



# Power Amplifier

## Model: PA-18G-36G-5

18-36GHz 5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 18-36GHz
- High output power at saturation, 5W Min.
- High gain, 50 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-18G-36G-5 is a power amplifier with a typical small signal gain of 50 dB and a minimum  $P_{sat}$  of 5W across the frequency range of 18 to 36 GHz. The DC power requirement for the amplifier is +18 VDC/3 A. 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		36	GHz
Small Signal Gain		50		dB
Small Signal Gain Flatness		±4		dB
Output Psat	37			dBm
Spurious			-60	dBc
Harmonic			-20	dBc
Input VSWR			2	:1
DC Voltage		+18	+19	V DC
DC Supply Current		3		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	Feedthru capacitors	
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	60*60*11(Without heatsink) 188*125*146(With heatsink)	mm

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

## Absolute Maximum Ratings:

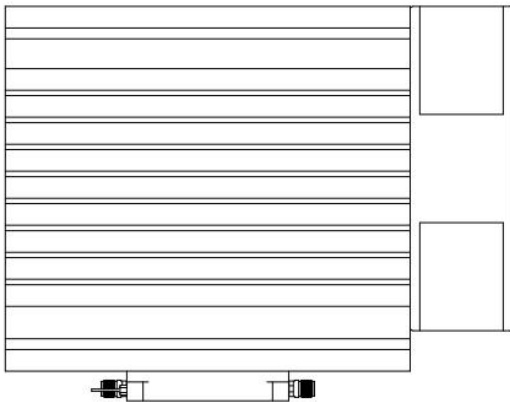
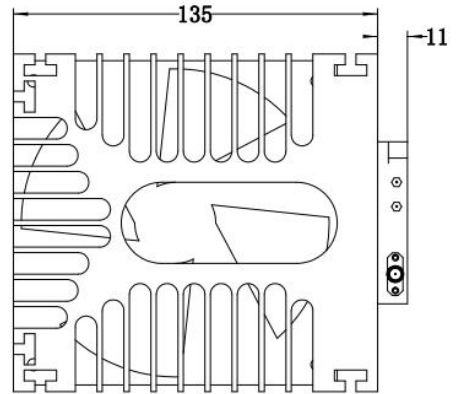
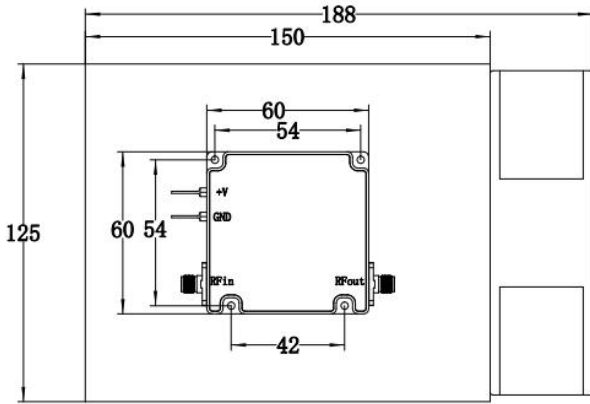
Parameter	Value
Supply Bias Voltage	+20 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## Outline Drawing:

