

LNA Series

30KHz – 600MHz Low Noise Amplifier

Features

- Frequency Range: 30KHz-600MHz
- Gain: 50dB
- P_{1dB} : +14dBm
- IP3: +24dBm
- Noise Figure: 2.2dB
- DC Power: 15V/85mA
- SMA Connector

Performance measured @ 300MHz

Description

LNA-650 is a 50dB gain wideband Low Noise Amplifier operates with frequency range from 30KHz to 600MHz.

Picture



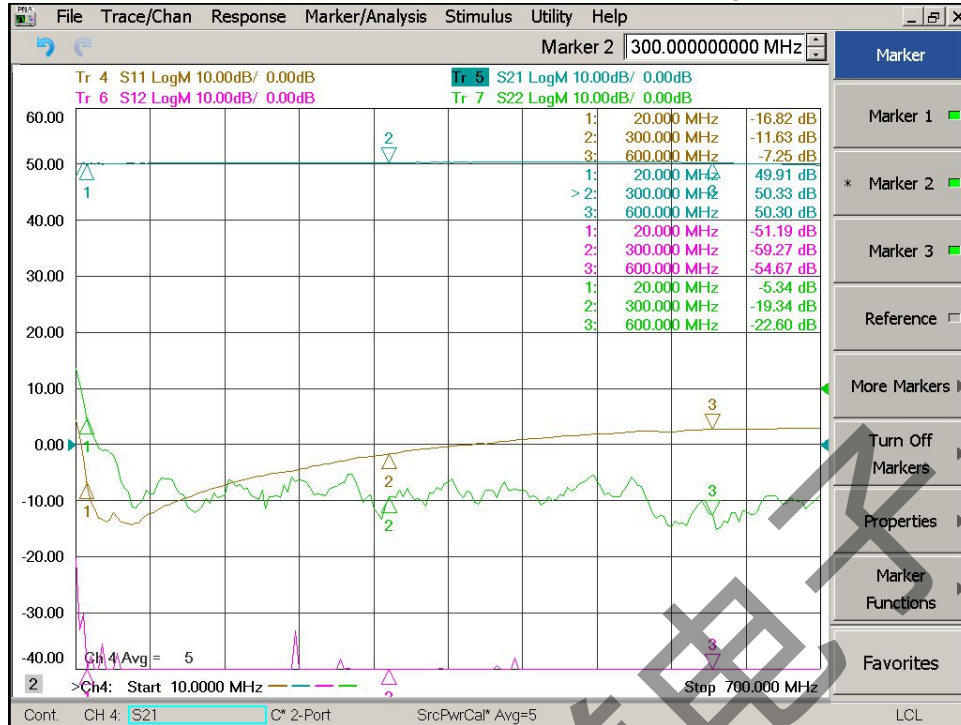
Electrical Specifications @ +25 °C, $Z_{in} = Z_{out} = 50 \Omega$, DC Voltage = +15V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	0.03		600
Gain S21	f = 30KHz	dB	47	48.5
	f = 20MHz	dB	48	50.0
	f = 300MHz	dB	48	50.0
	f = 600MHz	dB	48	50.0
Gain Flatness	dB		±1.2	±1.5
P_{1dB}	f = 300MHz	dBm	+12	+14
IP3	f = 300MHz	dBm	+22	+24
Noise Figure	f = 300MHz	dB		2.2
Reverse Isolation S12	f = 300MHz	dB	-50	-60
Input VSWR S11	f = 300MHz			1.5:1
Output VSWR S22	f = 300MHz			1.2:1
DC Power Supply	V	14	15	18
Supply Current	mA		85	100

