Power Amplifier

Model: PA-10M-18G-0.3

0.01-18GHz 0.3W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 0.01-18GHz
- High output power at saturation, 0.3W Min.
- High gain, 31 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-10M-18G-0.3 is a power amplifier with a typical small signal gain of 31 dB and a minimum Psat of 0.3W across the frequency range of 0.01 to 18GHz. The DC power requirement for the amplifier is +12 VDC/500 mA. The input and output port configuration offers coax adapter structure with SMA female.

Electrical Specifications at 25℃:

Parameter	Min	Typ	Max	Units
Frequency range	0.01		18	GHz
Small Signal Gain	27	31		dB
Small Signal Gain Flatness		±2.5		dB
Output P1dB		25		dBm
Output Psat	25	27		dBm
Noise Figure		2.5		dB
Input VSWR		2.0	2.5	:1
Output VSWR		1.8	2.4	:1
DC Voltage		+12		V DC
DC Supply Current		500		mA
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temerature*	-40℃ to +60℃	
Non-operating Temperature*	-50℃ to +70℃	
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	52*44*13	mm

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

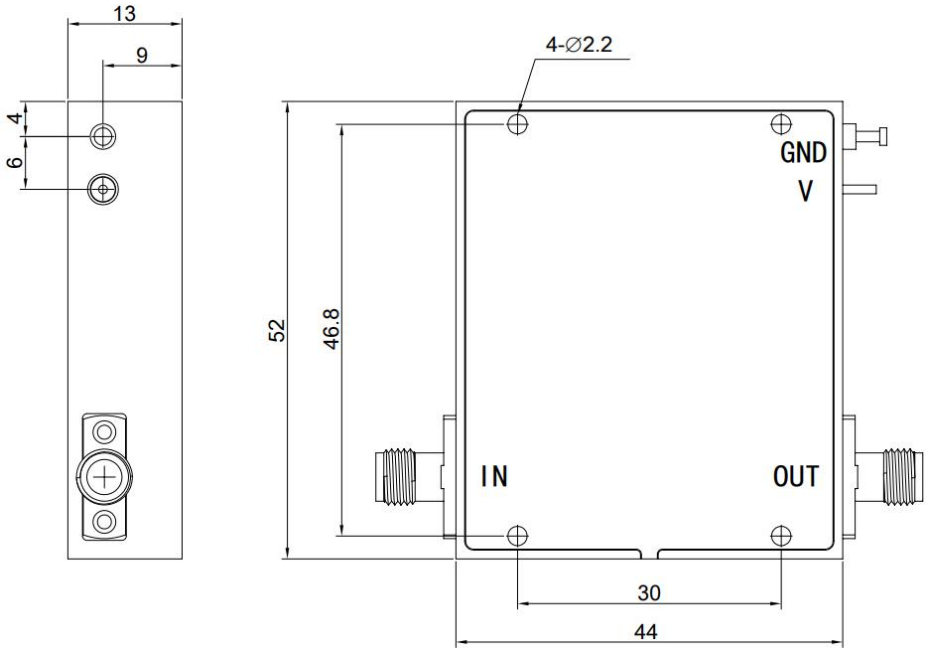
Absolute Maximum Ratings:

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-18G-0.3

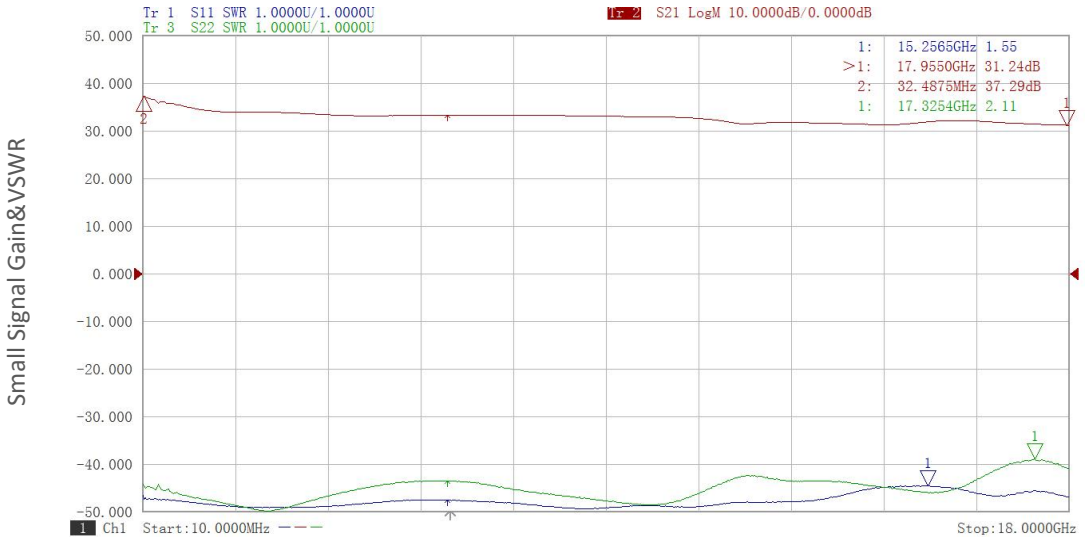


Ordering Information:

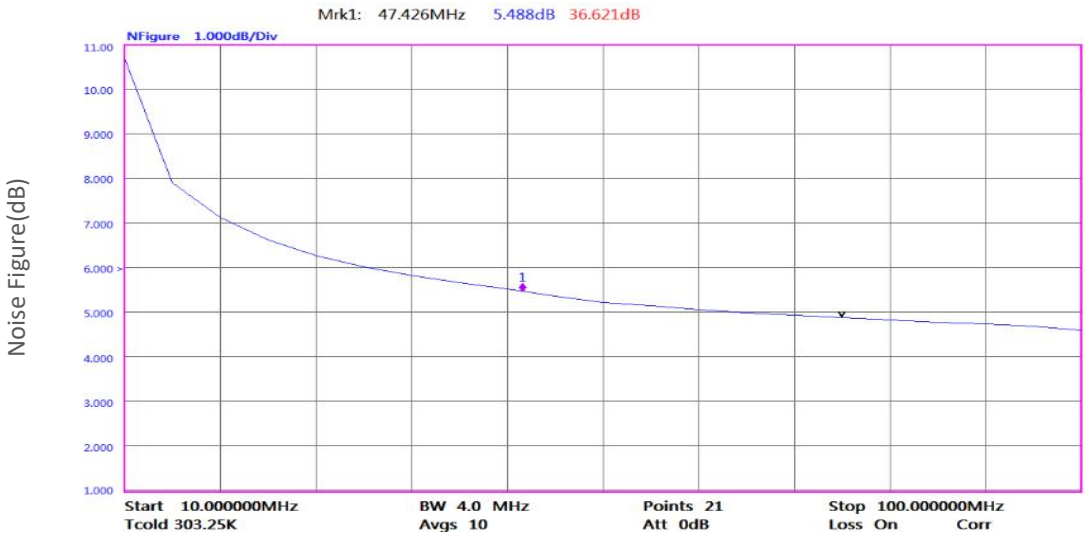
Base Number	Description	Optional
PA-10M-18G-0.3	Power Amplifier, 0.01-18GHz, Gain:31dB,Psat:0.3W,+12V DC	Without Heatsink
PA-10M-18G-0.3-HS	Power Amplifier, 0.01-18GHz, Gain:31dB,Psat:0.3W,+12V DC	With Heatsink

Typical Performance Data:

Small Signal Gain&VSWR vs Frequency



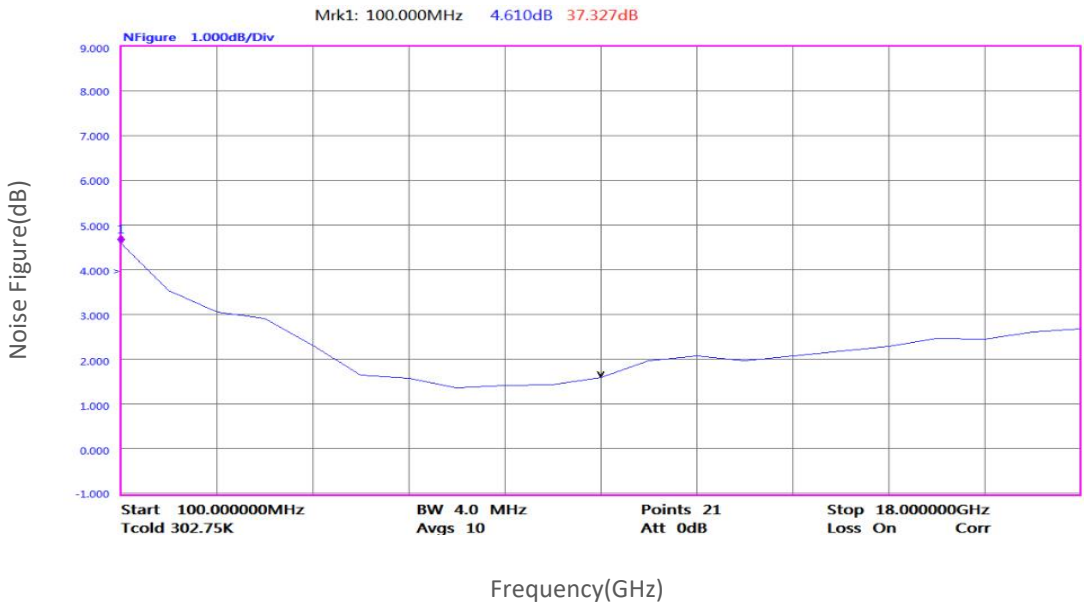
Noise Figure vs Frequency



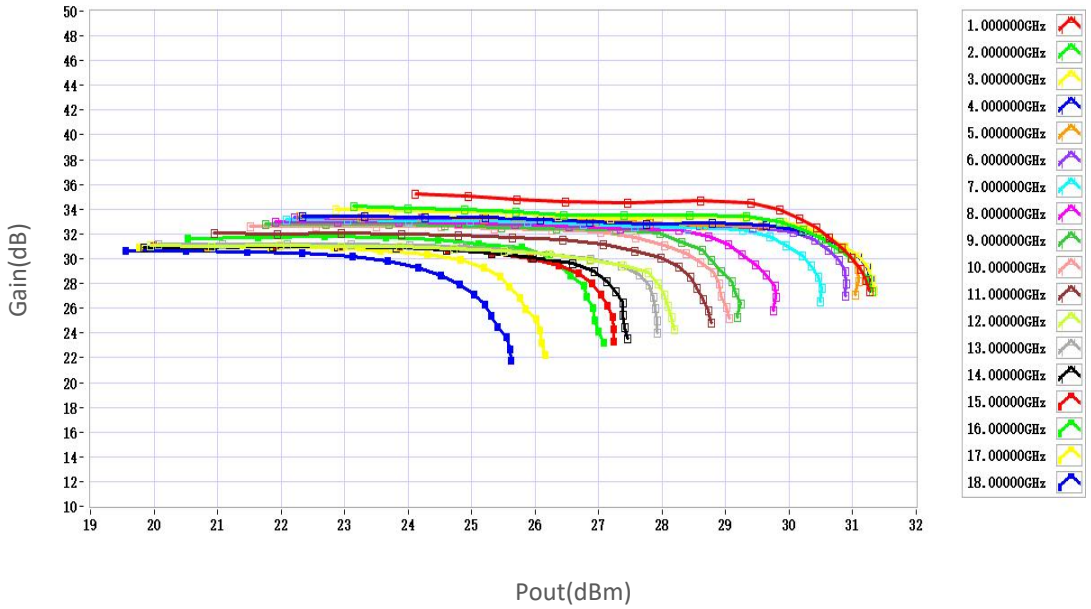
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

