

General Description

MWG302 is a power amplifier designed and manufactured by GaAs pHEMT process. This power amplifier can cover 71-79 GHz in the operating frequency band. It is powered by +4V Vdd. The normal operating current is 130mA. It provides 17 dB small signal gain. The output power reaches 16 dBm.

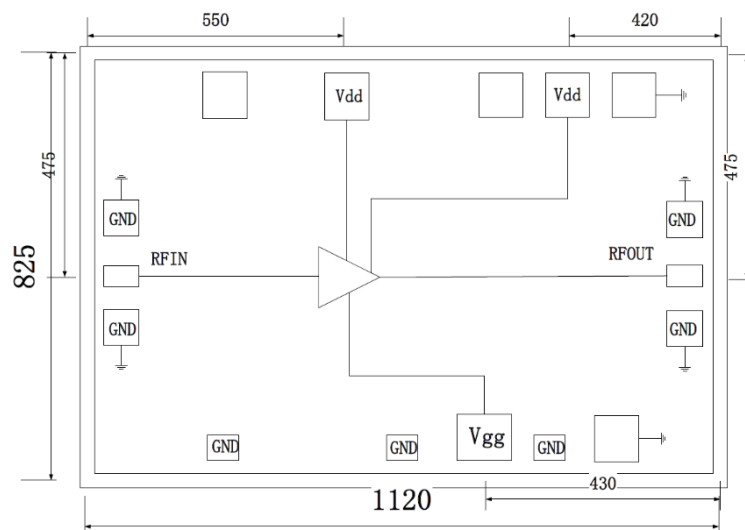
Features

Gain: 17 dB

Output P1dB: +16 dBm

Supply Current: +4.0V @ 130 mA

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



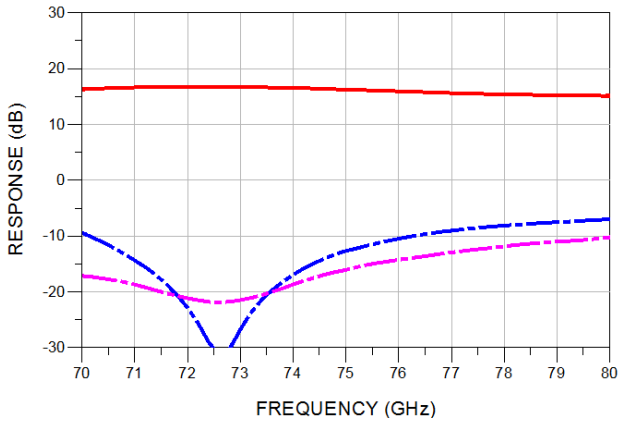
(Die Thickness: 50 um)

Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +4\text{ V}$, $V_{gg} = -0.3\text{ V}$

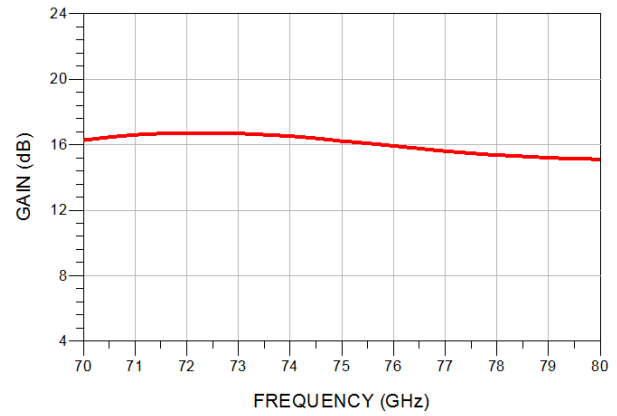
Parameter	Min	Typ	Max	Units
Bandwidth	71		79	GHz
Gain	15	17		dB
Input Return Loss	10	15		dB
Output Return Loss	12	15		dB
Output Power for 1dB Compression		+16		dBm
Current Supply (@Vdd=+4.0V)		130		mA

Test Results

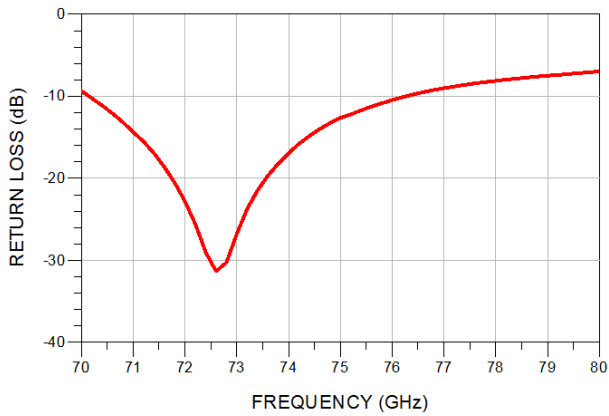
S_Parameter



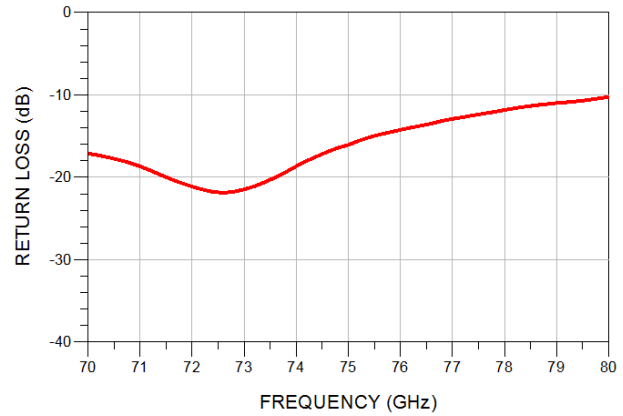
Gain



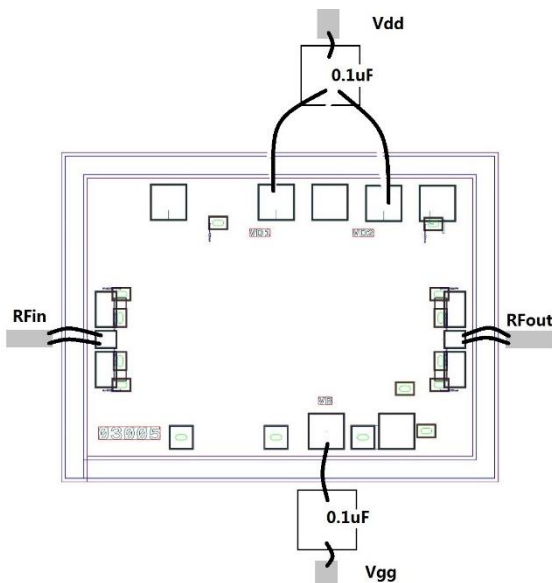
Input Return Loss



Output Return Loss



Assembly Diagram



Output P1dB & Psat

