

LPA Series

300KHz – 6500MHz RF Amplifier

Features

- Frequency Range:0.3-6500MHz
- Gain: 37dB
- P_{1dB}: +17dBm
- IP3: +32dBm
- Noise Figure: 4.5dB
- DC Power: 12V/120mA
- SMA Connector

Performance at 2000MHz

Description

LPA-6-30 is a wideband high gain RF Amplifier operates with frequency range from 300KHz to 6500MHz.

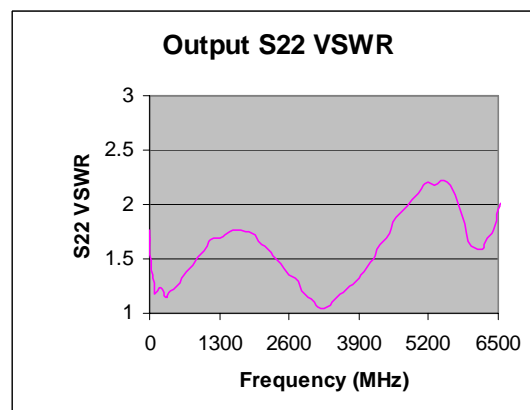
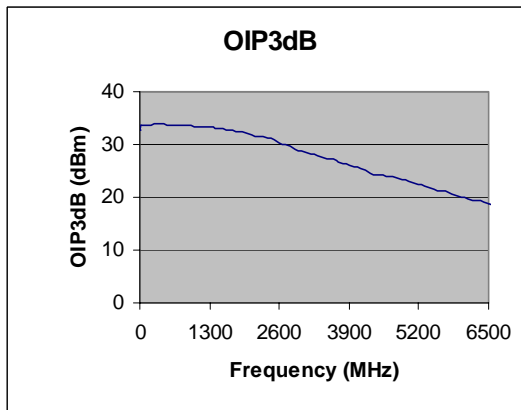
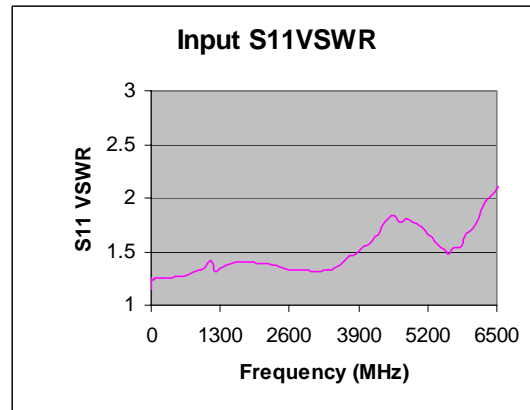
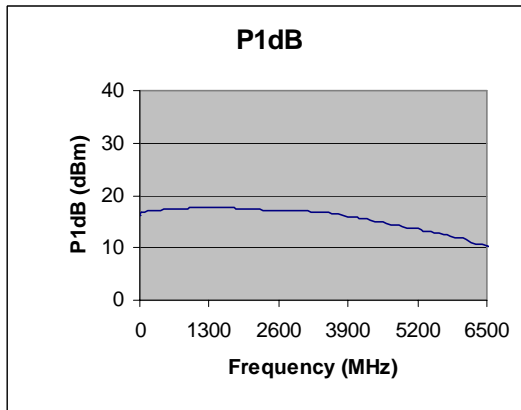
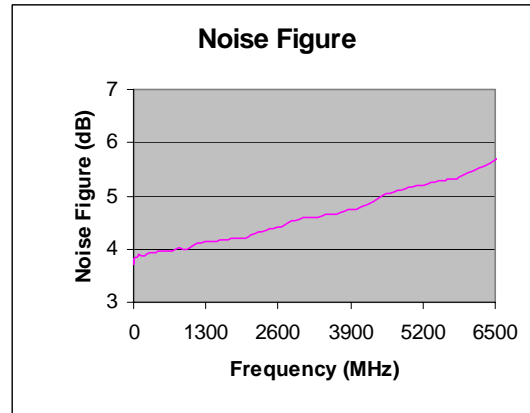
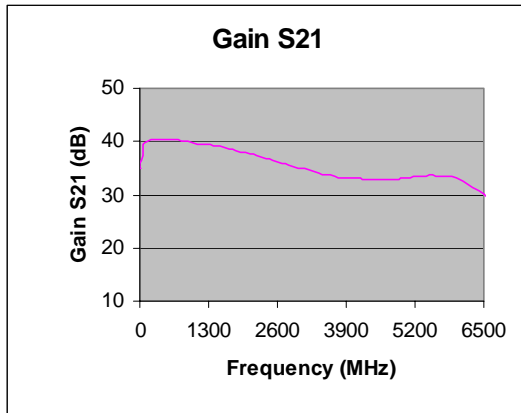
Picture



Electrical Specifications @ +25 °C, Z_S = Z_L = 50 Ohms, V_{cc}=+12V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	0.3		6500
Gain				
f = 300KHz	dB		35.0	
f = 50MHz	dB		38.0	
f = 500MHz	dB		40.0	
f = 1000MHz	dB		39.5	
f = 2000MHz	dB		37.5	
f = 3000MHz	dB		35.0	
f = 5000MHz	dB		33.0	
f = 6500MHz	dB		30.0	
P _{1dB} at 2000MHz	dBm		+17	
IP3 at 2000MHz	dBm		+32	
Noise Figure at 2000MHz	dB		4.5	
Reverse Isolation at 2000MHz	dB		-45	
VSWR at 2000MHz				
Input VSWR			1.4:1	
Output VSWR			1.6:1	
DC Power Supply	V	10	12	15
Supply Current	mA		120	

Typical Performance @ +25 °C



LPA Series**300KHz – 6500MHz RF Amplifier****Test Data @ +25 °C**

Freq(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)	OIP3(dBm)
0.3	35.11	-51.2	1.251	1.772	3.72	+16.10	+32.7
0.5	35.05	-51.2	1.207	1.708	3.74	+16.15	+32.9
0.75	34.98	-51.4	1.183	1.669	3.73	+16.14	+32.8
1	34.88	-50.7	1.147	1.685	3.75	+16.17	+32.8
2.5	34.87	-50.6	1.165	1.651	3.77	+16.19	+33.1
5	34.94	-50.3	1.186	1.629	3.79	+16.25	+33.3
10	35.30	-51.5	1.216	1.585	3.81	+16.43	+33.4
25	36.55	-50.0	1.232	1.481	3.83	+16.69	+33.5
50	38.40	-49.5	1.243	1.329	3.85	+16.85	+33.5
75	39.34	-47.5	1.245	1.230	3.86	+16.90	+33.5
100	39.81	-46.5	1.249	1.183	3.89	+16.92	+33.6
200	40.39	-45.3	1.247	1.230	3.88	17.07	+33.7
300	40.46	-45.7	1.248	1.149	3.92	+17.15	+33.8
400	40.46	-45.0	1.258	1.203	3.94	+17.18	+33.8
500	40.43	-44.7	1.269	1.250	3.96	+17.28	+33.7
600	40.34	-44.9	1.270	1.319	3.97	+17.29	+33.7
700	40.29	-44.9	1.277	1.382	3.95	+17.35	+33.6
800	40.17	-45.0	1.308	1.447	4.01	+17.39	+33.6
900	40.04	-45.1	1.332	1.515	4.00	+17.52	+33.5
1000	39.87	-45.1	1.349	1.580	4.01	+17.56	+33.4
1100	39.53	-45.2	1.417	1.665	4.09	+17.64	+33.4
1200	39.50	-45.2	1.319	1.690	4.11	+17.61	+33.3
1300	39.46	-45.1	1.348	1.697	4.13	+17.60	+33.2
1400	39.24	-45.2	1.369	1.723	4.15	+17.66	+33.0
1500	39.05	-45.3	1.386	1.756	4.14	+17.62	+32.9
1600	38.82	-45.3	1.397	1.765	4.16	+17.68	+32.8
1700	38.60	-45.4	1.400	1.768	4.17	+17.56	+32.6
1800	38.28	-45.5	1.397	1.750	4.19	+17.51	+32.4
1900	38.05	-45.6	1.400	1.729	4.20	+17.48	+32.3
2000	37.82	-45.4	1.394	1.685	4.21	+17.43	+32.1
2100	37.54	-45.3	1.387	1.634	4.25	+17.36	+31.8
2200	37.35	-45.2	1.381	1.593	4.29	+17.32	+31.6
2300	37.05	-45.1	1.379	1.536	4.32	+17.20	+31.5
2400	36.87	-45.1	1.358	1.480	4.36	+17.11	+31.2
2500	36.47	-45.0	1.336	1.408	4.39	+17.09	+30.8
2600	36.16	-44.9	1.335	1.353	4.41	+17.06	+30.4
2700	35.86	-44.9	1.332	1.326	4.45	+17.02	+30.0
2800	35.63	-44.8	1.330	1.251	4.49	+17.01	+29.6

