High Power Amplifier

Model:RPA-80M-1G-2000

80-1000MHz 2000W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 80-1000MHz
- High output power at saturation, 63dBm Min
- High gain, 63dB Min
- Operates from AC line power: 380V

Applications:

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

Product Overview：

The RPA-80M-1G-2000 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 80 to 1000MHz. The control functions RPA-80M-1G-2000 possesses include the on/off of the power supply and the adjustment of the gain, supporting manual or software control(Paid option features). 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 (70℃), over voltage, over current, open break and circuit break, over VSWR (5:1, adjustable) and over excitation 2300W@80-400MHz;1300W@400MHz-1GHz protection. It can also be remotely controlled via GPIB or Ethernet.

Electrical Specifications at 25℃:

Parameter		Symbol	Min	Typ	Max	Units
Frequency range		BW	80-1000			MHz
Power Gain		GP	63			dB
Gain flatness		ΔGL			±5	dB
Output Psat	@80-400MHz	Psat	2000			W
	@400MHz-1GHz		1000			
Output P1dB	@80-400MHz	P1dB	1600			W
	@400MHz-1GHz		800			
Spurious		Spur			-50	dBc
Harmonics		HAM			-18	dBc
Input VSWR		VSWRin			2	:1
AC Voltage				380		V AC
Power Consumption		Pdiss			10	KW
Impedance		I/O-IMP	50			Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-0 to +40	℃
Non-operating Temperature*	-15 to +65	℃
Relative humidity	95	%
RF Input/Output Connector	N Female/7/16 DIN Female (optional)	
Forward/Reverse Coupling Connector	N Female/ N Female (optional)	
Display function	Power Amplifier Status Monitoring (Paid option features)	
Digital Monitor & Control	GPIB;Ethernet	
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	800*1200*1400/19 Inch*1400	mm
Weight	≤180	Kg

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

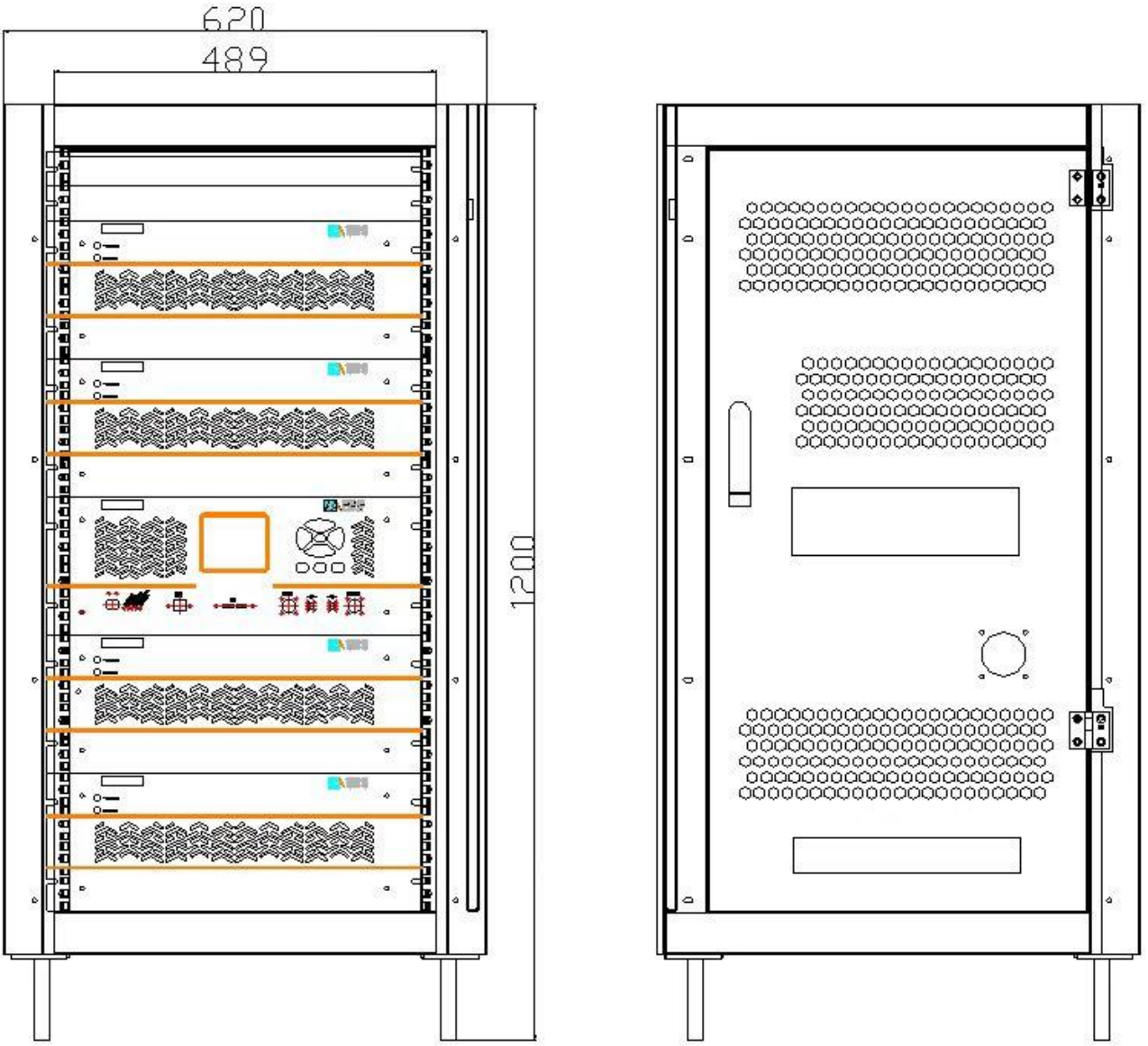
Absolute Maximum Ratings:

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

Outline Drawing:

Unit:mm

RPA-80M-1G-2000



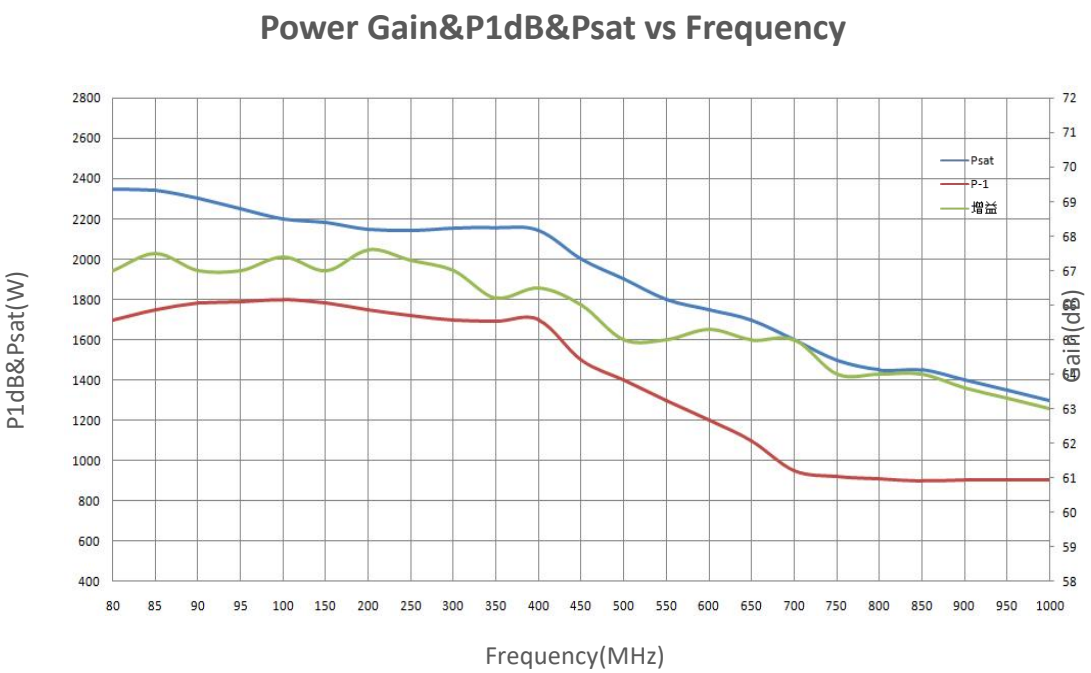
Optional items:

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

Ordering Information:

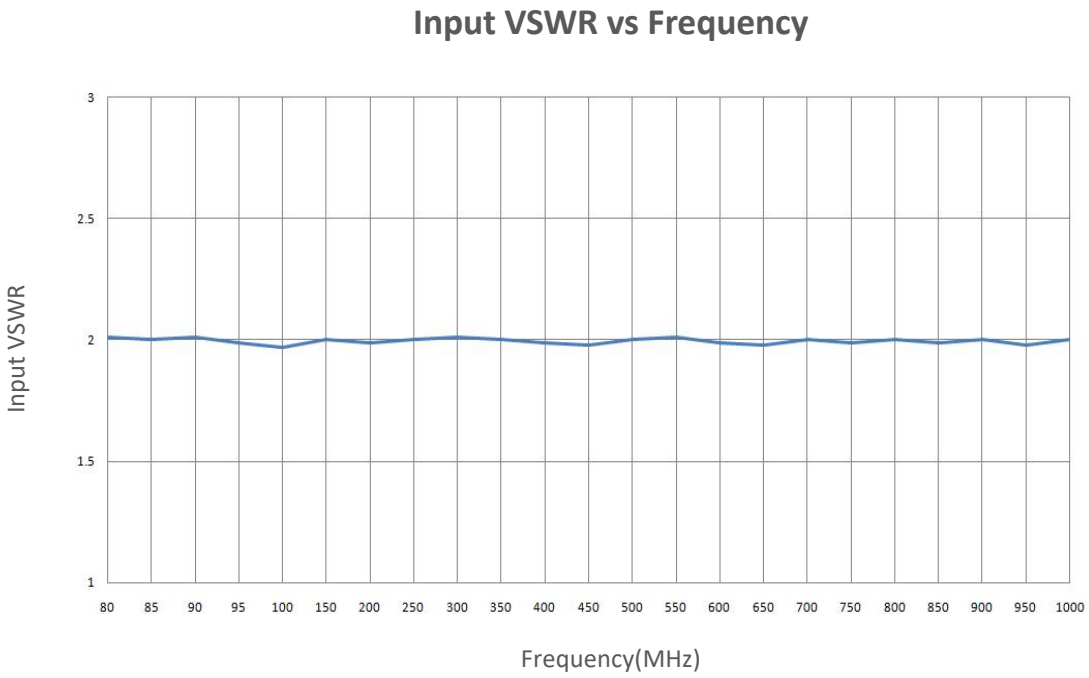
Base Number	Description	Optional
RPA-80M-1G-2000	High Power Amplifier, 80-1000MHz, 2000W, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-80M-1G-2000-M	High Power Amplifier, 80-1000MHz, 2000W, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-80M-1G-2000-IPxx	High Power Amplifier, 80-1000MHz, 2000W, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad

Typical Performance Data:



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:



Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.