



Power Amplifier

Model: PA-20M-3G-0.8

0.02-3GHz 0.8W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 0.02-3GHz
- High output power at saturation, 0.8W Min.
- High gain, 38 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-20M-3G-0.8 is a power amplifier with a typical small signal gain of 38 dB and a nominal P_{sat} of 0.8W across the frequency range of 0.02 to 3GHz. The DC power requirement for the amplifier is +12 VDC/1000 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 | 0.02 | | 3 | GHz |
| Small Signal Gain | 35 | 38 | | dB |
| Small Signal Gain Flatness | | | ±3 | dB |
| Output P1dB | 28 | | | dBm |
| Output Psat | 29 | | | dBm |
| Input VSWR | | 1.5 | 2.0 | :1 |
| DC Voltage | | +12 | | V DC |
| DC Supply Current | | 1000 | | mA |
| 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 | 30,000 | 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 | 120*80*22 | mm |
| Weight | 200 | g |

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

Absolute Maximum Ratings:

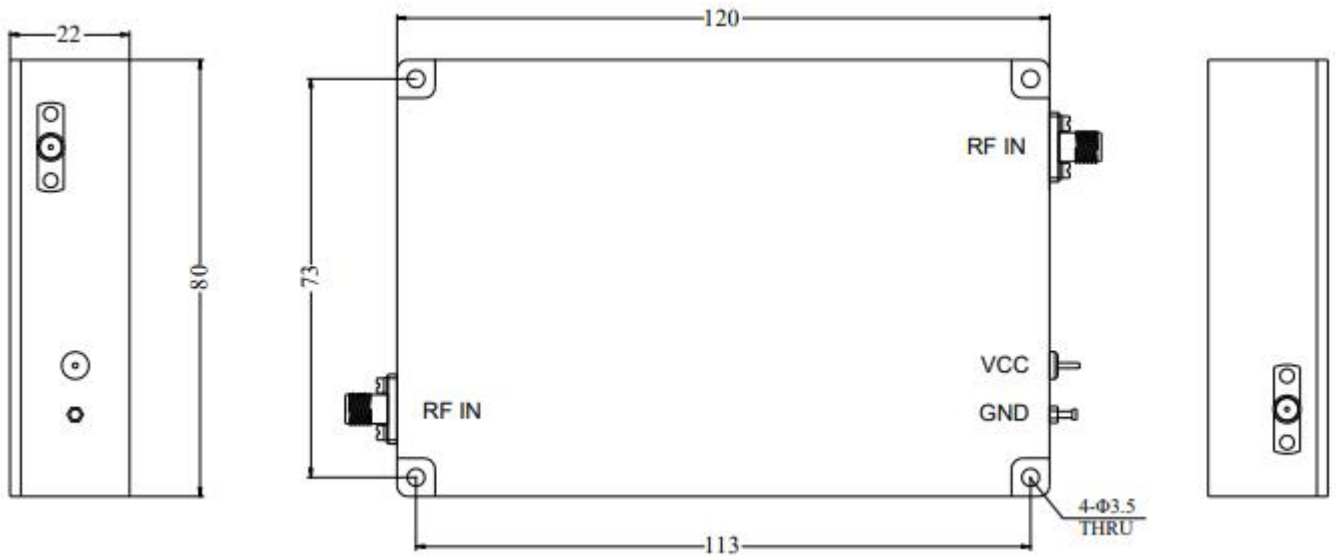
| Parameter | Value |
|-----------------------|----------------------|
| Supply Bias Voltage | +15 V |
| RF Input Power | 0 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |



Outline Drawing:

