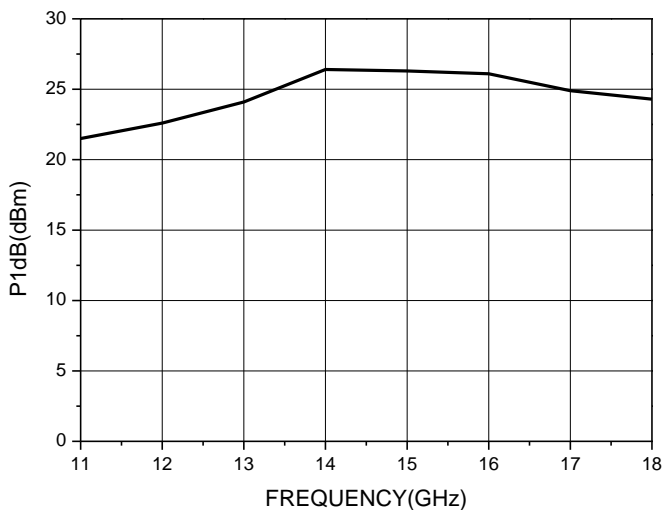
Input Return Loss



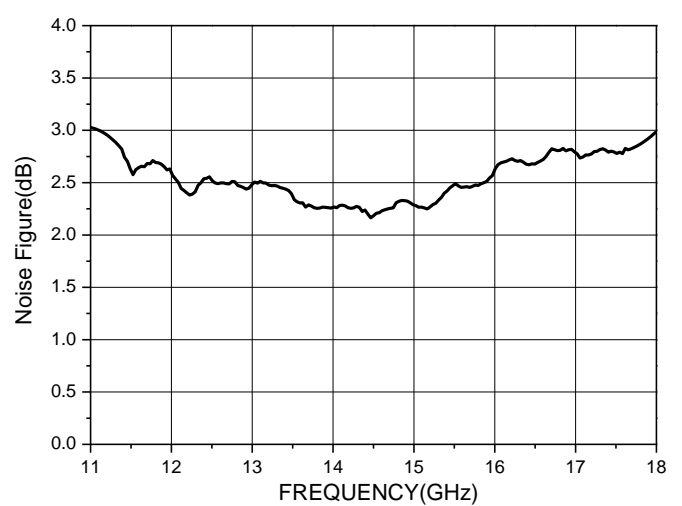
Output Return Loss



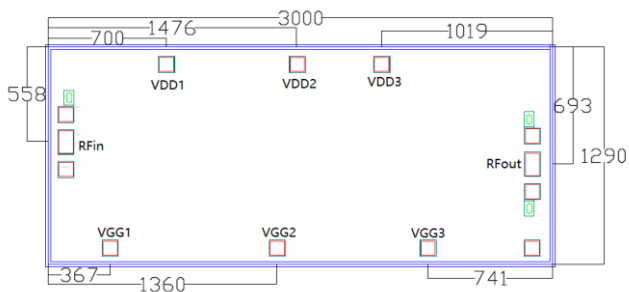
Output P1dB



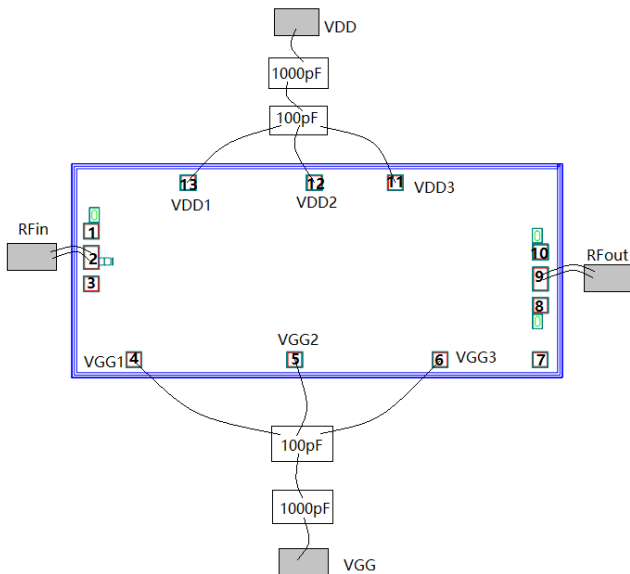
Noise Figure



Chip Size



Assembly Diagram



Pin Description

Pin NO.	Function	Description
1、3、7、8、10	GND	Connect to RF/DC Ground
2	RF/IN	RF input, external 50Ohm system
9	RF/OUT	RF output, external 50Ohm system.
11、12、13	Vdd	Amplifier power supply plus 100pF capacitor
4、5、6	Vgg	The pad provides the power negative voltage of the amplifier, plus the 100pF capacitor.

Absolute Maximum Ratings

Voltage	5.5V
RF Input Power	10dBm
Storage Temperature	-65 - +150°C
Operating Temperature	-55 - +85°C