

## Power Amplifier

6-18GHz/40dB Gain/40dBm Psat

Model: TLPA6G18G-40-40

TLPA6G18G-40-40 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 40 dBm across the frequency range of 6 to 18 GHz. The DC power requirement for the amplifier is +30 VDC/1.67 A. The input and output port configuration offers coax adapter structure with SMA female.

### Features:

- Frequency range: 6-18GHz
- Gain: 40dB Typ
- Output Power Psat: 40dBm Typ
- 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	6		18	GHz
Small Signal Gain		40		dB
Gain Flatness		±1.5		dB
Output P1dB		38		dBm
Output Psat		40		dBm
Harmonic			-15	dBc
Input VSWR			2	:1
DC Voltage		30		V DC
DC Supply Current		1.67		A
Impedance		50		Ohms

### Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	60*100*12 (Without heatsink) 100*200*56(With heatsink)	mm

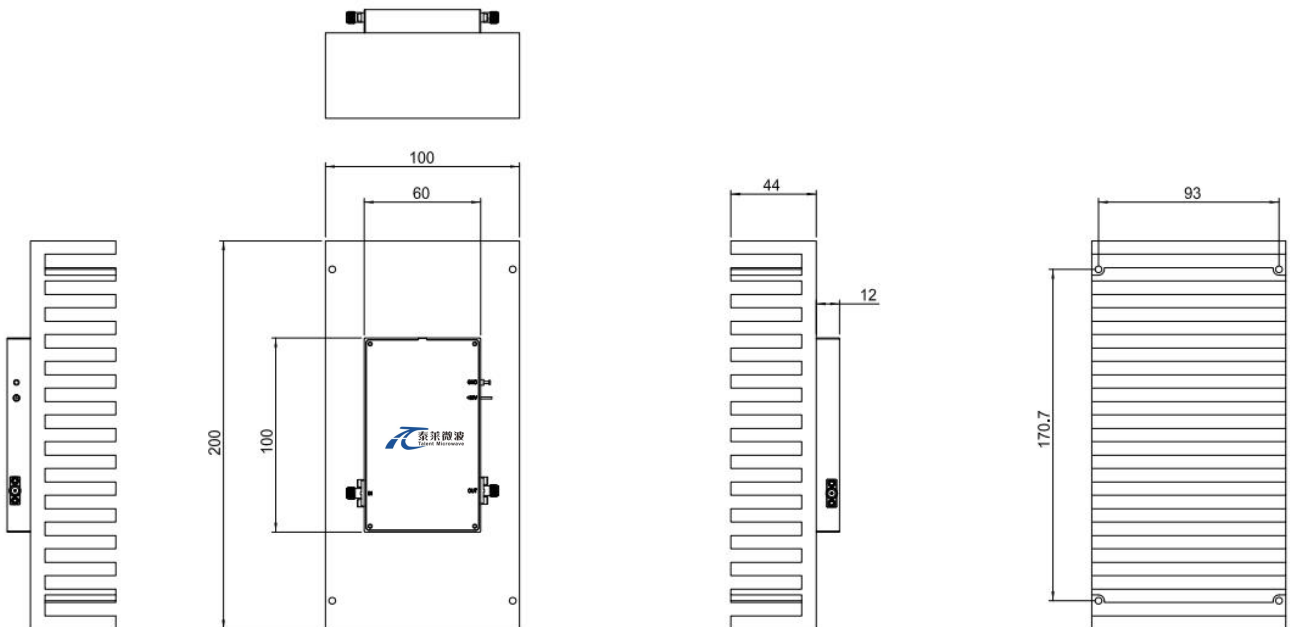
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+31 V
RF Input Power	+20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



### Outline Drawing:

Unit:mm



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

### Environmental Conditions:

Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°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			

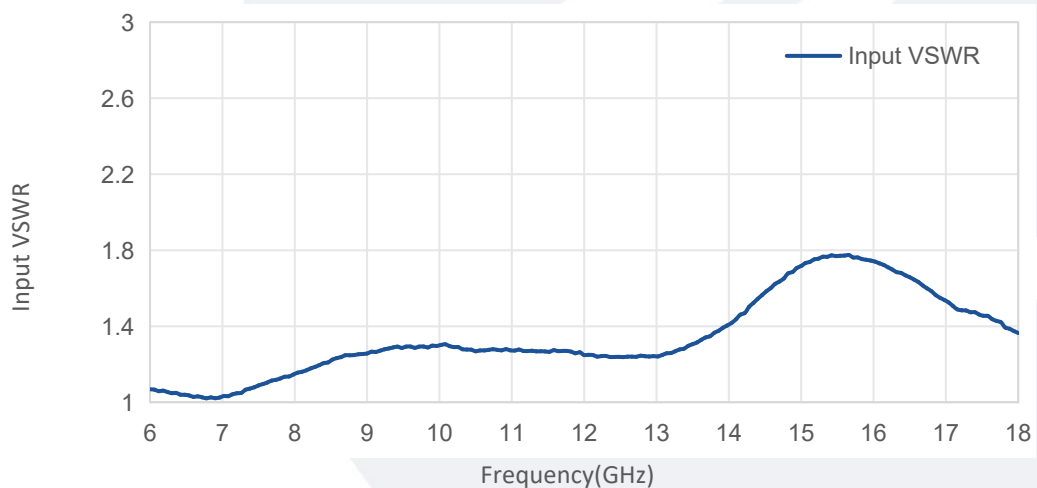
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

Base Number	Description	Revision
TLPA6G18G-40-40	Power amplifier 6-18GHz, Gain:40dB,Psat:40dBm,+30V DC,Without Heatsink	Rev.1.0
TLPA6G18G-40-40-HS	Power amplifier 6-18GHz, Gain:40dB,Psat:40dBm,+30V DC,With Heatsink	Rev.1.0

### Typical Performance Data:

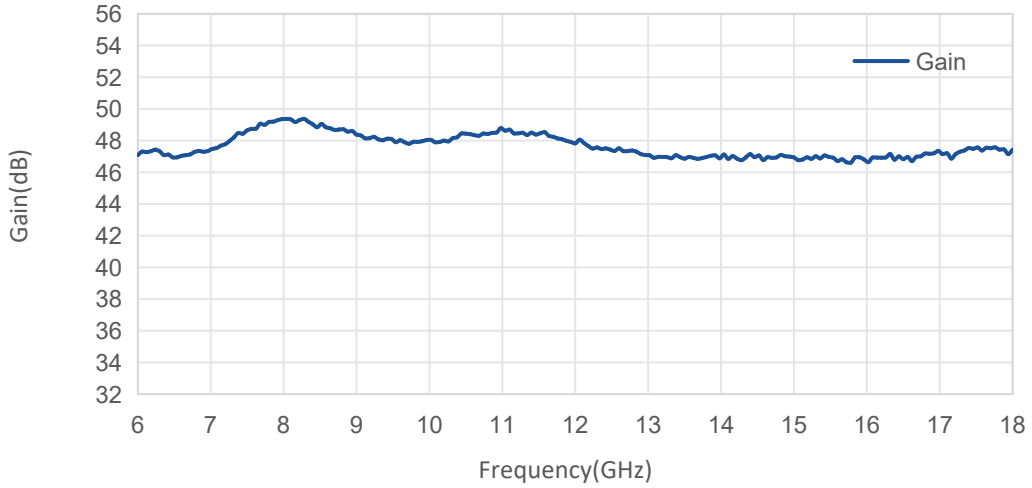
Input VSWR vs Frequency



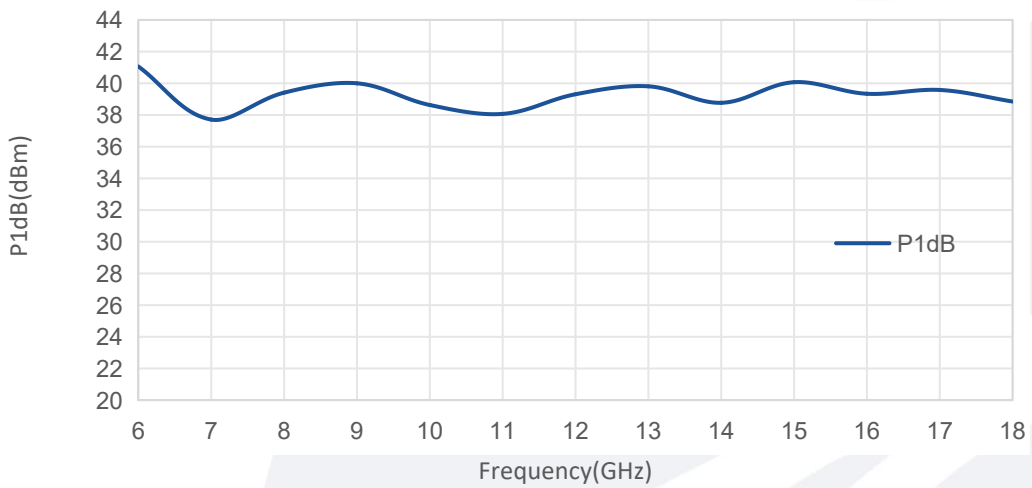
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

