



# Power Amplifier

## Model: PA-0G1-22G-0.5

0.1-22GHz 0.5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 0.1-22GHz
- High output power at saturation, 0.5W Min.
- High gain, 30 dB Min.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-0G1-22G-0.5 is a power amplifier with a minimum small signal gain of 30 dB and a minimum Psat of 0.5W across the frequency range of 0.1 to 22GHz. The DC power requirement for the amplifier is +24 VDC/850 mA. The input and output port configuration offers coax adapter structure with SMA female.



## Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	0.1		22	GHz
Small Signal Gain	30	33		dB
Small Signal Gain Flatness		±2		dB
Output P1dB	26	29		dBm
Output Psat	27	30		dBm
Input VSWR		1.6	2	:1
Output VSWR		1.6	2	:1
DC Voltage		+24		V DC
DC Supply Current		850		mA
Impedance		50		Ohms

Note: Below 500MHz, some technical specifications will deteriorate.

## 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	SMA Female/SMA Female	
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*65*11(Without Heatsink) 60*90*41(With Heatsink)	mm
Weight	200	g

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

## Absolute Maximum Ratings:

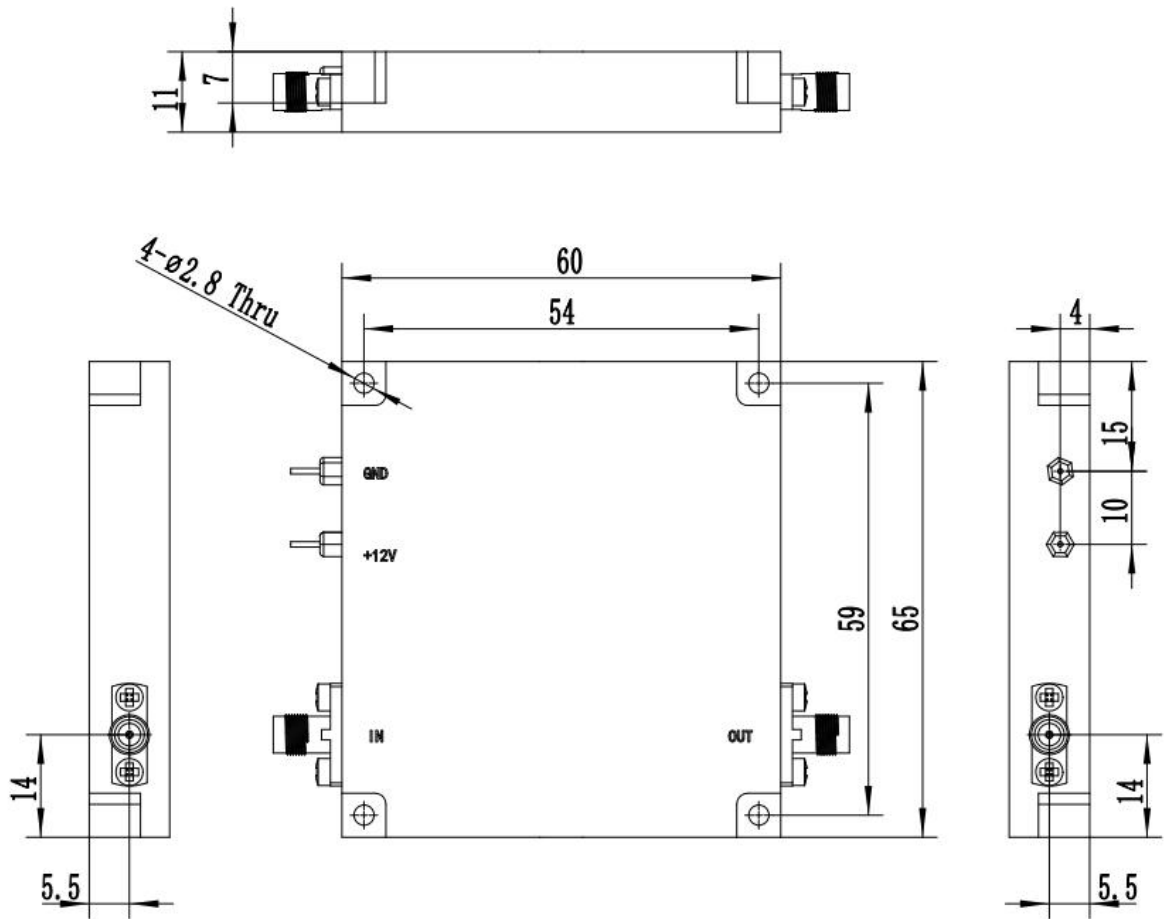
Parameter	Value
RF Input Power	0 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-0G1-22G-0.5

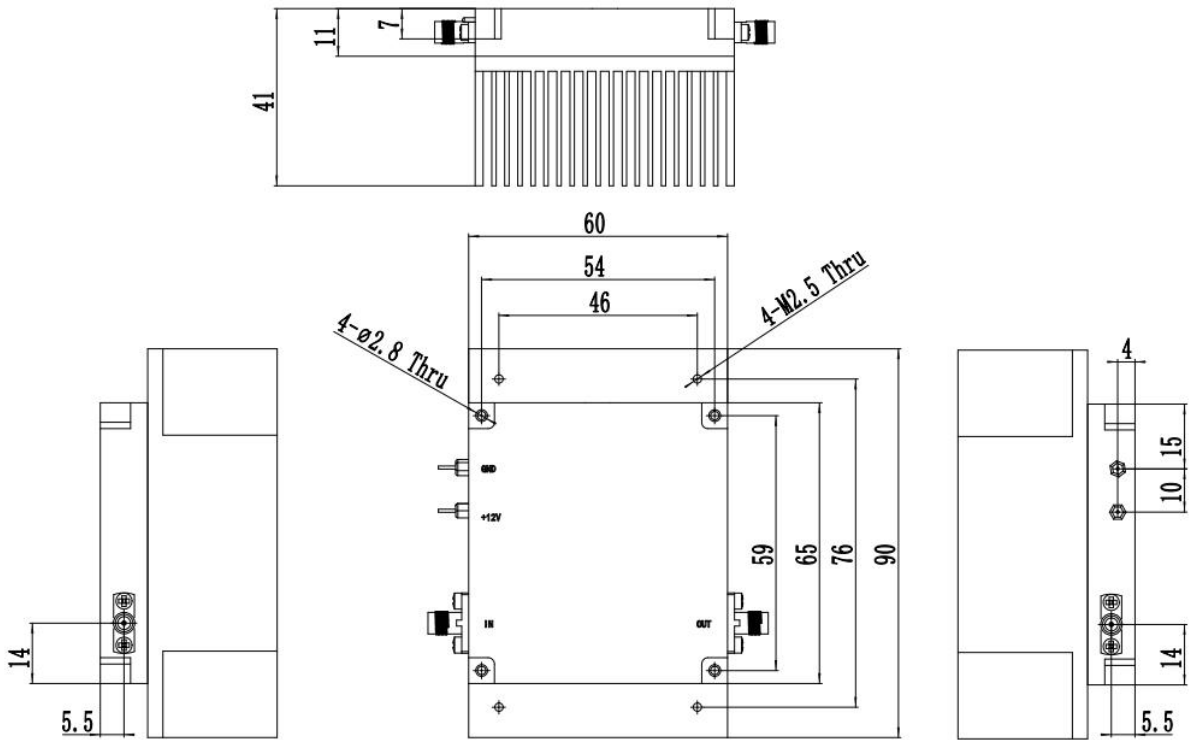




## Outline Drawing:

Unit:mm

PA-0G1-22G-0.5-HS



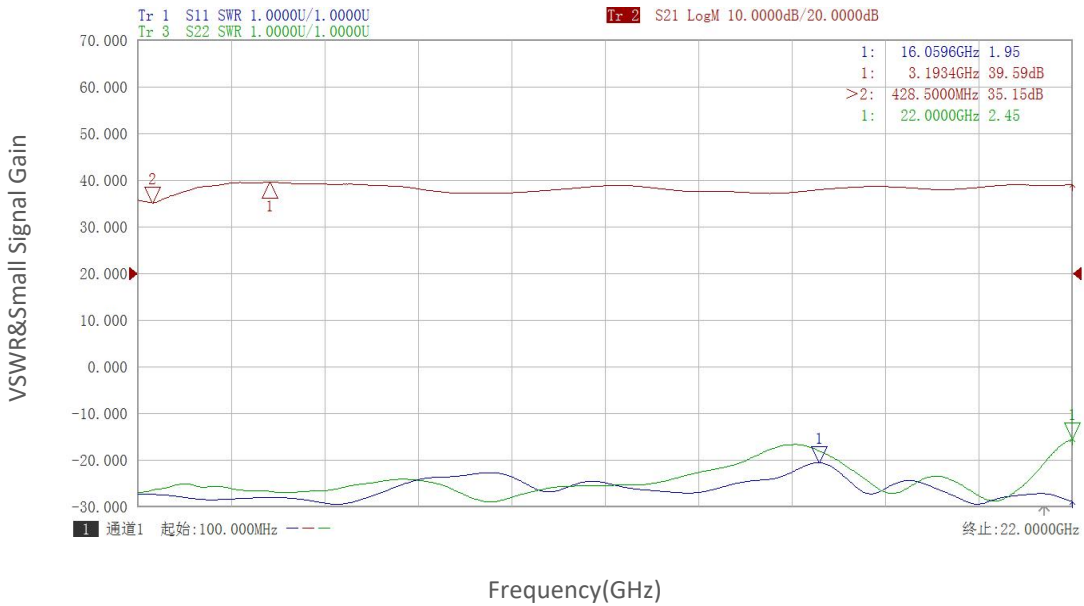
## Ordering Information:

Base Number	Description	Optional
PA-0G1-22G-0.5	Power Amplifier, 0.1-22GHz, Gain:30dB,Psat:0.5W,+24V DC	Without Heatsink
PA-0G1-22G-0.5-HS	Power Amplifier, 0.1-22GHz, Gain:30dB,Psat:0.5W,+24V DC	With Heatsink

