

## Power Amplifier

18-40GHz/43dB Gain/43 dBm Psat

Model: TLPA18G40G-43-43

TLPA18G40G-43-43 is a power amplifier with power gain of 43 dB and Psat of 43 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +18 VDC/25 A. The input port configuration offers coax adapter structure with 2.92mm female and output port configuration offers coax adapter structure with 2.92mm /WRD180C24.

### Features:

- Frequency range: 18-40GHz
- Gain: 43dB Min
- Output Power Psat: 43dBm 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	18-40			GHz
小信号增益 Small Signal Gain		50		dB
功率增益 Power Gain	43			dB
小信号增益平坦度 Small Signal Gain Flatness		±5		dB
饱和输出功率 Output Psat	43	44		dBm
杂散 Spurious@Pout=43dBm			-50	dBc
输入驻波 Input VSWR		2	2.5	:1
直流电压 DC Voltage		18	19	V DC
直流电流 DC Supply Current			25	A
直流电流 DC Supply Current@Pout=43dBm		20		A
工作模式 Working Mode	CW/PULSE compatible			
阻抗 Impedance	50			Ohms

## 机械特性 Mechanical Specifications:

参数 Parameter	指标 Value	单位 Units
输入接口 Input Connector	2.92mm Female	
输出接口 Output Connector	WRD180C24/2.92mm	
直流供电接口 DC Supply Interface	J30J-21ZKP	*Pin1:on/off switch Pin2~11:+18V Pin12~21:GND
尺寸 Size	190*160*30(Without Heatsink)	mm

\*Note: The power supply on-off pin can also be used for pulse modulation. Low level (0-0.8V) and floating are invalid, while high level (3.3-5V) is valid..

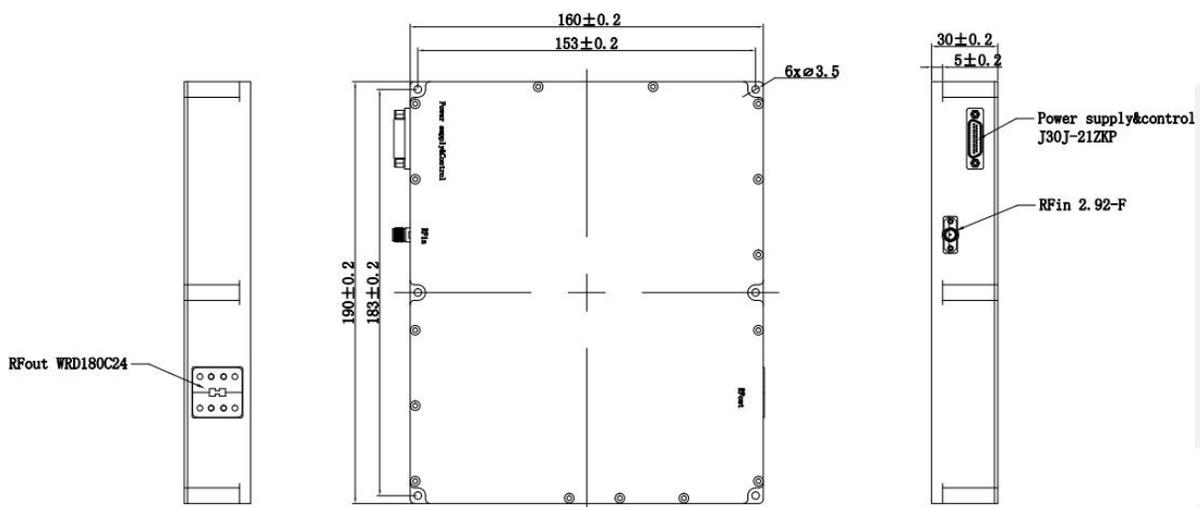
## 绝对最大值 Absolute Maximum Ratings:

参数 Parameter	指标 Value
供电偏置电压 Supply Bias Voltage	+19 V
输入功率 RF Input Power	+10 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		+50	°C
存储温度 Non-operating Temperature*	-50		+60	°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			

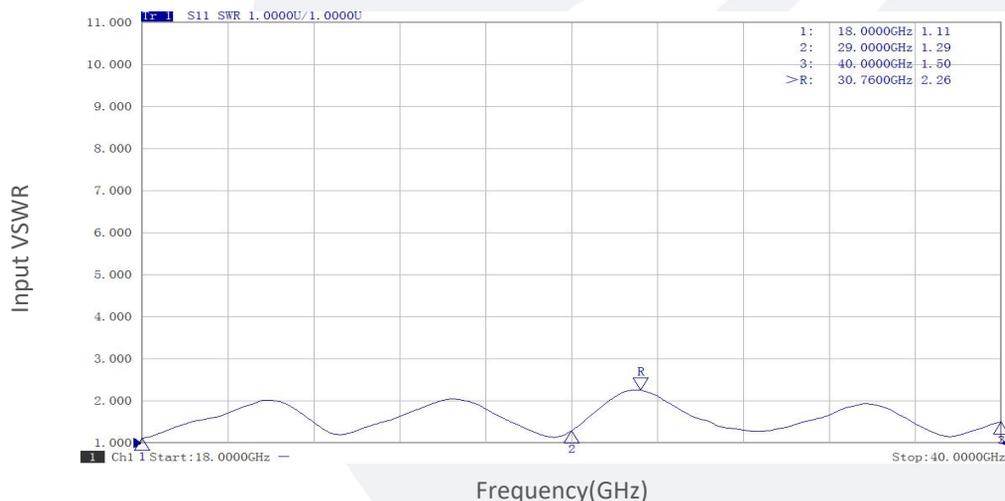
\*Note: For a wider temperature range, please consult the manufacturer.

## 订货信息 Ordering Information:

标准型号 Base Number	描述 Description	版本号 Revision
TLPA18G40G-43-43	Power amplifier 18-40GHz,Gain:43dB,Psat:43dBm, +18V DC,Without Heatsink	Rev.1.2
TLPA18G40G-43-43-HS	Power amplifier 18-40GHz,Gain:43dB,Psat:43dBm, +18V DC,With Heatsink	Rev.1.2

