

## Power Amplifier

18-40GHz /46dB Gain/30 dBm Psat

Model: TLPA18G40G-46-30

TLPA18G40G-46-30 is a power amplifier with a typical gain of 46 dB and a nominal Psat of 30 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +24 VDC/0.5 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Ultra Wide Band: 18-40GHz
- Gain: 46dB Typ
- Output Power Psat: 30dBm Typ
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### 电气特性 Electrical Characteristics:

| 参数 Parameter           | Min   | Typ | Max | 单位 Units |
|------------------------|-------|-----|-----|----------|
| 频率范围 Frequency range   | 18-40 |     |     | GHz      |
| 增益 Gain                | 45    | 46  |     | dB       |
| 噪声系数 Noise Figure      |       | 5   |     | dB       |
| 线性输出功率 Output P1dB     | 27.5  | 29  |     | dBm      |
| 饱和输出功率 Output Psat     | 28.5  | 30  |     | dBm      |
| 输入驻波 Input VSWR        |       | 1.8 |     | :1       |
| 输出驻波 Output VSWR       |       | 1.8 |     | :1       |
| 直流电压 DC Voltage        |       | 24  |     | V DC     |
| 直流电流 DC Supply Current |       | 0.5 |     | A        |
| 阻抗 Impedance           | 50    |     |     | Ohms     |

## 机械特性 Mechanical Specifications:

| 参数 Parameter                    | 指标 Value   | 单位 Units |
|---------------------------------|--|----------|
| 输入/输出接口 Input /Output Connector | 2.92mm Female/2.92mm Female                            |          |
| 直流偏置 DC Bias                    | Solder Pin   |          |
| 尺寸 Size                         | 50*65*14(Without heatsink)<br>100*50*64(With heatsink) | mm       |
| 重量 Weight                       | /  | g        |

## 绝对最大值 Absolute Maximum Ratings:

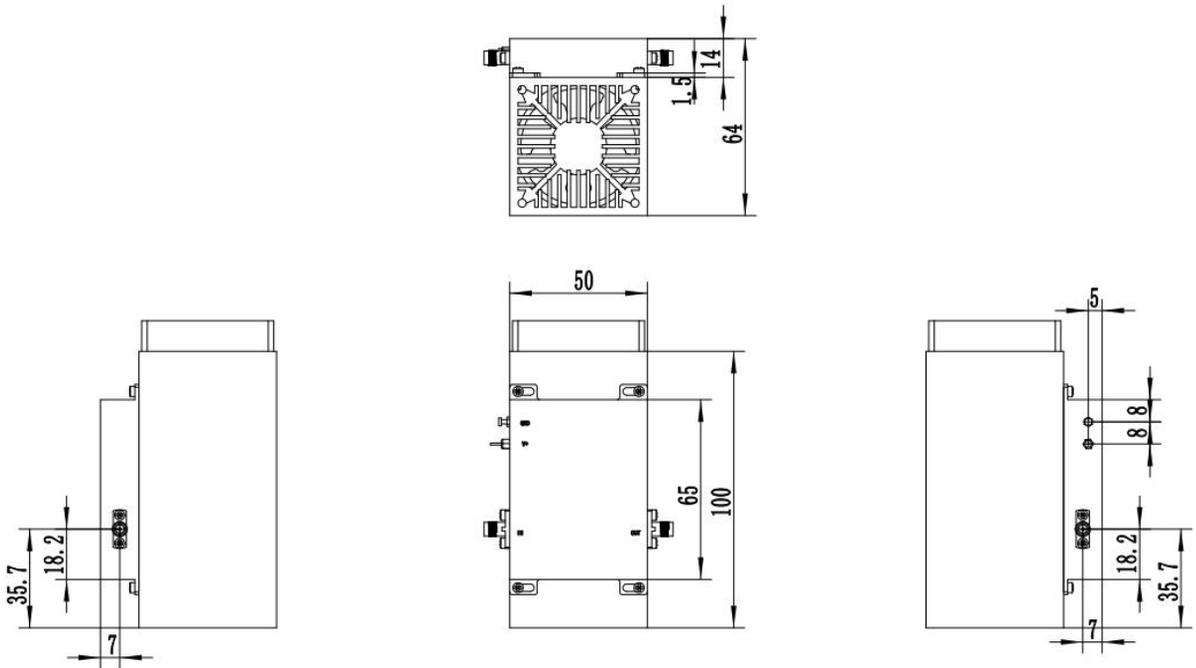
| 参数 Parameter                 | 指标 Value             |
|------------------------------|----------------------|
| 供电偏置电压 Supply Bias Voltage   | TBD                  |
| 输入功率 RF Input Power          | +5 dBm               |
| ESD灵敏度 ESD sensitivity (HBm) | Class 0, passed 150V |

## 外形图 Outline Drawing:

Unit:mm

## 外形图 Outline Drawing:

Unit:mm



## 温度环境 Environmental Conditions:

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

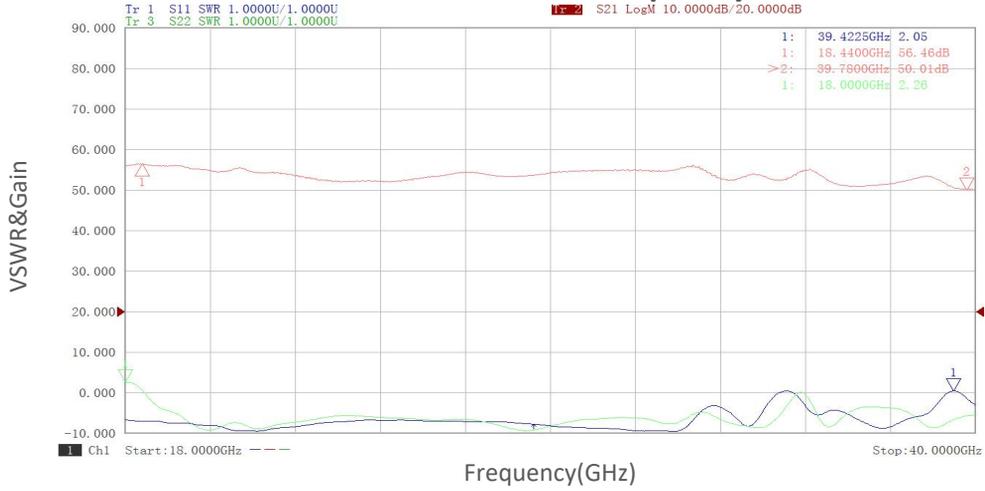
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

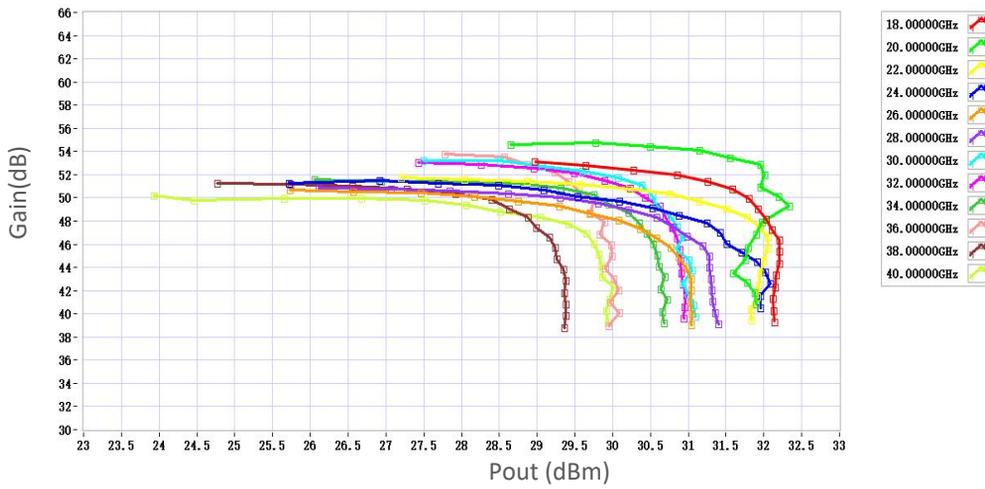
| 标准型号 Base Number | 描述 Description   | 版本号 Revision |
|------------------|--|--------------|
| TLPA18G40G-46-30 | Power amplifier 18-40GHz,Gain:46dB,Psat:30dBm,<br>+24V DC,Without Heatsink | Rev.1.1      |

