

## GNA Series

## 6 – 18GHz Low Noise Amplifier

### Features

- Frequency Range: 6-18GHz
- Gain: 23dB
- P<sub>1dB</sub>: +17dBm
- IP3: +27dBm
- Noise Figure: 1.5dB (typ.)
- DC Power: +5V @ 90mA
- RF Connector: SMA-F

### Photo



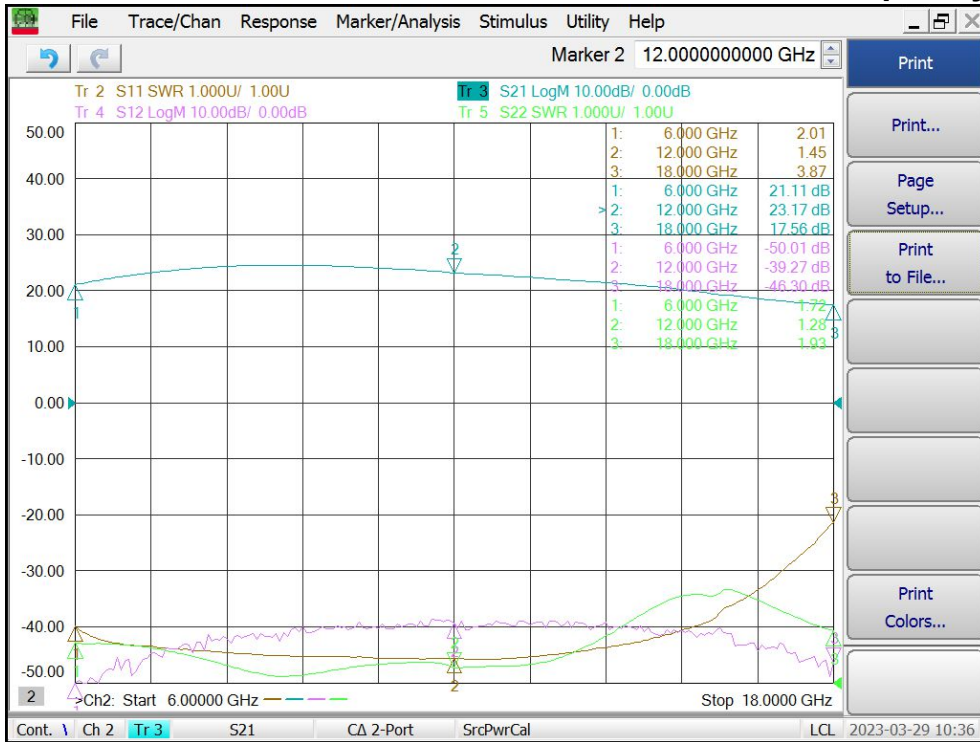
### Description

GNA-300F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 6GHz to 18GHz.

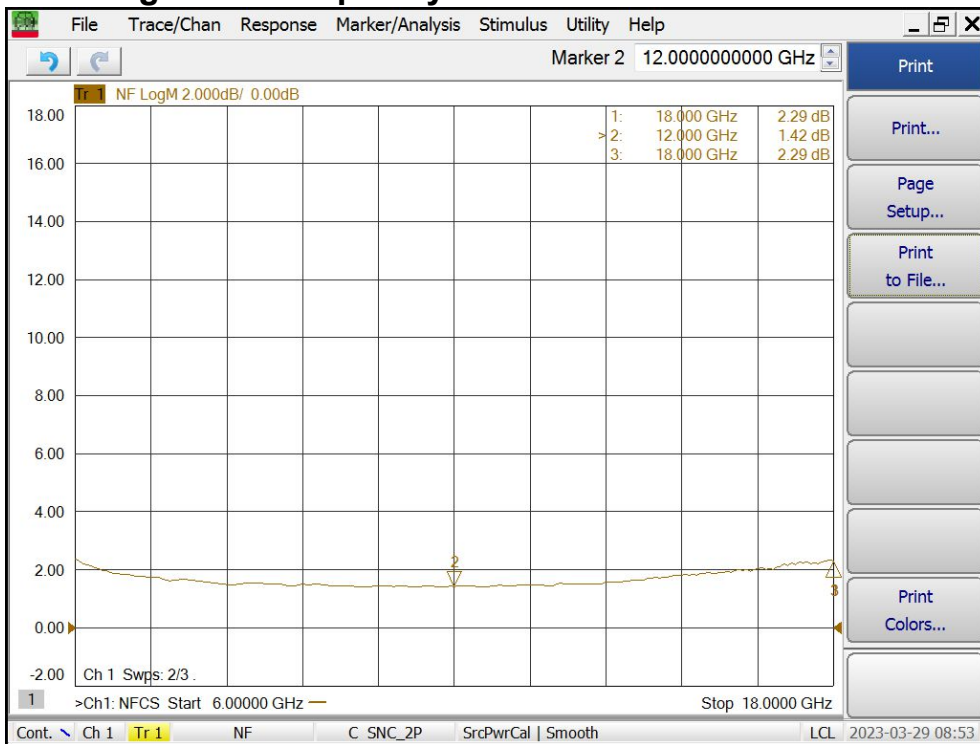
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	6		18
Gain (S <sub>21</sub> )	f = 6GHz	19.0	21.0	
	f = 12GHz	21.0	23.0	
	f = 18GHz	15.5	17.5	
Gain Flatness	dB		±2.7	±3.5
Output Power P <sub>1dB</sub> @ 12GHz	dBm	+15	+17	
Output Third Order IP3 @ 12GHz	dBm	+25	+27	
Noise Figure @ 12GHz	dB		1.5	2.0
Reverse Isolation (S <sub>12</sub> )	dB	-35	-40	
VSWR-Input (S <sub>11</sub> ) @ 12GHz			1.5:1	1.8:1
VSWR-Output (S <sub>22</sub> ) @ 12GHz			1.5:1	1.8:1
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		90	110
Operating Temperature	°C	-40		+85
Size (RF/DC feedthru's excluded)	Inch	1.00 (L) x 0.75 (W) x 0.45 (H)		
Weight	Oz	0.6 (17 grams)		

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



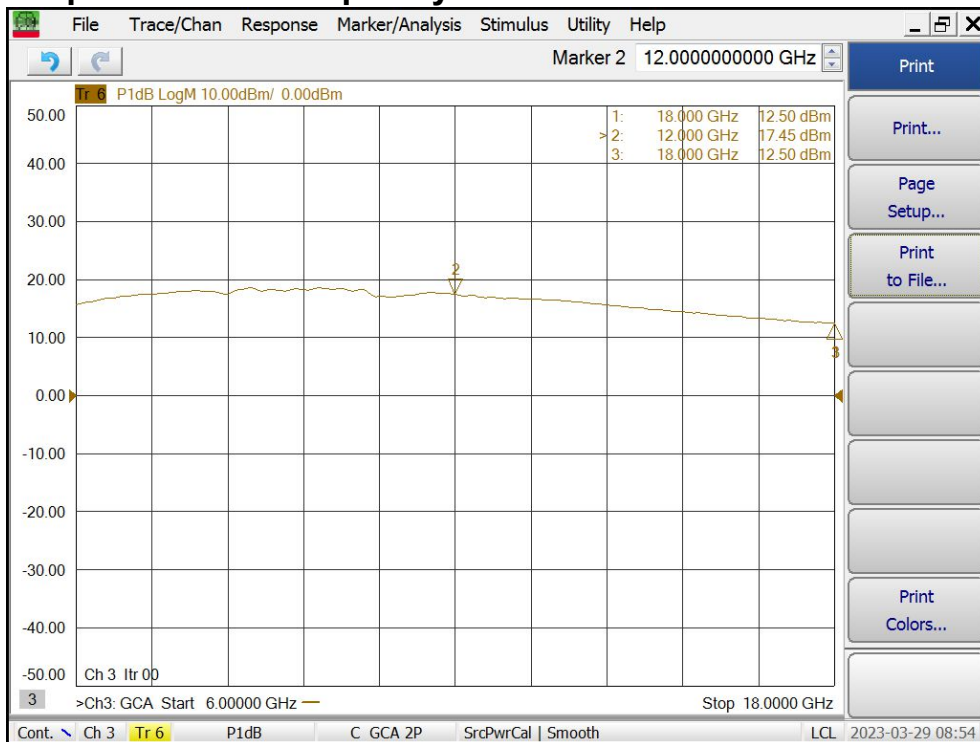
**Noise Figure vs Frequency**



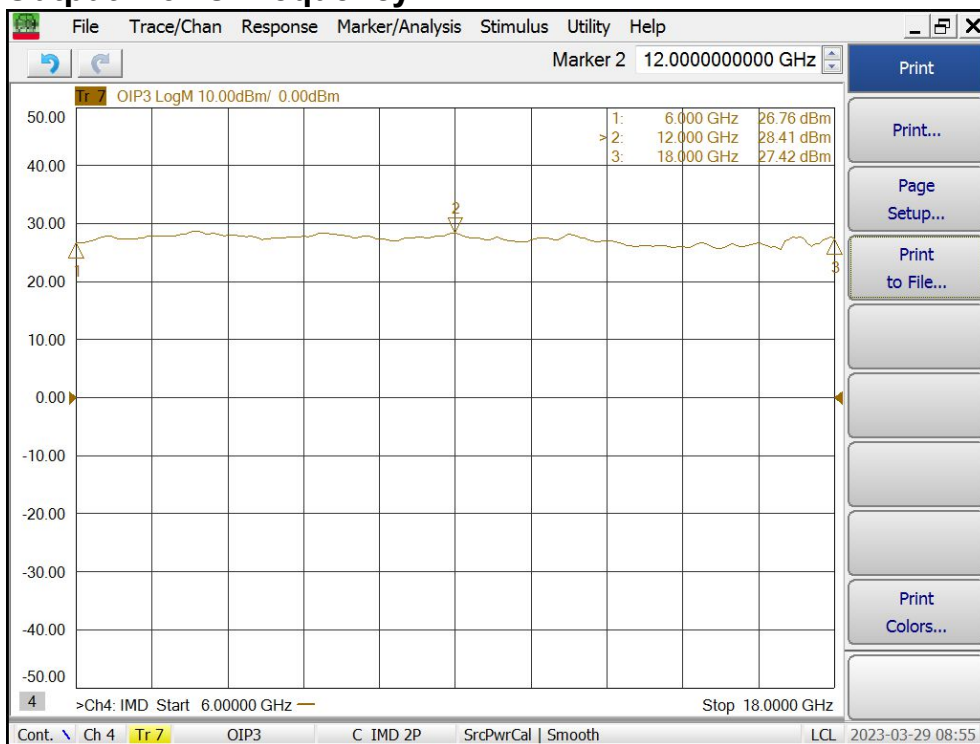
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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Supply Voltage (Survival)	+6V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

**ESD Sensitive Material**



**Outline**

