



Power Amplifier

Model: PA-18G-40G-5-L

18-40GHz 5W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 18-40GHz
- High output power at saturation, 5W Typ.
- High gain, 35 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-18G-40G-5-L is a power amplifier with a typical small signal gain of 35 dB and a nominal P_{sat} of 5W across the frequency range of 18 to 40 GHz. The DC power requirement for the amplifier is +24 VDC/1.7 A. 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	18		40	GHz
Small Signal Gain		35		dB
Small Signal Gain Flatness		±4		dB
Output P1dB		35		dBm
Output Psat		37		dBm
Spurious			-60	dBc
Harmonic			-15	dBc
Input VSWR			2.0	:1
DC Voltage		+24		V DC
DC Supply Current		1.7		A
Impedance		50		Ohms

Mechanical Specifications:

Parameter	Value	Notes
Operating Temperature*	-40°C to +50°C	
Non-operating Temperature*	-50°C to +60°C	
Relative humidity	95	%
RF Input/Output Connector	2.92mm Femlae/2.92mm 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	50*80*12(Without heatsink) 100*200*58(With heatsink)	mm

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

Absolute Maximum Ratings:

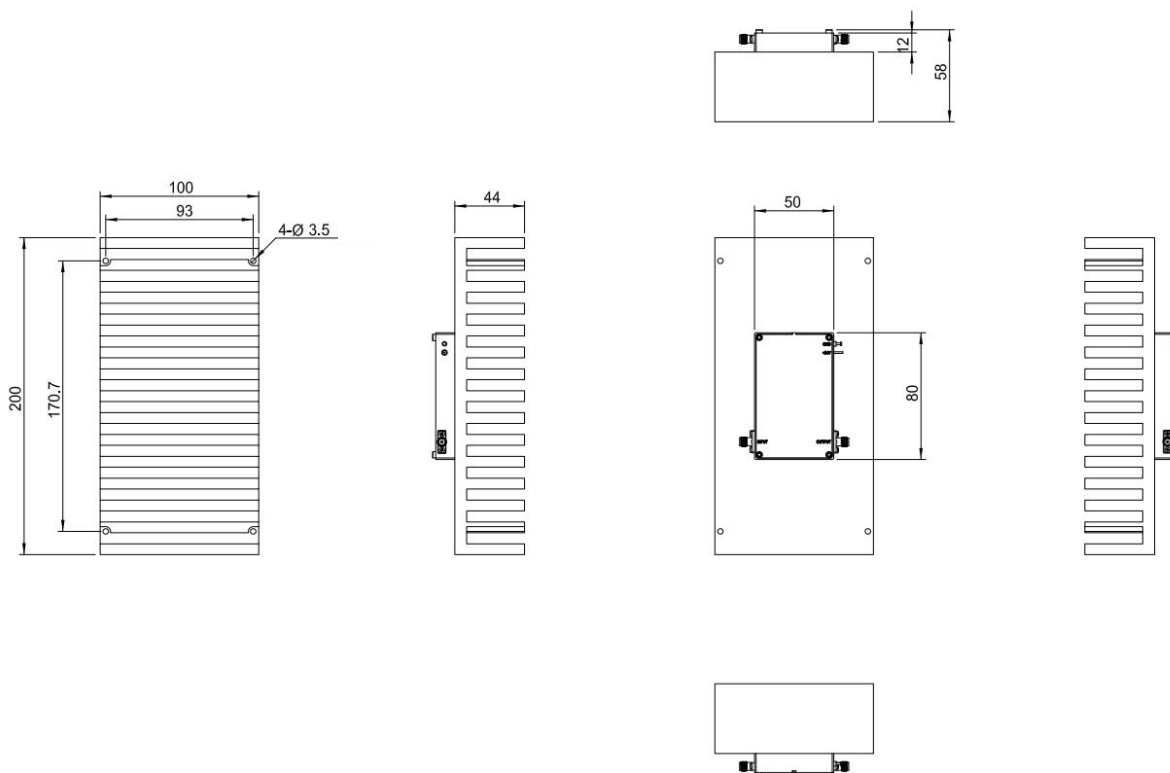
Parameter	Value
Supply Bias Voltage	+25 V
RF Input Power	+20 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-18G-40G-5-L-HS



