

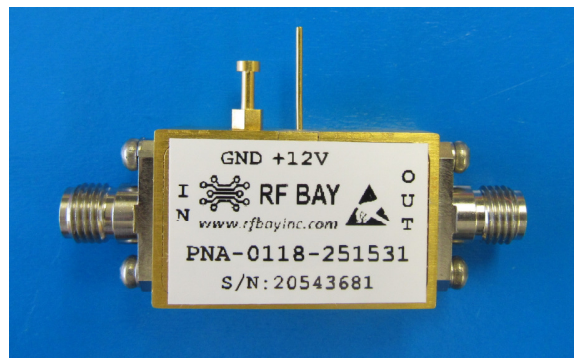
## PNA Series

## 1 – 18GHz Low Noise Amplifier

### Features

- Frequency Range: 1-18GHz
- Gain: 31dB
- P<sub>1dB</sub>: +15dBm
- OIP3: +25dBm
- Noise Figure: 2.5dB
- DC Power: +12V @ 250mA
- RF Connector: SMA-female

### Photo



### Description

PNA-0118-251531 is a wide band high performance Low Noise (& Driver) Amplifier, with standard frequency range of 1 to 18GHz.

### Electrical Specifications @+25 °C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, DC Supply = +12VDC

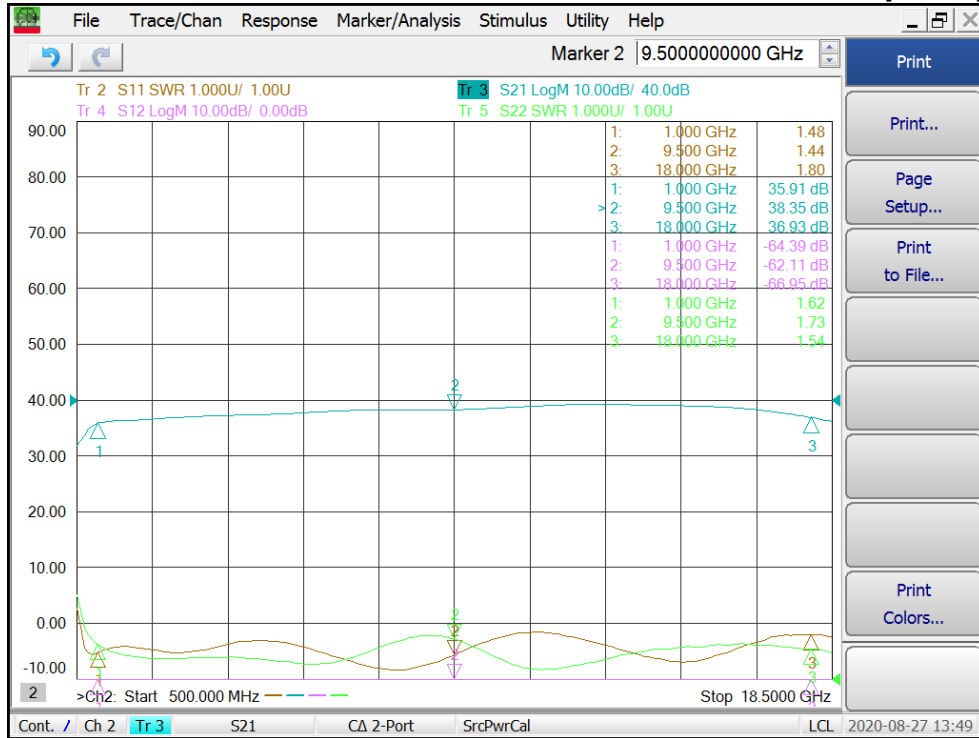
Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	1		18
Gain S <sub>21</sub>	f = 1GHz	dB	31	36
	f = 9.5GHz	dB	31	38
	f = 18GHz	dB	31	37
Gain Flatness	dB		±1.0	±1.8
Output Power P <sub>1dB</sub>	f = 9.5GHz	dBm	+15	+17
Output Third Order Intercept IP3	f = 9.5GHz	dBm	+25	+27
Noise Figure	f = 9.5GHz	dB	1.5	2.5
Reverse Isolation S <sub>12</sub>	f = 9.5GHz	dB	-55	-60
Input VSWR S <sub>11</sub>	f = 9.5GHz		1.6:1	2.0:1
Output VSWR S <sub>22</sub>	f = 9.5GHz		1.6:1	2.0:1
DC Power Supply - voltage	V	+9	+12	+14
DC Power Supply - current	mA		250	280
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**

