

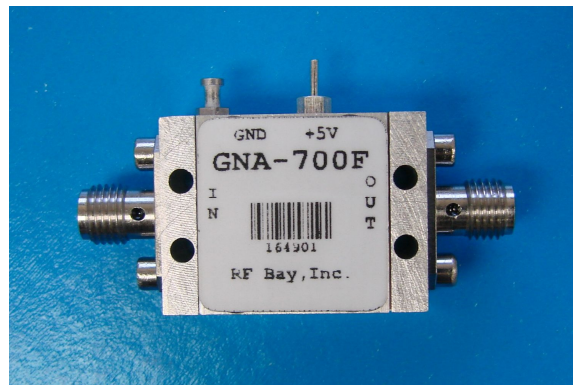
## GNA Series

## 17 – 27GHz Low Noise Amplifier

### Features

- Frequency Range: 17-27GHz
- Gain: 18dB
- P<sub>1dB</sub>: +12dBm
- IP3: +23dBm
- Noise Figure: 2.0dB (typ.)
- DC Power: +5V @ 95mA
- Internally Voltage Regulated
- RF Connector: SMA-F

### Photo



### Description

GNA-700F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 17GHz to 27GHz.

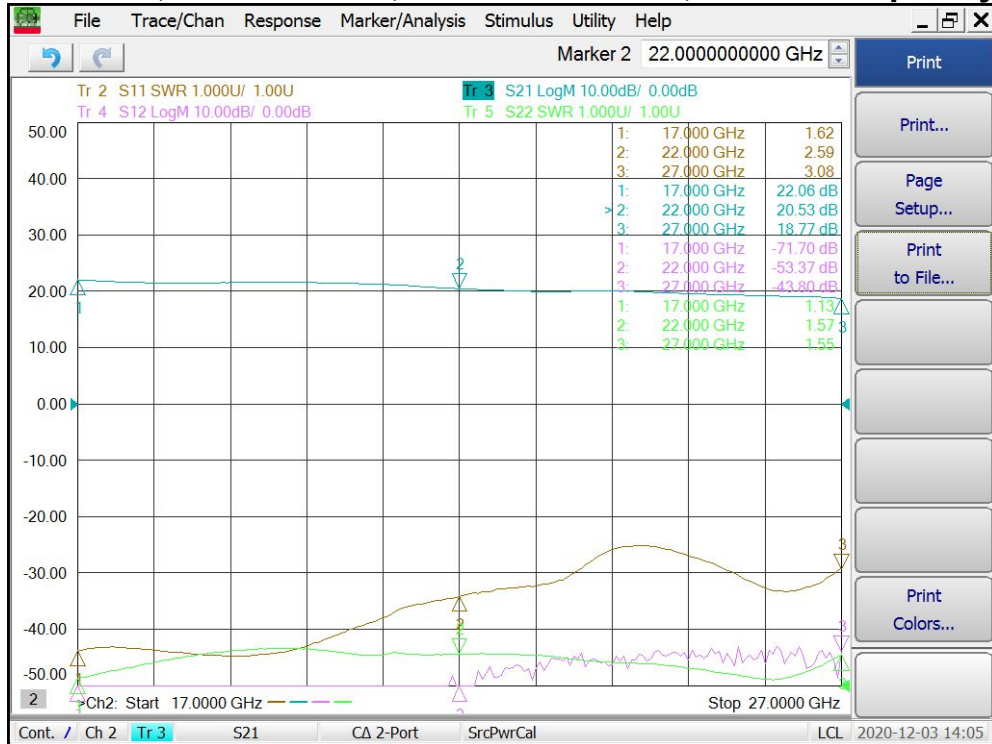
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	17		27
Gain (S <sub>21</sub> ) f = 17GHz	dB	19.0	20.0	
f = 22GHz	dB	18.0	19.0	
f = 27GHz	dB	16.0	17.5	
Gain Variation Over Temperature	dB/°C		0.015	0.025
Output Power P <sub>1dB</sub>	dBm	+12	+14	
Output Third Order Intercept IP3	dBm	+23	+25	
Noise Figure @ 22GHz	dB		2.0	2.5
Reverse Isolation (S <sub>12</sub> ) @ 22GHz	dB	-40	-50	
VSWR-Input (S <sub>11</sub> )	ratio:1	1.8 @17GHz	2.5 @22GHz	3.0 @27GHz
VSWR-Output (S <sub>22</sub> )	(unitless)	1.3 @17GHz	1.5 @22GHz	1.5 @27GHz
DC Power Supply - voltage	V	4.5	5.0	5.5
DC Power Supply - current	mA		95	120
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)		

