

## LNA Series

## 30KHz – 600MHz Low Noise Amplifier

### Features

- Frequency Range: 30KHz-600MHz
- Gain: 50dB
- P<sub>1dB</sub>: +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



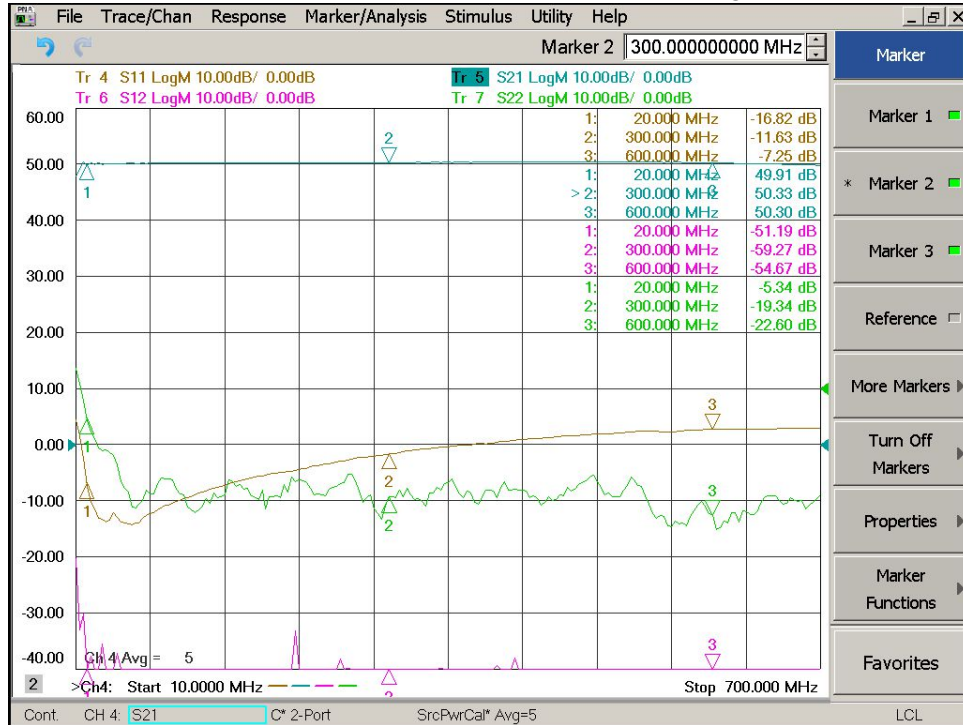
### Electrical Specifications @ +25 °C, Z<sub>in</sub> = Z<sub>out</sub> = 50 Ω, DC Voltage = +15V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	0.03		600
Gain S <sub>21</sub> 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 <sub>1dB</sub> f = 300MHz	dBm	+12	+14	
IP3 f = 300MHz	dBm	+22	+24	
Noise Figure f = 300MHz	dB		2.2	2.5
Reverse Isolation S <sub>12</sub> f = 300MHz	dB	-50	-60	
Input VSWR S <sub>11</sub> f = 300MHz			1.5:1	2.0:1
Output VSWR S <sub>22</sub> f = 300MHz			1.2:1	1.7:1
DC Power Supply	V	14	15	18
Supply Current	mA		85	100

