

Power Amplifier

1-18GHz/43dB Gain/32dBm Psat

Model: TLPA1G18G-43-32

TLPA1G18G-43-32 is a power amplifier with a typical small signal gain of 43 dB and a nominal Psat of 32 dBm across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +18 VDC/700 mA. The input and output port configuration offers coax adapter structure with SMA female.

Features:

- Frequency range: 1-18GHz
- Gain: 43dB Typ
- Output Power Psat: 32dBm 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	42	43		dB
Gain Flatness		±2	±2.5	dB
Output P1dB	30	31		dBm
Output Psat		32		dBm
Spurious		-60		dB
Input VSWR		2	2.2	:1
Output VSWR		2	2.2	:1
DC Voltage		+18	+20	V DC
DC Supply Current		700		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Size	58.5*38*12.5	mm

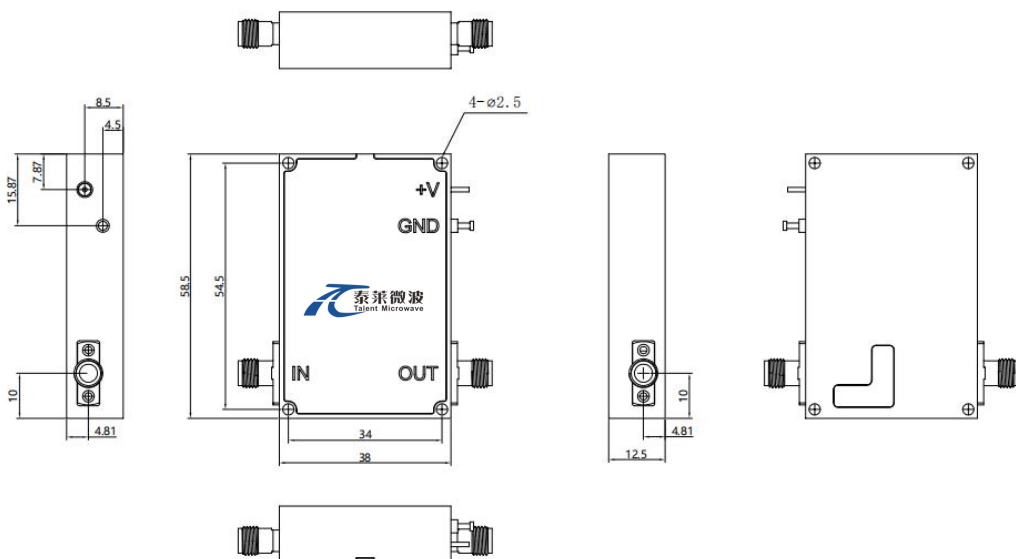
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 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			

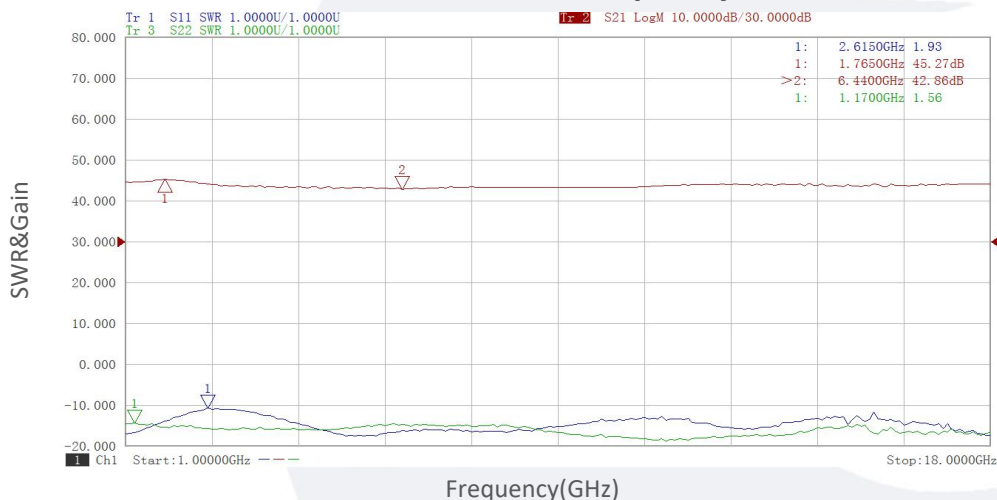
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

Base Number	Description	Revision
TLPA1G18G-43-32	Power amplifier 1-18GHz, Gain:43dB,Psat:32dBm,+18V DC,Without Heatsink	Rev.1.2
TLPA1G18G-43-32-HS	Power amplifier 1-18GHz, Gain:43dB,Psat:32dBm,+18V DC,With Heatsink	Rev.1.2

Typical Performance Data:

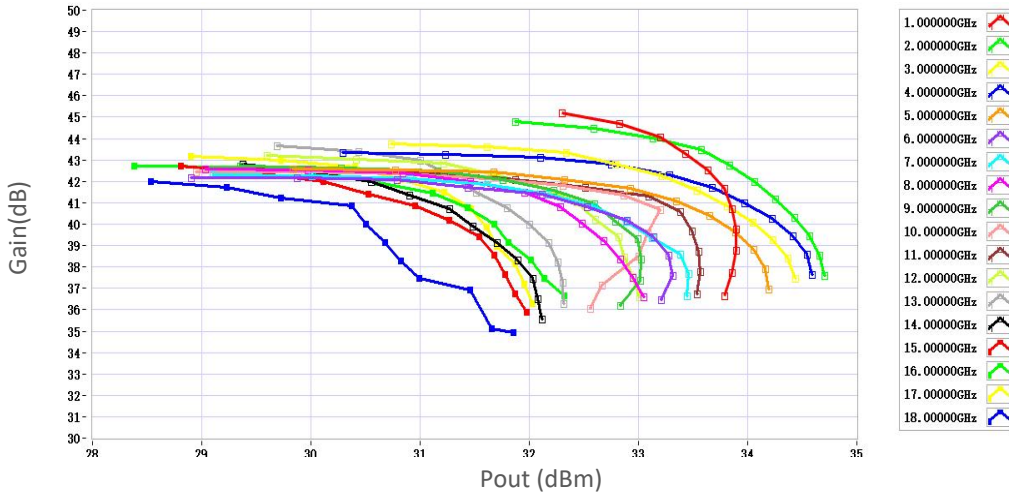
VSWR&Gain vs Frequency



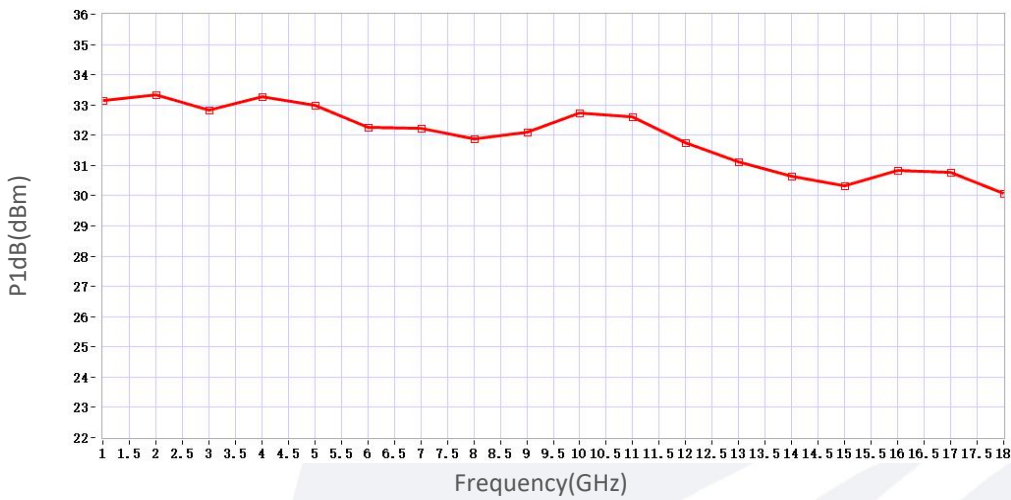
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

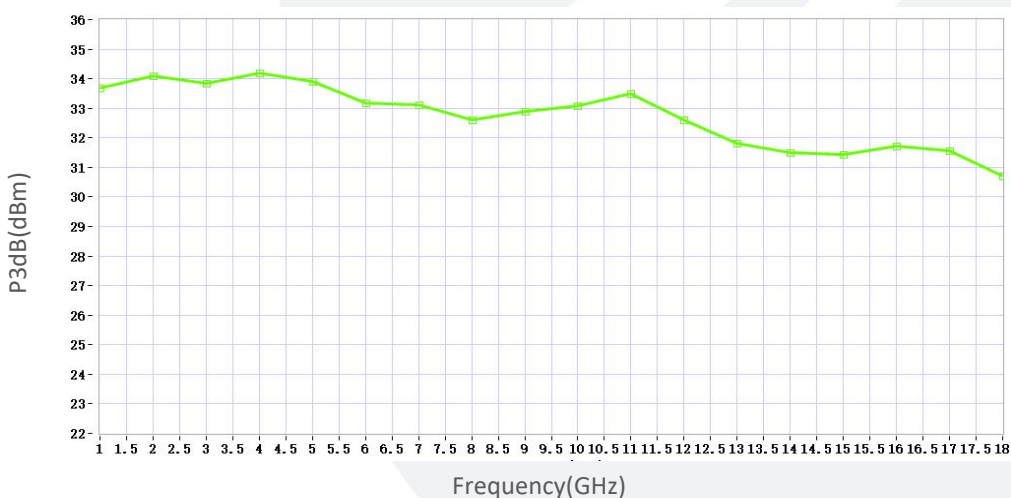
Gain vs Output Power



P1dB vs Frequency



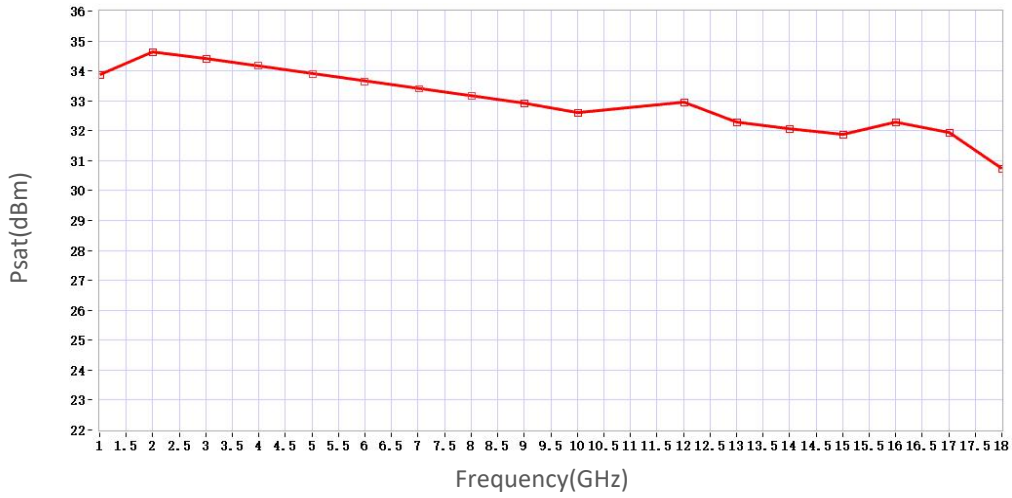
P3dB vs Frequency



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:

Psat 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.