



High Power Amplifier

Model:RPA-2G-4G-316-P

2-4GHz 316W Pulse

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 2-4GHz
- High output power at saturation, 316W Typ
- 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-2G-4G-316-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 316W output power over its entire operating bandwidth of 2 to 4GHz. The control functions RPA-2G-4G-316-P possesses include the on/off of the power supply. 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.



Electrical Specifications at 25°C:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	2		4	GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	55	58		dB
Power Gain flatness	Δ GL		± 2	± 3	dB
Gain adjust Range	Δ GR		31.5		dB
Gain adjust Step	Δ GS		0.5		dB
Output P1dB @(100us PW, 10% Duty cycle)	P1dB	50	51		dBm
Output Psat @(100us PW, 10% Duty cycle)	Psat	54.5	55		dBm
Spurious@Pout=300W	Spur			-60	dBc
2nd Harmonics @Pout=300W	HAM		-15	-10	dBc
3rd Harmonics @Pout=300W	HAM		-20	-15	dBc
Input VSWR	VSWRin			2	:1
AC Voltage	Vac		220		V AC
AC Supply Current	Iac		1		A
Power Consumption	Pdiss		220		W
Impedance	I/O-IMP		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-20 to +40	°C
Non-operating Temperature*	-30 to +50	°C
Relative humidity	95	%
RF Input/Output Connector	N Female/N Female	
Communication Connector	DB15	
Front Panel LCD Screen Display	7 inch LCD Screen Display	
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 3U*550	mm
Weight	≤ 25	Kg

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



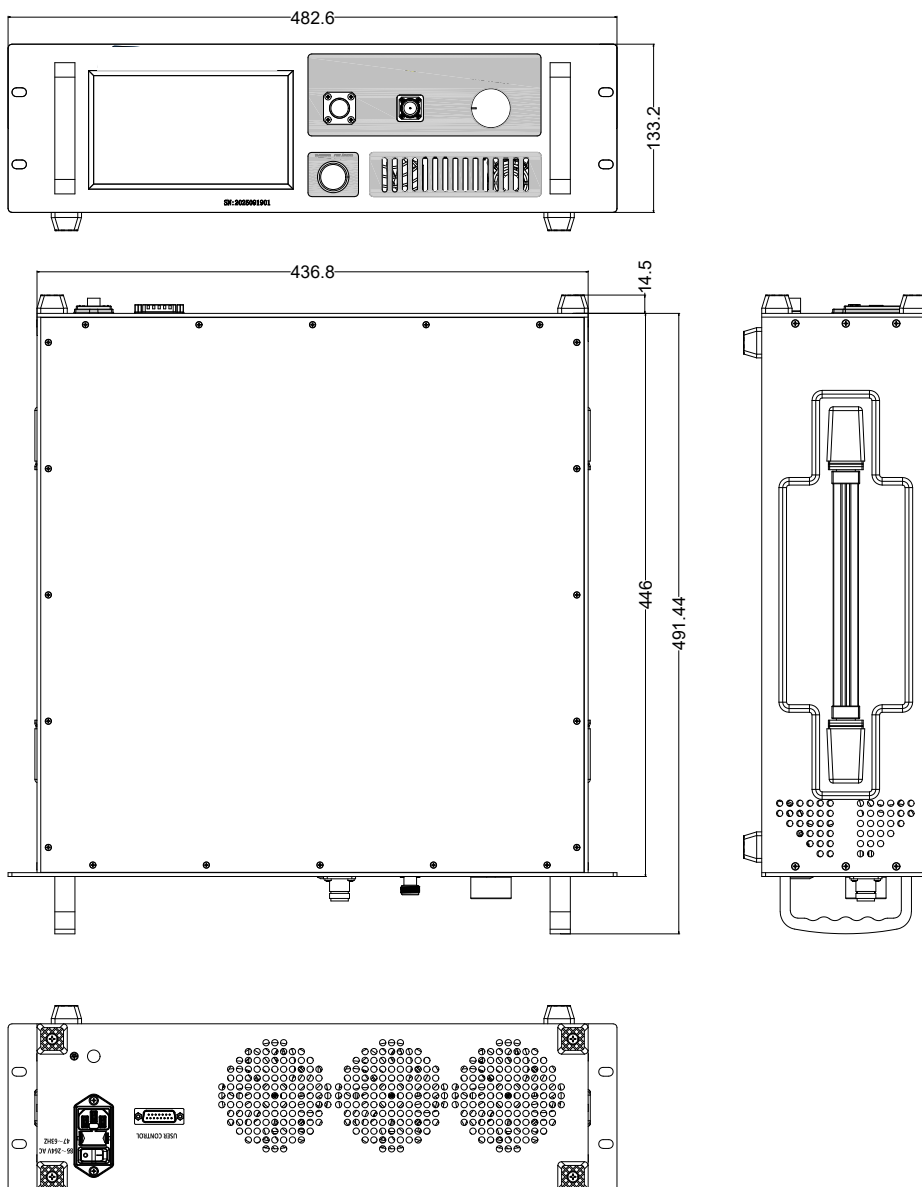
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

RPA-2G-4G-316-P





Control Connector(D-SUB-15Pin):

Pin	Name	Function
1	EN	Amplifier Enable: TTL High (5V) (Internally Pulled-High) Amplifier Disable: TTL Low(0V)
2	Over Voltage	Voltage FAULT:(TTL High= Fault, TTL Low =Normal)
3	Over Current	Current FAULT:(TTL High= Fault, TTL Low =Normal)
4	Over TEM	Temperature FAULT:(TTL High= Fault, TTL Low =Normal)
5	Over VSWR	VSWR FAULT:(TTL High= Fault, TTL Low =Normal)
6	Reset	Resets PA when logic LOW is applied and released (Internally Pulled-High)
7	GND	Ground
8~15	NC	Not connected

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-2G-4G-316-P	High Power Amplifier, 2-4GHz, 316W, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-2G-4G-316-P-M	High Power Amplifier, 2-4GHz, 316W, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-2G-4G-316-P-IPxx	High Power Amplifier, 2-4GHz, 316W, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad