

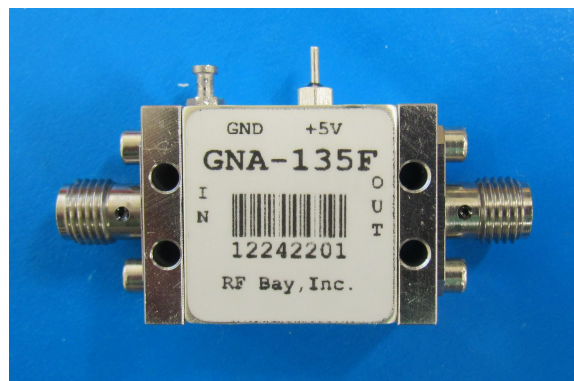
## GNA Series

## 10 – 6000MHz Low Noise Amplifier

### Features

- Frequency Range: 10-6000MHz
- Gain: 15dB
- P<sub>1dB</sub>: +19dBm
- IP3: +36dBm
- Noise Figure: 2.7dB (typ.)
- DC Power: +5V @ 100mA
- RF Connector: SMA-F

### Photo



### Description

GNA-135F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 10MHz to 6000MHz.

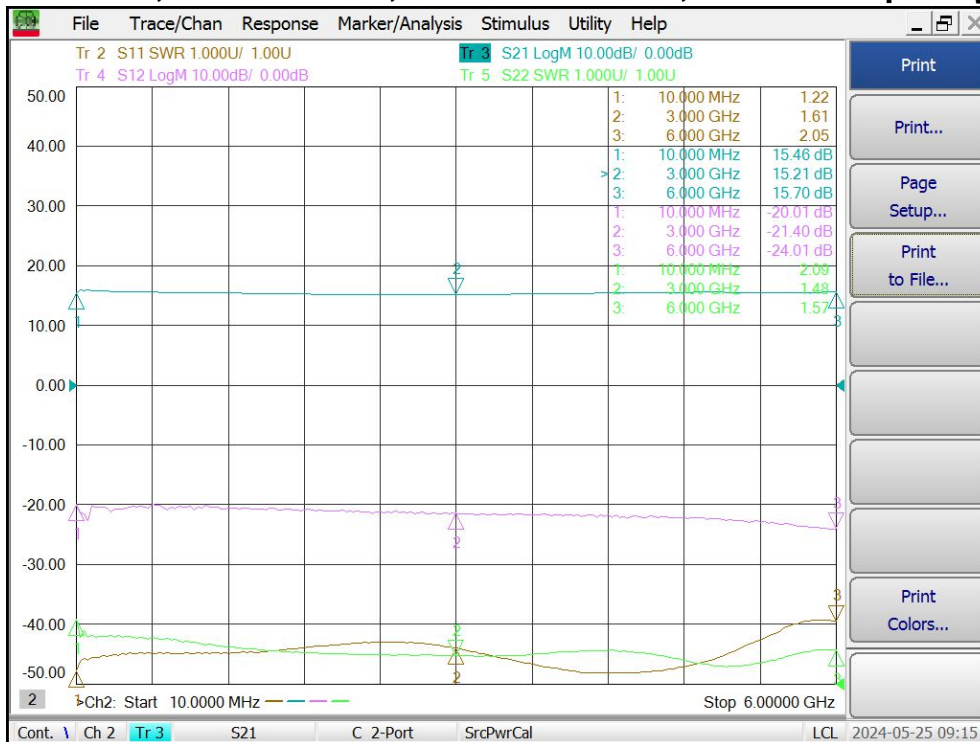
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		6000
Gain (S <sub>21</sub> ) f = 10MHz	dB	14.0	15.0	
f = 3GHz	dB	14.0	15.0	
f = 6GHz	dB	14.0	15.0	
Gain Flatness	dB		±0.3	±0.5
Output Power P <sub>1dB</sub> @ 3GHz	dBm	+18	+19	
Output Third Order IP3 @ 3GHz	dBm	+34	+36	
Noise Figure @ 3GHz	dB		2.7	3.2
Reverse Isolation (S <sub>12</sub> ) @ 3GHz	dB	-15	-20	
VSWR-Input (S <sub>11</sub> )	ratio:1	1.2 @10MHz	1.6 @ 3GHz	2.0 @ 6GHz
VSWR-Output (S <sub>22</sub> )	(unitless)	2.1 @10MHz	1.5 @ 3GHz	1.6 @ 6GHz
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		100	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)		

