

GNA Series

10 – 8000MHz Low Noise Amplifier

Features

- Frequency Range: 10-8000MHz
- Gain: 20dB
- P_{1dB}: +18dBm
- IP3: +32dBm
- Noise Figure: 1.6dB (typ.)
- DC Power: +5V @ 70mA
- RF Connector: SMA-F

Photo



Description

GNA-180F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 10MHz to 8000MHz.

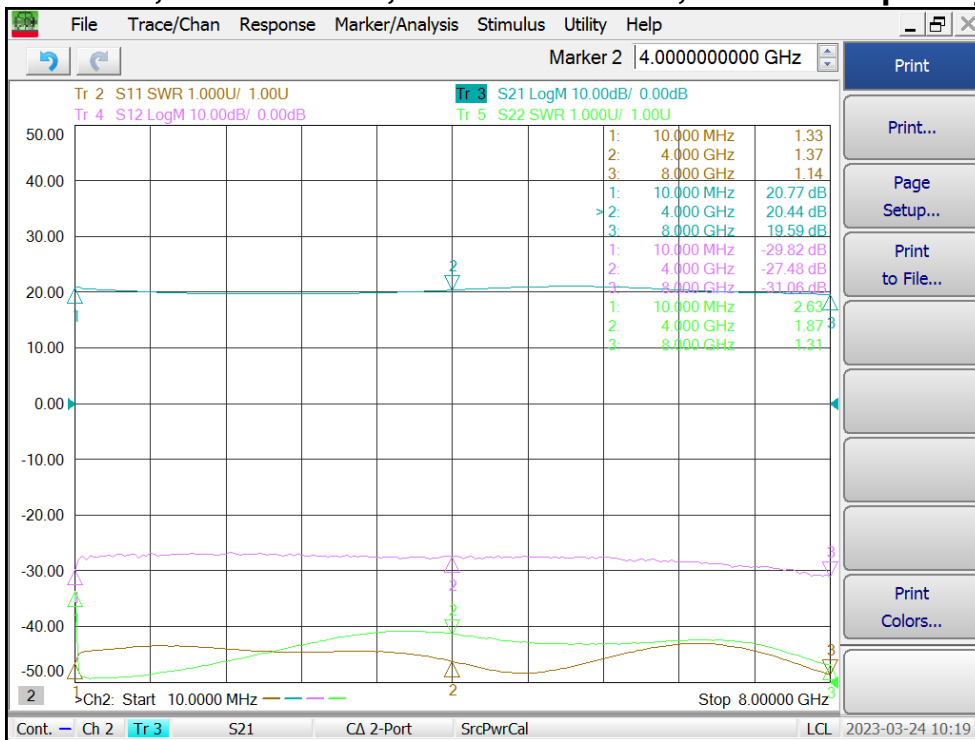
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		8000
Gain (S ₂₁) f = 10MHz	dB	19.0	20.5	
f = 4GHz	dB	19.0	20.0	
f = 8GHz	dB	18.0	19.5	
Gain Flatness	dB		±0.6	±1.0
Output Power P _{1dB} @ 4GHz	dBm	+17	+18	
Output Third Order IP3 @ 4GHz	dBm	+30	+32	
Noise Figure @ 4GHz	dB		1.6	2.0
Reverse Isolation (S ₁₂) @ 4GHz	dB	-20	-25	
VSWR-Input (S ₁₁)	ratio:1	1.4 @10MHz	1.4 @ 4GHz	1.2 @ 8GHz
VSWR-Output (S ₂₂)	(unitless)	2.6 @10MHz	1.9 @ 4GHz	1.2 @ 8GHz
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		70	90
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)		

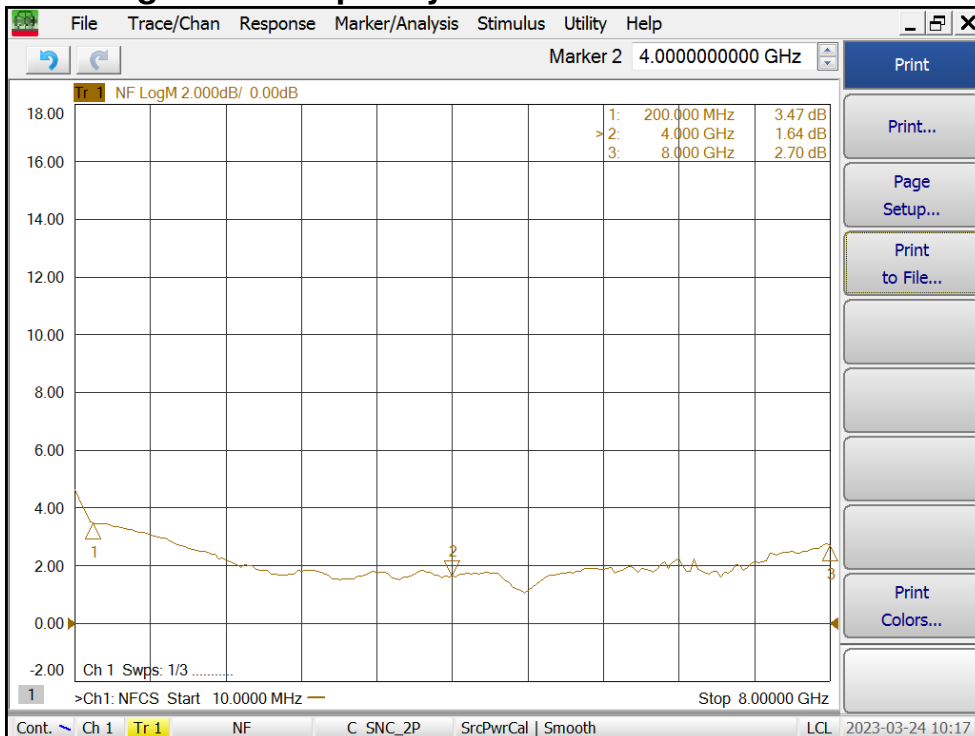
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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



