

## Power Amplifier

2-18GHz/50dB Gain/47dBm Psat

Model: TLPA2G18G-50-47

TLPA2G18G-50-47 is a power amplifier with a minimum power gain of 50 dB and a minimum Psat of 47 dBm across the frequency range of 2 to 18 GHz. The DC power requirement for the amplifier is +28 VDC/600W. The input port configuration offers coax adapter structure with SMA female and output port configuration offers coax adapter structure with N female.

### Features:

- Frequency range: 2-18 GHz
- Gain: 50 dB Min
- Output Power Psat: 47 dBm Min
- Good Power and Gain Flatness
- 50 Ohm Matched Input / Output

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Electrical Characteristics:

Parameter	Min	Typ	Max	Units
Frequency range	2		18	GHz
Power Gain	50			dB
Gain Flatness		±3	±5	dB
Output P1dB		40		dBm
Output Psat	47			dBm
Spurious@Pout=47dBm			-60	dBc
Harmonic@Pout=47dBm		-10	-15	dBc
Input VSWR			2	:1
DC Voltage		+28		V DC
Power Consumption			600	W
Impedance		50		Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/N Female	
DC Power Supply Connector	SUB-7W2	A1:+28V A2:GND Pin1~5:NC
Size	200*100*23(Without Heatsink) 200*100*69.5(With Heatsink)	mm
Weight	≤4	Kg

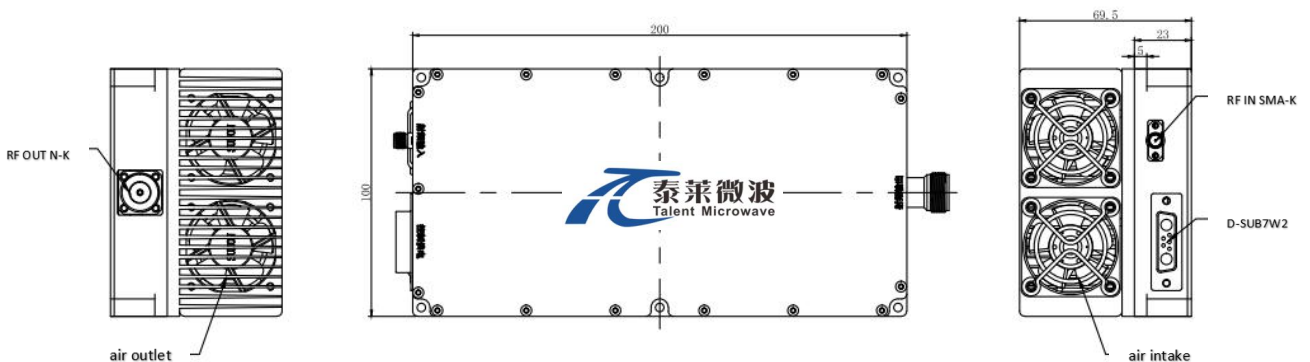
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+28 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



### Outline Drawing:

Unit:mm



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



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

### Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-20		+50	°C
Non-operating Temperature*	-30		+60	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

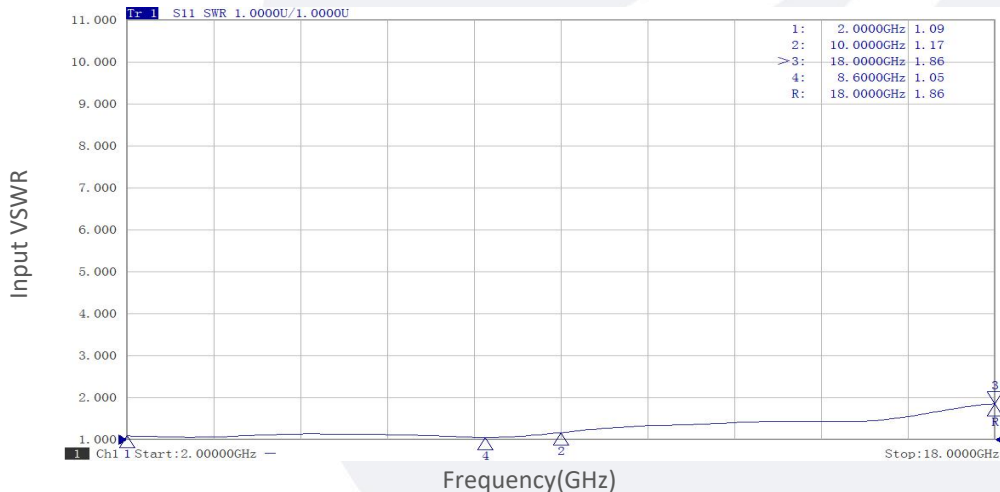
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

Base Number	Description	Revision
TLPA2G18G-50-47	Power amplifier 2-18GHz, Gain:50dB,Psat:47dBm,+28V DC,Without Heatsink	Rev.1.1
TLPA2G18G-50-47-HS	Power amplifier 2-18GHz, Gain:50dB,Psat:47dBm,+28V DC,With Heatsink	Rev.1.1

### Typical Performance Data:

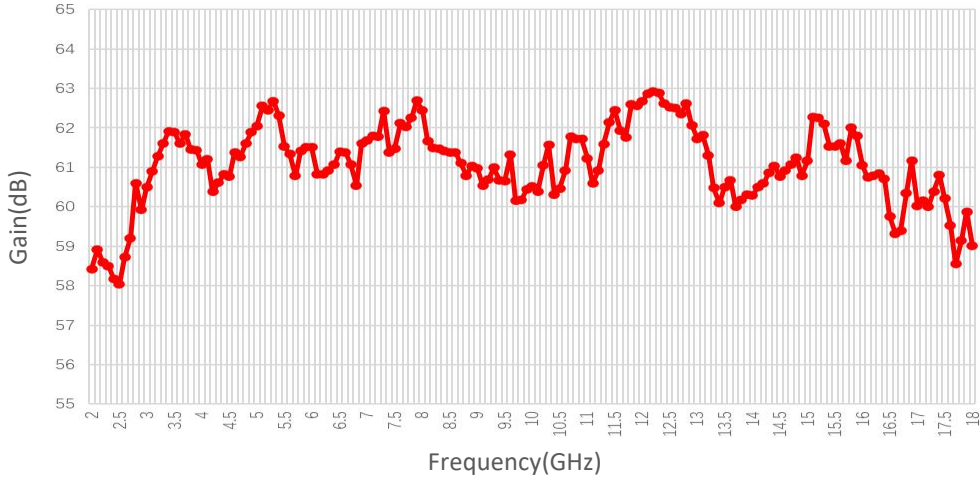
#### Input VSWR vs Frequency



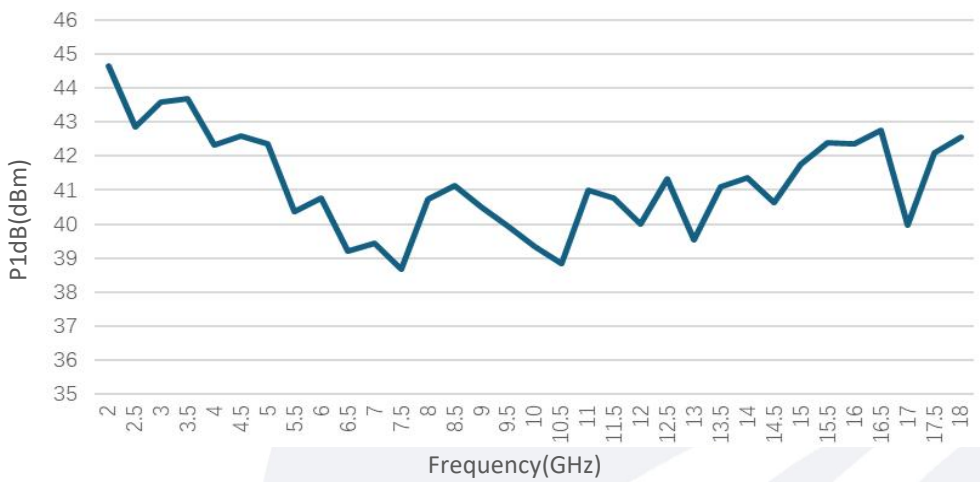
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

