

## Power Amplifier

18-40GHz /50dB Gain/37 dBm Psat

Model: TLPA18G40G-40-37-V2

TLPA18G40G-40-37-V2 is a power amplifier with a typical small signal gain of 50 dB and a minimum Psat of 37dBm @18~39GHz across the frequency range of 18 to 39 GHz. The DC power requirement for the amplifier is +24 VDC/1.7 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 18-40GHz
- Gain: 50dB Typ
- Output Power Psat: 37dBm 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		18		40	GHz
Small Signal Gain			50		dB
Gain Flatness			±5		dB
Output P1dB		34	35		dBm
Output Psat	@18-39GHz	37	38		dBm
	@39-40GHz	36			
Spurious				-60	dBc
Harmonic				-20	dBc
Input VSWR				2.0	:1
DC Voltage			24		V DC
DC Supply Current			1.7		A
Impedance			50		Ohms

### Mechanical Specifications:

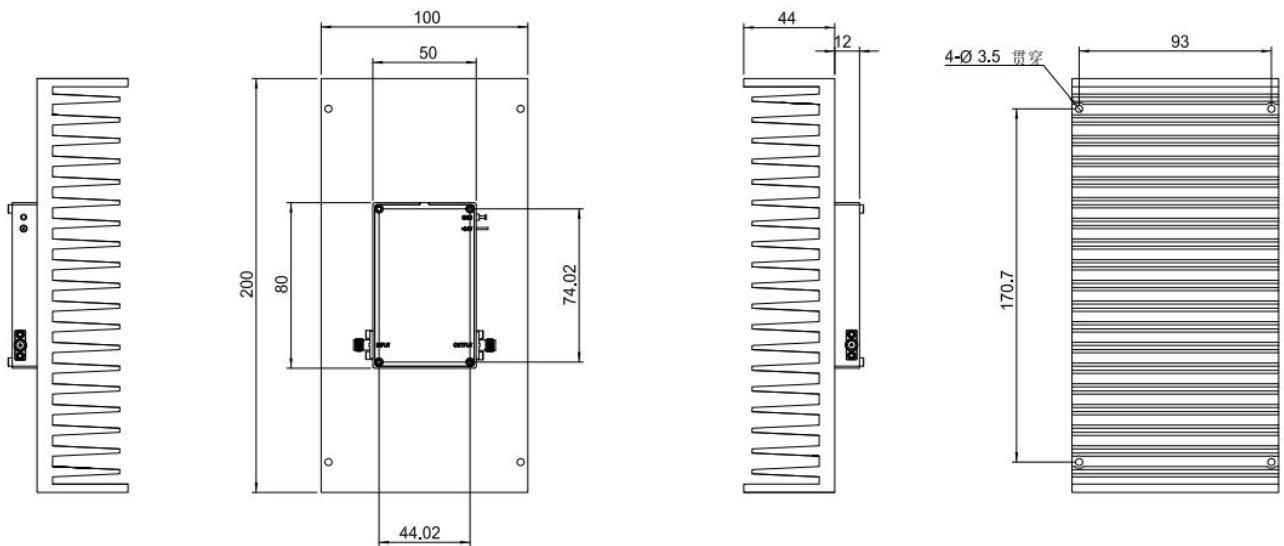
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	50*80*12(Without heatsink) 200*100*56(With heatsink)	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+26 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:

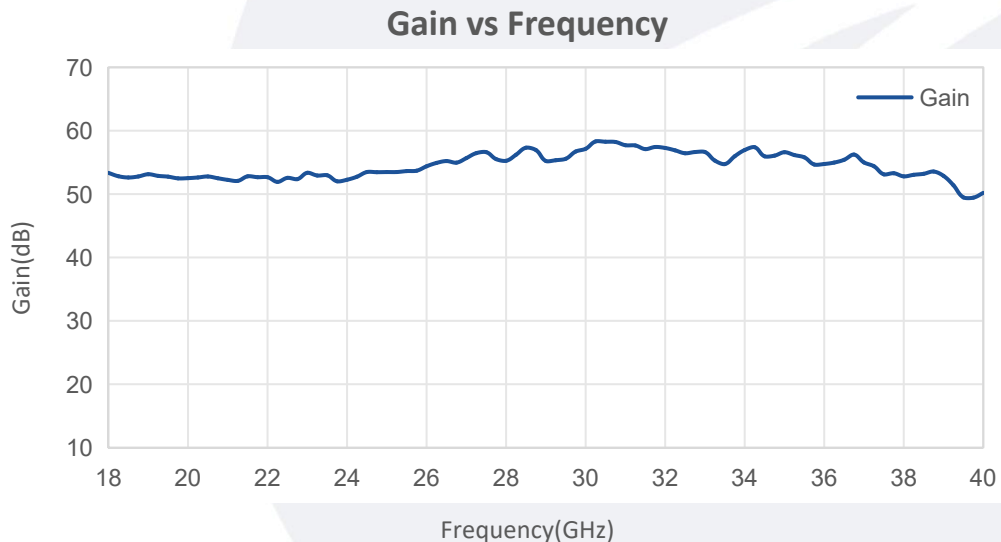
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

### Ordering Information:

Base Number	Description	Revision
TLPA18G40G-40-37-V2	Power amplifier 18-40GHz,Gain:50dB,Psat:37dBm, +24V DC,With Heatsink	Rev.1.2

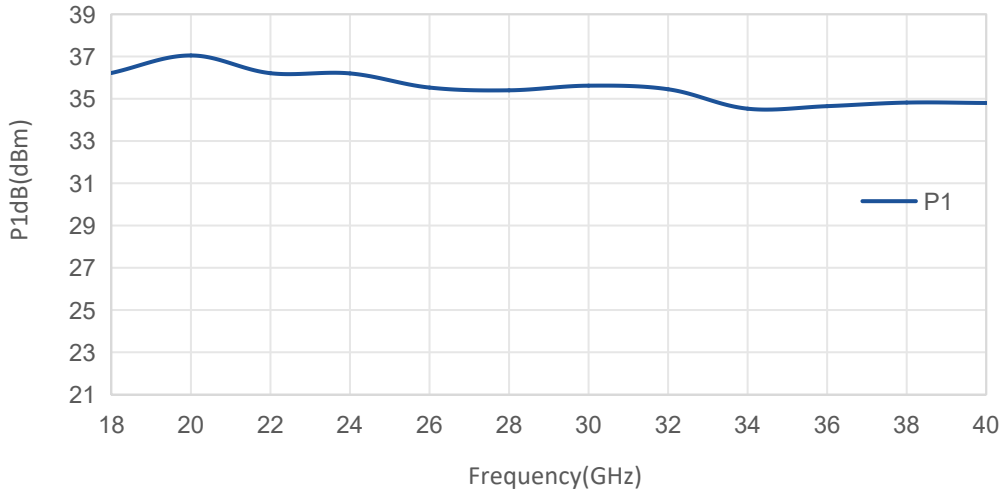
### Typical Performance Data:



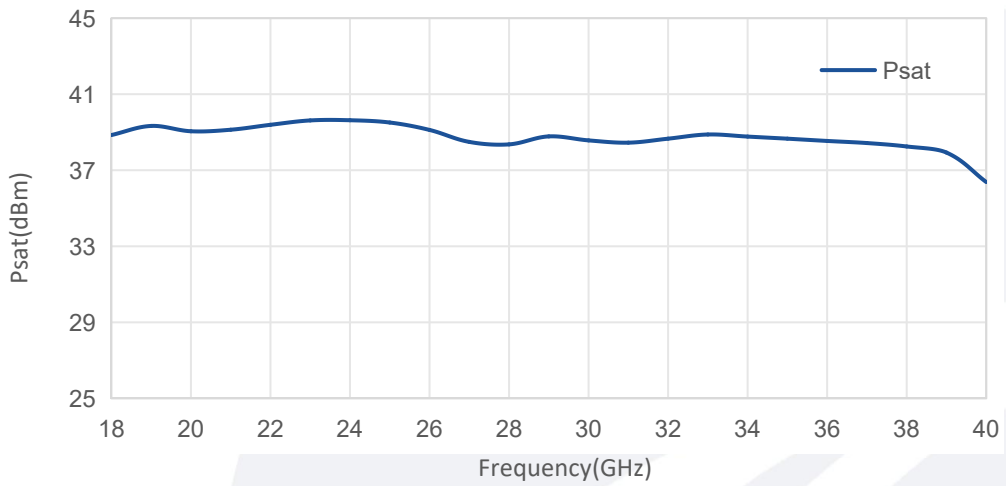
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

