



# High Power Amplifier

## Model:RPA-1G5-3150-P

1.5GHz 3150W Pulse

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency point: 1.5GHz
- High output power at saturation, 65dBm Min
- High gain, 65dB Min
- Operates from AC line power: 48(It can be changed to 220 V AC)

### Applications:

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

### Product Overview:

The RPA-1G5-3150-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 3150W output power at its frequency point of 1.5GHz. The control functions RPA-1G5-3150-P possesses include the on/off of the power supply, 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.



## Electrical Specifications at 25°C:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	1.5			GHz
Working Mode	MOD	PULSE ONLY			
Power Gain	GP	65			dB
Output Psat	Psat	65	66		dBm
Spurious@Pout=65dBm	Spur			-60	dBc
Harmonics@Pout=65dBm	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	1		500	us
Duty Cycle	$\tau$	0.1		30	%
Rise/Fall Time	Tr		50	100	ns
Pulse Input	TTL level, 50 ohm nominal termination				
Pulse Drop@T=100us	Pdrop		0.5	1	dB
Star Delay	DSU		150		ns
Shutoff Delay	TOF		250		ns
Input VSWR	VSWRin			1.5	:1
Output VSWR	VSWRout			2.0	:1
AC Voltage	Vac	48(It can be changed to 220 V AC)			V AC
Power consumption	Pdiss			2000	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/WR510	
Pulse Input Connector	J30J-15ZKP	
Supply Connector	Y50DX-1804	
Digital Monitor & Control	RS422	
Cooling system	Built in Cooling system,forced air cooling	



## Mechanical Specifications:

Parameter	Value	Notes
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	510*450*134	mm
Weight	≤35	Kg

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

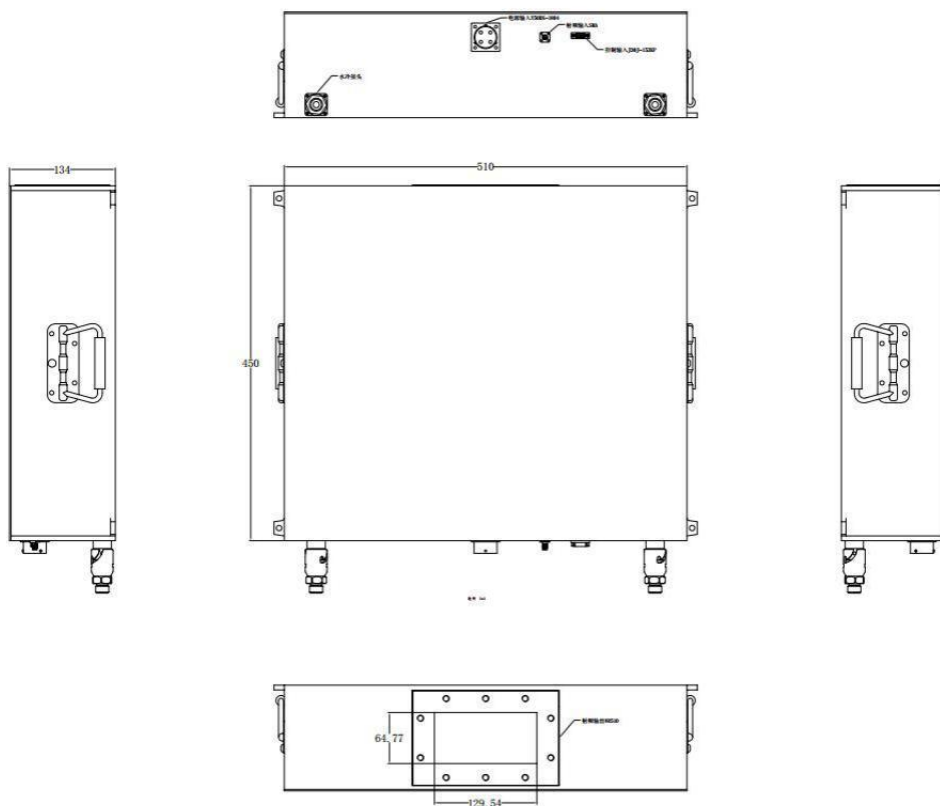
## Absolute Maximum Ratings:

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

## Outline Drawing:

Unit:mm

RPA-1G5-3150-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-1G5-3150-P	High Power Amplifier, 1.5GHz, 3150W Pulse, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-1G5-3150-P-M	High Power Amplifier, 1.5GHz, 3150W Pulse , Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-1G5-3150-P-IPxx	High Power Amplifier, 1.5GHz, 3150W Pulse, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad