

LPA Series

10 – 8000MHz RF Amplifier

Features

- Frequency Range:10-8000MHz
- Gain: 21dB
- P_{1dB}: +17dBm
- IP3: +32dBm
- Noise Figure: 3.5dB
- DC Power: 12V/75mA
- SMA Connector

Performance at 2000MHz

Description

LPA-8-17 is a wideband RF Amplifier operates with frequency range from 10MHz to 8000MHz.

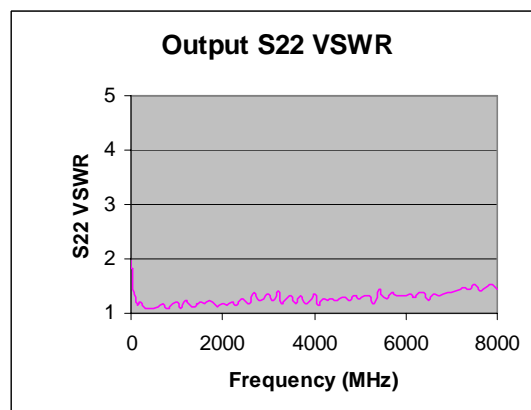
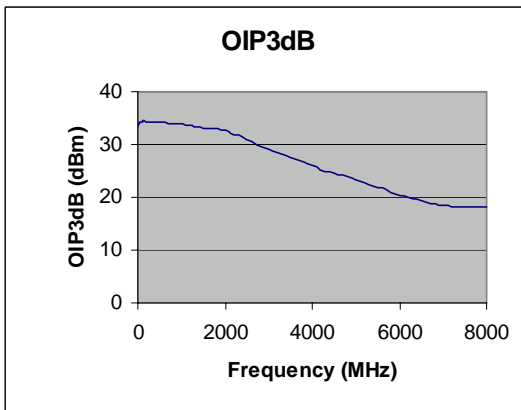
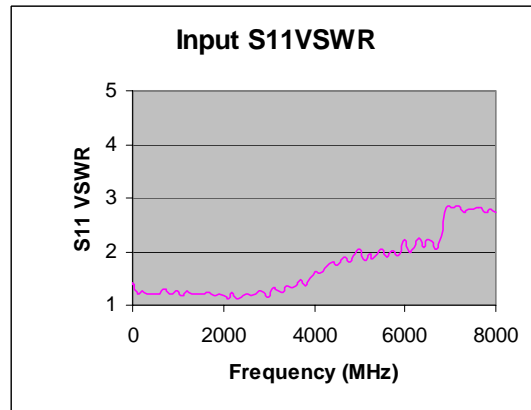
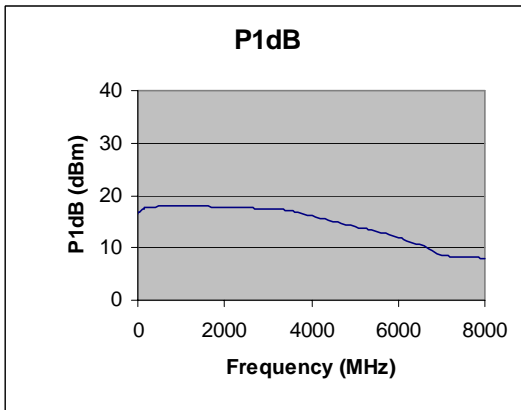
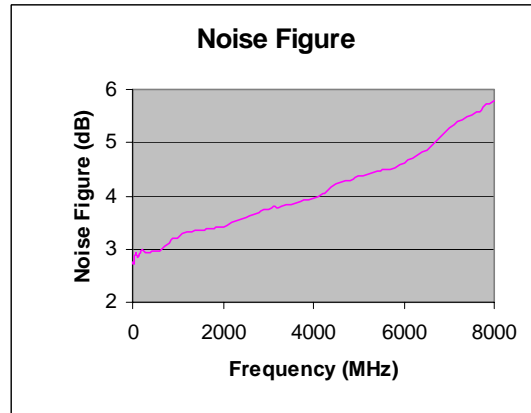
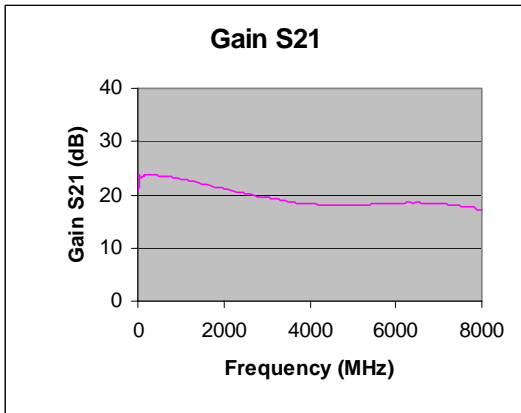
Picture