Unit:mm

PA-20M-3G-0.8



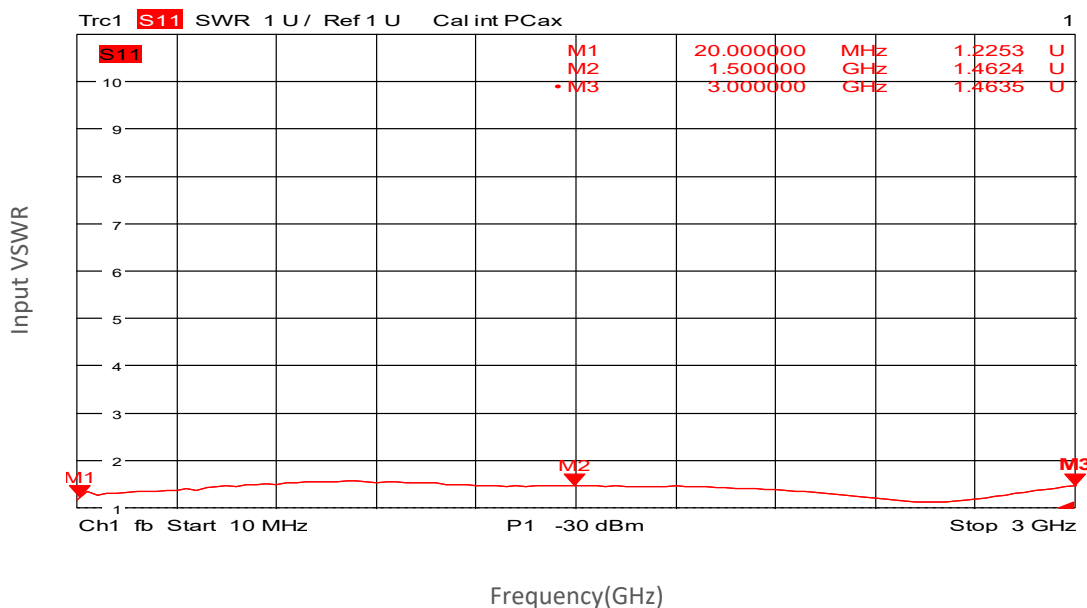
Ordering Information:

| Base Number | Description | Optional |
|------------------|---|------------------|
| PA-20M-3G-0.8 | Power Amplifier, 0.02-3GHz, Gain:38dB,Psat:0.8W,+12V DC | Without Heatsink |
| PA-20M-3G-0.8-HS | Power Amplifier, 0.01-18GHz, Gain:38dB,Psat:0.8W,+12V DC | With Heatsink |

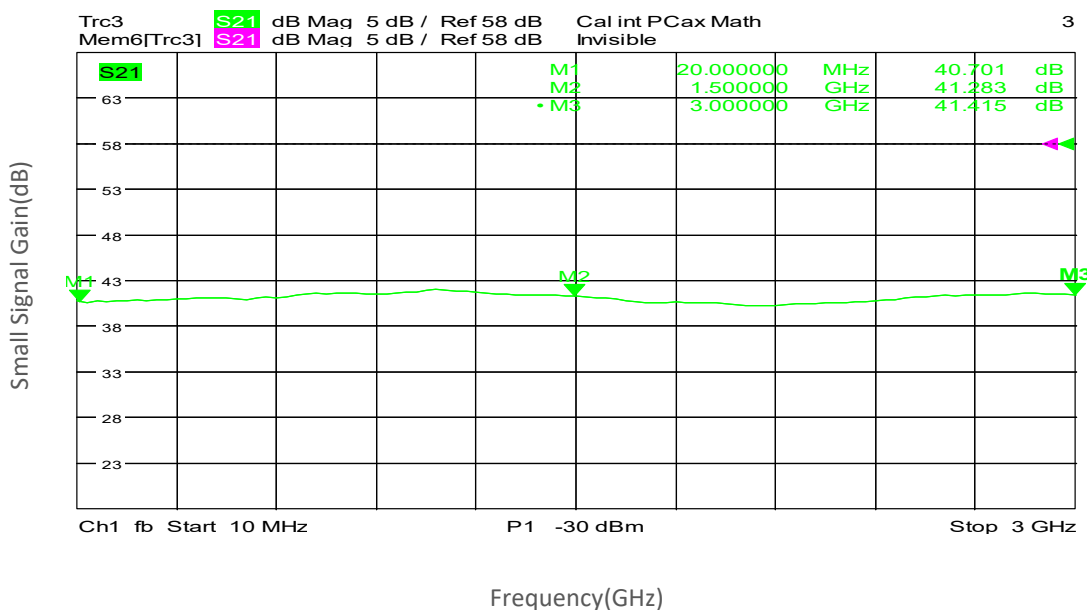


Typical Performance Data:

Input VSWR vs Frequency



Small Signal Gain vs Frequency

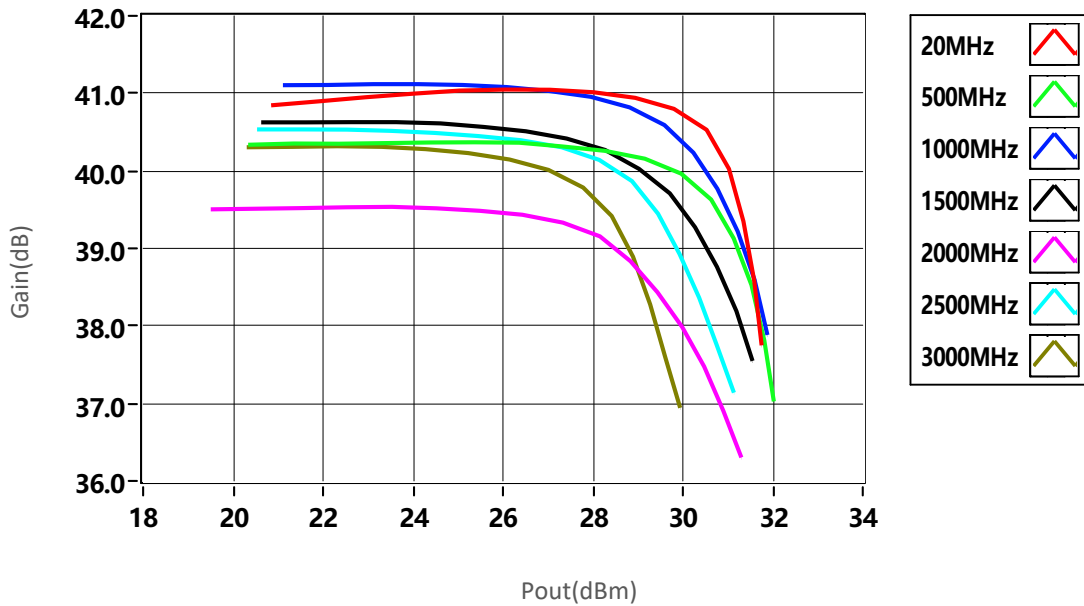


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

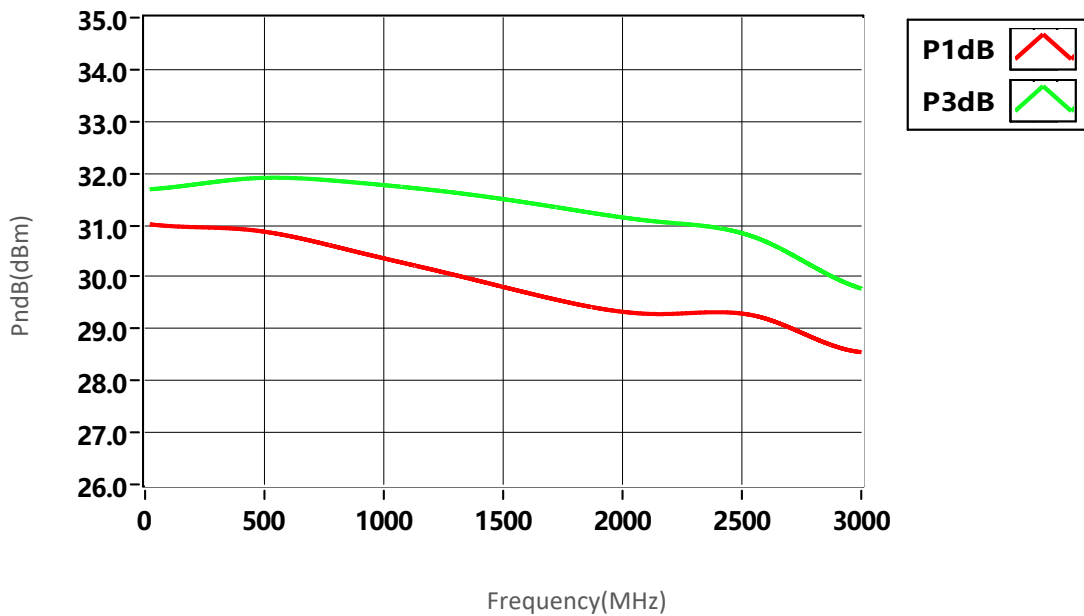


Typical Performance Data:

