

## Power Amplifier

40-52GHz/40dB Gain/40dBm Psat

Model: TLPA40G52G-40-40

TLPA40G52G-40-40 is a power amplifier with a minimum power gain of 40 dB and a minimum Psat of 40 dBm across the frequency range of 40 to 52 GHz. The DC power requirement for the amplifier is +18 VDC/350 W. The input port configuration offers coax adapter structure with 1.85mm female and output port is WR19.

### Features:

- Frequency range: 40-52GHz
- Gain: 40dB Min
- Output Power Psat: 40dBm 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	40		52	GHz
功率增益 Power Gain	40			dB
增益平坦度 Gain Flatness		±5		dB
饱和输出功率 Output Psat	40			dBm
杂散 Spurious			-50	dBc
输入驻波 Input VSWR		2		:1
直流电压 DC Voltage		+18		V DC
功耗 Power Consumption			350	W
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	1.85mm Female/WR19	
直流供电 DC Supply	DSUB-5W5	A1~3:+18V A4~5:GND
控制接口 Control Connector	J30J-15ZKP	1:TTL(power switch) 2~5:GND 6~15:NC
尺寸 Size	300*262*92	mm
重量 Weight	≤20	Kg

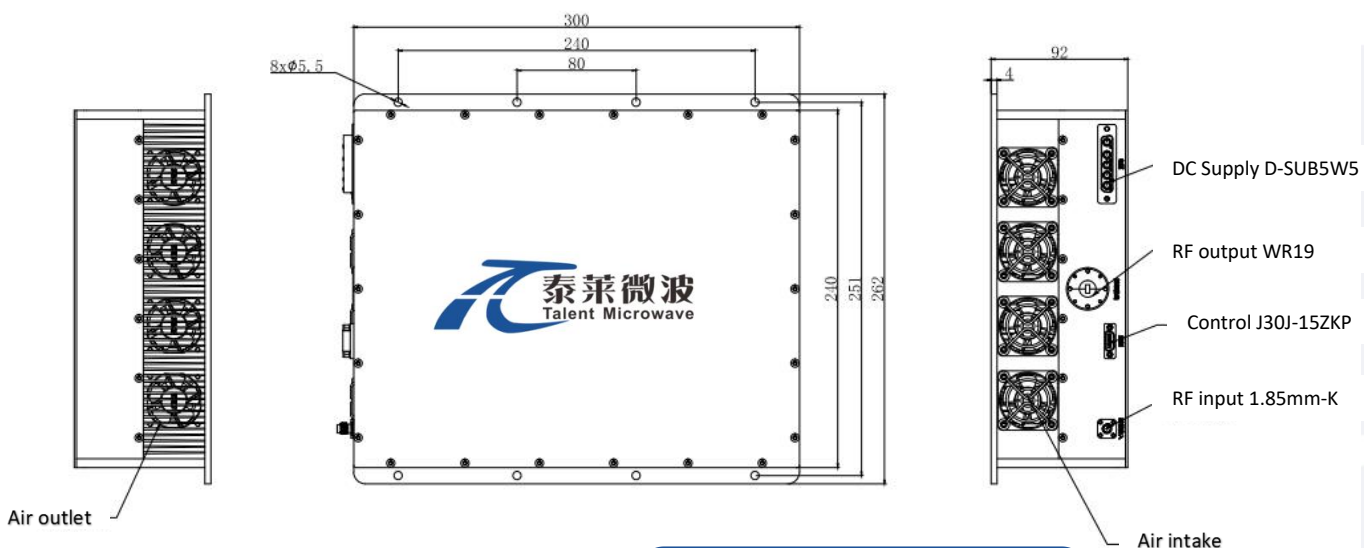
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+19 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



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			

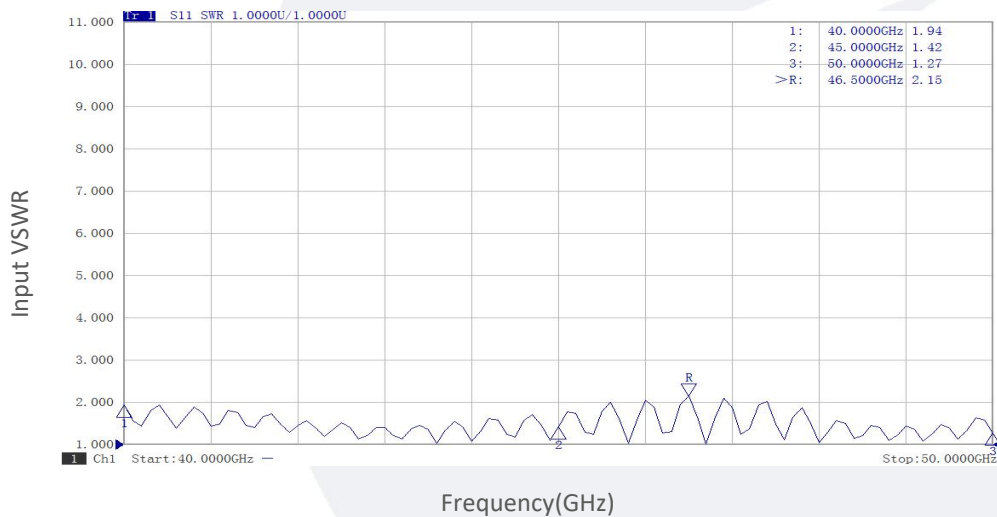
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA40G52G-40-40	Power amplifier 40-52GHz, Gain:40dB,Psat:40dBm,+18V DC,With Heatsink	Rev.1.1

## 典型曲线 Typical Performance Data:

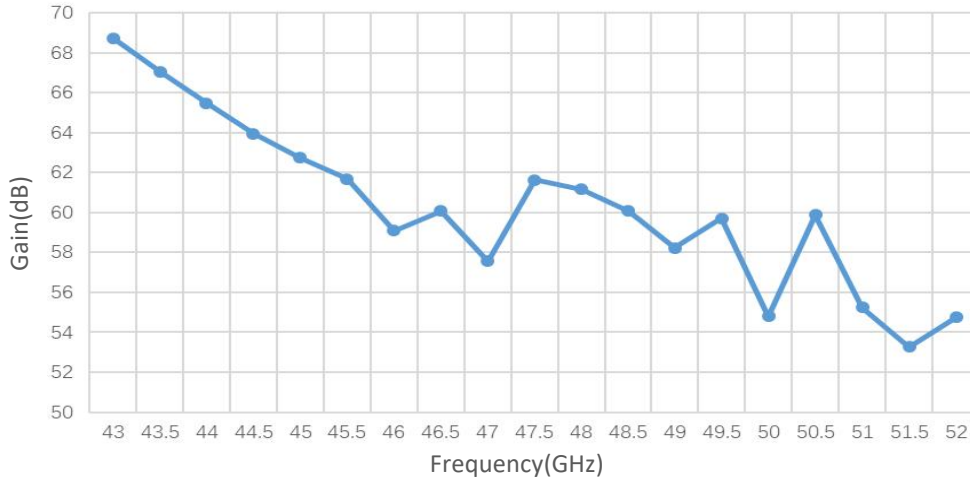
### Input VSWR vs Frequency



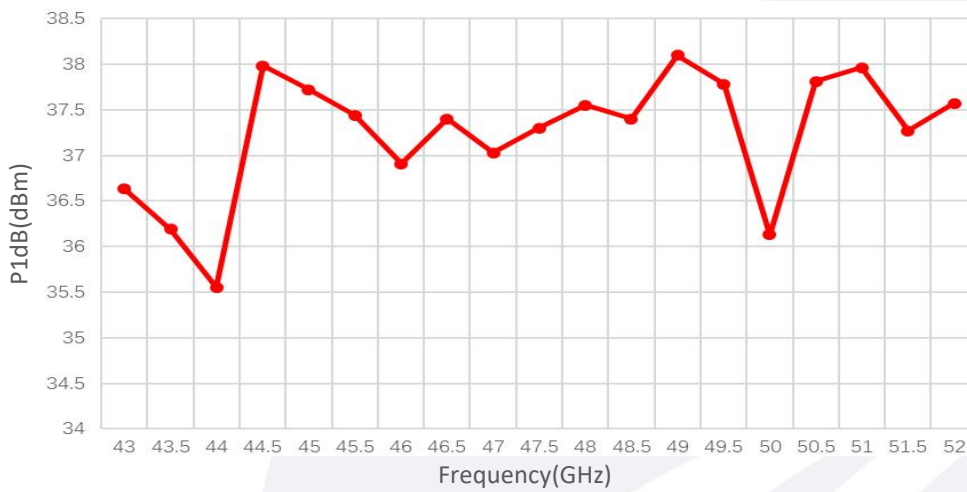
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**典型曲线 Typical Performance Data:**

