



Power Amplifier

Model: PA-1G-6G-2

1-6GHz 2W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 1-6GHz
- High output power at saturation, 2W Min.
- High gain, 45dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-1G-6G-2 is a power amplifier with a minimum small signal gain of 45 dB and a minimum Psat of 2W across the frequency range of 1 to 6GHz. The DC power requirement for the amplifier is +15 V DC/0.7 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 | 1 | | 6 | GHz |
| Small Signal Gain | 45 | 47 | | dB |
| Small Signal Gain Flatness | | ±3 | ±4 | dB |
| Output P1dB | 30 | 31 | | dBm |
| Output Psat | 33 | 34 | | dBm |
| Harmonic | | -15 | | dBc |
| Input VSWR | | 1.5 | 2 | :1 |
| DC Voltage | | +15 | +16 | V DC |
| DC Supply Current | | 0.7 | 1.5 | 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 | 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 | 100*50*15 | mm |
| Weight | 150 | g |

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

Absolute Maximum Ratings:

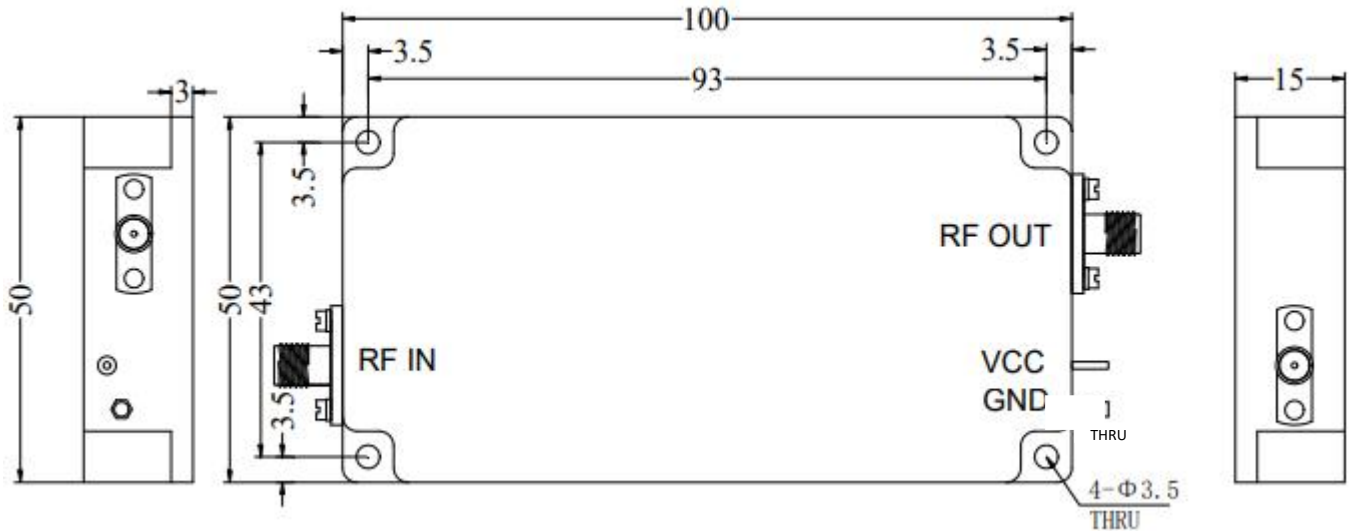
| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +16 V |
| RF Input Power | 0 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Outline Drawing:

