



High Power Amplifier

Model:RPA-75G-110G-1

75-110GHz 1W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 75-110GHz
- High output power at saturation, 30dBm Min.
- High gain, 30dB 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-75G-110G-1 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 1W output power over its entire operating bandwidth of 75 to 110GHz. The control functions that RPA-75G-110G-1 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	75-110			GHz
Working Mode	MOD	CW/PULSE compatible			
Power Gain@Psat	GP	30			dB
Gain flatness	ΔGL		±3		dB
Output Psat	Psat	30			dBm
Spurious@Psat	Spur			-50	dBc
Input Signal Mode	IPS_MOD	CW/PULSE			
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF			200	KHz
Rise/Fall Time	Tr		30		ns
Pulse Drop@T=100us	Pdrop		0.5		dB
AC Voltage	Vac		220		V AC
Power Consumption	Pdiss			100	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	WR-10/WR-10	
Pulse Input Connector	BNC Female	
Communication Connector	DB9/RJ-45	
Digital Monitor & Control	Serial: RS422;Ethernet	Optional: GPIB
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	
Front Panel LCD Screen Display	5 inch LCD Screen Display	
Display functions	1,Output/reflected power; 2,Fault informations	
Dimensions W x H x D	19 Inch 3U*550 depth	mm
Weight	≤30	Kg

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



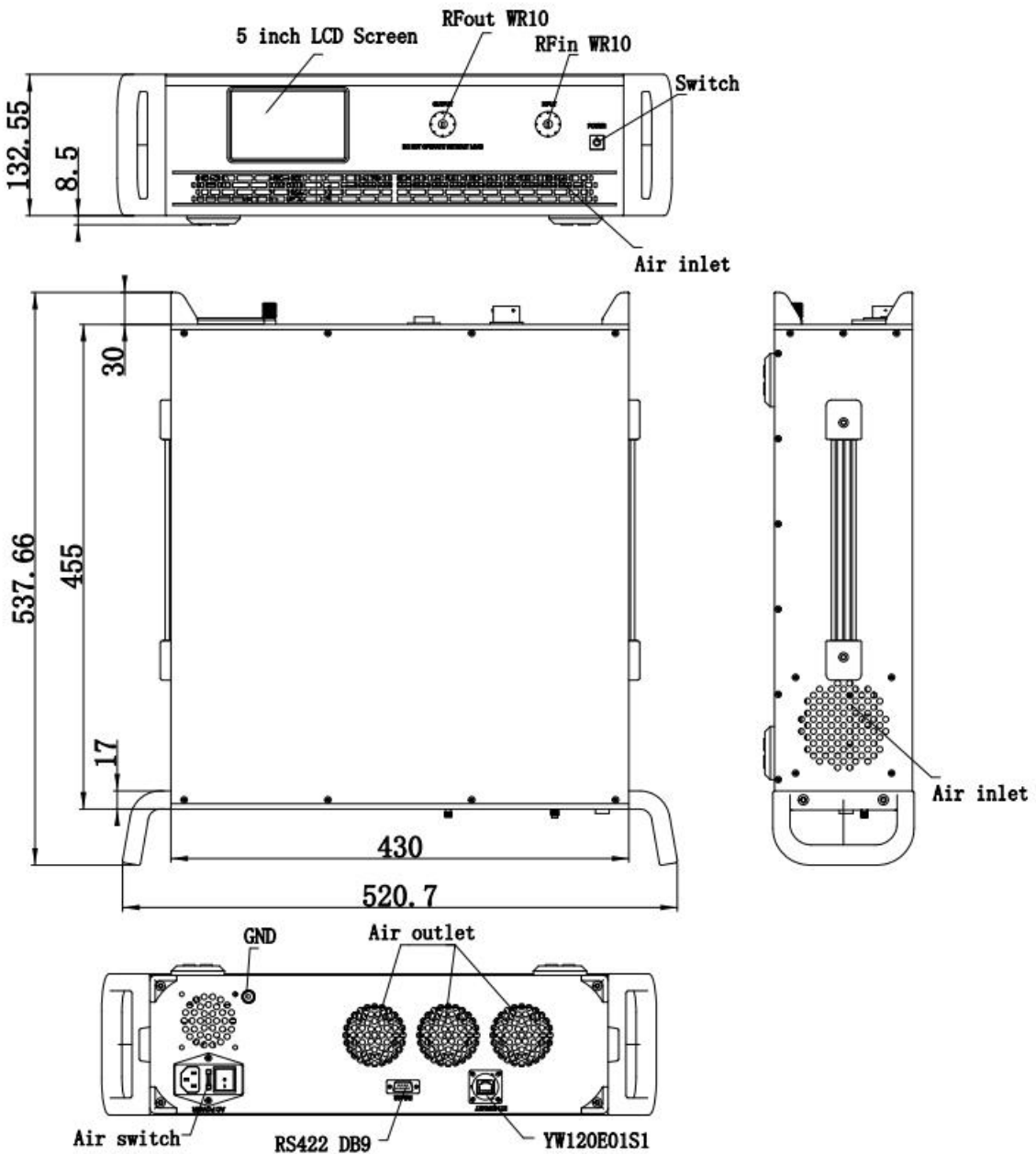
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

RPA-75G-110G-1





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-75G-110G-1	High Power Amplifier, 75-110GHz, 1W CW, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-75G-110G-1-M	High Power Amplifier, 75-110GHz, 1W CW, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-75G-110G-1-IPxx	High Power Amplifier, 75-110GHz, 1W CW, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad