



# Power Amplifier

## Model: PA-0G38-6G-5

0.38-6GHz 5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 0.38-6GHz
- High output power at saturation, 5W Min.
- High gain, 35 dB Min.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-0G38-6G-5 is a power amplifier with a minimum power gain of 35 dB and a minimum Psat of 5W across the frequency range of 0.38 to 6 GHz. The DC power requirement for the amplifier is +30 VDC/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	0.38		6	GHz
Power Gain	35			dB
Power Gain Flatness		±2.5	±4	dB
Output P1dB		35		dBm
Output Psat	37			dBm
Supurious		-60		dBc
Harmonic		-15		dBc
Input VSWR		1.5	2.5	:1
DC Voltage		+30		V DC
DC Supply Current		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	J30J-9ZKW Male	
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	100*70*15	mm
Weight	200	g

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

## Absolute Maximum Ratings:

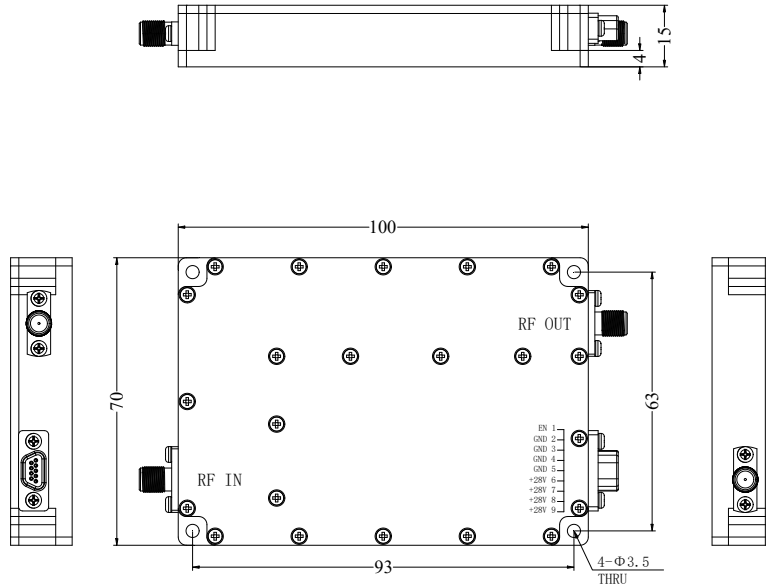
Parameter	Value
Supply Bias Voltage	+32 V
RF Input Power	+8 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



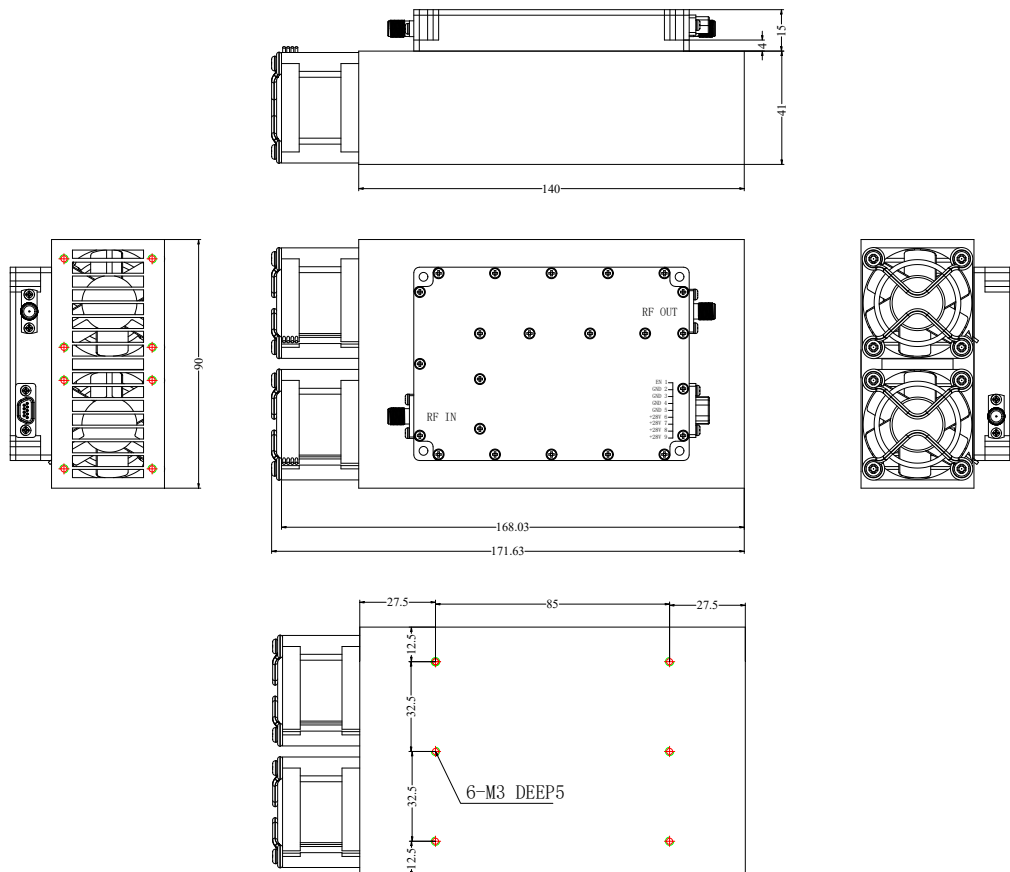
# Outline Drawing:

Unit:mm

## PA-0G38-6G-5



## PA-0G38-6G-5-HS





## Fan power supply:

Fan power supply	
Red line	Power supply positive,+24.0-28.0VDC DC current: 0.3A
Black line	Ground

## DC Supply Connector(J30J-9ZKW Male):

Pin	Name	Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: Short to ground
2	GND	Ground
3	GND	Ground
4	GND	Ground
5	GND	Ground
6	VCC	+26.0-30.0VDC
7	VCC	+26.0-30.0VDC
8	VCC	+26.0-30.0VDC
9	VCC	+26.0-30.0VDC

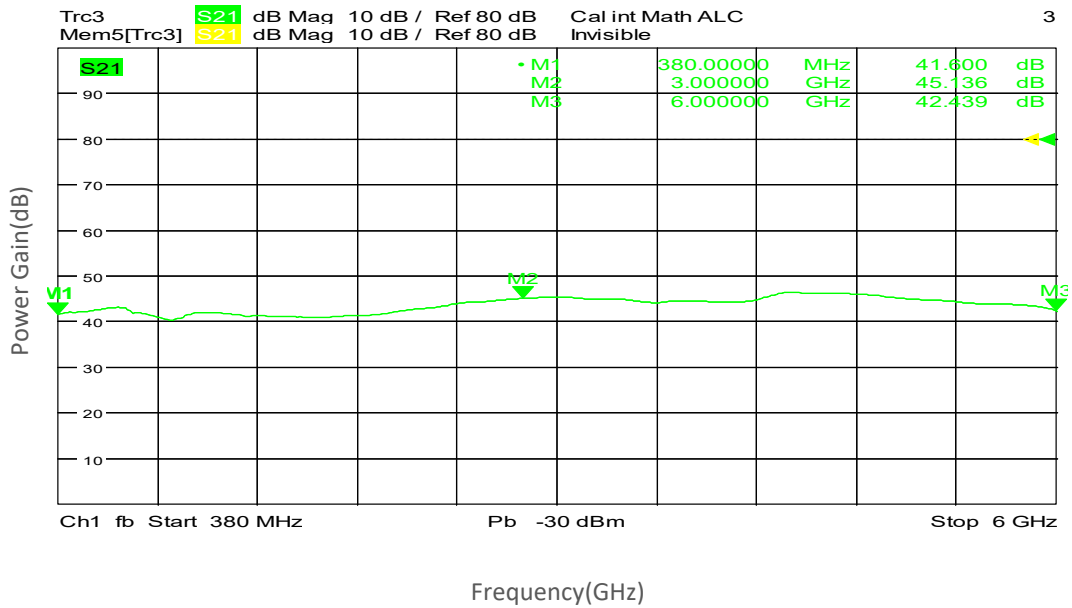
## Ordering Information:

Base Number	Description	Optional
PA-0G38-6G-5	Power Amplifier, 0.38-6GHz, Gain:35dB,Psat:5W,+30V DC	Without Heatsink
PA-0G38-6G-5-HS	Power Amplifier, 0.38-6GHz, Gain:35dB,Psat:5W,+30V DC	With Heatsink

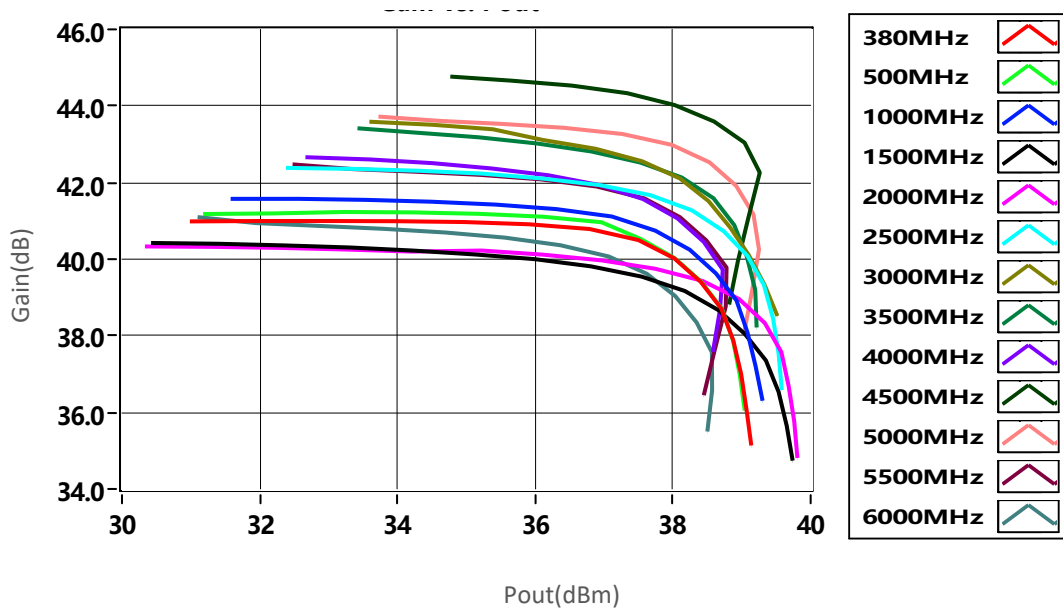


## Typical Performance Data:

### Power Gain vs Frequency



### Gain vs Output Power

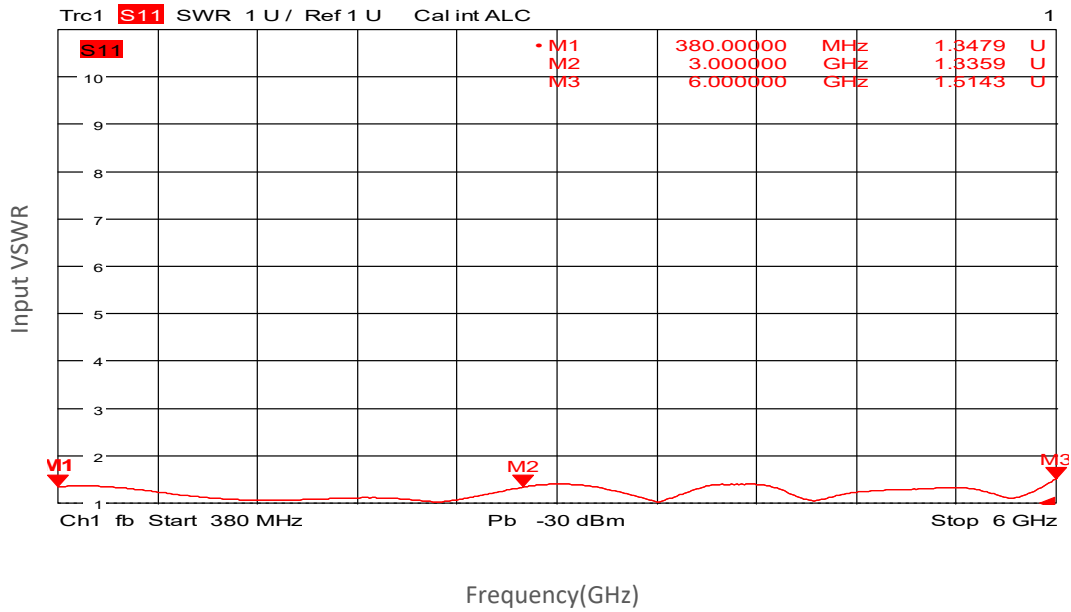


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

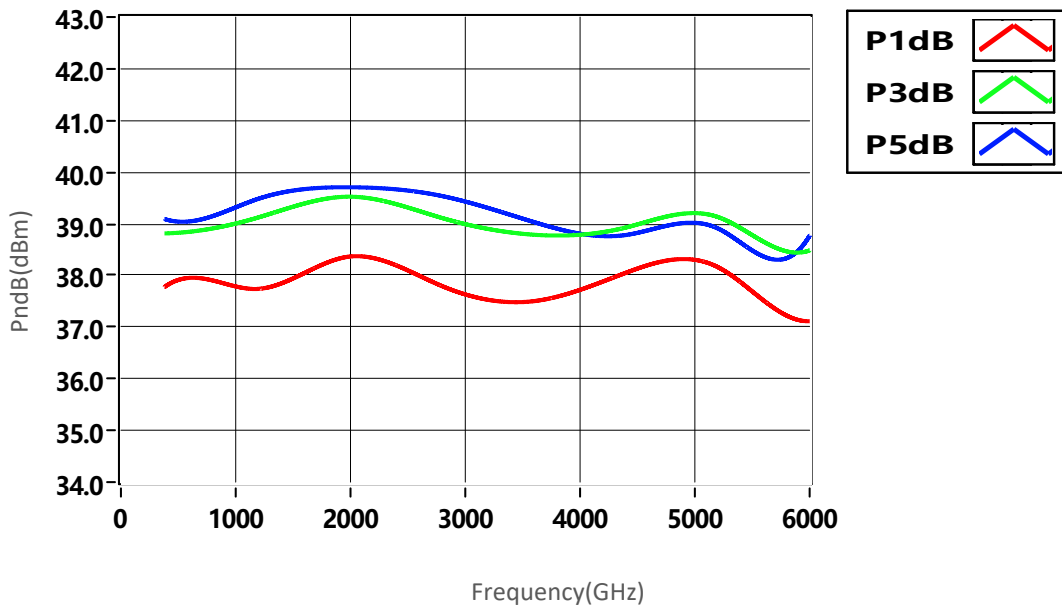