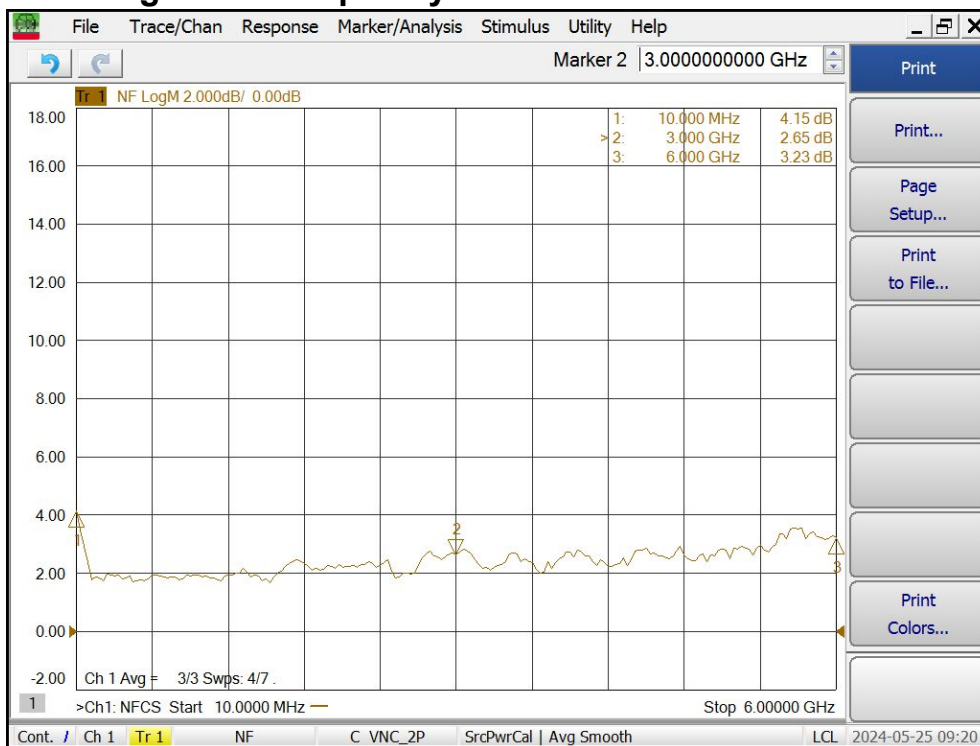
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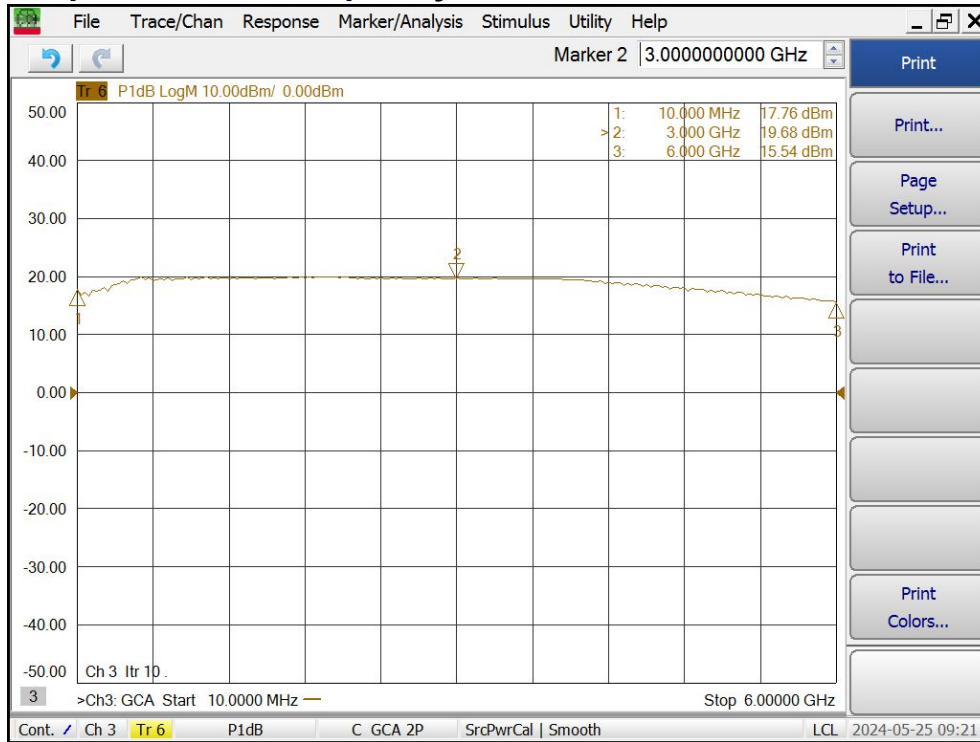
### Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



