

## Power Amplifier

18-50GHz /35dB Gain/19 dBm Psat

Model: TLPA18G50G-35-20

TLPA18G50G-35-20 is a power amplifier with a typical small signal gain of 35 dB and a nominal Psat of 19 dBm across the frequency range of 18 to 50 GHz. The DC power requirement for the amplifier is +12 VDC/350 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 18-50GHz
- Gain: 35dB Typ
- Output Power Psat: 19dBm 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		18-50		GHz
小信号增益 Small Signal Gain	32	35		dB
增益平坦度 Gain Flatness		±1.5	±2.5	dB
线性输出功率 Output P1dB		17		dBm
饱和输出功率 Output Psat		19		dBm
输入驻波 Input VSWR		1.8	2.5	:1
输出驻波 Output VSWR		1.8	2.5	:1
直流电压 DC Voltage		12		V DC
直流电流 DC Supply Current		350		mA
阻抗 Impedance		50		Ohms

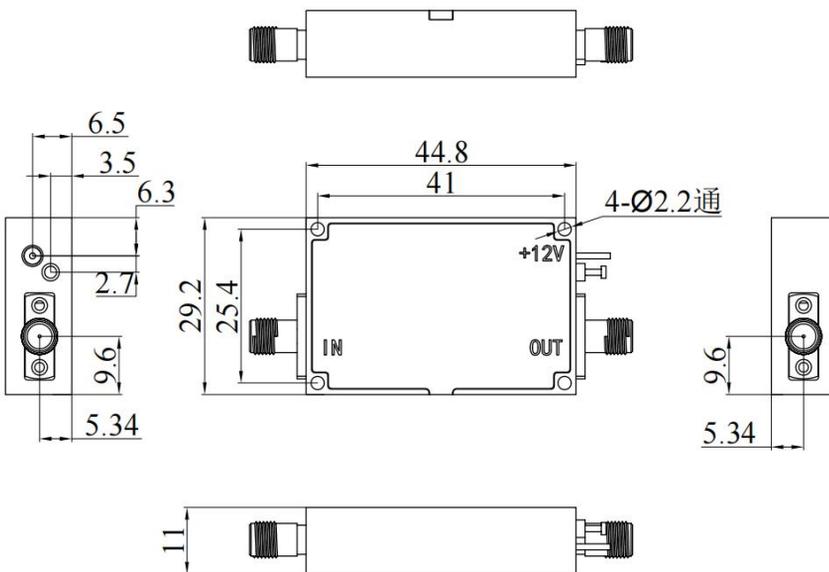
### 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入/输出接口 Input /Output Connector	2.4mm Female/2.4mm Female	
直流偏置 DC Bias	Solder Pin	
尺寸 Size	44.8*29.2*11	mm
重量 Weight	40	g

### 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+15 V
输入功率 RF Input Power	+12 dBm
ESD灵敏度 ESD sensitivity (HBm)	Class 0, passed 150V

### 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
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

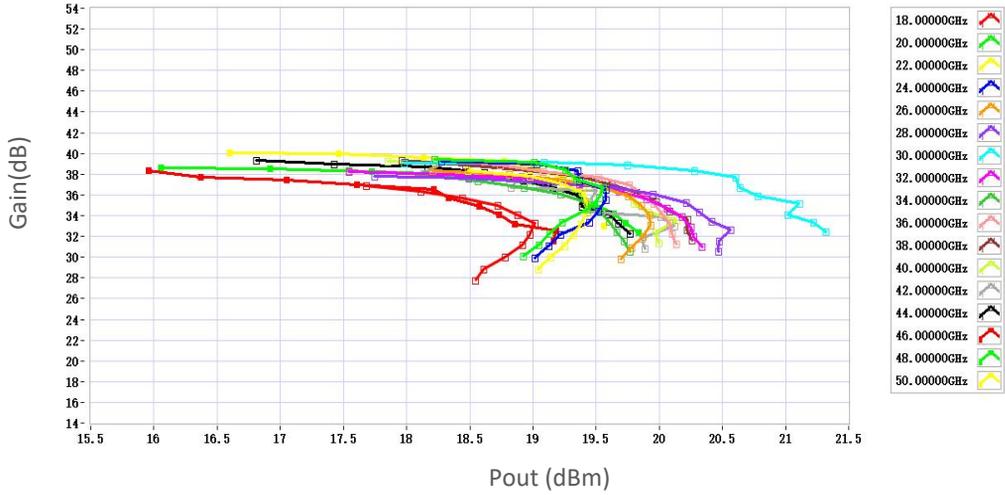
## 典型曲线 Typical Performance Data:

### VSWR&Gain vs Frequency

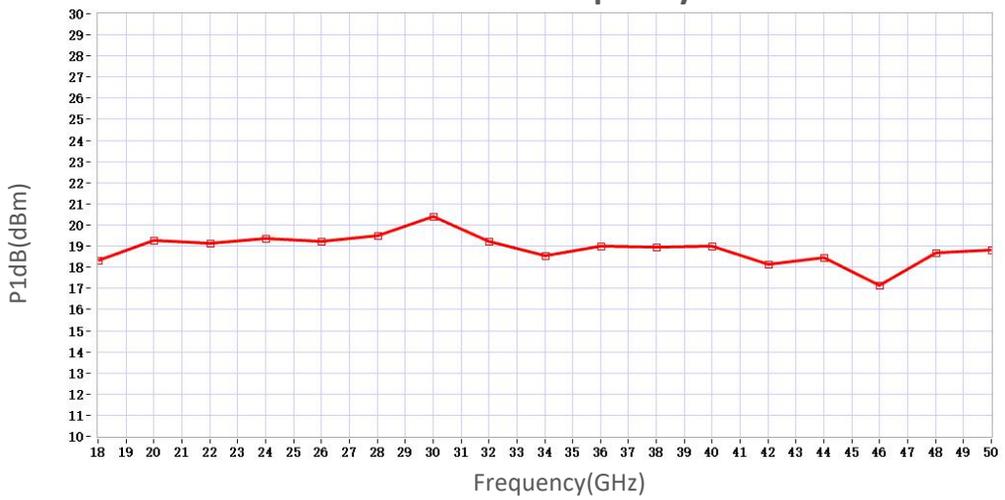
VSWR&Gain

## 典型曲线 Typical Performance Data:

### Gain vs Output Power



### P1dB vs Frequency

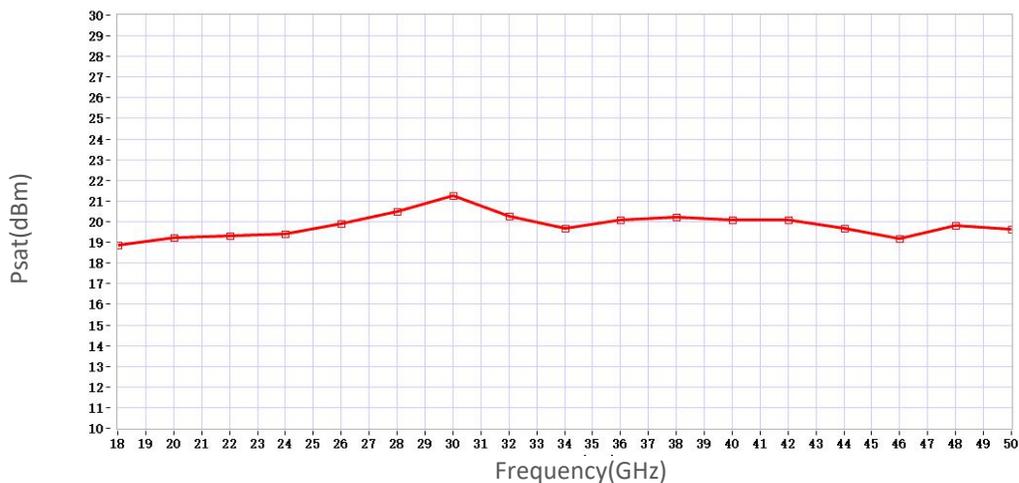


### P3dB vs Frequency

P3dB (dBm)

## 典型曲线 Typical Performance Data:

### Psat 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.