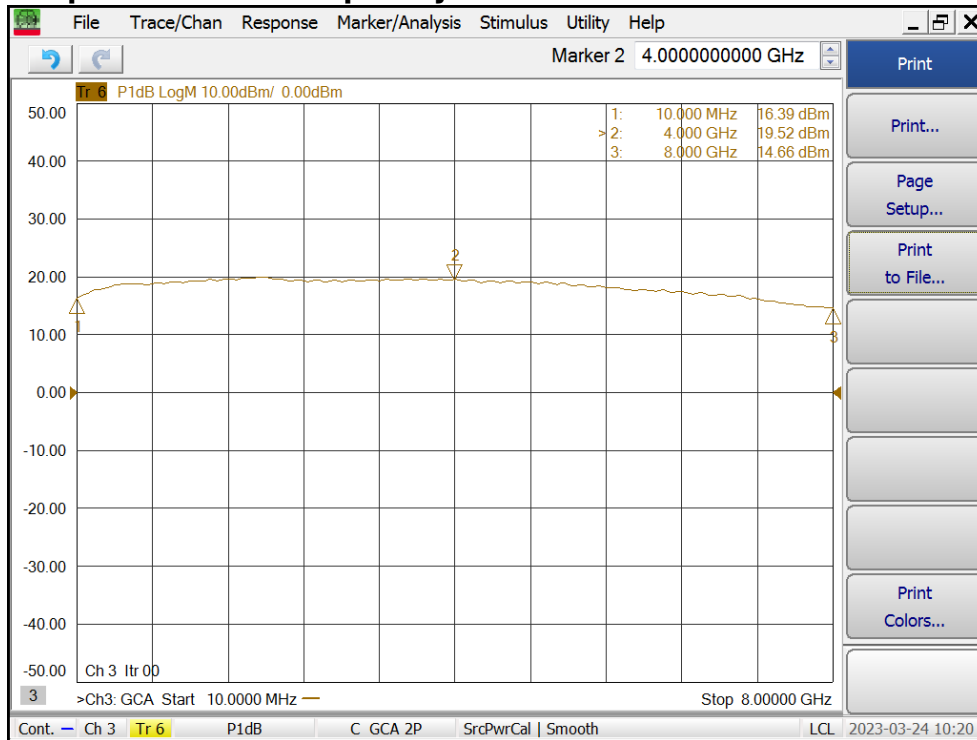
Noise Figure vs Frequency



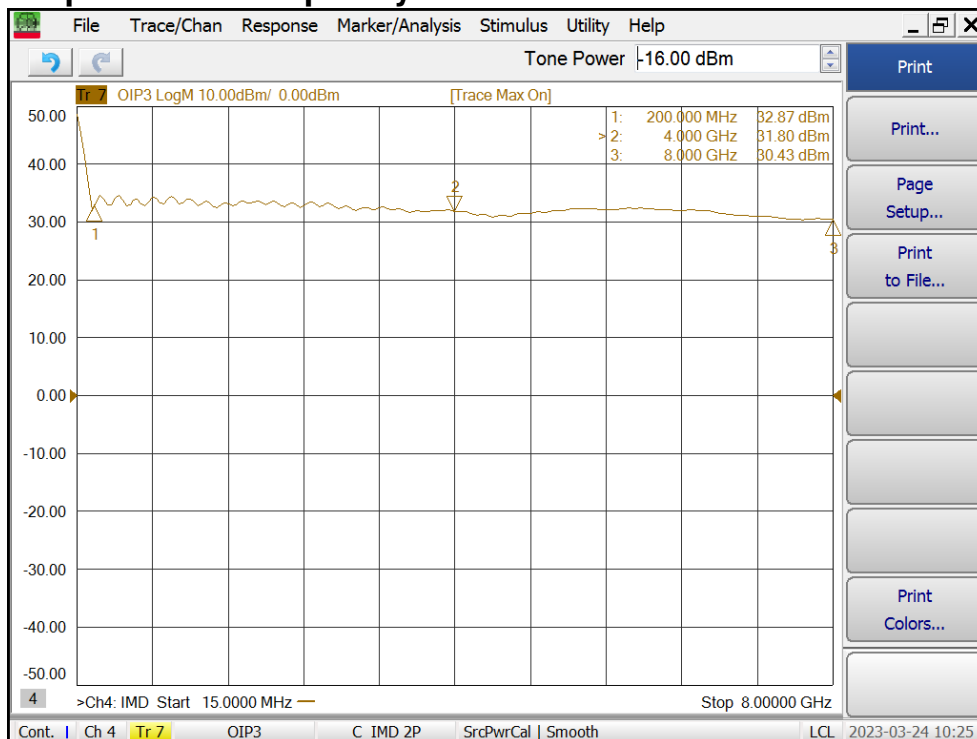
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Output P1dB vs Frequency



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

