

GNA Series

2 – 20GHz Low Noise Amplifier

Features

- Frequency Range: 2-20GHz
- Gain: 20dB
- P_{1dB}: +16dBm
- IP3: +26dBm
- Noise Figure: 2.0dB (typ.)
- DC Power: +5V @ 115mA
- RF Connector: SMA-F

Photo



Description

GNA-500F is a high performance Microwave Low Noise Amplifier, with standard frequency range of 2GHz to 20GHz.

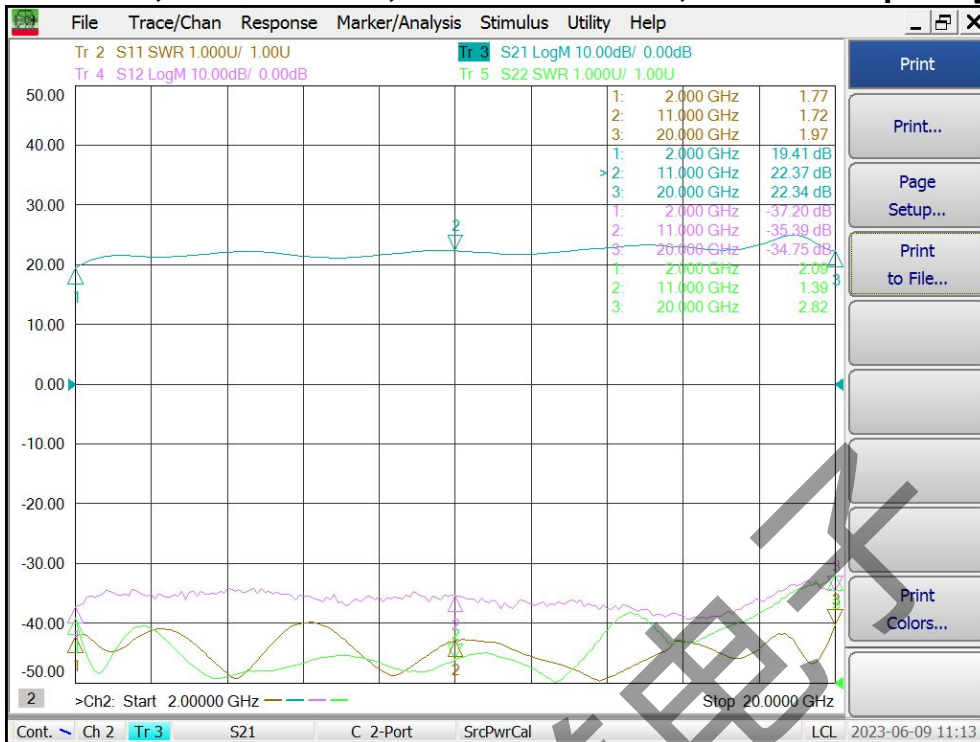
Electrical Specifications @+25°C, Z_{in}=Z_{out}=50 Ω, V_{supply} = +5VDC

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	2		20
Gain (S ₂₁)	f = 2GHz		19.5	
	f = 11GHz	20.0	22.0	
	f = 20GHz		22.0	
Gain Flatness	dB		±2.0	±3.0
Output Power P _{1dB} @ 11GHz	dBm	+14	+16	
Output Third Order IP3 @ 11GHz	dBm	+24	+26	
Noise Figure @ 11GHz	dB		2.0	2.2
Reverse Isolation (S ₁₂)	dB	-30	-35	
VSWR-Input (S ₁₁) @ 11GHz			1.7:1	2.0:1
VSWR-Output (S ₂₂) @ 11GHz			1.4:1	1.7:1
DC Power Supply - Voltage	V	4.5	5	5.5
DC Power Supply - Current	mA		115	140
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)		

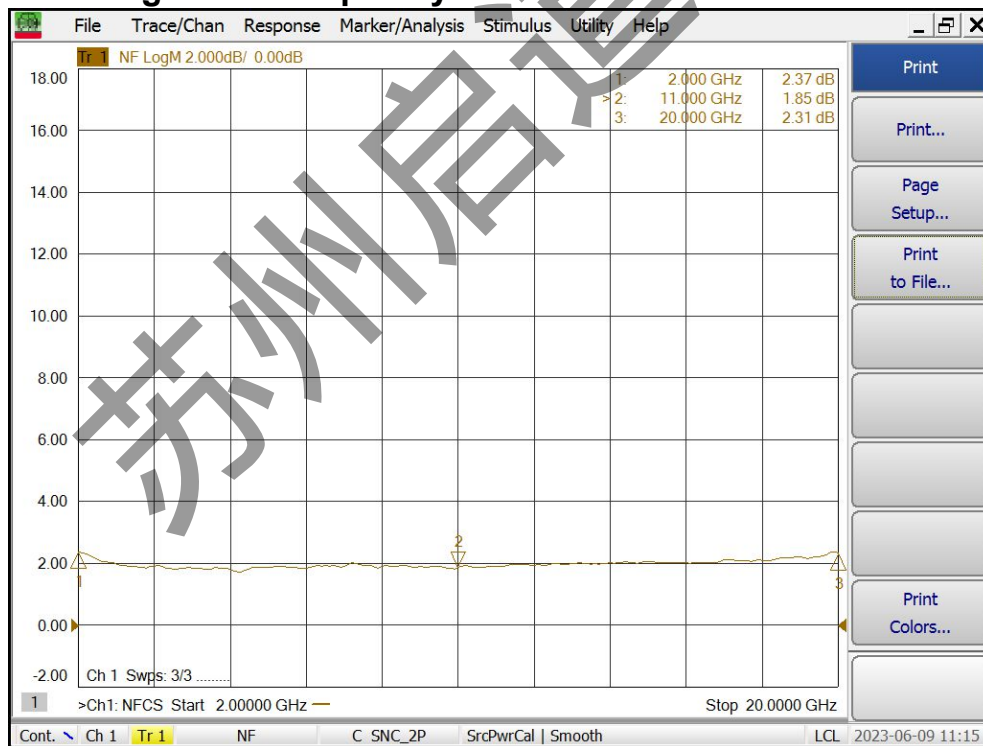
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Gain S21, Isolation S12, Return Loss S11, S22 vs Frequency



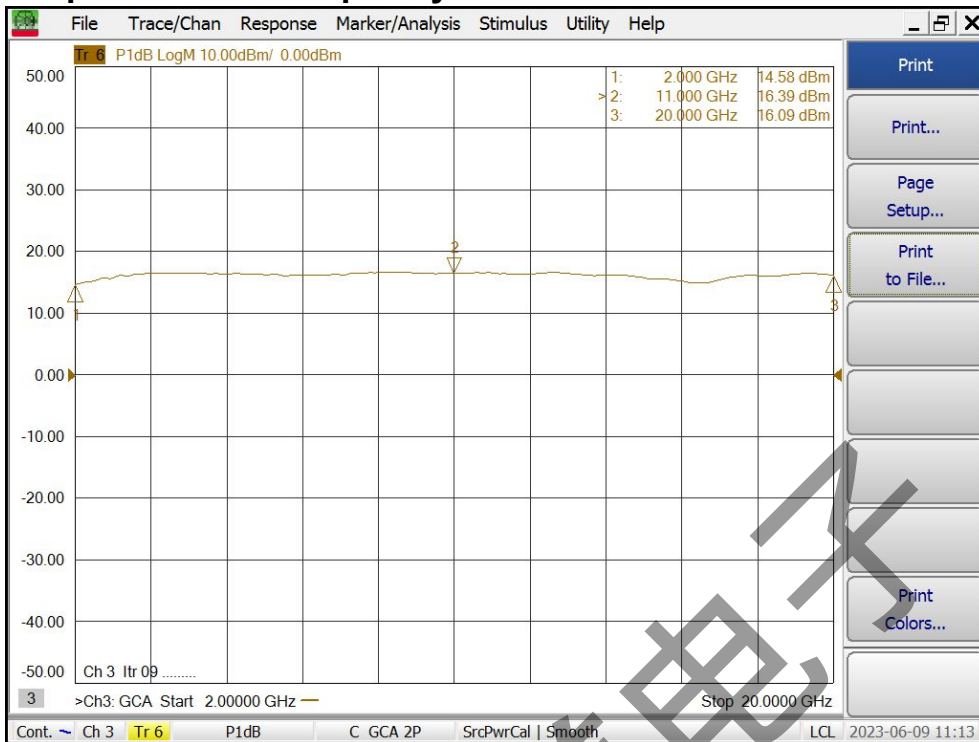
Noise Figure vs Frequency



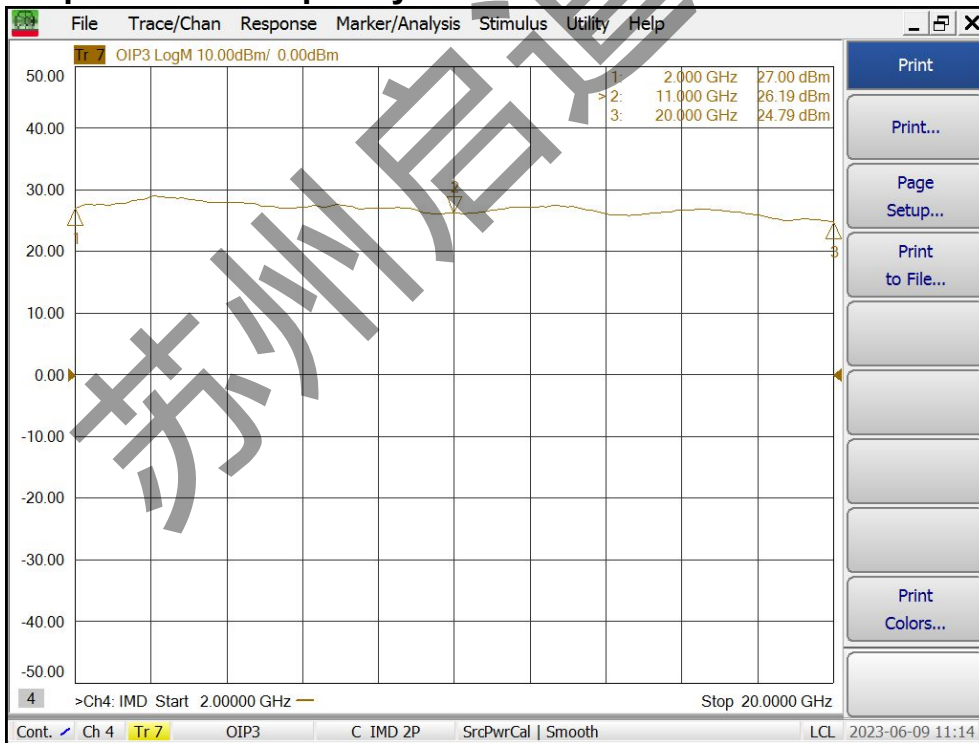
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Output P1dB vs Frequency



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

