



High Power Amplifier

Model:RPA-1M-500M-250

1-500MHz 250W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 1-500MHz
- High output power at saturation, 54dBm Min
- High gain, 54dB Min
- Operates from AC line power: 110-220V

Applications:

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

Product Overview:

The RPA-1M-500M-250 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 250W output power over its entire operating bandwidth of 1 to 500MHz, The control functions RPA-1M-500M-250 possesses include the on/off of the power supply. Built-in safety features include fans alarms and automatic shut down mechanism to prevent damage in the event of excessive internal temperatures. And it has built-in protection functions included over TEM, over voltage and over current protection.



Electrical Specifications at 25°C:

Parameter	Symbol	Min	Typ	Max	Units
Frequency range	BW	1-500			MHz
Gain	GP	54			dB
Gain flatness	Δ GL		± 2	± 3	dB
Output P1dB	P1dB		50		dBm
Output Psat	Psat	54			dBm
Spurious@Pout=54dBm	Spur			-60	dBc
Harmonics@Pout=54dBm	HAM			-10	dBc
Input VSWR	VSWRin		1.5	2.0	:1
AC Voltage	Vac	110	220		V AC
AC Supply Current	Iac		5		A AC
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/N Female	
Communication functions	RS422;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	4U*500 depth	mm
Weight	≤ 10	Kg

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

Absolute Maximum Ratings:

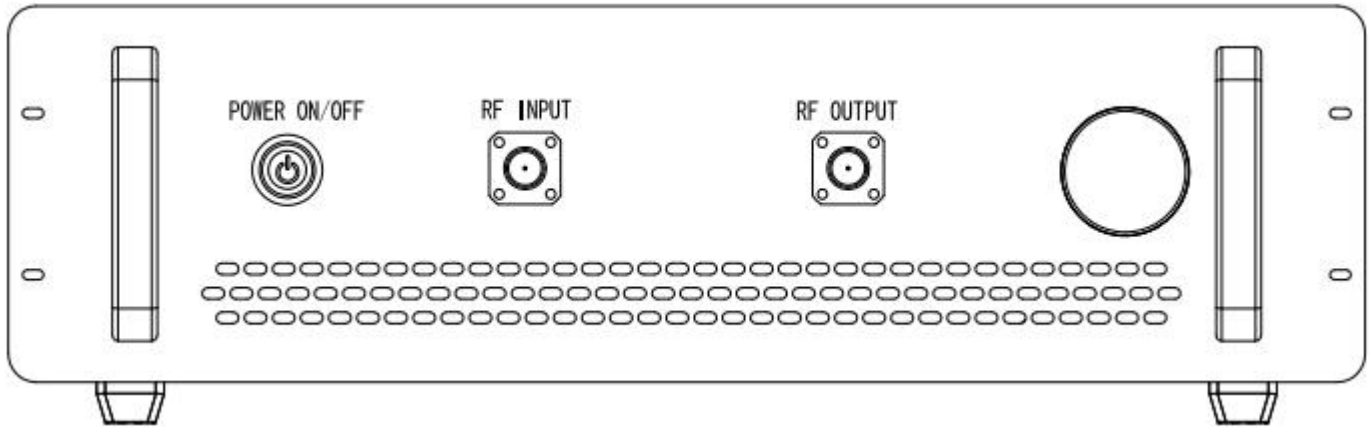
Parameter	Value
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

RPA-1M-500M-250



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

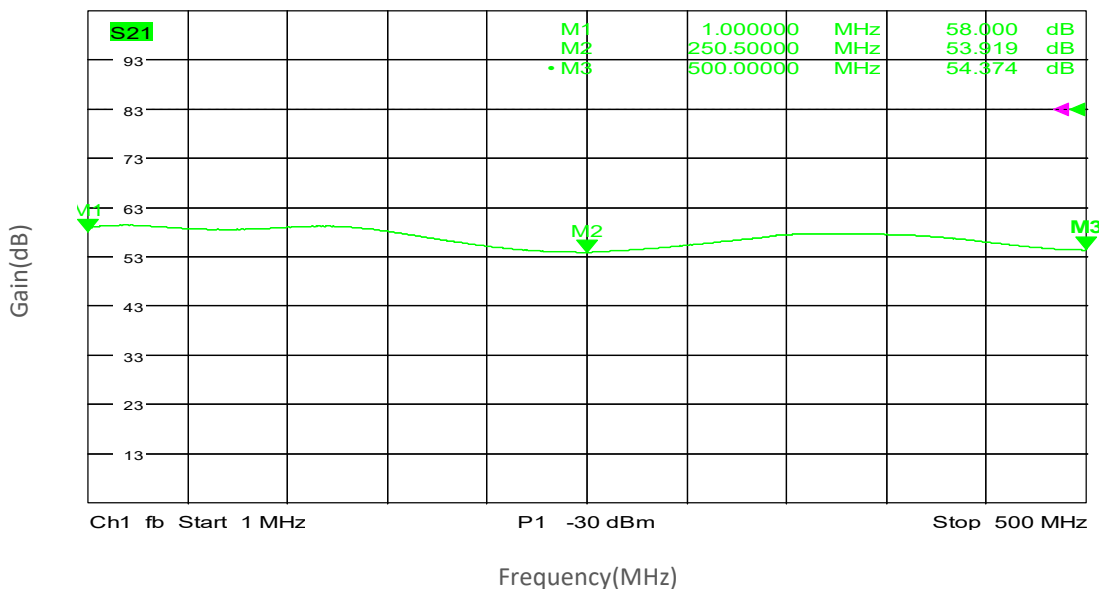
Ordering Information:

Base Number	Description	Optional
RPA-1M-500M-250	High Power Amplifier, 1-500M, 250W CW, Built in air or liquid cooling, without LCD and IP grad.	Basic version
RPA-1M-500M-250-M	High Power Amplifier, 1-500M, 250W CW, Built in air or liquid cooling, with LCD.	Add LCD display touchscreen
RPA-1M-500M-250-IPxx	High Power Amplifier, 1-500M, 250W CW, Built in air or liquid cooling, with LCD and IP grad.	Add Ingress protection grad

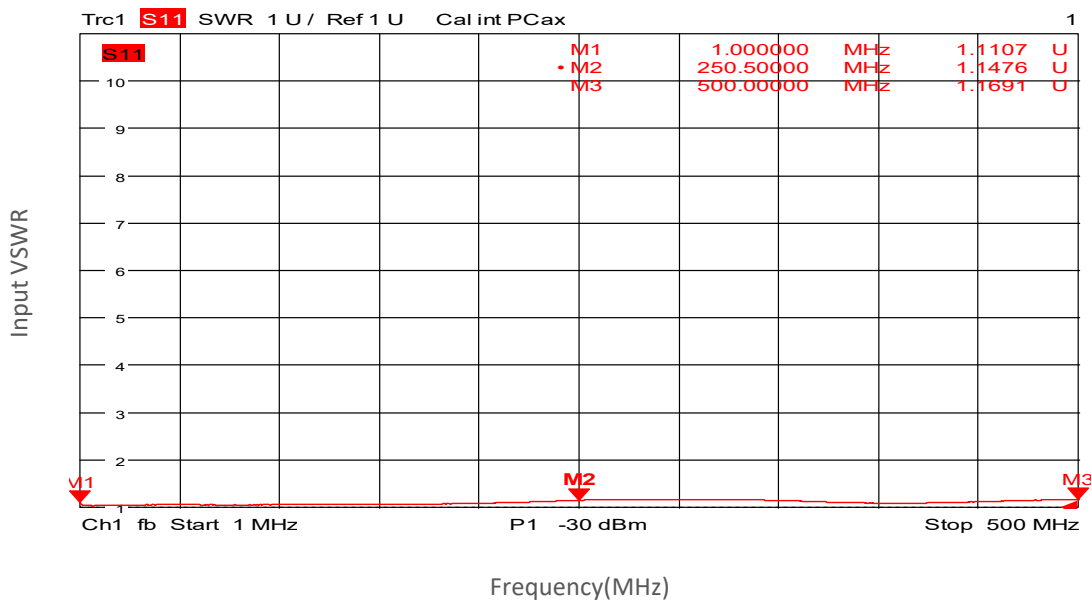


Typical Performance Data:

Gain vs Frequency



Input VSWR vs Frequency

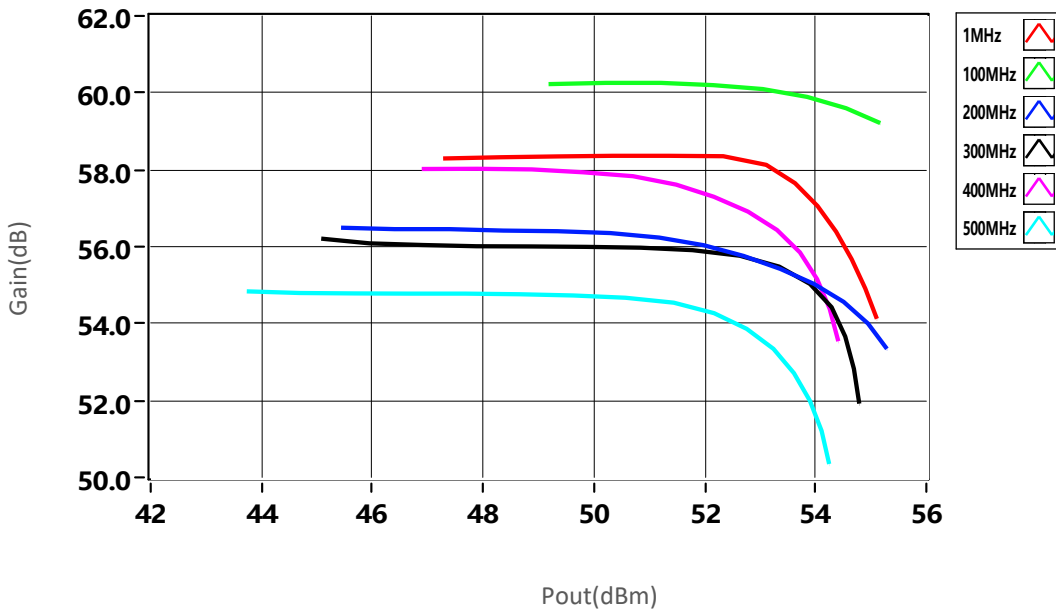


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



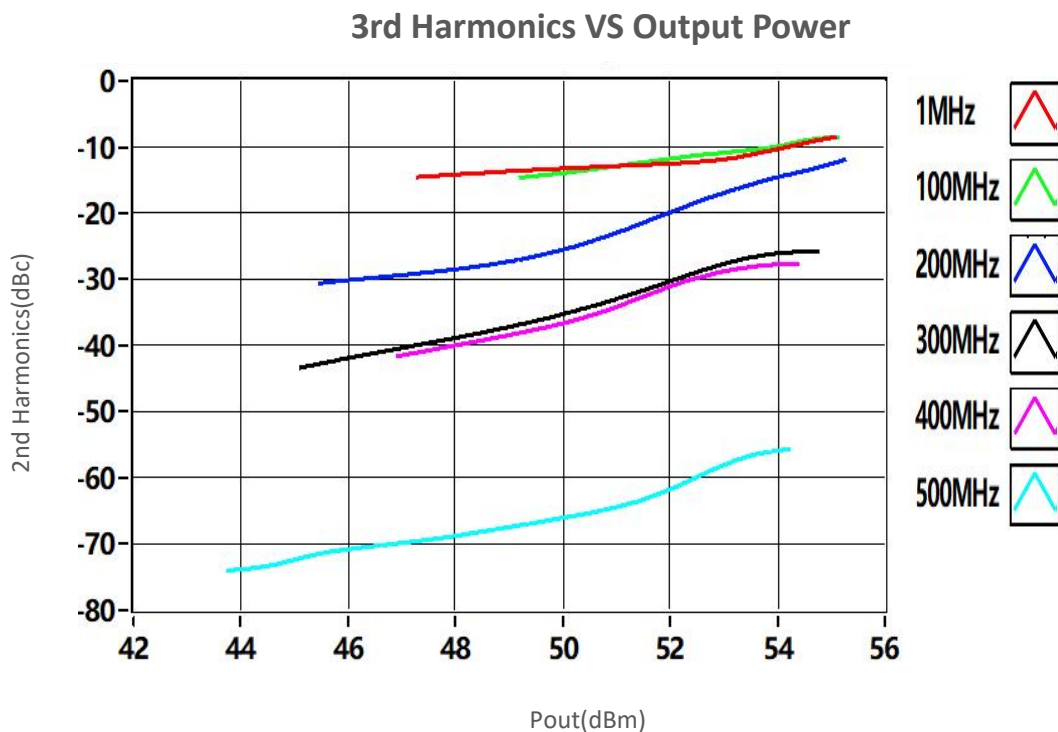
Typical Performance Data:

Gain vs Output Power





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.