

## LNA Series

## 10 – 250MHz Low Noise Amplifier

### Features

- Frequency Range:10-250MHz
- Gain: 17dB
- P<sub>1dB</sub>: +21dBm
- IP3: +39dBm
- Noise Figure: 1.4dB
- DC Power: 5V/160mA
- SMA Connector

Performance measured @ 125MHz

### Description

LNA-250 is a high dynamic range Low Noise Amplifier as well as 100mW Driver Amplifier operates with frequency range from 10 to 250MHz.

### Picture



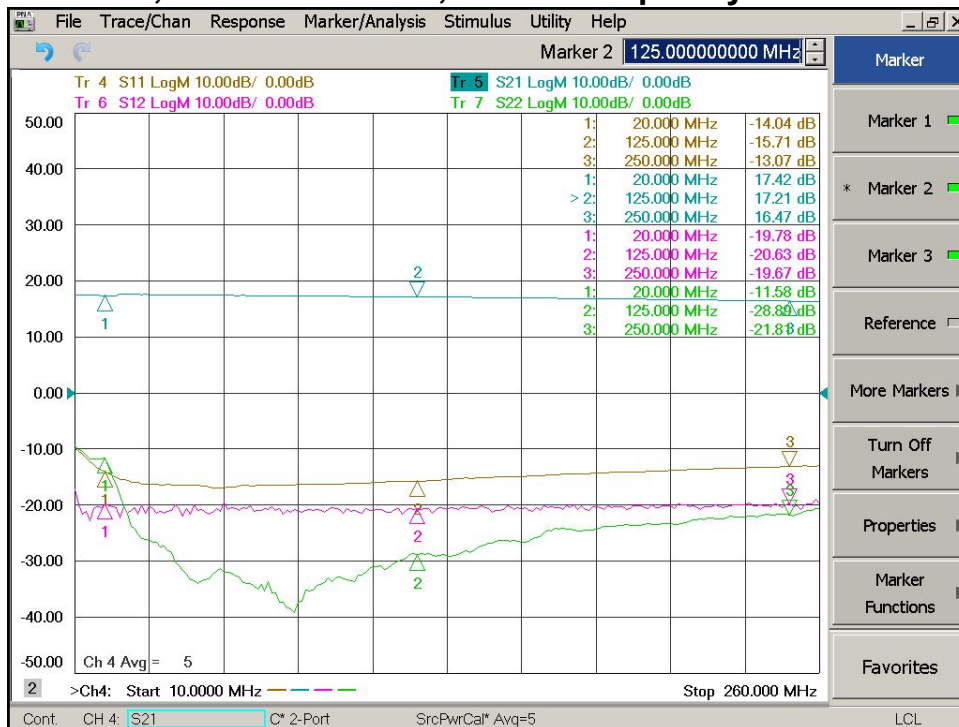
### Electrical Specifications @ +25 °C, Z<sub>in</sub> = Z<sub>out</sub> = 50 Ω, DC Voltage = +5V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		250
Gain S21 f = 10MHz	dB	15	17	
f = 125MHz	dB	15	17	
f = 250MHz	dB	14	16	
Gain Flatness	dB		±0.5	±0.8
P <sub>1dB</sub> f = 125MHz	dBm	+19	+21	
IP3 f = 125MHz	dBm	+37	+39	
Noise Figure	dB		1.4	1.8
Reverse Isolation S12	dB	-17	-20	
VSWR f = 125MHz				
Input VSWR S11			1.4:1	1.8:1
Output VSWR S22			1.1:1	1.5:1
DC Power Supply	V	4.75	5	5.25
Supply Current	mA	140	160	180