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

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		8000
Gain				
f = 10MHz	dB		20.5	
f = 100MHz	dB		23.0	
f = 500MHz	dB		23.5	
f = 1000MHz	dB		22.5	
f = 2000MHz	dB		21.0	
f = 3000MHz	dB		19.5	
f = 5000MHz	dB		18.0	
f = 8000MHz	dB		17.0	
P _{1dB} at 2000MHz	dBm		+17	
IP3 at 2000MHz	dBm		+32	
Noise Figure at 2000MHz	dB		3.5	
Reverse Isolation at 2000MHz	dB		-26	
VSWR at 2000MHz				
Input VSWR			1.2:1	
Output VSWR			1.2:1	
DC Power Supply	V	10	12	15
Supply Current	mA		75	

Typical Performance @ +25 °C



LPA Series**10 – 8000MHz RF Amplifier****Test Data @ +25 °C**

Freq(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)	OIP3(dBm)
10	20.67	-28.72	1.417	1.979	2.72	+16.50	+33.4
15	21.00	-28.40	1.400	1.848	2.74	+16.67	+33.7
20	21.30	-28.41	1.394	1.821	2.73	+16.74	+33.8
25	21.58	-28.04	1.383	1.776	2.75	+16.77	+33.9
30	21.87	-27.54	1.367	1.656	2.77	+16.79	+34.0
40	22.38	-27.06	1.332	1.580	2.79	+16.85	+34.1
50	23.73	-26.79	1.310	1.507	2.81	+16.93	+34.2
75	23.23	-26.16	1.272	1.369	2.93	+17.09	+34.3
100	23.47	-26.13	1.235	1.280	2.85	+17.35	+34.3
150	23.59	-26.01	1.212	1.153	2.86	+17.50	+34.4
200	23.72	-26.11	1.258	1.201	2.99	+17.62	+34.3
300	23.70	-26.05	1.218	1.100	2.92	+17.65	+34.3
400	23.66	-26.14	1.221	1.084	2.94	+17.78	+34.2
500	23.56	-26.11	1.202	1.094	2.96	+17.88	+34.2
600	23.44	-26.16	1.206	1.119	2.97	+17.89	+34.1
700	23.35	-26.22	1.307	1.179	3.05	+17.95	+34.0
800	23.22	-26.24	1.217	1.083	3.11	+17.99	+34.0
900	23.06	-26.29	1.247	1.171	3.20	+18.02	+33.9
1000	22.88	-26.26	1.276	1.212	3.21	+18.06	+33.8
1100	22.72	-26.17	1.177	1.077	3.29	+18.04	+33.6
1200	22.59	-26.29	1.282	1.246	3.31	+18.01	+33.5
1300	22.42	-26.16	1.220	1.139	3.33	+18.00	+33.4
1400	22.25	-26.22	1.208	1.128	3.35	+17.96	+33.2
1500	22.07	-26.25	1.199	1.216	3.34	+17.92	+33.1
1600	21.87	-26.18	1.223	1.175	3.36	+17.88	+33.0
1700	21.68	-26.17	1.242	1.221	3.37	+17.86	+32.9
1800	21.46	-26.32	1.166	1.172	3.39	+17.81	+32.9
1900	21.29	-26.30	1.198	1.124	3.40	+17.78	+32.8
2000	21.15	-26.25	1.180	1.179	3.41	+17.73	+32.8
2100	20.93	-26.07	1.134	1.149	3.45	+17.66	+32.3
2200	20.76	-26.14	1.250	1.217	3.49	+17.62	+31.9
2300	20.59	-26.17	1.134	1.141	3.52	+17.60	+31.7
2400	20.40	-26.31	1.143	1.260	3.56	+17.58	+31.4
2500	20.21	-25.96	1.216	1.201	3.59	+17.58	+30.9
2600	20.04	-26.18	1.170	1.182	3.61	+17.56	+30.6
2700	19.85	-26.30	1.204	1.370	3.65	+17.52	+30.1
2800	19.64	-26.07	1.264	1.225	3.69	+17.51	+29.7
2900	19.49	-26.21	1.227	1.265	3.73	+17.50	+29.4

