

Power Amplifier

2-20GHz/19dB Gain/23dBm Psat

Model: TLPA2G20G-19-23-LC

TLPA2G20G-19-23-LC is a power amplifier with a typical small signal gain of 17 dB and Psat of 23 dBm across the frequency range of 2 to 20 GHz. The DC power requirement for the amplifier is +12 VDC/136mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 2-20GHz
- Small Signal Gain: 17dB Typ
- Output Power Psat: 23dBm Typ
- 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 | | 20 | GHz |
| Small Signal Gain | | 17 | | dB |
| Gain Flatness | | ±2.5 | | dB |
| Output P1dB | | 21 | | dBm |
| Output Psat | | 23 | | dBm |
| Noise Figure | | 5.5 | | dB |
| Input VSWR | | 2 | | :1 |
| Output VSWR | | 2 | | :1 |
| DC Voltage | | +12 | +15 | V DC |
| DC Supply Current | | 136 | | mA |
| Impedance | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | SMA Female/SMA Female | |
| DC Bias | Solder Pin | |
| Size | 25*25*9 | mm |

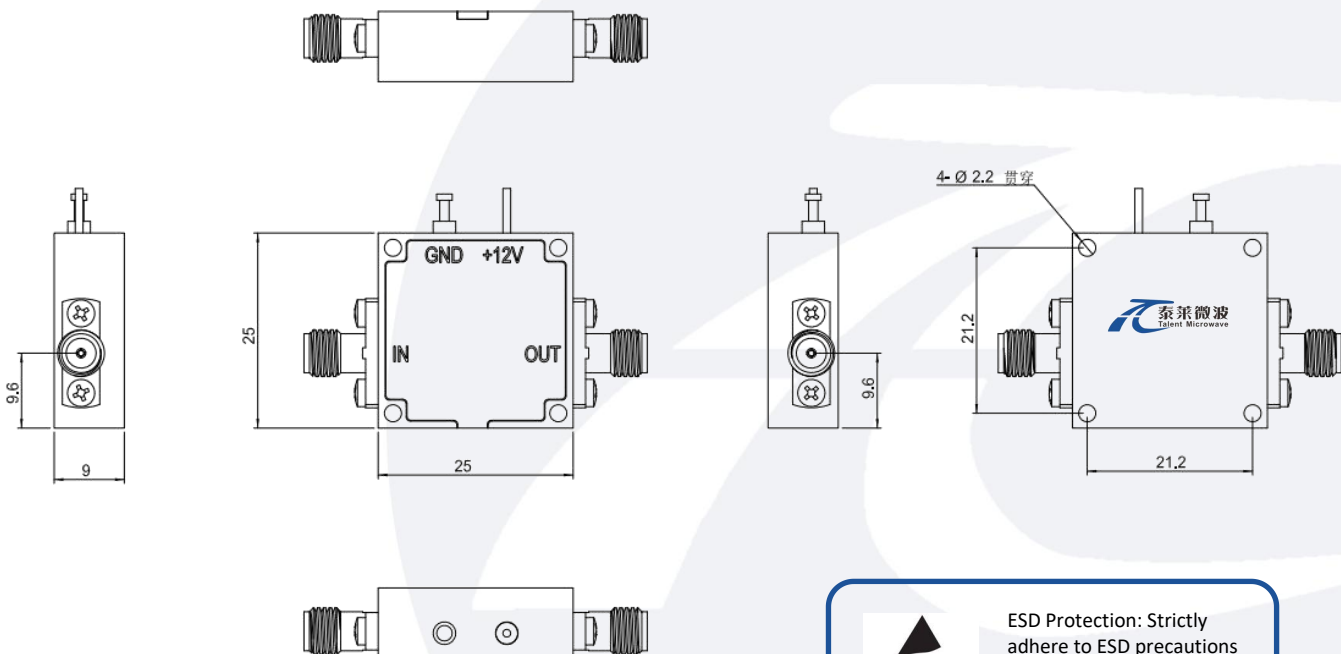
Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +15 V |
| RF Input Power | +20 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:

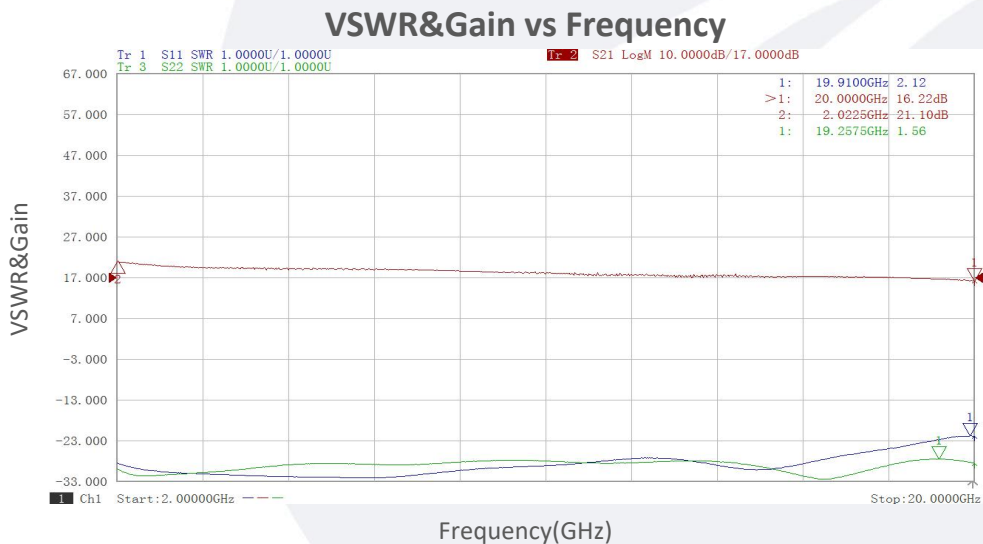
| Parameter | Min | Typ | Max | Units |
|---------------------------------|---|-----|-----|-------|
| Operating Temperature* | -40 | | +60 | °C |
| on-operating Temperature* | -50 | | +70 | °C |
| Relative humidity | | 95 | | % |
| Altitude | 10,000 | | | feet |
| Shock / Vibration(MIL-STD-810F) | 25g 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 |
|--------------------|---|----------|
| TLPA2G20G-19-23-LC | Power amplifier 2-20GHz, Gain:17dB,Psat:23dBm,+12V DC,Without Heatsink | Rev.1.1 |

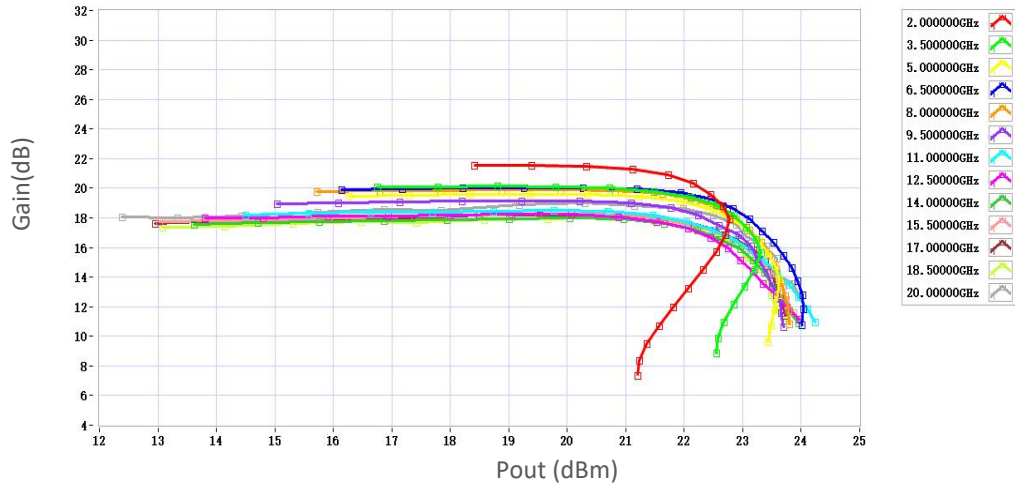
Typical Performance Data:



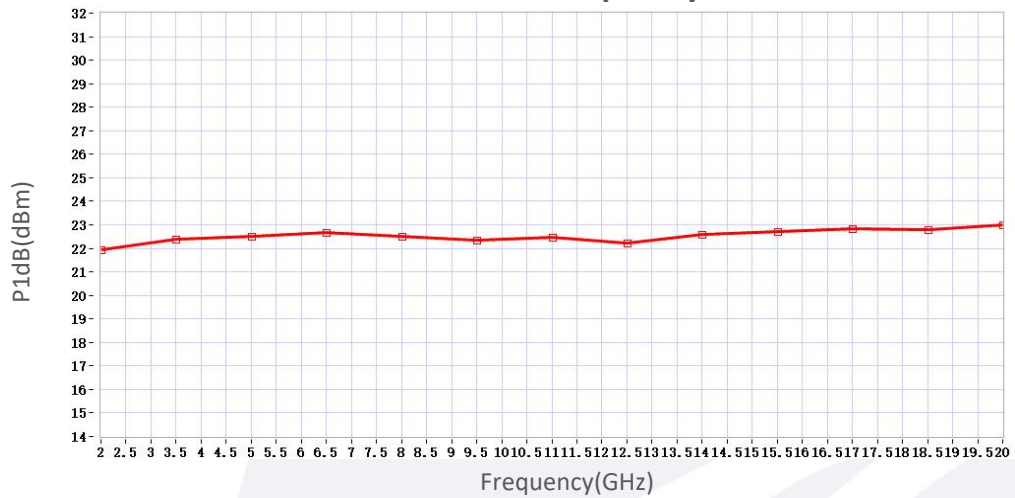
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

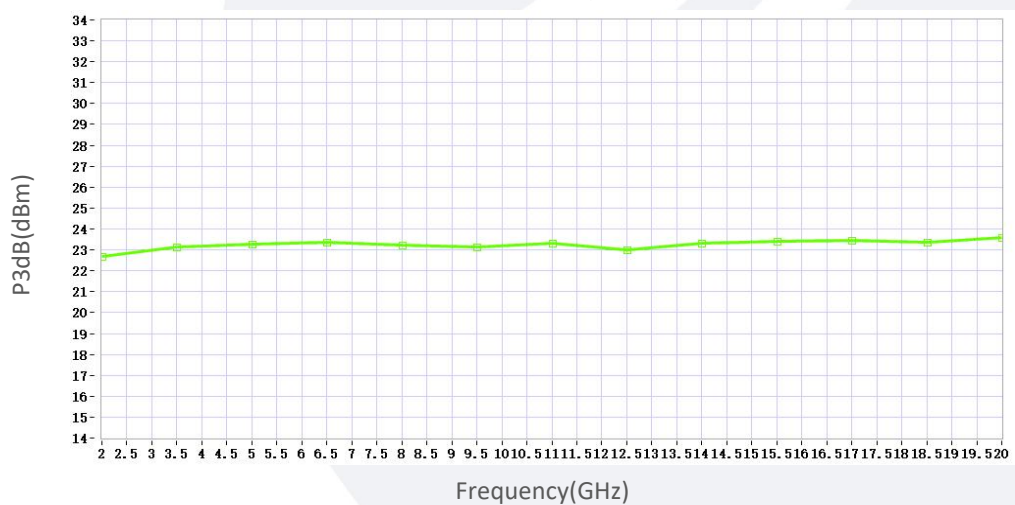
Gain vs Output Power



P1dB vs Frequency



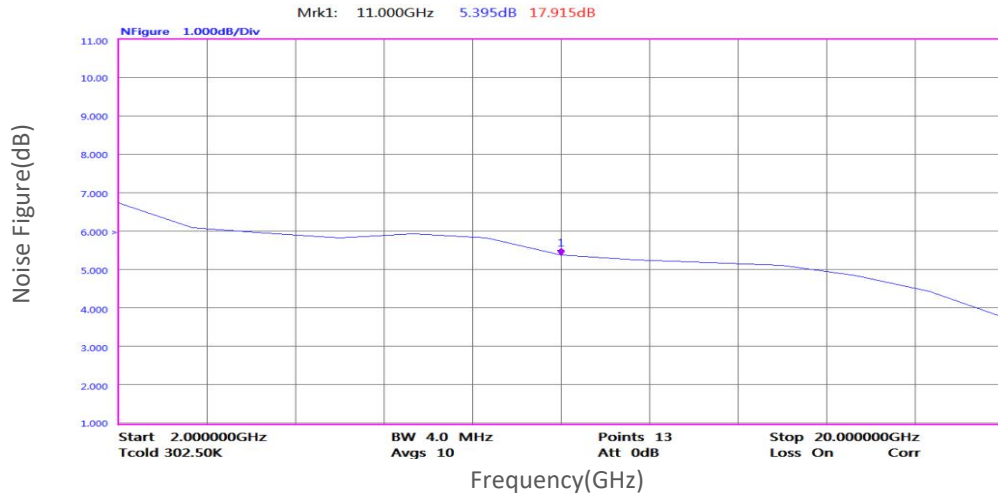
P3dB vs Frequency



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Typical Performance Data:

Noise Figure vs Frequency



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