

## Power Amplifier

18-40GHz/38dB Gain/27 dBm Psat

Model: TLPA18G40G-38-27

TLPA18G40G-38-27 is a power amplifier with a typical small signal gain of 43 dB and a nominal Psat of 28 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +12 VDC/500 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

### Features:

- Frequency range: 18-40GHz
- Gain: 43dB Typ
- Output Power Psat: 28dBm 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	38	43		dB
Gain Flatness		±2.5		dB
Output P1dB		27		dBm
Output Psat	27	28		dBm
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		12		V DC
DC Supply Current		500		mA
Impedance		50		Ohms

### Mechanical Specifications:

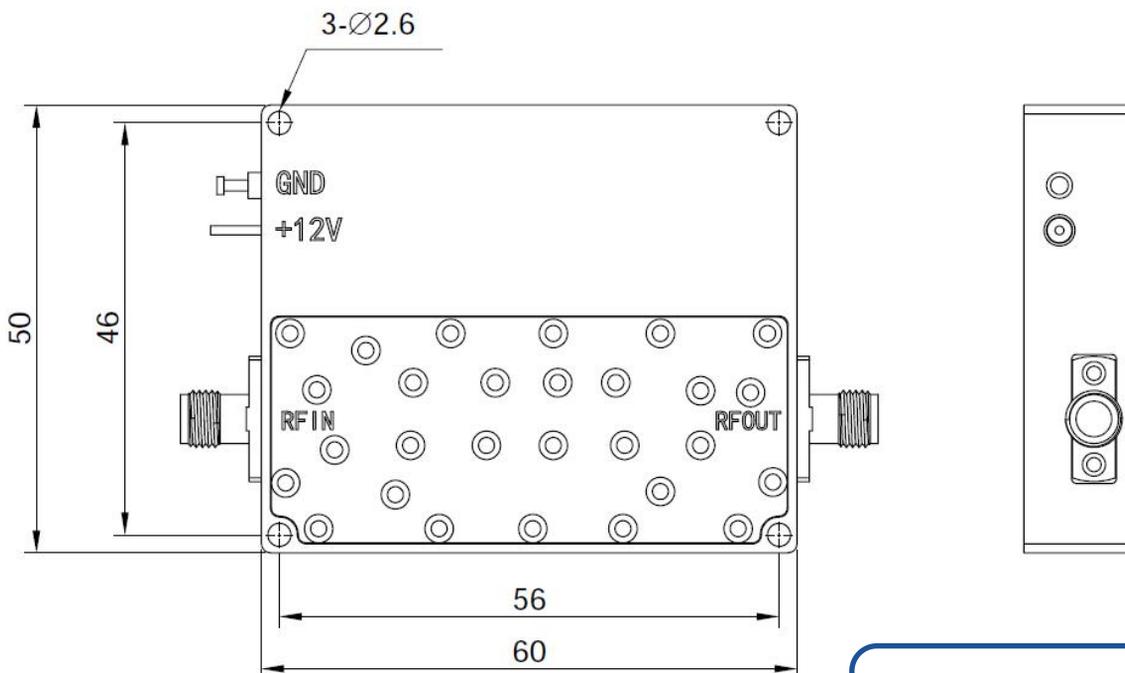
Parameter	Value	Units
Input /Output Connector	2.92 Female/2.92 Female	
DC Bias	Solder Pin	
Size	60*50*12	mm

### Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 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:

