

Power Amplifier

2-18GHz/50dB Gain/50dBm Psat

Model: TLPA2G18G-50-50-HS

TLPA2G18G-50-50-HS is a power amplifier with a minimum power gain of 50 dB and a minimum power Psat of 50 dBm across the frequency range of 2 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/1800 W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

Features:

- Frequency range: 2-18GHz
- Gain: 50dB Min
- Output Power Psat: 50dBm 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 | 2 | | 18 | GHz |
| Power Gain | 50 | | | dB |
| Gain Flatness | | ±4.5 | ±5 | dB |
| Output Psat | 50 | | | dBm |
| Spurious@Pout=51dBm | | | -60 | dBc |
| Harmonics@Pout=51dBm | | | -10 | dBc |
| Input VSWR | | | 2.0 | :1 |
| DC Voltage | | +28 | | V DC |
| Power Consumption | | | 1800 | W |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|---------------------------|---------------------|-------|
| Input /Output Connector | SMA Female/N Female | |
| DC Power Supply Connector | SUB-5W5 | |
| Size | 340*330*98.5 | mm |
| Weight | 25 | Kg |

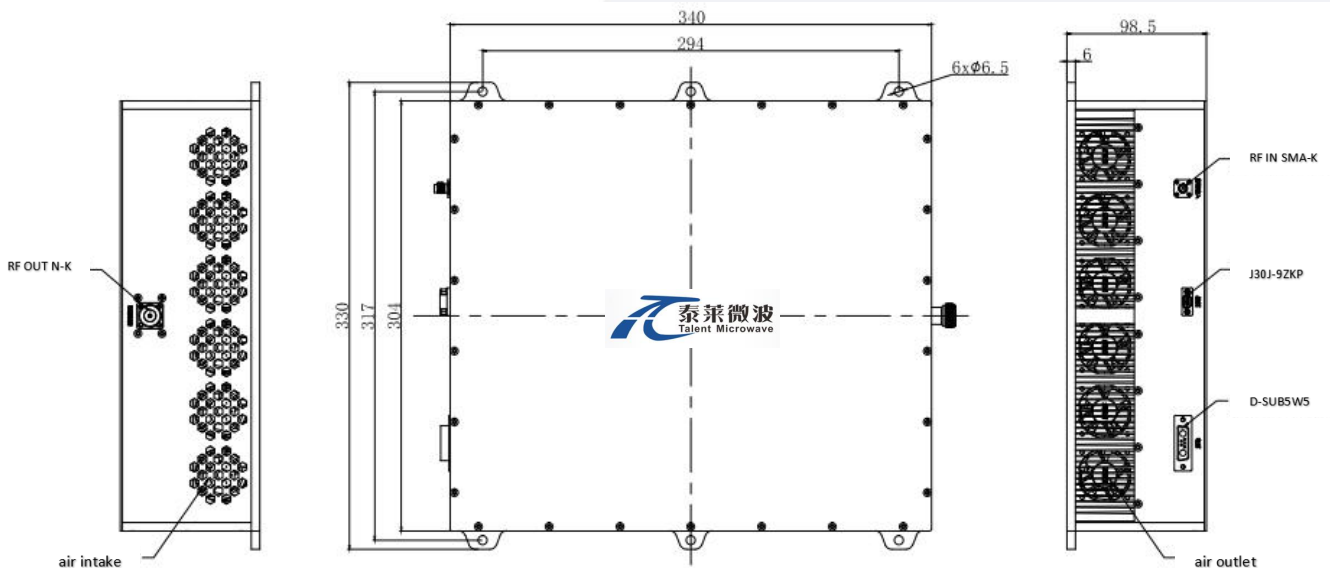
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +28 V |
| RF Input Power | +10 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Outline Drawing:

Unit:mm



*****Heat Sink Required During Operation**



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

DC Power Supply Connector(D-SUB-5W5):

| Pin | Function |
|-------|----------|
| A1-A2 | +28 V |
| A3-A5 | GND |

Environmental Conditions:

| Parameter | Min | Typ | Max | Units |
|---------------------------------|--|-----|-----|-------|
| Operating Temperature* | -20 | | +40 | °C |
| Non-operating Temperature* | -40 | | +55 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 20g,11ms,saw-tooth | | | |
| Shock(non operating) | 20G for 11msc half sin wave,3 axis both directions | | | |