Gain vs Output Power



PndB vs Frequency

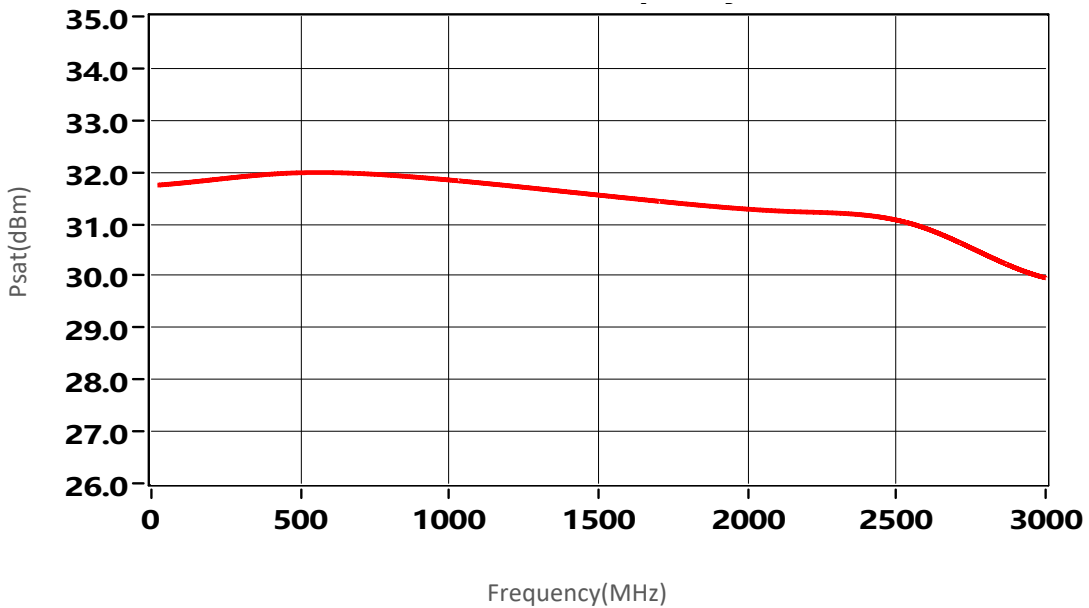


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

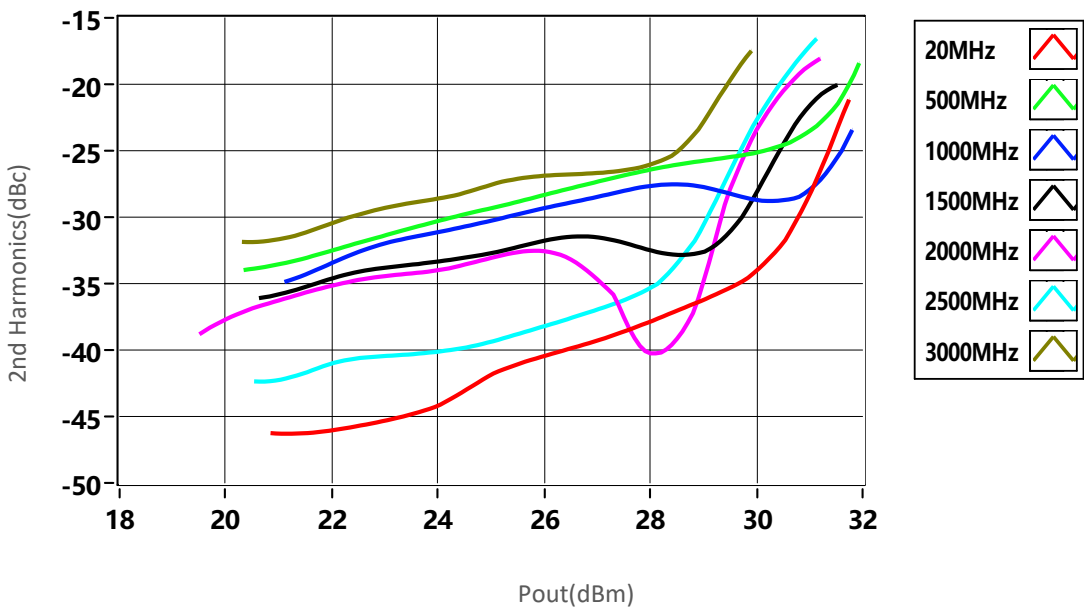


Typical Performance Data:

Psat vs Frequency



2nd Harmonics vs Output Power

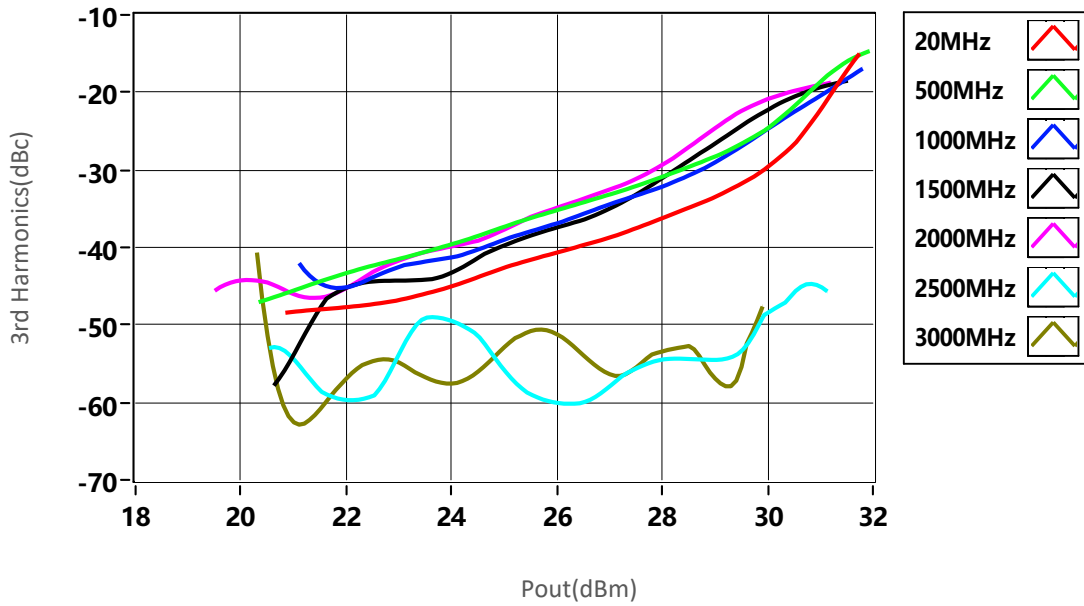


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



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.