

Power Amplifier

1-18GHz /40dB Gain/30 dBm Psat

Model: TLPA1G18G-40-30

TLPA1G18G-40-30 is a power amplifier with a typical small signal gain of 40 dB and a nominal Psat of 30 dBm across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +18 VDC/800 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-18GHz
- Gain: 40dB Typ
- Output Power Psat: 30dBm 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		1-18		GHz
Small Signal Gain	38	40		dB
Gain Flatness		±2.5		dB
Output P1dB	27			dBm
Output Psat		30		dBm
Noise Figure		4		dB
Input VSWR			2.2	:1
Output VSWR			2.2	:1
DC Voltage		18	20	V DC
DC Supply Current		800		mA
Impedance		50		Ohms

Mechanical Specifications:

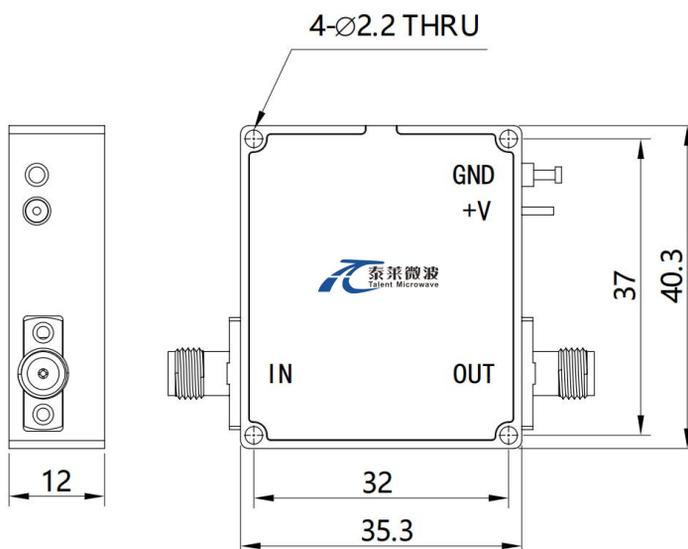
Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	35.3*40.3*12	mm
Weight	50	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+20 V
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm



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

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

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
TLPA1G18G-40-30	Power amplifier 1-18GHz,Gain:40dB,Psat:30dBm,+18V DC,Without Heatsink.	Rev.1.1
TLPA1G18G-40-30-HS	Power amplifier 1-18GHz,Gain:40dB,Psat:30dBm,+18V DC,With Heatsink.	Rev.1.1

Typical Performance Data:

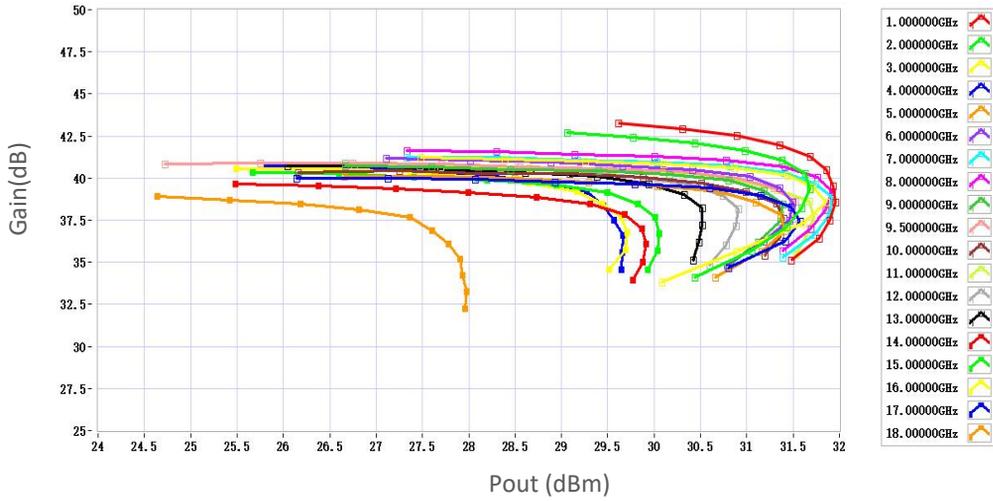
VSWR&Gain vs Frequency



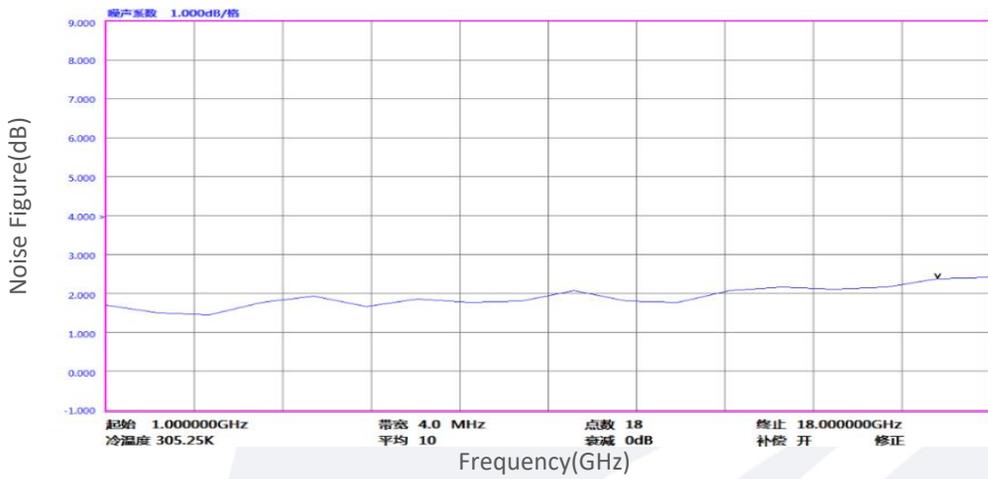
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

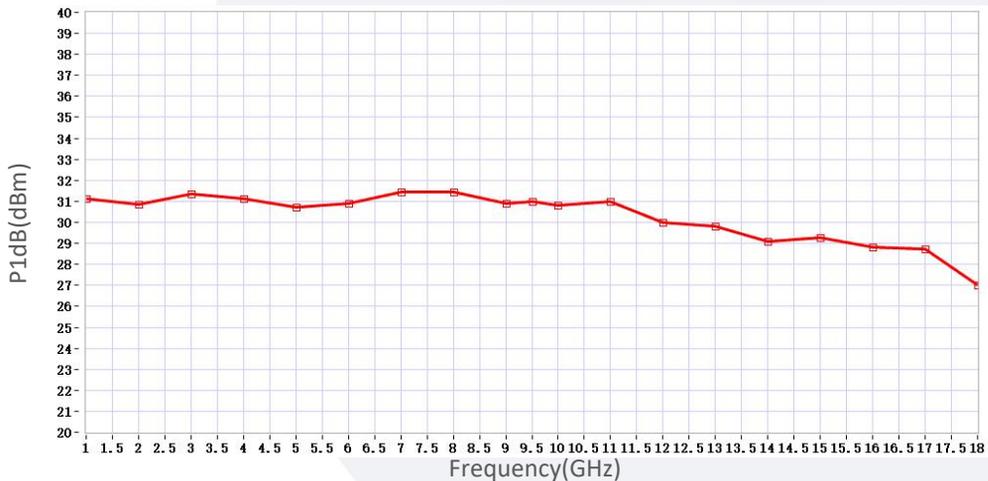
Gain vs Output Power



Noise Figure vs Frequency



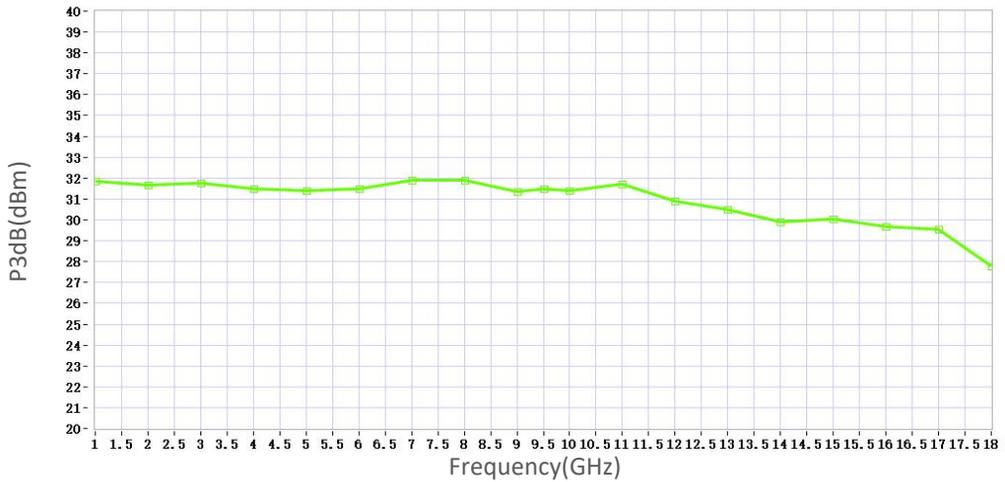
P1dB vs Frequency



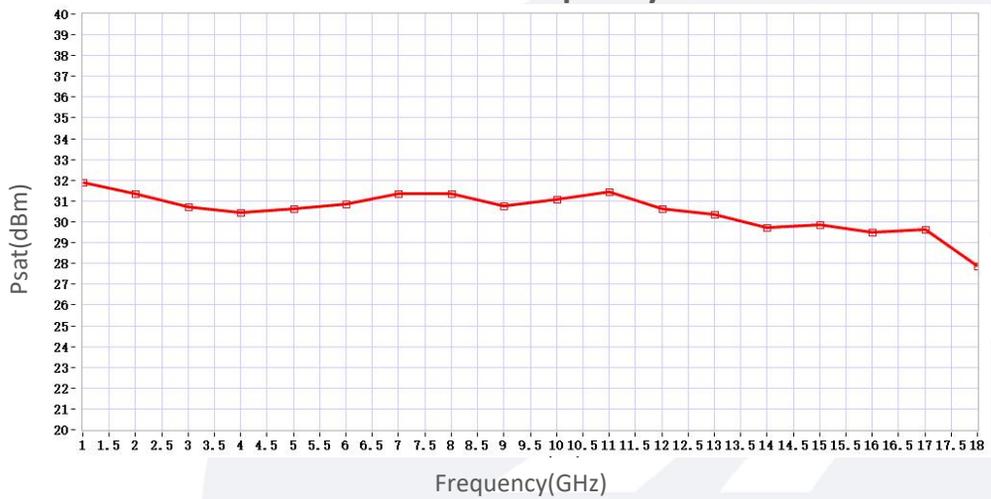
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Typical Performance Data:

P3dB vs Frequency



Psat vs Frequency



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