

General Description

MWG304 is a power amplifier designed and manufactured by GaAs pHEMT process. This power amplifier can cover 77-86 GHz in operating frequency band. It is powered by +4V Vdd. The normal operating current is 150 mA. It provides 18 dB small signal gain. The output power reaches 19 dBm.

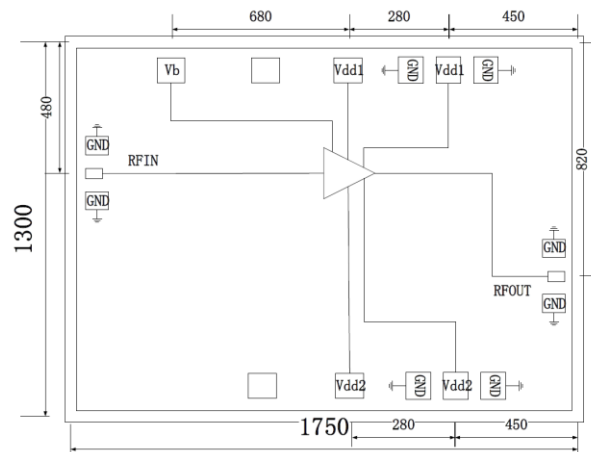
Features

Gain: 18 dB

Output P1dB: +19 dBm

Supply Current: +4.0V@ 150 mA

Functional Diagram(Typical bond: 50x50, unit: um)



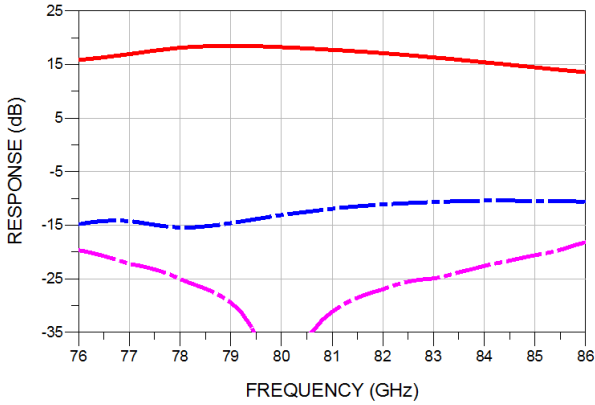
(Die Thickness: 50 um)

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +4\text{ V}$, $V_{gg} = -0.5\text{ V}$

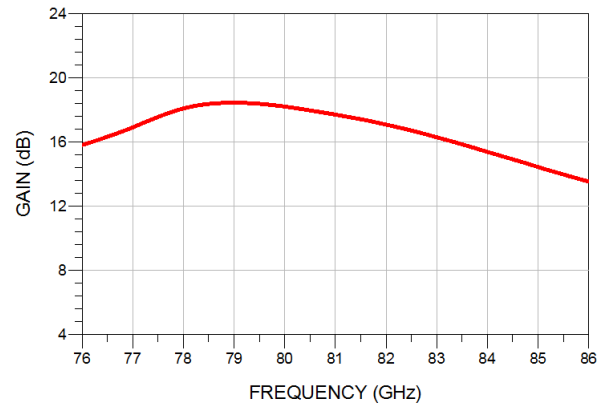
Parameter	Min	Typ	Max	Units
Bandwidth	77		86	GHz
Gain	14	18		dB
Input Return Loss	10	15		dB
Output Return Loss	20	30		dB
Output Power for 1dB Compression		+19		dBm
Supply Current (@Vdd=+4.0V)		150		mA

Test Results

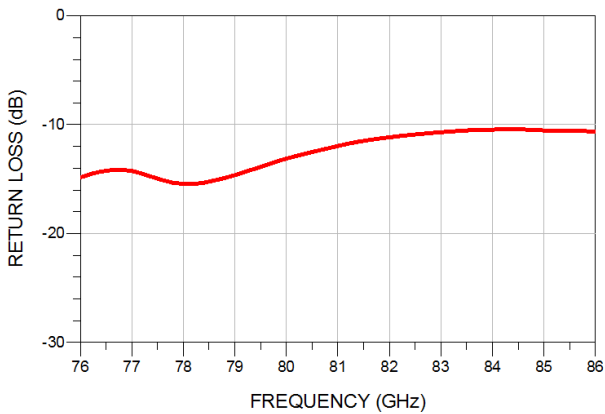
S_Parameter



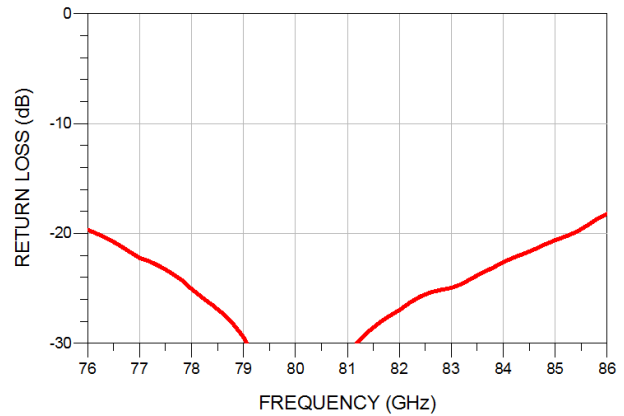
Gain



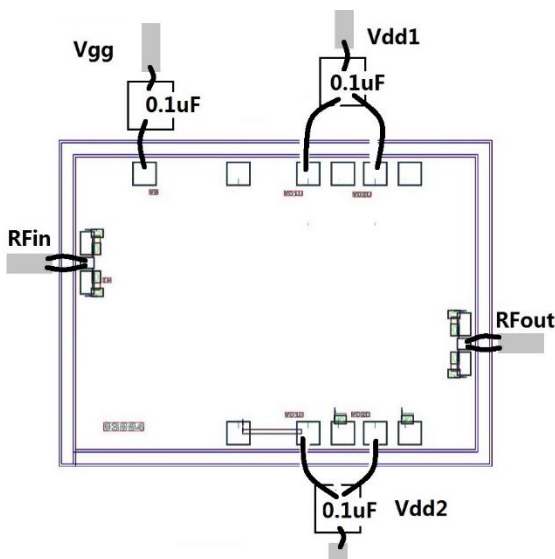
Input Return Loss



Output Return Loss



Assembly Diagram



Output P1dB&Psat

