

General Description

MWG306 is a broadband power amplifier product designed and manufactured by GaAs pHEMT technology. This power amplifier can cover 50-75 GHz operating frequency band, using +4V voltage V_{dd} power supply, normal operating current 133 mA, providing 19 dB small signal gain, output power up to 18 dBm.

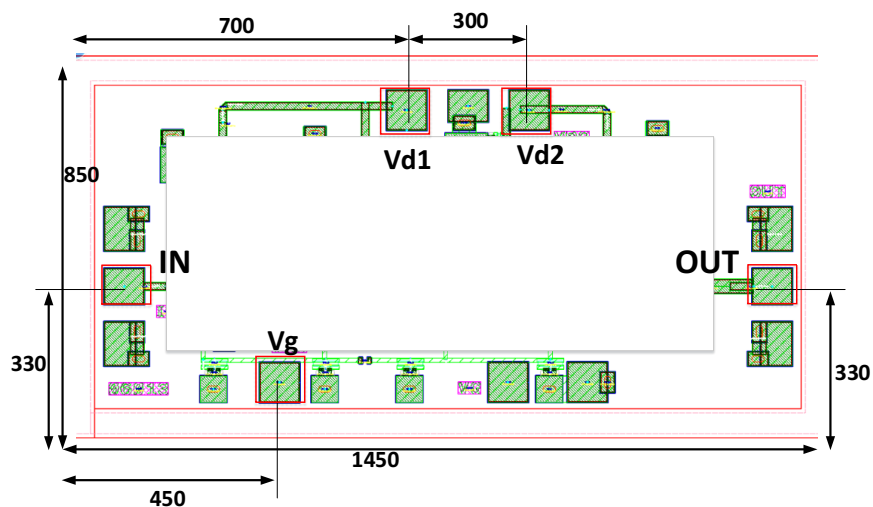
Features

Gain: 19 dB;

Psat: +18dBm

Supply Current: +4V@133 mA

Functional Diagram(Typical bond 100x100, unit μm)



(Die Thickness: 50 μm)

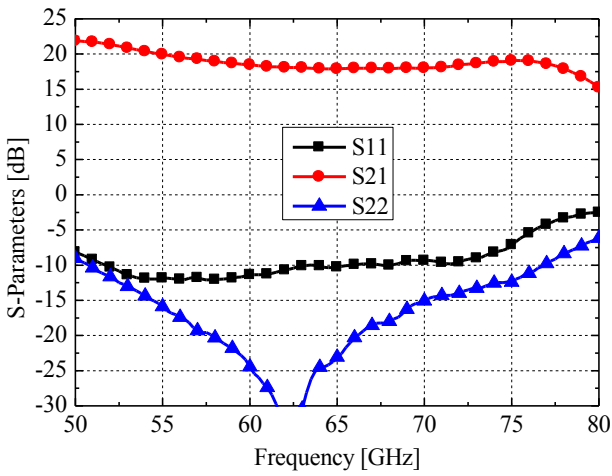
Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{d1} = V_{d2} = +4\text{V}$, $V_g = -0.4\text{V}$

Parameter	Min	Typ	Max	Units
Bandwidth	50		75	GHz
Gain	18	19	22	dB
Input Return Loss		10		dB
Output Return Loss		13		dB
Psat	17	18	19	dBm
Supply Current (@V _{dd} =4V)		133		mA

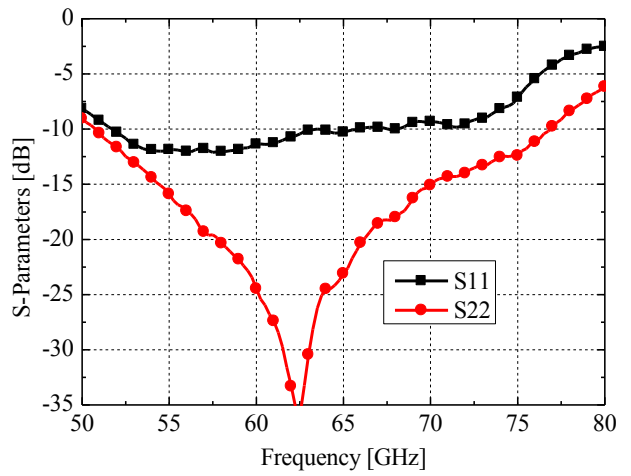


Test Results

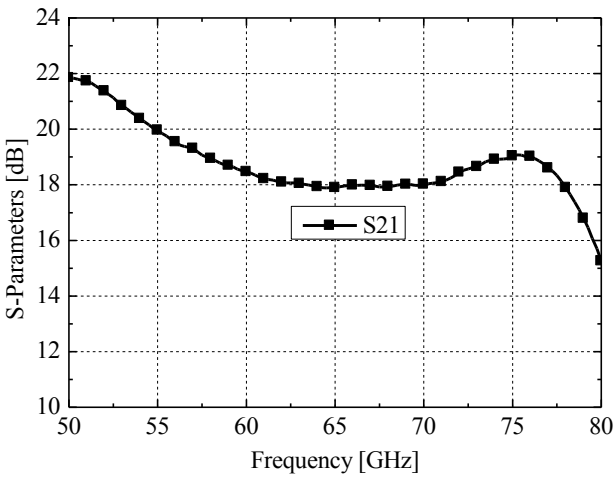
S_Parameter



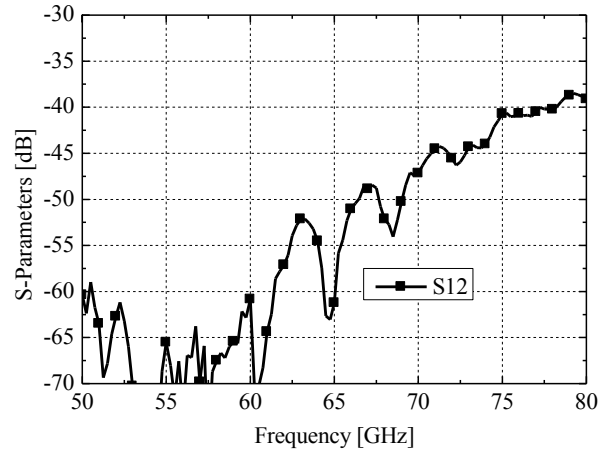
Input/Output Return Loss



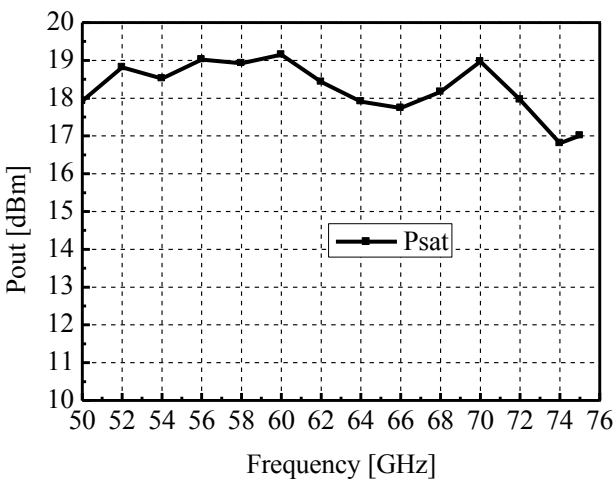
Gain



Isolation(S12)



Psat



Assembly Diagram

