

HD26951

10–700MHz Low Noise Amplifier

Features

- Frequency Range: 10 - 700MHz
- Gain: 40dB
- P_{1dB}: +25dBm
- IP3: +35.8dBm
- Noise Figure: 1dB
- DC Power: 5V/150mA
- SMA Connector

Performance measured @ 350MHz

Description

HD26951 is a 1dB Noise Figure 40dB high gain Low Noise Amplifier operates with frequency range from 10MHz to 700MHz.



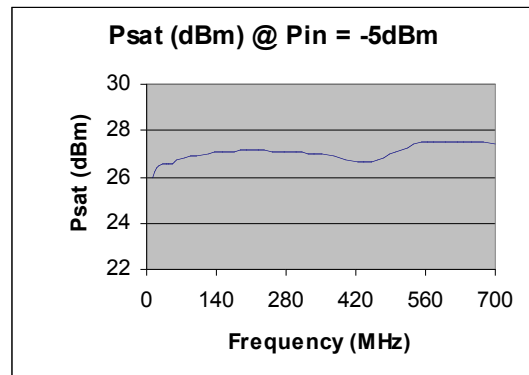
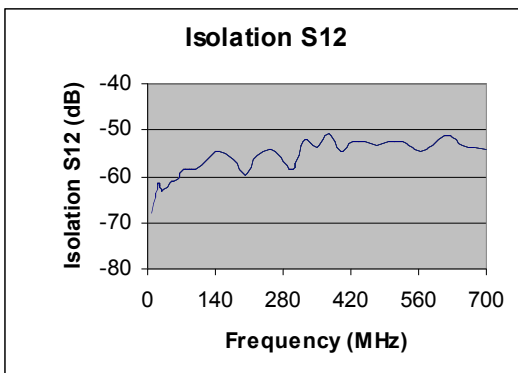
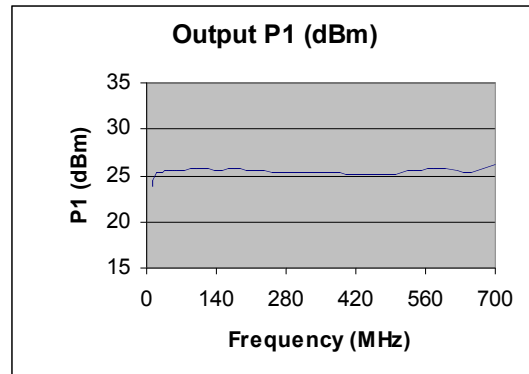
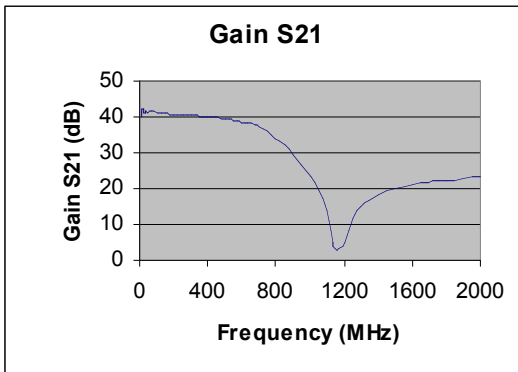
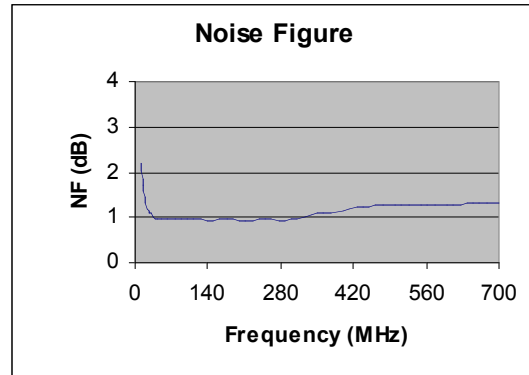
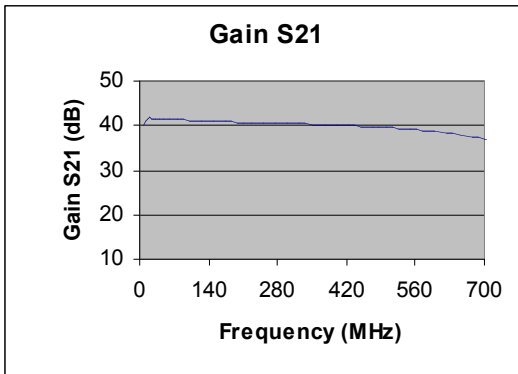
Electrical Specifications @ +25 °C, Z_{in} = Z_{out} = 50 Ω, V_{cc} = +5V

