

## PNA Series

## 500MHz – 20GHz Low Noise Amplifier

### Features

- Frequency Range: 0.5-20GHz
- Gain: 35dB
- P<sub>1dB</sub>: +15dBm
- OIP3: +25dBm
- Noise Figure: 2.5dB
- DC Power: +5V @ 100mA
- RF Connector: SMA-female

### Photo



### Description

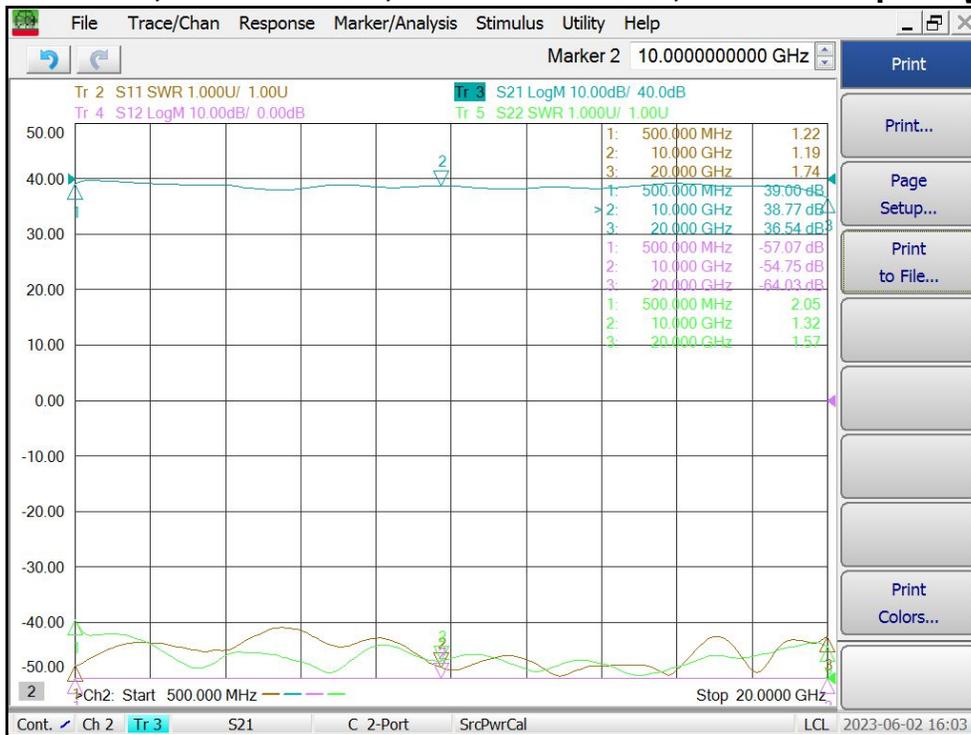
PNA-0020-251535 is a wide band high performance Low Noise (& Driver) Amplifier, with standard frequency range of 500MHz to 20GHz.

