



# High Power Amplifier

## Model:RPA-2G-3G-2000-P

2-3GHz 2000W Pulse

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 2-3GHz
- High output power at saturation, 63dBm Min.
- High gain, 63dB 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-3G-2000-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 2000W output power over its entire operating bandwidth of 2 to 3GHz. The control functions RPA-2G-3G-2000-P possesses include the on/off of the power supply, output power can be controlled by the automatic ALC system, on/off of the RF setting and control of the gain. 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, over VSWR, over pulse width and over PRF. 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		3	GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	63			dB
Power Gain flatness@Pout=63dBm	$\Delta$ GL		$\pm 3$		dB
Output Psat	Psat	63			dBm
Spurious@Pout=63dBm	Spur			-60	dBc
Harmonics@Pout=63dBm	HAM		-10		dBc
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF	1		100	KHz
Pulse Width	T	0.3		100	us
Duty Cycle	$\tau$			5	%
Rise/Fall Time	Tr		100		ns
Pulse Drop@T=100us	Pdrop		0.5		dB
Pulse Delay	Pd		250		ns
Pulse off isolation	Piso		80		dBc
Pulse Width Distortion	PWd		$\pm 50$		ns
Input VSWR	VSWR			1.5	:1
Noise Floor@pulse on	NL1	-55	-70		dBm/Hz
Noise Floor@pulse off	NL2		-140		dBm/Hz
AC Voltage	Vac		220		V AC
Power consumption@5% duty cycle	Pdiss		2200		W
Impedance	I/O-IMP	50			Ohms

\*Note: If the input signal is a pulse, the modulated TTL can always be high, but the pulse parameter limit of the input pulse signal is again shown in the table above.



## 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/L29 Female	
Forward/Reverse Coupling	SMA Female/SMA Female	
Digital Monitor & Control	Serial:RS422; Ethernet	Optional: GPIB
Pulse Input Connector	BNC Female	
Communication Connector	DB-9/RJ-45	
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 6U*600 depth	mm
Weight	≤45	Kg

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

## Absolute Maximum Ratings:

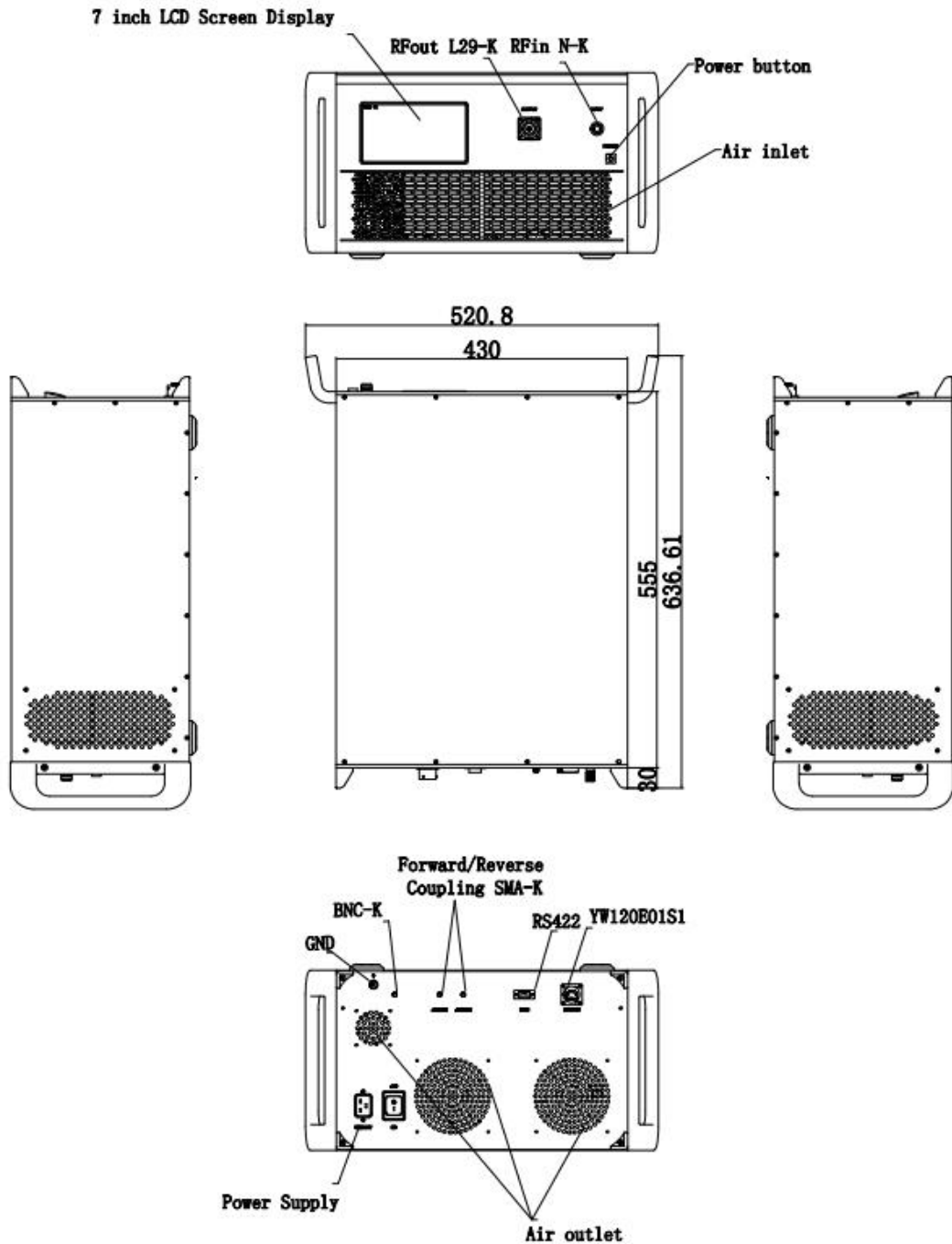
Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



# Outline Drawing:

Unit:mm

RPA-2G-3G-2000-P





## 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-2G-3G-2000-P	High Power Amplifier, 2-3GHz, 2000W Pulse, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-2G-3G-2000-P-M	High Power Amplifier, 2-3GHz, 2000W Pulse, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-2G-3G-2000-P-IPxx	High Power Amplifier, 2-3GHz, 2000W Pulse, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad