



Power Amplifier

Model: PA-10M-1G-10

10MHz-1GHz 10W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 10MHz-1GHz
- High output power at saturation, 10W Typ.
- High gain, 35 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-10M-1G-10 is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{sat} of 10W across the frequency range of 10 MHz to 1 GHz. The DC power requirement for the amplifier is +28 VDC/0.2 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	0.01		1	GHz
Small Signal Gain	32	35		dB
Small Signal Gain Flatness		±2	±3	dB
Output P1dB	37	38		dBm
Output Psat	39	40		dBm
Harmonics			-10	dBc
Input VSWR		1.5	2.0	:1
DC Voltage	+26	+28	+30	V DC
DC Supply Current		0.2	1.5	A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-40°C to +60°C	
Non-operating Temperature*	-50°C to +70°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)	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	76*48*15	mm
Weight	250	g

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

Absolute Maximum Ratings:

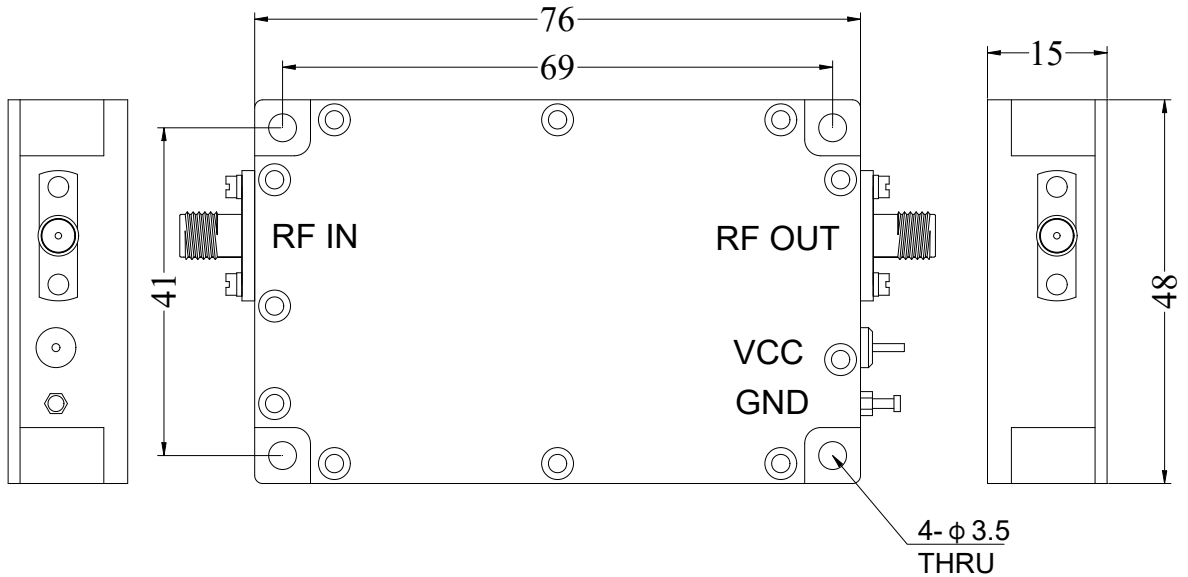
Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-10M-1G-10



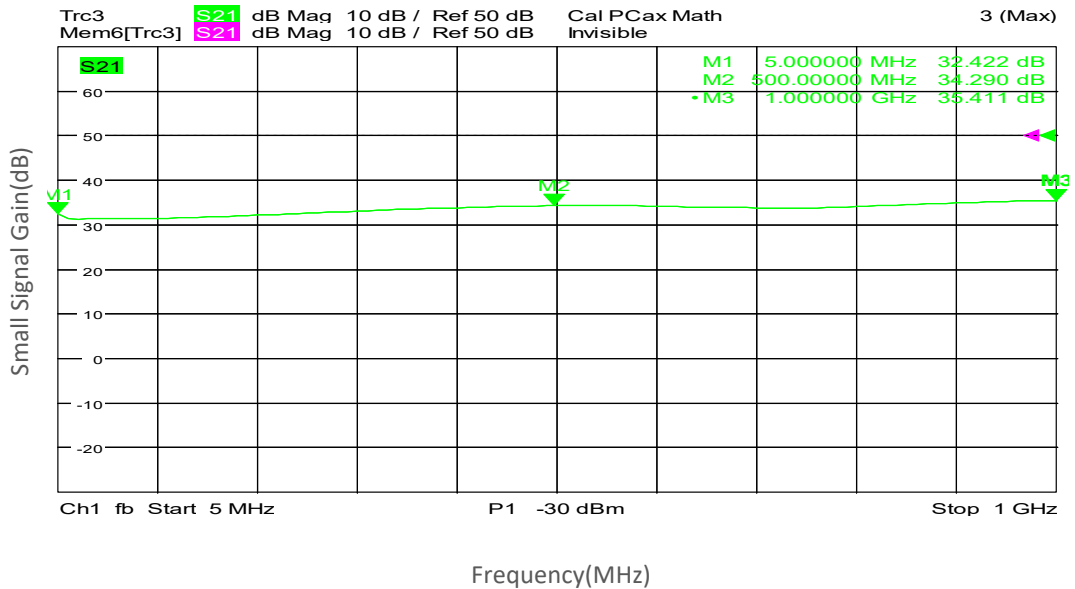
Ordering Information:

