

Power Amplifier

18-40GHz/28dB Gain/23dBm Psat

Model: TLPA18G40G-28-20

TLPA18G40G-28-20 is a power amplifier with a typical small signal gain of 28 dB and a nominal Psat of 23 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +12 VDC/270 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-40GHz
- Gain: 28dB Typ
- Output Power Psat: 23dBm 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	26	28		dB
Gain Flatness		±2		dB
Output P1dB	20	22		dBm
Output Psat		23		dBm
Spurious		-60		dBc
Noise Figure		6		dB
VSWR		1.7	2.3	:1
DC Voltage		12		V DC
DC Supply Current		270		mA
Impedance	50			Ohms

Mechanical Specifications:

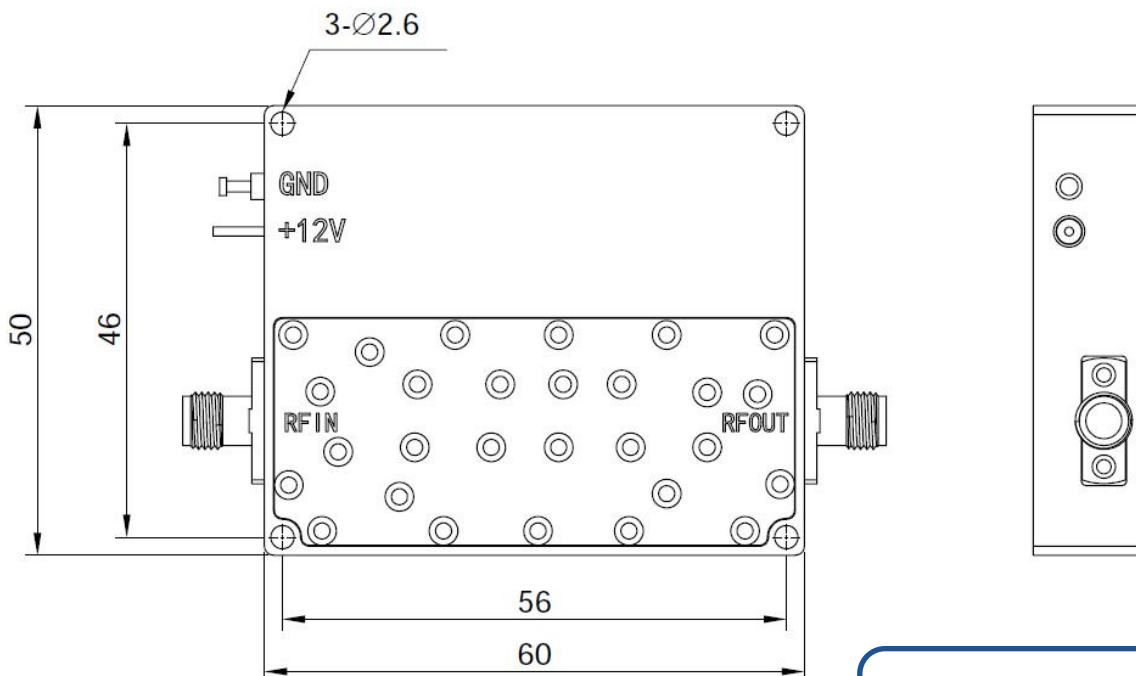
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	60*50*12	mm

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+13 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm; Tolerance:±0.1mm



*****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			

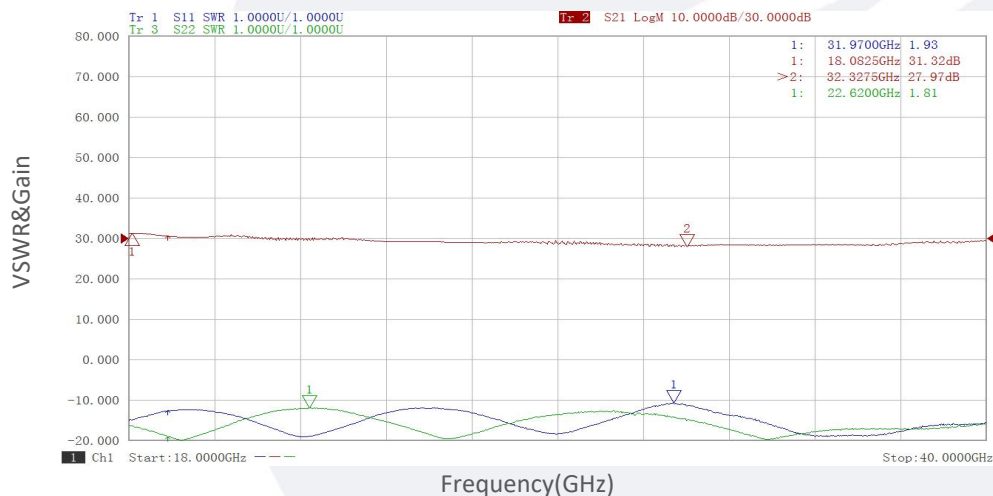
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA18G40G-28-20	Power amplifier 18-40GHz, Gain:28dB,Psat:23dBm,+12V DC,Without Heatsink	Rev.1.2
TLPA18G40G-28-20-HS	Power amplifier 18-40GHz, Gain:28dB,Psat:23dBm,+12V DC,With Heatsink	Rev.1.2

