



# Power Amplifier

## Model: PA-100M-6G-1

0.1-6GHz 1W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 0.1-6GHz
- High output power at saturation, 1W Min.
- High gain, 30 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-100M-6G-1 is a power amplifier with a typical power gain of 30 dB and a minimum  $P_{sat}$  of 1W across the frequency range of 0.1 to 6GHz. The DC power requirement for the amplifier is +15 VDC/0.7 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	0.1		6	GHz
Power Gain	27	30		dB
Power Gain Flatness		±3	±4	dB
Output P1dB	30	31		dBm
Output Psat	30			dBm
Harmonic		-25	-20	dBc
Input VSWR		1.5	2	:1
DC Voltage		+15	+16	V DC
DC Supply Current		0.7	1	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	100*50*15	mm
Weight	200	g

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

## Absolute Maximum Ratings:

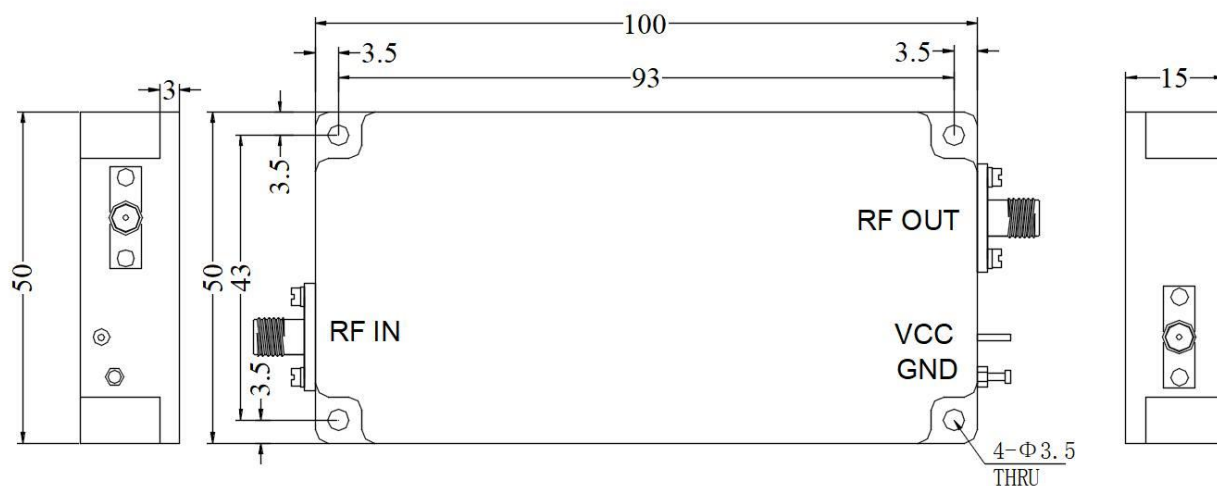
Parameter	Value
Supply Bias Voltage	+16 V
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## Outline Drawing:

Unit:mm

PA-100M-6G-1



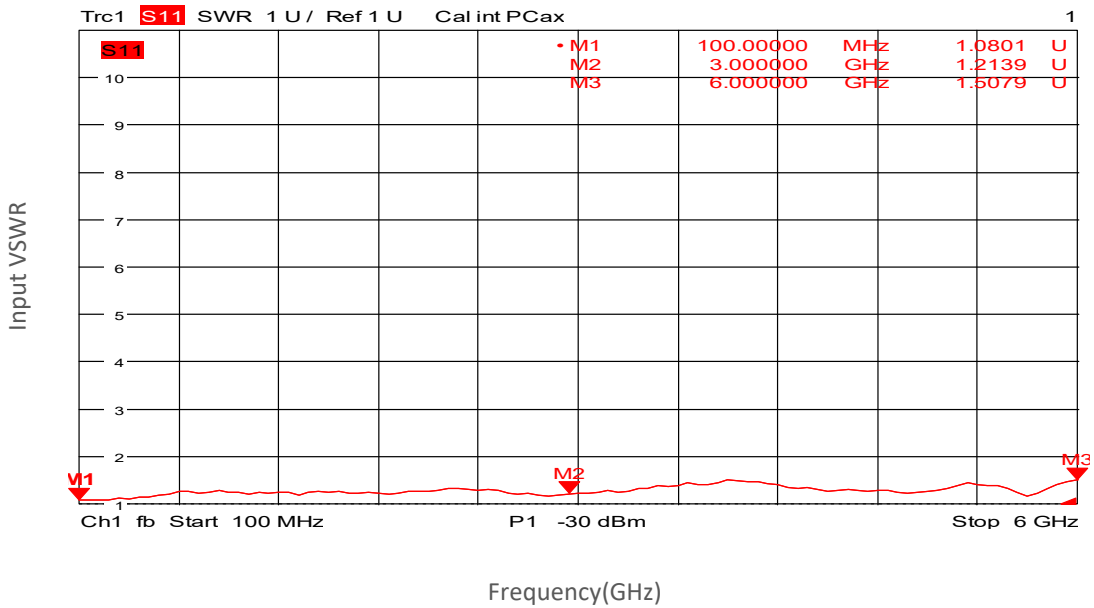
## Ordering Information:

Base Number	Description	Optional
PA-100M-6G-1	Power Amplifier, 0.1-6GHz, Gain:30dB,Psat:1W,+15V DC	Without Heatsink
PA-100M-6G-1-HS	Power Amplifier, 0.1-6GHz, Gain:30dB,Psat:1W,+15V DC	With Heatsink

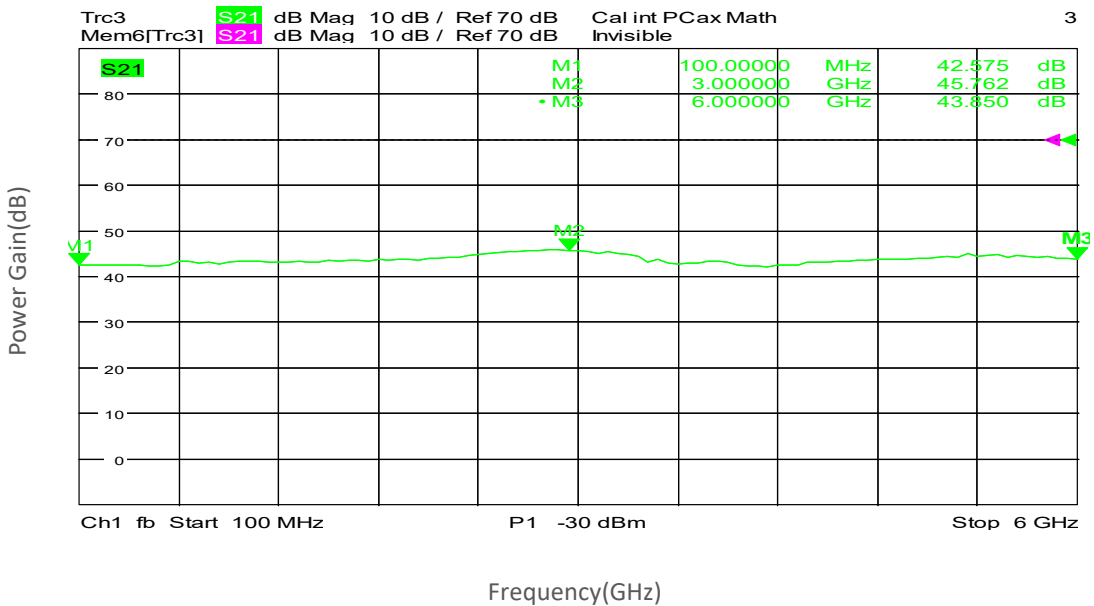


## Typical Performance Data:

### Input VSWR vs Frequency



### Power Gain vs Frequency

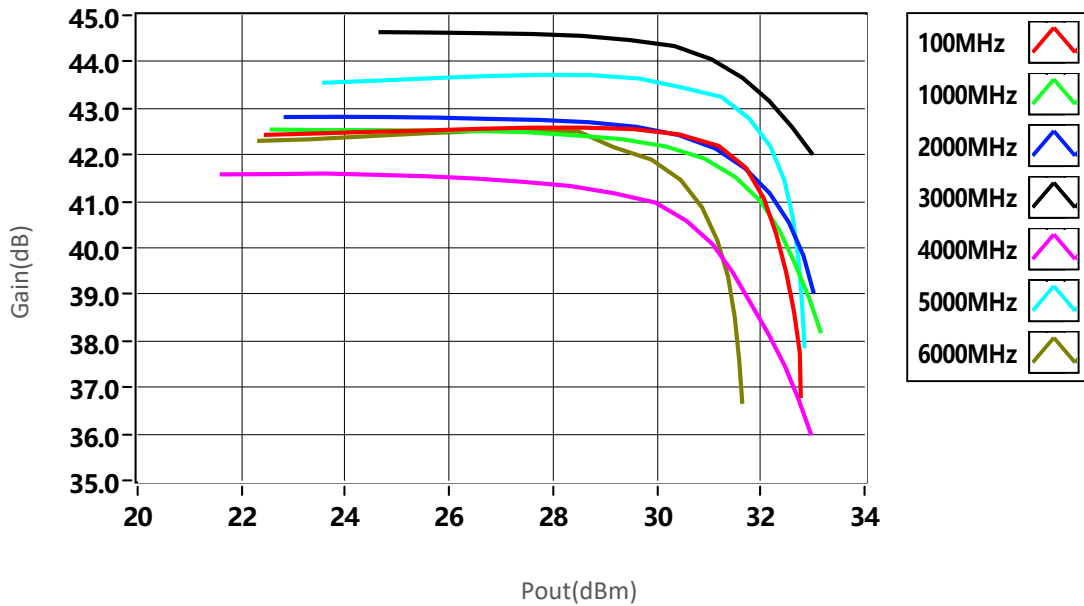


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

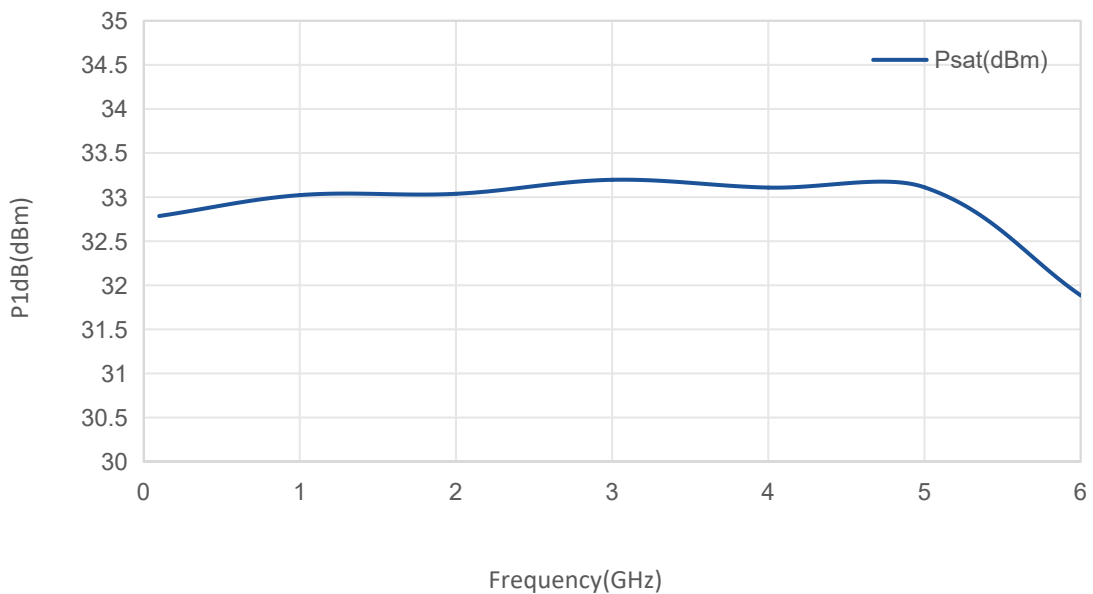


## Typical Performance Data:

### Gain vs Output Power



### P1dB vs Frequency

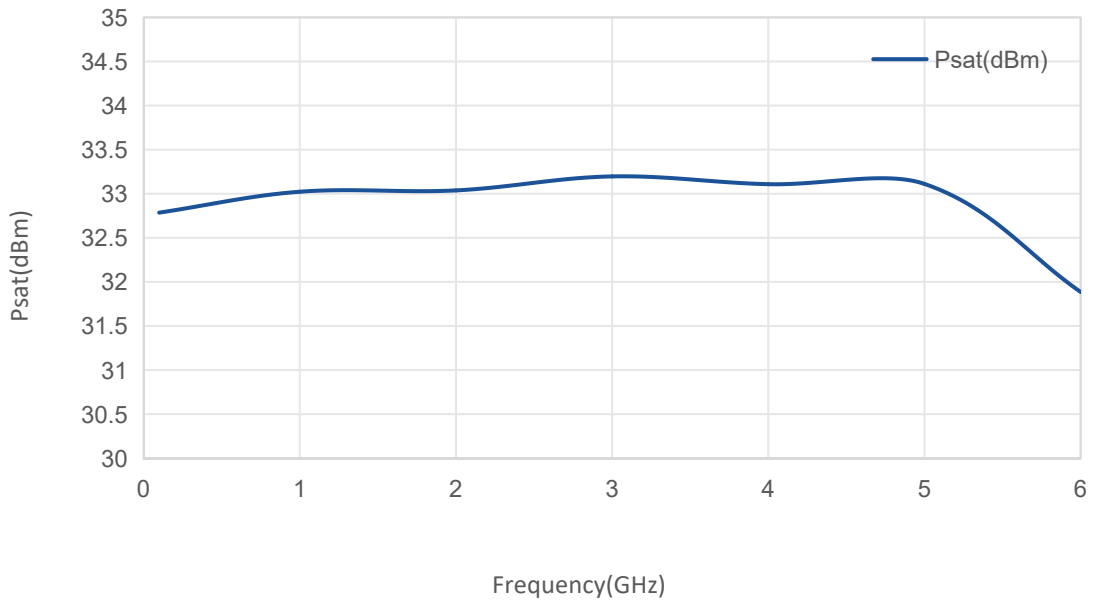


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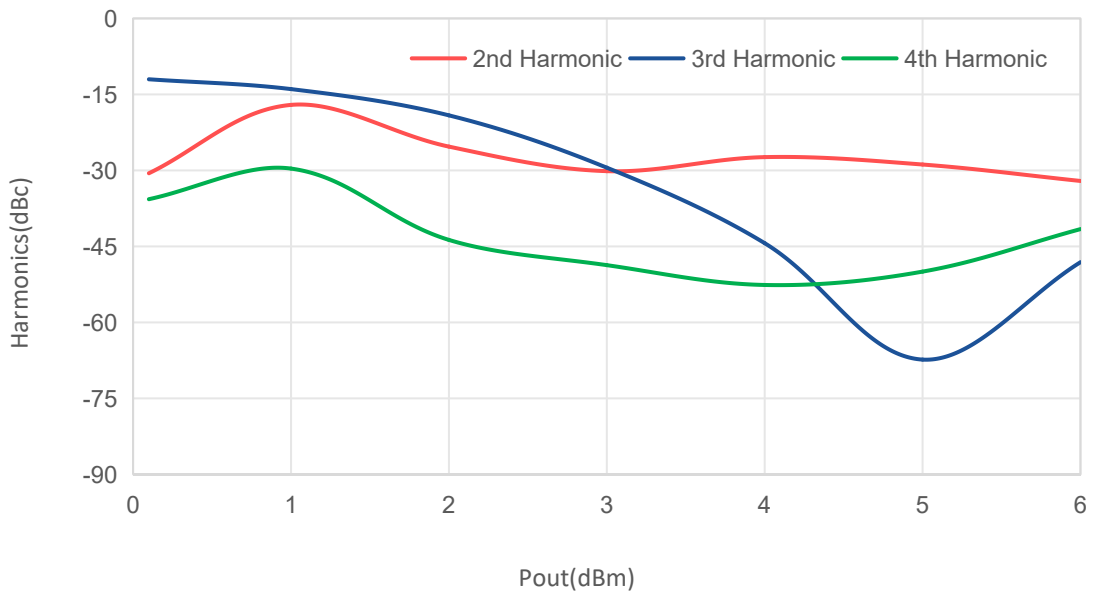


## Typical Performance Data:

### Psat VS Frequency



### 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.