

## Power Amplifier

18-40GHz/35dB Gain/37dBm Psat

Model: TLPA18G40G-35-37

TLPA18G40G-35-37 is a power amplifier with a typical small signal gain of 35 dB and a nominal Psat of 37 dBm across the frequency range of 18 to 40 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: 35dB 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		35		dB
Gain Flatness		±4		dB
Output P1dB		35		dBm
Output Psat		37		dBm
Spurious			-60	dBc
Harmonic			-15	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 Femlae/2.92mm Female	
DC Bias	Solder Pin	
Size	50*80*12(Without heatsink) 100*200*58(With heatsink)	mm

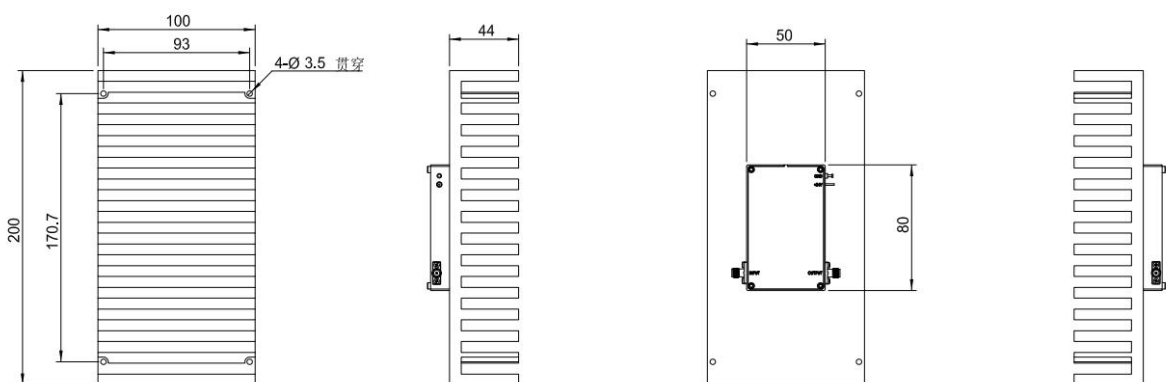
### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+25 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		+50	°C
Non-operating Temperature*	-50		+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			

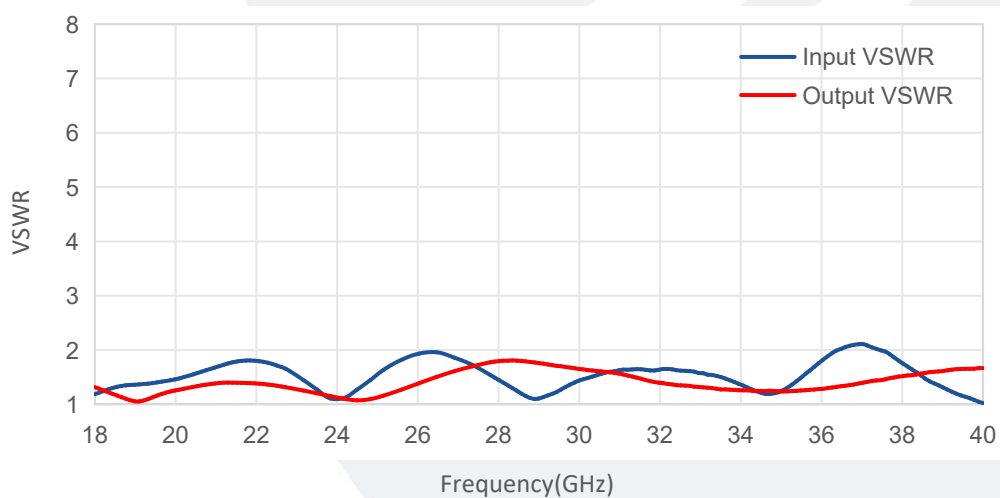
\*Note: For a wider temperature range, please consult the manufacturer.

### Ordering Information:

Base Number	Description	Revision
TLPA18G40G-35-37	Power amplifier 18-40GHz, Gain:35dB,Psat:37dBm,+24V DC,Without Heatsink	Rev.1.1
TLPA18G40G-35-37-HS	Power amplifier 18-40GHz, Gain:35dB,Psat:37dBm,+24V DC,With Heatsink	Rev.1.1

### Typical Performance Data:

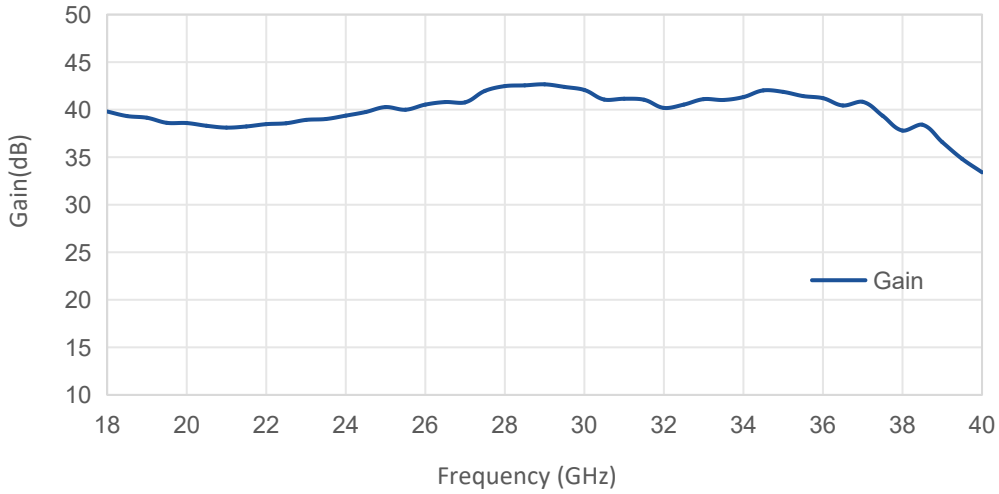
VSWR vs Frequency



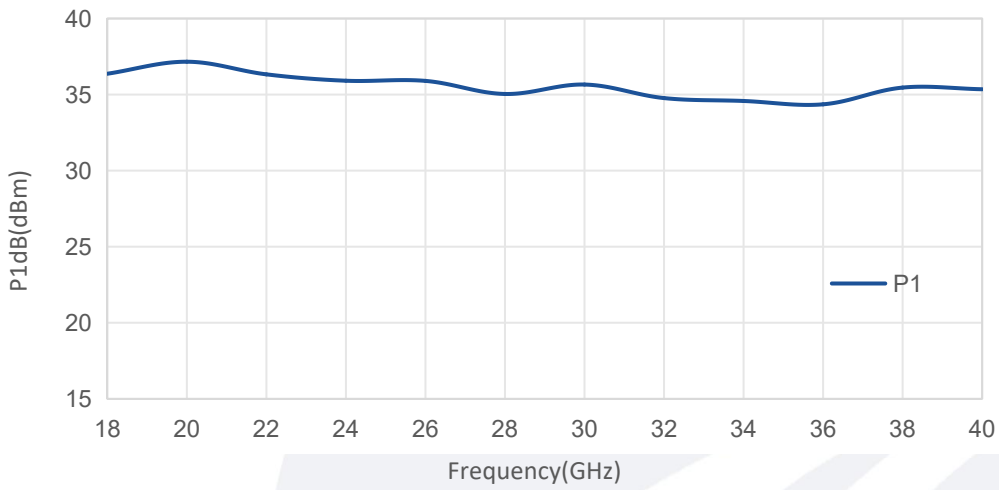
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

**Typical Performance Data:**

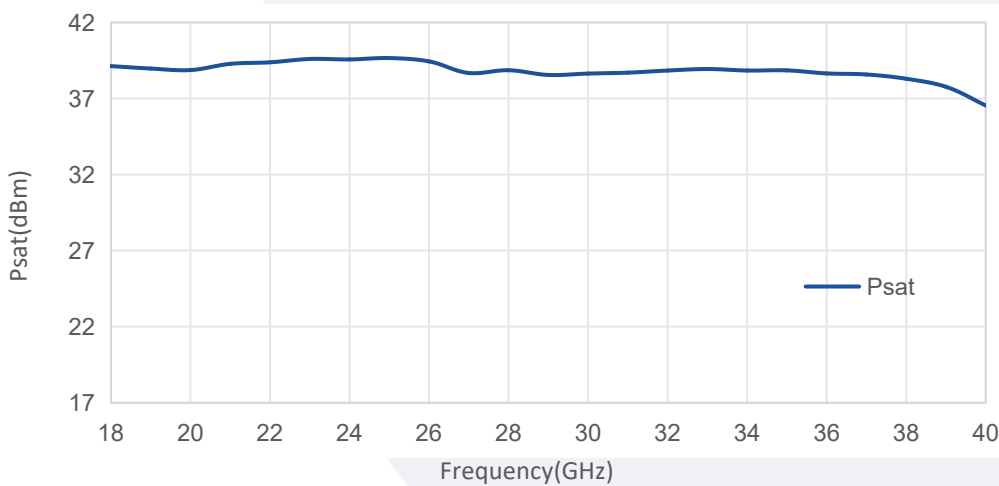
**Small Signal Gain vs Frequency**



**P1dB vs Frequency**



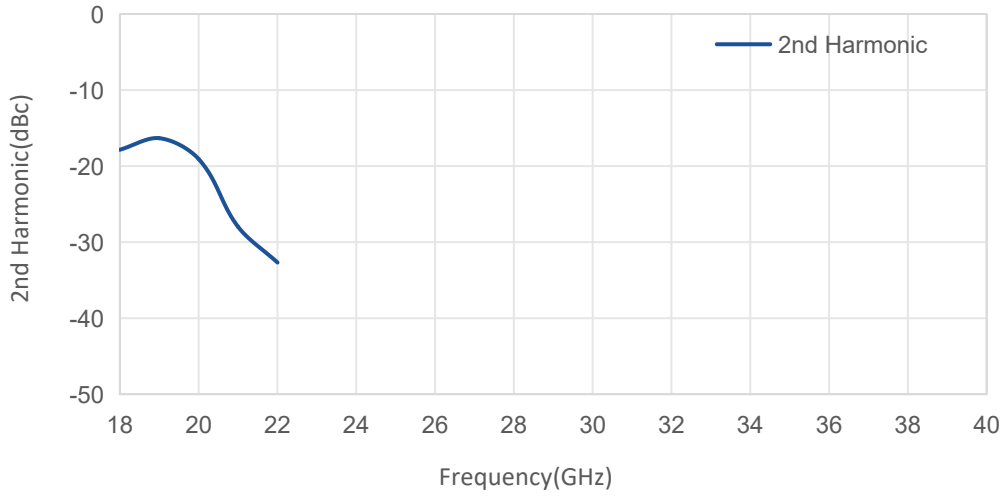
**Psat vs Frequency**



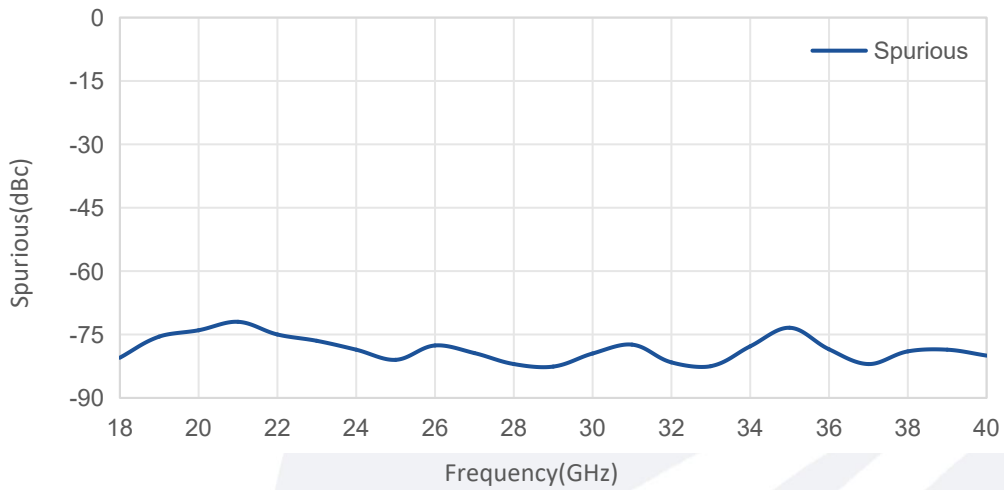
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## Typical Performance Data:

### 2nd Harmonic vs Frequency



### Spurious vs Frequency



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