

LNA Series

30 – 512MHz Low Noise Amplifier

Features

- Frequency Range: 30 - 512MHz
- Gain: 30dB
- P_{1dB}: +19dBm
- IP3: +34dBm
- Noise Figure: 1.5dB
- DC Power: 12V/105mA
- Internal Voltage Regulated
- Reverse DC Protection
- SMA Connector

Picture



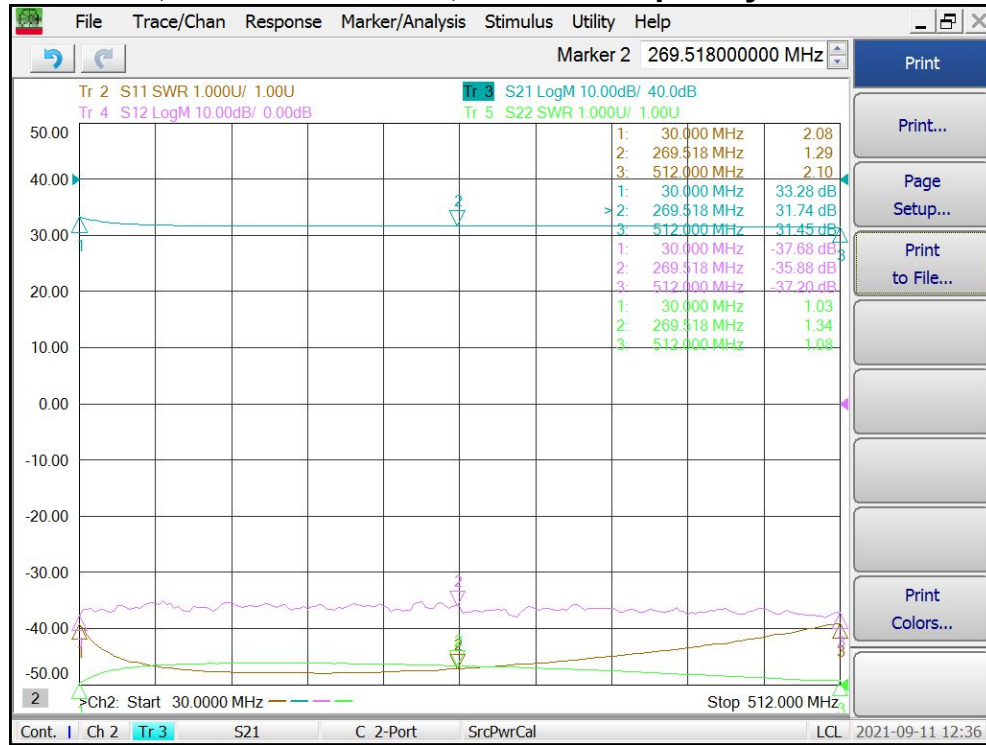
Description

LNA-512 is a flat response Low Noise Amplifier operates in frequency range from 30MHz to 512MHz.

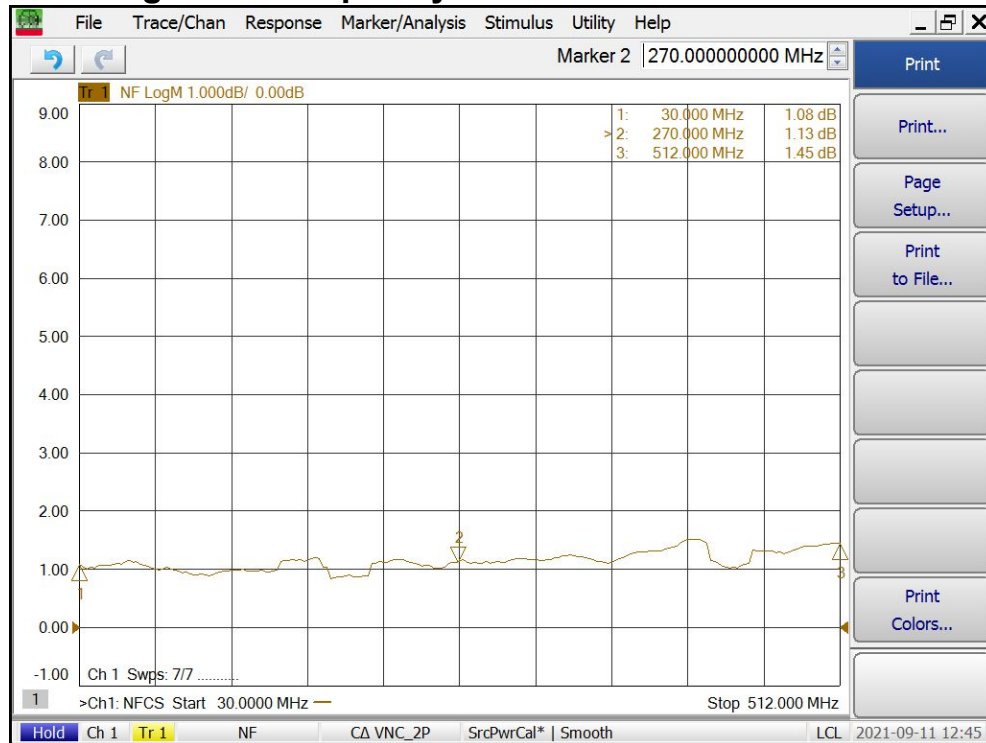
Electrical Specifications @ +25 °C, Z_{in} = Z_{out} = 50 Ω, DC Supply = +12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	30		512
Gain S ₂₁ f = 30MHz	dB	30	32	
f = 270MHz	dB	30	31	
f = 512MHz	dB	30	31	
Gain Flatness	dB		± 1.0	± 1.5
P _{1dB}	dBm	+17	+19	
Output IP3	dBm	+32	+34	
Noise Figure f = 270MHz	dB		1.5	1.8
Reverse Isolation S ₁₂ f = 270MHz	dB	-30	-35	
Input VSWR S ₁₁ f = 270MHz			1.5:1	2.0:1
Output VSWR S ₂₂ f = 270MHz			1.5:1	2.0:1
DC Power Supply	V		12	15
Supply Current	mA		105	120

Gain S21, Return Loss S11, S22 vs Frequency



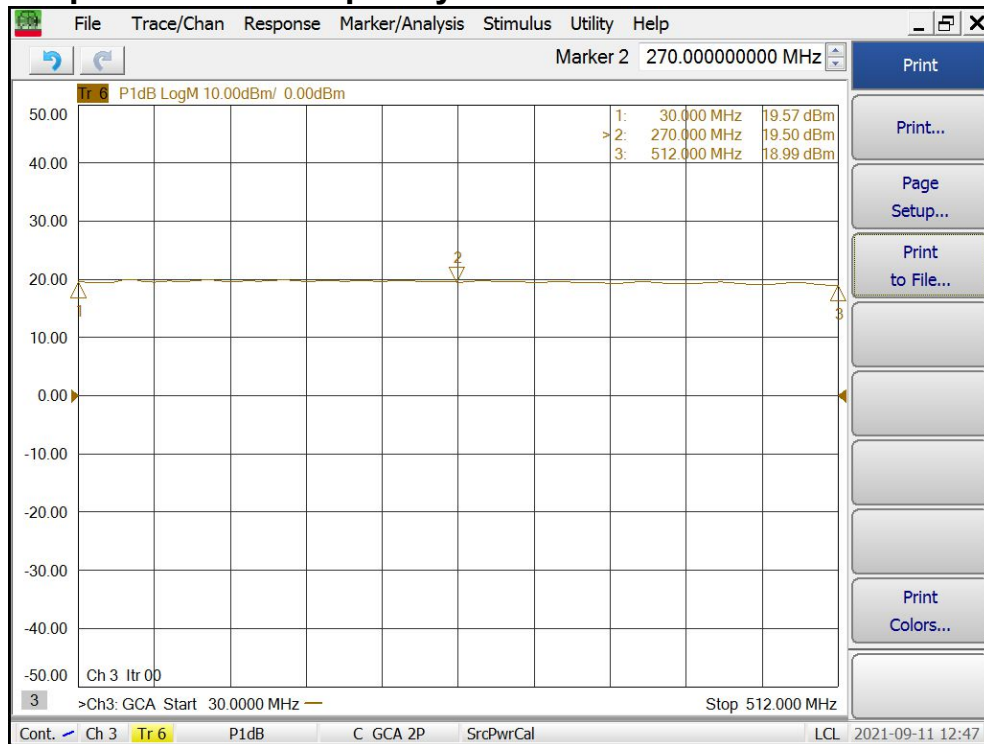
Noise Figure vs Frequency



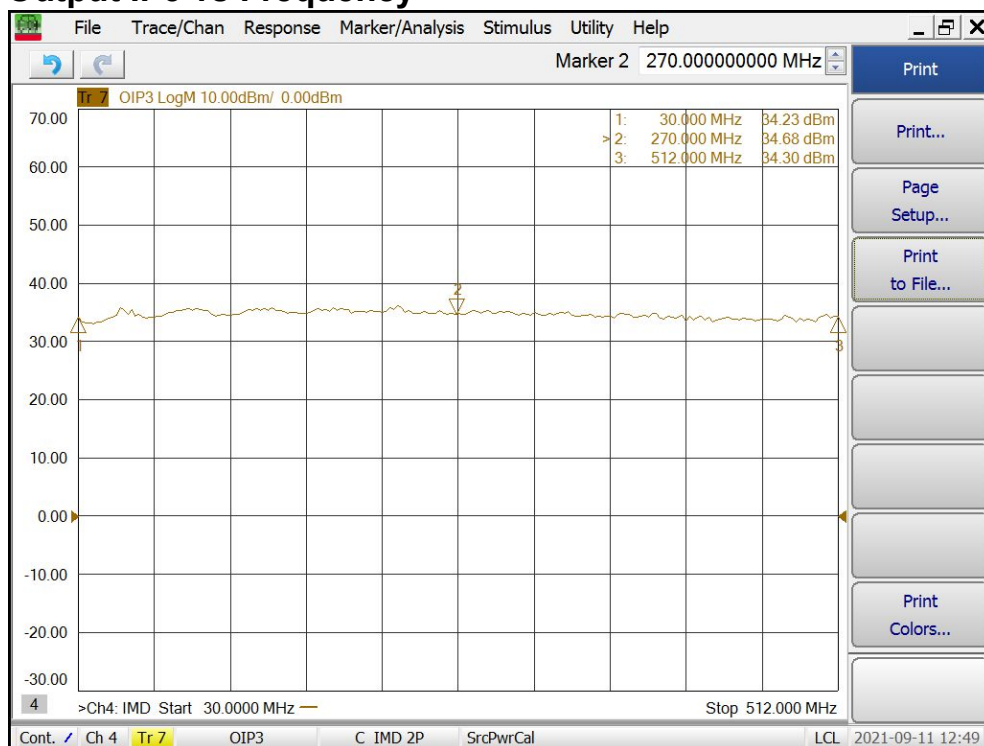
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Output P1dB vs Frequency



Output IP3 vs Frequency



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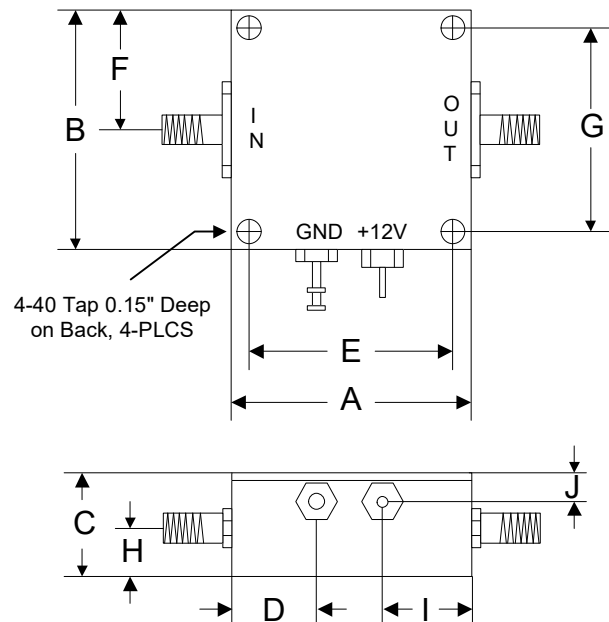
Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+25V
RF Input Power	+15dBm
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °C

ESD Sensitive Material



Outline



	A	B	C	D	E	F	G	H	I	J
Inch	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
mm	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76