## 典型曲线 Typical Performance Data:

### VSWR&Gain vs Frequency



### Gain vs Output Power

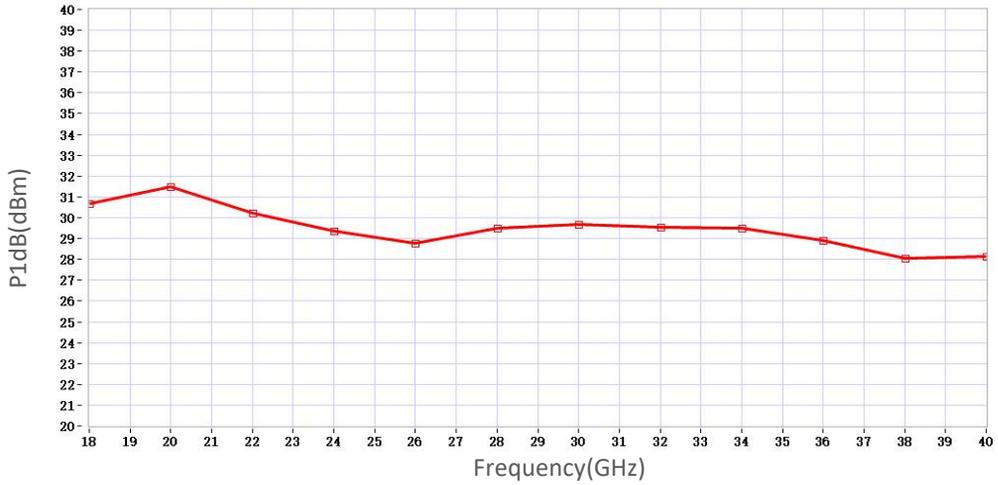


### Noise Figure vs Frequency

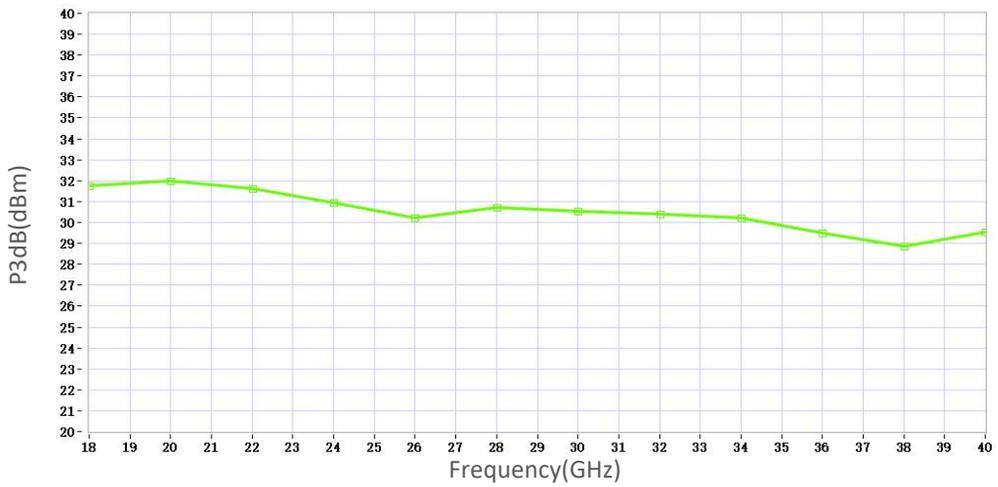
Noise Figure(dBm)

典型曲线 Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency



Psat vs Frequency

Psat (dBm)