

Features

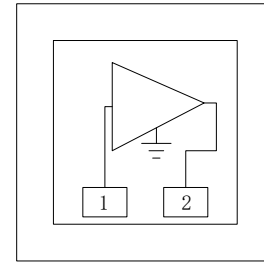
Gain: 17dB

Output P1dB: 14dBm

Supply Current: +5V @ 54mA

Chip Size: 450μm×450μm

Functional Diagram



General Description

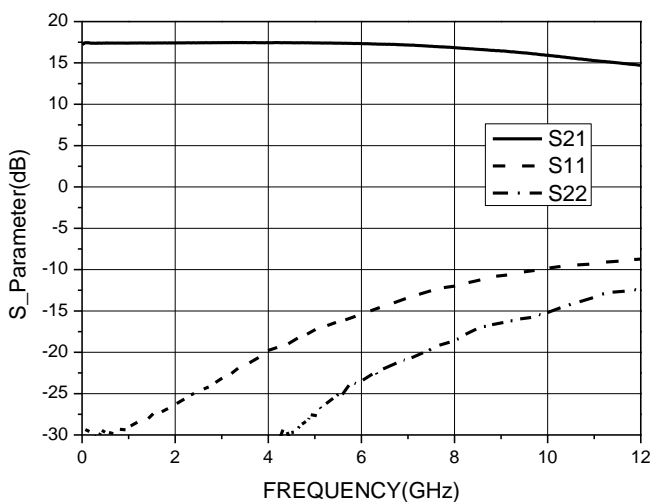
MWG007 is a wideband drive amplifier designed and manufactured by GaAs HBT technology. This amplifier can cover the DC-10GHz operating frequency band, using 5V voltage supply, the normal operating current is 54 mA, providing 17 dB small signal gain, typical output P1dB power up to 14 dBm.

Electrical Specification, TA = +25°C, Vdd = +3.8V

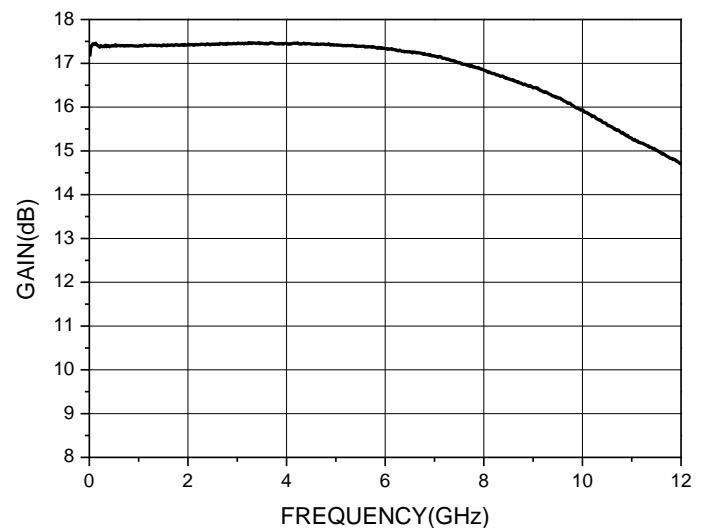
Parameter	Min	Typ	Max	Units
Bandwidth	DC		10	GHz
Gain		17		dB
Gain Flatness		±0.7		dB
Input Return Loss		18		dB
Output Return Loss		31		dB
Output Power for 1dB Compression		14		dBm
Output 3 rd Intercept Point		26		dBm
Supply Current (@Vdd=5V)		54		mA