Noise Figure vs Frequency



Gain vs Output Power



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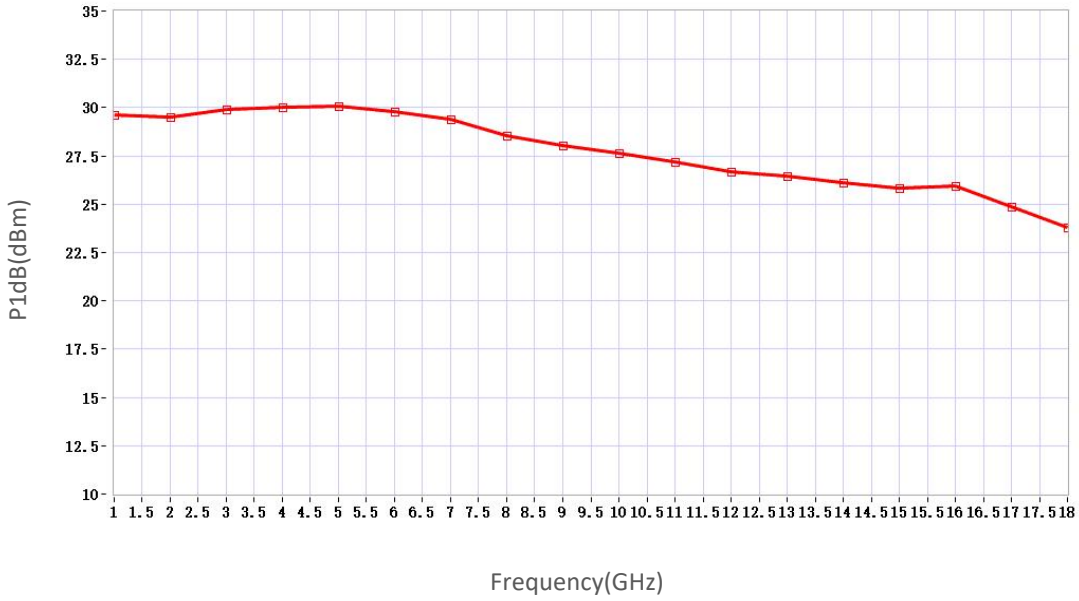
Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency

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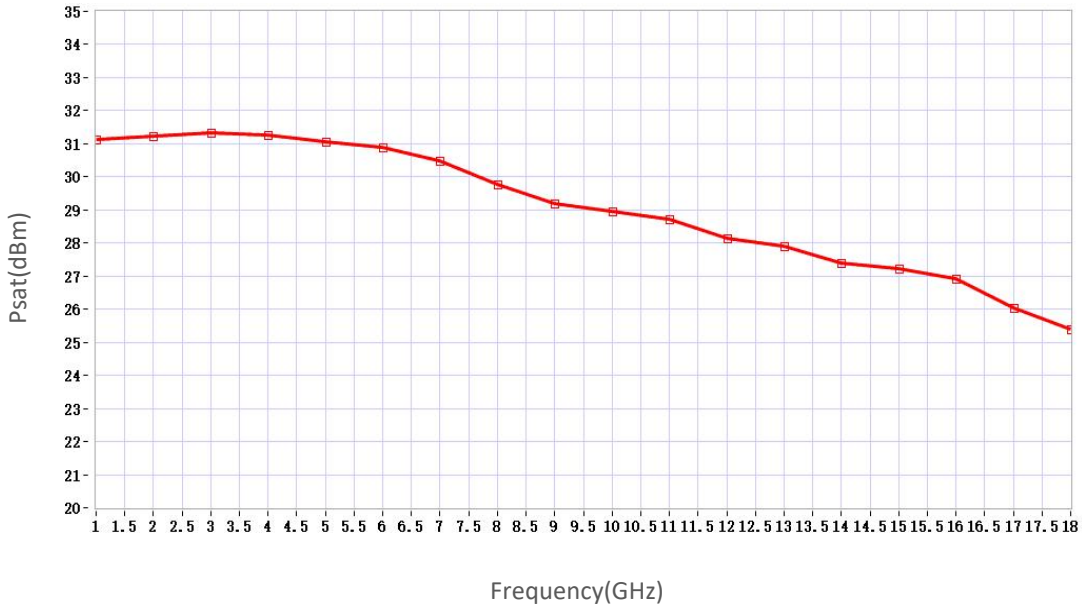
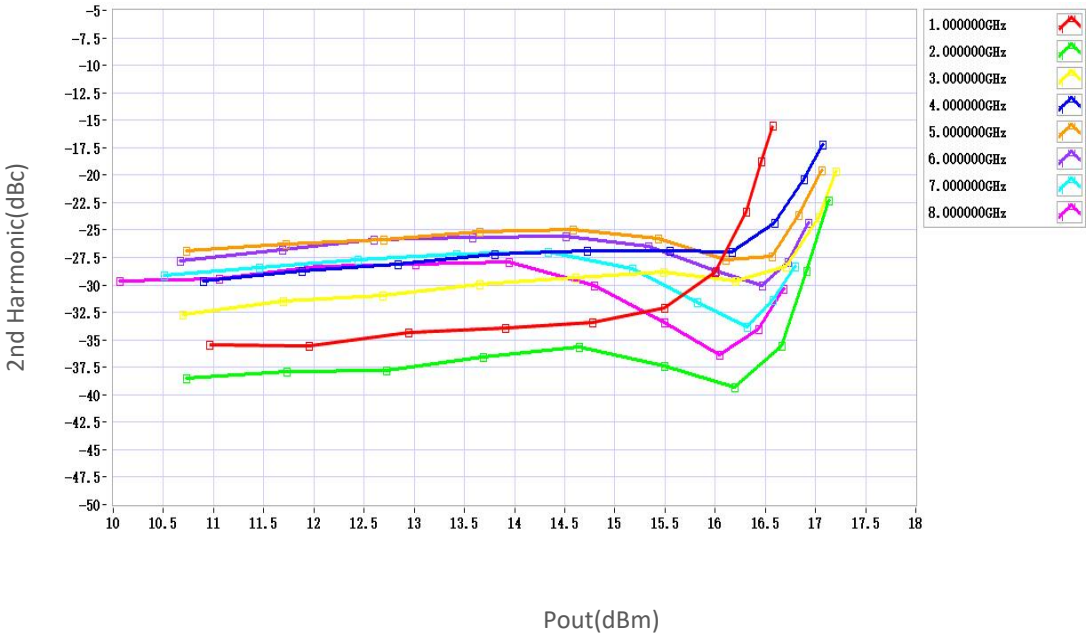
Typical Performance Data:

Psat vs Frequency



2nd Harmonic vs Output Power



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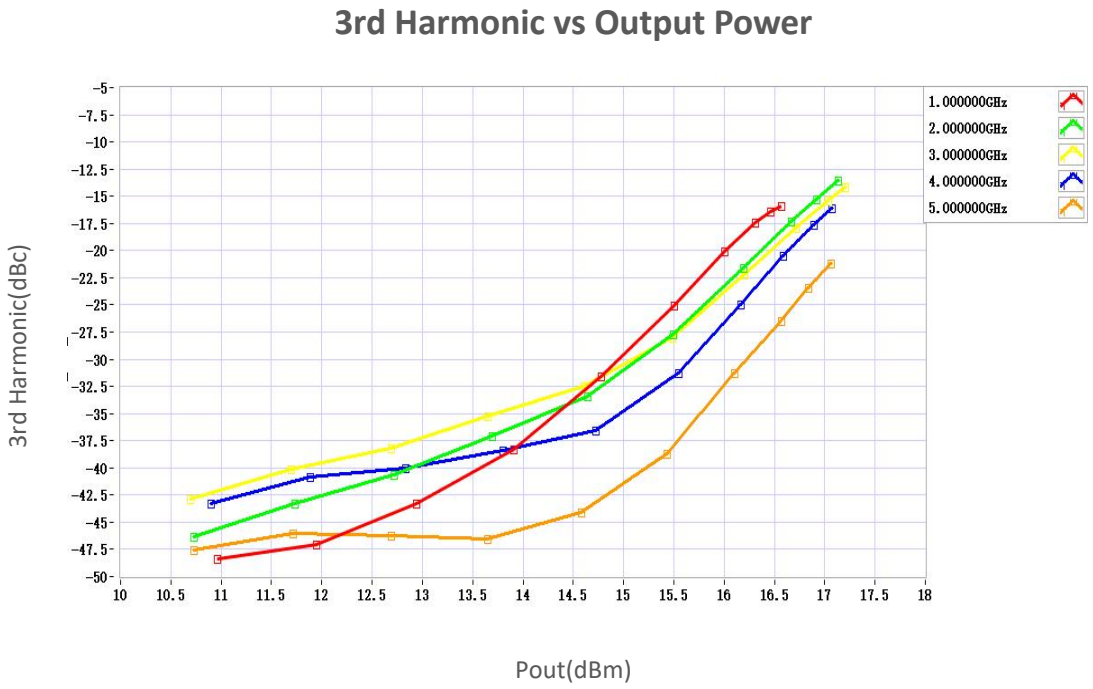

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