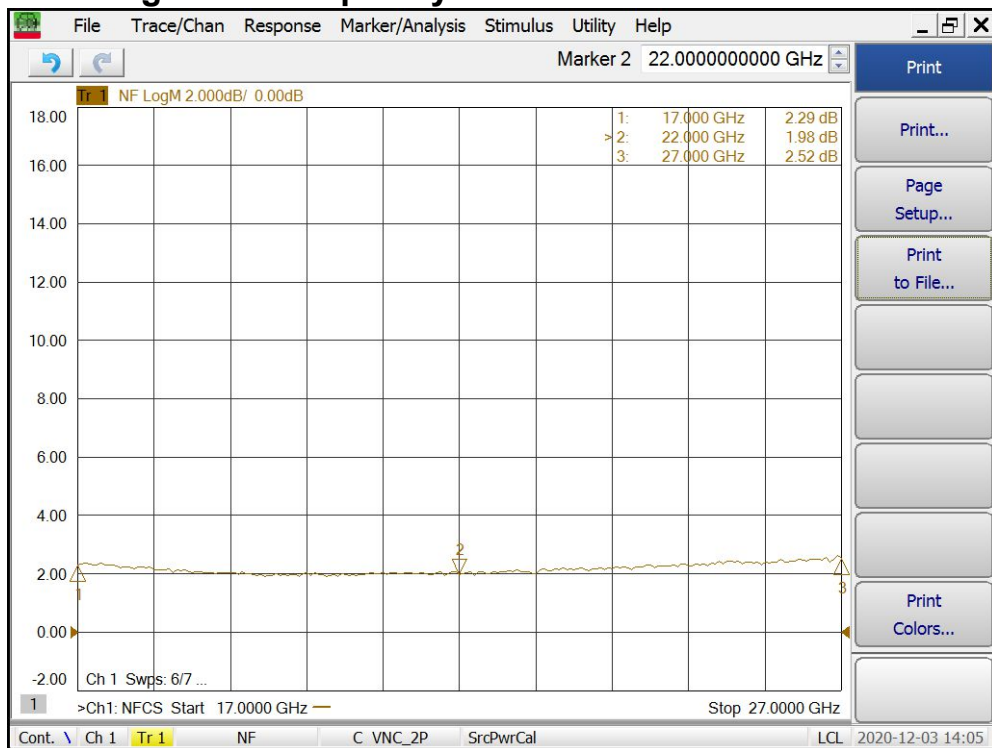
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**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