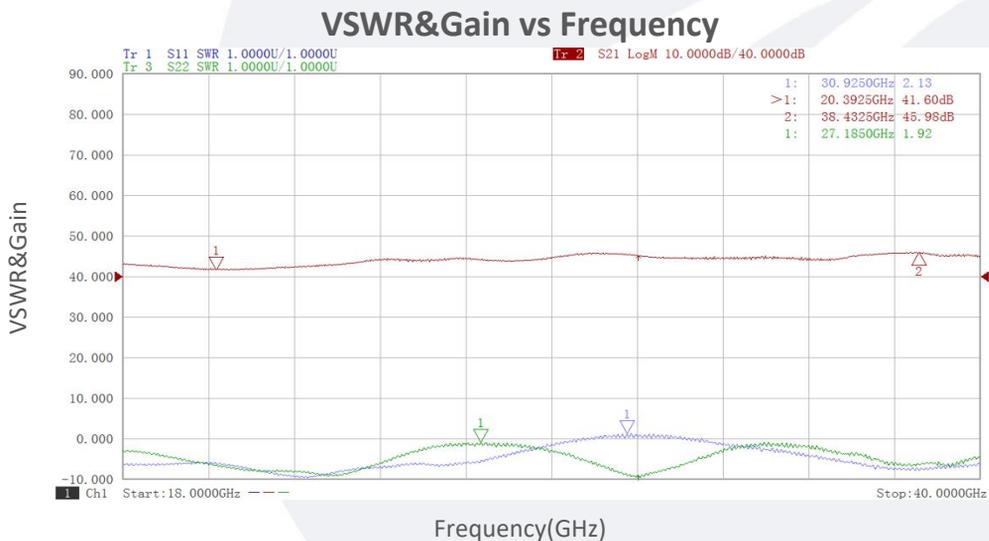
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

### Ordering Information:

Base Number	Description	Revision
TLPA18G40G-38-27	Power amplifier 18-40GHz, Gain:38dB,Psat:27dBm,+12V DC,Without Heatsink.	Rev.1.2
TLPA18G40G-38-27-HS	Power amplifier 18-40GHz, Gain:38dB,Psat:27dBm,+12V DC,With Heatsink.	Rev.1.2

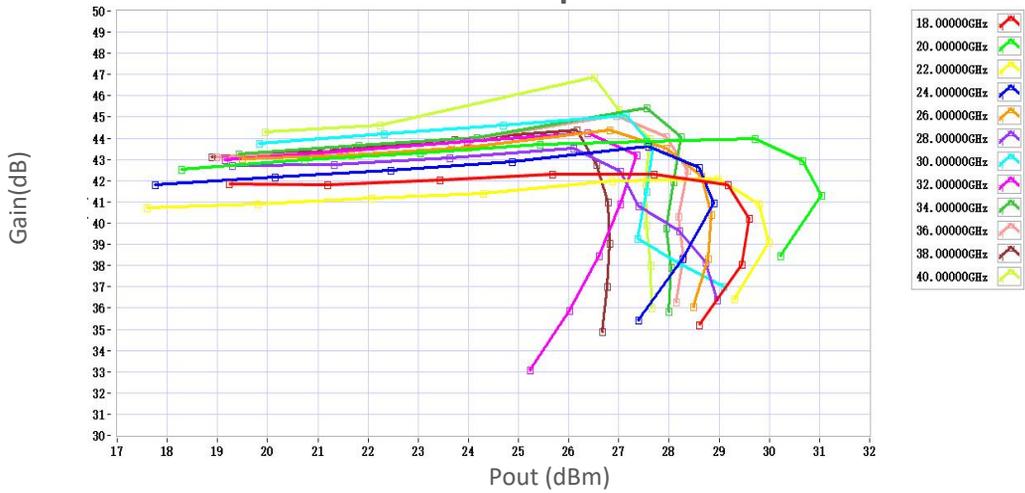
### Typical Performance Data:



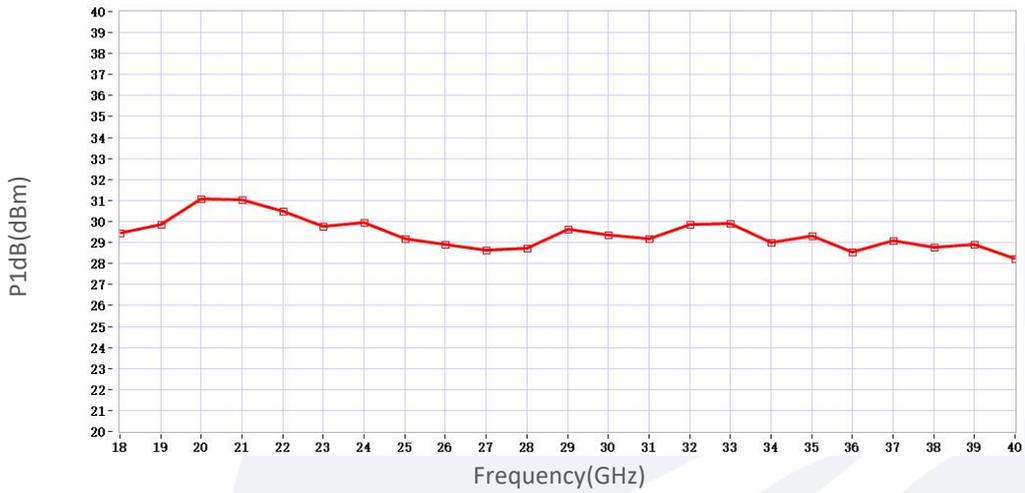
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

## Typical Performance Data:

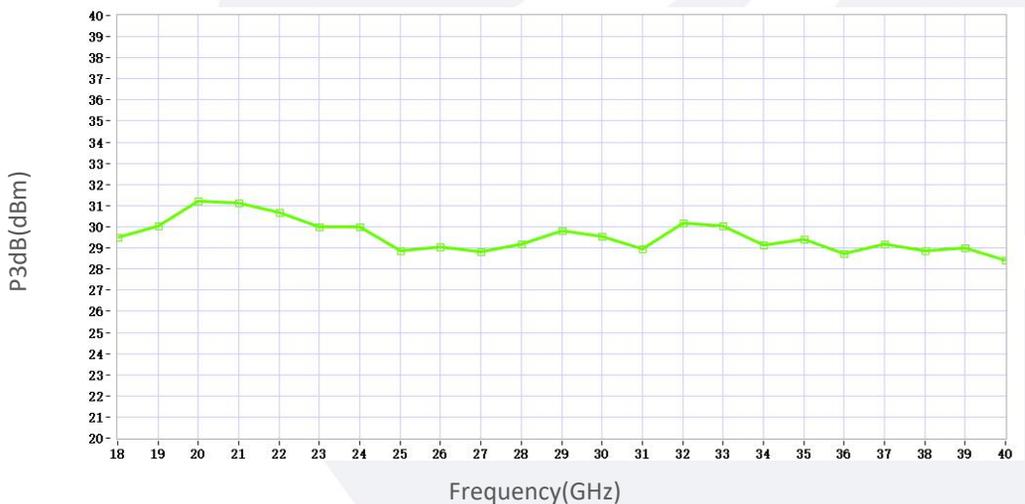
### Gain vs Output Power



### P1dB vs Frequency



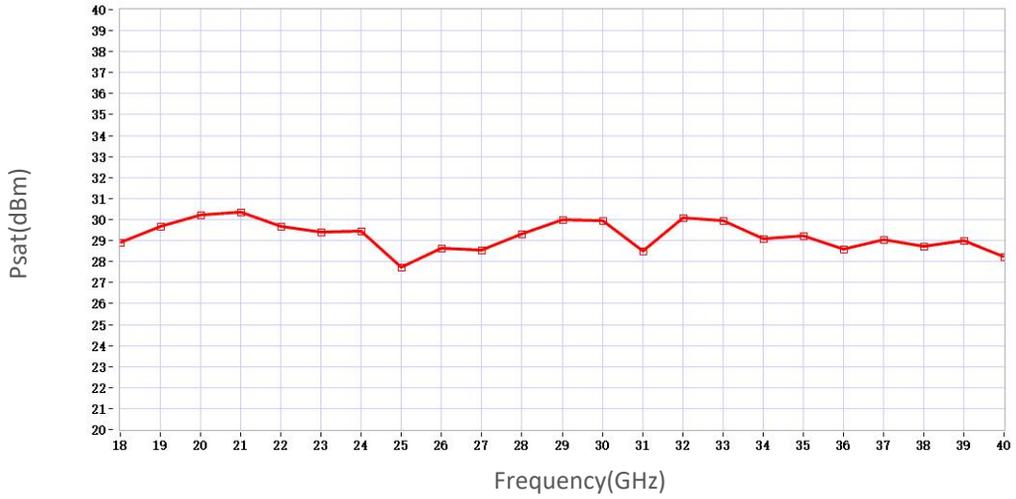
### P3dB vs Frequency



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**Typical Performance Data:**

**P<sub>sat</sub> vs Frequency**



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