### Electrical Specifications @+25 °C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, DC Supply = +5VDC

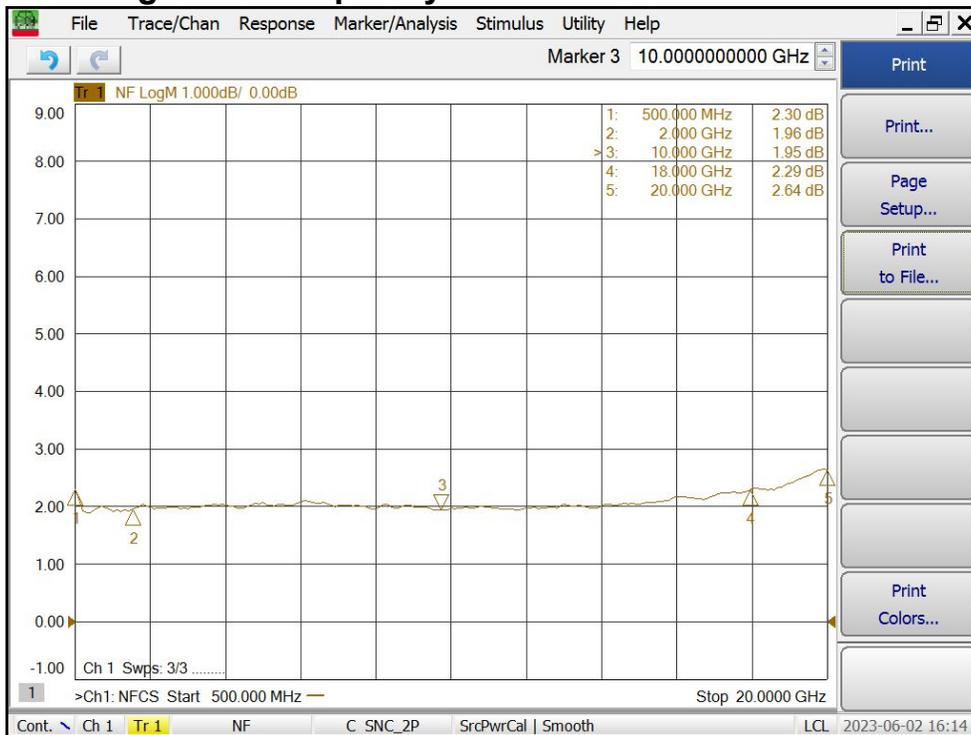
Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	0.5		20
Gain S <sub>21</sub>	f = 0.5GHz		39.0	
	f = 10GHz	35	38.5	
	f = 20GHz		36.5	
Gain Flatness	dB		±1.5	±2.2
Output Power P <sub>1dB</sub>	f = 10GHz	+15	+17	
Output Third Order Intercept IP3	f = 10GHz	+25	+28	
Noise Figure	f = 10GHz		2.0	2.5
Reverse Isolation S <sub>12</sub>	f = 10GHz	-50	-54	
Input VSWR S <sub>11</sub>	f = 10GHz		1.3:1	2.0:1
Output VSWR S <sub>22</sub>	f = 10GHz		1.3:1	2.0:1
DC Power Supply - voltage	V	+5		+12
DC Power Supply - current	mA		100	160
Size (RF/DC feedthrough excluded)	Inch	1.110"x0.700"x0.365"		
Weight	Oz	2.0		

**WARNING: MUST USE HEAT SINK OR MOUNT ON LARGE METAL PLATE**

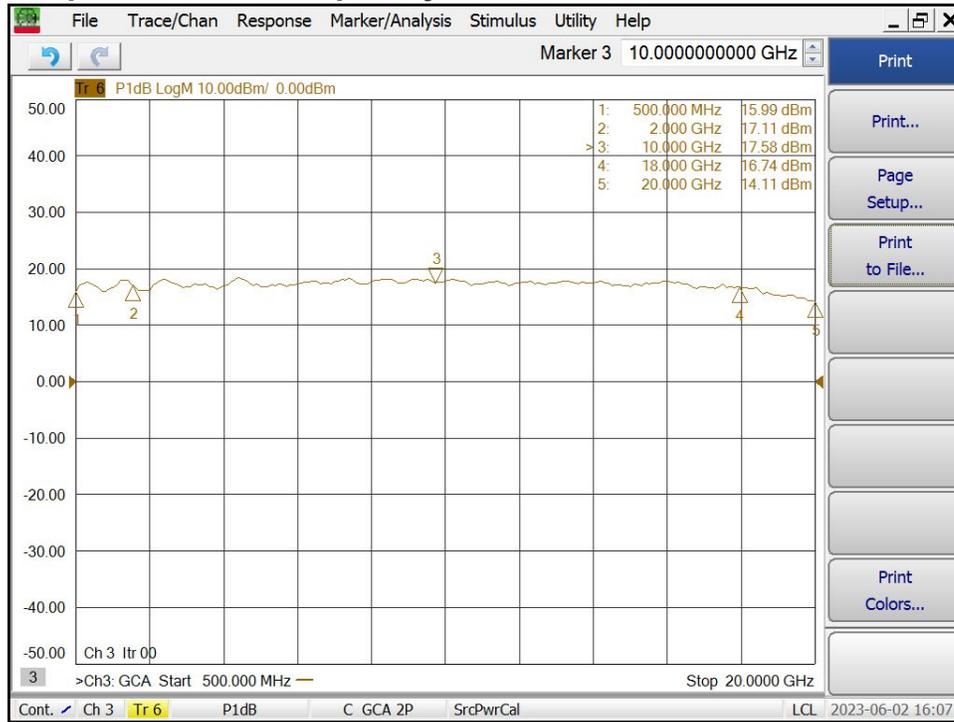
### Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



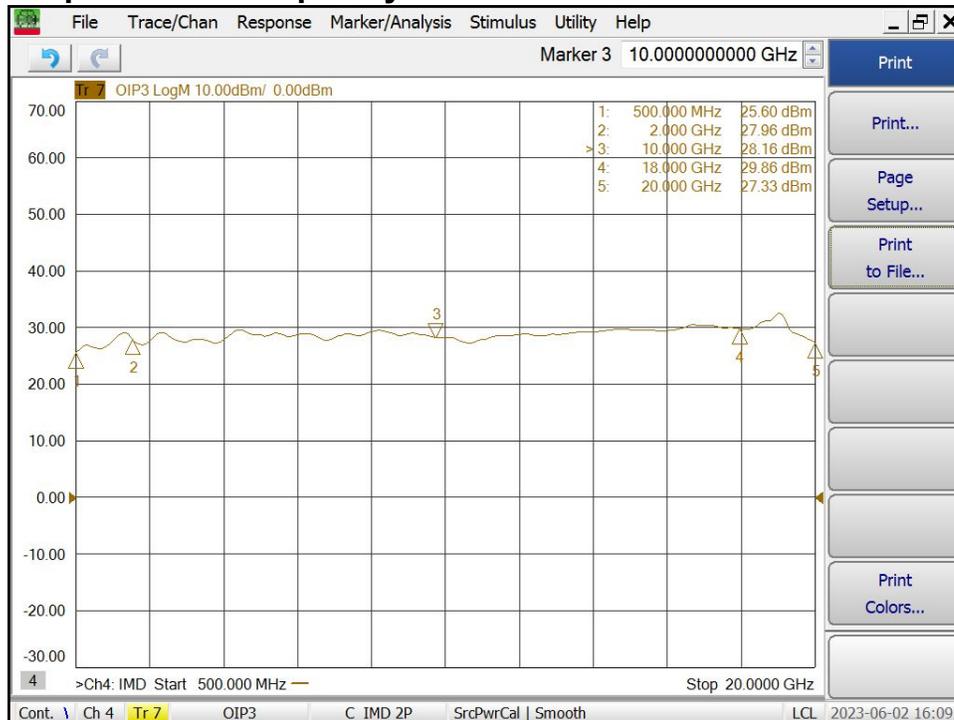
### Noise Figure vs Frequency



**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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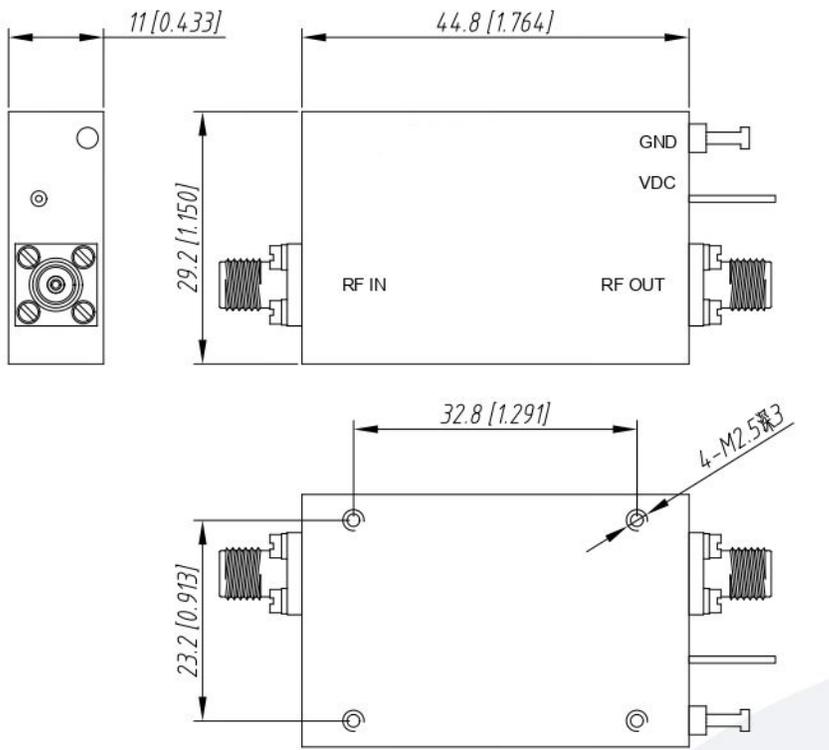
**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Supply Voltage	+12V
RF Input Power	+10dBm
Operating Temperature	-45 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

**ESD Sensitive Material**



**Outline**



Unit: mm [inches]