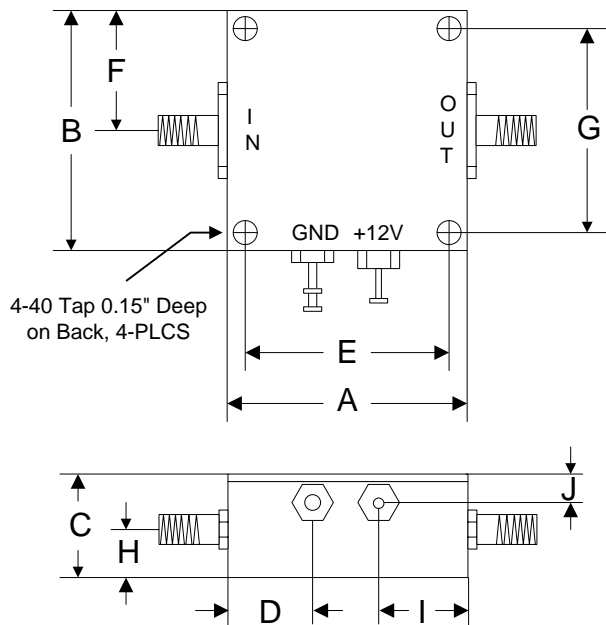
LPA Series**300KHz – 6500MHz RF Amplifier**

Freq(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)	OIP3(dBm)
2900	35.34	-44.7	1.326	1.182	4.53	+17.00	+29.2
3000	35.10	-44.7	1.315	1.131	4.55	+17.01	+28.8
3100	34.84	-44.6	1.320	1.074	4.59	+16.95	+28.4
3200	34.62	-44.6	1.317	1.045	4.58	+16.86	+28.1
3300	34.34	-44.5	1.327	1.055	4.60	+16.88	+27.9
3400	34.14	-44.3	1.326	1.096	4.62	+16.70	+27.6
3500	33.90	-44.1	1.359	1.152	4.64	+16.65	+27.4
3600	33.69	-44.3	1.396	1.185	4.66	+16.55	+27.2
3700	33.39	-44.4	1.447	1.239	4.69	+16.39	+26.8
3800	33.28	-44.6	1.463	1.272	4.71	+16.18	+26.5
3900	33.19	-44.5	1.507	1.326	4.73	+15.94	+26.1
4000	33.10	-44.6	1.555	1.384	4.75	+15.77	+25.8
4100	33.04	-44.5	1.573	1.472	4.79	+15.58	+25.5
4200	32.95	-44.3	1.640	1.534	4.84	+15.47	+25.1
4300	32.84	-44.2	1.689	1.630	4.89	+15.39	+24.6
4400	32.84	-44.0	1.778	1.688	4.96	+15.08	+24.3
4500	32.86	-43.6	1.831	1.778	5.02	+15.00	+24.1
4600	32.79	-43.4	1.815	1.888	5.06	+14.61	+24.0
4700	32.78	-43.1	1.772	1.934	5.08	+14.50	+23.8
4800	32.98	-42.6	1.807	1.985	5.10	+14.25	+23.5
4900	32.90	-42.1	1.774	2.048	5.13	+14.06	+23.3
5000	33.03	-41.4	1.756	2.103	5.17	+13.87	+23.1
5100	33.18	-40.5	1.734	2.171	5.19	+13.78	+22.7
5200	33.32	-39.3	1.663	2.200	5.20	+13.6	+22.4
5300	33.45	-39.2	1.623	2.170	5.23	+13.28	+22.1
5400	33.54	-38.9	1.572	2.206	5.26	+13.09	+21.7
5500	33.63	-38.6	1.526	2.227	5.28	+12.94	+21.5
5600	33.57	-38.3	1.475	2.182	5.29	+12.72	+21.2
5700	33.52	-38.0	1.533	2.082	5.31	+12.51	+21.1
5800	33.55	-37.8	1.533	1.906	5.33	+12.28	+20.7
5900	33.44	-37.7	1.640	1.735	5.38	+12.01	+20.3
6000	33.04	-37.6	1.686	1.620	5.43	+11.88	+20.0
6100	32.52	-37.5	1.757	1.591	5.48	+11.61	+19.8
6200	31.89	-37.3	1.880	1.593	5.52	+11.03	+19.5
6300	31.29	-37.5	1.970	1.687	5.57	+10.82	+19.3
6400	30.69	-37.4	2.031	1.771	5.62	+10.61	+19.1
6500	30.15	-37.4	2.088	1.962	5.67	+10.35	+18.8
6600	29.33	-36.6	2.115	2.042	5.73	+10.21	+18.6
6700	28.63	-35.1	2.106	2.173	5.82	+9.55	+18.3
6800	28.13	-33.4	1.922	2.440	5.90	+9.17	+18.1

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+17dBm
Supply Voltage	+16V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +100 °C

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