



# Power Amplifier

## Model: PA-8G-12G4-0.3

8-12.4GHz 0.3W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 8-12.4GHz
- High output power at saturation, 0.3W Min.
- High gain, 30 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-8G-12G4-0.3 is a power amplifier with a typical small signal gain of 30 dB and a minimum  $P_{sat}$  of 0.3W across the frequency range of 8 to 12.4GHz. The DC power requirement for the amplifier is +12 VDC/0.2 A. 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	8		12.4	GHz
Small Signal Gain		30		dB
Small Signal Gain Flatness		±1		dB
Output P1dB	23			dBm
Output Psat	25			dBm
Spurious			-50	dBc
Harmonic			-10	dBc
Input VSWR		2		:1
Output VSWR		2		:1
DC Voltage		+12		V DC
DC Supply Current		0.2		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	SMA Female/SMA 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	44.8*29.2*11	mm
Weight	40	g

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

## Absolute Maximum Ratings:

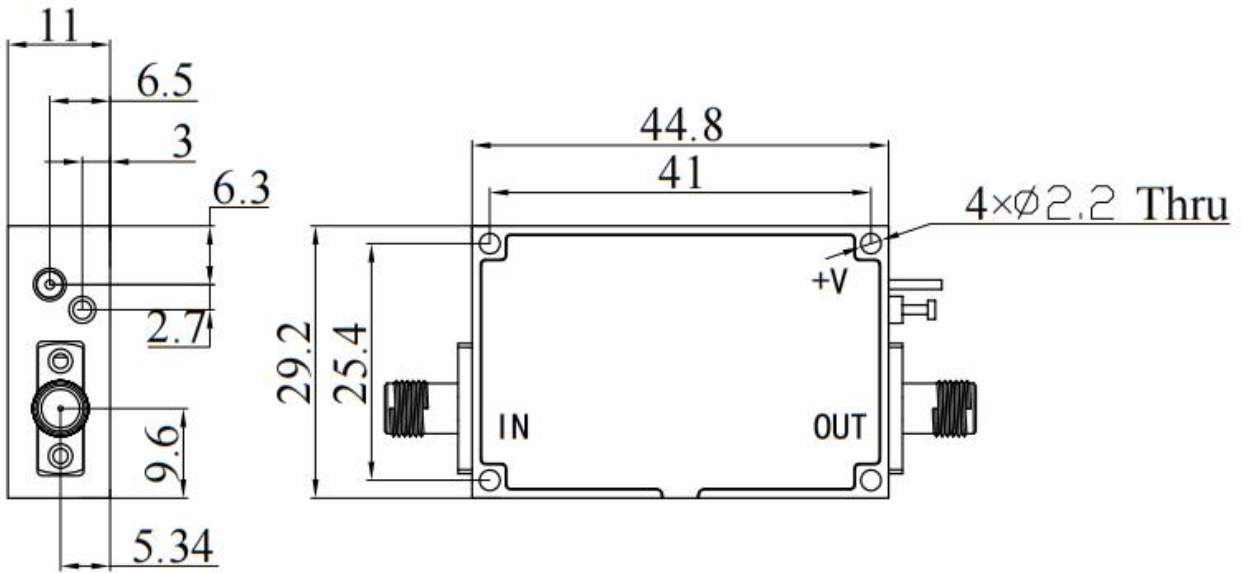
Parameter	Value
Supply Bias Voltage	+15 V
RF Input Power	+12 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## Outline Drawing:

Unit:mm

PA-8G-12G4-0.3



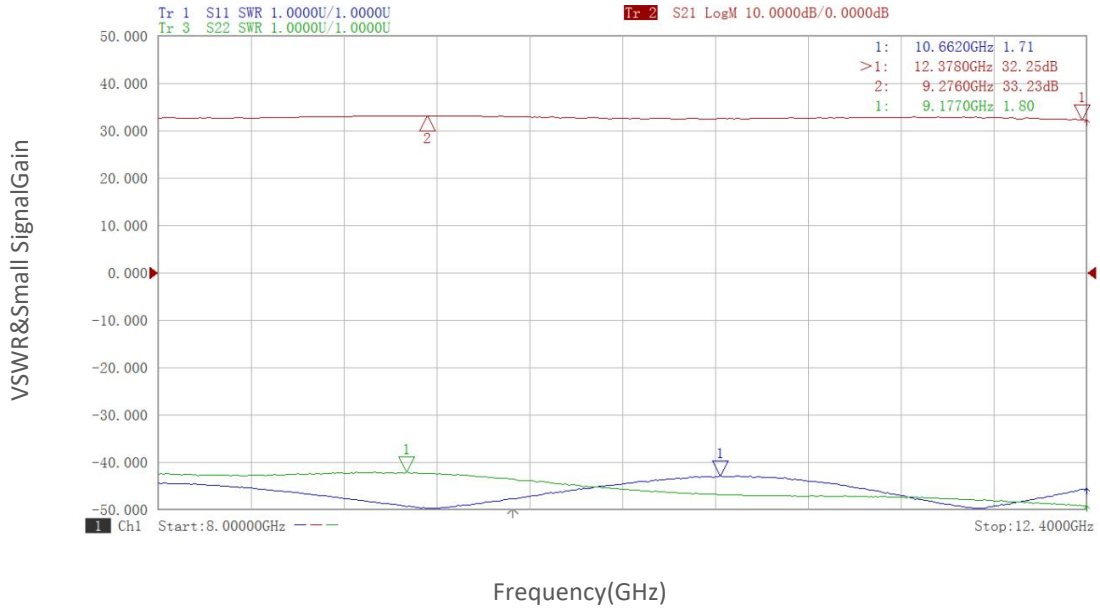
## Ordering Information:

Base Number	Description	Optional
PA-8G-12G4-0.3	Power Amplifier, 8-12.4GHz, Gain:30dB,Psat:0.3W,+12V DC	Without Heatsink
PA-8G-12G4-0.3-HS	Power Amplifier, 8-12.4GHz, Gain:30dB,Psat:0.3W,+12V DC	With Heatsink

