

## Model:TLPA18G50G-35-20

## Power Amplifier

18-50GHz,Gain:35dB,Psat:19dBm

### Feature:

- Ultra Wide Band: 18-50GHz
- Gain:35dB Typ
- Psat Output Power:19dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Electrical Specifications:

| Parameter         | Min   | Typ  | Max  | Units |
|-------------------|-------|------|------|-------|
| Frequency range   | 18-50 |      |      | GHz   |
| Gain              | 32    | 35   |      | dB    |
| Gain Flatness     |       | ±1.5 | ±2.5 | dB    |
| Output P1dB       |       | 17   |      | dBm   |
| Output Psat       |       | 19   |      | dBm   |
| Input VSWR        |       | 1.8  | 2.5  | :1    |
| Output VSWR       |       | 1.8  | 2.5  | :1    |
| DC Voltage        |       | +12  |      | V DC  |
| DC Supply Current |       | 700  |      | mA    |
| Impedance         | 50    |      |      | Ohms  |

### Mechanical Specifications:

| Parameter               | Value                 | Units |
|-------------------------|-----------------------|-------|
| Input /Output Connector | 2.4 Female/2.4 Female |       |
| DC Bias                 | Solder Pin            |       |
| Size                    | 44.*29.2*11           | mm    |
| Weight                  | /                     | g     |

### Absolute Maximum Ratings:

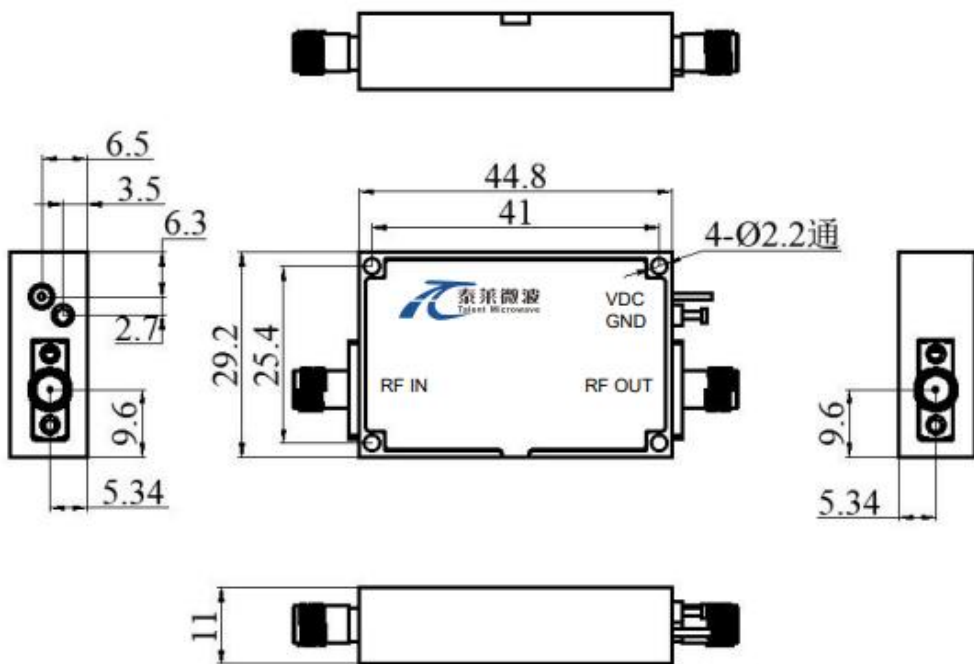
| Parameter             | Value                |
|-----------------------|----------------------|
| Supply Bias Voltage   | +12V                 |
| RF Input Power        | -5dBm                |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Available 220V System  
Benchtop Amplifier

## Outline Drawing:

Unit: mm



## \*\*\*Heat Sink Required During Operation

## Environmental Conditions:



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

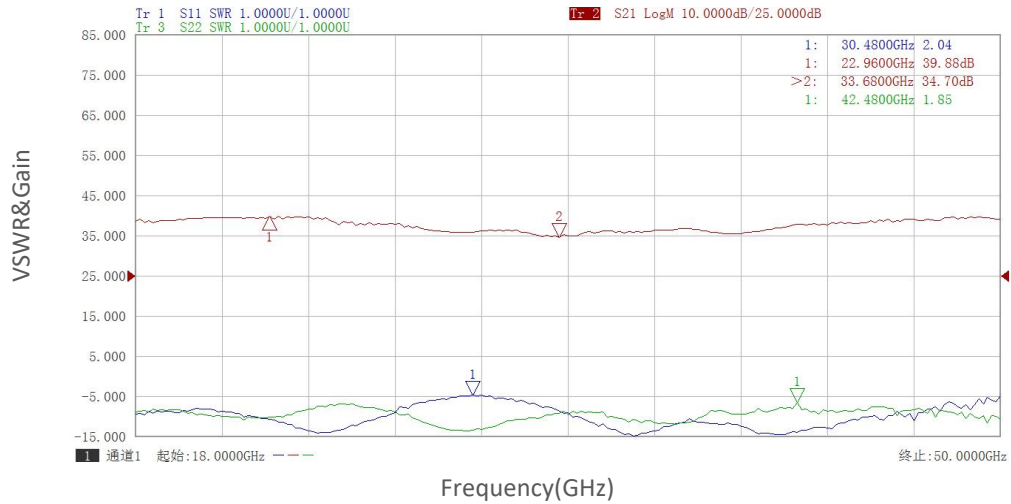
| Parameter                       | Min                                                 | Typ | Max  | Units |
|---------------------------------|-----------------------------------------------------|-----|------|-------|
| Operating Temperature           | -40                                                 |     | +75  | °C    |
| Non-operating Temperature       | -55                                                 |     | +125 | °C    |
| Relative humidity               |                                                     | 95  |      | %     |
| Altitude                        | 50,000                                              |     |      | 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  |     |      |       |

## Ordering Information:

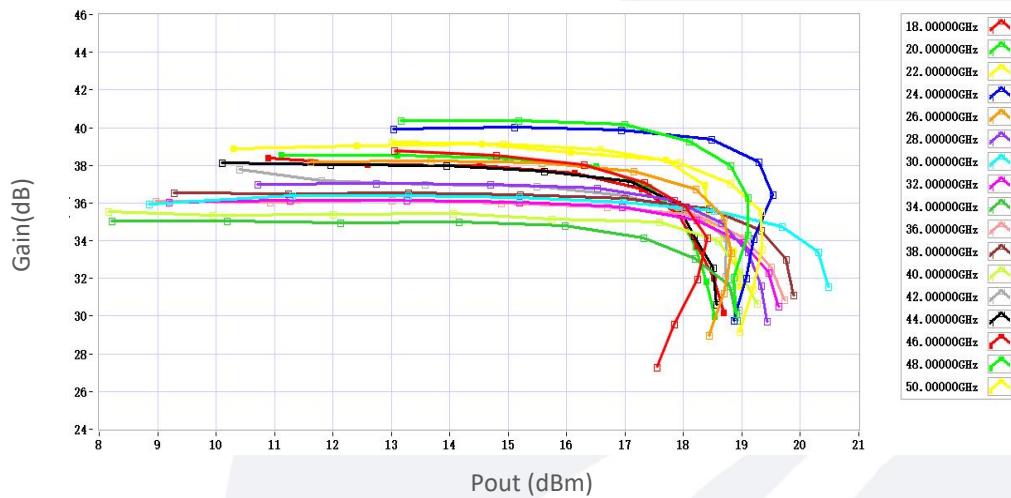
| Part Number         | Description                                                             | Revision |
|---------------------|-------------------------------------------------------------------------|----------|
| TLPA18G50G-35-20    | Power amplifier 18-50GHz,Gain:35dB,Psat:19dBm,+12V DC,Without Heatsink. | Rev.1.1  |
| TLPA18G50G-35-20-HS | Power amplifier 18-50GHz,Gain:35dB,Psat:19dBm,+12V DC,With Heatsink.    | Rev.1.1  |

## Typical Performance Data:

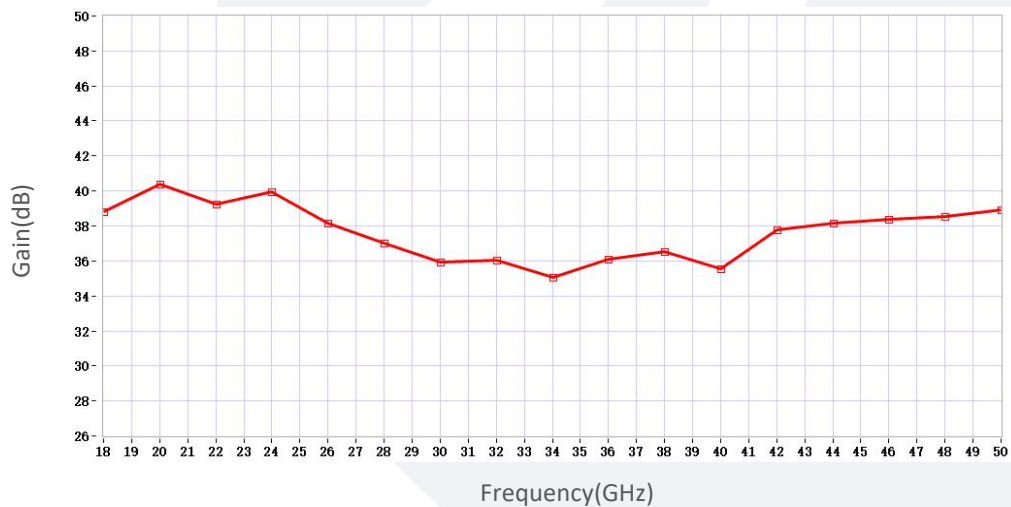
### VSWR&Gain vs Frequency



### Gain vs Output Power

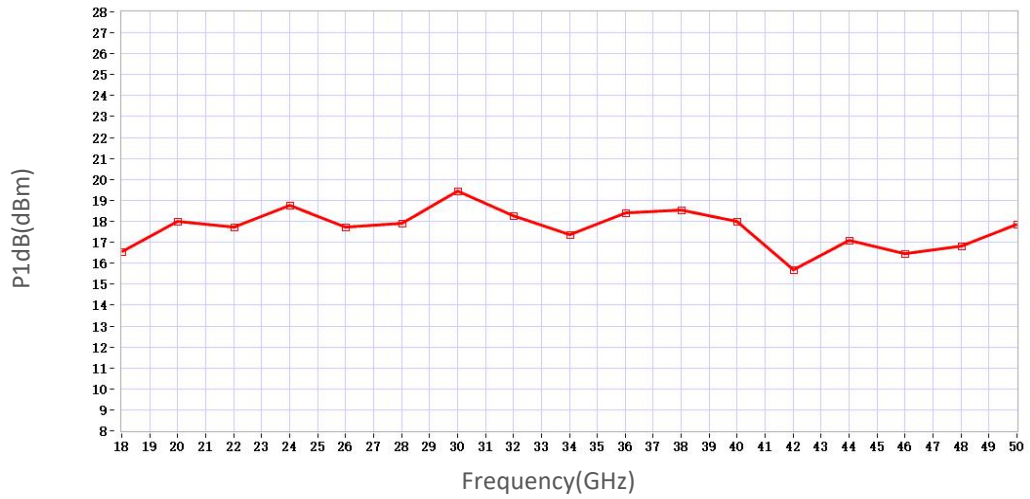


### Gain vs Frequency



## Typical Performance Data:

### P1dB vs Frequency



### P3dB vs Frequency