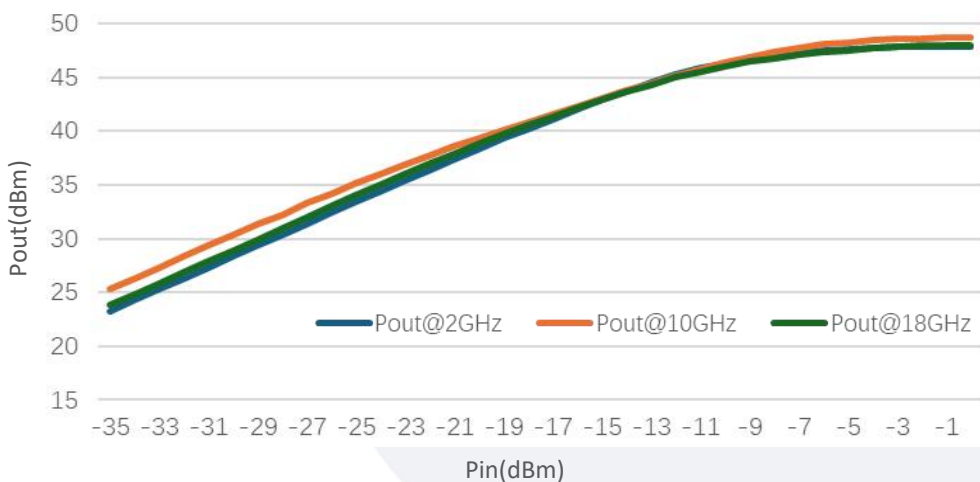
**Small Signal Gain vs Frequency**



**P1dB vs Frequency**



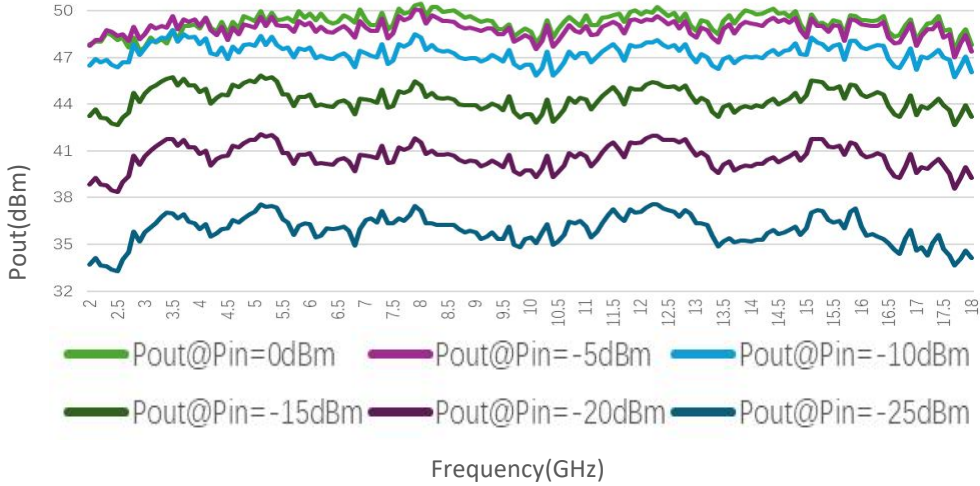
**Pout@Pin**



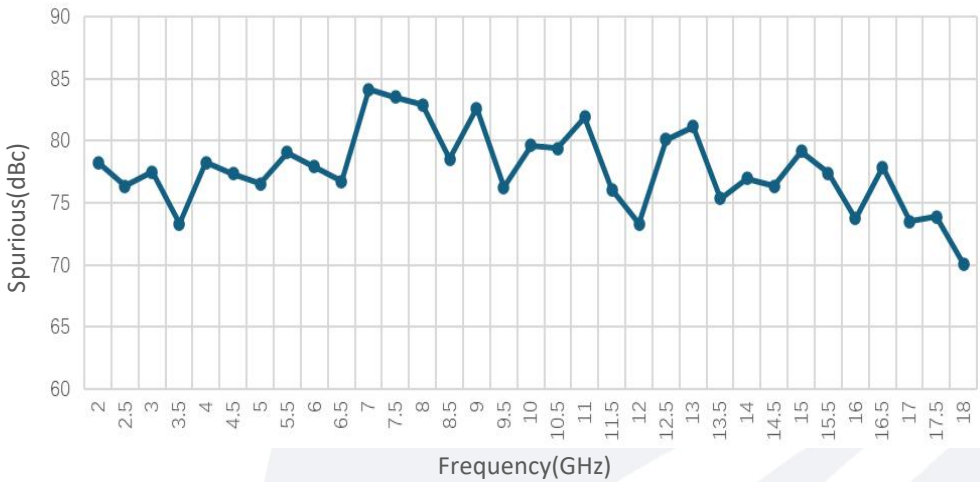
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## Typical Performance Data:

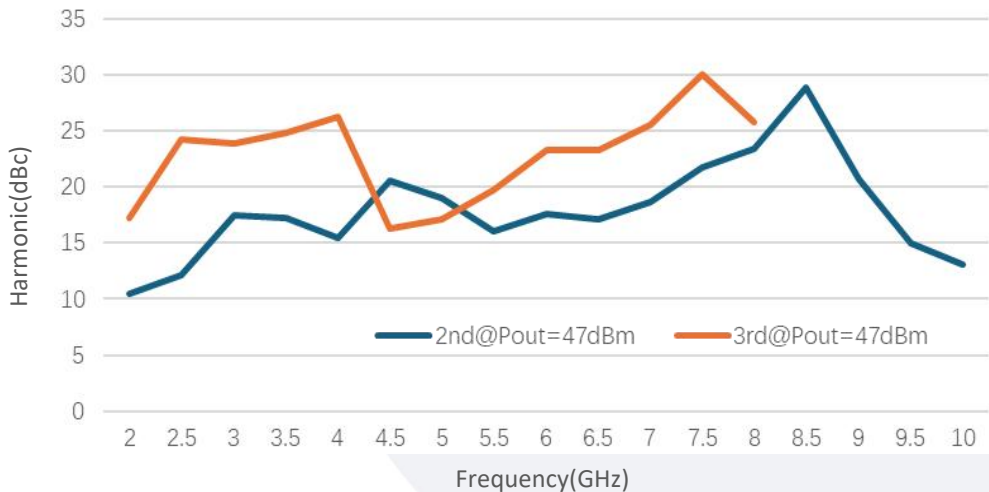
### Pout@Equal\_Pin



### Spurious vs Frequency



### Harmonic vs Frequency



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