



Power Amplifier

Model: PA-20G-50G-0.2

20-50GHz 0.2W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 20-50GHz
- High output power at saturation, 0.2W Typ.
- High gain, 23 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-20G-50G-0.2 is a power amplifier with a typical gain of 23 dB and a nominal Psat of 0.2W across the frequency range of 20 to 50GHz. The DC power requirement for the amplifier is +6 V DC/420 mA. The input and output port configuration offers coax adapter structure with 2.4mm female.



Electrical Specifications at 25°C:

Parameter	Min	Typ	Max	Units
Frequency range	20		50	GHz
Gain	20	23		dB
Gain Flatness		±3		dB
Output P1dB	20.5	21		dBm
Output Psat	21	23		dBm
Input VSWR		2.3		:1
Output VSWR		2.3		:1
DC Voltage	+5	+6	+8	V DC
DC Supply Current		420		mA
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	2.4mm Female/2.4mm 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	44.8*29.2*11	mm

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

Absolute Maximum Ratings:

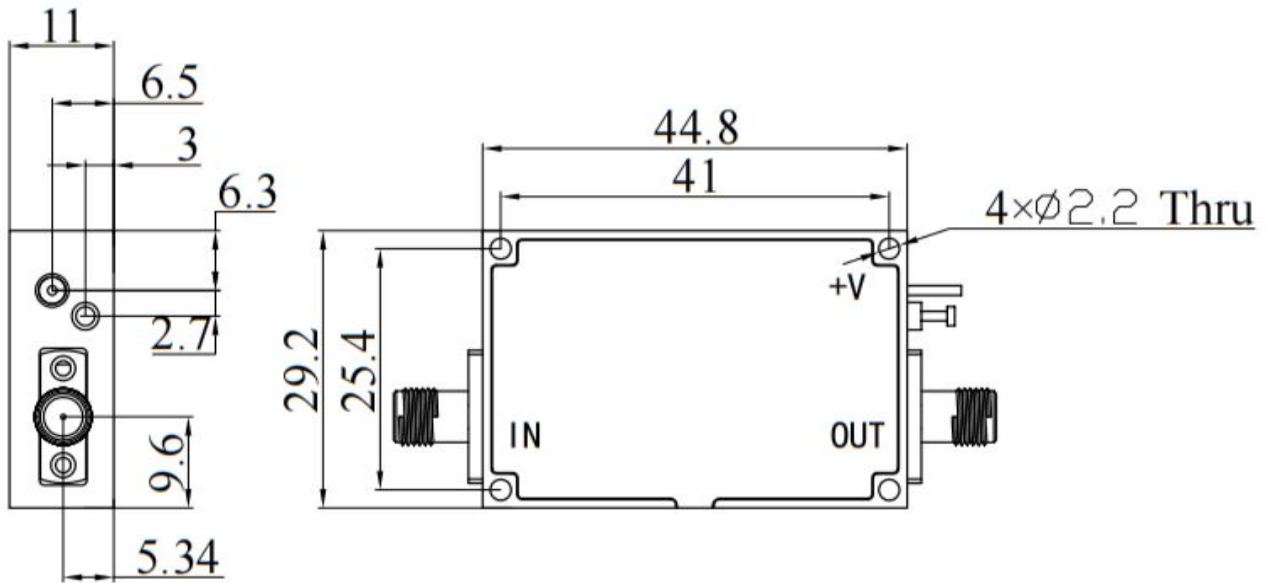
Parameter	Value
Supply Bias Voltage	+8 V
RF Input Power	+13 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-20G-50G-0.2



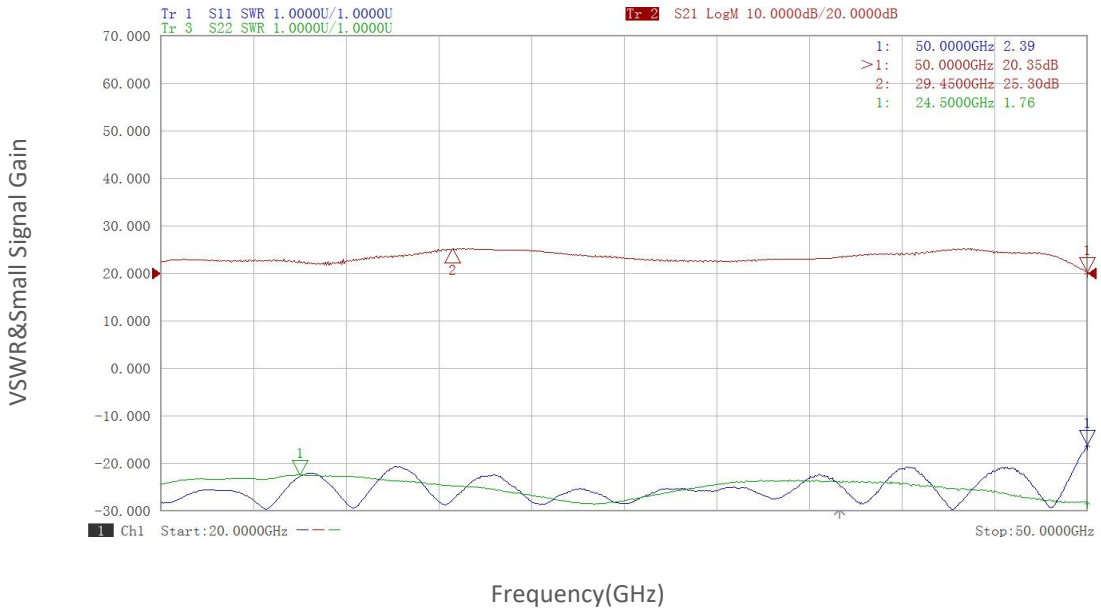
Ordering Information:

Base Number	Description	Optional
PA-20G-50G-0.2	Power Amplifier, 20-50GHz, Gain:23dB,Psat:0.2W,+6V DC	Without Heatsink
PA-20G-50G-0.2-HS	Power Amplifier, 20-50GHz, Gain:23dB,Psat:0.2W,+6V DC	With Heatsink

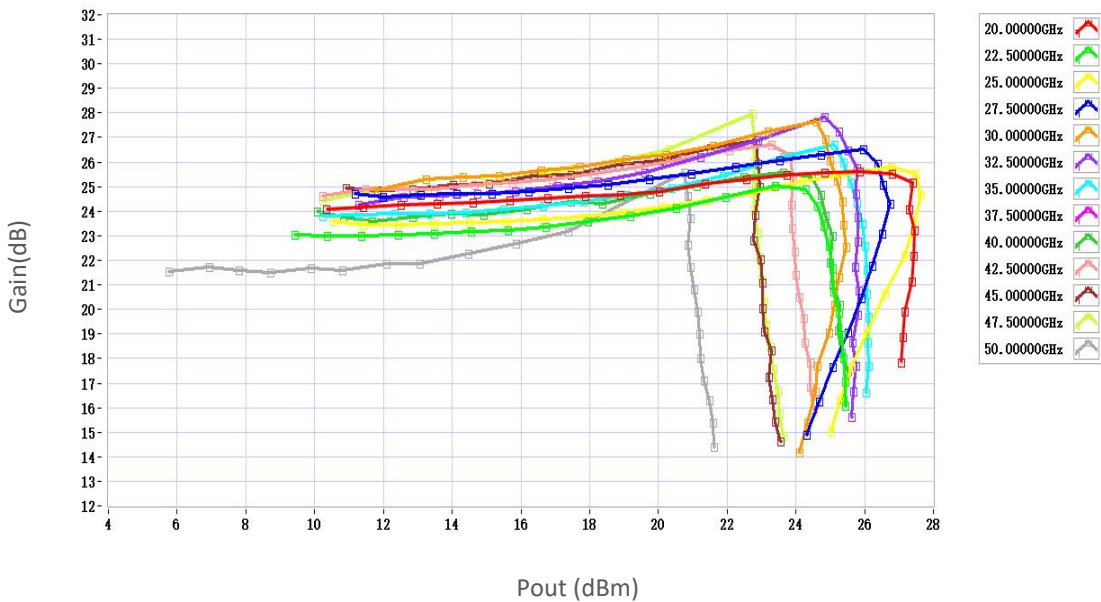


Typical Performance Data:

VSWR&Small Signal 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.

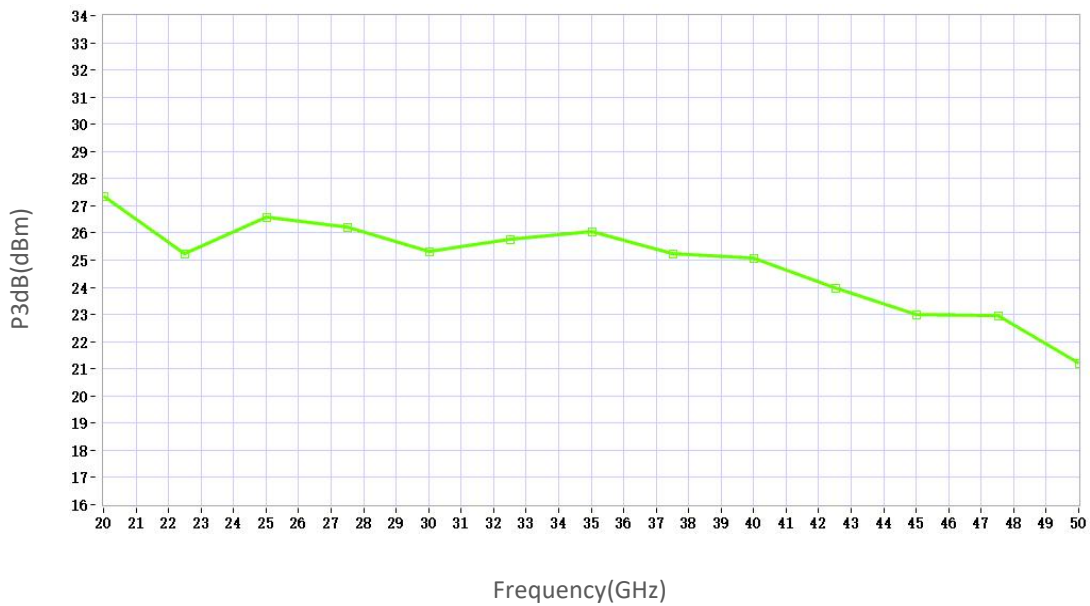


Typical Performance Data:

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:

Psat 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.