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3000	19.40	-26.27	1.146	1.350	3.75	+17.50	+29.0
3100	19.28	-26.14	1.316	1.241	3.79	+17.45	+28.7
3200	19.14	-26.07	1.277	1.413	3.78	+17.36	+28.4
3300	18.95	-26.14	1.234	1.182	3.80	+17.28	+28.1
3400	18.85	-26.38	1.344	1.275	3.82	+17.20	+27.8
3500	18.72	-26.05	1.332	1.318	3.84	+17.05	+27.6
3600	18.62	-26.13	1.361	1.189	3.86	+16.85	+27.3
3700	18.45	-26.31	1.466	1.317	3.89	+16.69	+27.0
3800	18.41	-26.30	1.346	1.170	3.91	+16.48	+26.7
3900	18.37	-26.45	1.499	1.237	3.93	+16.25	+26.3
4000	18.30	-25.80	1.637	1.339	3.95	+16.07	+26.0
4100	18.30	-26.00	1.590	1.160	3.99	+15.88	+25.7
4200	18.16	-26.20	1.620	1.277	4.04	+15.67	+25.3
4300	18.12	-25.75	1.748	1.241	4.09	+15.49	+24.9
4400	18.12	-26.09	1.799	1.253	4.16	+15.28	+24.7
4500	18.14	-25.97	1.755	1.248	4.22	+15.10	+24.5
4600	18.04	-25.62	1.859	1.303	4.26	+14.91	+24.3
4700	18.07	-25.95	1.905	1.270	4.28	+14.72	+24.1
4800	18.15	-25.84	1.795	1.232	4.30	+14.45	+23.8
4900	18.08	-25.80	1.946	1.325	4.33	+14.26	+23.6
5000	18.03	-25.89	2.033	1.253	4.37	+14.07	+23.3
5100	17.99	-25.75	1.840	1.325	4.39	+13.88	+23.0
5200	18.06	-25.20	1.970	1.338	4.40	+13.67	+22.7
5300	18.12	-25.31	1.871	1.172	4.43	+13.48	+22.4
5400	18.13	-25.05	1.962	1.441	4.46	+13.29	+22.1
5500	18.20	-24.71	2.037	1.334	4.48	+13.10	+21.9
5600	18.24	-25.25	1.884	1.256	4.49	+12.90	+21.7
5700	18.30	-25.00	2.015	1.394	4.51	+12.71	+21.4
5800	18.27	-24.55	1.911	1.321	4.53	+12.48	+21.0
5900	18.31	-24.73	1.952	1.322	4.58	+12.23	+20.6
6000	18.30	-24.67	2.237	1.337	4.63	+12.04	+20.3
6100	18.49	-24.33	2.000	1.352	4.68	+11.76	+20.2
6200	18.46	-24.64	2.076	1.308	4.72	+11.40	+20.0
6300	18.51	-24.47	2.254	1.378	4.77	+11.03	+19.8
6400	18.43	-24.19	2.066	1.372	4.82	+10.82	+19.7
6500	18.57	-24.22	2.221	1.240	4.87	+10.65	+19.5
6600	18.47	-24.61	2.187	1.342	4.93	+10.38	+19.2
6700	18.45	-24.19	2.045	1.316	5.02	+9.86	+18.9
6800	18.44	-24.40	2.272	1.342	5.10	+9.39	+18.7
6900	18.36	-24.33	2.827	1.371	5.19	+8.92	+18.5
7000	18.24	-24.37	2.806	1.374	5.28	+8.45	+18.4

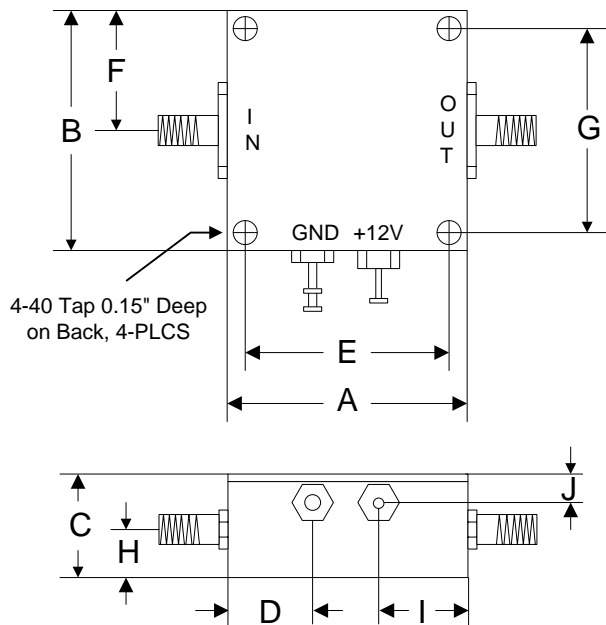
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Freq(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)	OIP3(dBm)
7100	18.26	-24.43	2.826	1.404	5.35	+8.40	+18.4
7200	18.16	-24.49	2.856	1.449	5.39	+8.36	+18.3
7300	18.04	-23.61	2.726	1.482	5.44	+8.31	+18.3
7400	18.15	-24.47	2.803	1.431	5.49	+8.28	+18.3
7500	17.86	-24.42	2.787	1.518	5.53	+8.25	+18.3
7600	17.80	-23.56	2.831	1.407	5.58	+8.20	+18.2
7700	17.79	-23.64	2.835	1.431	5.62	+8.15	+18.2
7800	17.61	-23.62	2.720	1.493	5.69	+8.10	+18.2
7900	17.05	-23.44	2.784	1.537	5.74	+8.06	+18.1
8000	17.02	-23.32	2.730	1.446	5.80	+8.02	+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