



High Power Amplifier

Model:RPA-2G7-3G7-1600-P

2.7-3.7GHz 1600W Pulse

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 2.7-3.7GHz
- High output power at saturation, 62dBm Min
- High gain, 62dB Min
- Operates from AC line power: 220V

Applications:

- Laboratory test instrument
- RF Power stress test
- EMI and antenna testing
- Reliability testing

Product Overview:

The RPA-2G7-3G7-1600-P is a high power, rack mount amplifier with a self-contained AC power supply which can be used for a wide variety of laboratory testing applications. This rugged amplifier is capable of amplifying signals up to 1600W output power over its entire operating bandwidth of 2.7 to 3.7GHz. The control functions RPA-2G7-3G7-1600-P possesses include the on/off of the power supply and output power can be controlled by the automatic ALC system. Built-in safety features include fans alarms and automatic shut down mechanism to prevent damage in the event of excessive internal temperatures. The amplifier's output stage is further protected in the event of a fault condition, allowing high power operation for up to 5 minutes into an open or short load (refer to the maximum input power specifications). And it has built-in protection functions included over TEM, over voltage, over current and over VSWR protection. It can also be remotely controlled via RS422 or Ethernet.



Electrical Specifications at 25°C:

| Parameter | Symbol | Min | Typ | Max | Units |
|-------------------------|---------|------------|-----|-----|-------|
| Frequency range | BW | 2.7-3.7 | | | GHz |
| Working Mode | MOD | PULSE ONLY | | | |
| Power Gain | GP | 62 | | | dB |
| Output Psat@Pout=62dBm | Psat | 62 | | | dBm |
| Spurious@Pout=62dBm | Spur | | | -60 | dBc |
| Harmonics@Pout=62dBm | HAM | | -20 | | dBc |
| Input Signal Mode | IPS_MOD | CW/PULSE | | | |
| Modulation Signal Level | TTL | 0 | | 5 | V |
| Modulation Frequency | MF | 1 | | 100 | KHz |
| Pulse Width | T | 0.3 | | 300 | us |
| Duty Cycle | τ | 0.1 | | 10 | % |
| Rise/Fall Time | Tr | | 50 | 100 | ns |
| Pulse Drop@T=100us | Pdrop | | 0.5 | 1 | dB |
| Input VSWR | VSWR | | 1.5 | 2.0 | :1 |
| AC Voltage | Vac | | 220 | | V AC |
| Power consumption@10% | Pdiss | | 800 | | W |
| Impedance | I/O-IMP | | 50 | | Ohms |

Mechanical Specifications:

| Parameter | Value | Notes |
|------------------------------------|---------------------------|-------|
| Operating Temperature* | -20 to +50 | °C |
| Non-operating Temperature* | -30 to +60 | °C |
| Relative humidity | 95 | % |
| RF Input/Output Connector | SMA Female/N Female | |
| Forward/Reverse Coupling Connector | SMA Female/ SMA Female | |
| Front Panel LCD Screen Display | 7 inch LCD Screen Display | |
| Pulse Input Connector | BNC Female | |
| Communication Connector | DB9/RJ-45 | |
| Digital Monitor & Control | RS422;Ethernet | |



Mechanical Specifications:

| Parameter | Value | Notes |
|---------------------------------|---|-------|
| Cooling system | Built in Cooling system,forced air cooling | |
| 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 | 19 Inch 5U*550 depth | mm |
| Weight | ≤35 | Kg |

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

Absolute Maximum Ratings:

| Parameter | Value |
|-----------------------|----------------------|
| RF Input Power | +5 dBm |
| ESD sensitivity (HBm) | Class 0, passed 150V |

Optional items:

| Number | Parameter |
|--------|---|
| 1 | LCD display touchscreen |
| 2 | Ingress protection grad |
| 3 | Customized operating temperature range |
| 4 | Built in Cooling system(air or liquid) |
| 5 | Types of RF,coupling and monitor&control interfaces |

Outline Drawing:

| Base Number | Description | Optional |
|-------------------------|---|-----------------------------|
| RPA-2G7-3G7-1600-P | High Power Amplifier, 2.7-3.7GHz, 1600W Pulse, Built in air or liquid cooling, without LCD and IP grad. | Basic version |
| RPA-2G7-3G7-1600-P-M | High Power Amplifier, 2.7-3.7GHz, 1600W Pulse, Built in air or liquid cooling, with LCD. | Add LCD display touchscreen |
| RPA-2G7-3G7-1600-P-IPxx | High Power Amplifier, 2.7-3.7GHz, 1600W Pulse, Built in air or liquid cooling, with LCD and IP grad. | Add Ingress protection grad |



Outline Drawing:

Unit:mm

RPA-2G7-3G7-1600-P