Test Results

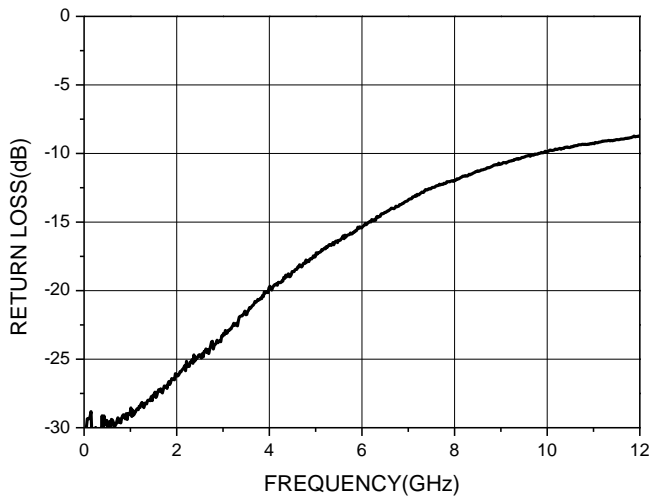
S_Parameter



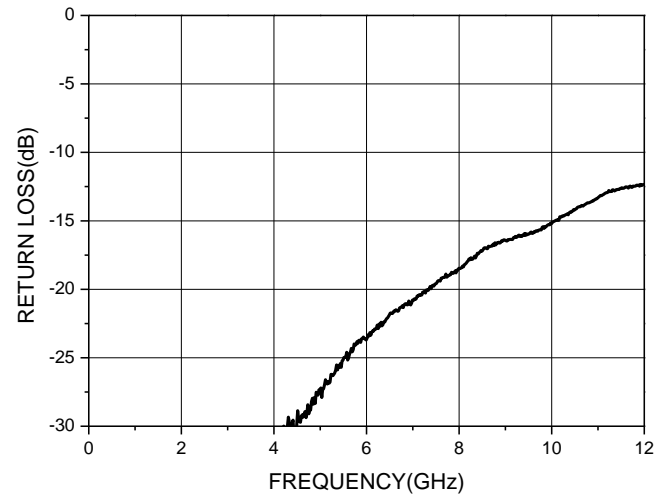
Gain



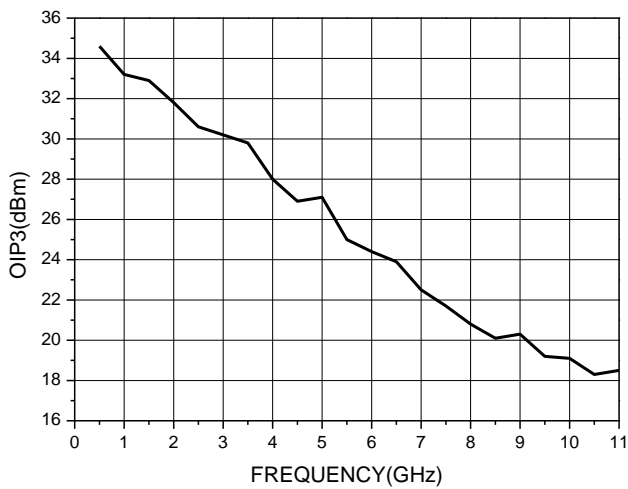
Input Return Loss



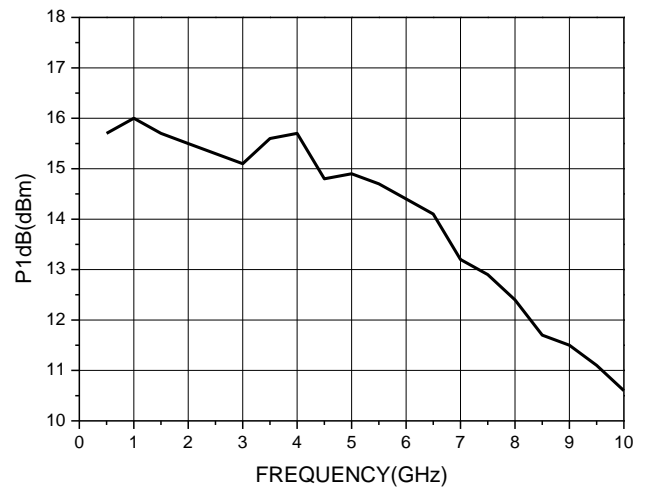
Output Return Loss



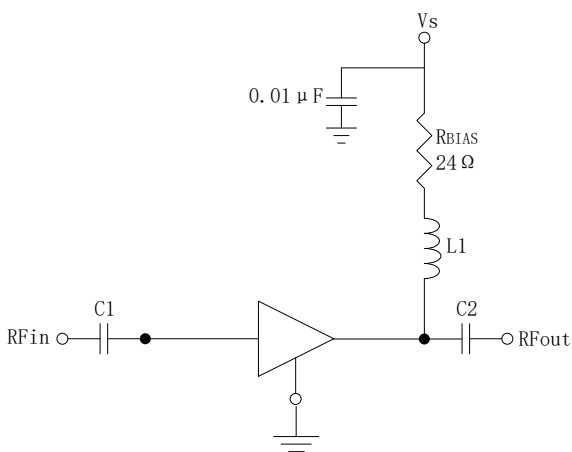
OIP3



Output P1dB



Assembly Diagram



Recommended component values

元器件	工作频率(GHz)			
	0.05	1	3	7
L1	270nH	56nH	8.2nH	2.2nH
C1, C2	0.01μF	100pF	100pF	100pF

Note: L1 is series resonance, C1 and C2 are parallel resonance.

Absolute Maximum Ratings

Voltage	+ 7V
Input Power	+ 3dBm
Storage Temperature	-65°C - + 150°C
Operating Temperature	-55°C - + 85°C

Pin Description

Pin NO.	Function	Description
1	RF/IN	RF input terminal, DC coupled and requires an external DC isolation capacitor.
2	RF/OUT	RF Output terminal