

Power Amplifier

18-40GHz/46dB Gain/30dBm Psat

Model: TLPA18G40G-46-30

TLPA18G40G-46-30 is a power amplifier with a typical power gain of 46 dB and a nominal Psat of 30 dBm across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +24 VDC/0.5 A. The input and output port configuration offers coax adapter structure with 2.92mm female.

Features:

- Frequency range: 18-40GHz
- Gain: 46dB 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	18		40	GHz
Power Gain	45	46		dB
Noise Figure		5		dB
Output P1dB	27.5	29		dBm
Output Psat	28.5	30		dBm
Input VSWR		1.8		:1
Output VSWR		1.8		:1
DC Voltage		+24		V DC
DC Supply Current		0.5		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Units
Input /Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Size	50*65*14(Without heatsink) 100*50*64(With heatsink)	mm

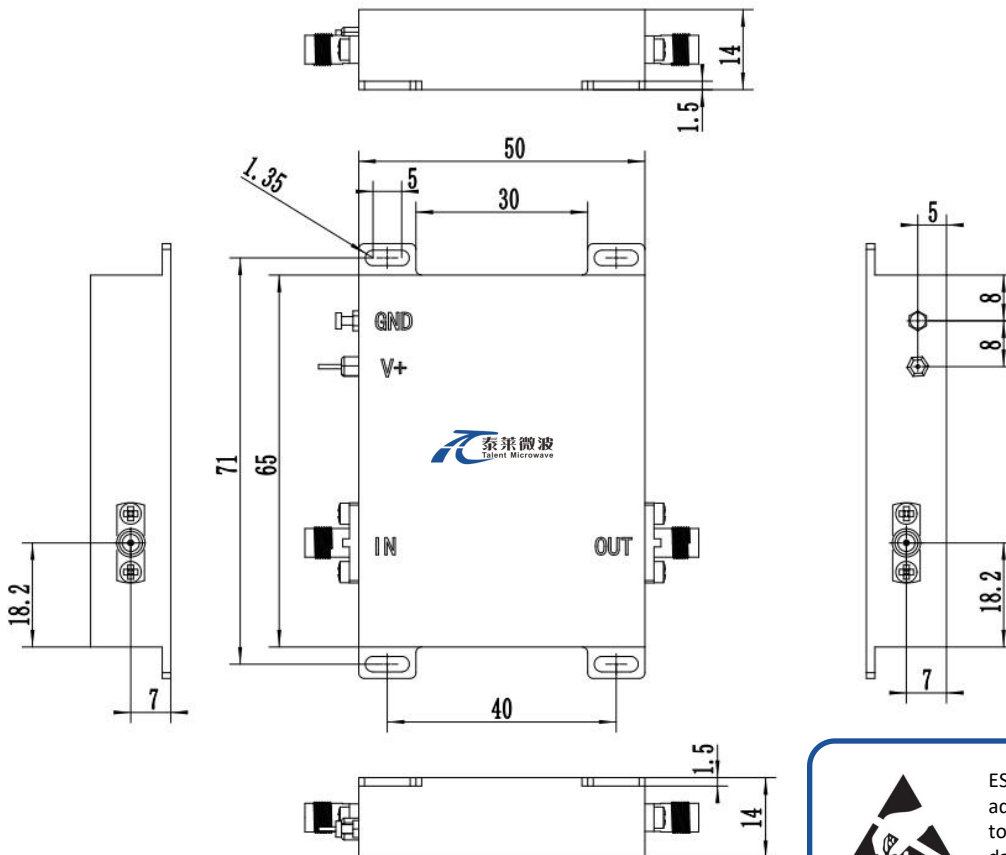
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

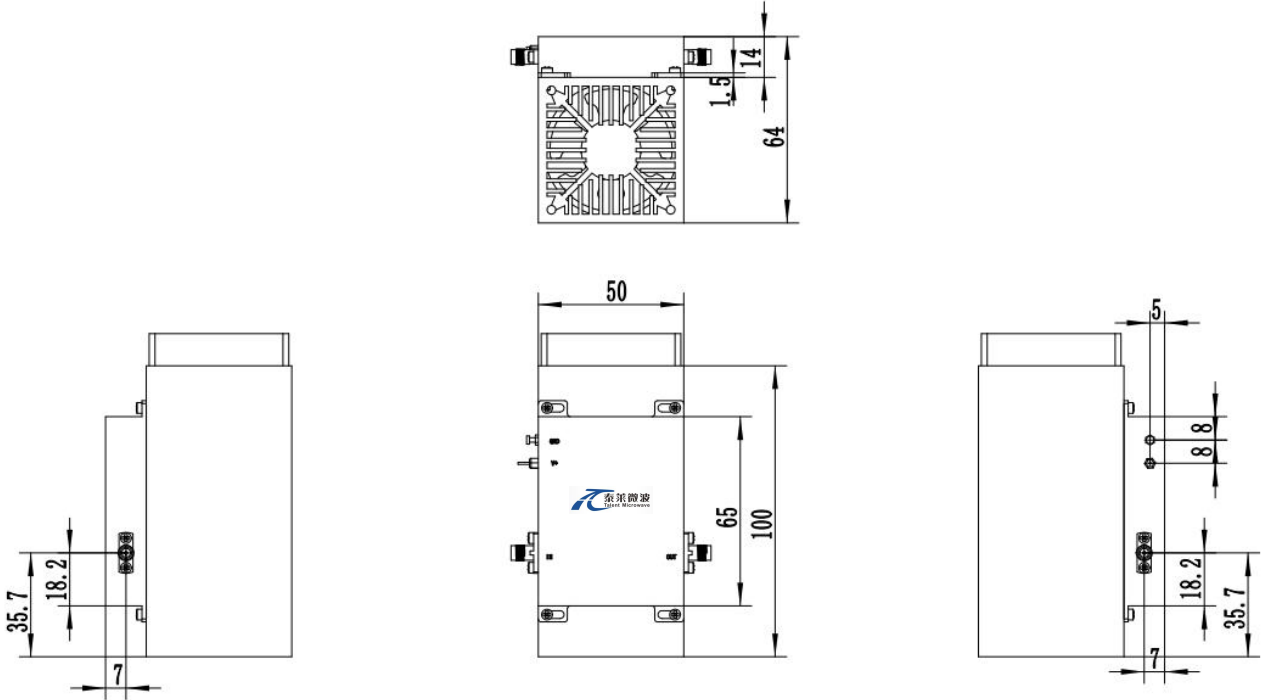


ESD Protection: Strictly adhere to ESD precautions to prevent electrostatic damage.

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

Outline Drawing:

Unit:mm



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			

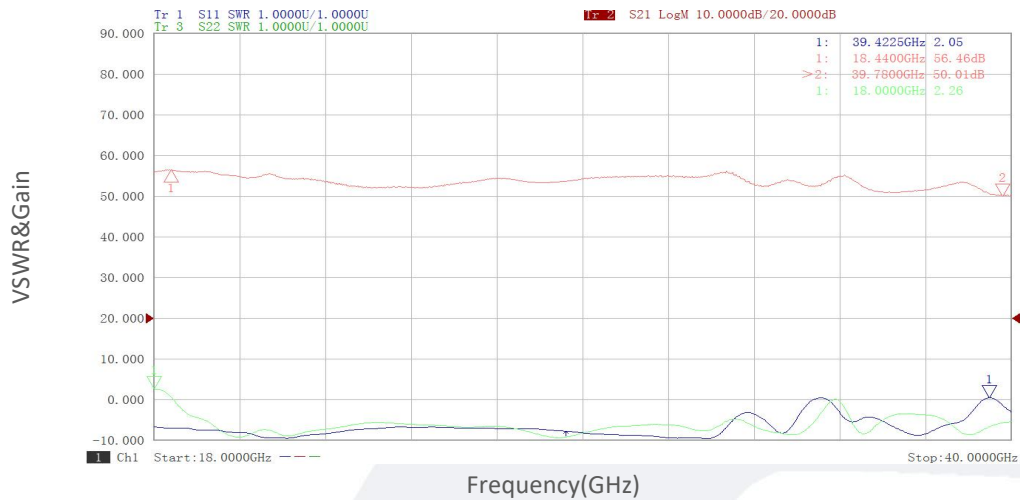
*Note: For a wider temperature range, please consult the manufacturer.

Ordering Information:

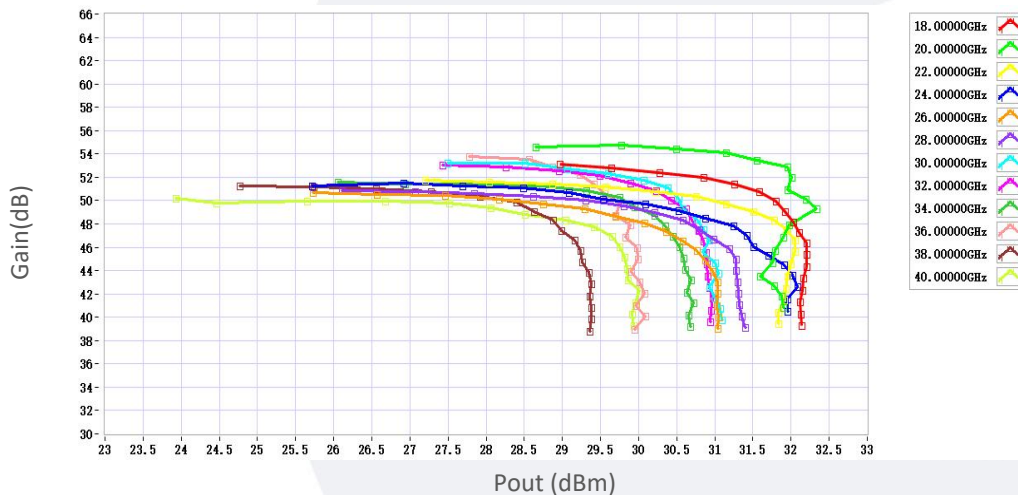
Base Number	Description	Revision
TLPA18G40G-46-30	Power amplifier 18-40GHz, Gain:46dB,Psat:30dBm,+24V DC,Without Heatsink	Rev.1.1
TLPA18G40G-46-30-HS	Power amplifier 18-40GHz, Gain:46dB,Psat:30dBm,+24V DC,With Heatsink	Rev.1.1

Typical Performance Data:

