

Power Amplifier

Model: PA-1M-1G-20

1-1000MHz 20W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 1-1000MHz
- High output power at saturation, 20W Min.
- High gain, 43 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-1M-1G-20 is a power amplifier with a minimum small signal gain of 43 dB and a minimum Psat of 20W across the frequency range of 1 to 1000MHz. The DC power requirement for the amplifier is +28 VDC/6 A. The input and output port configuration offers coax adapter structure with SMA female.

Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	1		1000	MHz
Small Signal Gain	43			dB
Gain Flatness			±5	dB
Output P1dB	40			dBm
Output Psat	43			dBm
Spurious			-50	dBc
Input VSWR		1.5	2.0	:1
DC Voltage		+28		V DC
DC Supply Current		6		A
Impedance		50		Ohms

Mechanical Specifications:

ParameterKg	Value	Notes
Operating Temperature*	-40°C to +50°C	
Non-operating Temperature*	-50°C to +60°C	
Relative humidity	95%	
RF Input/Output Connector	SMA Female/SMA Female	
DC Bias	Solder Pin	
Altitude	10,000	feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	200*120*25	mm
Weight	200	g

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

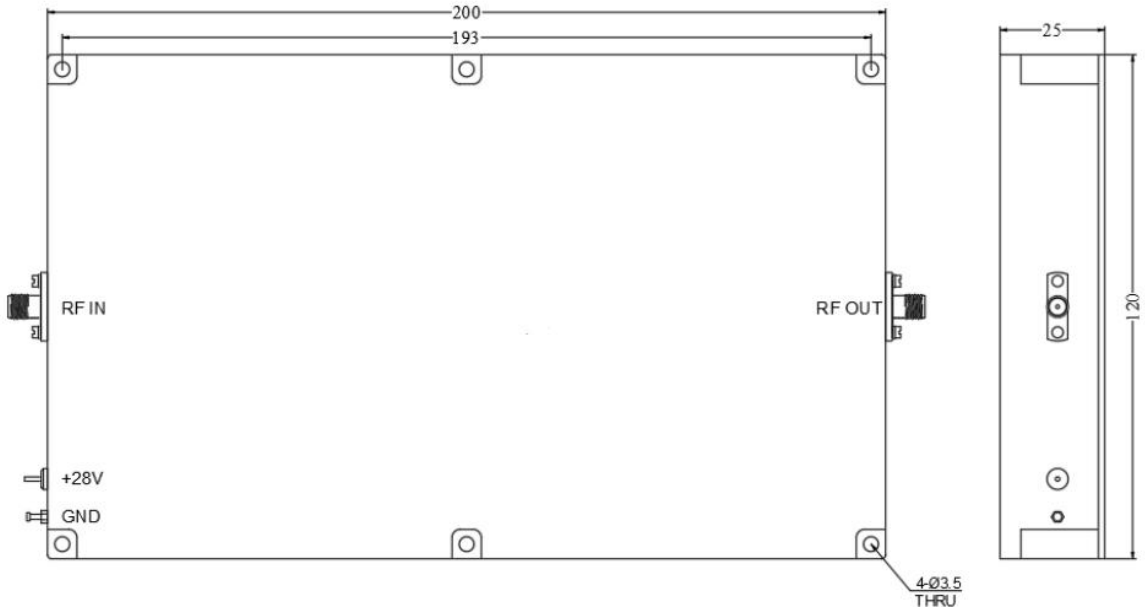
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+32 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

