



High Power Amplifier

Model:RPA-15G-18G-1000

15-18GHz 1000W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 15-18GHz
- High output power at saturation, 60dBm Min.
- High gain, 60dB 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-15G-18G-1000 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 1000W output power over its entire operating bandwidth of 15 to 18GHz. The control functions RPA-15G-18G-1000 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, adjustment of the gain and real time status query. 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	15-18			GHz
Power Gain	GP	60			dB
Gain flatness	Δ GL		± 3		dB
Peak Output Power	P.P	60			dB
Peak Output Power	Δ PR		30		dB
Output Power adjust Range	Δ PS		0.5		dB
Peak Output Power flatness	Δ P.P			± 1.5	dB
Spurious	Spur		-60	-50	dBc
Harmonics	HAM		-20		dBc
Modulation Frequency	MF			100	KHz
Pulse Width	T	0.1		300	us
Duty Cycle	τ			20	%
Rise/Fall Time	Tr		30	50	ns
Input VSWR	VSWRin			2	:1
AC Voltage	Vac		220		V AC
Power consumption@5% duty cycle	Pdiss			380	W
Power consumption@10% duty cycle	Pdiss			730	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/WR62	
Communication Connector	DB9/RJ45	
Digital Monitor & Control	Serial: RS422;Ethernet	Optional: GPIB
Indications	1,AC on/off; 2,DC on/off; 3,RF on/off; 4,Fault	
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	19 Inch 5U	mm
Weight	≤45	Kg

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

Absolute Maximum Ratings:

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

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-15G-18G-1000	High Power Amplifier, 15-18GHz, 1000W CW, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-15G-18G-1000-M	High Power Amplifier, 15-18GHz, 1000W CW, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-15G-18G-1000-IPxx	High Power Amplifier, 15-18GHz, 1000W CW, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad



Outline Drawing:

Unit:mm

RPA-15G-18G-1000

