

## Power Amplifier

47-52GHz/20dB Gain/18dBm P1dB

Model: TLPA47G52G-20-18

TLPA47G52G-20-18 is a power amplifier with a minimum gain of 20 dB and a minimum P1dB of 18 dBm across the frequency range of 47 to 52 GHz. The DC power requirement for the amplifier is +12 VDC/0.7 A. The input and output port configuration offers coax adapter structure with 2.4mm female.

### Features:

- Frequency range: 47-52GHz
- Gain: 20dB Min
- Output Power P1dB: 18dBm Min
- 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	47		52	GHz
增益 Gain	20			dB
线性输出功率 Output P1dB	18			dBm
杂散 Spurious			-50	dBc
直流电压 DC Voltage		+12		V DC
直流电流 DC Supply Current			0.7	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	2.4mm Female/2.4mm Female	
直流供电接口 DC Supply Connector	Solder Pin	
尺寸 Size	60*65*11	mm
重量 Weight	500	g

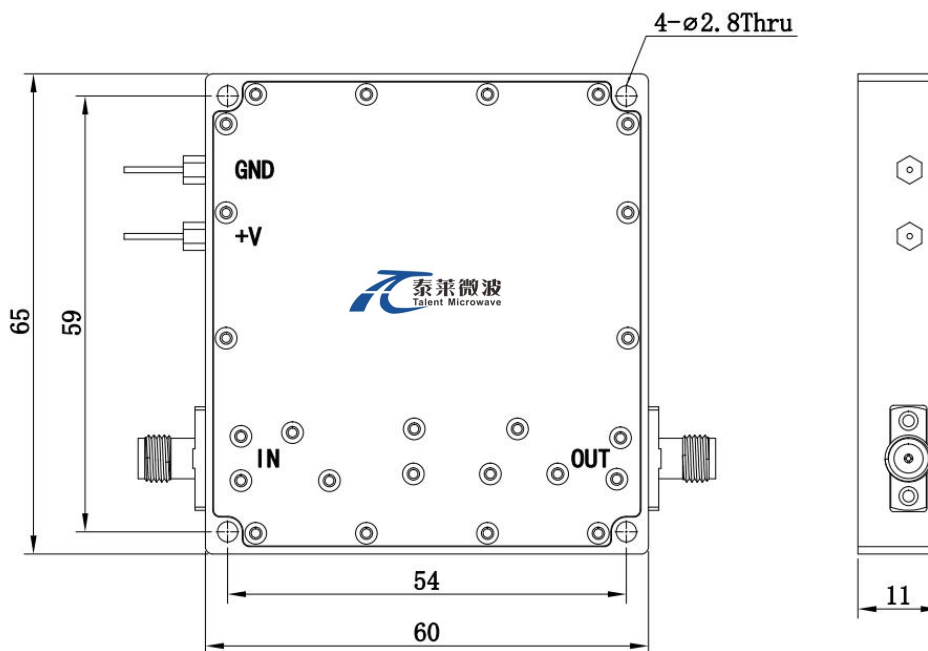
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+12 V
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



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



ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

## 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			

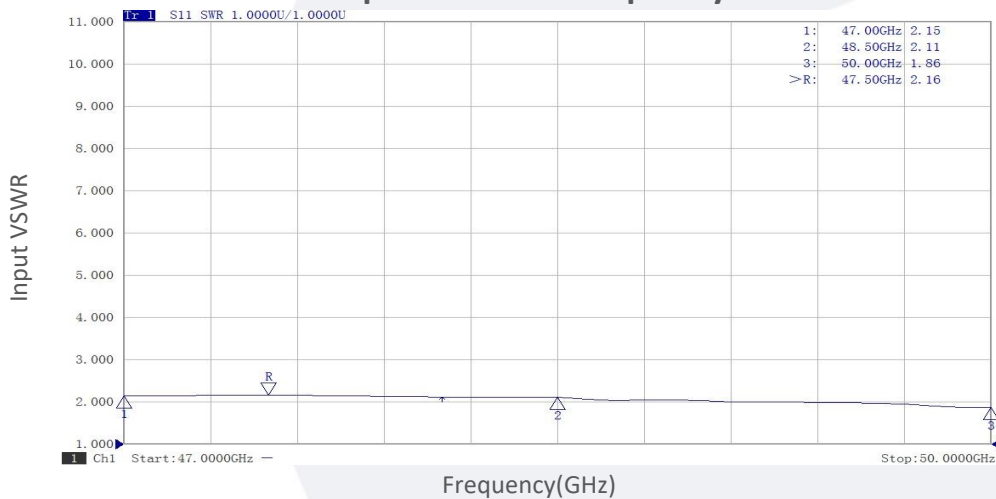
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA47G52G-20-18	Power amplifier 47-52GHz, Gain:20dB,P1dB:18dBm,+12V DC,Without Heatsink	Rev.1.1
TLPA47G52G-20-18-HS	Power amplifier 47-52GHz, Gain:20dB,P1dB:18dBm,+12V DC,With Heatsink	Rev.1.1

## 典型曲线 Typical Performance Data:

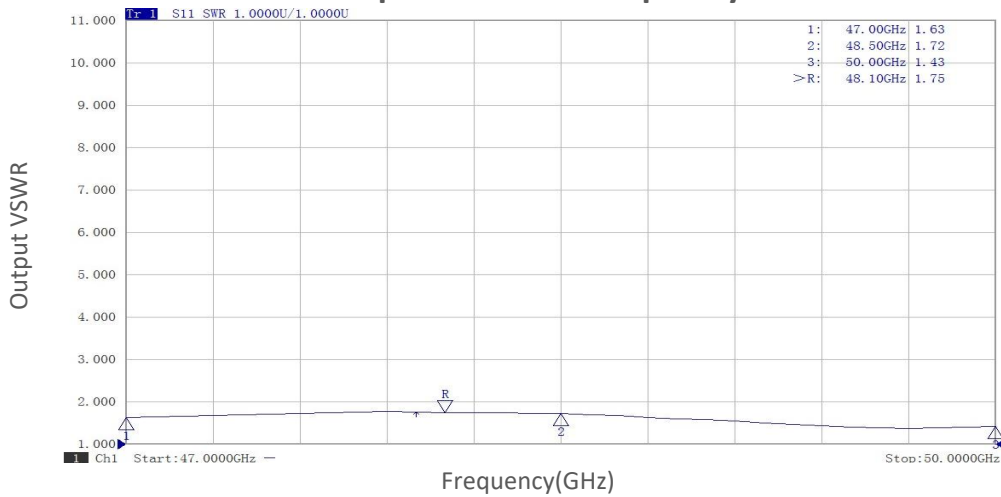
### Input VSWR vs Frequency



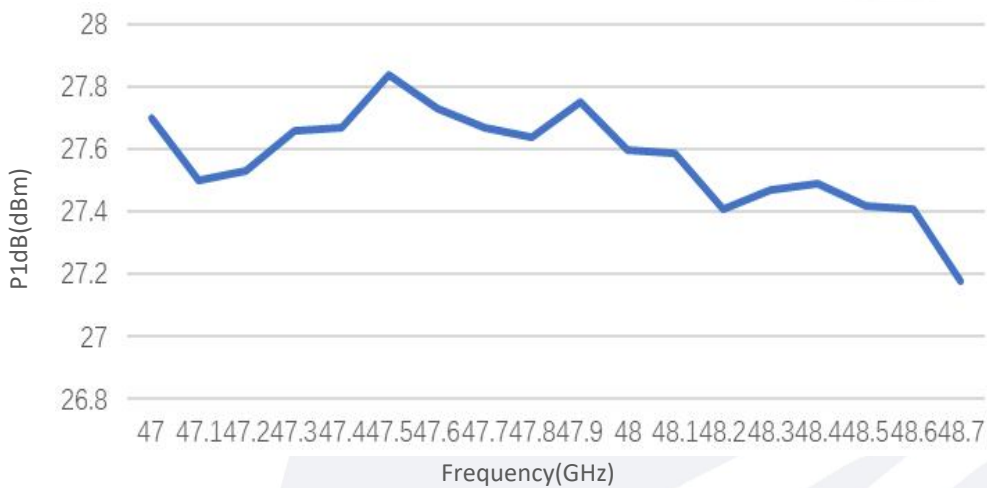
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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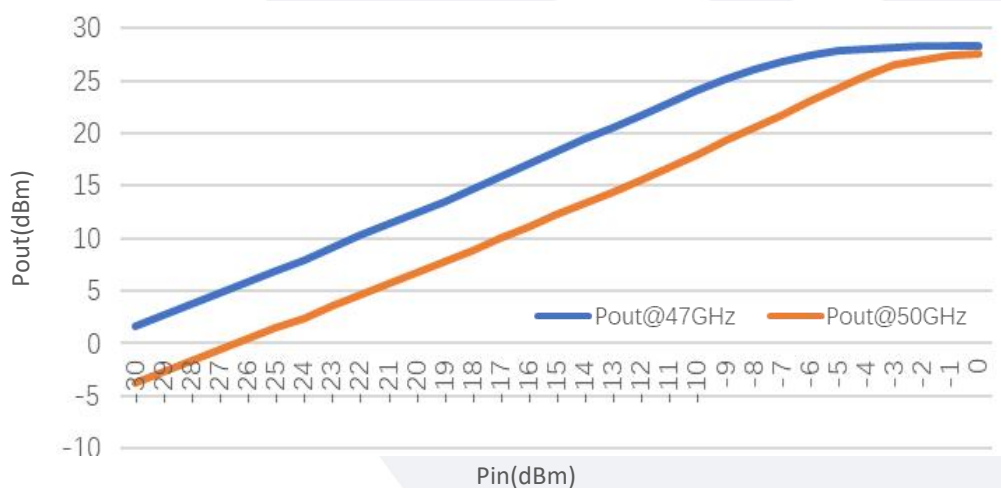
**Output VSWR vs Frequency**



**P1dB vs Frequency**

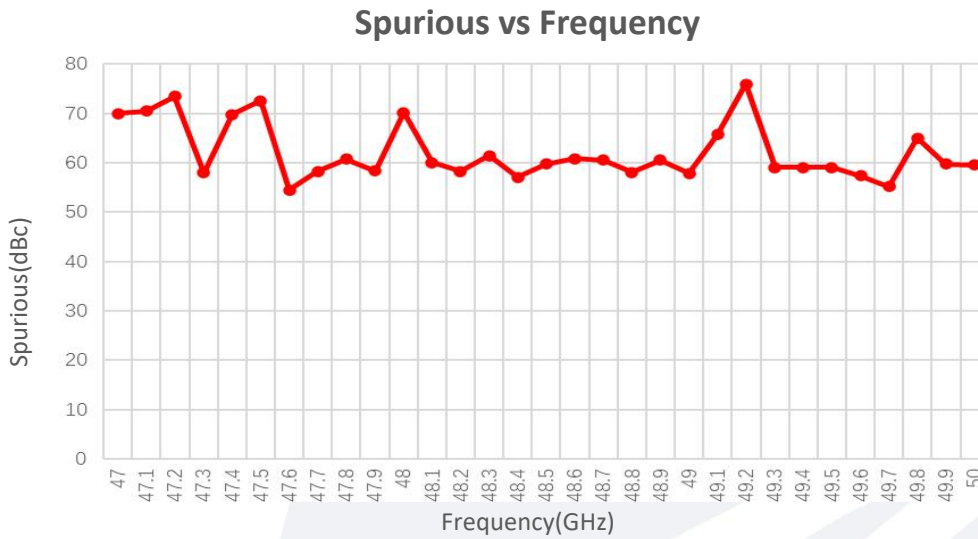
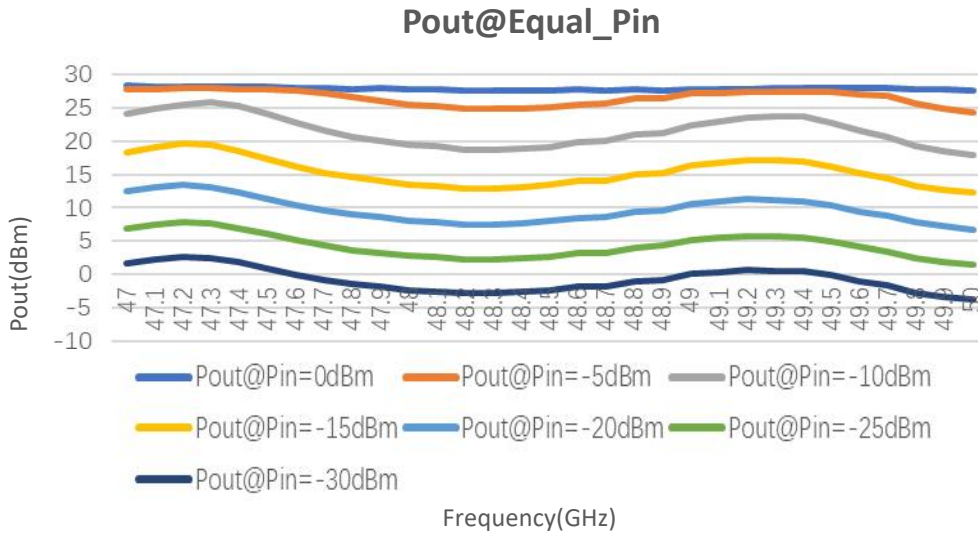


**Pout@Pin**



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