PA-1M-1G-20

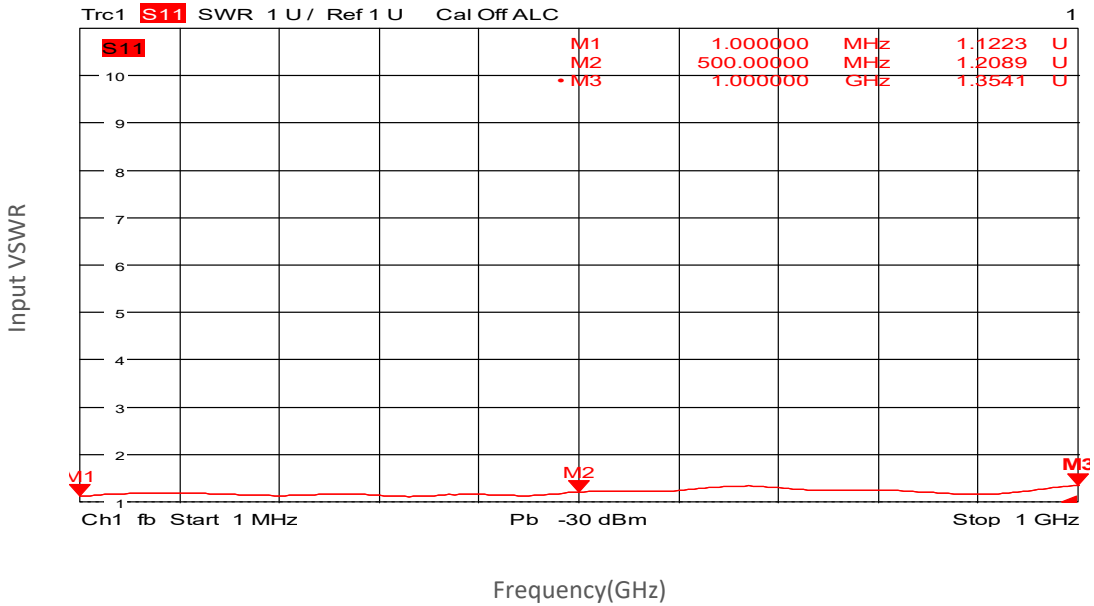


Ordering Information:

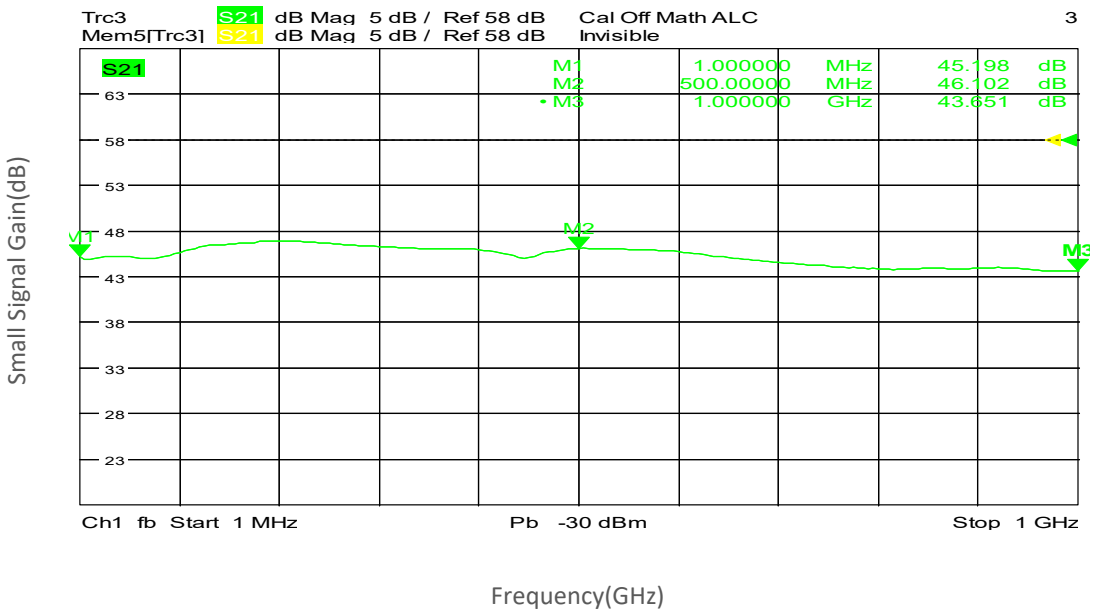
Base Number	Description	Optional
PA-1M-1G-20	Power Amplifier,1-1000MHz, Gain:43dB,Psat:20W,+28V DC	Without Heatsink
PA-1M-1G-20-HS	Power Amplifier,1-1000MHz, Gain:43dB,Psat:20W,+28V DC	With Heatsink