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		700
Gain	f = 10MHz		41.0	
	f = 100MHz		41.0	
	f = 350MHz		40.0	
	f = 500MHz		39.5	
	f = 700MHz		37.0	
Gain Flatness	dB		± 2.0	
P _{1dB}	dBm		+25	
IP3	dBm		+35.8	
Noise Figure	dB		1.0	1.5
Reverse Isolation	dB		-57	
VSWR	Input VSWR		1.5:1	
	Output VSWR		1.2:1	
DC Power Supply	V	4.5	5.0	5.5
Supply Current	Quiescent (no RF)	mA	170	
	@ P _{1dB} = +25dBm	mA	240	

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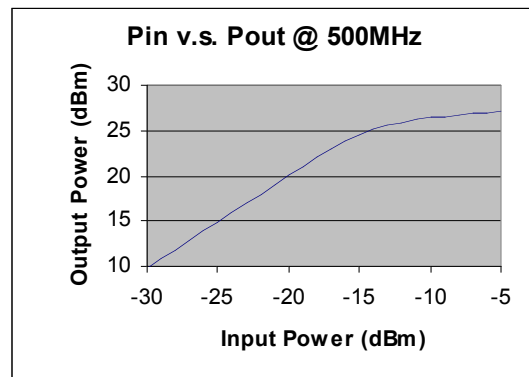
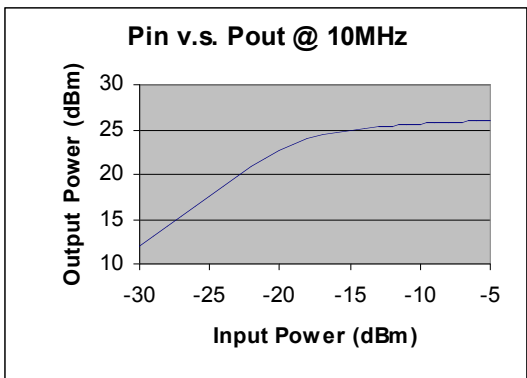
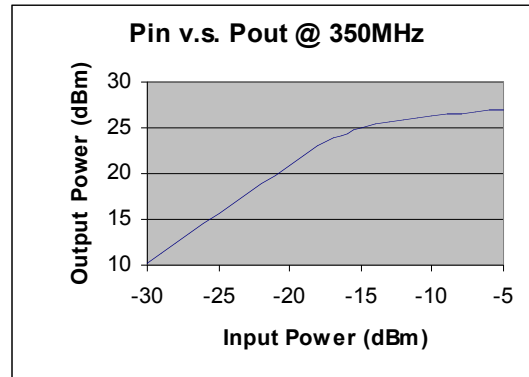
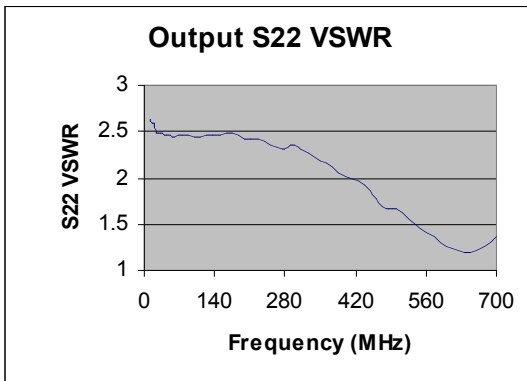
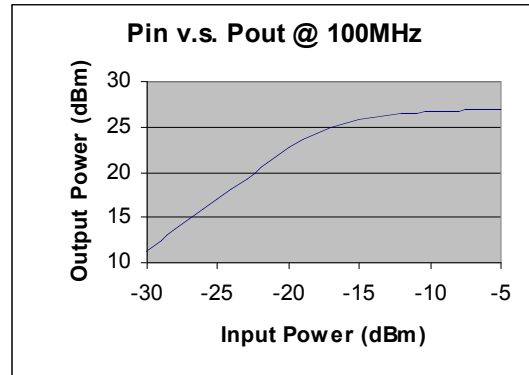
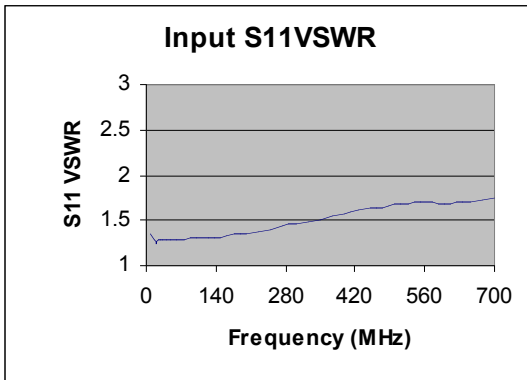
Typical Performance @ +25 °C