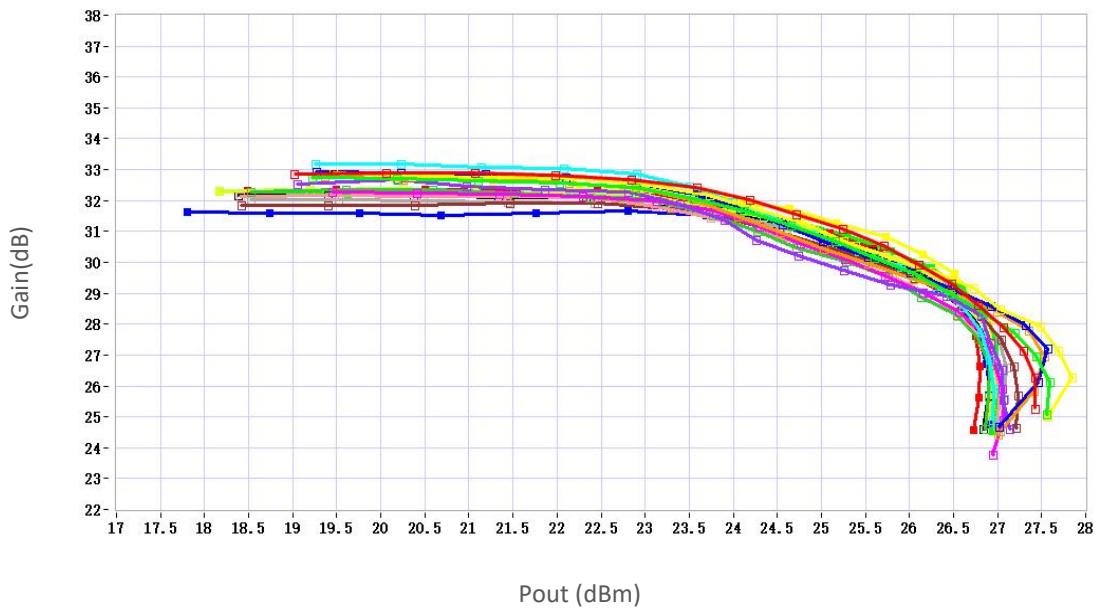


## Typical Performance Data:

### VSWR&Small Signal Gain vs Frequency



### Gain vs Output Power

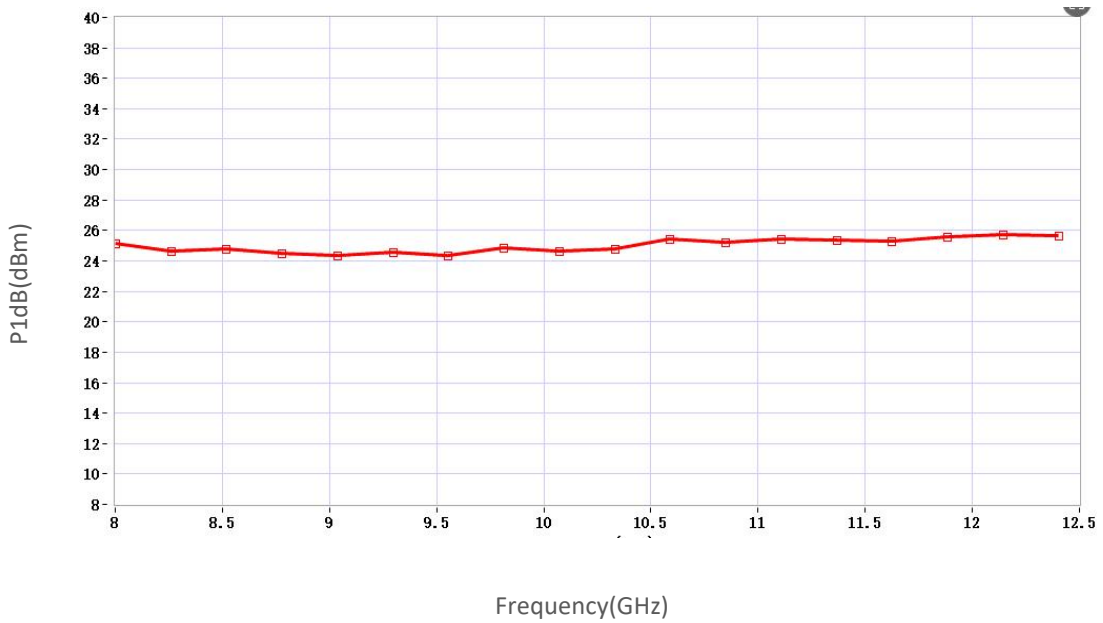


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