Typical Performance Data:

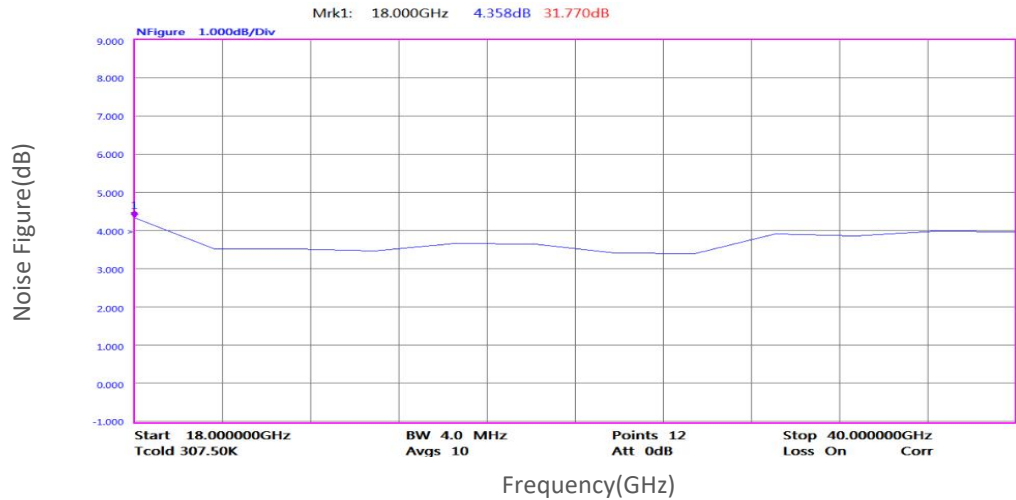
VSWR&Gain vs Frequency



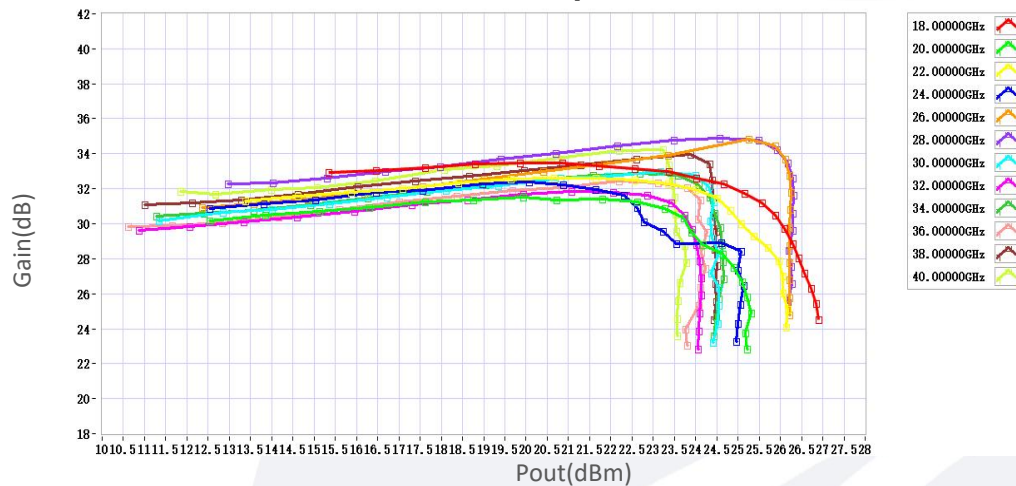
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

