

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 38 dBm 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	mm

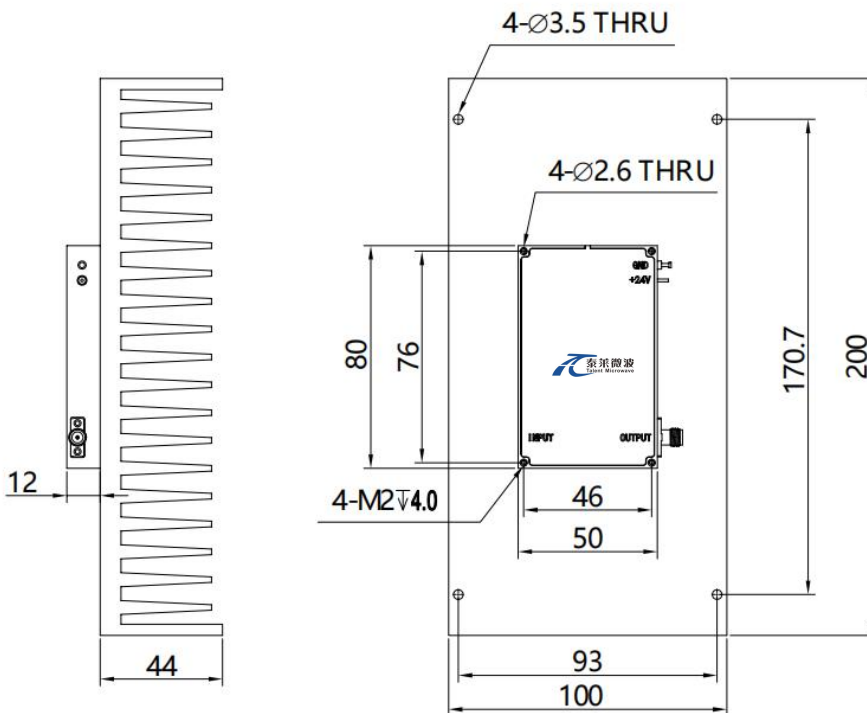
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+26 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

Regulatory Compliance:



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



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

Environmental Conditions:

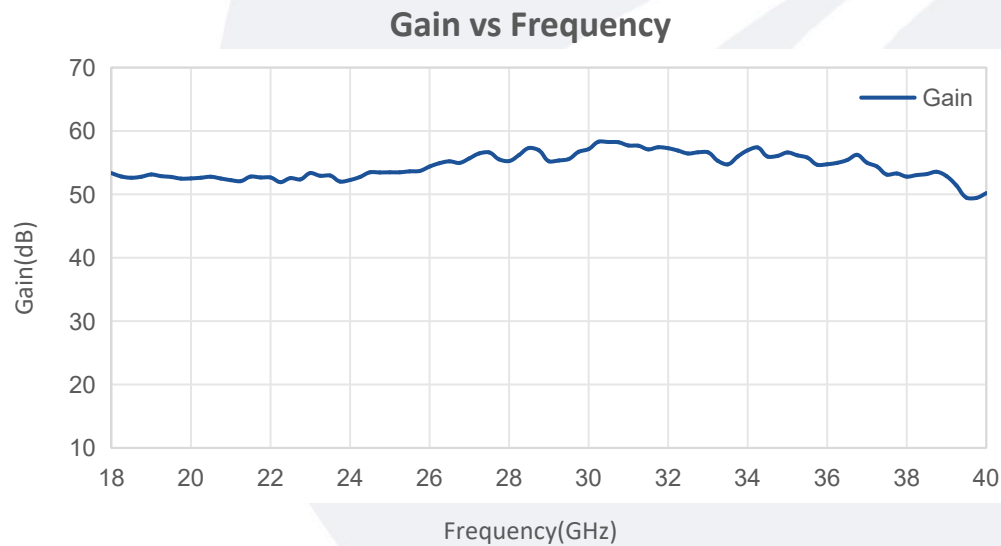
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Description	Revision
TLPA18G40G-40-37-V2-HS	Power amplifier 18-40GHz,Gain:50dB,Psat:37dBm, +24V DC,With Heatsink	Rev.1.1

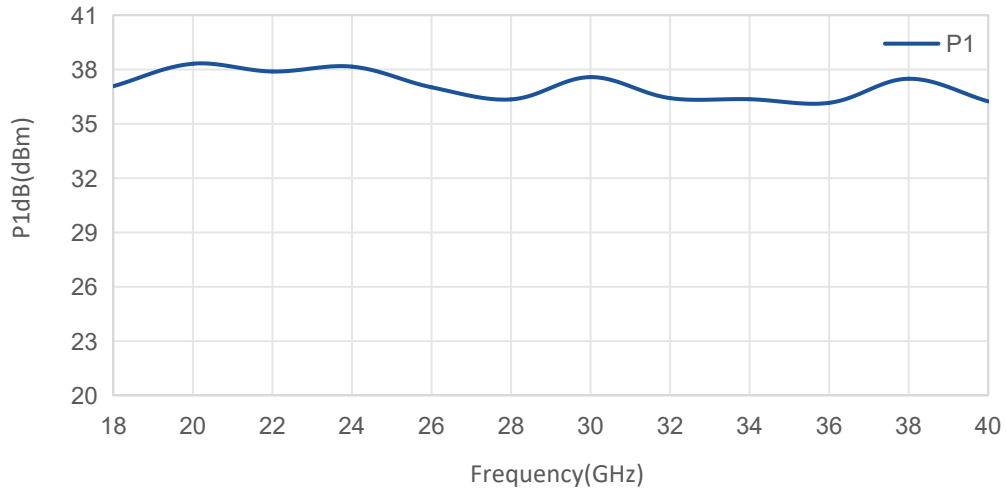
Typical Performance Data:



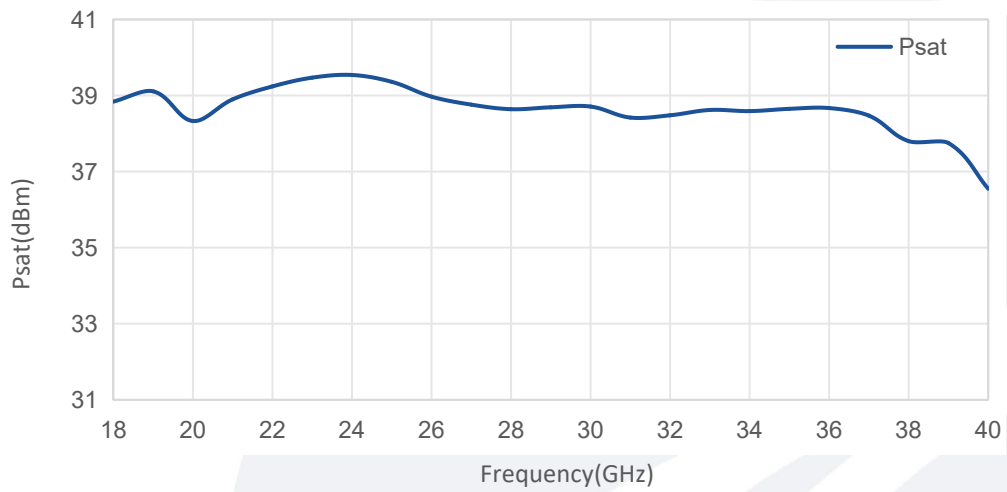
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

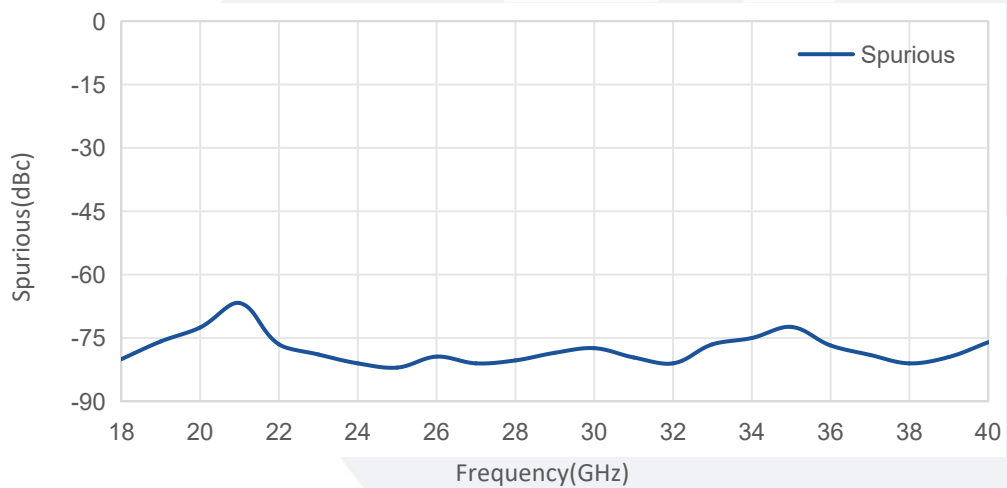
P1dB vs Frequency



Psat vs Frequency



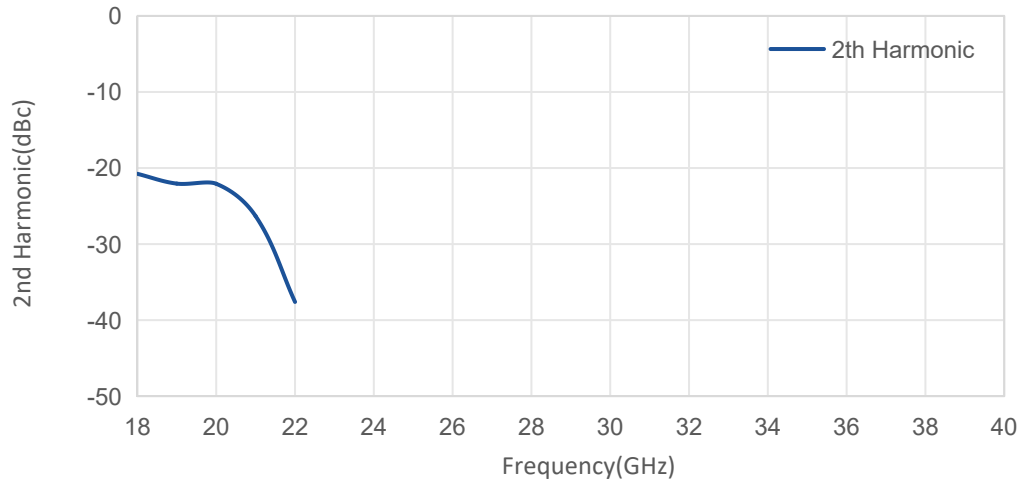
Spurious vs Frequency



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Typical Performance Data:

2nd Harmonic vs Frequency



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