Unit:mm

### PA-18G-36G-5-HS



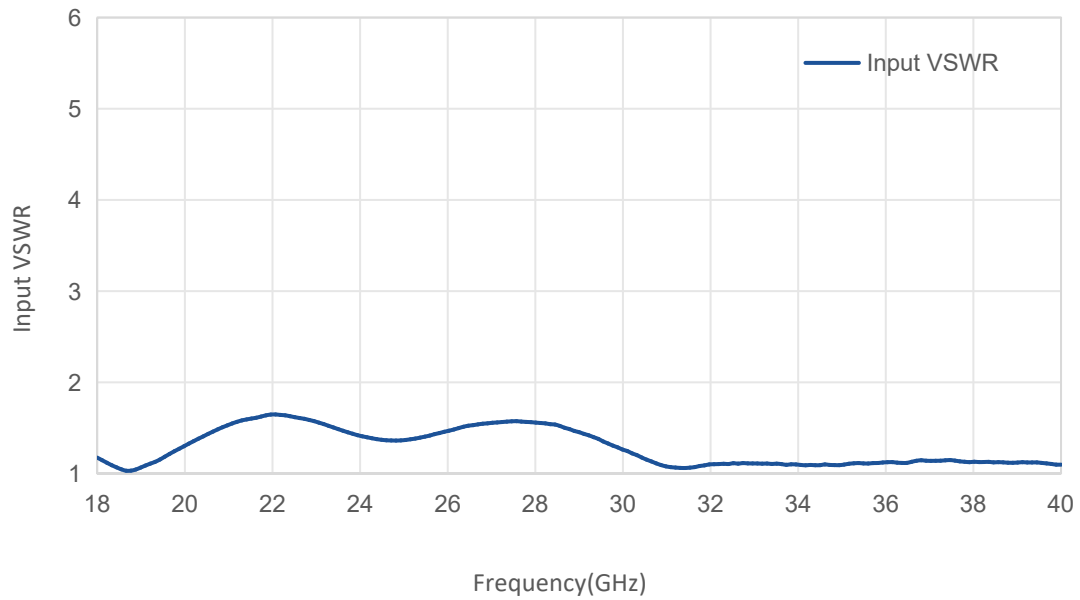
## Ordering Information:

Base Number	Description	Optional
PA-18G-36G-5	Power Amplifier, 18-36GHz, Gain:50dB,Psat:5W,+18V DC	Without Heatsink
PA-18G-36G-5-HS	Power Amplifier, 18-36GHz, Gain:50dB,Psat:5W,+18V DC	With Heatsink

