

General Description

MWG105 is a GaAs pHEMT technology design and manufacture, broadband power driver amplifier. This amplifier can achieve 18 dB small signal gain in 10-20 GHz operating frequency band and output 1 dB compression point up to +15 dBm. It can be used as the driving stage of LO drive amplifier or power amplifier. Vdd adopts 5V self-bias power supply. Because of its excellent performance, this product can be widely used in point-to-point mobile communications, VSAT and other fields.

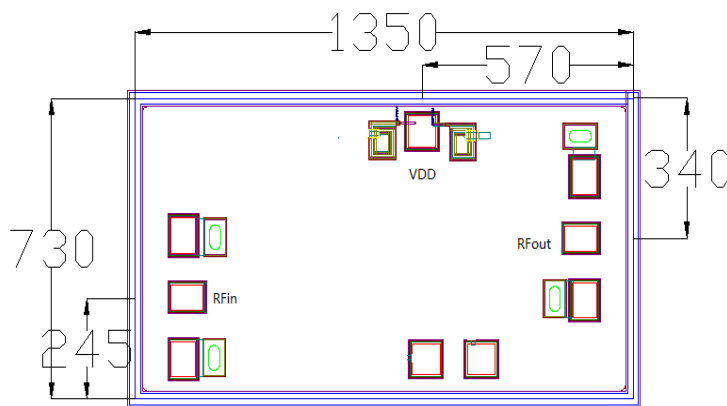
Features

Gain: 18dB;

Output P1dB: +15dBm

Supply Current: +5.0V@50 mA

Functional Diagram(Typical bond: 100x100, unit: um)



(Die Thickness: 100 um)

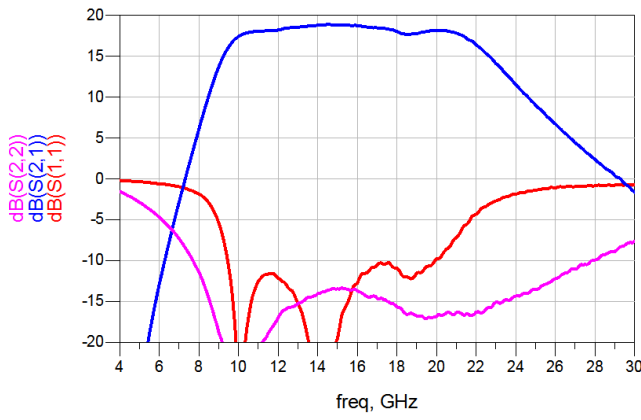
Electrical Specifications, $T_A = +25^\circ\text{C}$, $V_{dd} = +5.0\text{V}$

| Parameter | Min | Typ | Max | Units |
|----------------------------------|-----|-----|------|-------|
| Bandwidth | 10 | | 20 | GHz |
| Gain | 18 | 18 | 19 | dB |
| Input Return Loss | | 10 | | dB |
| Output Return Loss | | 14 | | dB |
| Output Power for 1dB Compression | 15 | 15 | 16.5 | dBm |
| Supply Current (@Vdd=5V) | | 50 | | mA |

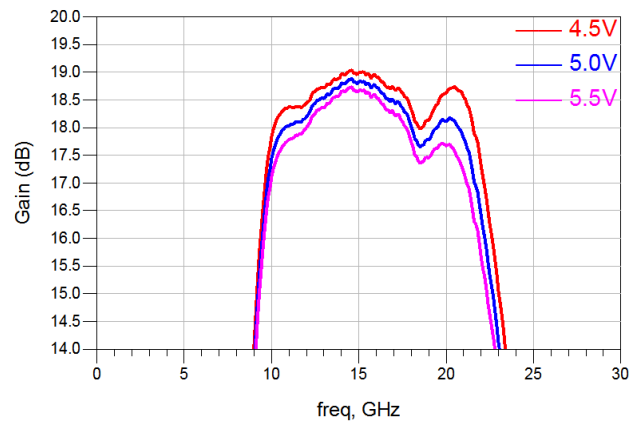


Test Results

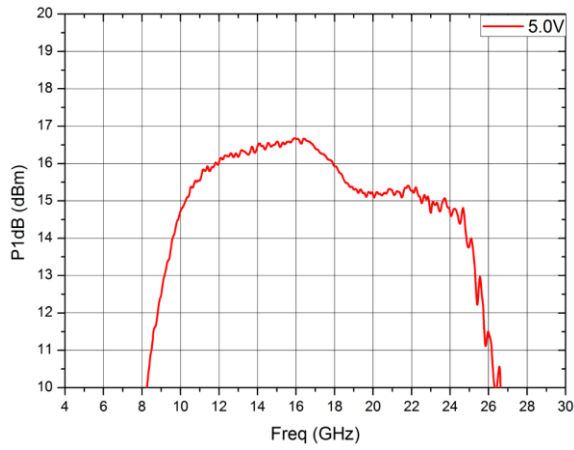
S_Parameter



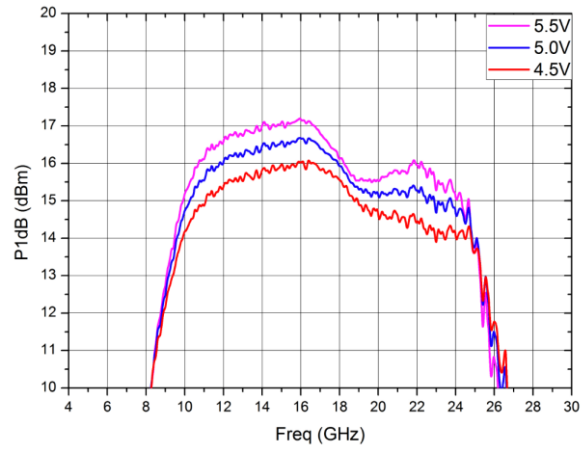
Gain



Output P1dB



Output P1dB Vs Voltage



Assembly Diagram

