

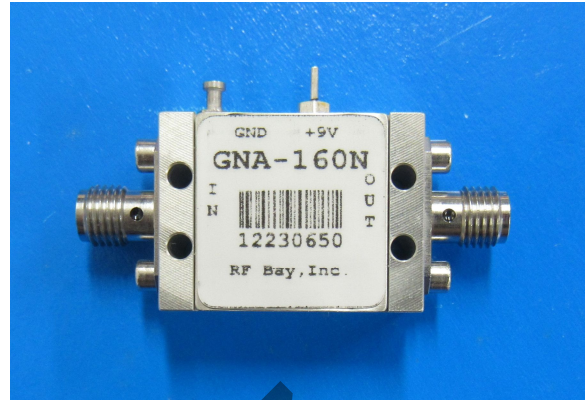
## GNA Series

## 20 – 6000MHz Low Noise Amplifier

### Features

- Frequency Range: 20-6000MHz
- Gain: 19dB
- P<sub>1dB</sub>: +26.5dBm
- IP3: +38dBm
- Noise Figure: 2dB (typ.)
- DC Power: +9V @ 200mA
- Internally Voltage Regulated
- RF Connector: SMA-F

### Photo



### Description

GNA-160N is a high performance Microwave Low Noise Amplifier, with standard frequency range of 20MHz to 6000MHz.

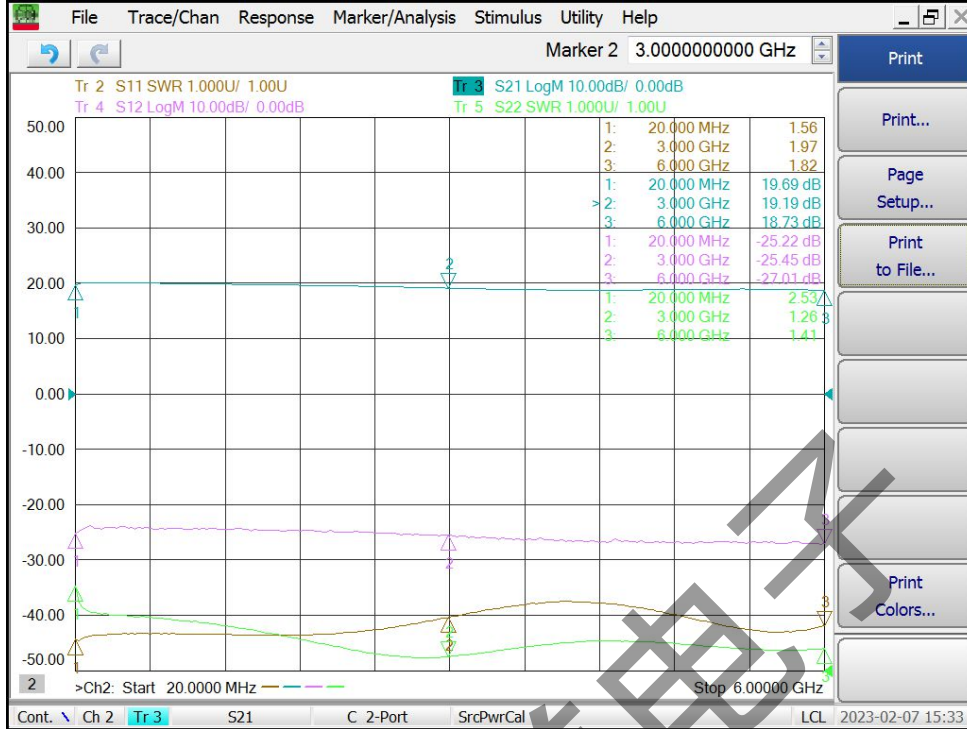
### Electrical Specifications @+25°C, Z<sub>in</sub>=Z<sub>out</sub>=50 Ω, V<sub>supply</sub> = +9VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	20		6000
Gain (S <sub>21</sub> )	f = 20MHz	18.0	19.5	
	f = 3GHz	17.5	19.0	
	f = 6GHz	17.0	18.5	
Gain Flatness	dB		±0.5	±1.0
Output Power P <sub>1dB</sub> @ 3GHz	dBm	+25	+26.5	
Output Third Order IP3 @ 3GHz	dBm	+36	+38	
Noise Figure @ 3GHz	dB		2.0	2.5
Reverse Isolation (S <sub>12</sub> ) @ 3GHz	dB	-20	-25	
VSWR-Input (S <sub>11</sub> )	ratio:1	1.5 @20MHz	2.0 @ 3GHz	1.8 @ 6GHz
VSWR-Output (S <sub>22</sub> )	(unitless)	2.5 @20MHz	1.3 @ 3GHz	1.4 @ 6GHz
DC Power Supply - Voltage	V		9	10
DC Power Supply - Current	mA		200	220
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)		