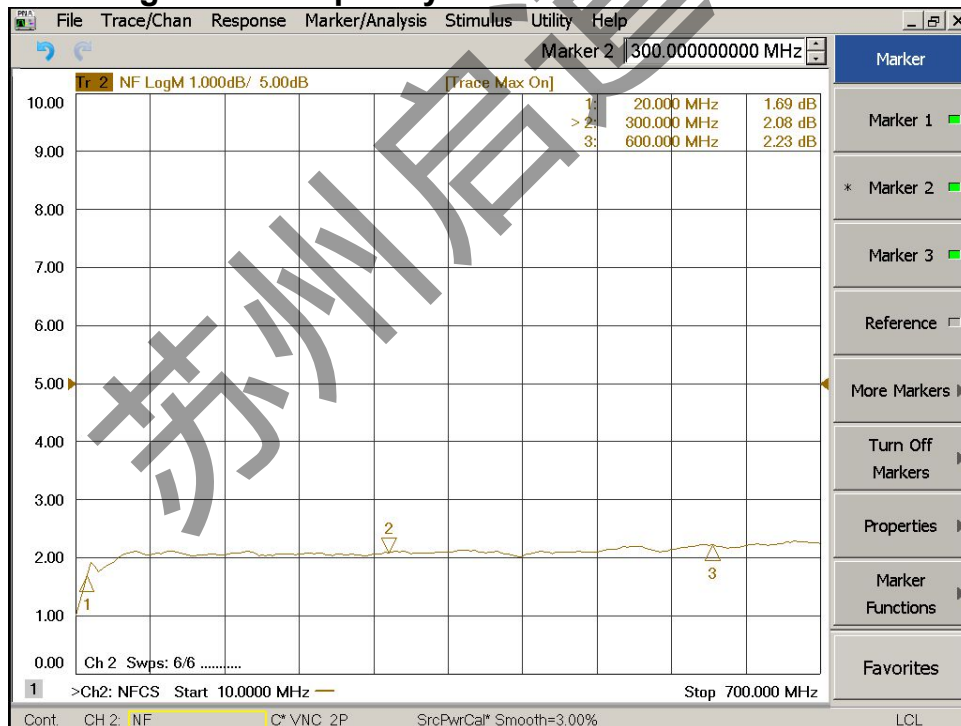
LNA Series

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Gain S21, Return Loss S11, S22 vs Frequency



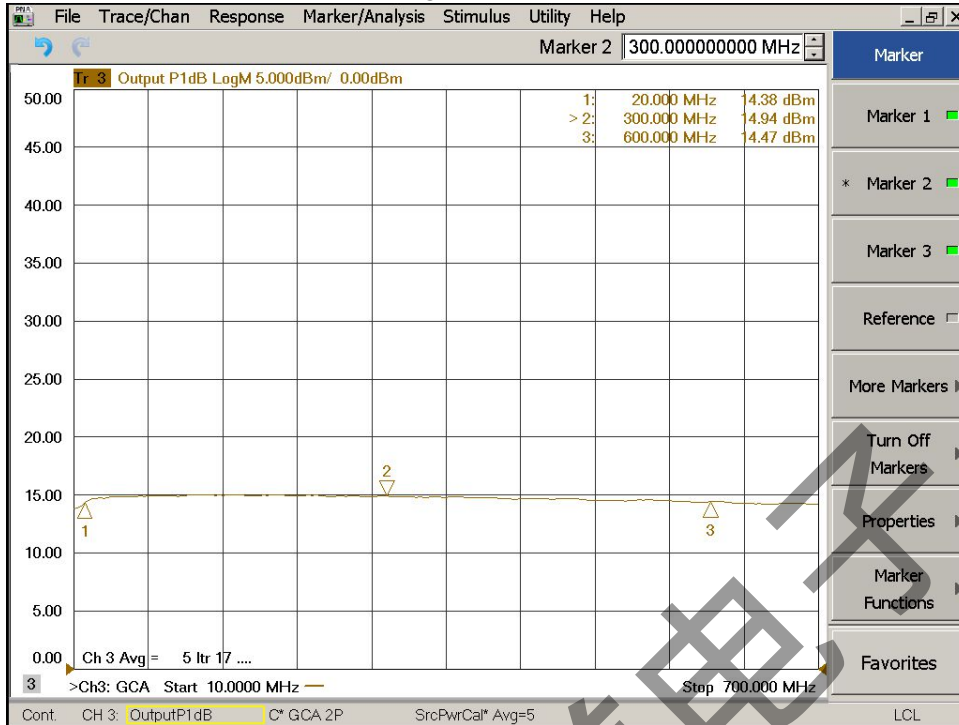
Noise Figure vs Frequency



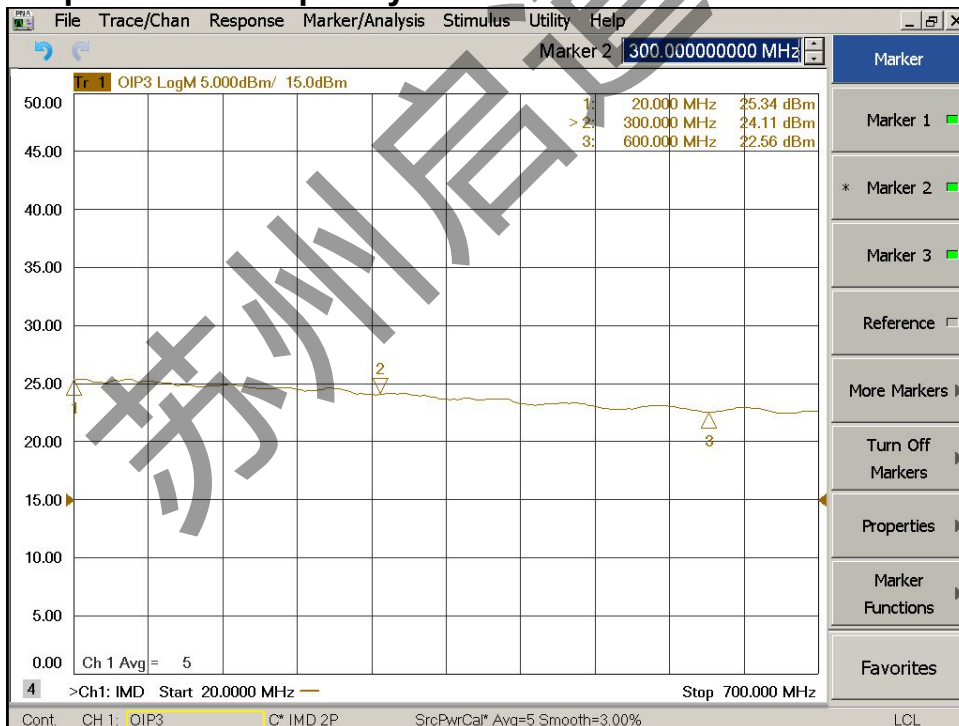
LNA Series

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Output P1dB vs Frequency



Output IP3 vs Frequency



LNA Series

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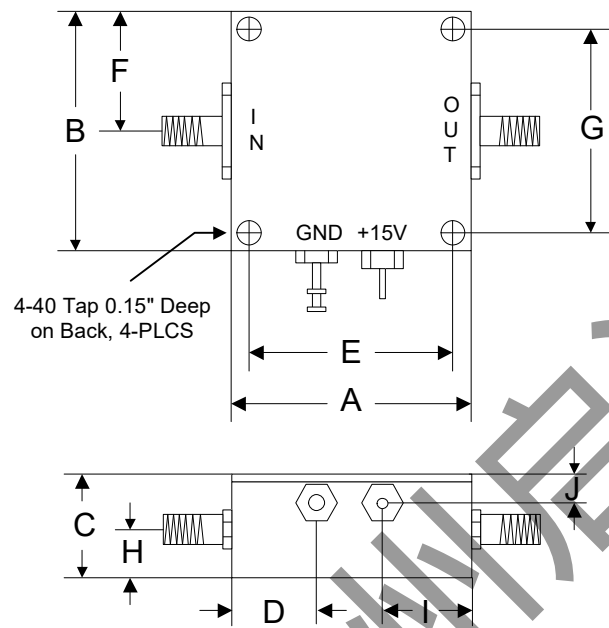
Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+20V
RF Input Power	+13dBm
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