Unit:mm

PA-1G-6G-2



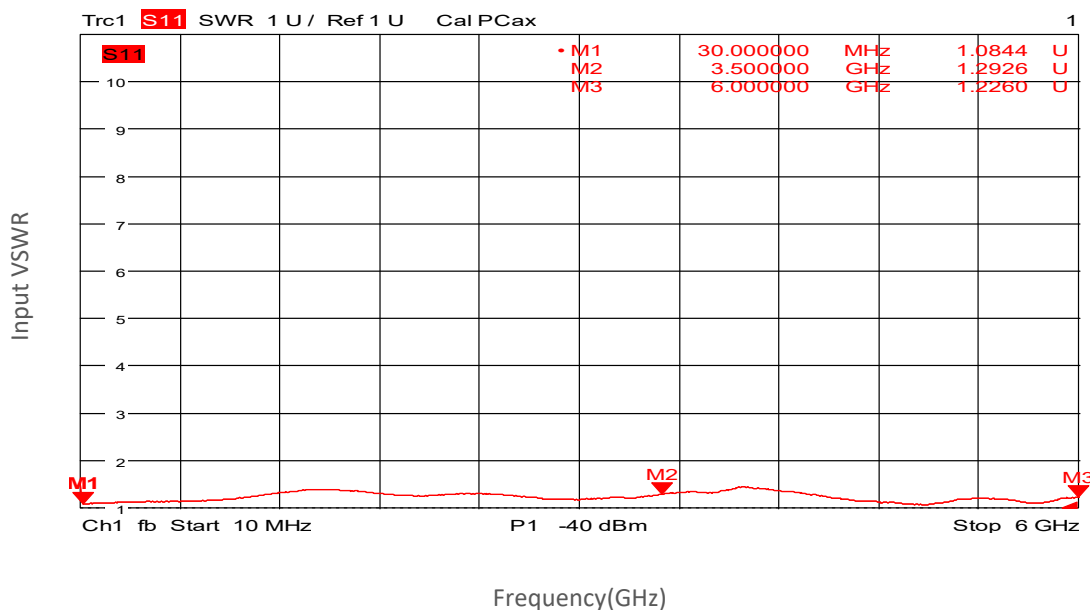
Ordering Information:

| Base Number | Description | Optional |
|---------------|---|------------------|
| PA-1G-6G-2 | Power Amplifier, 1-6GHz, Gain:45dB,Psat:2W,+15V DC | Without Heatsink |
| PA-1G-6G-2-HS | Power Amplifier, 1-6GHz, Gain:45dB,Psat:2W,+15V DC | With Heatsink |

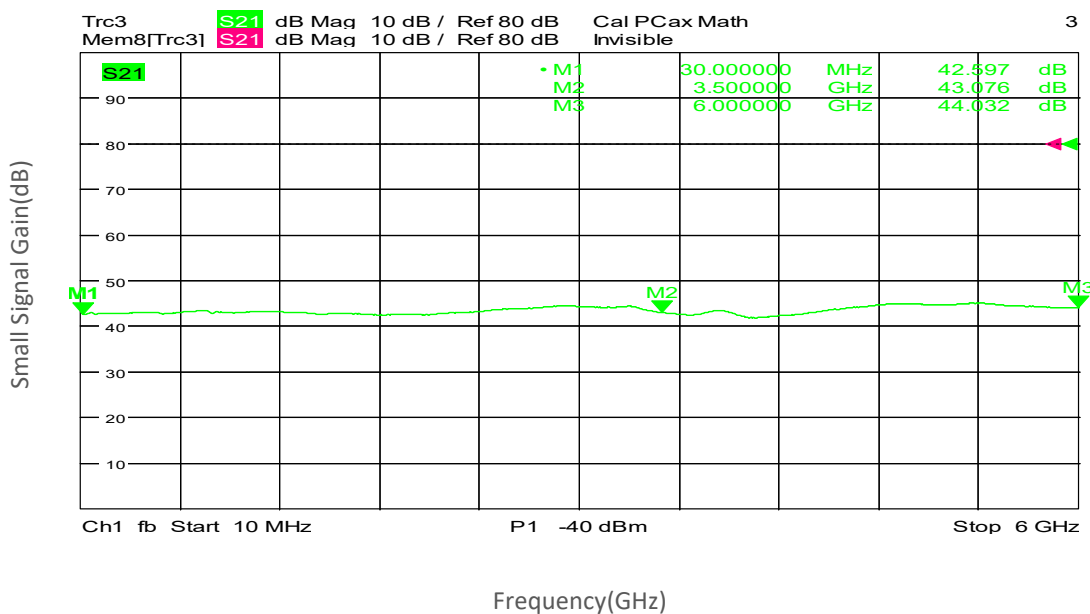


Typical Performance Data:

Input VSWR vs Frequency



Small Signal Gain vs Frequency

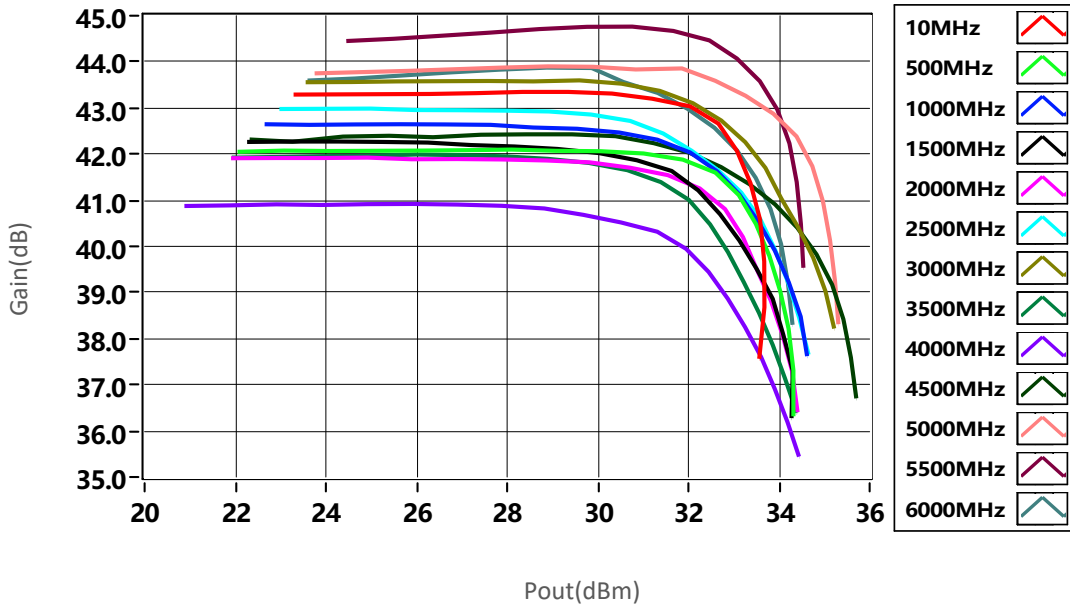


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

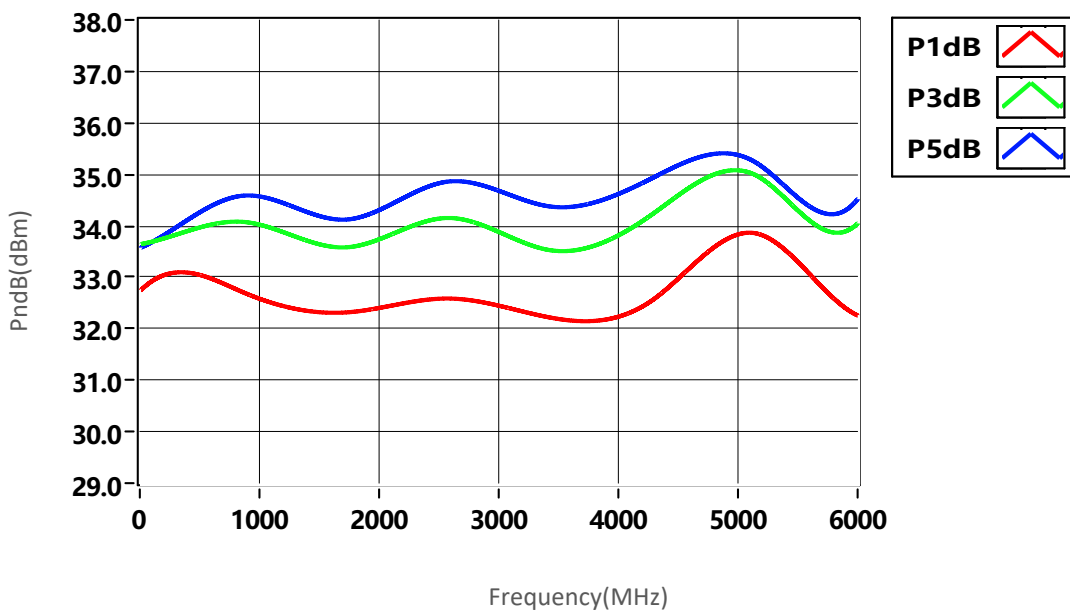


Typical Performance Data:

