

Power Amplifier

18-36GHz/50dB Gain/37dBm Psat

Model: TLPA18G36G-40-37

TLPA18G36G-40-37 is a power amplifier with a typical small signal gain of 50 dB and a minimum Psat of 37 dBm across the frequency range of 18 to 36 GHz. The DC power requirement for the amplifier is +18 VDC/3 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-36GHz
- Gain: 50dB Typ
- Output Power Psat: 37dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Electrical Characteristics:

| Parameter | Min | Typ | Max | Units |
|-------------------|-----|-----|-----|-------|
| Frequency range | 18 | | 36 | GHz |
| Small Signal Gain | | 50 | | dB |
| Gain Flatness | | ±4 | | dB |
| Output Psat | 37 | | | dBm |
| Spurious | | | -60 | dBc |
| Harmonic | | | -20 | dBc |
| Input VSWR | | | 2 | :1 |
| DC Voltage | | +18 | +19 | V DC |
| DC Supply Current | | 3 | | A |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|--|-------|
| Input /Output Connector | 2.92mm Female/2.92mm Female | |
| DC Bias | Feedthru capacitors | |
| Size | 60*60*11(Without heatsink) 188*125*146(With heatsink) | mm |

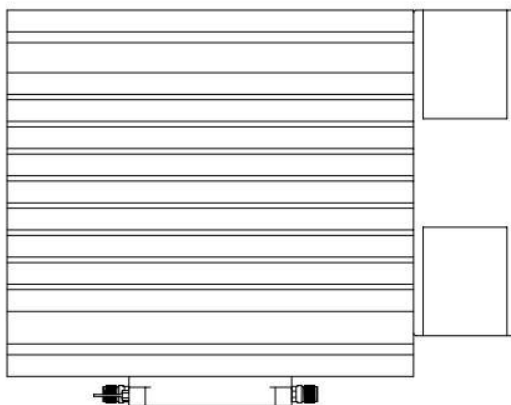
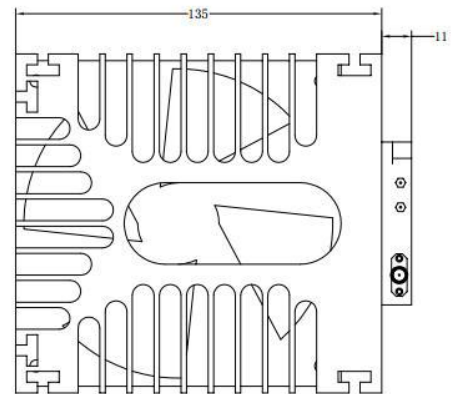
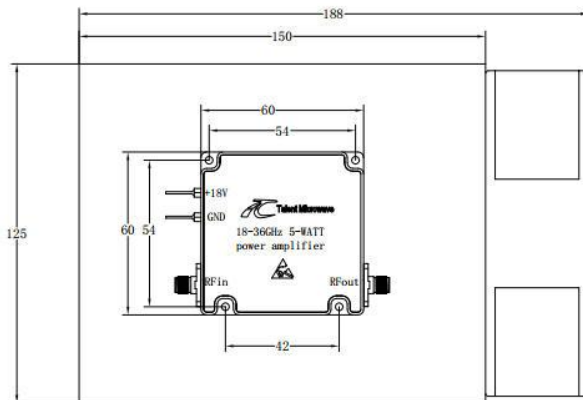
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +20 V |
| RF Input Power | +5 dBm |
| ESD sensitivity (HBM) | Class 0, passed 150V |



Outline Drawing:

Unit:mm



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---------------------------------|---|-----|-----|-------|
| Operating Temperature* | -40 | | +60 | °C |
| Non-operating Temperature* | -50 | | +70 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 25g rms (15 degree 2KHz) endurance, 1 hour per axis | | | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

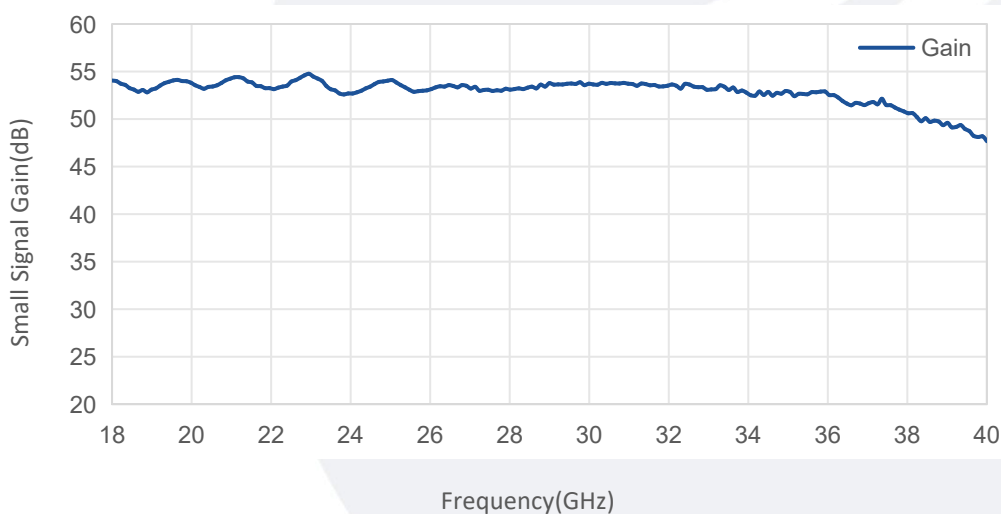
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

| Base Number | Description | Revision |
|------------------|---|----------|
| TLPA18G36G-40-37 | Power amplifier 18-36GHz, Gain:50dB,Psat:37dBm,+18V DC,With Heatsink | Rev.1.1 |