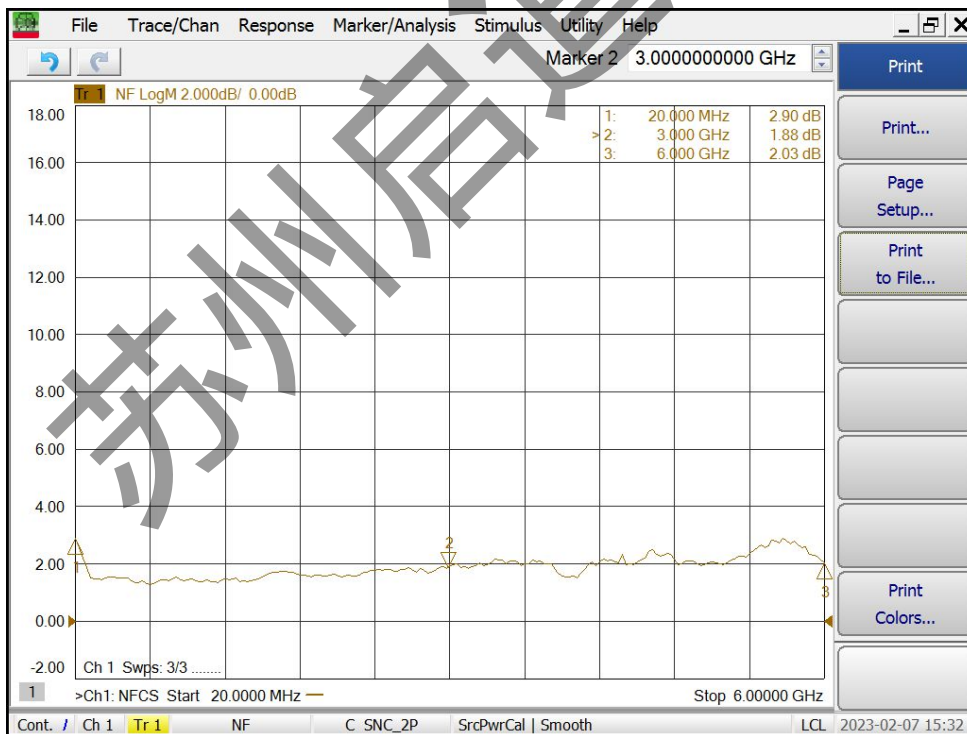
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### Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