Typical Performance Data:

Input VSWR vs Frequency



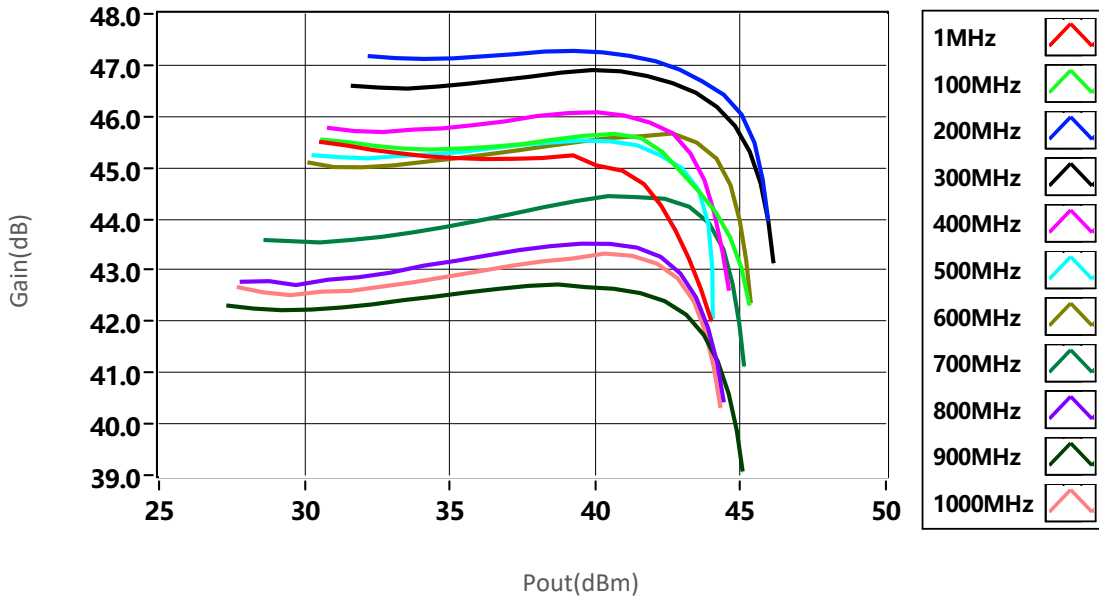
Small Signal Gain vs Frequency



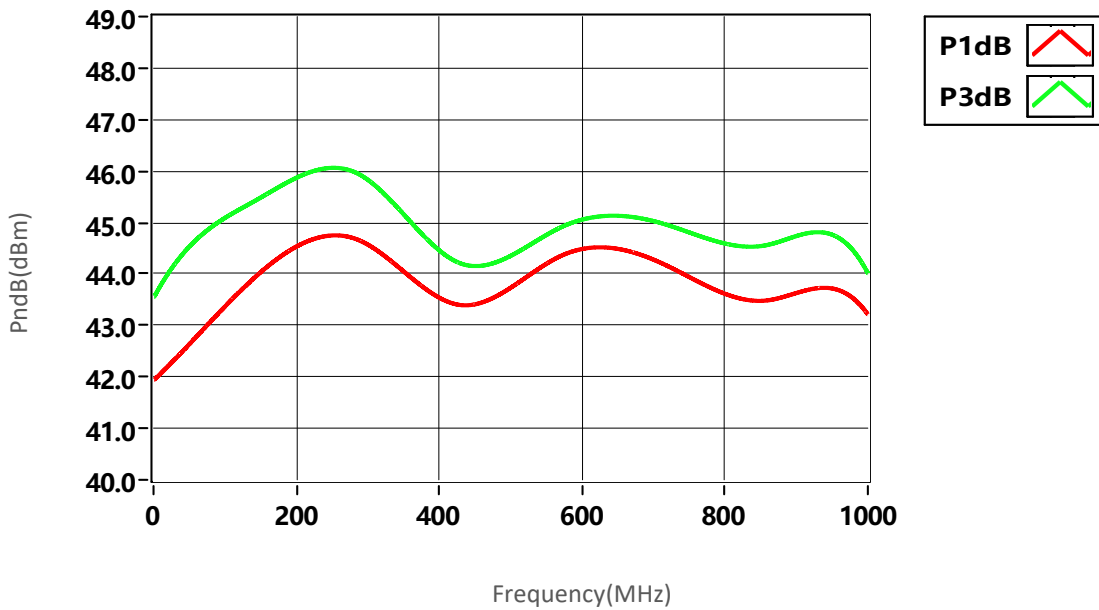
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Gain vs Output Power