Base Number	Description	Optional
PA-10M-1G-10	Power Amplifier, 10MHz-1GHz, Gain:35dB,Psat:10W,+28V DC	Without Heatsink
PA-10M-1G-10HS	Power Amplifier,10MHz-1GHz, Gain:35dB,Psat:10W,+28V DC	With Heatsink

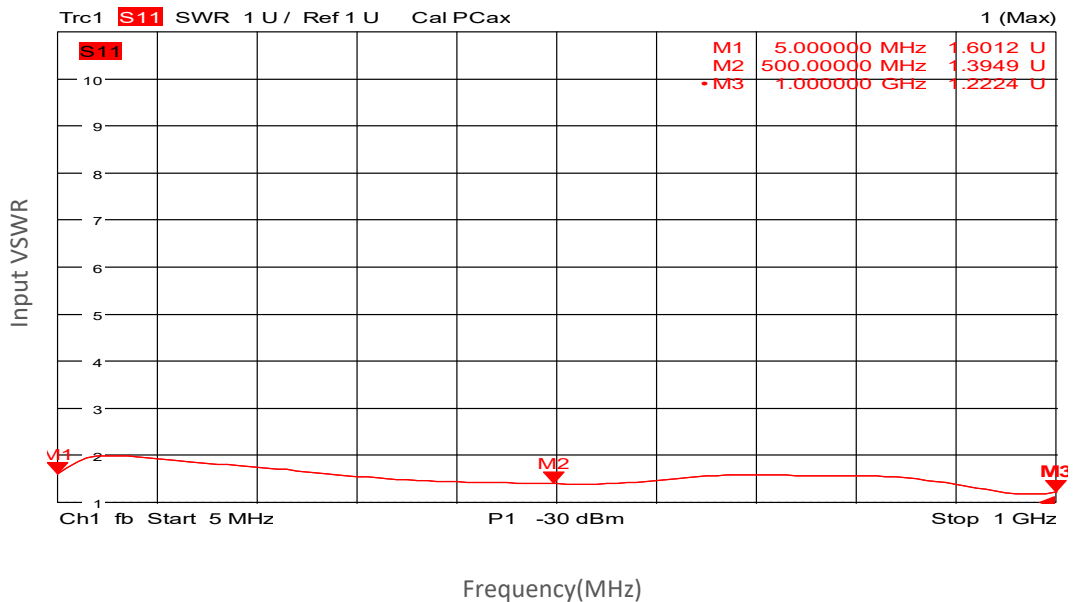


Typical Performance Data:

Small Signal Gain vs Frequency



Input VSWR vs Frequency

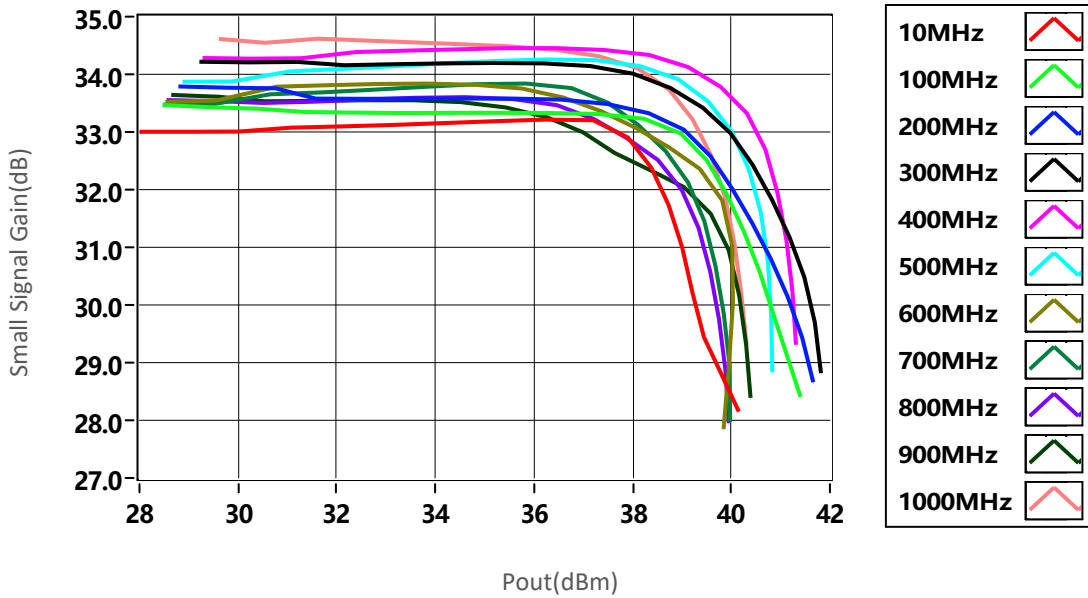


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

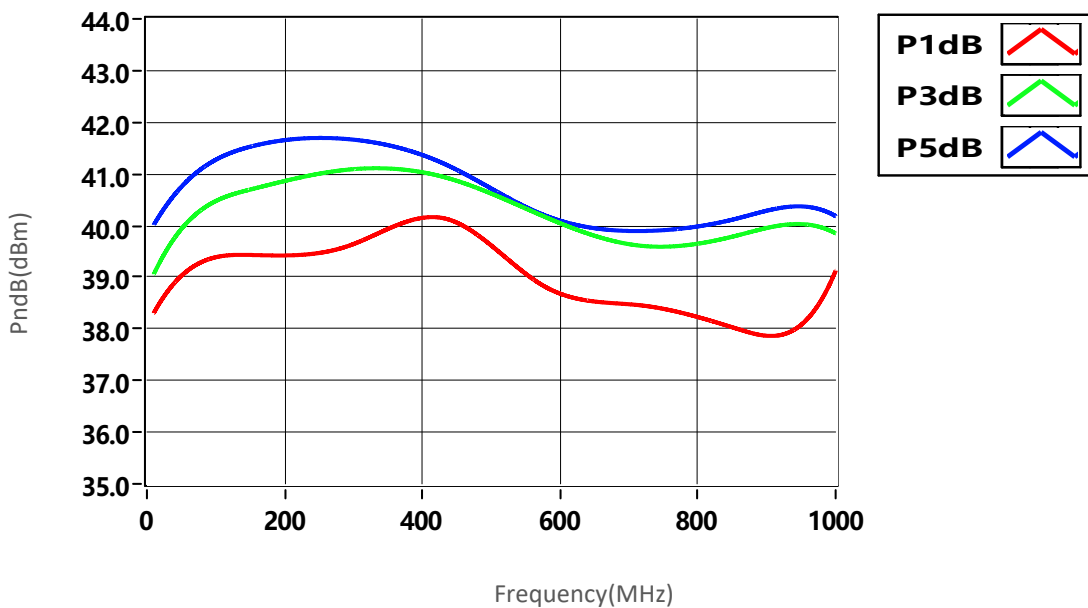


Typical Performance Data:

Small Signal Gain vs Output Power



PndB vs Frequency

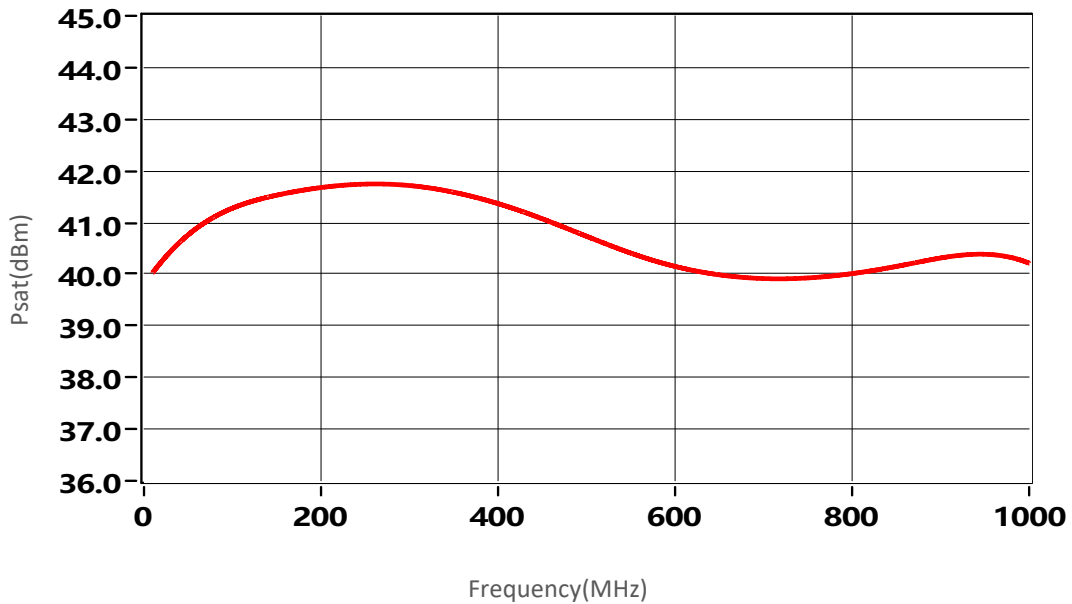


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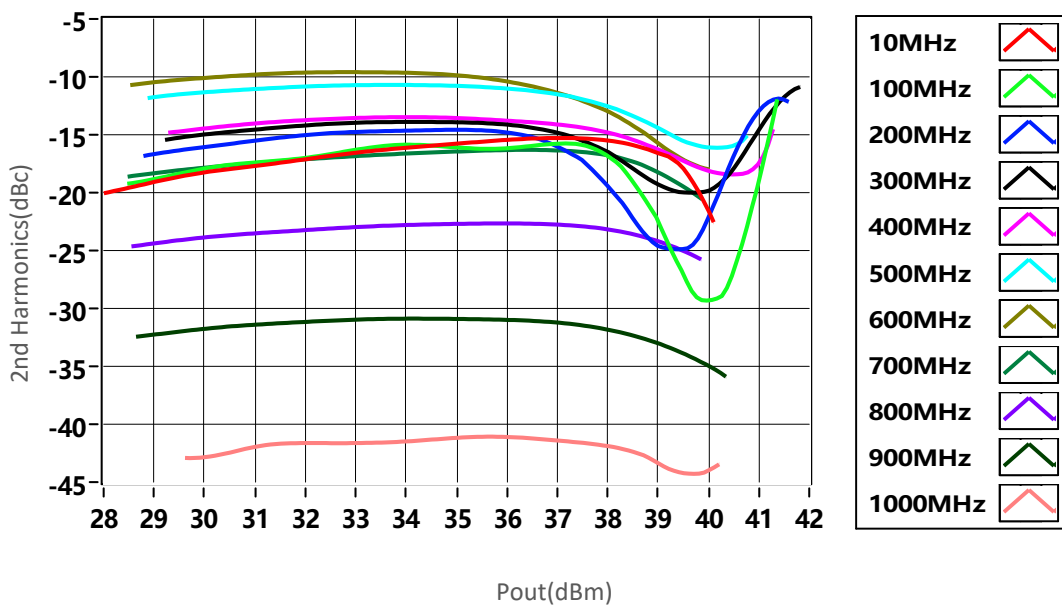


Typical Performance Data:

Psat vs Frequency



2nd Harmonics vs Output Power

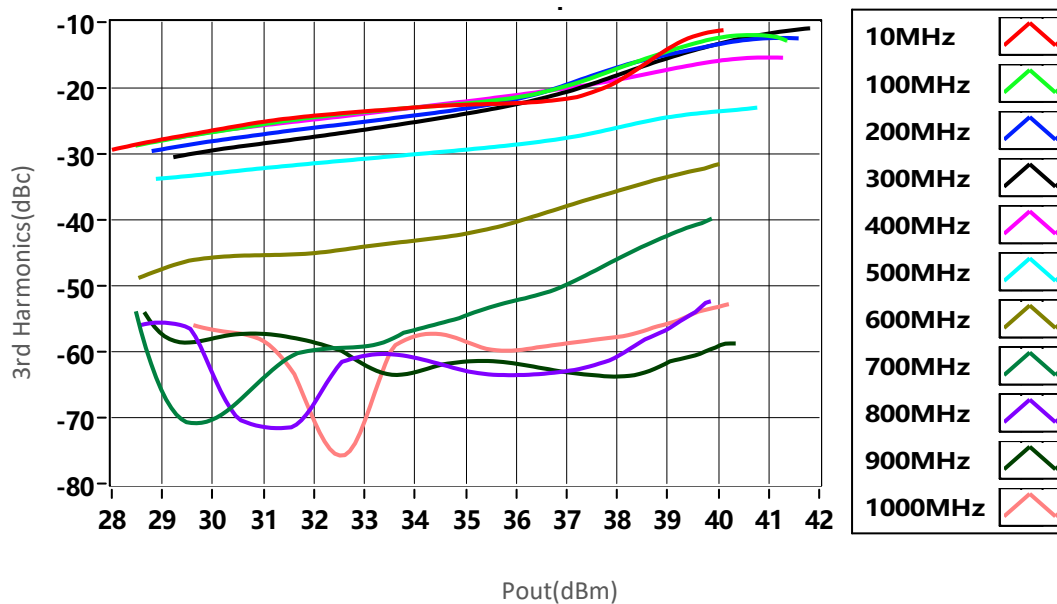


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Typical Performance Data:

3rd 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.