

## Power Amplifier

2-18GHz /40dB Gain/40 dBm Psat

Model: TLPA2G18G-40-40

TLPA2G18G-40-40 is a power amplifier with power gain of 40 dB and Psat of 40 dBm across the frequency range of 2 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/2.3 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Ultra Wide Band: 2-18GHz
- Gain: 40dB Typ
- Output Power Psat: 40dBmMin
- 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              |      | 40  |     | dB    |
| Gain Flatness           |      | ±4  |     | dB    |
| Output Psat             | 40   |     |     | dBm   |
| Spurious@Pout=40dBm     |      |     | -50 | dBc   |
| 2nd Harmonic@Pout=40dBm |      | -10 |     | dBc   |
| Input VSWR              |      |     | 2   | :1    |
| DC Voltage              |      | 28  |     | V DC  |
| DC Supply Current       |      | 2.3 |     | A     |
| Impedance               | 50   |     |     | Ohms  |

## Mechanical Specifications:

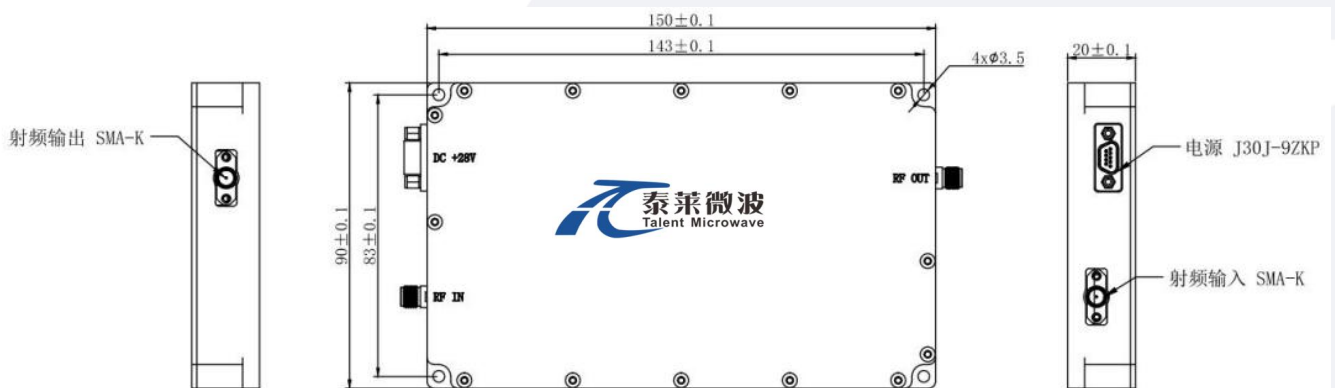
| Parameter               | Value                                                     | Units                     |
|-------------------------|-----------------------------------------------------------|---------------------------|
| Input /Output Connector | SMA Female/SMA Female                                     |                           |
| DC Bias                 | J30J-9ZKP                                                 | Pin1~5:+28V<br>Pin6~9:GND |
| Size                    | 150*90*20(Without Heatsink)<br>258*125*155(With Heatsink) | mm                        |

## 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



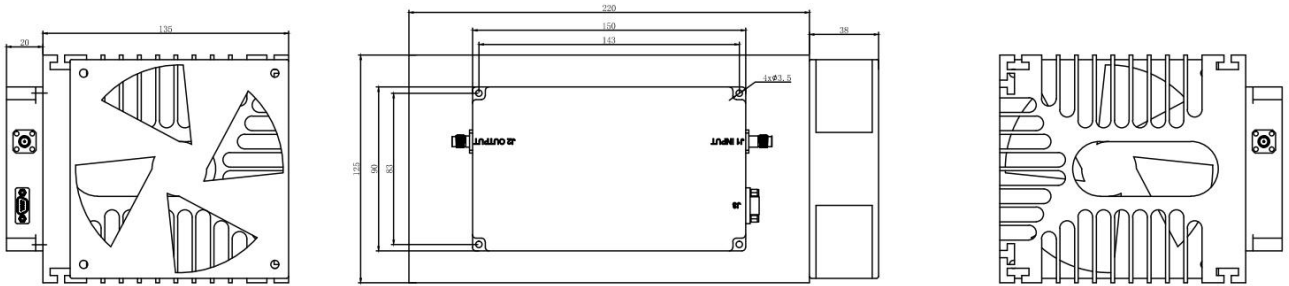
\*\*\*Heat Sink Required During Operation



OBSERVE PRECAUTIONS  
ELECTROSTATIC SENSITIVE  
DEVICES

## Outline Drawing:

Unit:mm



## DC Supply Connector(J30J-9ZKP):

| J30J-9ZKP Define |          |
|------------------|----------|
| Pin              | Function |
| 1~5              | +28 V    |
| 6~9              | GND      |

## Environmental Conditions:

| Parameter                       | Min                                                 | Typ | Max | Units |
|---------------------------------|-----------------------------------------------------|-----|-----|-------|
| Operating Temperature*          | -40                                                 |     | +50 | °C    |
| Non-operating Temperature*      | -50                                                 |     | +60 | °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  |     |     |       |

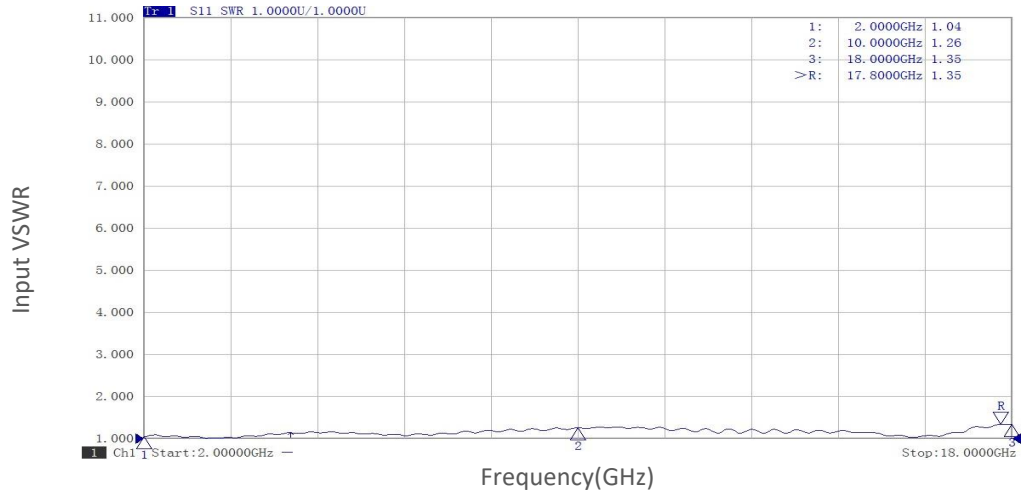
\*Note: For a wider temperature range, please consult the manufacturer.

## Ordering Information:

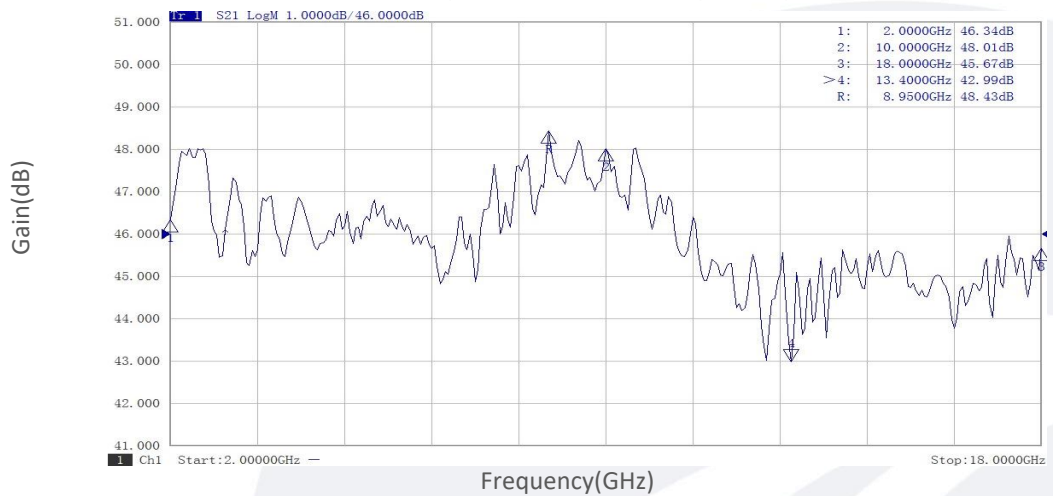
| Base Number        | Description                                                               | Revision |
|--------------------|---------------------------------------------------------------------------|----------|
| TLPA2G18G-40-40    | Power amplifier 2-18GHz,Gain:40dB,Psat:40dBm,<br>+28V DC,Without Heatsink | Rev.1.1  |
| TLPA2G18G-40-40-HS | Power amplifier 2-18GHz,Gain:40dB,Psat:40dBm,<br>+28V DC,With Heatsink    | Rev.1.1  |

## Typical Performance Data:

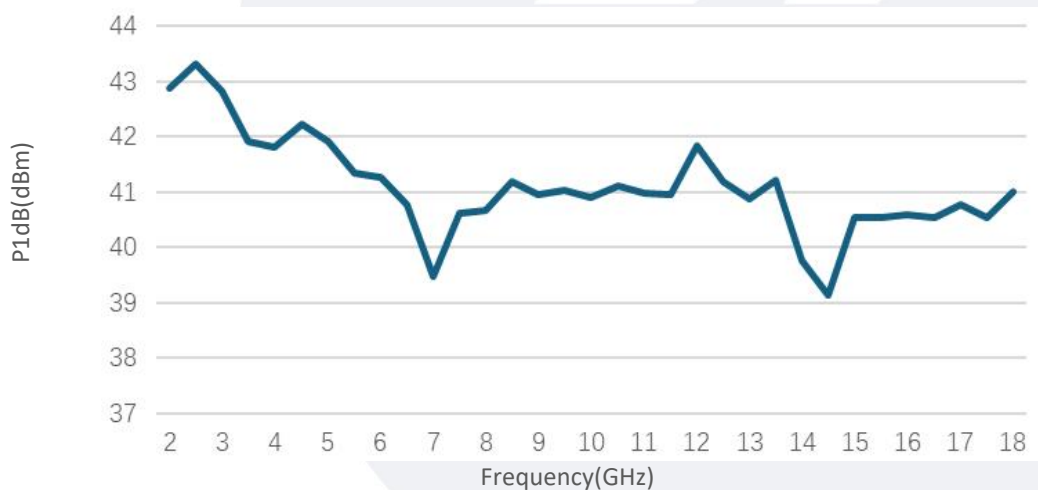
### Input VSWR vs Frequency



### Small Signal Gain vs Frequency

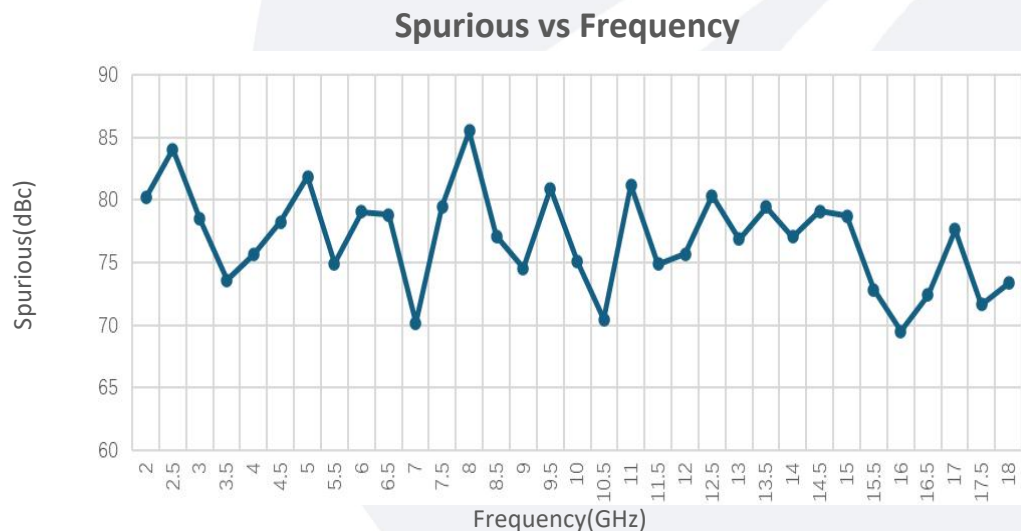
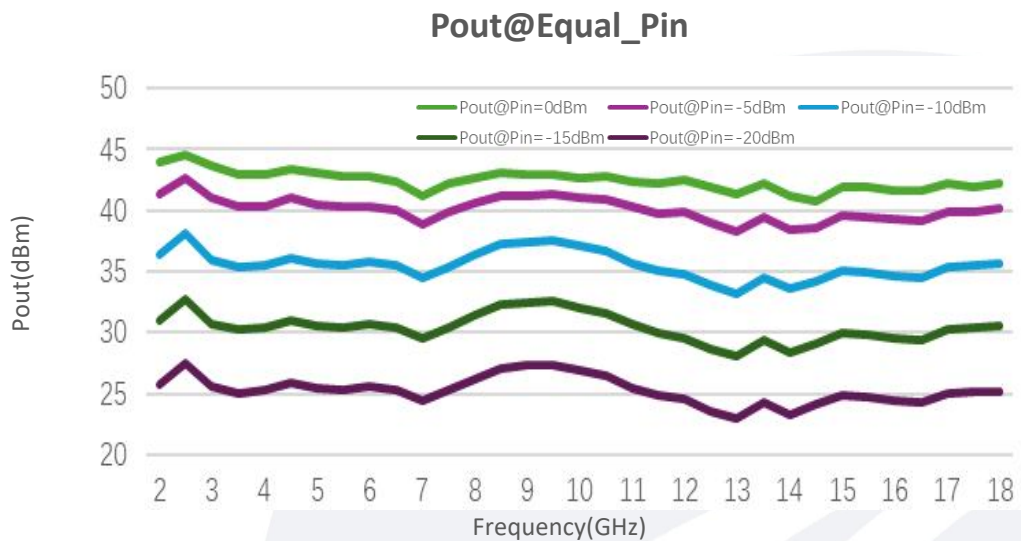
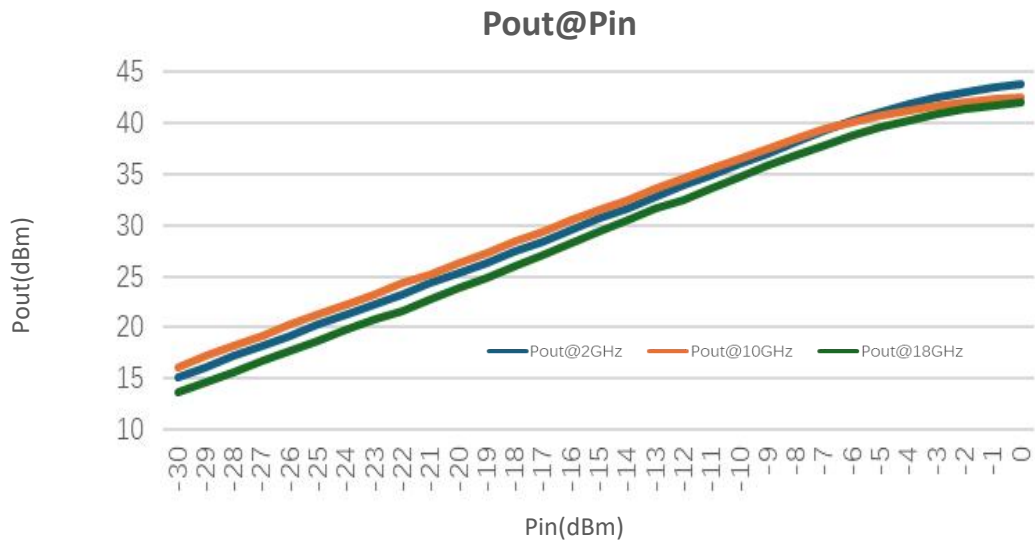