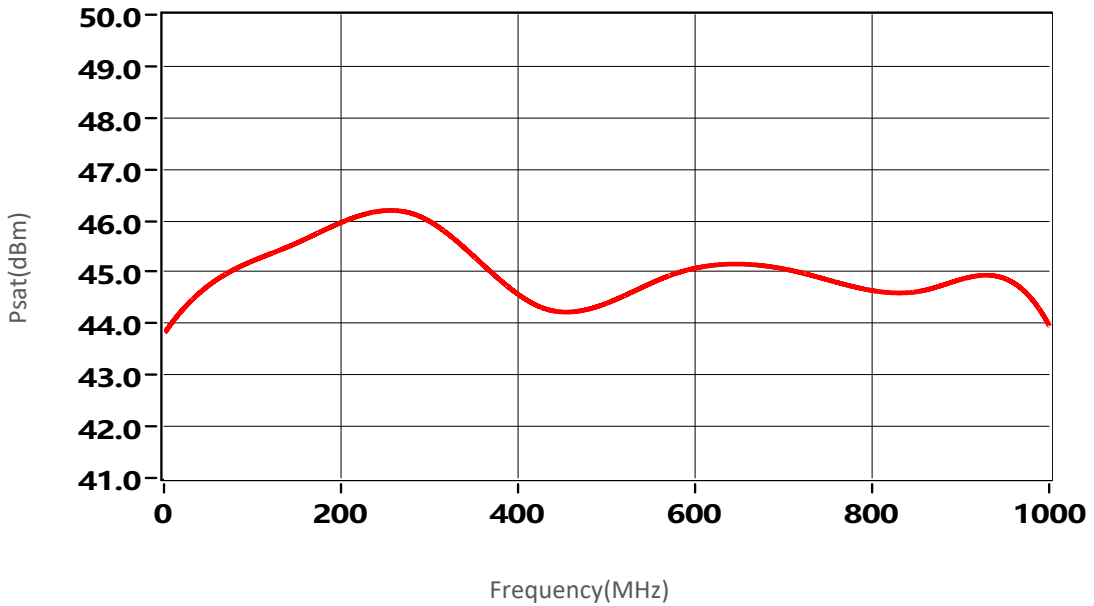
PndB vs Frequency



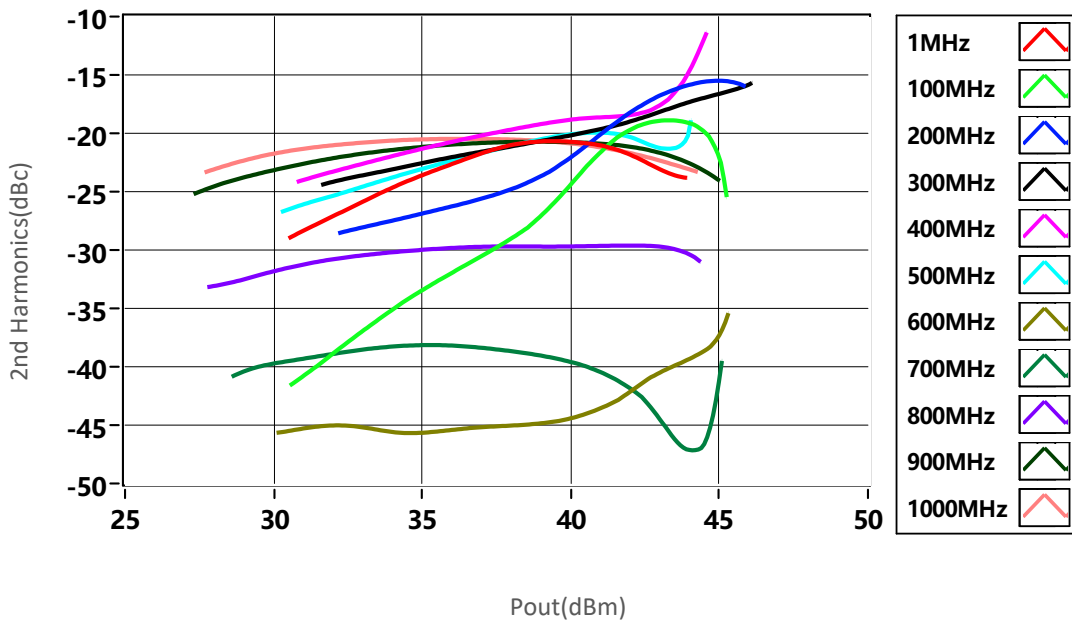
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Psat vs Frequency



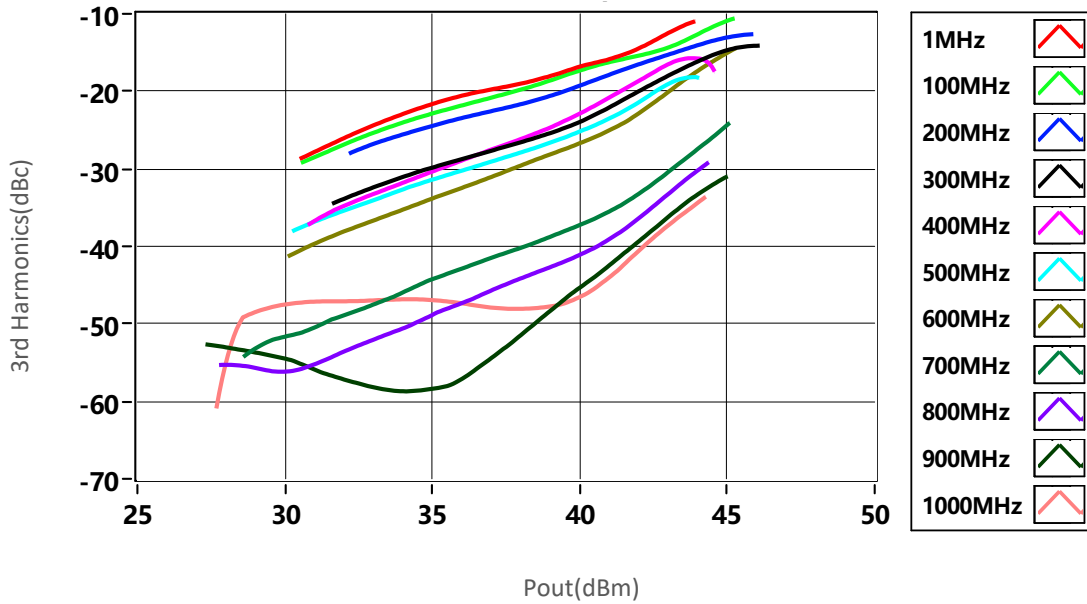
2nd Harmonics vs Output Power



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:

3rd Harmonics vs Output Power



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