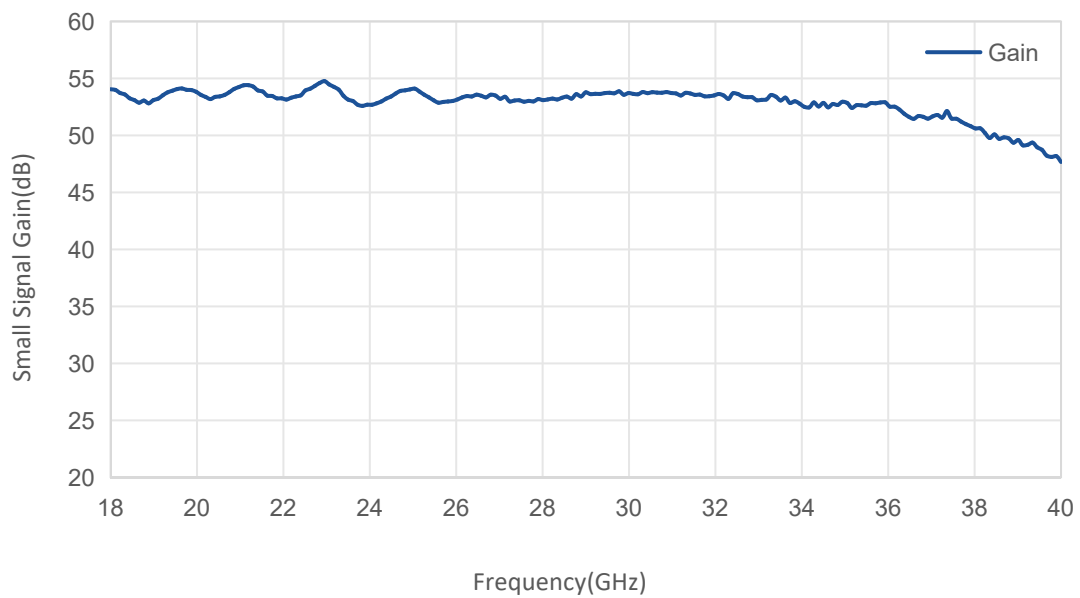


## Typical Performance Data:

### Input VSWR vs Frequency



### Small Signal Gain vs Frequency

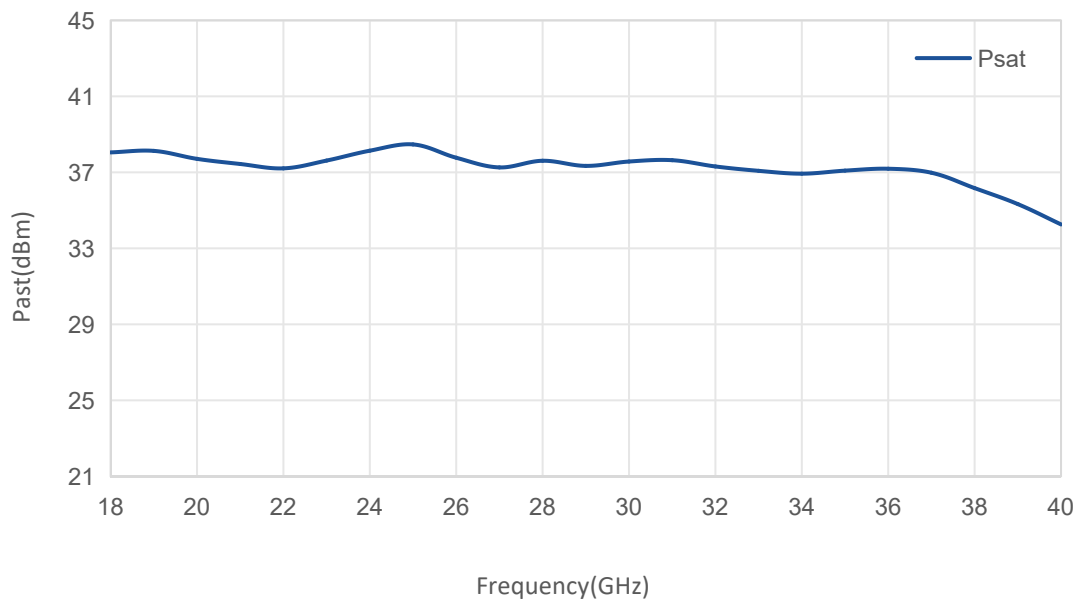


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

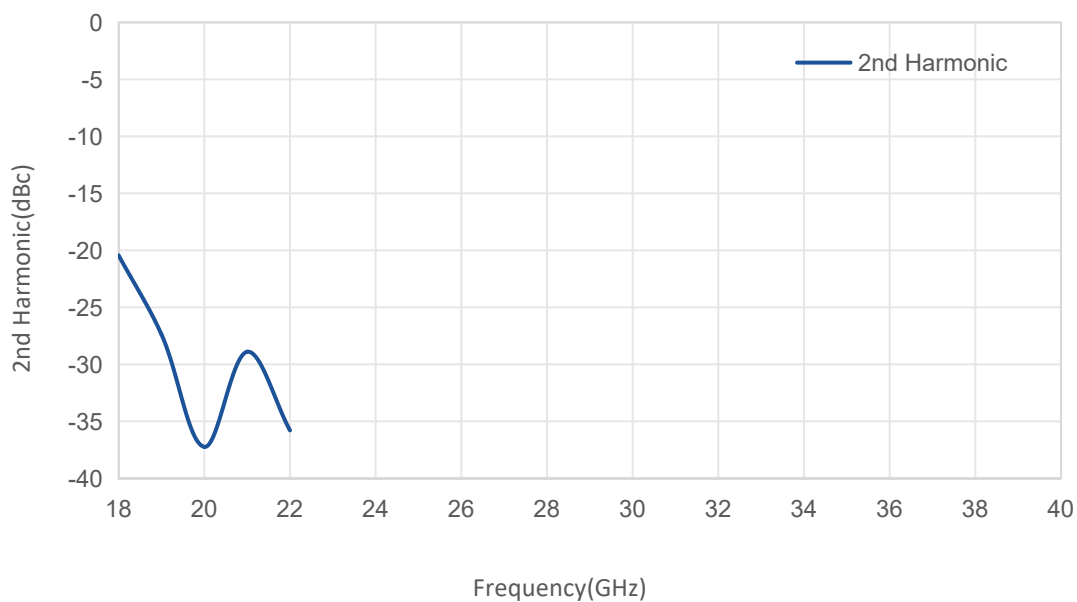


## Typical Performance Data:

### Past vs Frequency



### 2nd Harmonic 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.