



Power Amplifier

Model: PA-50K-20G-0.15

0.05-20000MHz 0.15W CW

Ultrabroad frequency range, high performance and exceptional RF characteristics

Features:

- Frequency range: 0.05-20000Hz
- Input 1 dB Gain Compression Point, 0.15W Typ.
- High gain, 32 dB Typ.
- 50 Ohm Matched Input / Output.

Applications:

- Cellular
- PCN
- GSM
- ISM
- Lab Test

Product Overview:

The PA-50K-20G-0.15 is a power amplifier with a typical small signal gain of 32 dB and a nominal P1dB of 0.15W across the frequency range of 50KHz to 20GHz. The DC power requirement for the amplifier is +12 VDC/240 mA. 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	50KHz		20GHz	
Small Signal Gain		32		dB
Small Signal Gain Flatness		±2		dB
Output P1dB	20	22		dBm
Noise Figure		3		dB
Input VSWR		2.2		:1
Output VSWR		2.2		:1
DC Voltage	+10	+12	+13	V DC
DC Supply Current		240		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	SMA Female/SMA Female	
DC Bias	Solder Pin	
Altitude	50,000	feet
Shock / Vibration(MIL-STD-810F)	20g,11ms,saw-tooth	
Shock(non operating)	20G for 11msc half sin wave,3 axis both directions	
Dimensions W x H x D	44*36*11	mm

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

Absolute Maximum Ratings:

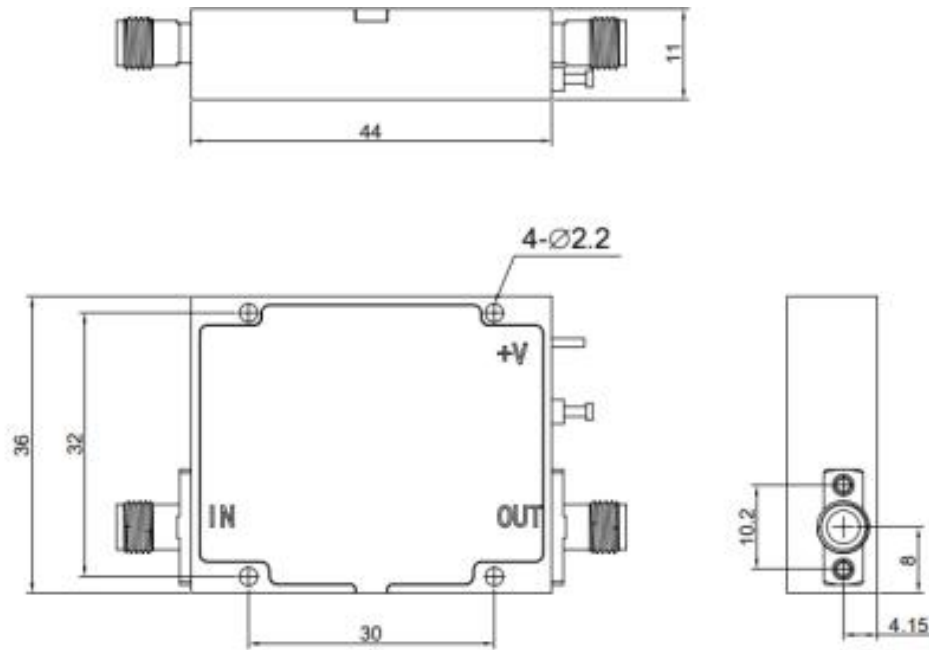
Parameter	Value
Supply Bias Voltage	+13 V
RF Input Power	+10 dBm
ESD sensitivity (HBm)	Class 0, passed 150V



Outline Drawing:

Unit:mm

PA-50K-20G-0.15



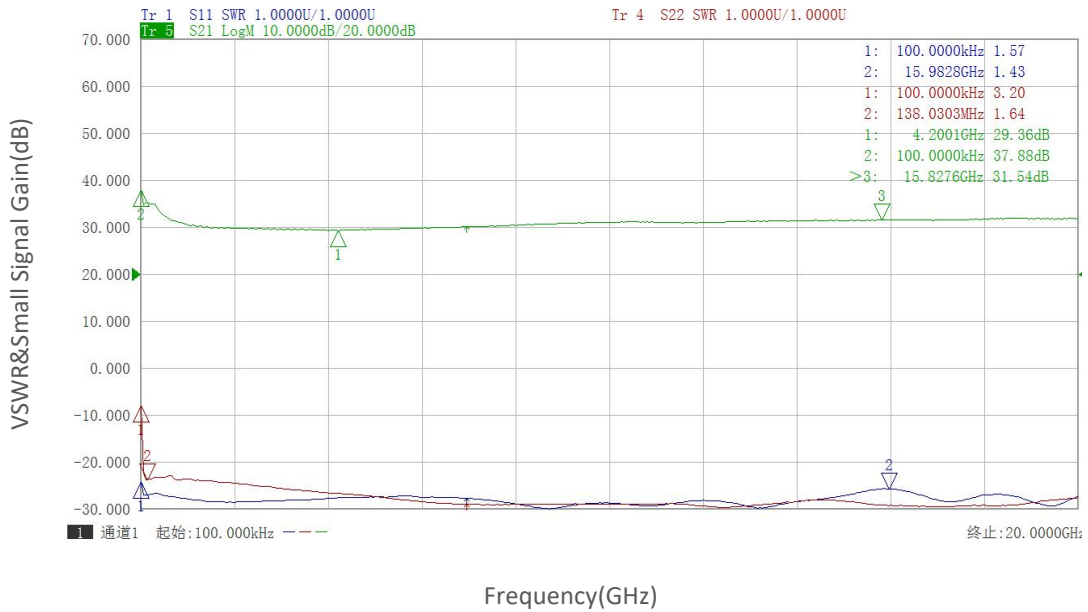
Ordering Information:

Base Number	Description	Optional
PA-50K-20G-0.15	Power Amplifier, 0.05-20000MHz, Gain:32dB,P1dB:0.15W,+12V DC	Without Heatsink
PA-50K-20G-0.15-HS	Power Amplifier, 0.05-20000MHz, Gain:32dB,P1dB:0.15W,+12V DC	With Heatsink

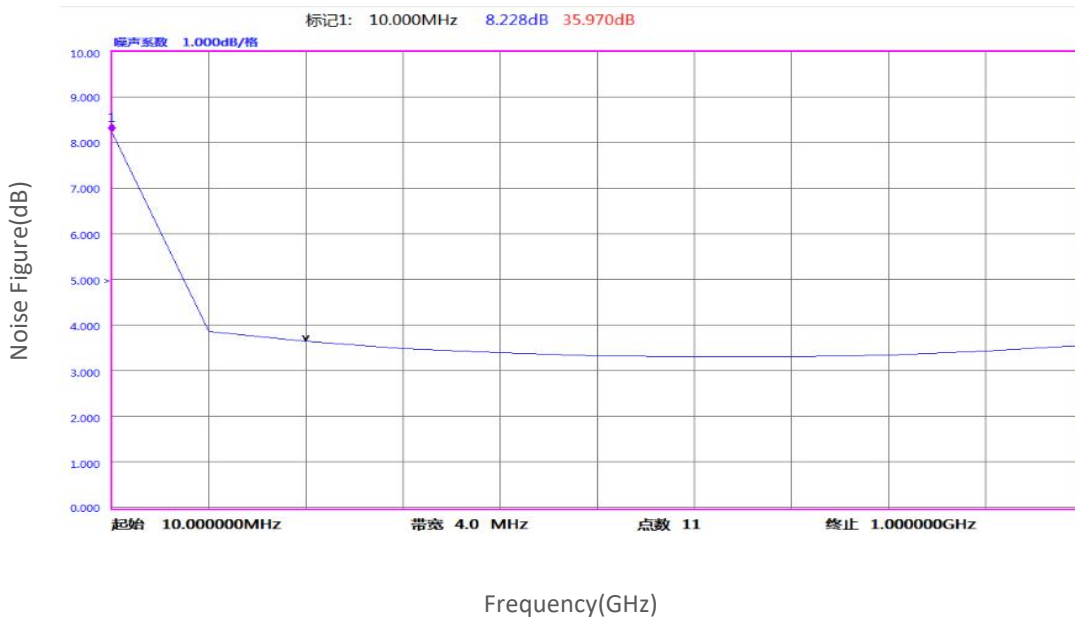


Typical Performance Data:

VSWR&Small Signal Gain vs Frequency



Noise Figure vs Frequency

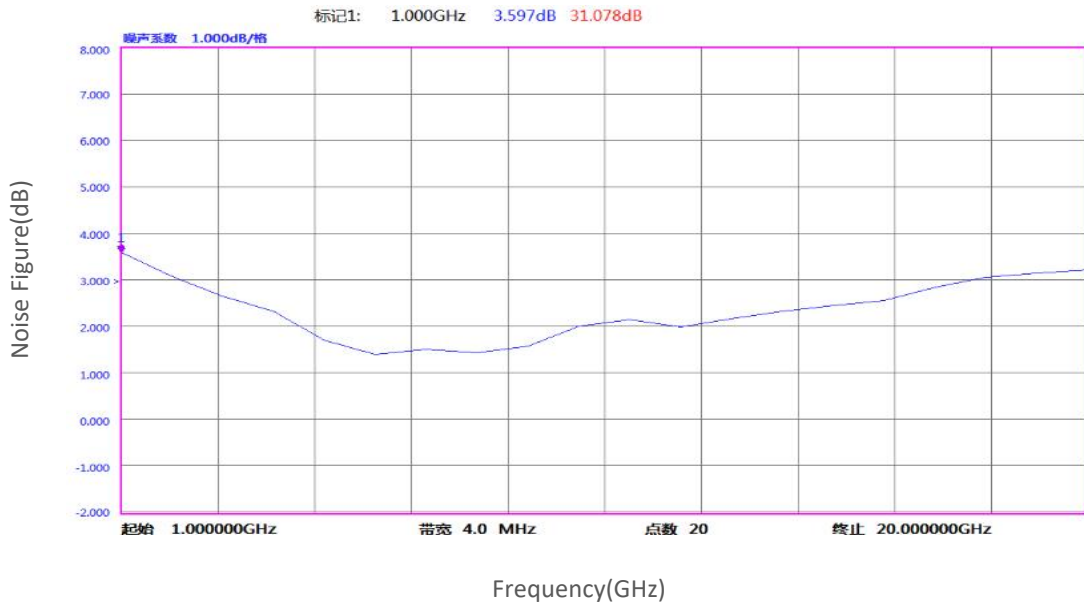


Note: Above data is for ref only, actual data may vary from unit to unit depending on operating environment and other factors like material lots etc.

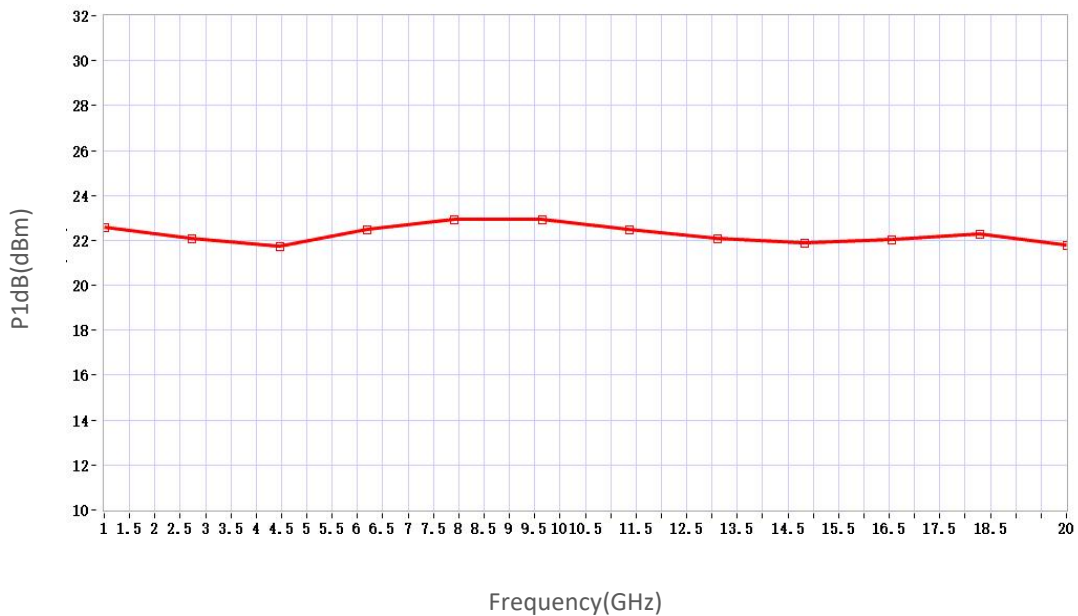


Typical Performance Data:

Noise Figure vs Frequency



P1dB vs Frequency



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