High Power Amplifier

Model:RPA-1G-2G-316

1-2GHz 316W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 1-2GHz
- High output power at saturation, 55dBm Min
- High gain, 55dB 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-1G-2G-316 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 316W output power over its entire operating bandwidth of 1 to 2GHz. The control functions RPA-1G-2G-316 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℃:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW		1-2		GHz
Small Signal Gain	SSGP	55			dB
Gain flatness	ΔGL		±3		dB
Output Psat	Psat	55			dBm
Spurious@Pout=55dBm	Spur			-60	dBc
Harmonics@Pout=55dBm	HAM			-10	dBc
Input VSWR	VSWRin			2.0	:1
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			2000	W
Impedance	I/O-IMP		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-20 to +40	℃
Non-operating Temperature*	-30 to +50	℃
Relative humidity	95	%
RF Input/Output Connector	N Female/N Female	
Forward/Reverse Coupling Connector	SMA Female/ SMA Female	
Communication Connector	DB9/RJ45	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
Digital Monitor & Control	RS422;Ethernet	
Cooling	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 4U*550	mm
Weight	≤35	Kg

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

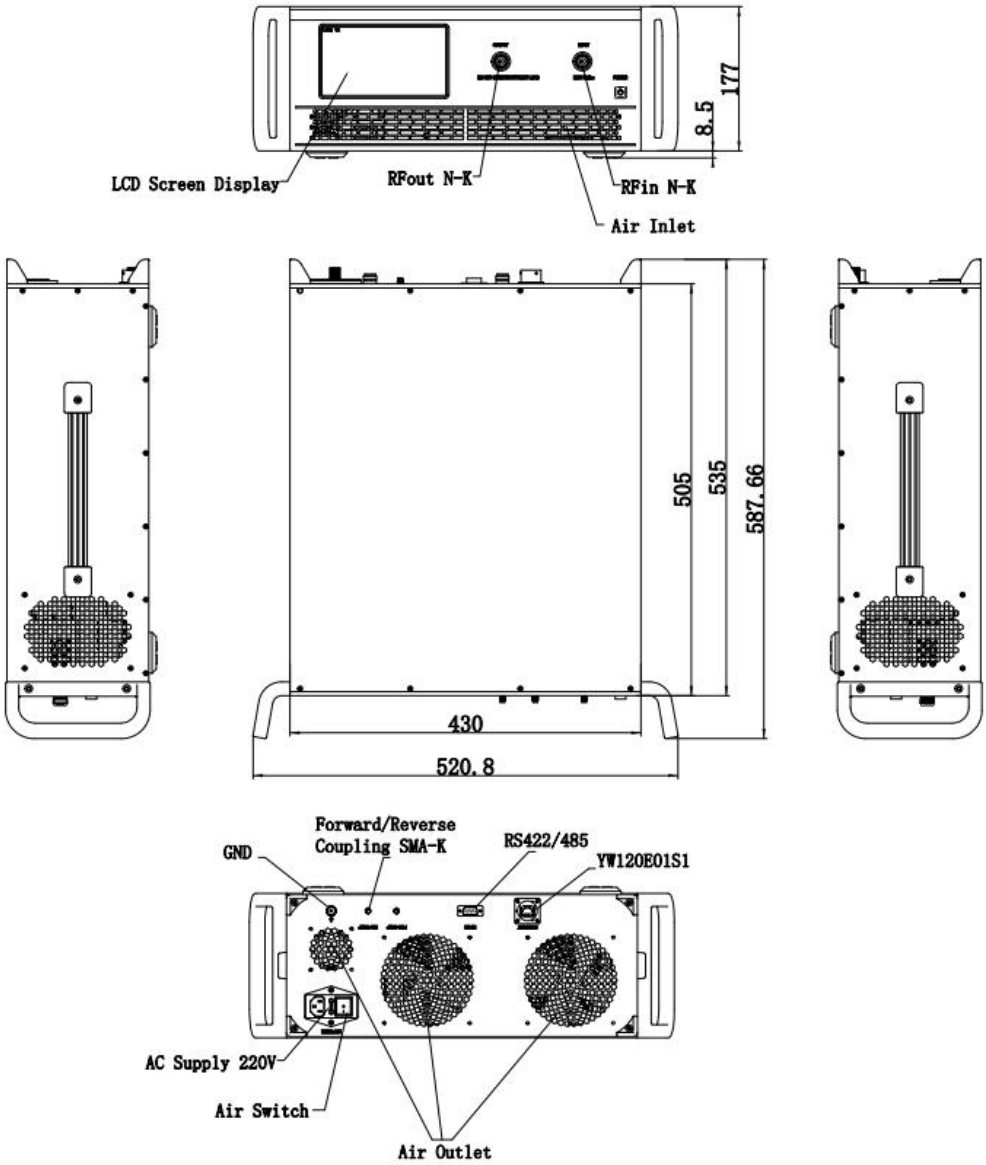
Absolute Maximum Ratings:

Parameter	Value
RF Input Power	10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

RPA-1G-2G-316



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

Ordering Information:

Base Number	Description	Optional
RPA-1G-2G-316	High Power Amplifier, 1-2GHz, 316W, CW Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-1G-2G-316-M	High Power Amplifier, 1-2GHz, 316W CW, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-1G-2G-316-IPxx	High Power Amplifier, 1-2GHz, 316W CW, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad