



# Power Amplifier

## Model: PA-10M-40G-0.1

0.01-40GHz 0.1W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

### Features:

- Frequency range: 0.01-40GHz
- High output power at saturation, 0.1W Typ.
- High gain, 28 dB Typ.
- 50 Ohm Matched Input / Output.

### Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

### Product Overview:

The PA-10M-40G-0.1 is a power amplifier with a typical small signal gain of 28 dB and a nominal  $P_{sat}$  of 0.1W across the frequency range of 0.01 to 40GHz. The DC power requirement for the amplifier is +12 VDC/400 mA. The input and output port configuration offers coax adapter structure with 2.92mm female.



## Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	0.01		40	GHz
Small Signal Gain		28		dB
Small Signal Gain Flatness		±2		dB
Output P1dB		18		dBm
Output Psat		20		dBm
Spurious		-60		dBc
Noise Figure		6		dB
Input VSWR		2.0		:1
Output VSWR		2.0		:1
DC Voltage		+12		V DC
DC Supply Current		400		mA
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	2.92mm Female/2.92mm Female	
DC Bias	Solder Pin	
Altitude	50,000	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	44*36*12	mm

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

## Absolute Maximum Ratings:

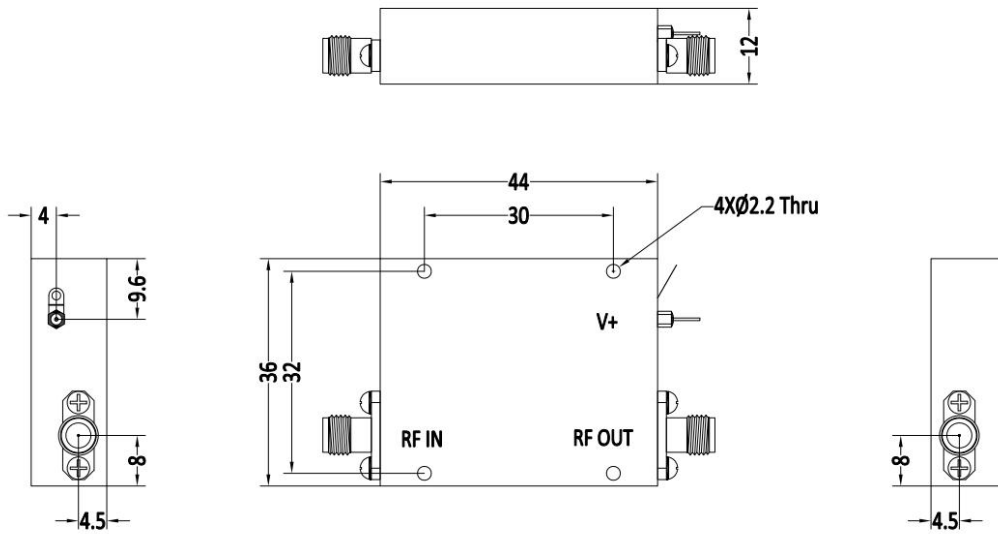
Parameter	Value
Supply Bias Voltage	+12 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



## Outline Drawing:

Unit:mm

PA-10M-40G-0.1



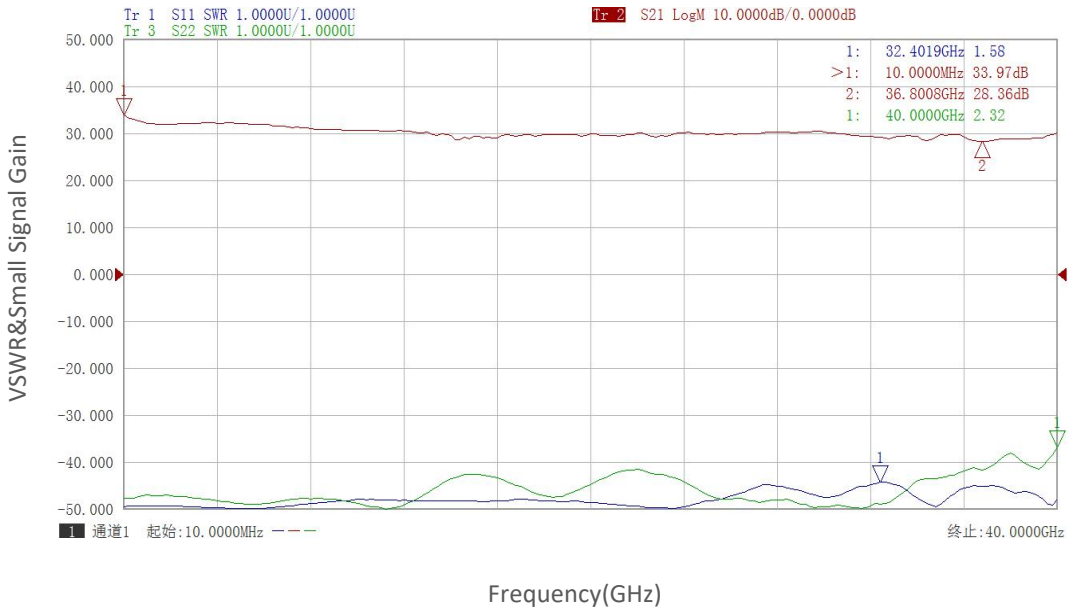
## Ordering Information:

Base Number	Description	Optional
PA-10M-40G-0.1	Power Amplifier, 0.01-40GHz, Gain:28dB,Psat:0.1W,+12V DC	Without Heatsink
PA-10M-40G-0.1-HS	Power Amplifier, 0.01-18GHz, Gain:28dB,Psat:0.1W,+12V DC	With Heatsink

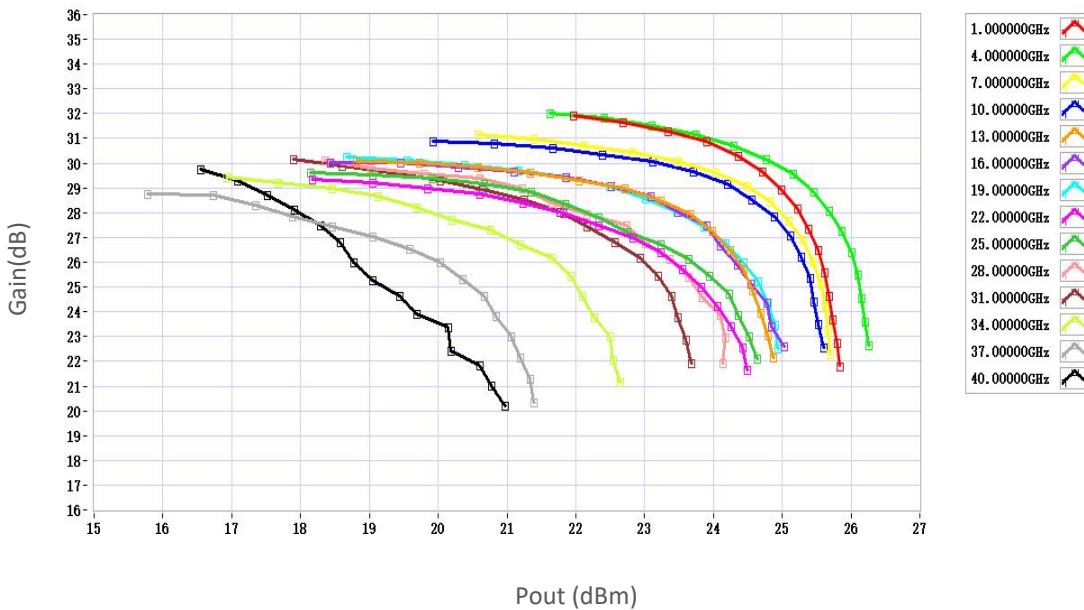


## Typical Performance Data:

### VSWR&Small Signal Gain vs Frequency



### Gain 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:

### P1dB vs Frequency



### P3dB vs Frequency

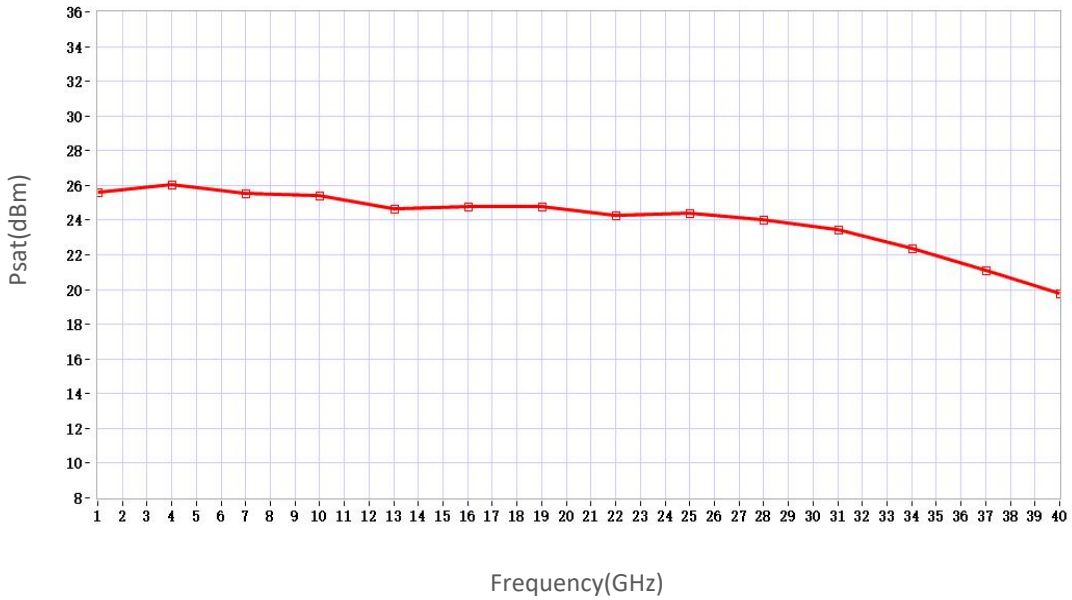


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## Typical Performance Data:

### Psat 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.