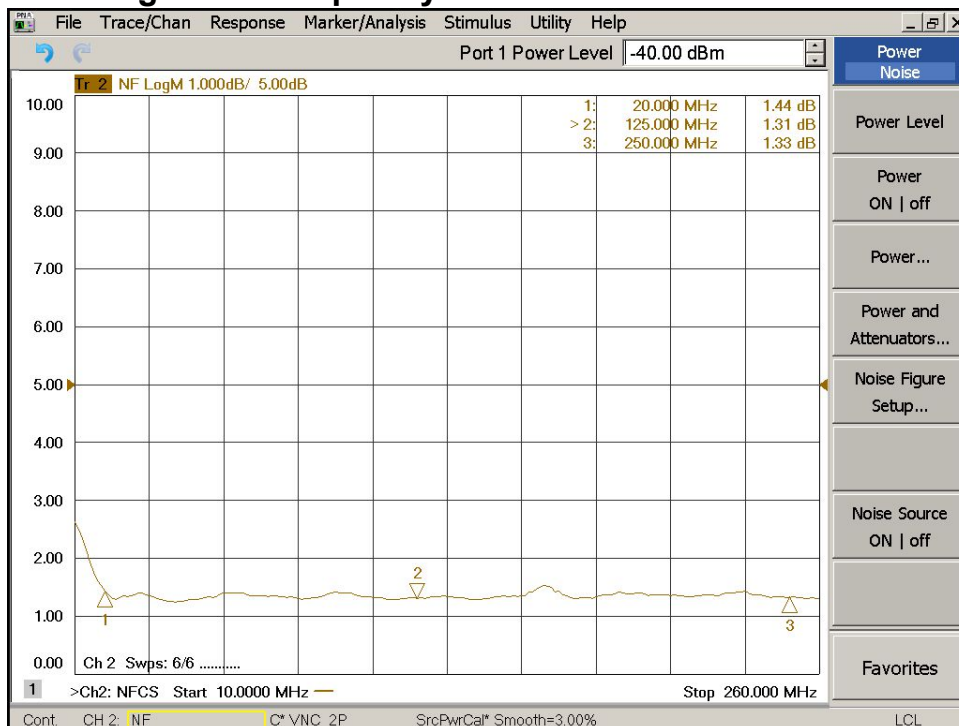
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### Gain S21, Return Loss S11, S22 vs Frequency



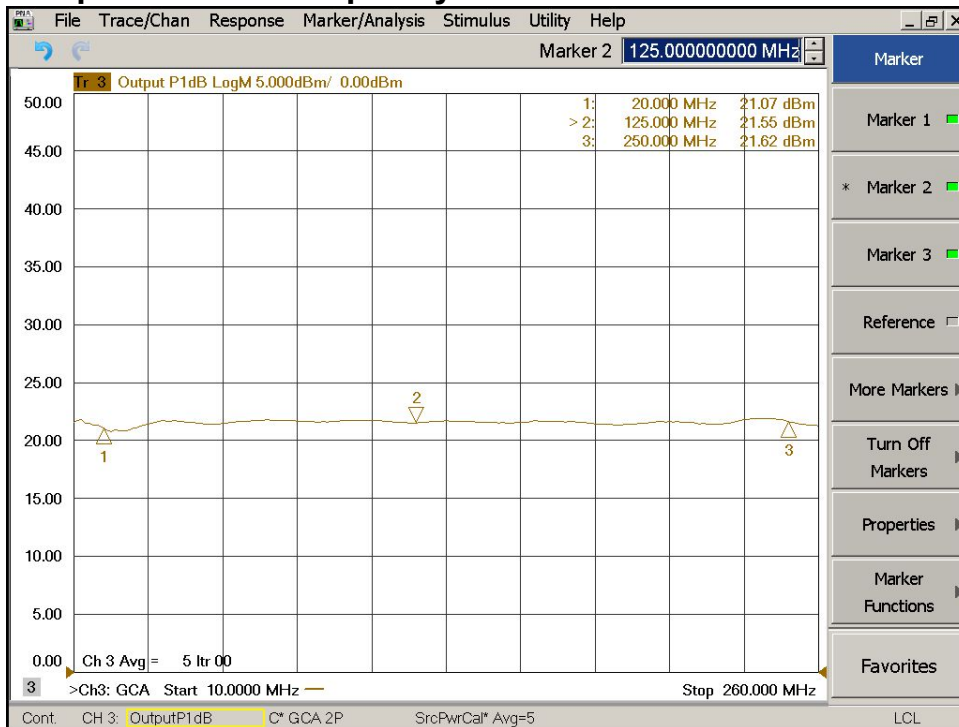
### Noise Figure vs Frequency



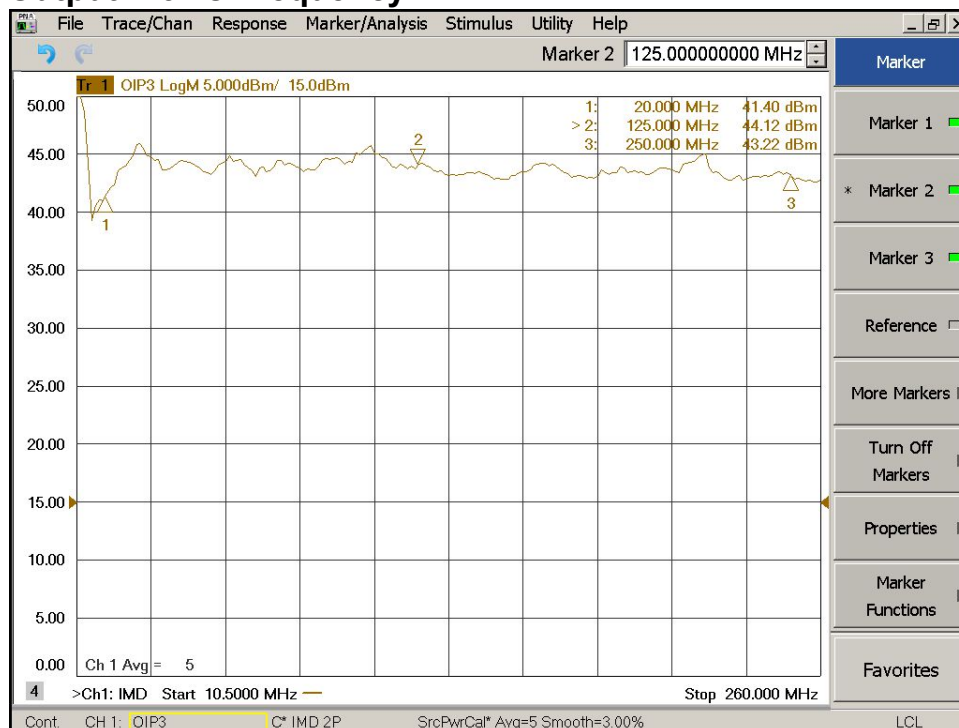
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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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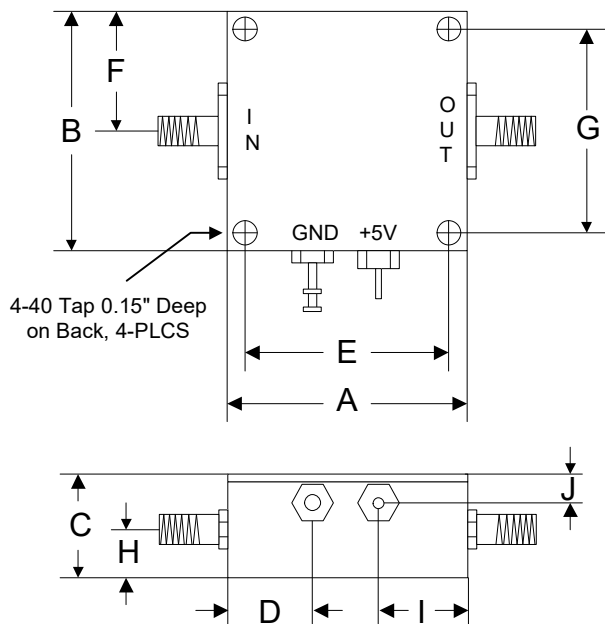
**Absolute Maximum Ratings**

Parameter	Absolute Maximum
Supply Voltage	+6V
RF Input Power	+20dBm
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
<b>Inch</b>	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
<b>mm</b>	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76