

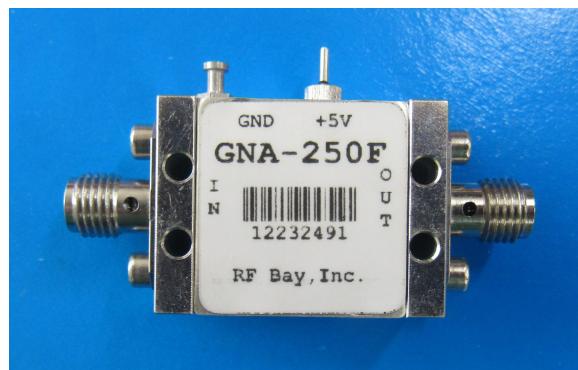
## GNA Series

## 10MHz – 20GHz Low Noise Amplifier

### Features

- Frequency Range: 0.01-20GHz
- Gain: 12dB
- P<sub>1dB</sub>: +15dBm
- IP3: +26dBm
- Noise Figure: 3.0dB (typ.)
- DC Power: +5V @ 55mA
- RF Connector: SMA-F

### Photo



### Description

GNA-250F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 10MHz to 20GHz.

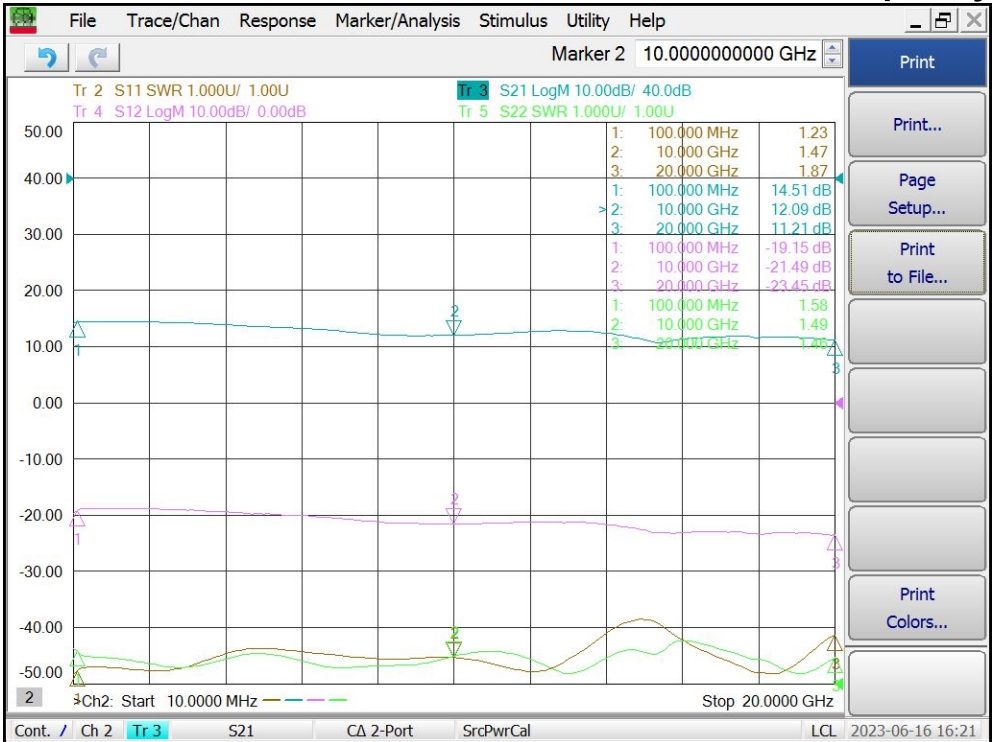
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	0.01		20
Gain (S <sub>21</sub> )	f = 10MHz	dB	13.0	14.5
	f = 10GHz	dB	10.5	12.0
	f = 20GHz	dB	9.5	11.0
Gain Flatness	dB		±1.5	±2.0
Output Power P <sub>1dB</sub> @ 10GHz	dBm	+13	+15	
Output Third Order IP3 @ 10GHz	dBm	+26	+29	
Noise Figure @ 10GHz	dB		3.0	4.0
Reverse Isolation (S <sub>12</sub> ) @ 10GHz	dB	-15	-20	
VSWR-Input (S <sub>11</sub> ) @ 10GHz			1.5:1	2.0:1
VSWR-Output (S <sub>22</sub> ) @ 10GHz			1.5:1	2.0:1
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		55	70
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)		

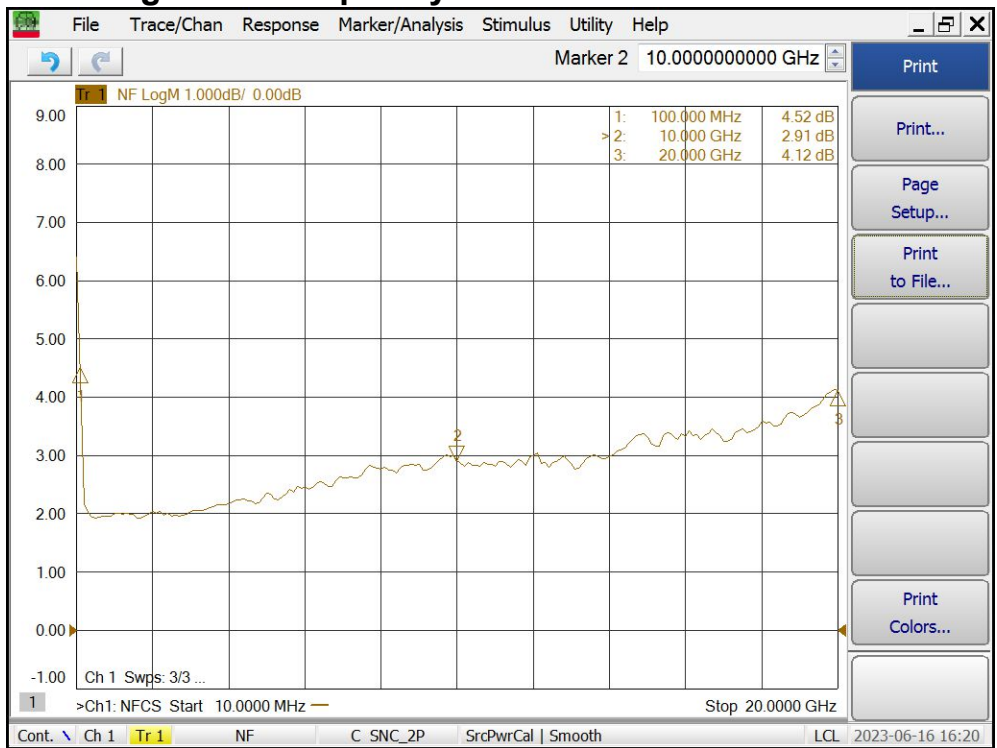
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**Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency**