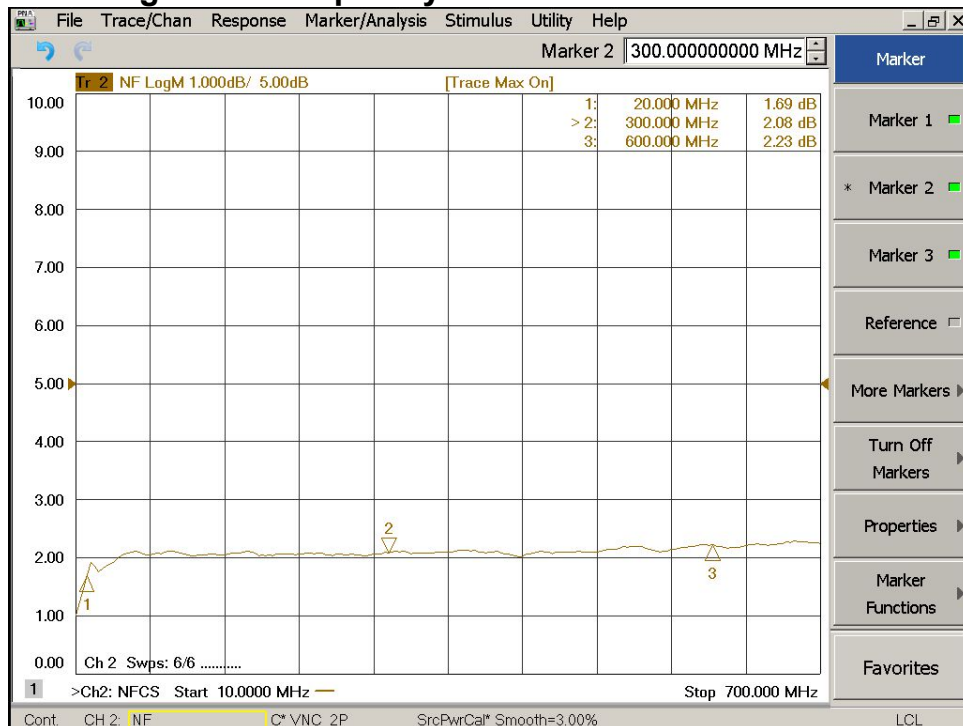
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**Gain S21, Return Loss S11, S22 vs Frequency**