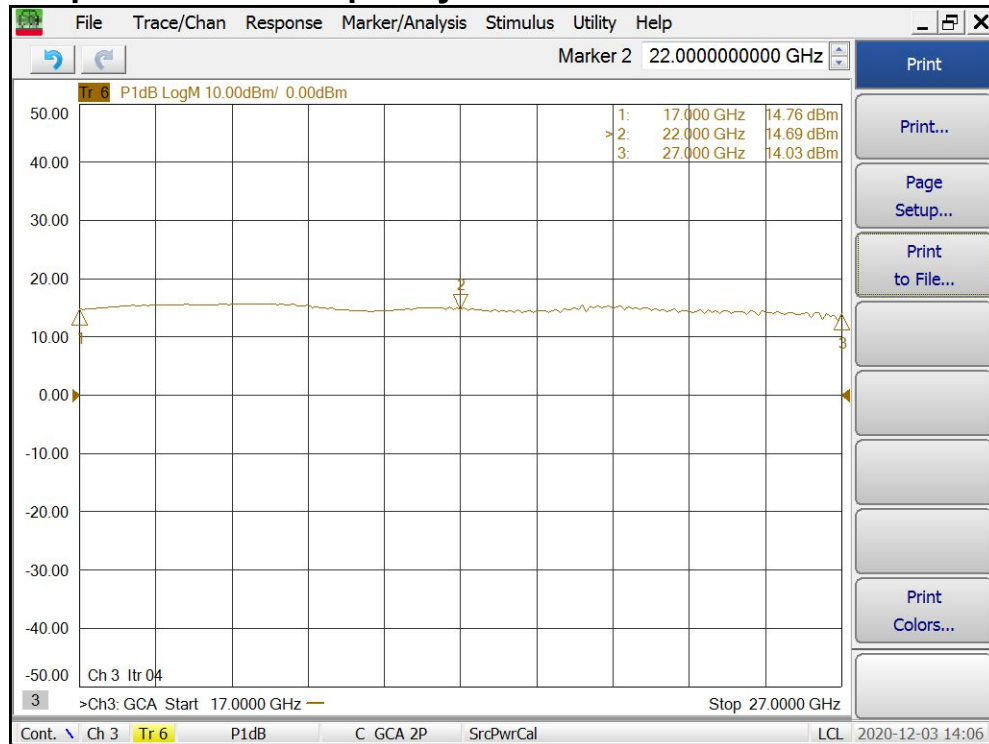
**Noise Figure vs Frequency**



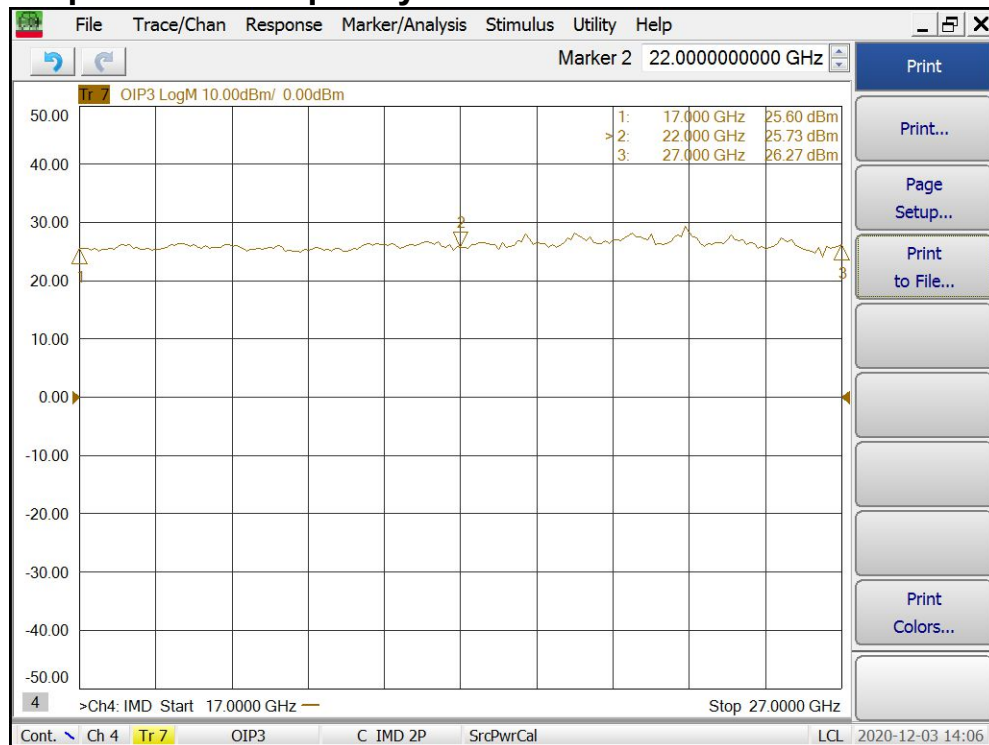
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### Output P1dB vs Frequency



### Output IP3 vs Frequency



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**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Supply Voltage (Survival)	+16V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

**ESD Sensitive Material**



**Outline**