## Typical Performance Data:

### Input VSWR vs Frequency



### PndB vs Frequency

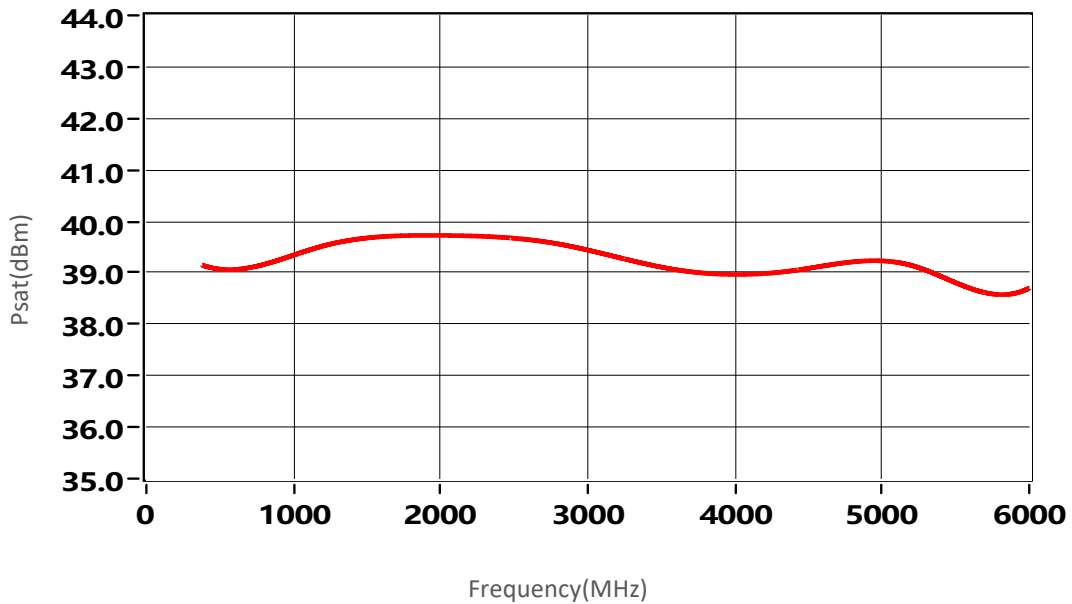


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

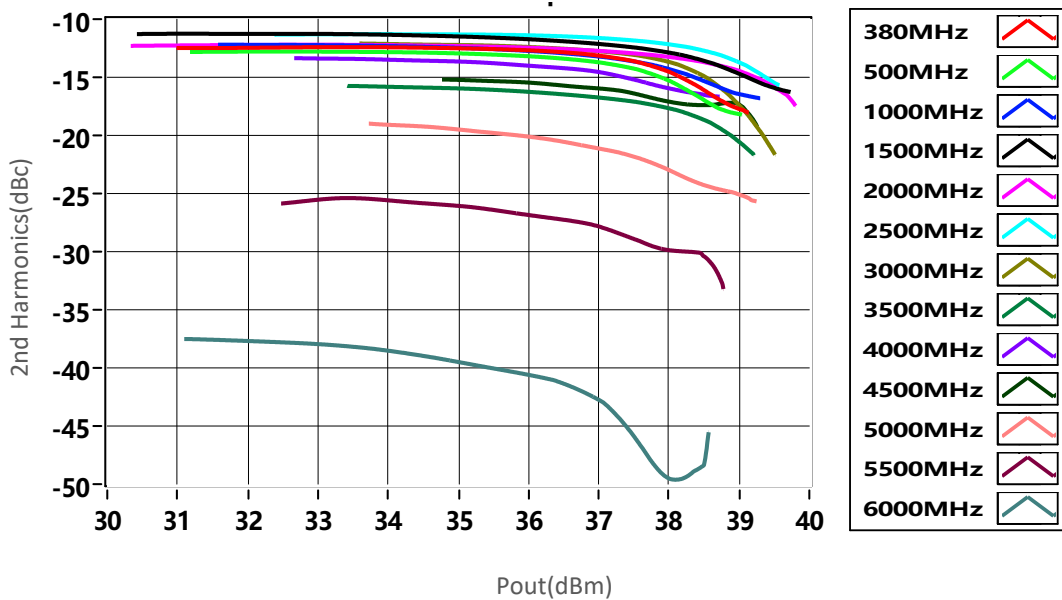


## Typical Performance Data:

### P<sub>sat</sub> vs Frequency



### 2nd Harmonics vs Output Power

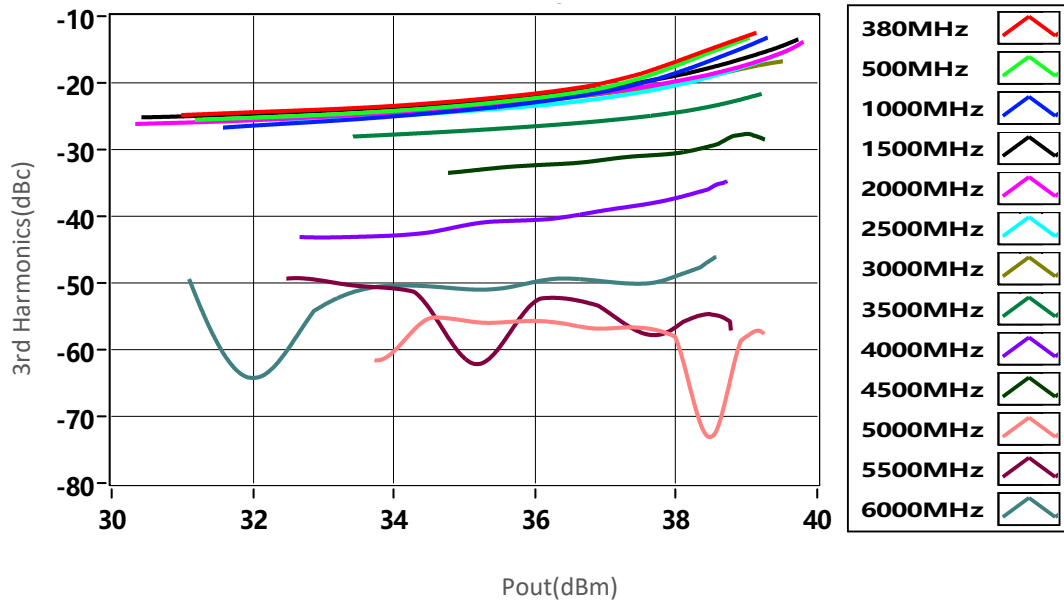


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



## Typical Performance Data:

### 3rd Harmonics 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.