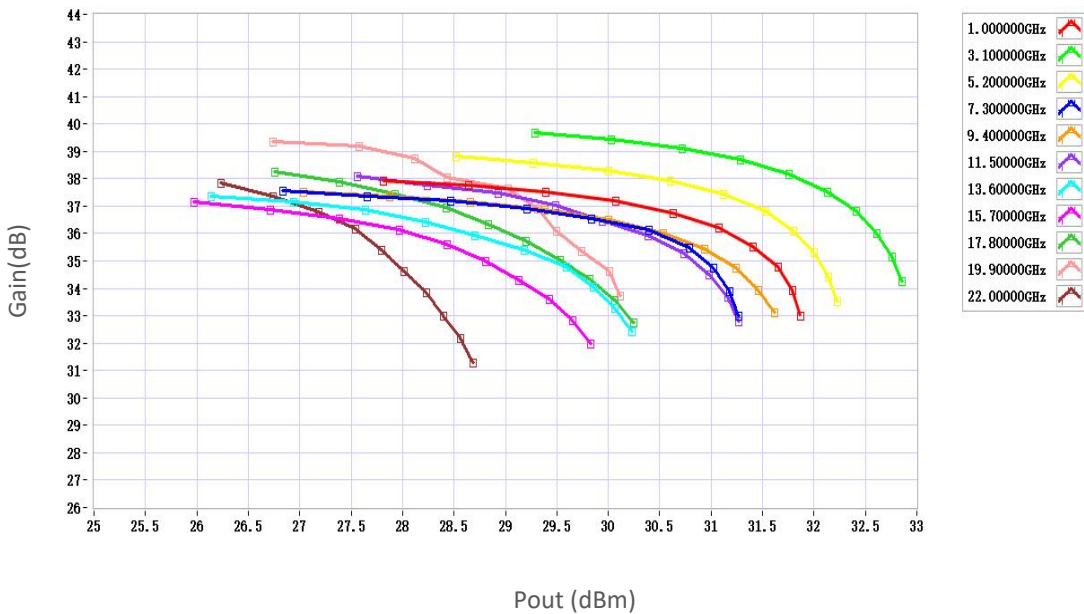


## Typical Performance Data:

### VSWR&Small Signal Gain vs Frequency



### Gain vs Output Power

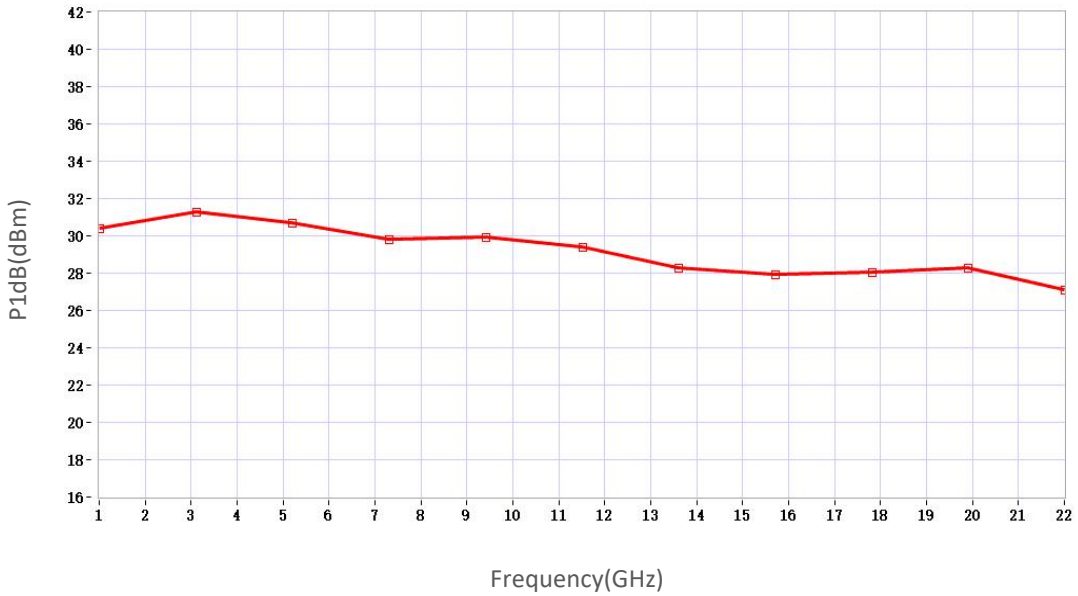


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



## Typical Performance Data:

### P1dB vs Frequency



### P3dB vs Frequency

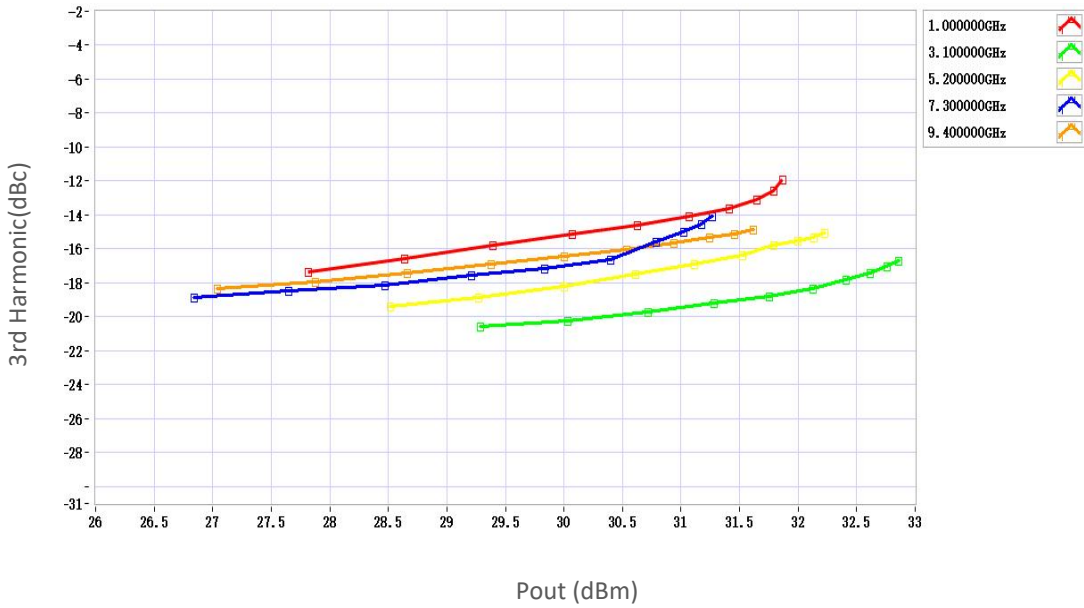


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



## Typical Performance Data:

### 3rd Harmonic vs Output Power



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