

Power Amplifier

0.7-20GHz /32dB Gain/25 dBm Psat

Model: TLPA0.7G20G-32-22

TLPA0.7G20G-32-22 is a power amplifier with a typical small signal gain of 32 dB and a nominal Psat of 25 dBm across the frequency range of 0.7 to 20 GHz. The DC power requirement for the amplifier is +12 VDC/300 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Ultra Wide Band: 0.7-20GHz
- Gain: 32dB Typ
- Output Power Psat: 25dBm 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	0.7-20			GHz
Small Signal Gain	30	32		dB
Gain Flatness		±2		dB
Output P1dB	22	23		dBm
Output Psat		25		dBm
Noise Figure		3	4.5	dB
Input VSWR		1.5		:1
Output VSWR		1.5		:1
DC Voltage		12		V DC
DC Supply Current		300		mA
Impedance	50			Ohms

Mechanical Specifications:

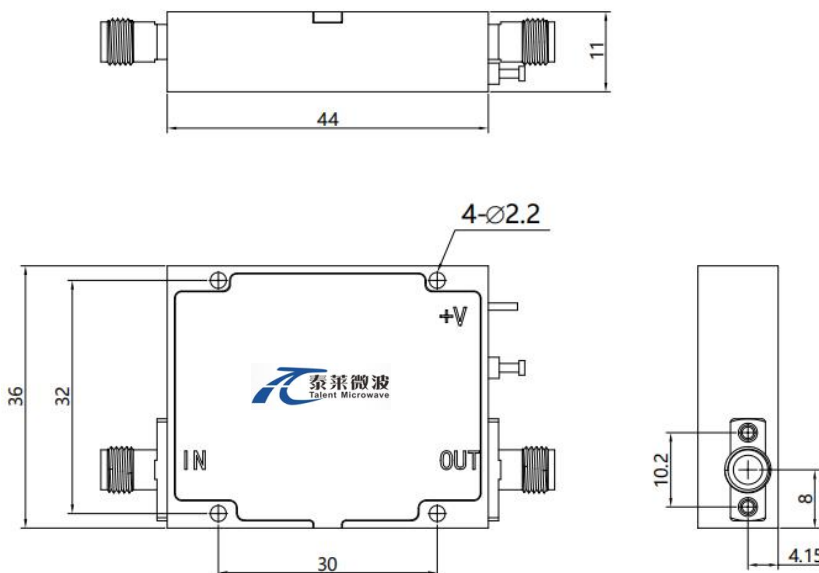
Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	44*36*11	mm
Weight	50	g

Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+15 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:

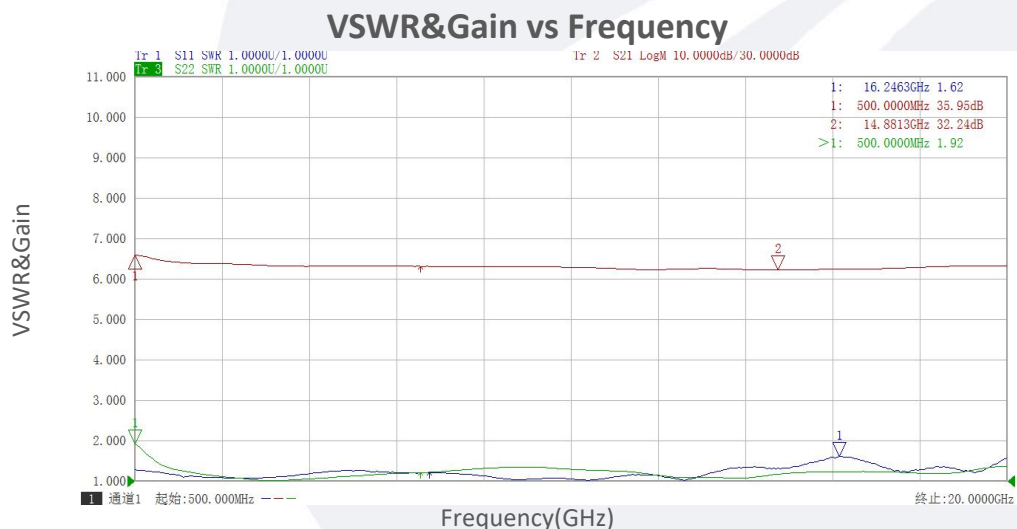
Parameter	Min	Typ	Max	Units
Operating Temperature*	-40		+60	°C
Non-operating Temperature*	-50		+70	°C
Relative humidity		95		%
Altitude	10,000			feet
Shock / Vibration(MIL-STD-810F)	25g rms (15 degree 2KHz) endurance, 1 hour per axis			
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions			

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

Ordering Information:

Base Number	Description	Revision
TLPA0.7G20G-32-22	Power amplifier 0.7-20GHz,Gain:32dB,P1dB:23dBm, +12V DC,Without Heatsink	Rev.1.1
TLPA0.7G20G-32-22-HS	Power amplifier 0.7-20GHz,Gain:32dB, P1dB:23dBm, +12V DC,With Heatsink	Rev.1.1

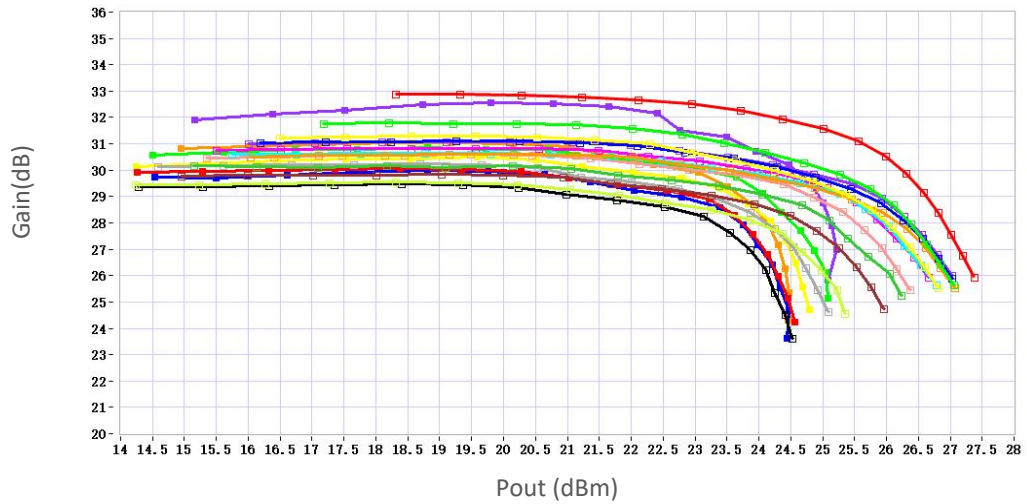
Typical Performance Data:



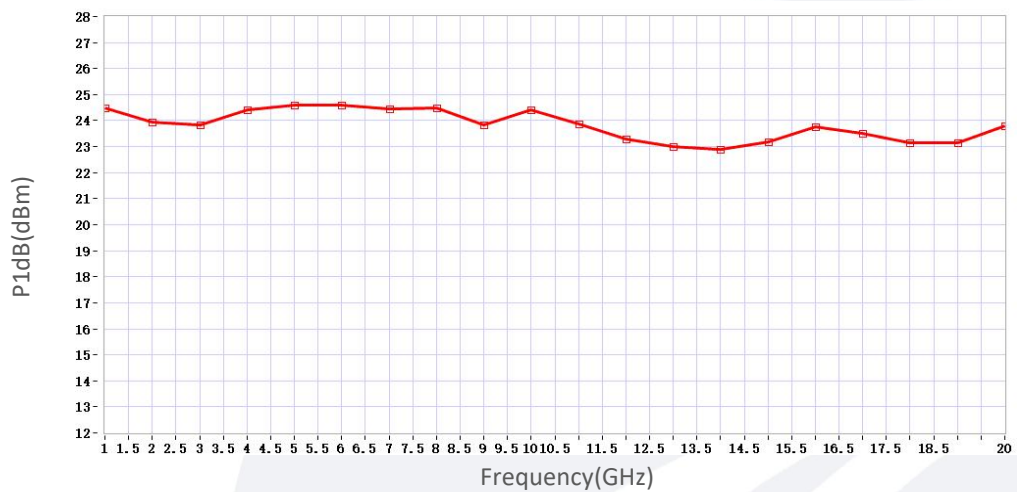
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency



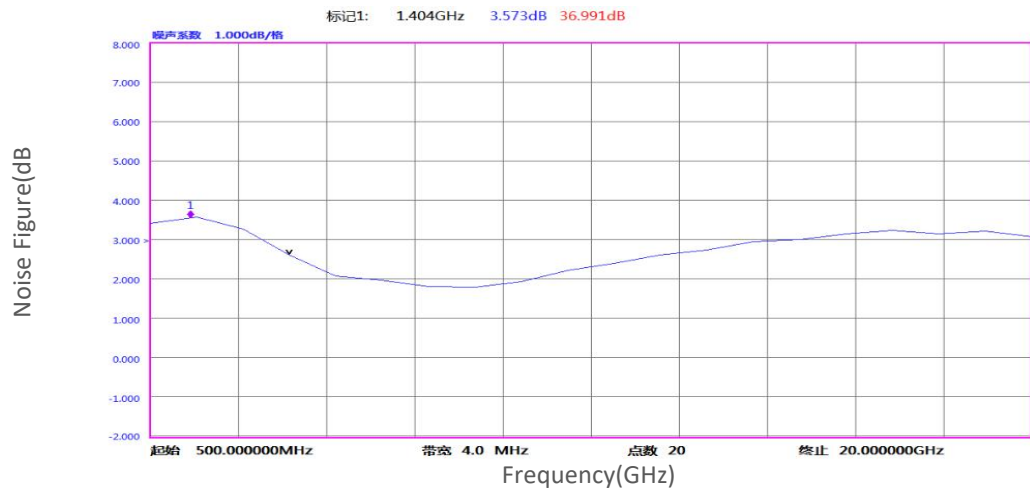
P3dB vs Frequency



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:

Noise Figure 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.