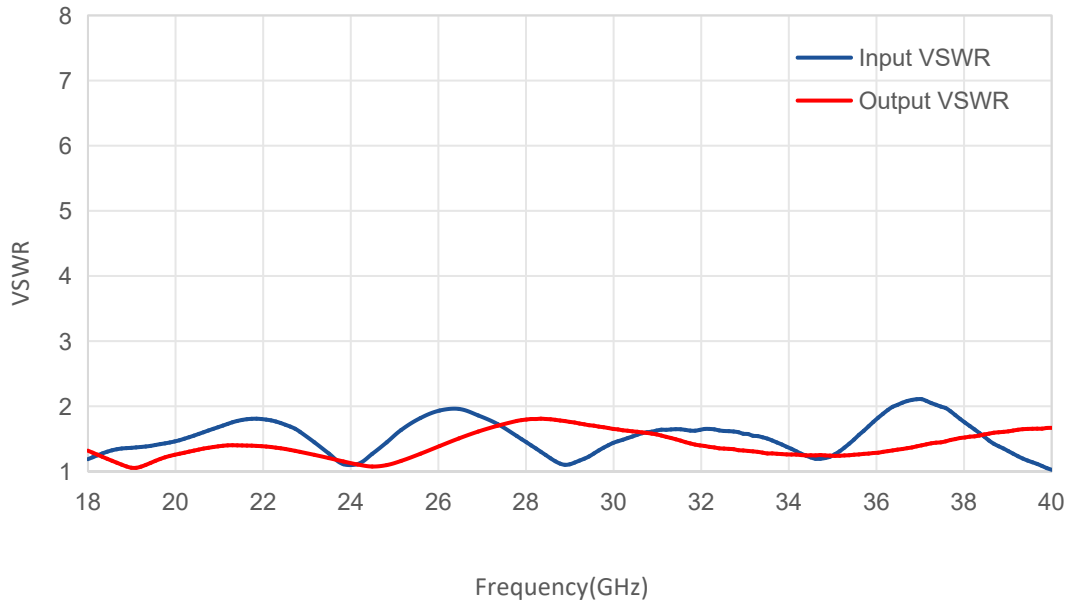
Ordering Information:

Base Number	Description	Optional
PA-18G-40G-5-L	Power Amplifier, 18-40GHz, Gain:35dB,Psat:5W,+24V DC	Without Heatsink
PA-18G-40G-5-L-HS	Power Amplifier, 18-40GHz, Gain:35dB,Psat:5W,+24V DC	With Heatsink

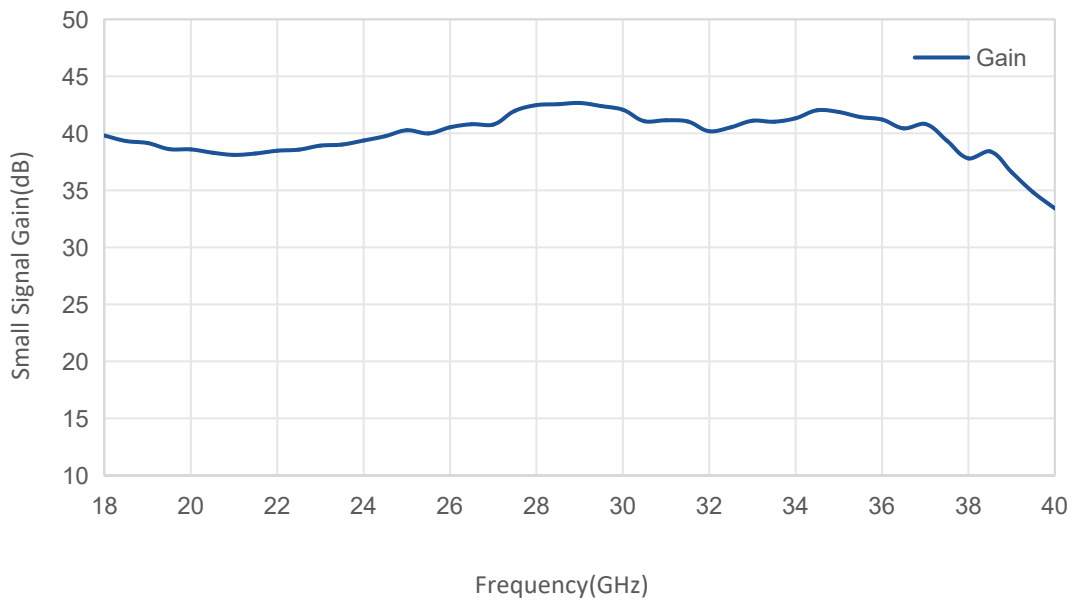


Typical Performance Data:

VSWR vs Frequency



Small Signal Gain vs Frequency

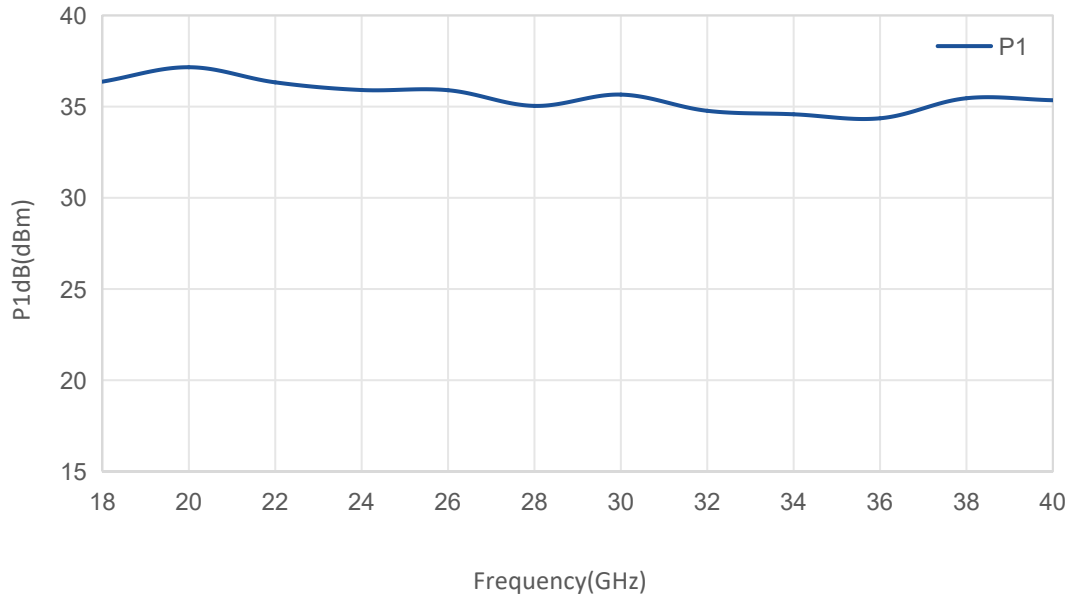


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

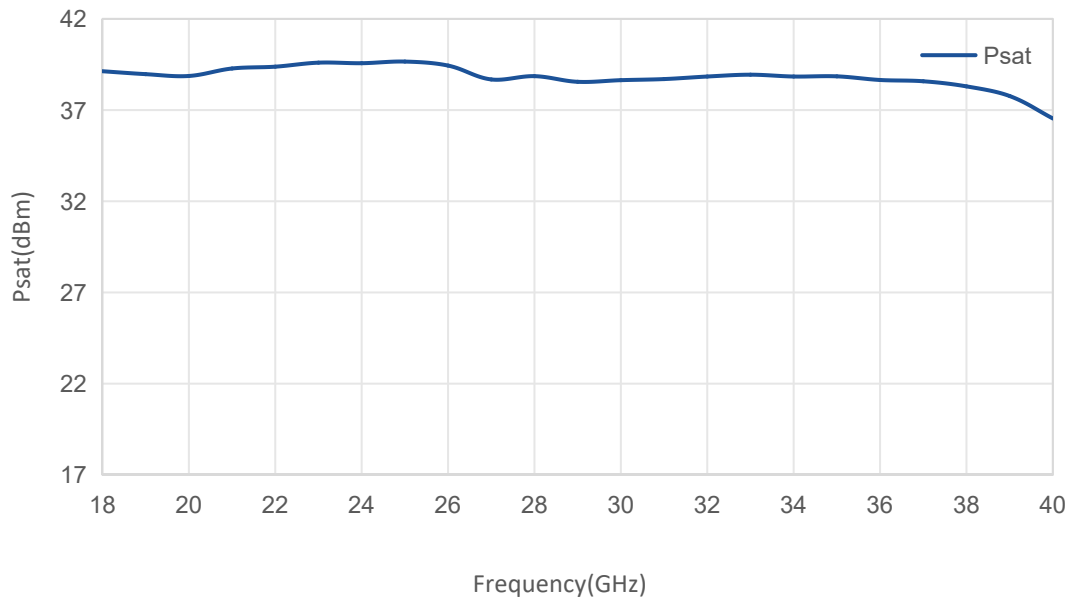


Typical Performance Data:

P1dB vs Frequency



Psat vs Frequency

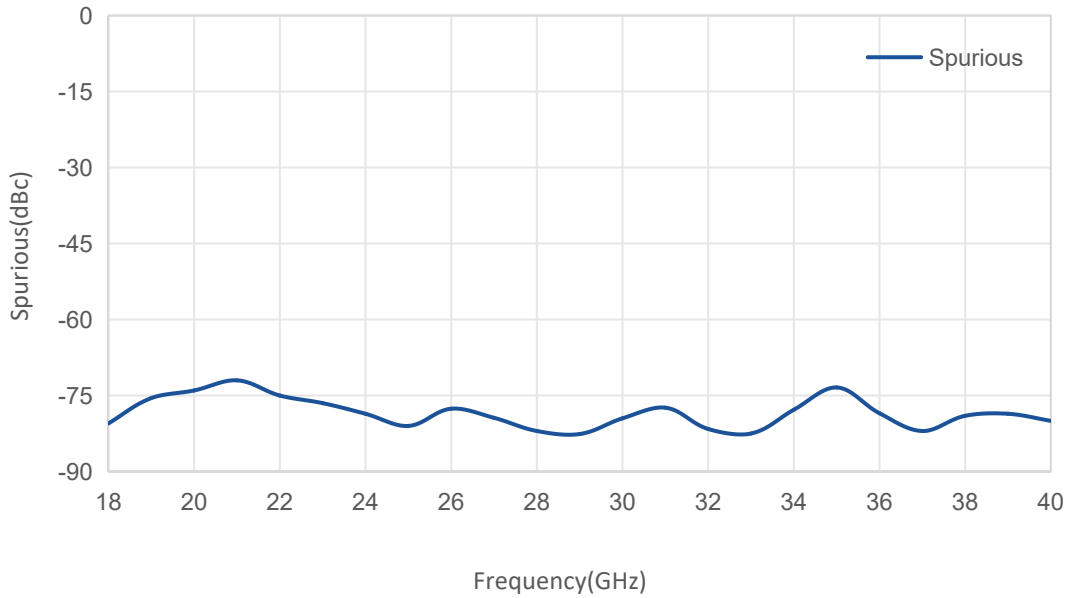


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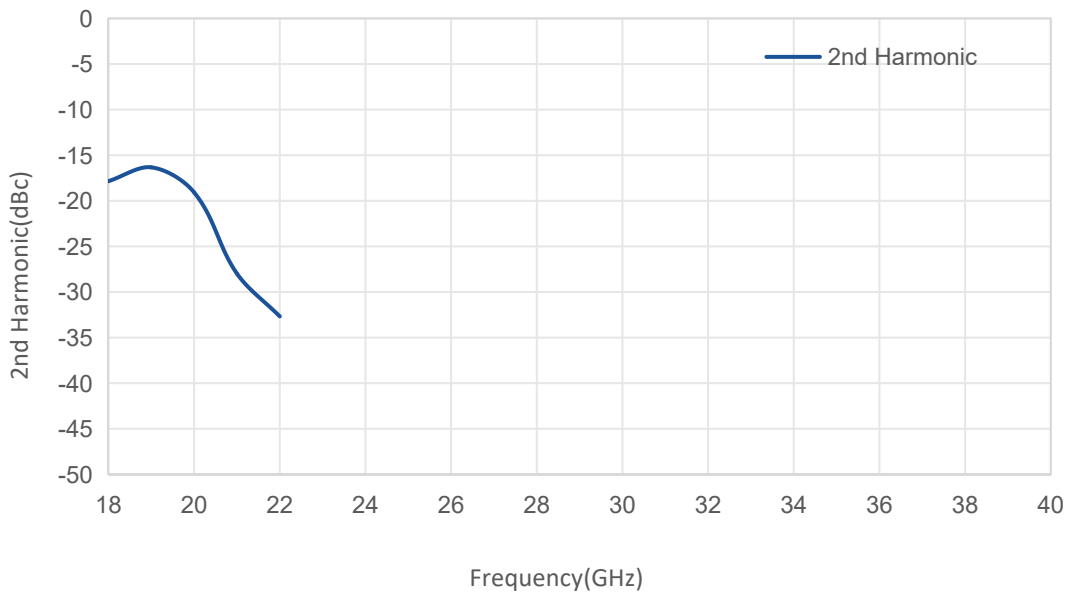


Typical Performance Data:

Spurious vs Frequency



2nd Harmonic 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.