



High Power Amplifier

Model:RPA-9G-10G-1600-P

9-10GHz 1600W Pulse

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 9-10GHz
- High output power at saturation, 62dBm Min.
- High gain, 62dB Min.
- Operates from DC line power: 28V

Applications:

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

Product Overview:

The RPA-9G-10G-1600-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 1600W output power over its entire operating bandwidth of 9 to 10GHz. 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 (This function can be provided according to customer requirements).



Electrical Specifications at 25°C:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	9-10			GHz
Power Gain	GP	62			dB
Small Signal Gain flatness	Δ GL		± 4	± 4.5	dB
Power Gain flatness@Pout=62dBm	Δ GP		± 4	± 4.5	dB
Output Psat	Psat	62			dBm
Spurious@Pout=62dBm	Spur			-60	dBc
Harmonics@Pout=62dBm	HAM			-30	dBc
Ground Noise	NL			-80	dBm/Hz
Modulation Signal Level	TTL	0		5	V
Modulation Frequency	MF	0.5		100	KHz
Pulse Width	T	0.3		500	us
Duty Cycle	τ			10	%
Rise/Fall Time	Tr		50	100	ns
Pulse Drop@T=100us	Pdrop		0.5		dB
DC Supply Voltage	Vdc		28		V
Inrush Impulse Current@10%	IPC			20	A
Input VSWR	VSWRin			1.5	:1
Output VSWR	VSWRout			2	:1
Power consumption@5%	Pdiss			450	W
Power consumption@10%	Pdiss			900	W

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	SMA Female/WRD90	Height-reduced WR 90
Forward/Reverse Coupling	SMA Female/SMA Female	40 \pm 2dB
DC Supply Interface	DSUB-8W8	Pin1~4:+28V Pin5~8:GND
Control Connector	J30J-15ZKP	
Cooling	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	398*320*149	mm
Weight	/	Kg

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

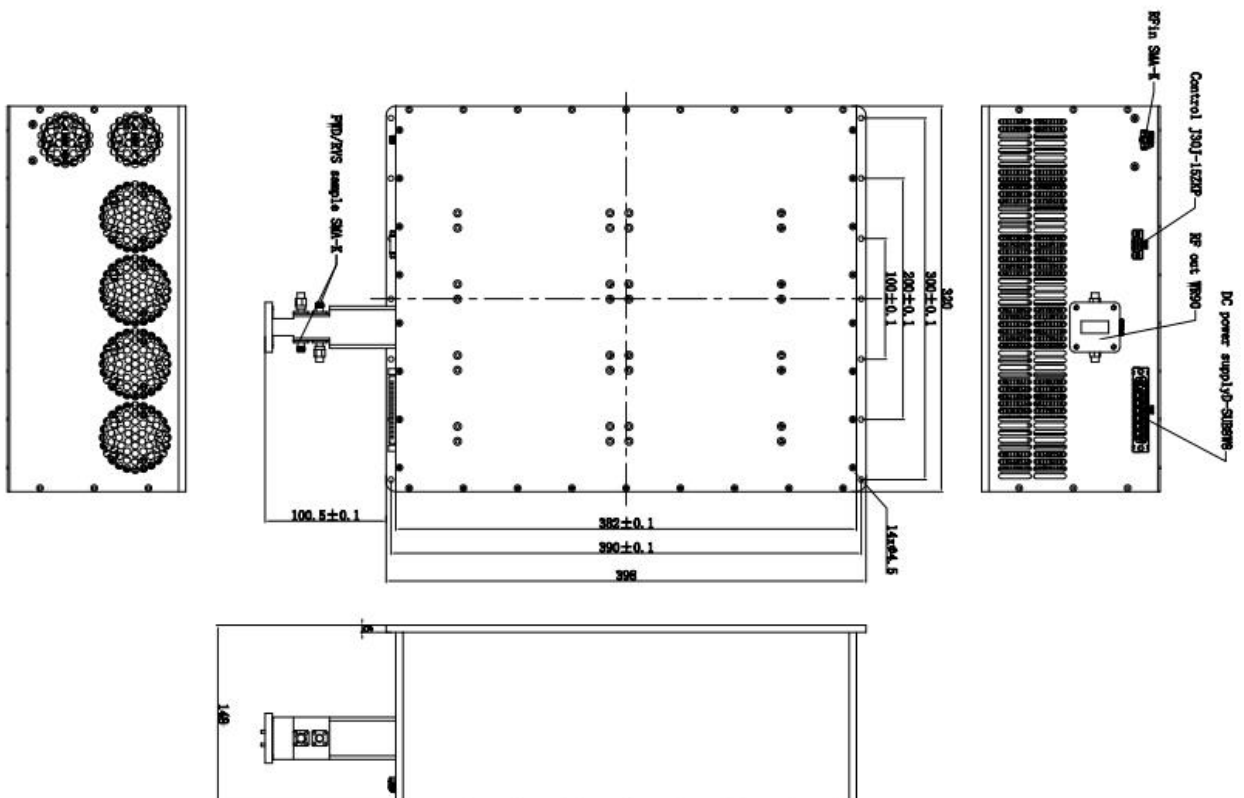
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

RPA-9G-10G-1600-P





Control Connector(J30J-15ZKP):

Pin	Function
Pin1	TTL(Modulating signal)
Pin2	GND(Modulating signal)
Pin3	0.5dB Attenuation Bit
Pin4	1dB Attenuation Bit
Pin5	2dB Attenuation Bit
Pin6	4dB Attenuation Bit
Pin7	8dB Attenuation Bit
Pin8	16dB Attenuation Bit
Pin9~15	GND

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-9G-10G-1600-P	High Power Amplifier, 9-10GHz, 1600W Pulse, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-9G-10G-1600-P-M	High Power Amplifier, 9-10GHz, 1600W Pulse, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-9G-10G-1600-P-IPxx	High Power Amplifier, 9-10GHz, 1600W Pulse, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad