



Power Amplifier

Model: PA-18G-25G-3

18-25GHz 3W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 18-25GHz
- High output power at saturation, 3W Typ.
- High gain, 30 dB Min.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-18G-25G-3 is a power amplifier with a minimum small signal gain of 30 dB and a nominal P_{sat} of 3W across the frequency range of 18 to 25 GHz. The DC power requirement for the amplifier is +18 VDC/1.7 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	18		25	GHz
Small Signal Gain	30			dB
Small Signal Gain Flatness		±2.5		dB
Output P1dB		34		dBm
Output Psat		35		dBm
Spurious@Pout=33dBm			-50	dBc
Harmonic@Pout=33dBm		-15		dBc
Input VSWR		2.0		:1
DC Voltage		18		V DC
DC Supply Current		1.7		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	130.4*74.5*16	mm
Weight	≤500	g

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

Absolute Maximum Ratings:

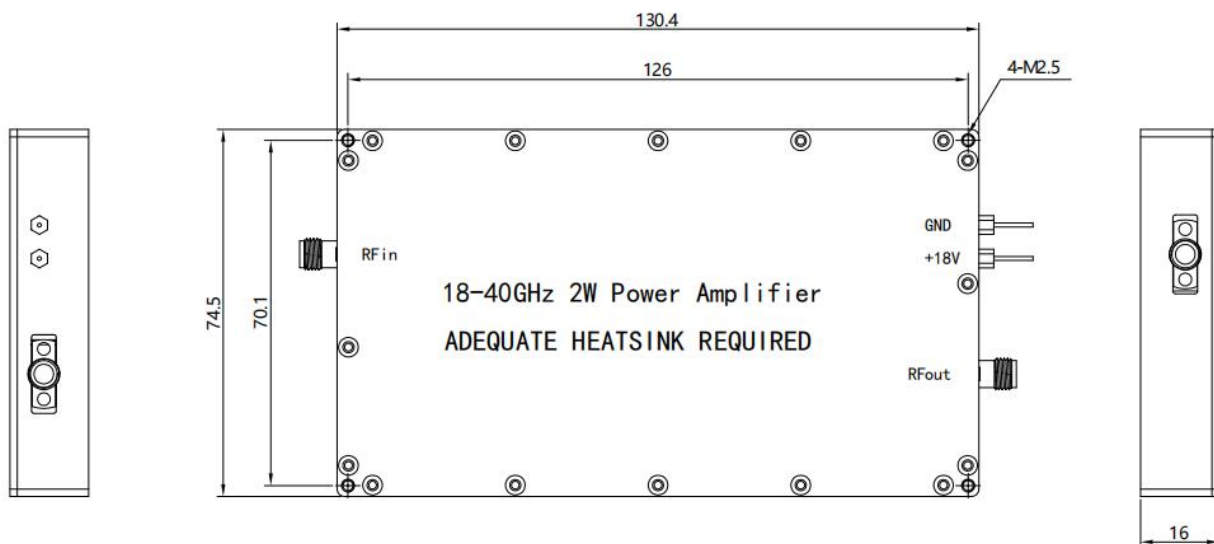
Parameter	Value
Supply Bias Voltage	+18 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-18G-25G-3



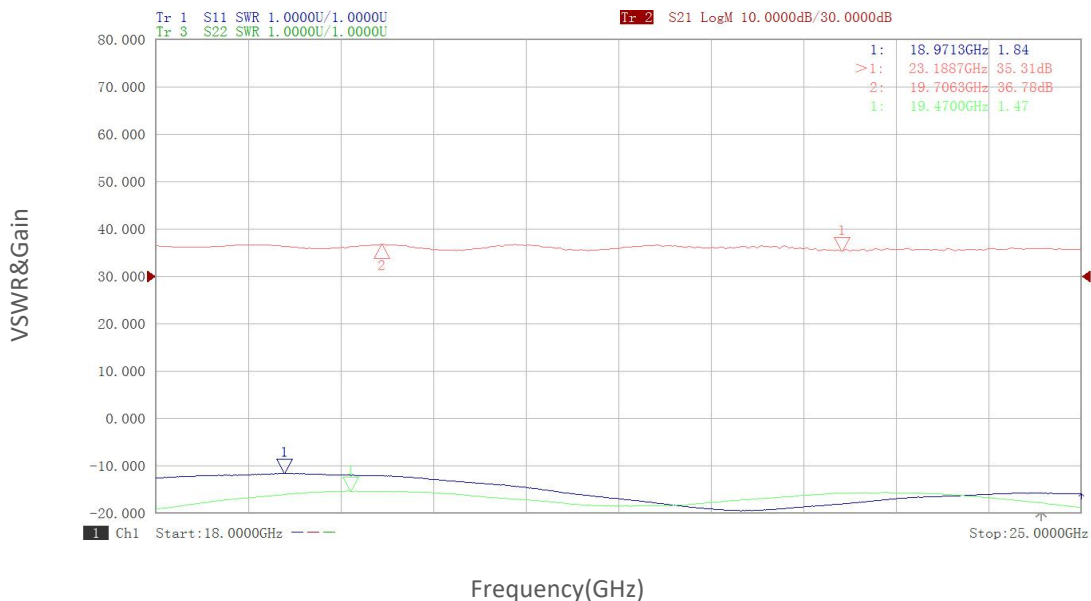
Ordering Information:

Base Number	Description	Optional
PA-18G-25G-3	Power Amplifier, 18-25GHz, Gain:30dB,Psat:3W,+18V DC	Without Heatsink
PA-18G-25G-3-HS	Power Amplifier, 18-25GHz, Gain:30dB,Psat:3W,+18V DC	With Heatsink

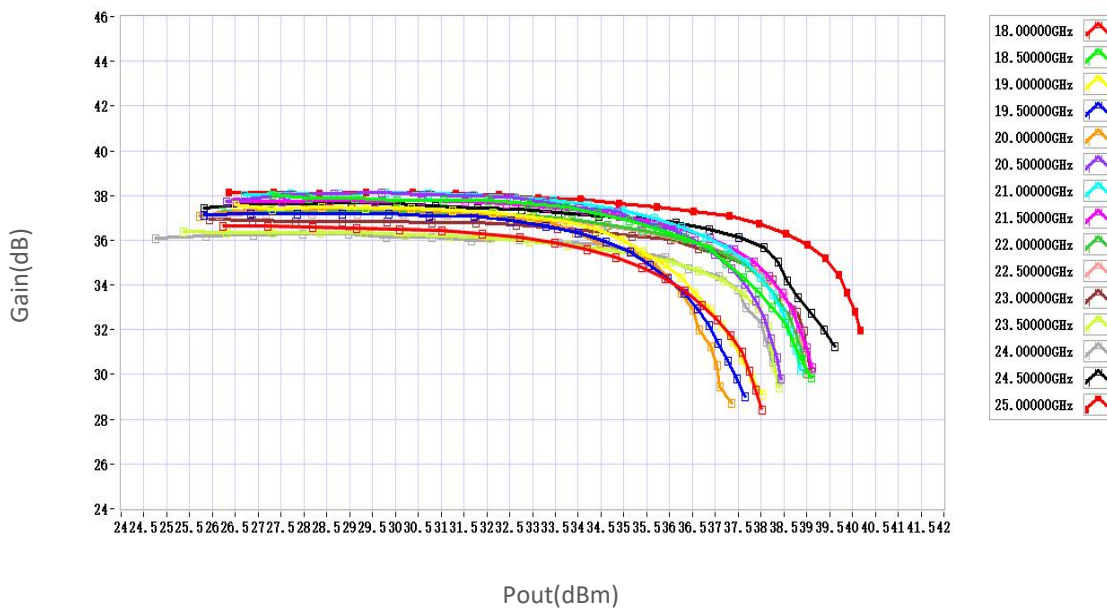


Typical Performance Data:

VSWR&Gain vs Frequency



Gain vs Output Power

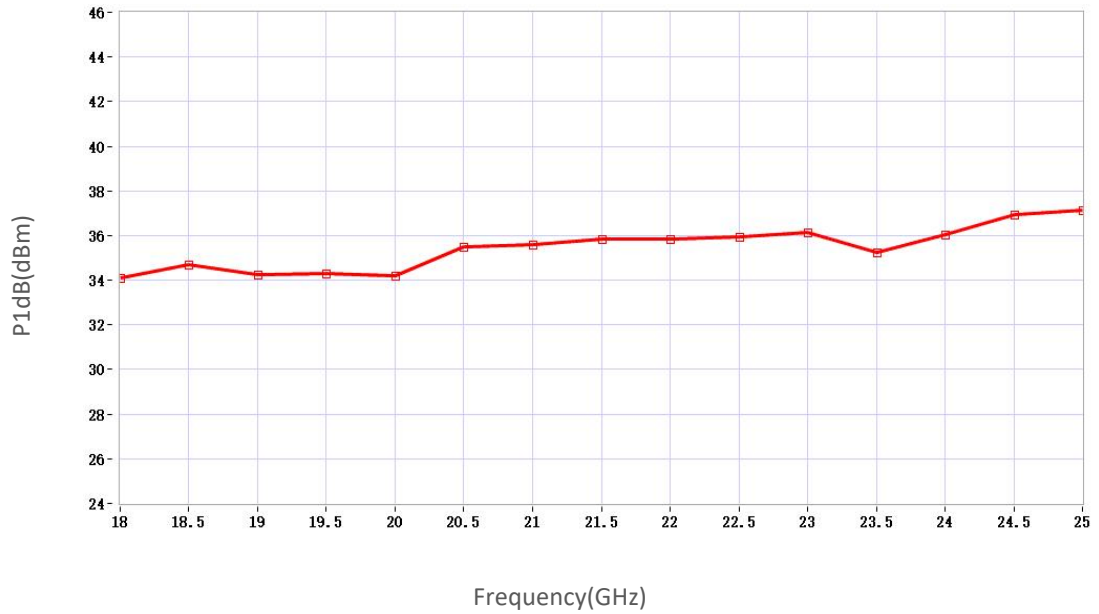


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

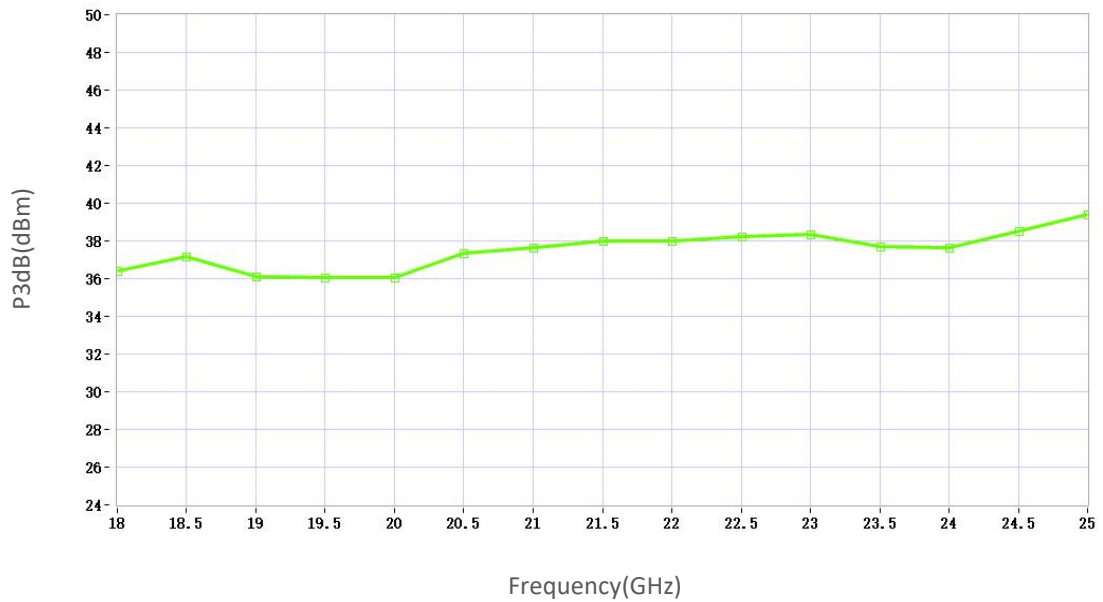


Typical Performance Data:

P1dB vs Frequency



P3dB vs Frequency

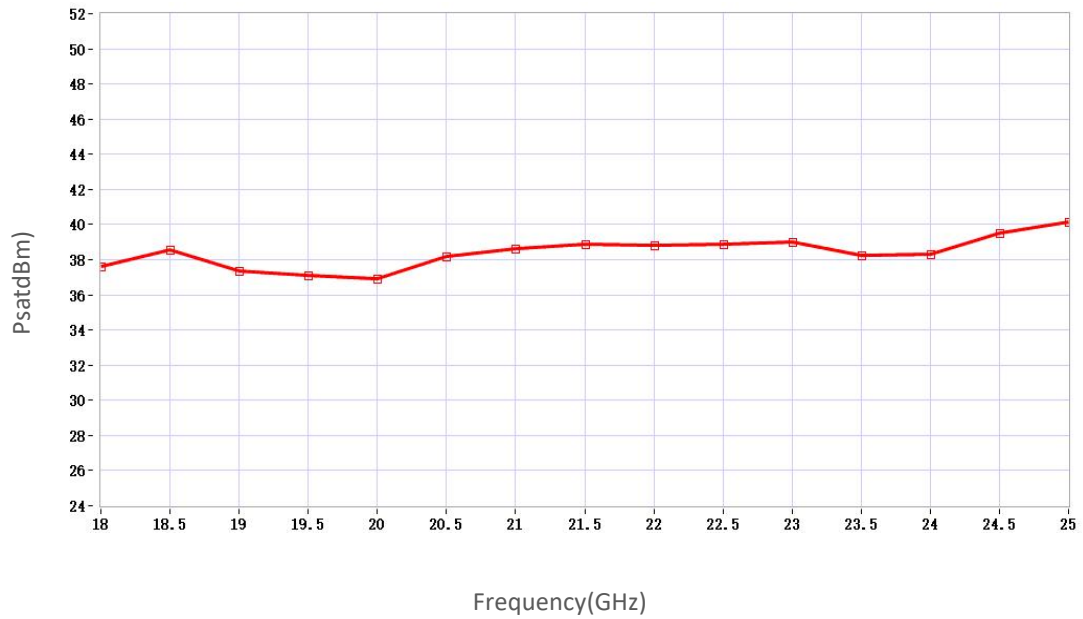


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.



Typical Performance Data:

Psatd 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.