## 典型曲线 Typical Performance Data:

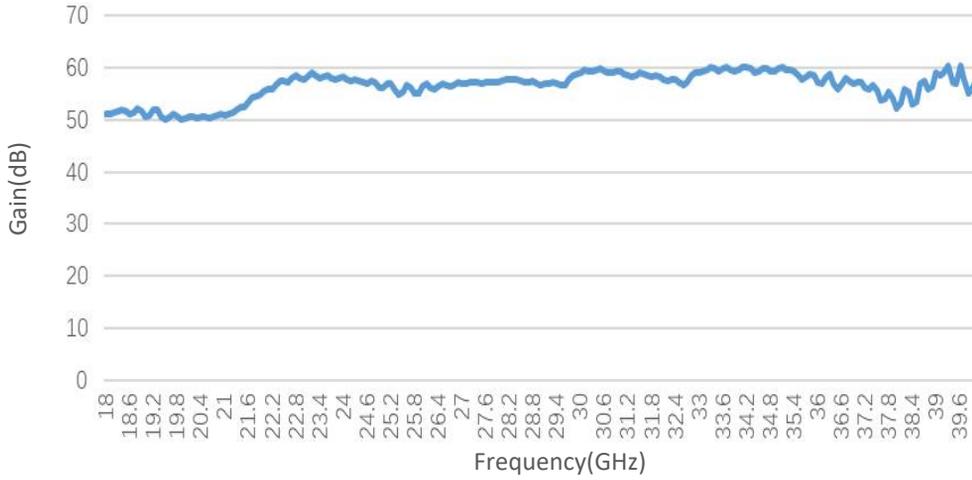
### Input VSWR vs Frequency



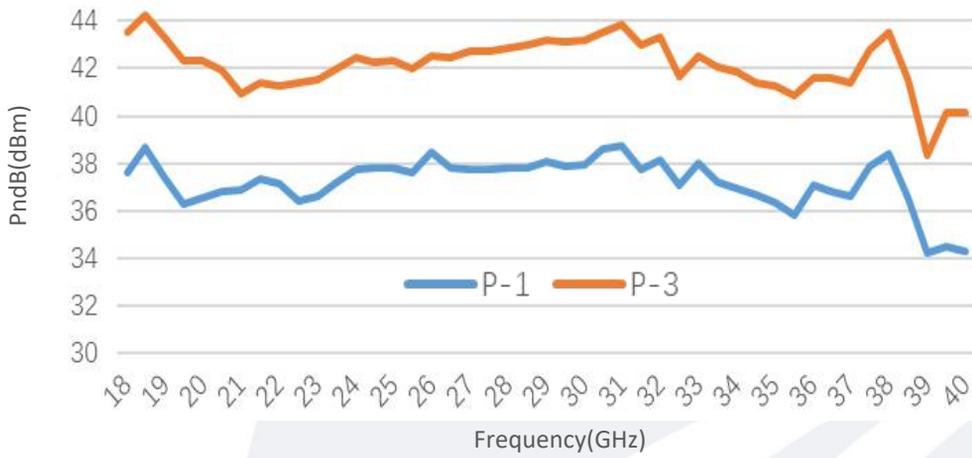
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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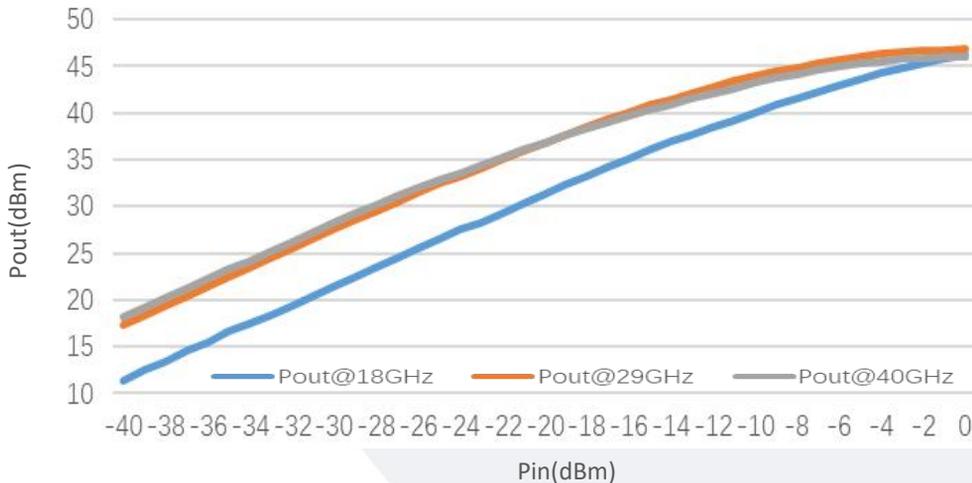
**Small Signal Gain vs Frequency**



**PndB vs Frequency**

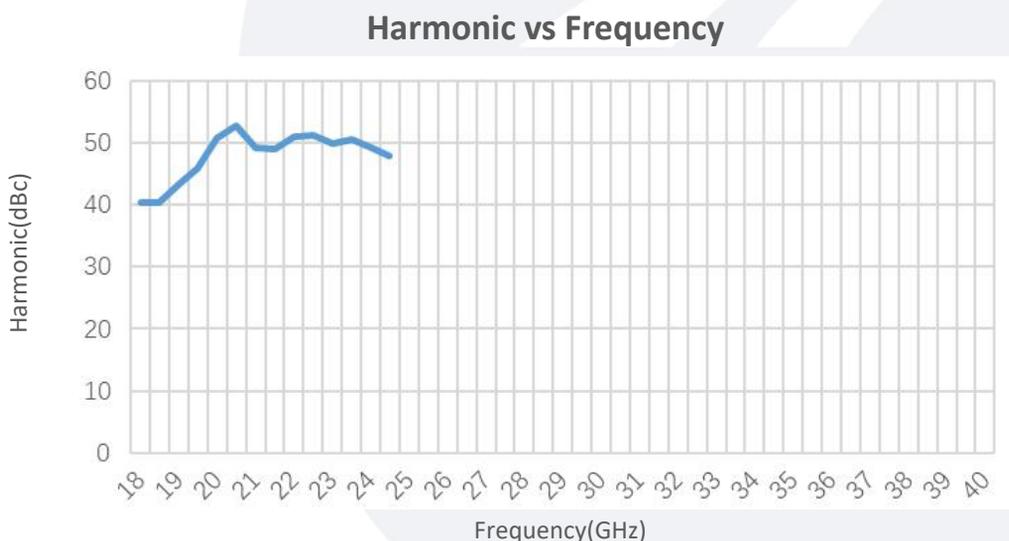
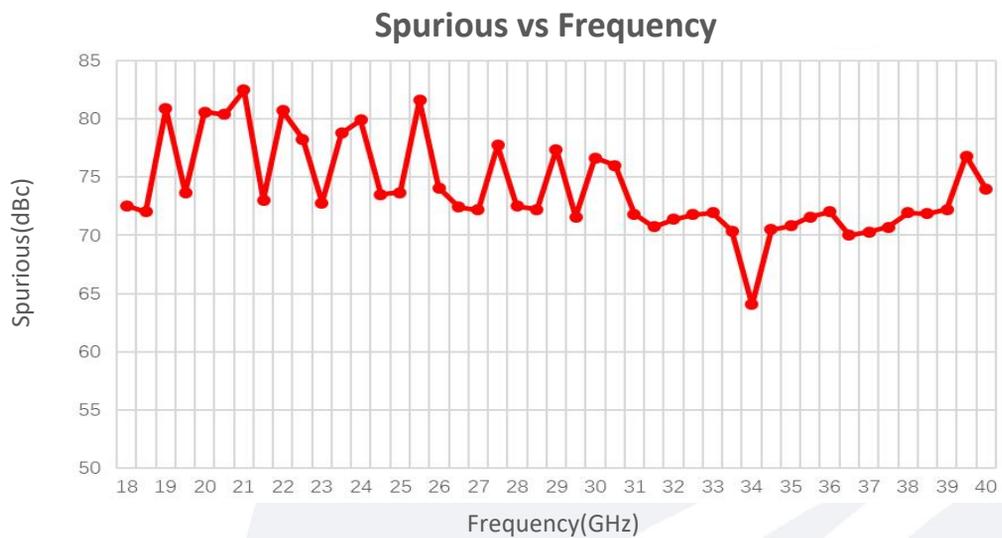
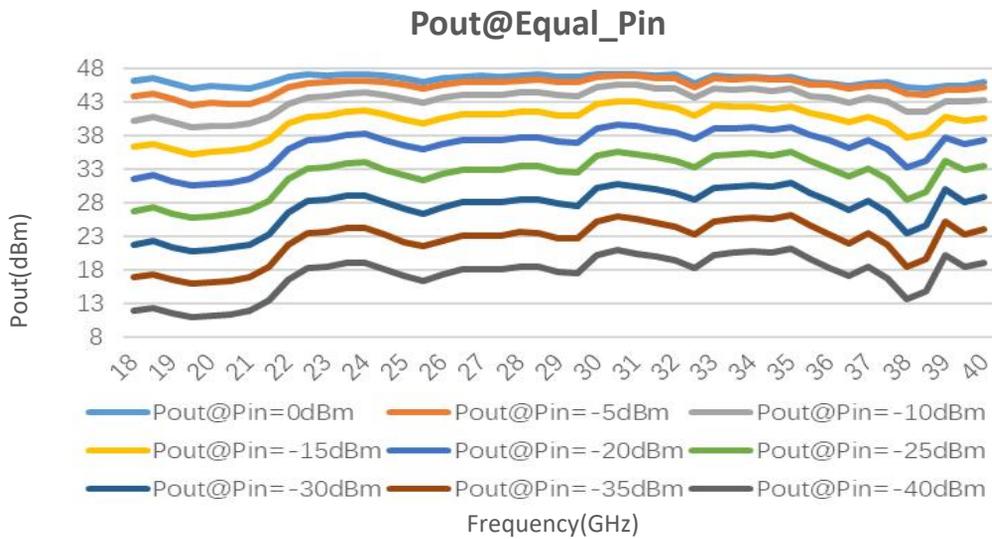


**Pout@Pin**



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