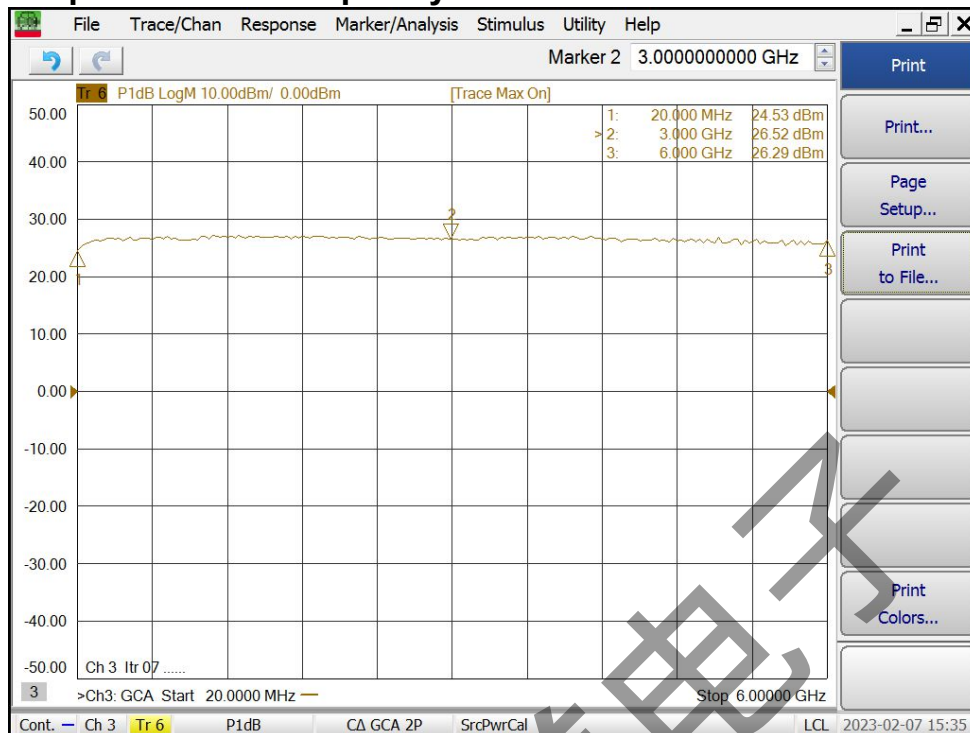
### Noise Figure vs Frequency



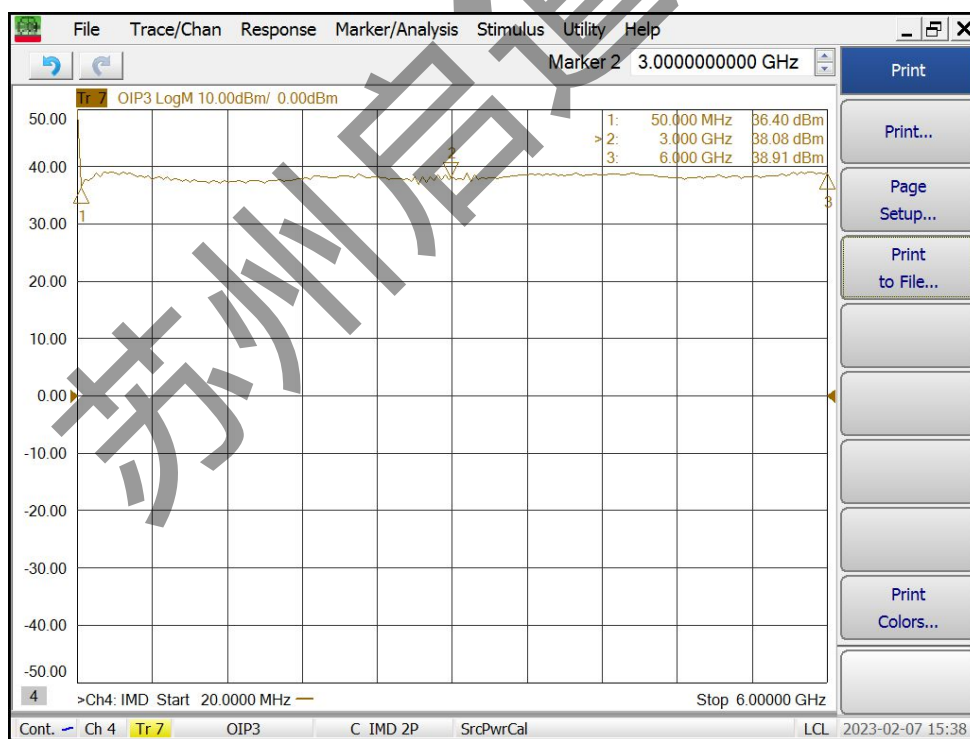
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### Output P1dB vs Frequency



### Output IP3 vs Frequency



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### Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage (Survival)	+13V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

### ESD Sensitive Material



### Outline