VSWR&Gain vs Frequency



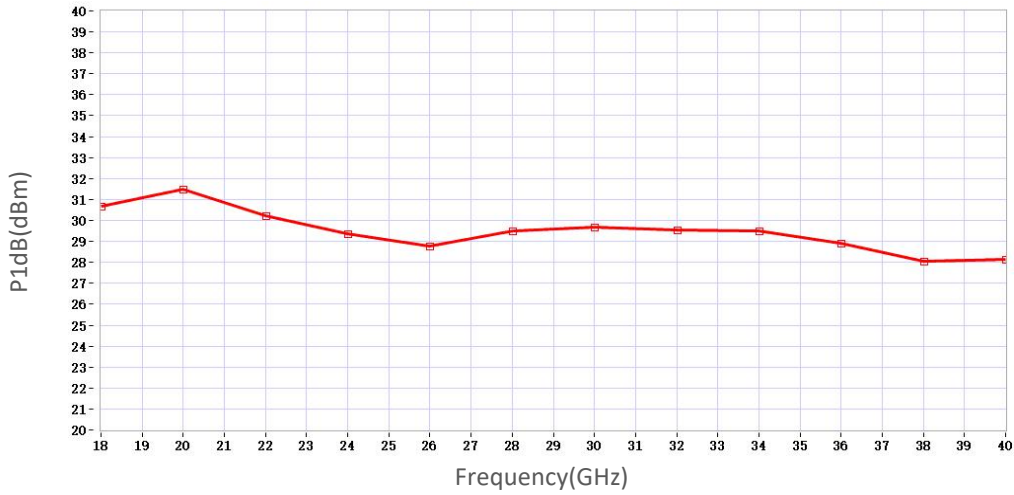
Gain vs Output Power



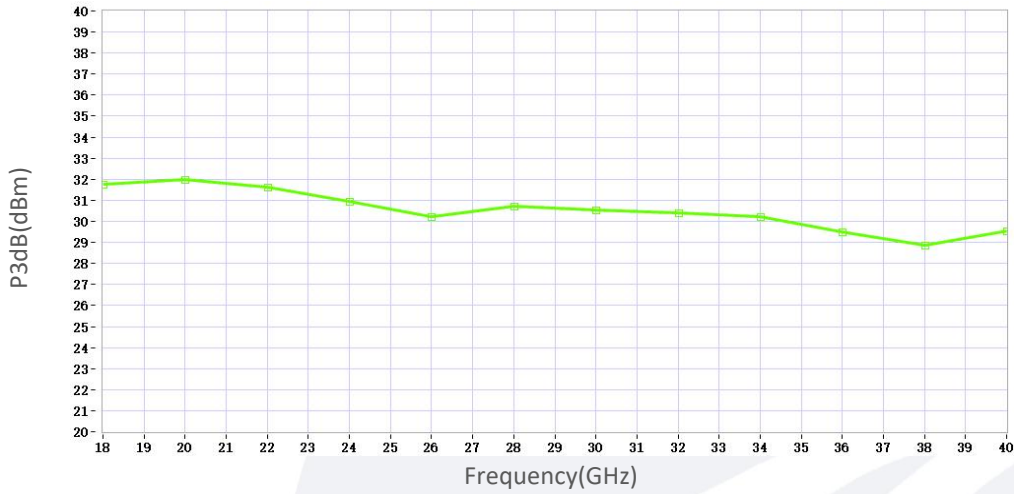
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

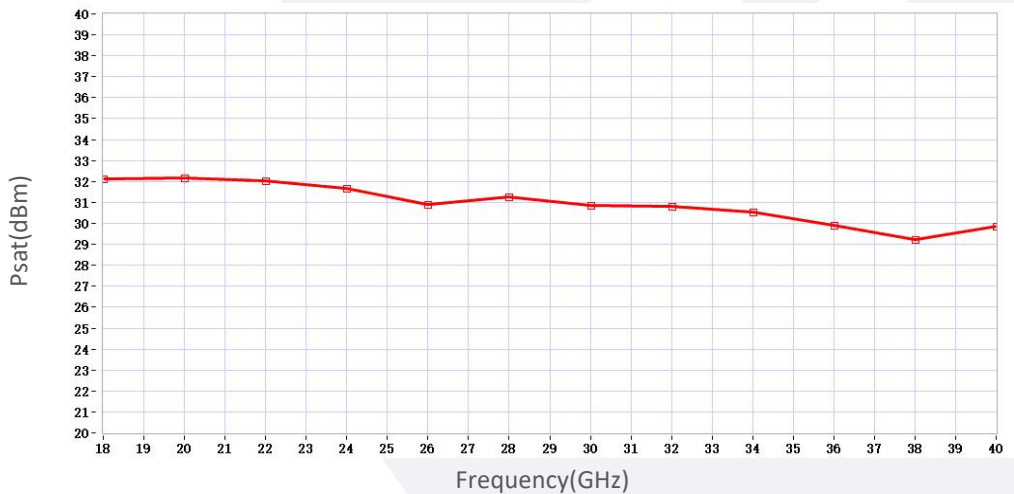
P1dB vs Frequency



P3dB vs Frequency



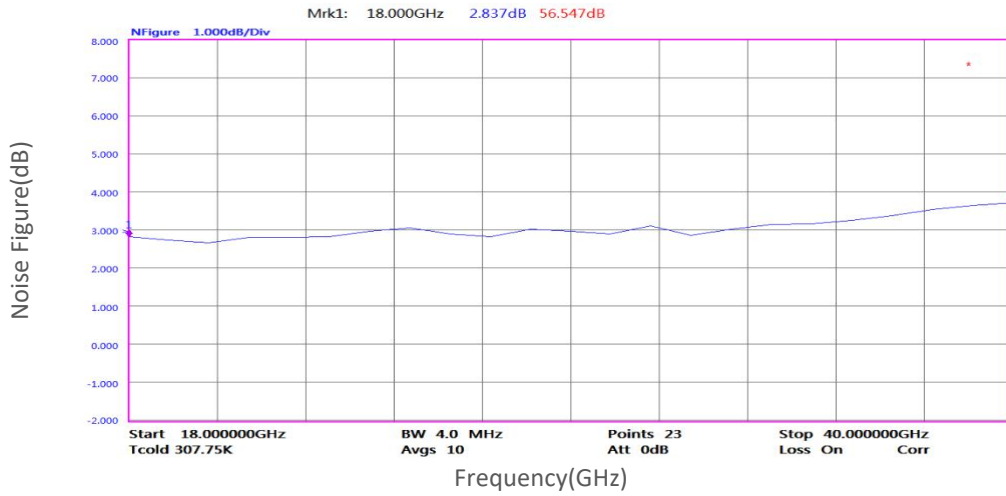
Psat vs Frequency



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Typical Performance Data:

Noise Figure vs Frequency



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