



Power Amplifier

Model: PA-1G-18G-2.5

1-18GHz 2.5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 1-18GHz
- High output power at saturation, 2.5W Typ.
- High gain, 40 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-1G-18G-2.5 is a power amplifier with a minimum small signal gain of 40 dB and a nominal P_{sat} of 2.5 W across the frequency range of 1 to 18 GHz. The DC power requirement for the amplifier is +20 VDC/0.8 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	1		18	GHz
Small Signal Gain	40	41		dB
Small Signal Gain Flatness		±2.5	±3	dB
Output P1dB		31		dBm
Output Psat		34		dBm
Spurious@Psat		-60		dBc
Input VSWR		2.0	2.5	:1
Output VSWR		2.0	2.5	:1
DC Voltage		+20		V DC
DC Supply Current		0.8		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 to 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	mm

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

Absolute Maximum Ratings:

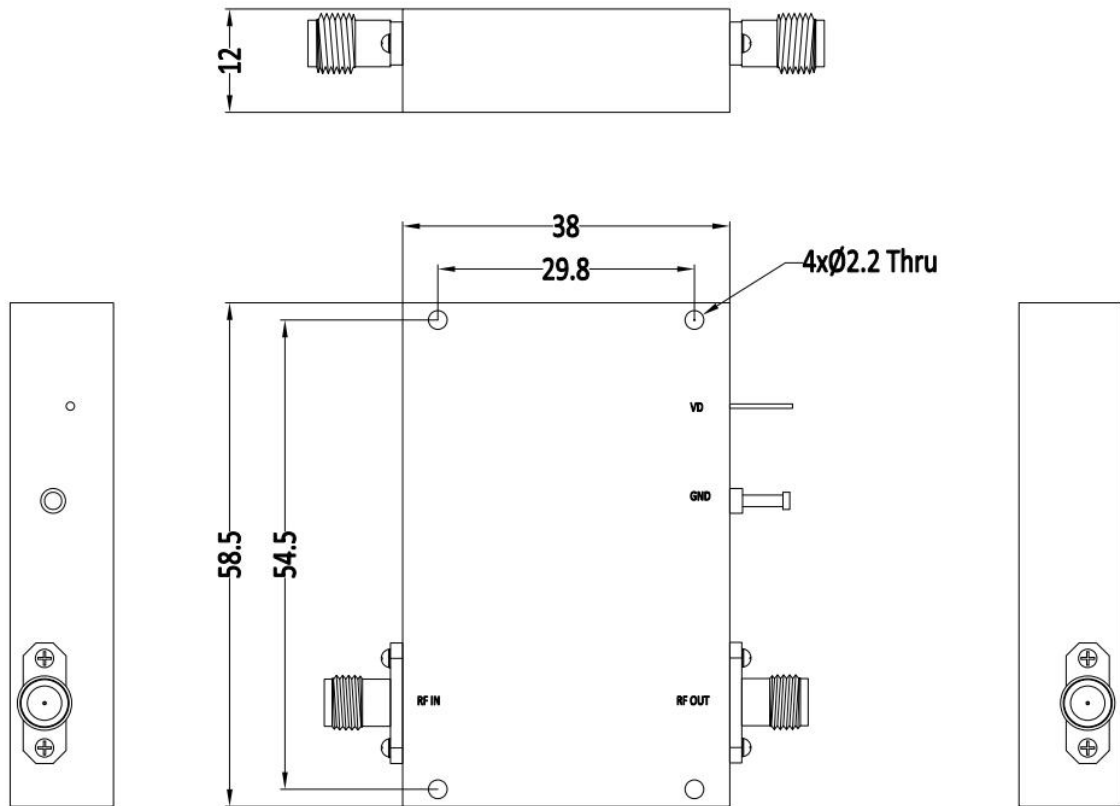
Parameter	Value
Supply Bias Voltage	TBD
RF Input Power	+5 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-1G-18G-2.5



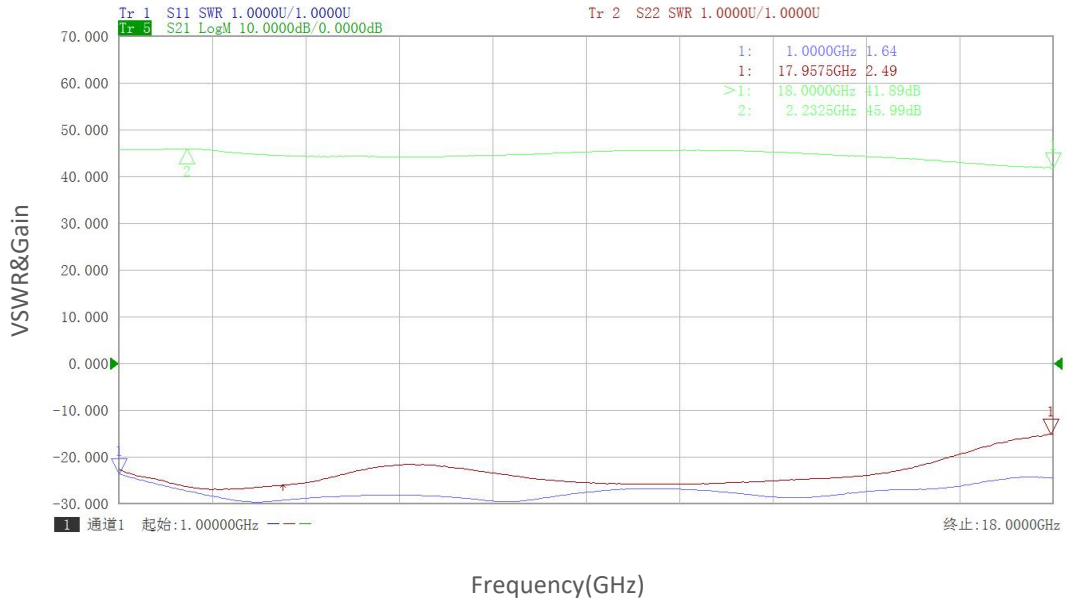
Ordering Information:

Base Number	Description	Optional
PA-1G-18G-2.5	Power Amplifier, 1-18GHz, Gain:40dB,Psat:2.5W,+20V DC	Without Heatsink
PA-1G-18G-2.5-HS	Power Amplifier, 1-18GHz, Gain:40dB,Psat:2.5W,+20V DC	With Heatsink

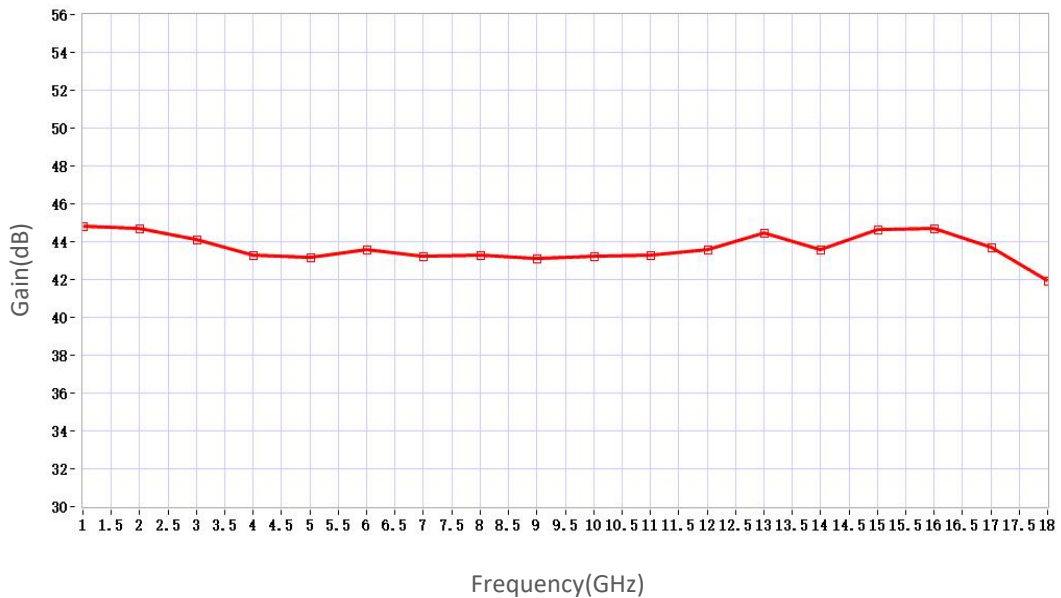


Typical Performance Data:

VSWR&Gain vs Frequency



Gain vs Frequency

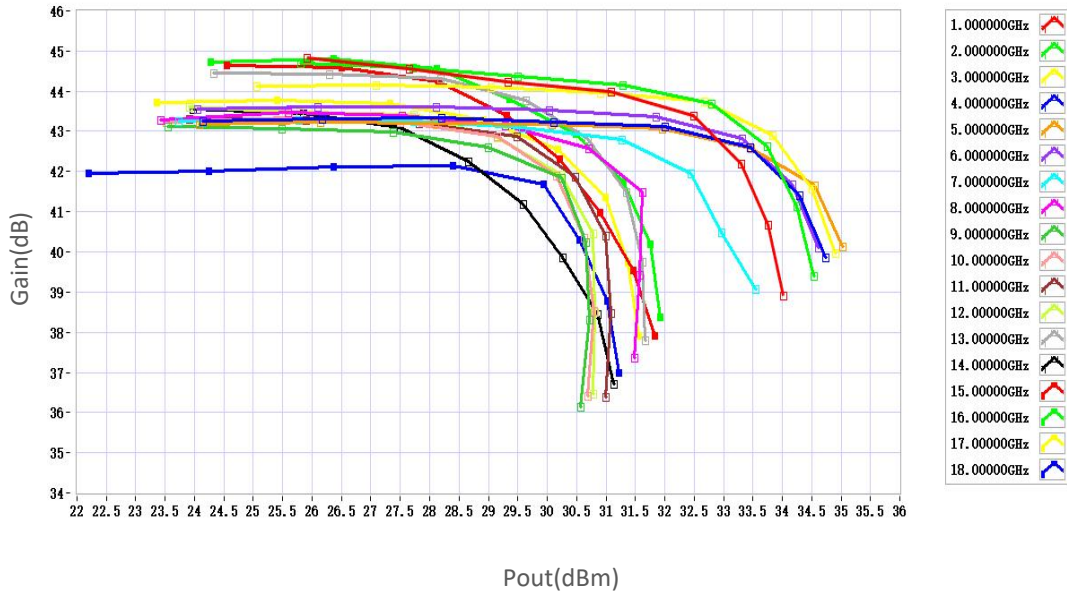


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

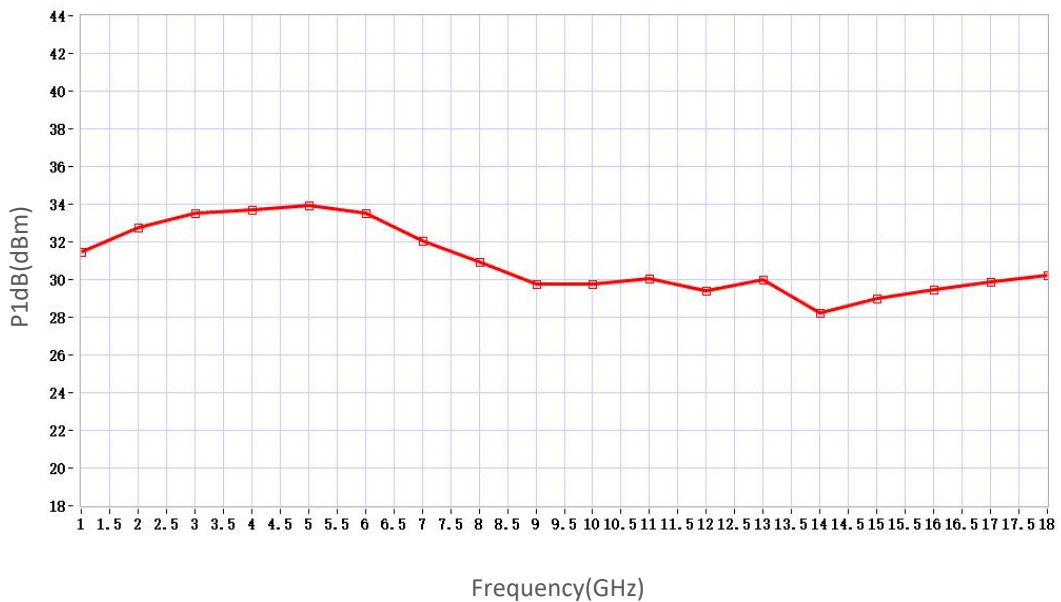


Typical Performance Data:

Gain vs Output Power



P1dB vs Frequency

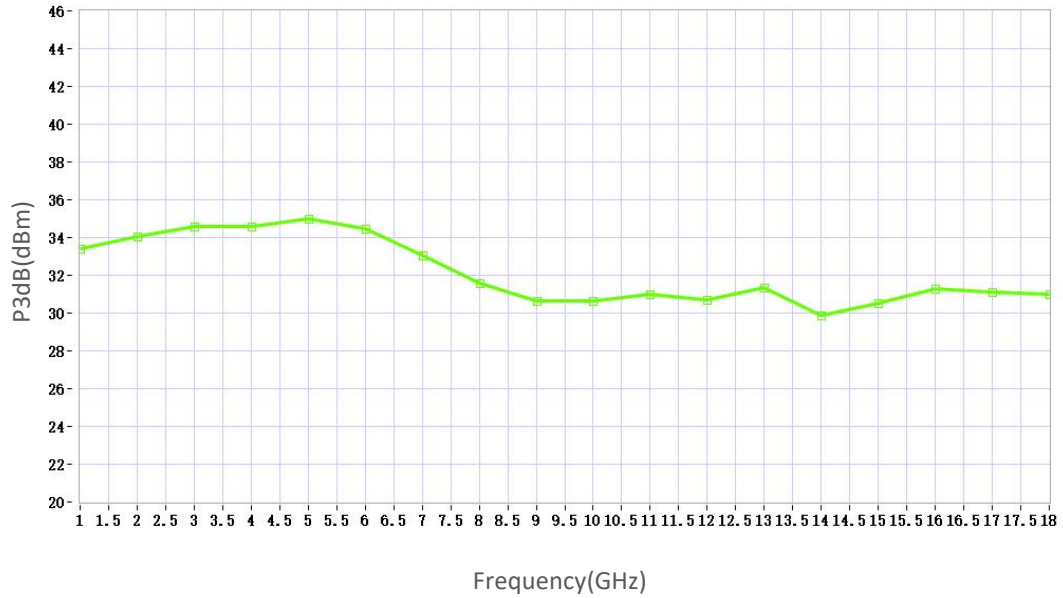


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



Typical Performance Data:

P3dB 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.