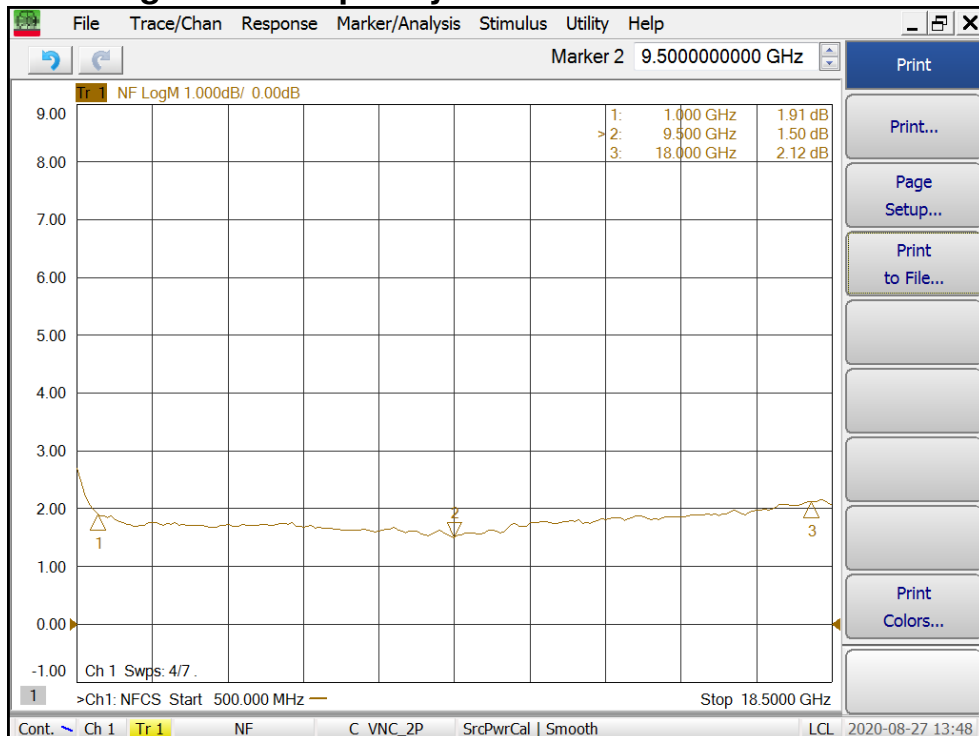
**PNA Series**

**1 – 18GHz Low Noise Amplifier**

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



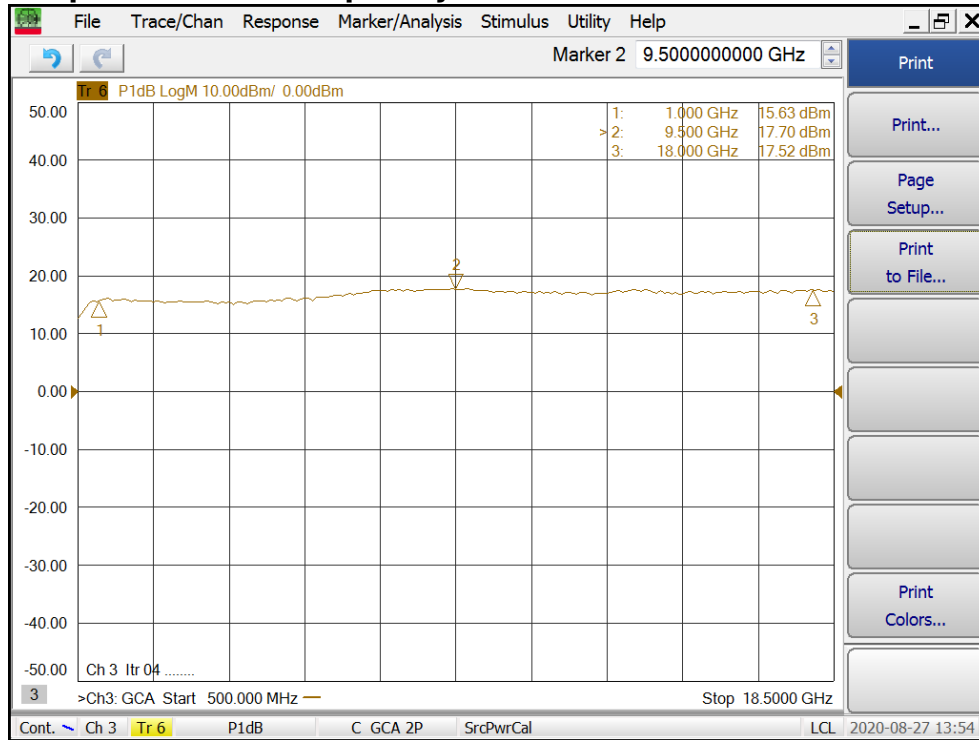
**Noise Figure vs Frequency**



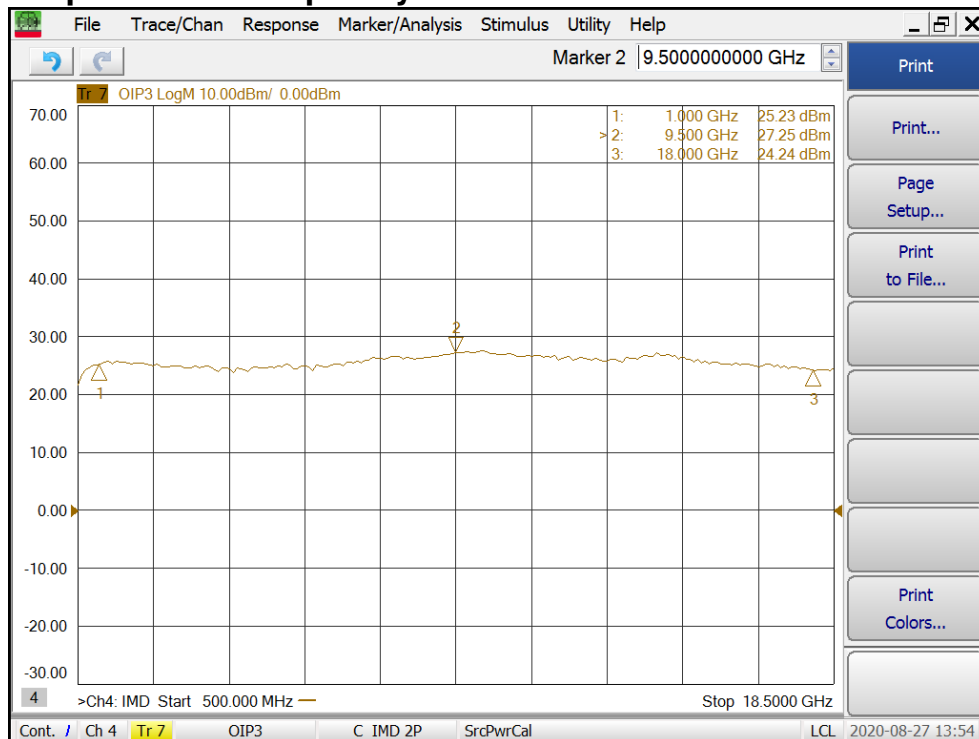
**PNA Series**

**1 – 18GHz Low Noise Amplifier**

**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



## PNA Series

## 1 – 18GHz Low Noise Amplifier

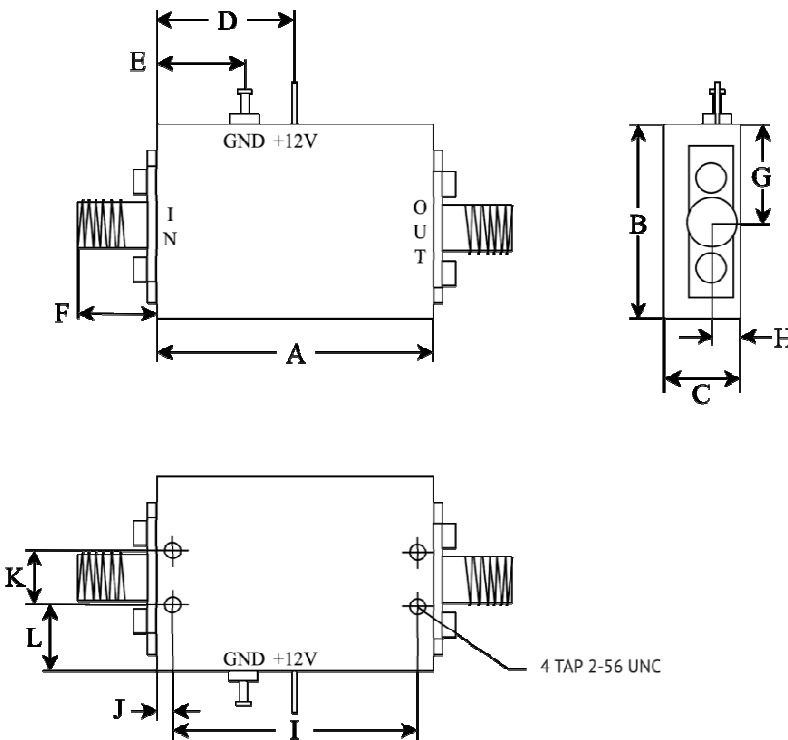
### Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+14V
RF Input Power	+5dBm
Operating Temperature	-45 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

### ESD Sensitive Material



### Outline



	A	B	C	D	E	F	G	H	I	J	K	L
Inch	1.110	0.700	0.365	0.560	0.350	0.380	0.350	0.150	0.960	0.075	0.240	0.230
mm	28.19	17.78	9.27	14.22	8.89	9.65	8.89	3.81	24.38	1.91	6.10	5.84