Power Amplifier

Model: PA-1G-18G-1.6

1-18GHz 1.6W CW

Ultrabroad frequency range, high performanceand exceptional RF characteristics

Features:

- Frequency range: 1-18GHz
- High output power at saturation, 1.6W Typ.
- High gain, 43 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview：

The PA-1G-18G-1.6 is a power amplifier with a typical small signal gain of 43 dB and a nominal Psat of 1.6W across the frequency range of 1 to 18GHz. The DC power requirement for the amplifier is +18 VDC/700 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	1		18	GHz
Small Signal Gain	42	43		dB
Small Signal Gain Flatness		±2	±2.5	dB
Output P1dB	30	31		dBm
Output Psat		32		dBm
Spurious		-60		dBc
Input VSWR		2	2.2	:1
Output VSWR		2	2.2	:1
DC Voltage		+18		V DC
DC Supply Current		700		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	30,000	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	58.5*38*12.5	mm

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

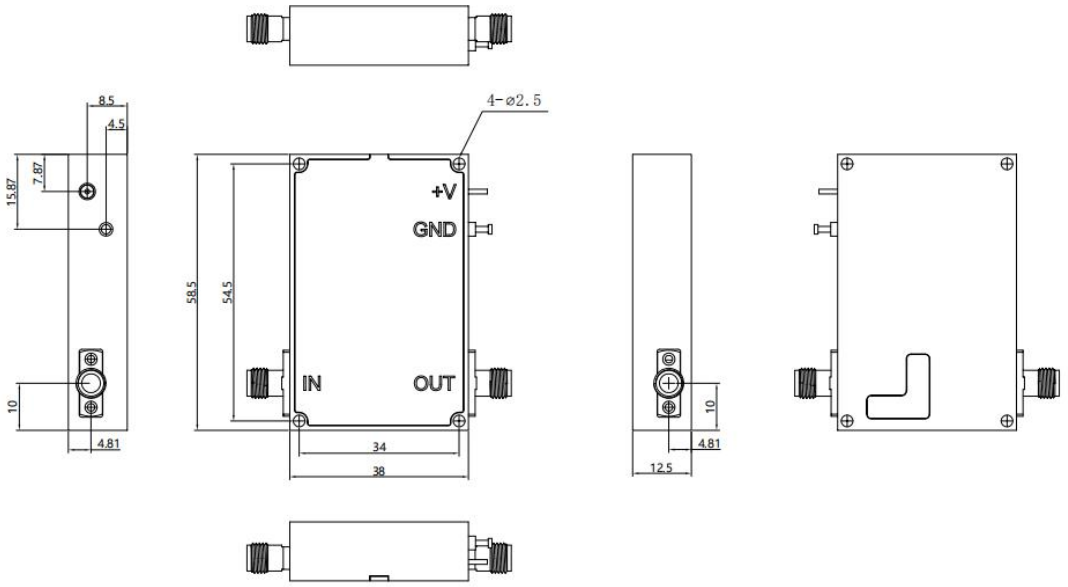
Absolute Maximum Ratings:

Parameter	Value
Supply Bias Voltage	+30 V
RF Input Power	+15 dBm
ESD sensitivity (HBm)	Class 0, passed 150V

Outline Drawing:

Unit:mm

PA-1G-18G-1.6

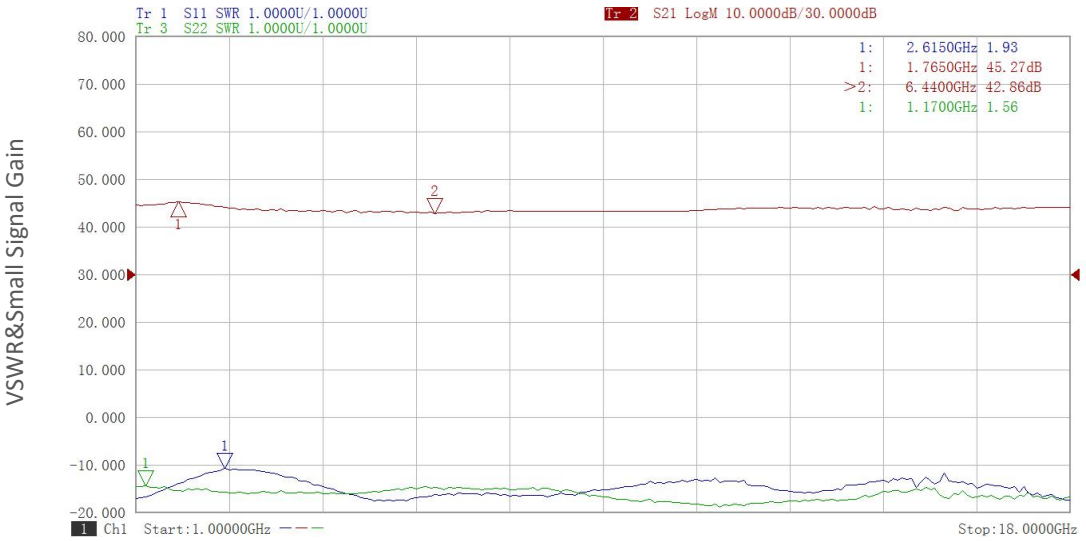


Ordering Information:

Base Number	Description	Optional
PA-1G-18G-1.6	Power Amplifier, 1-18GHz, Gain:43dB,Psat:1.6W,+18V DC	Without Heatsink
PA-1G-18G-1.6-HS	Power Amplifier, 1-18GHz, Gain:43dB,Psat:1.6W,+18V DC	With Heatsink

Typical Performance Data:

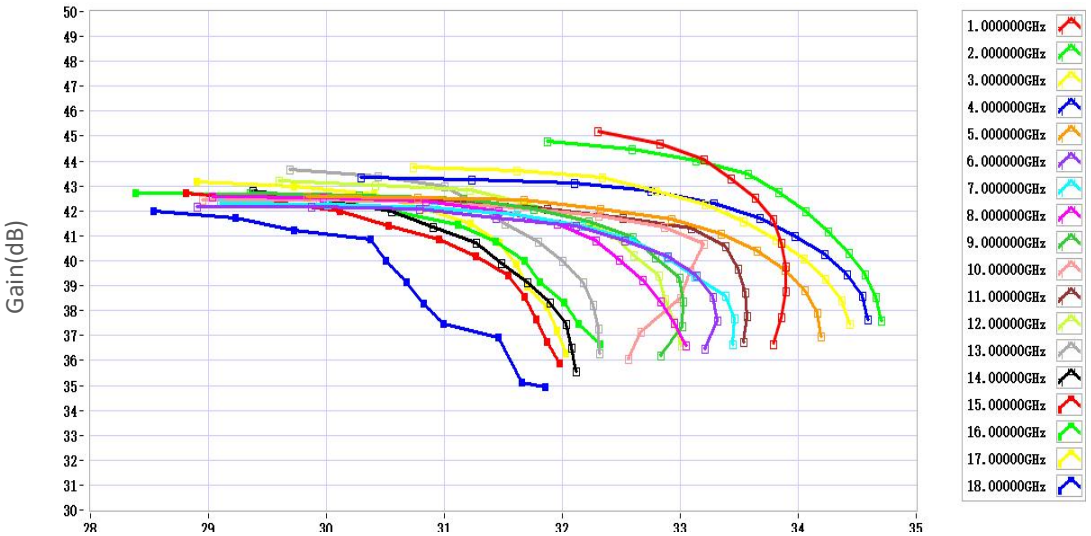
VSWR&Small Signal Gain vs Frequency



VSWR&Small Signal Gain

Frequency(GHz)

Gain vs Output Power



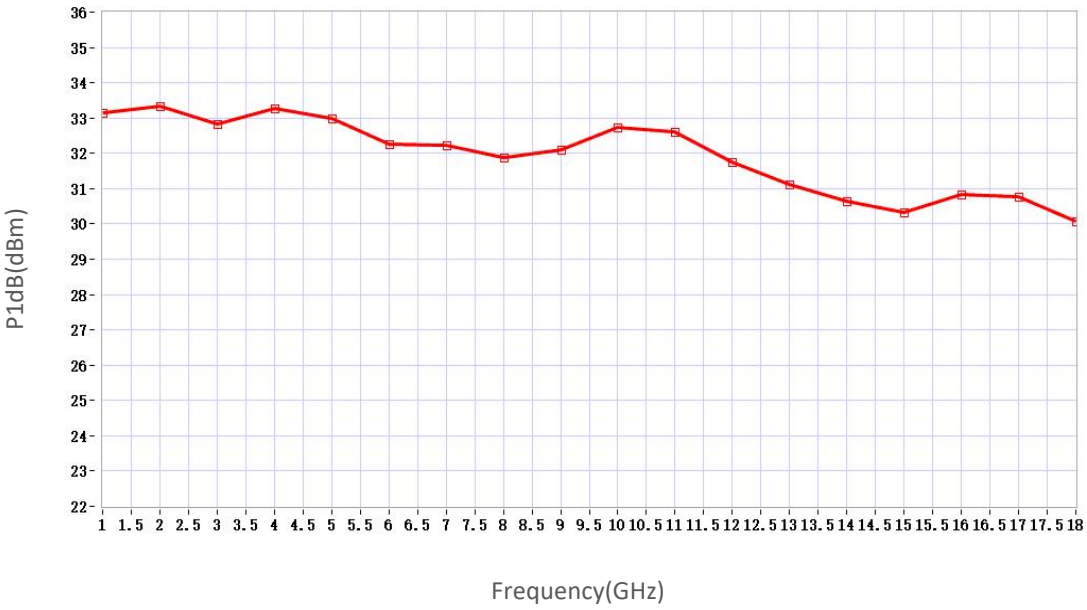
Gain(dB)

Pout (dBm)

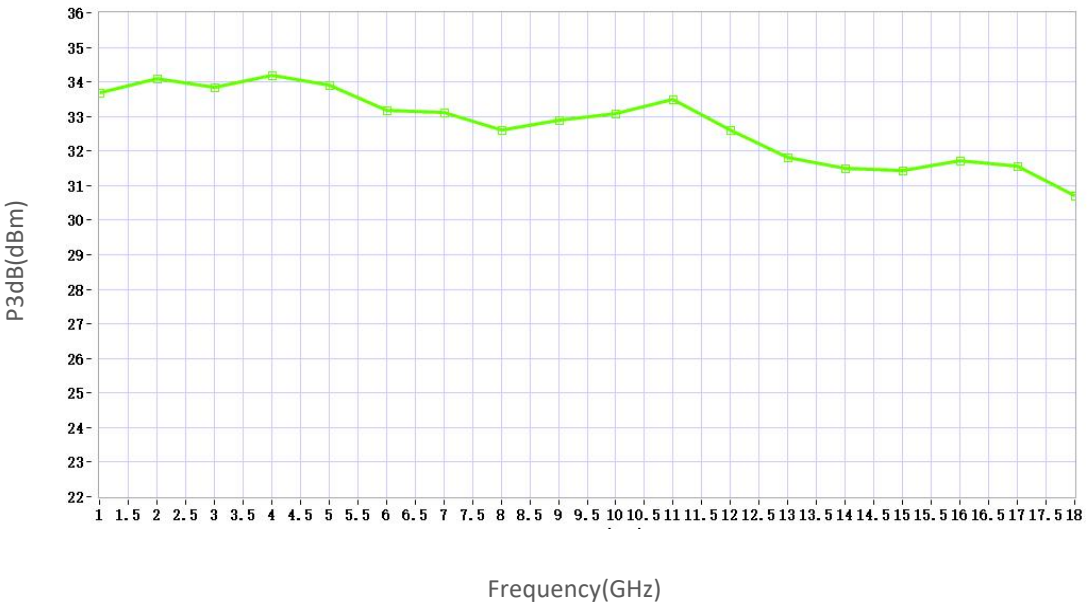
Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency



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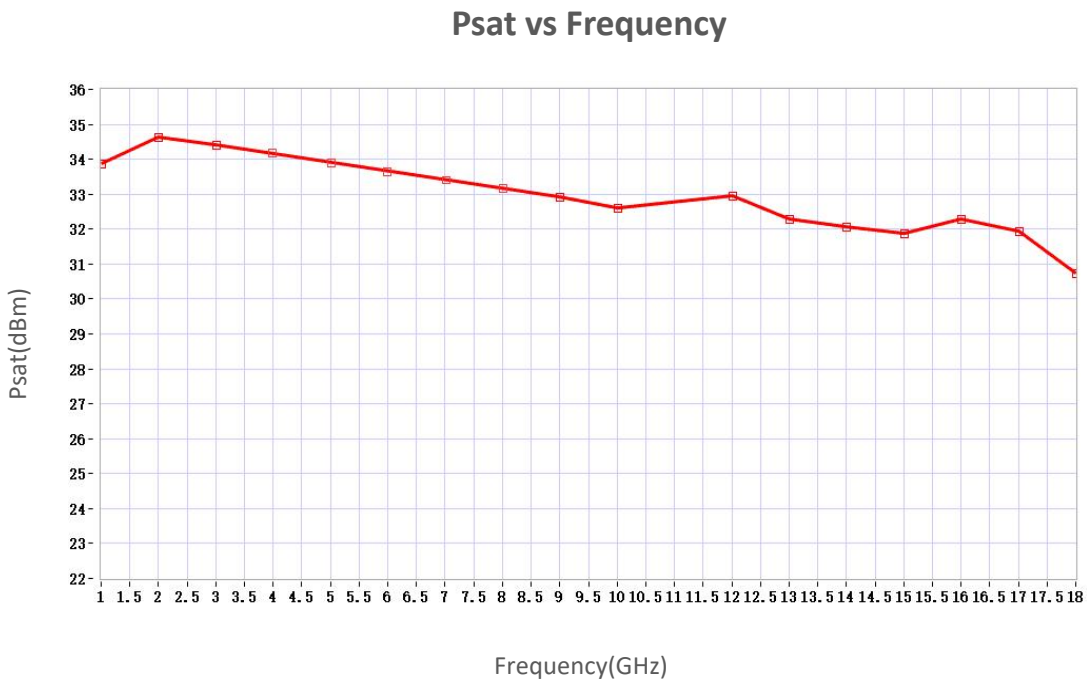
Typical Performance Data:



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