



# Power Amplifier

## Model: PA-18G-40G-1

18-40GHz 1W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 18-40GHz
- High output power at saturation, 1W Typ.
- High gain, 46 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-18G-40G-1 is a power amplifier with a typical power gain of 46 dB and a nominal Psat of 1W across the frequency range of 18 to 40GHz. The DC power requirement for the amplifier is +24 VDC/0.5A. The input and output port configuration offers coax adapter structure with 2.92mm female.



## Electrical Specifications at 25°C:

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	Notes
Operating Temperature*	-40°C to +60°C	
Non-operating Temperature*	-50°C to +70°C	
Relative humidity	95%	
RF Input/Output Connector	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
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	
Dimensions W x H x D	50*65*14(Without heatsink) 100*50*64(With heatsink)	mm

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

## Absolute Maximum Ratings:

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

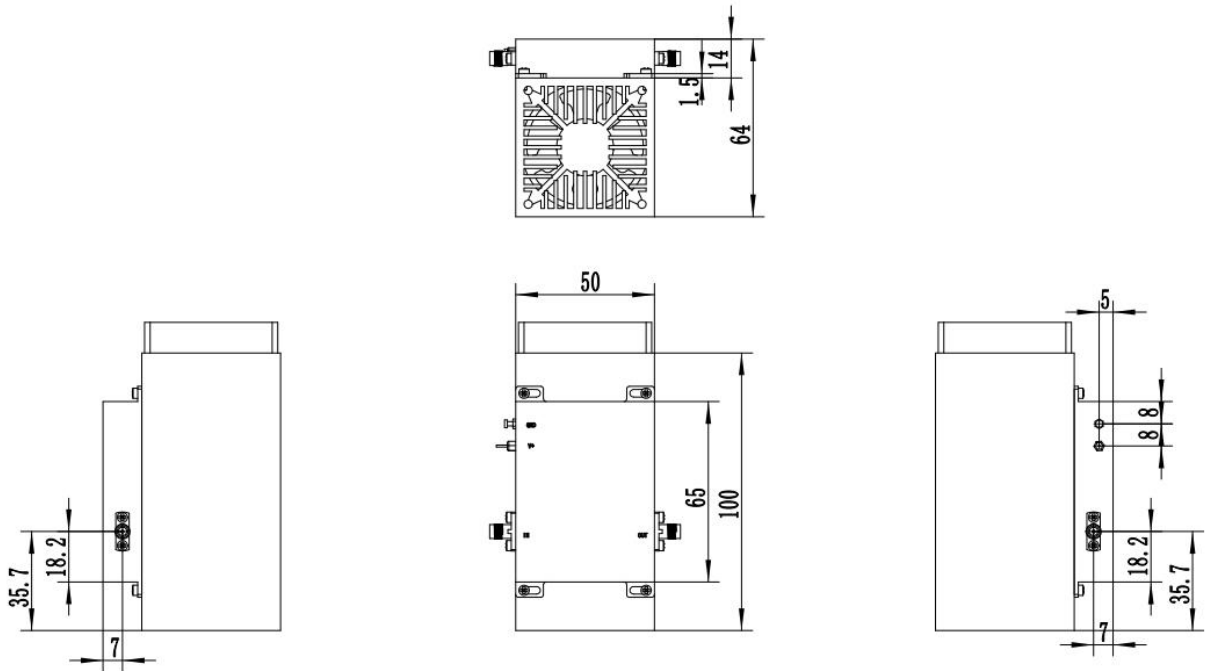




## Outline Drawing:

Unit:mm

PA-18G-40G-1-HS



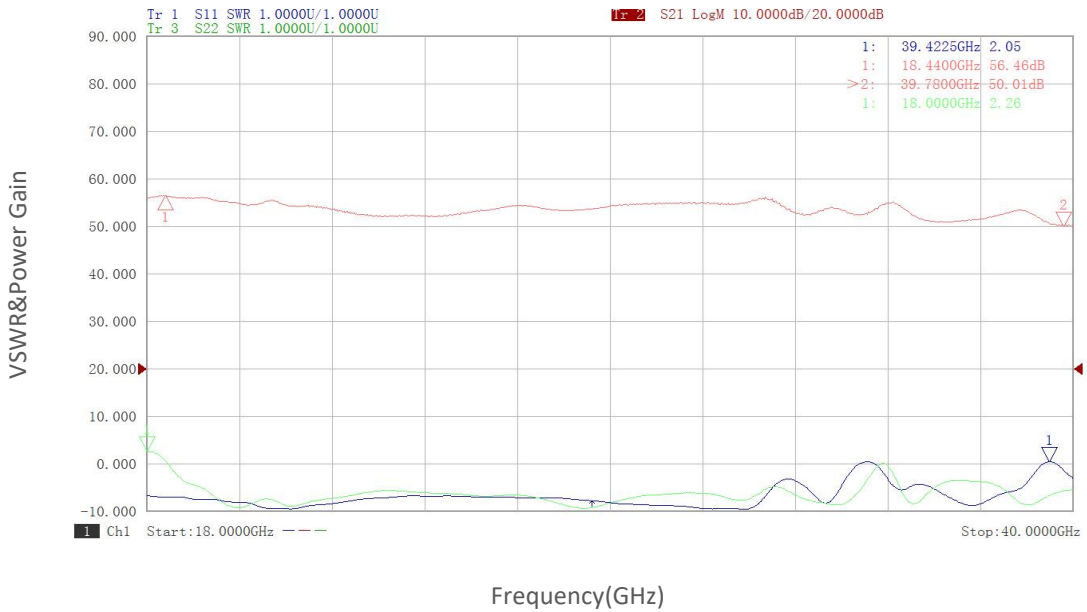
## Ordering Information:

Base Number	Description	Optional
PA-18G-40G-1	Power Amplifier, 18-40GHz, Gain:46dB,Psat:1W,+24V DC	Without Heatsink
PA-18G-40G-1-HS	Power Amplifier, 18-40GHz, Gain:46dB,Psat:1W,+24V DC	With Heatsink

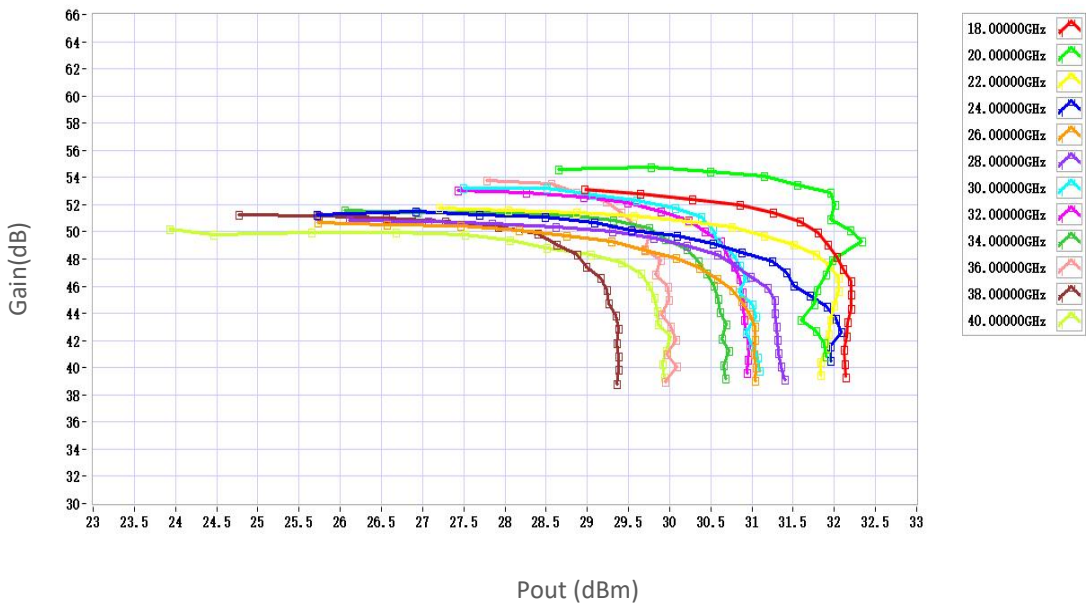


## Typical Performance Data:

### VSWR&Power Gain vs Frequency



### Gain vs Output Power

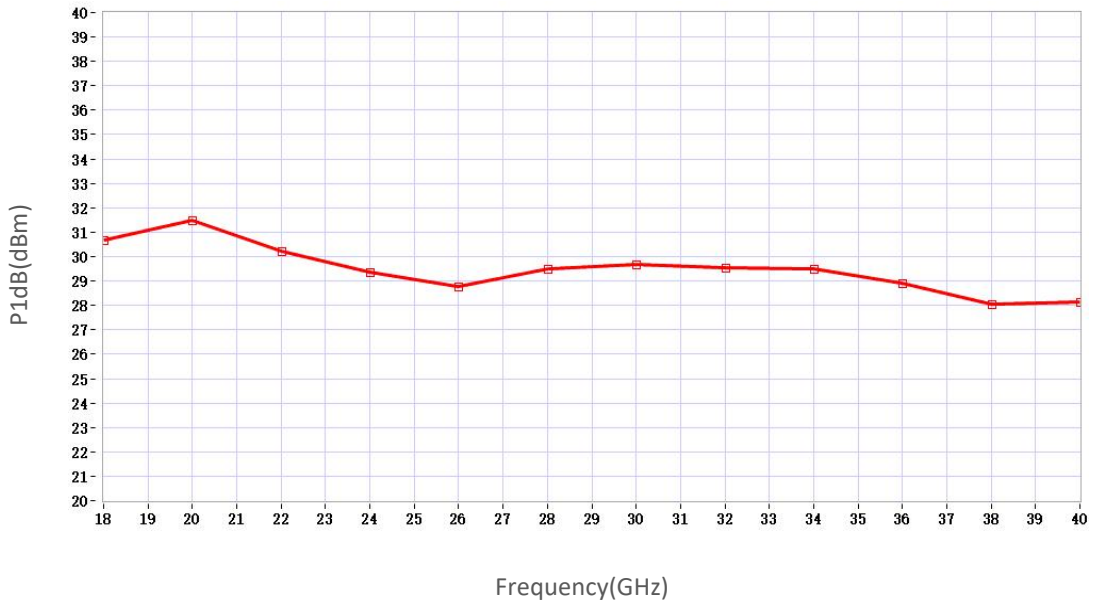


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



## Typical Performance Data:

### P1dB vs Frequency



### P3dB vs Frequency

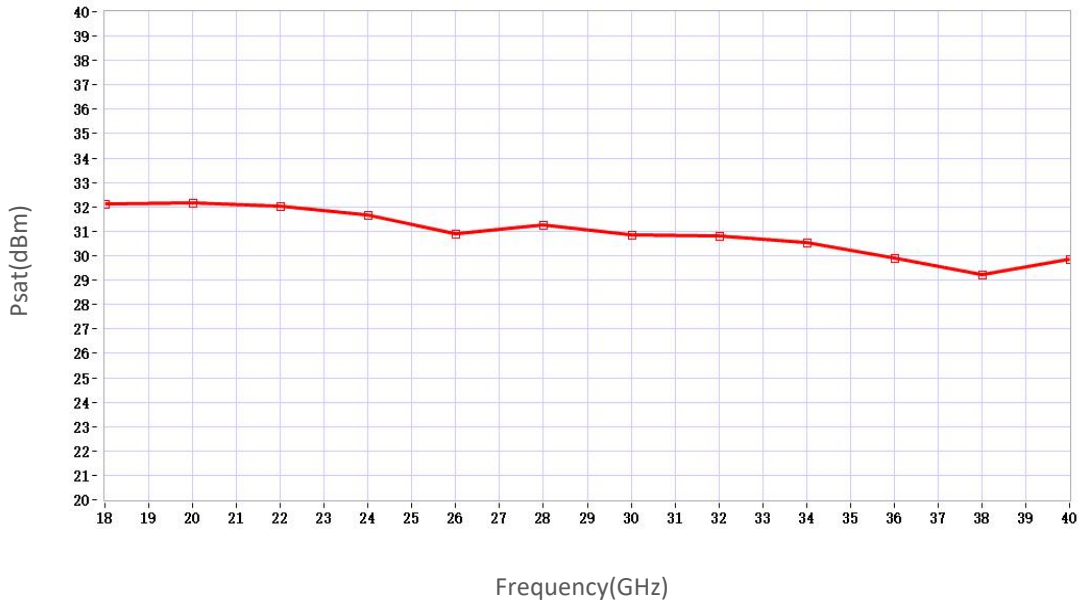


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

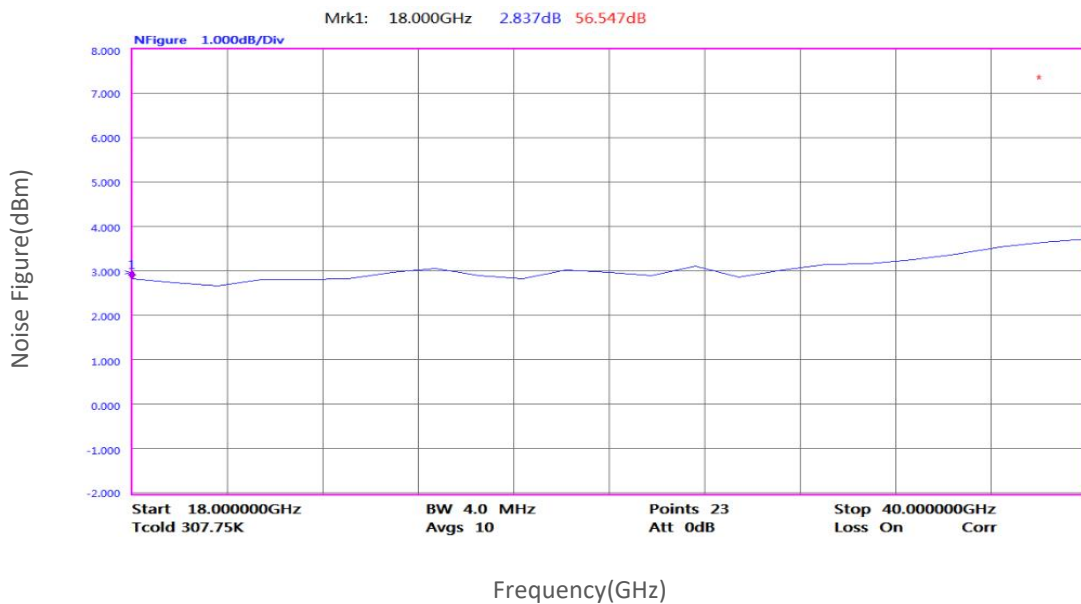


## Typical Performance Data:

### Psat vs Frequency



### 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.