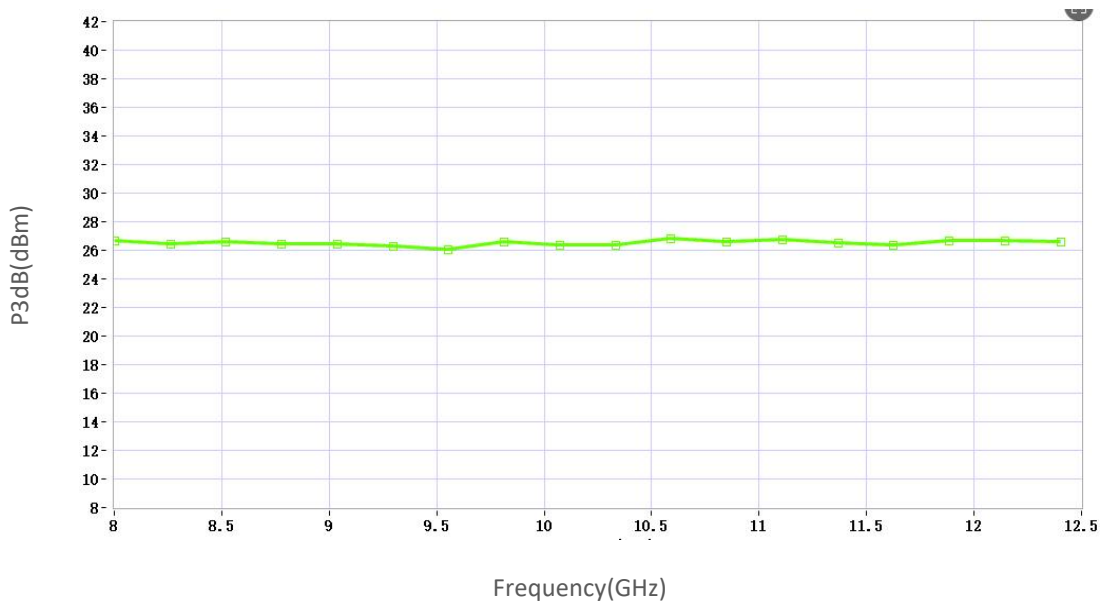


## Typical Performance Data:

### P1dB vs Frequency



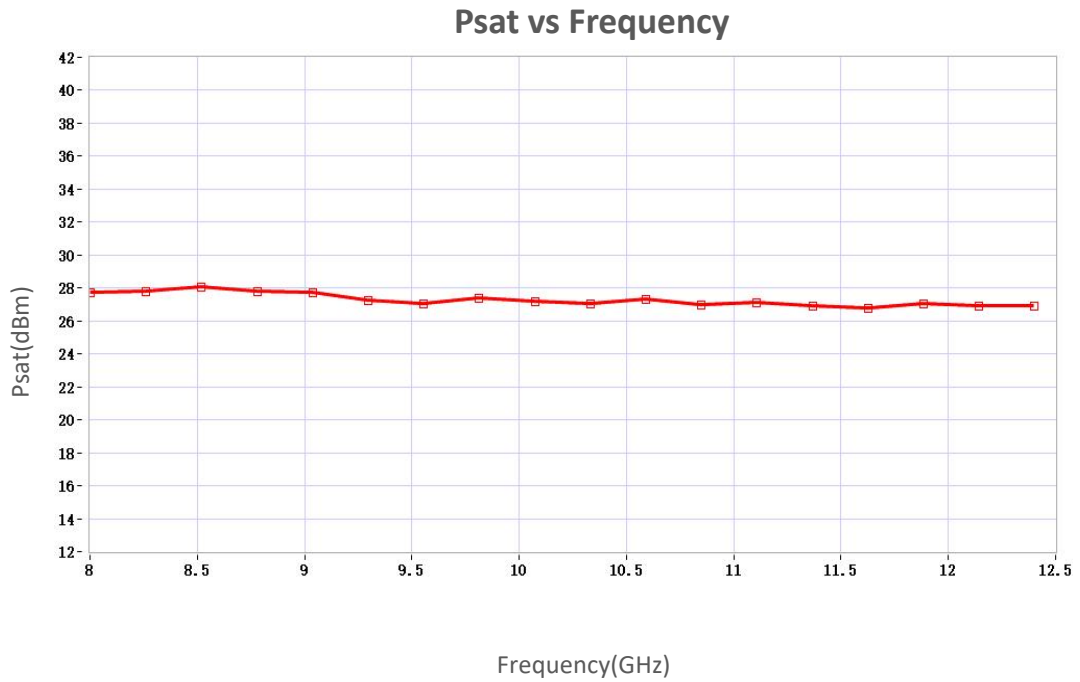
### P3dB vs Frequency



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:



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