

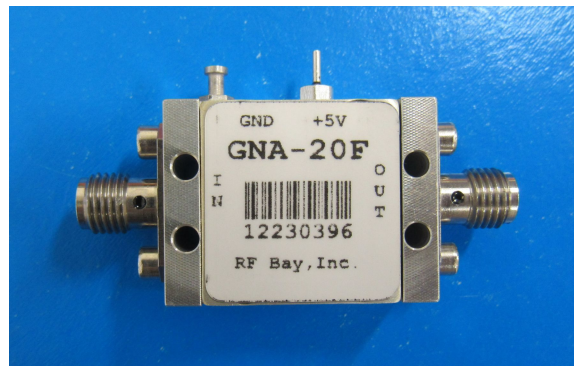
GNA Series

1.5 – 3000MHz Low Noise Amplifier

Features

- Frequency Range: 1.5-3000MHz
- Gain: 18dB
- P_{1dB}: +20dBm
- IP3: +35dBm
- Noise Figure: 2.2dB (typ.)
- DC Power: +5V @ 90mA
- RF Connector: SMA-F

Photo



Description

GNA-20F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 1.5MHz to 3000MHz.

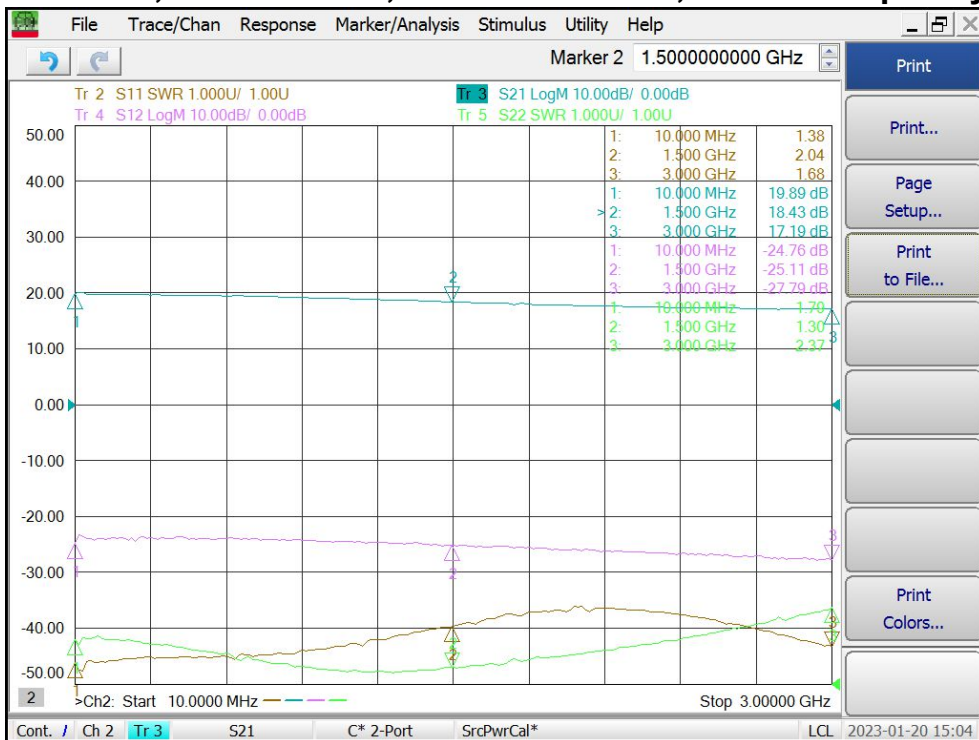
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	1.5		3000
Gain (S21) f = 1.5MHz	dB	16.5	18.0	
f = 10MHz	dB	17.5	19.0	
f = 1.5GHz	dB	16.5	18.0	
f = 3GHz	dB	15.5	17.0	
Gain Flatness	dB		±1.0	±1.5
Output Power P _{1dB} @ 1.5GHz	dBm	+18	+20	
Output Third Order IP3 @ 1.5GHz	dBm	+32	+35	
Noise Figure @ 1.5GHz	dB		2.2	2.7
Reverse Isolation (S12) @ 1.5GHz	dB	-20	-25	
VSWR-Input (S11)	ratio:1	1.5 @1.5MHz	2.0 @ 1.5GHz	1.7 @ 3GHz
VSWR-Output (S22)	(unitless)	2.0 @1.5MHz	1.5 @ 1.5GHz	2.5 @ 3GHz
DC Power Supply - Voltage	V	4.5	5	8
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)		

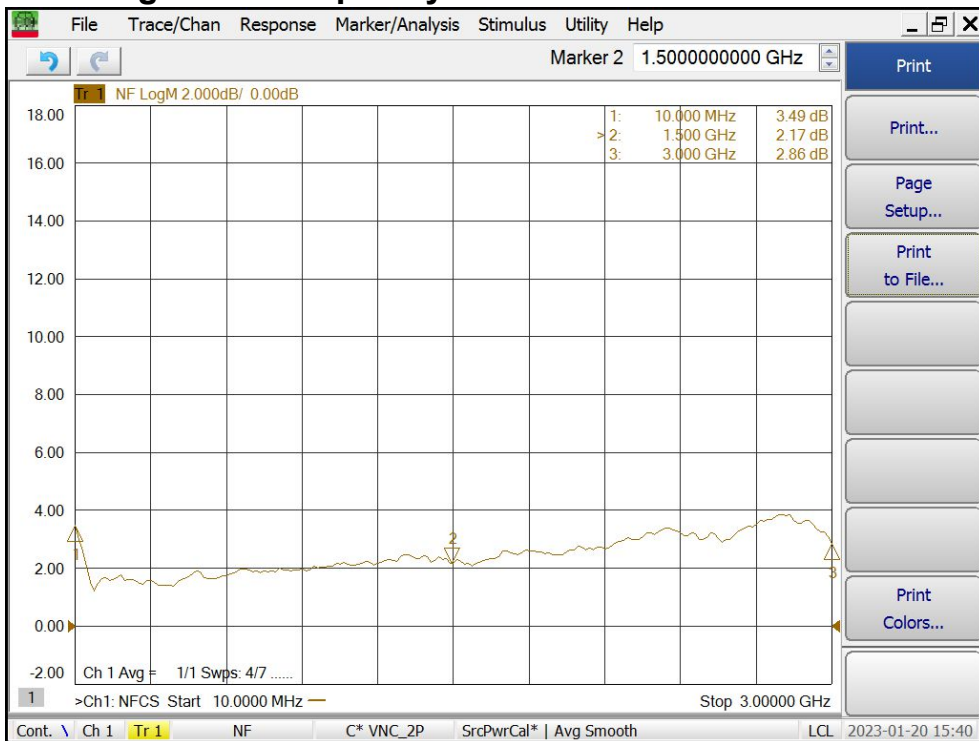
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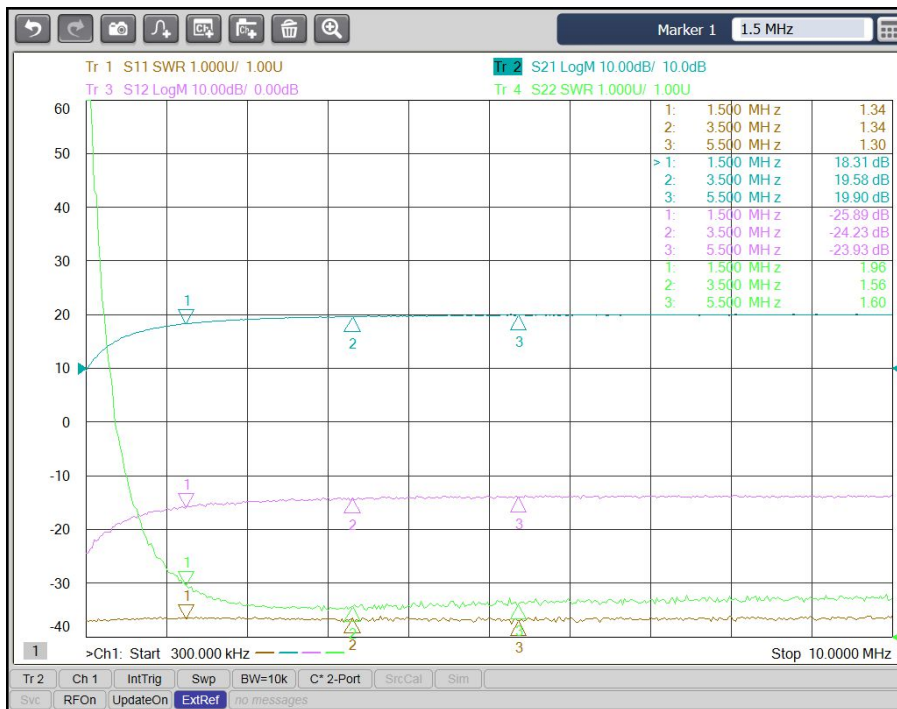
Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



Noise Figure vs Frequency



Low Frequency Gain S21, Isolation S12, VSWR S11, S22



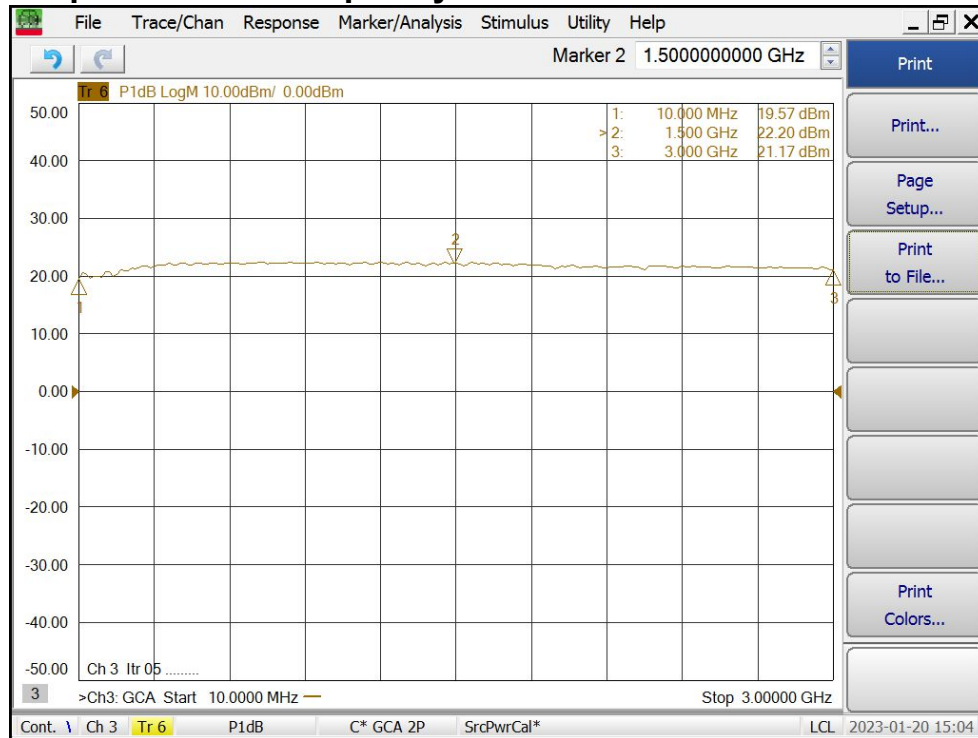
Low Frequency Gain S21, Isolation S12, VSWR S11, S22



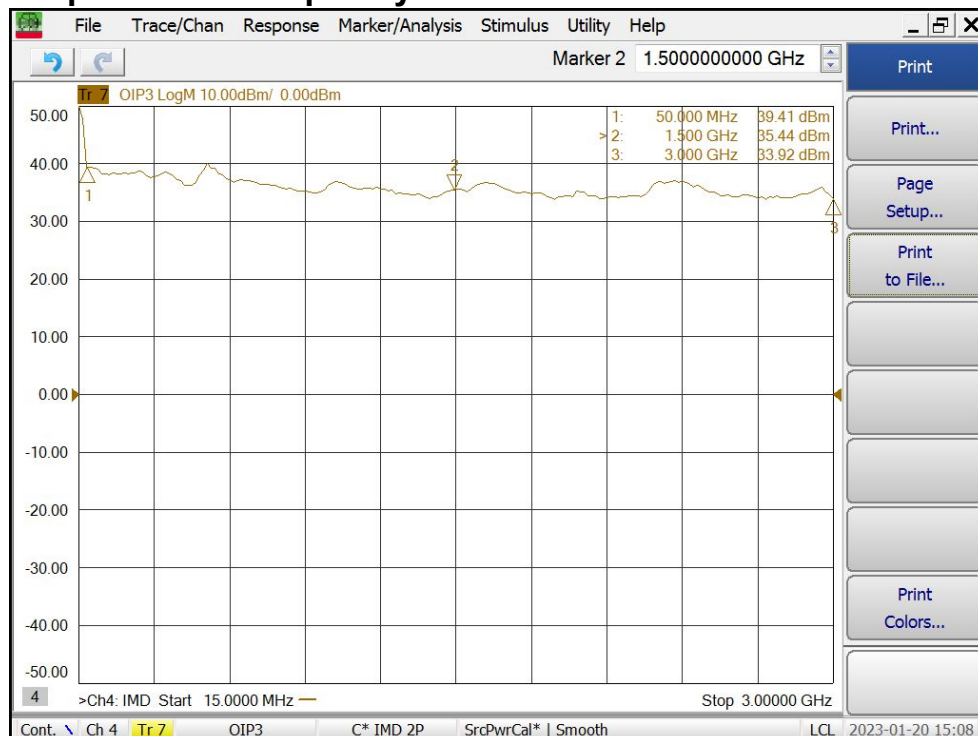
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Output P1dB vs Frequency



Output IP3 vs Frequency



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Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage (Survival)	+10V
RF Input Power	+20dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline