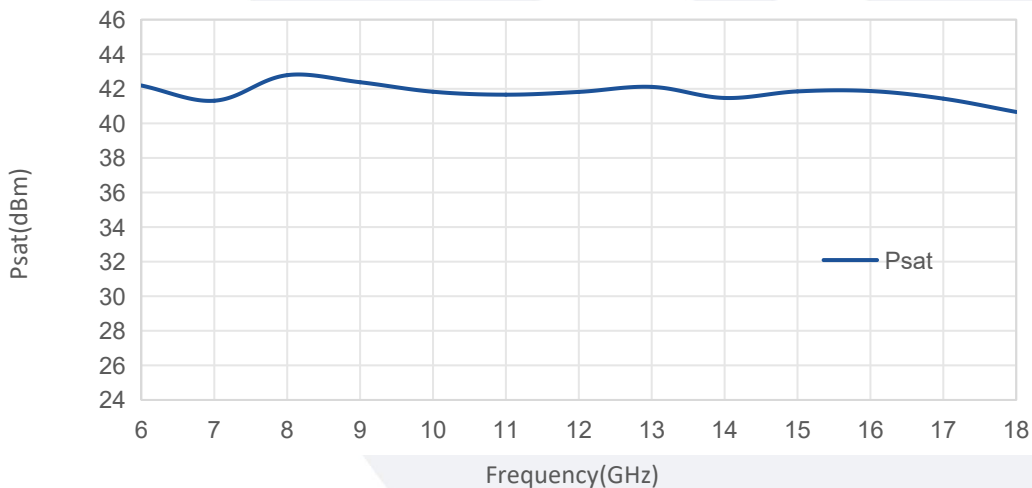
**Small Signal Gain vs Frequency**



**P1dB vs Frequency**

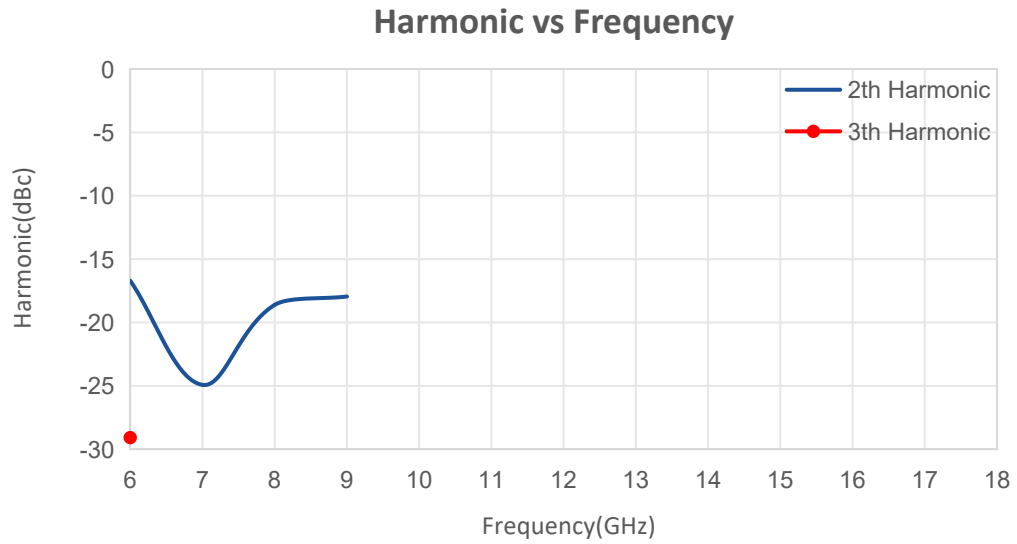


**Psat vs Frequency**



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