Gain vs Output Power



PndB vs Frequency

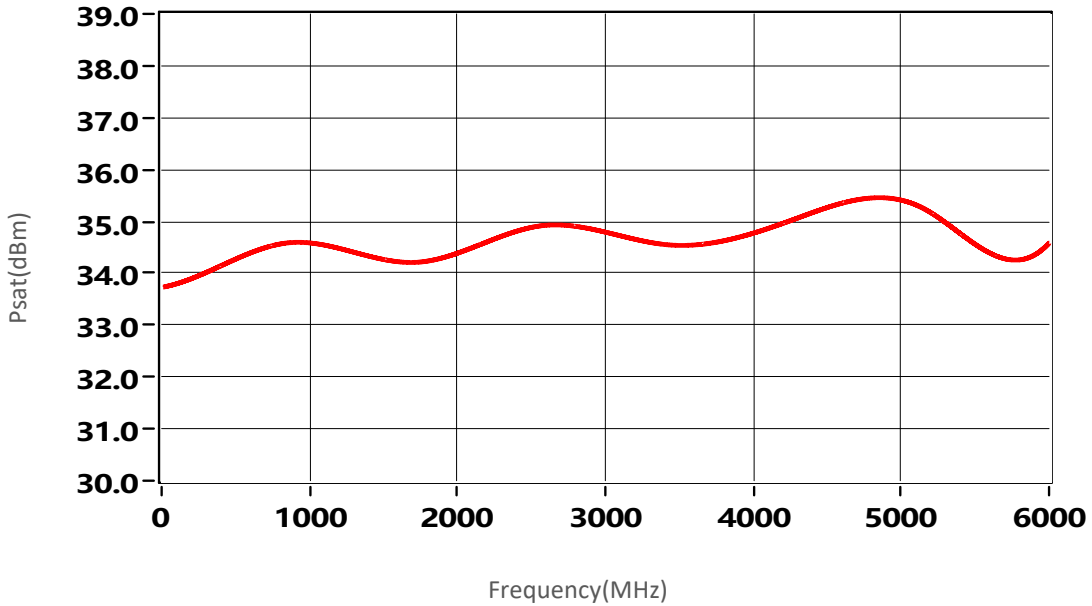


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

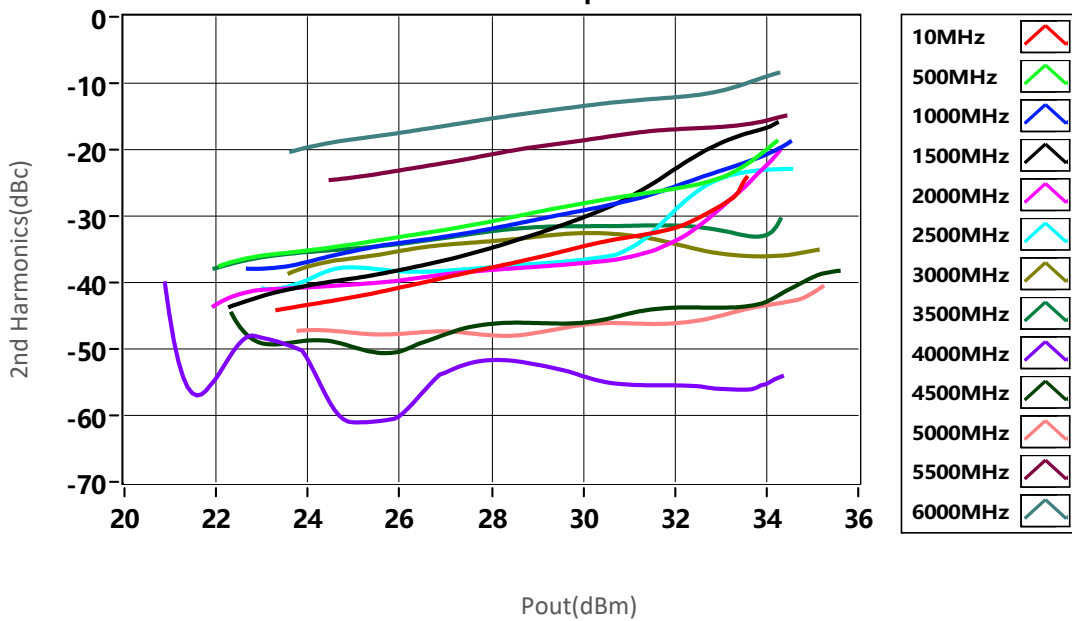


Typical Performance Data:

Psat vs Frequency



2nd Harmonics VS Output Power

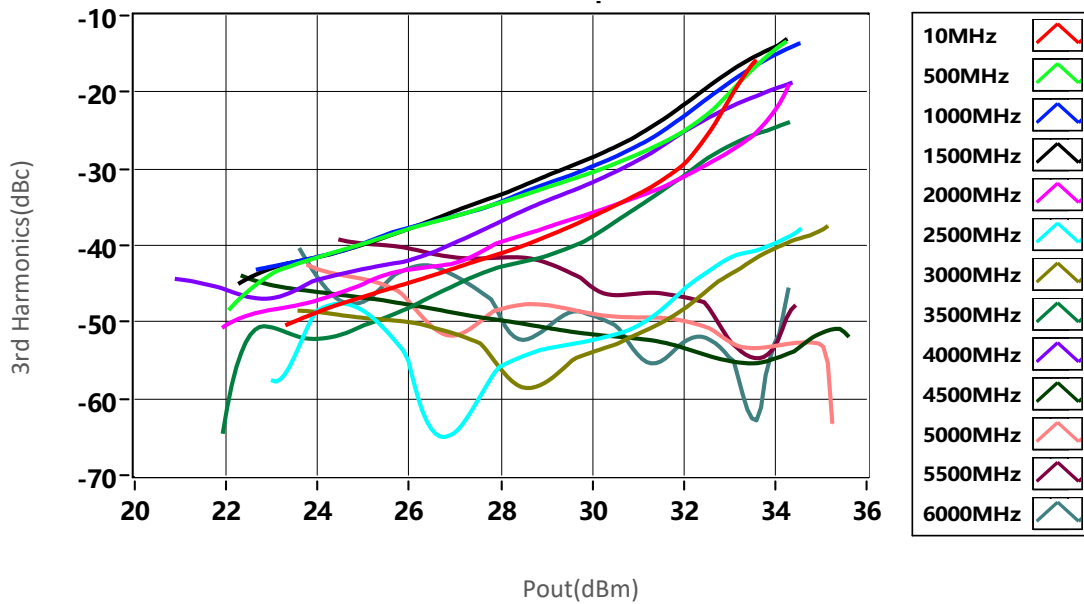


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



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.