Typical Performance Data:

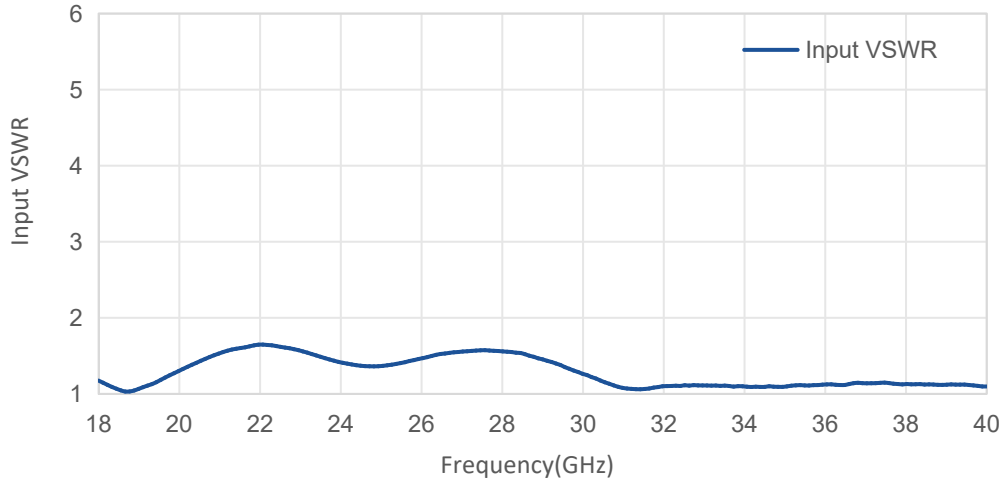
Small Signal Gain vs Frequency



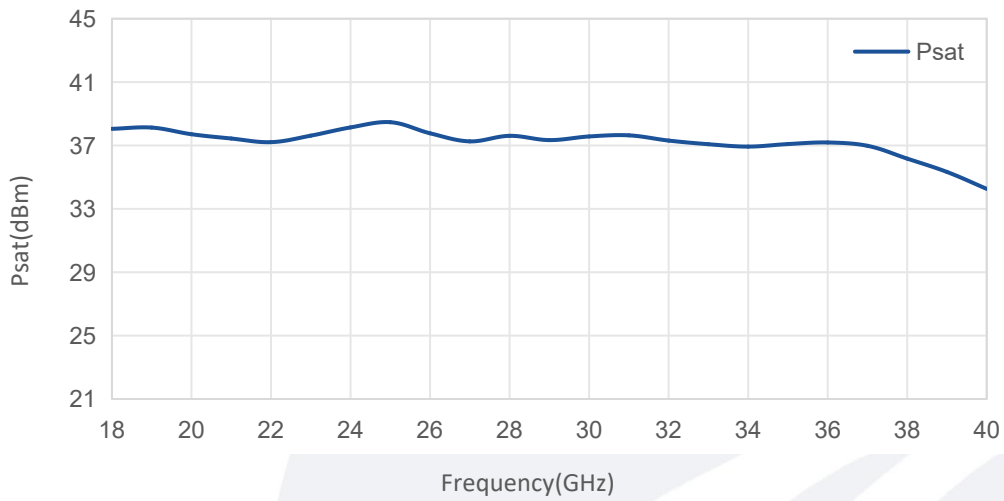
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

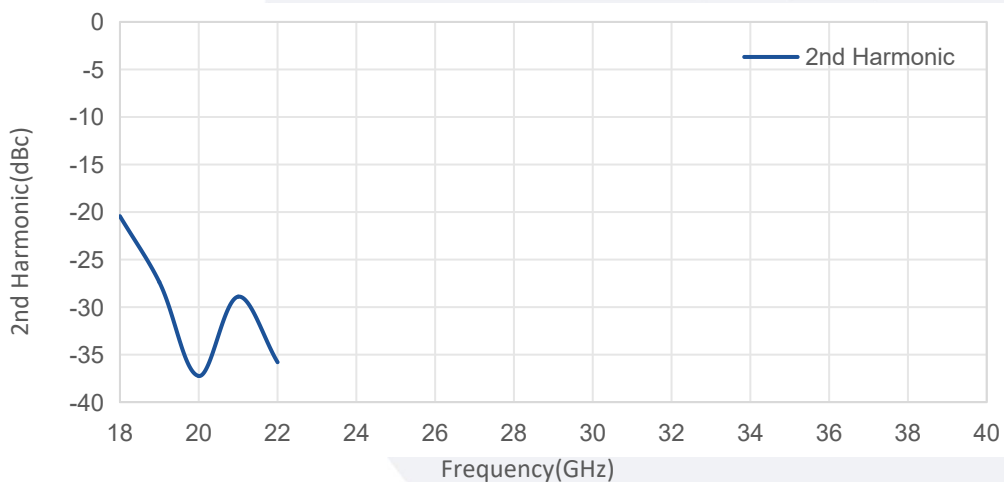
Input VSWR vs Frequency



Psat vs Frequency



2nd Harmonic vs Frequency



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.