### P1dB vs Frequency



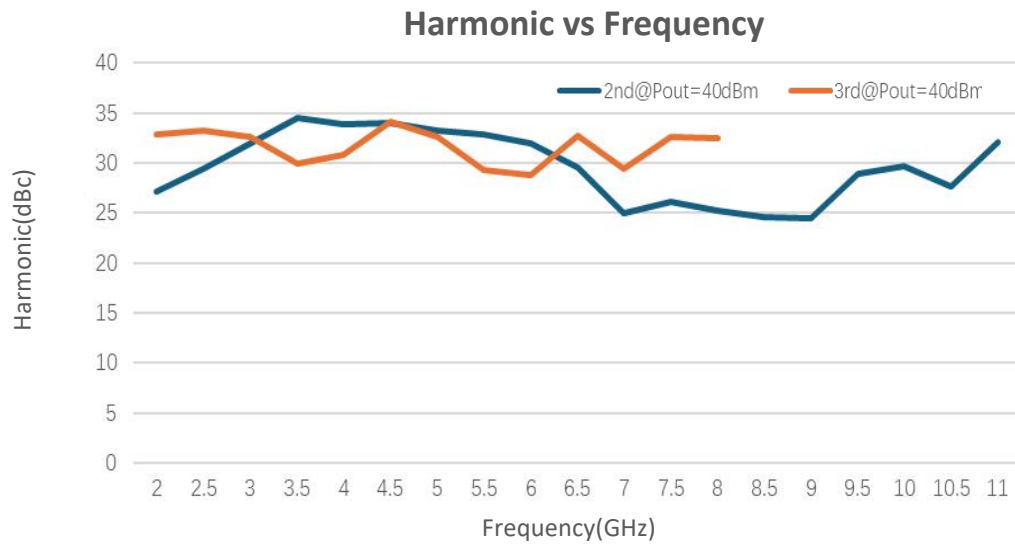
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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