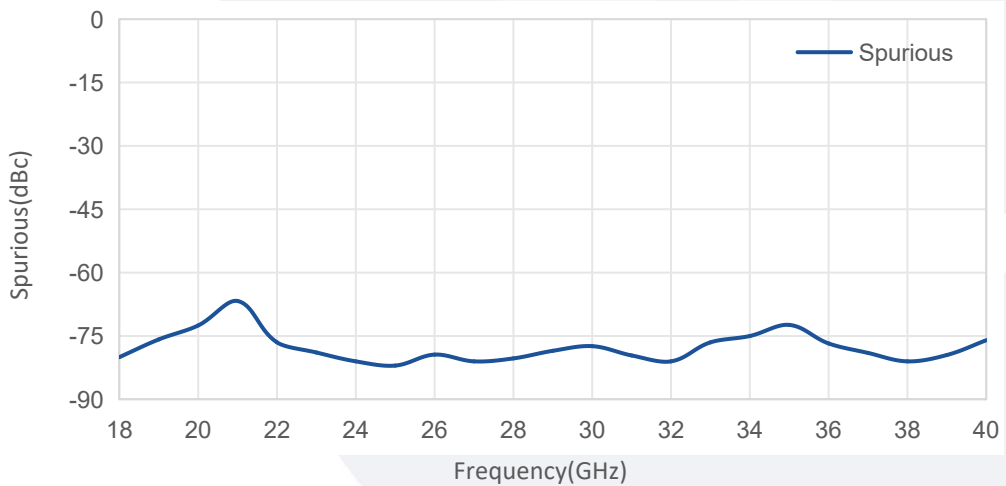
**P1dB vs Frequency**



**Psat vs Frequency**



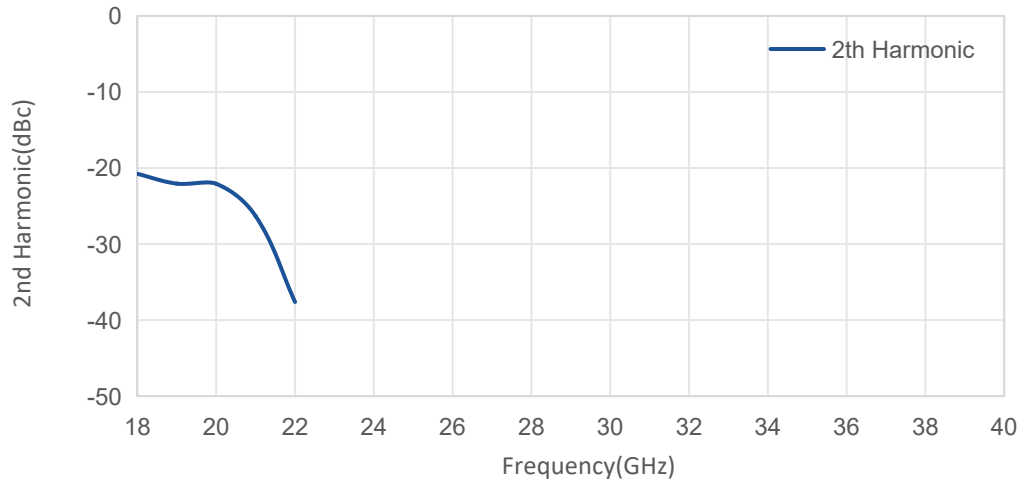
**Spurious vs Frequency**



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## Typical Performance Data:

### 2nd Harmonic vs Frequency



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