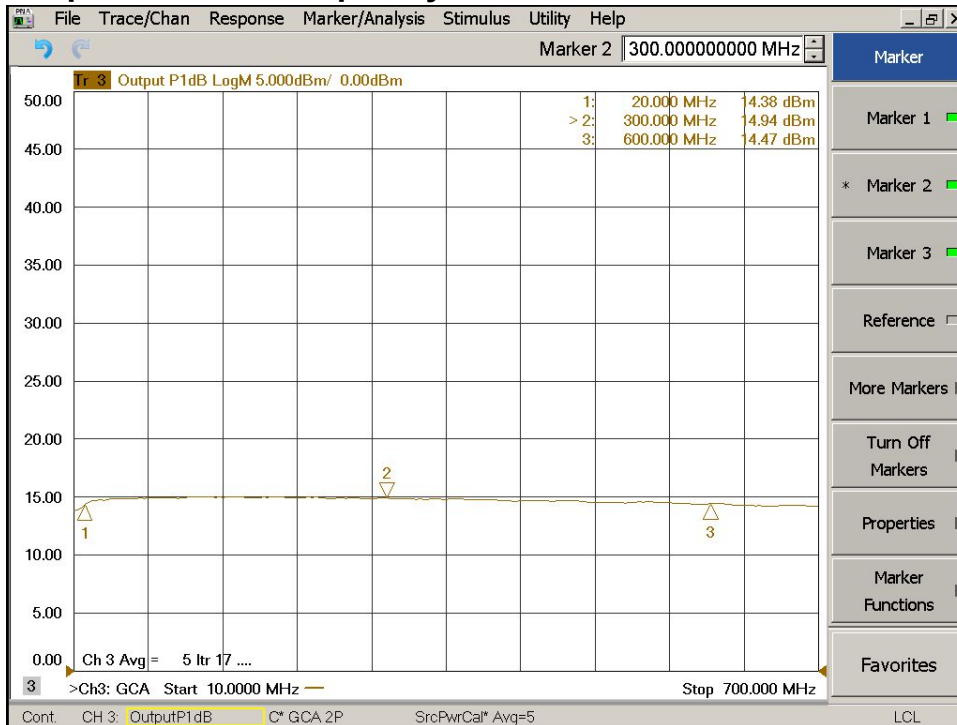
**Noise Figure vs Frequency**



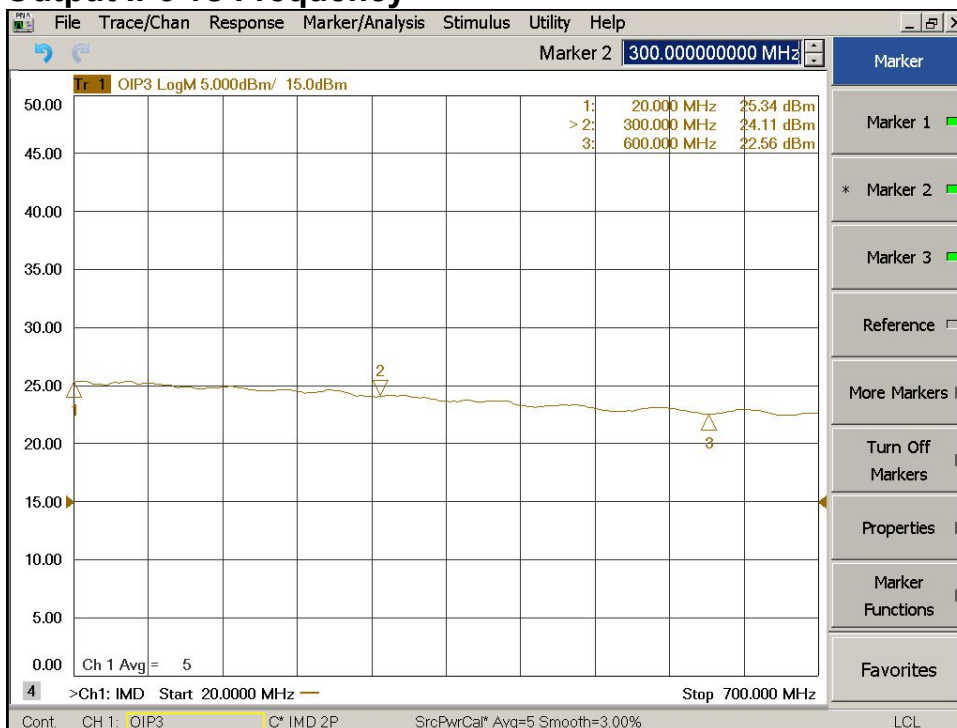
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**Output P1dB vs Frequency**



**Output IP3 vs Frequency**



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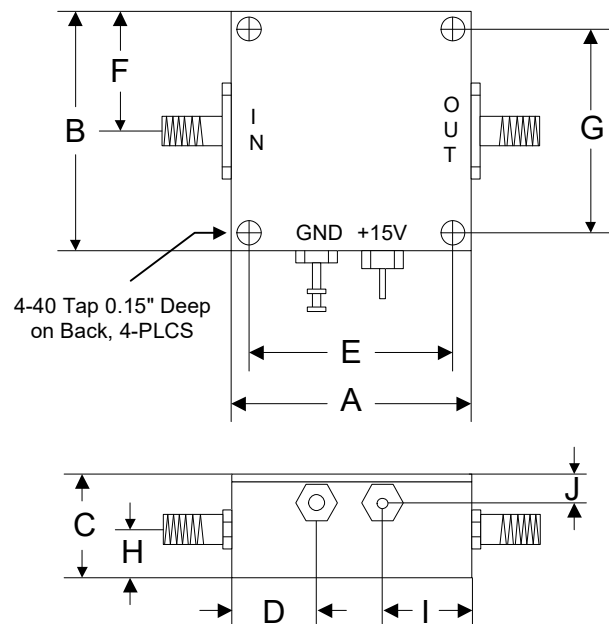
### Absolute Maximum Ratings

Parameter	Absolute Maximum
Supply Voltage	+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
<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