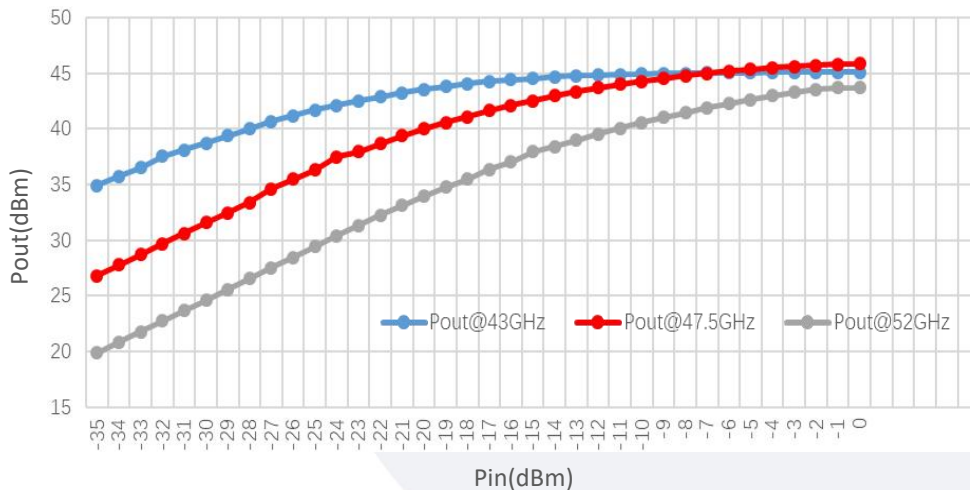
**Small Signal Gain vs Frequency**



**P1dB vs Frequency**



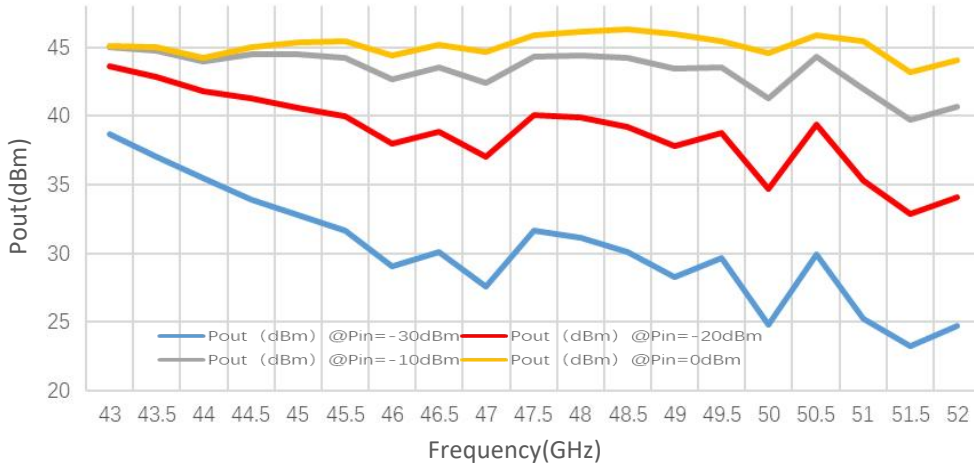
**Pout@Pin**



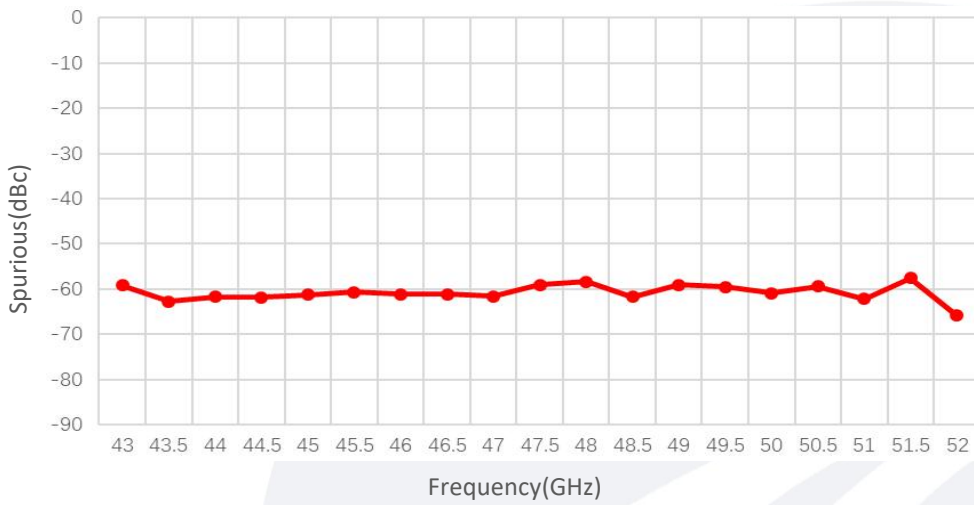
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## 典型曲线 Typical Performance Data:

### Pout@Equal\_Pin



### Spurious vs Frequency



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