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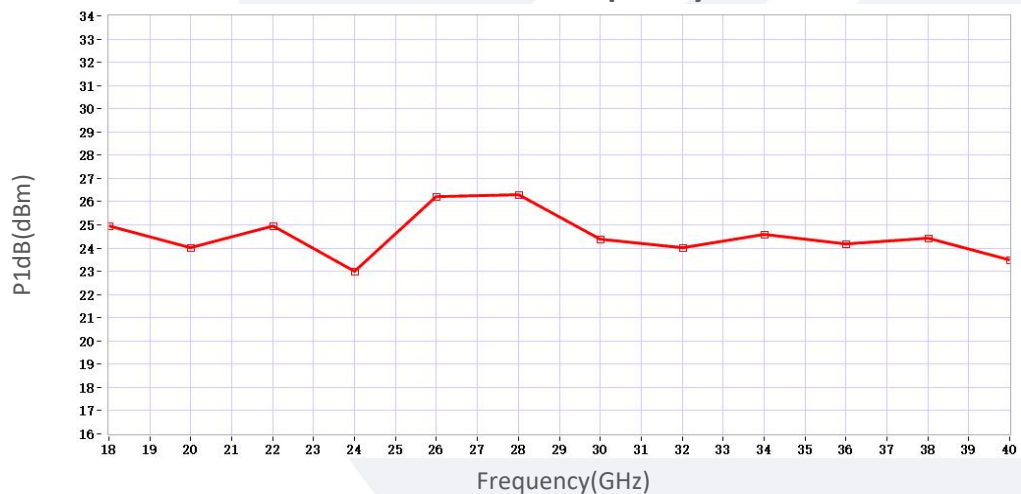
Noise Figure vs Frequency



Gain vs Output Power



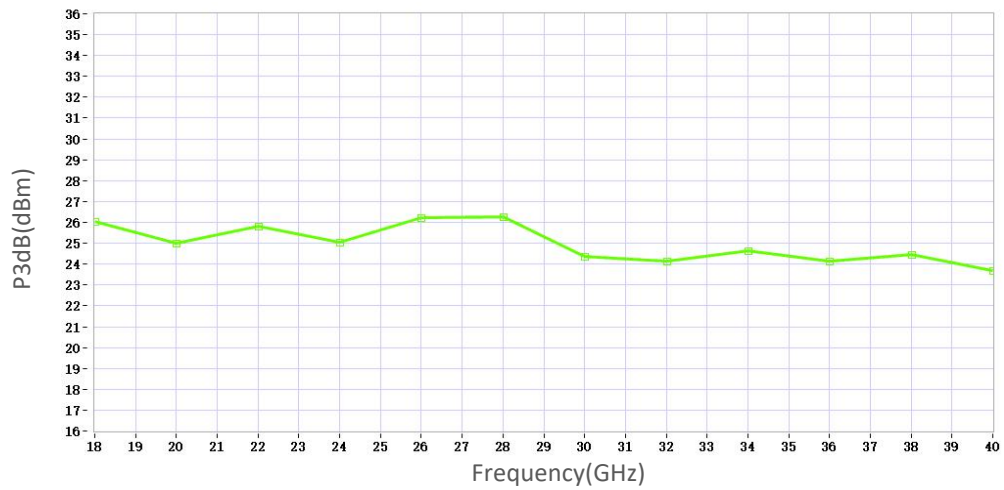
P1dB vs Frequency



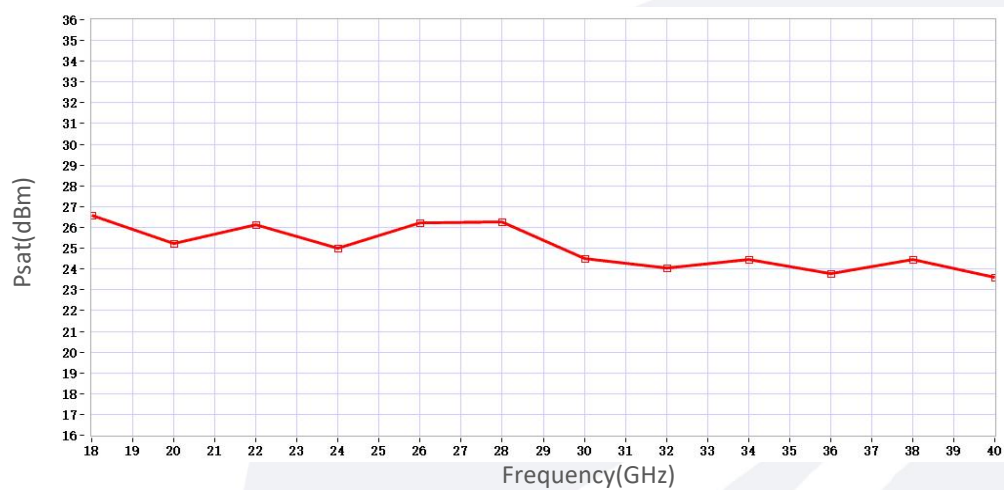
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Typical Performance Data:

P3dB vs Frequency



Psat vs Frequency



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