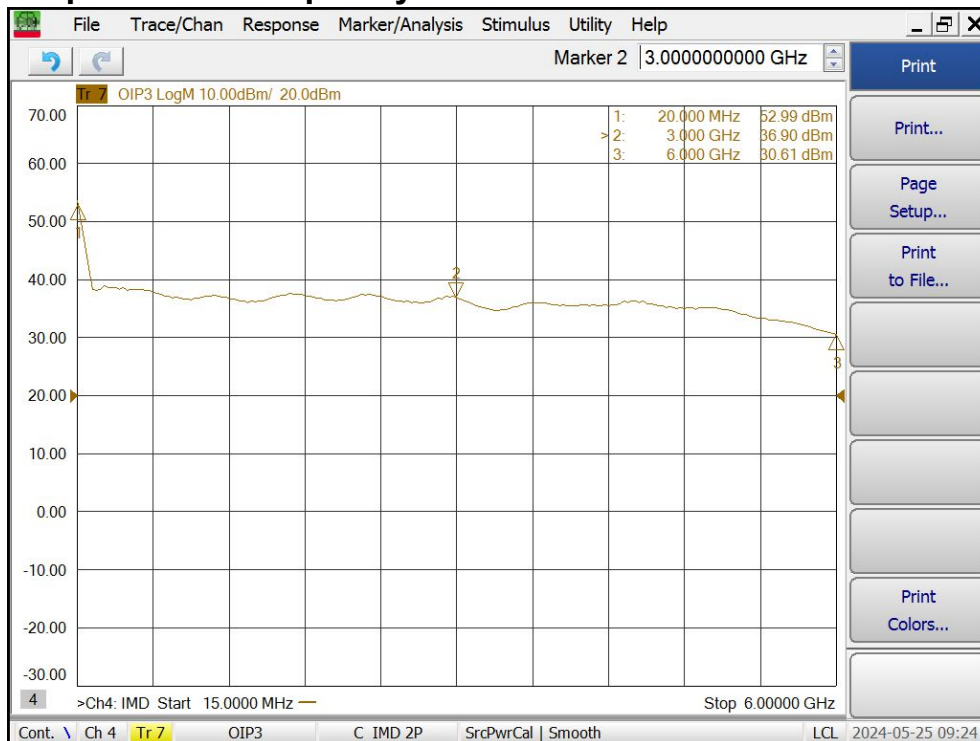
### Noise Figure vs Frequency



**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



**GNA Series**

**10 – 6000MHz Low Noise Amplifier**

**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**