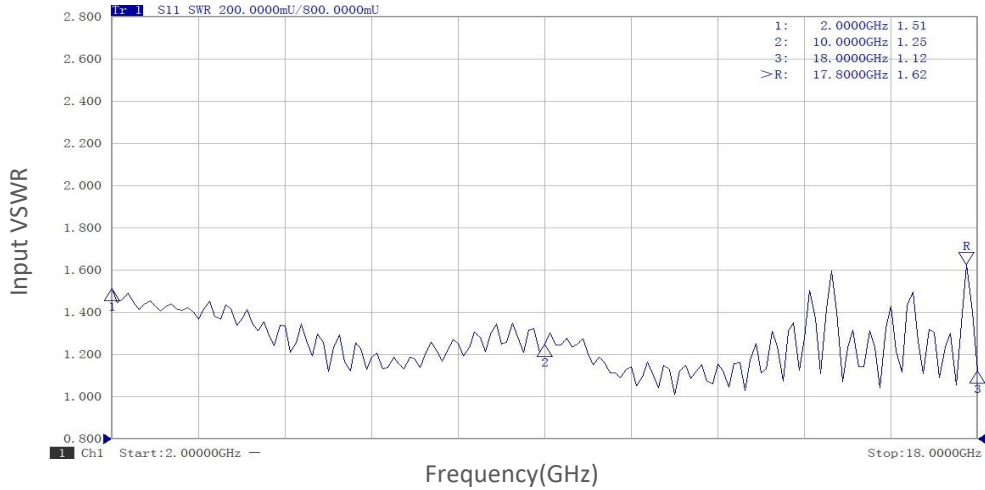
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

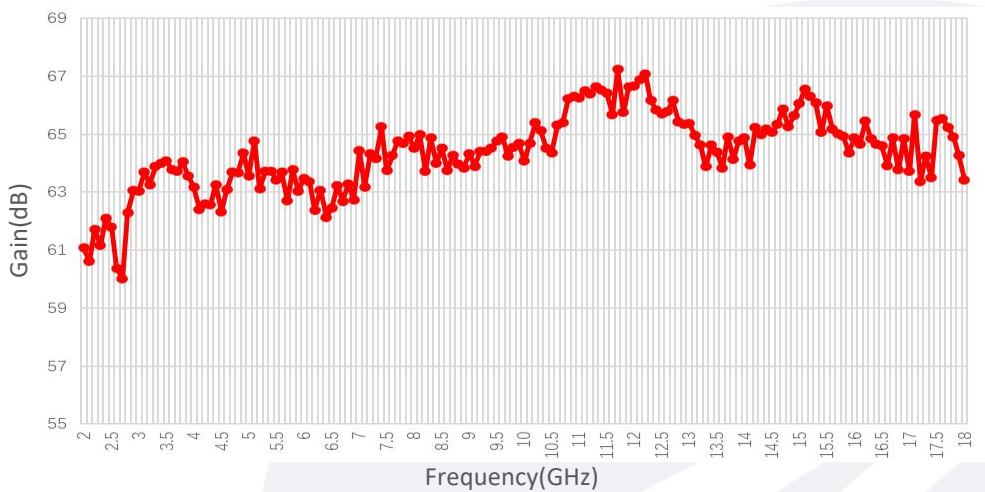
| Base Number | Description | Revision |
|--------------------|---|----------|
| TLPA2G18G-50-50-HS | Power amplifier 2-18GHz, Gain:50dB,Psat:50dBm,+28V DC,Built in Fan Cooling | Rev.1.1 |

Typical Performance Data:

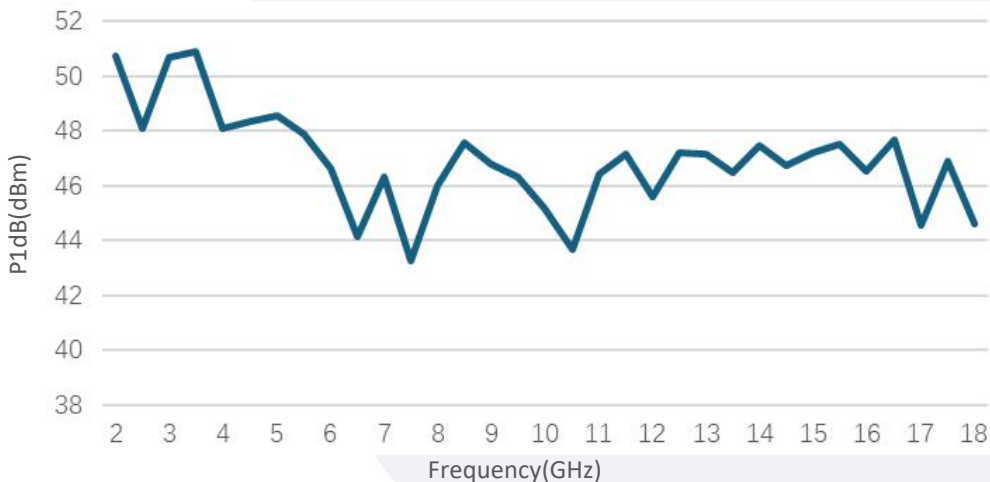
Input VSWR vs Frequency



Small Signal Gain vs Frequency

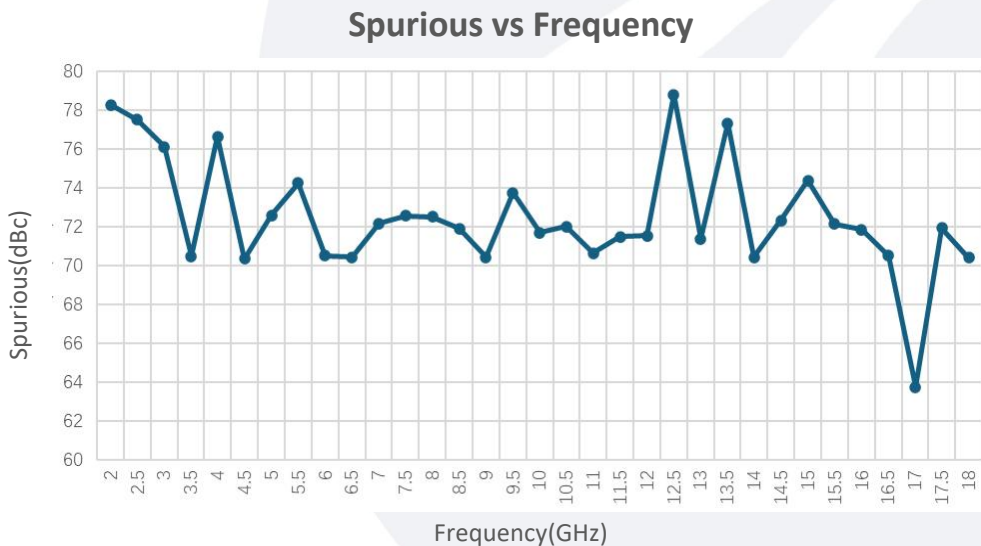
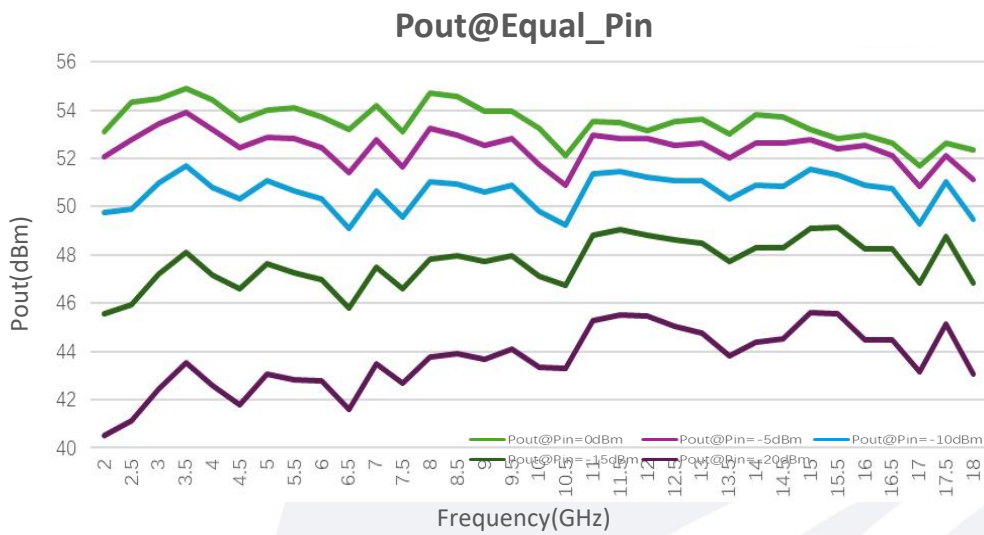
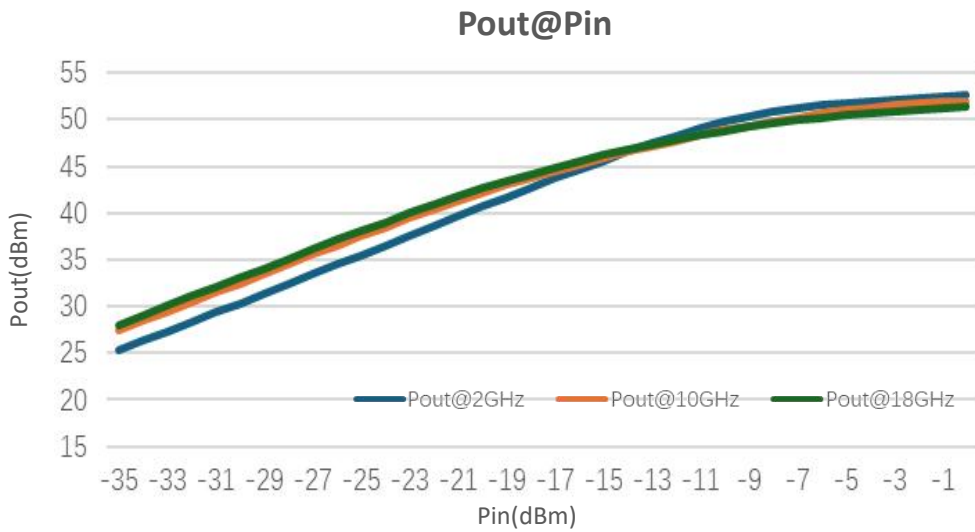


P1dB vs Frequency



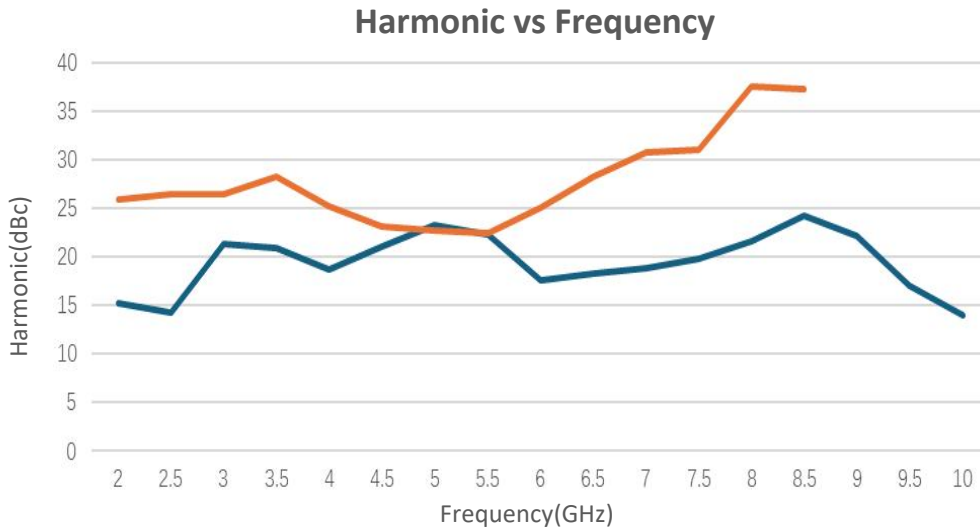
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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