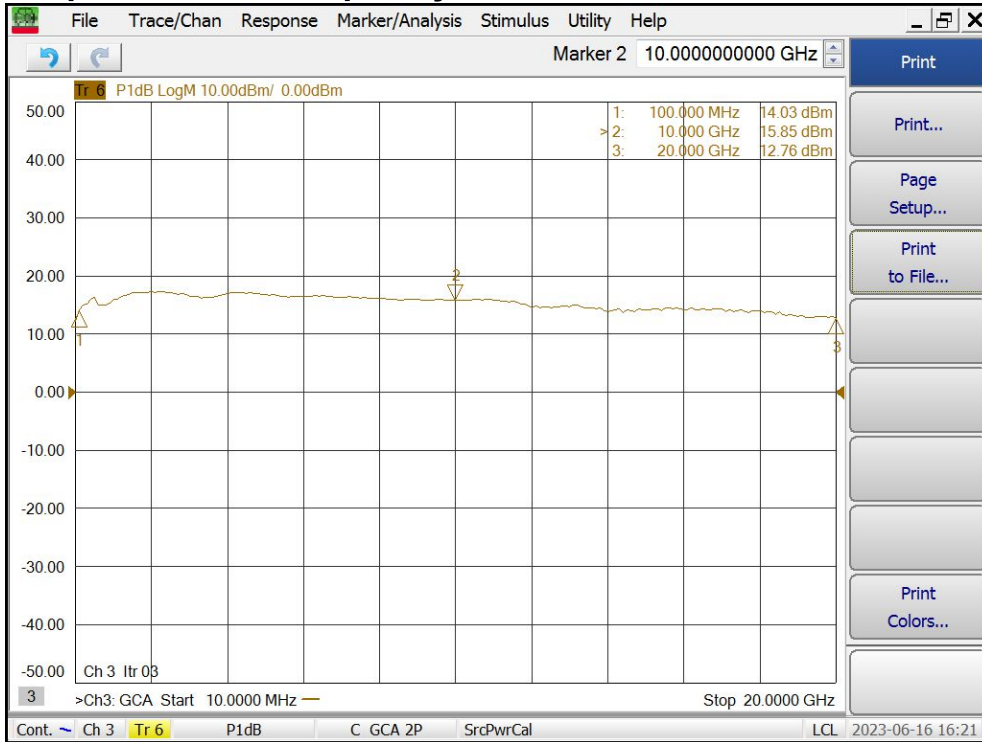
**Noise Figure vs Frequency**



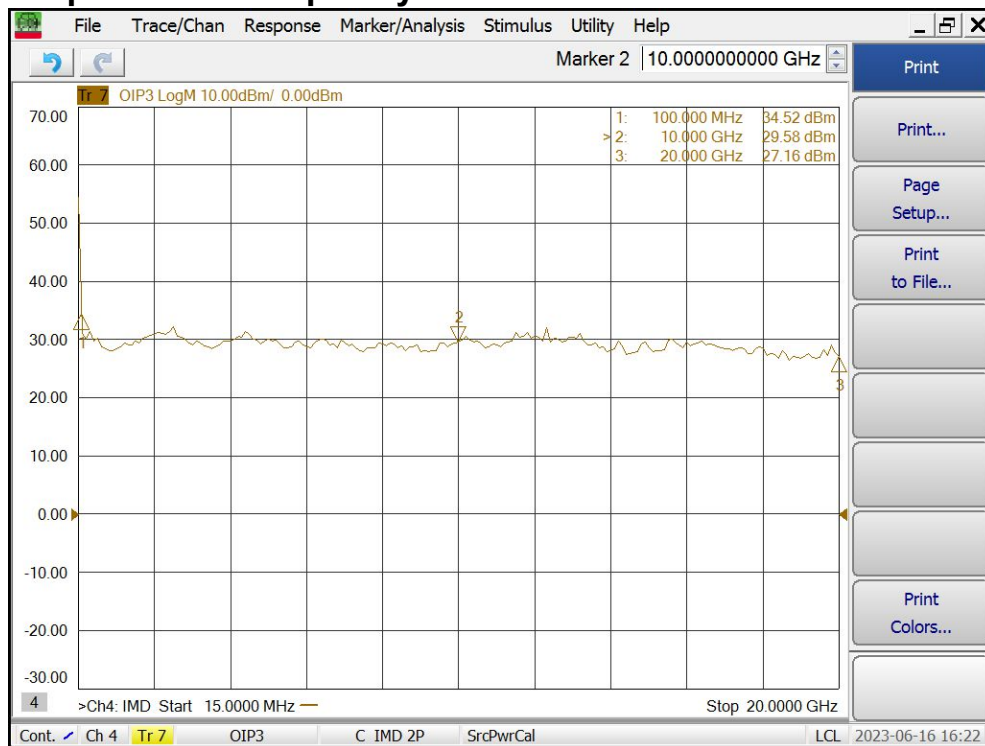
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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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**Absolute Maximum Ratings**

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

**ESD Sensitive Material**



**Outline**