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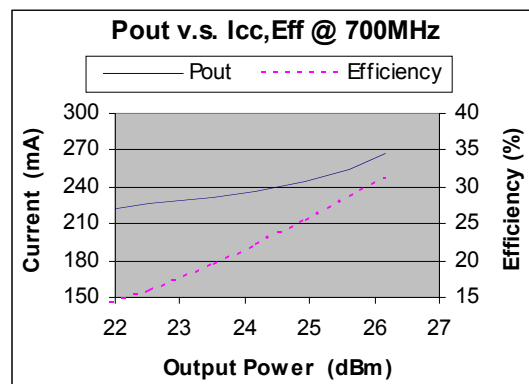
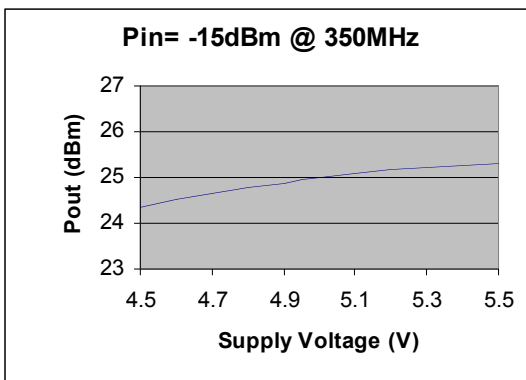
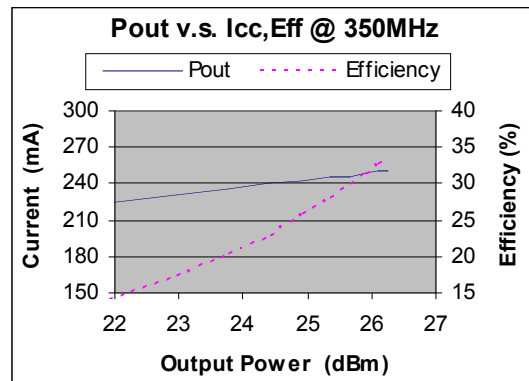
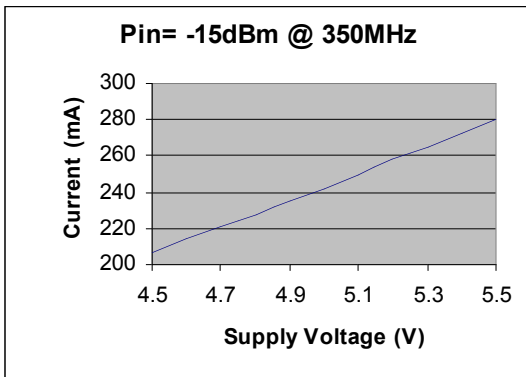
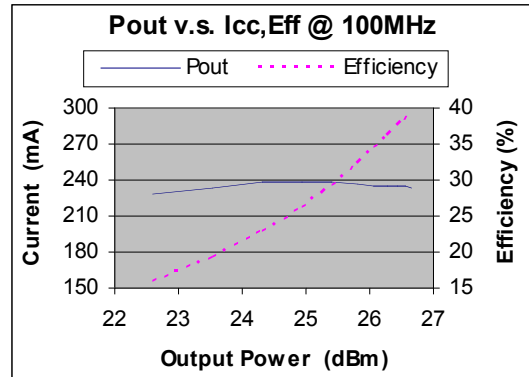
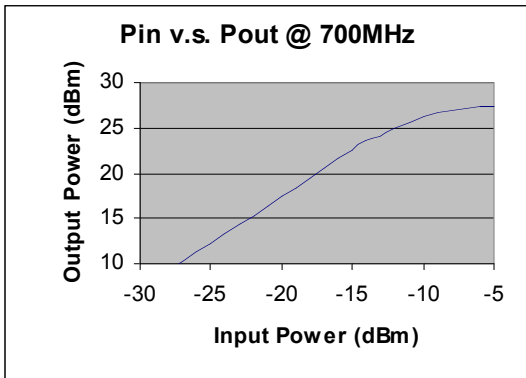
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Typical Performance @ +25 °C



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Typical Performance @ +25 °C

Freq(MHz)	NF (dB)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	P _{1dB} (dBm)	P _{sat} (dBm)
10	2.215	40.14	-67.79	1.346	2.643	+23.86	+25.93
15	1.825	41.55	-63.63	1.283	2.586	+24.86	+26.18
20	1.316	41.96	-62.11	1.249	2.585	+25.30	+26.37
25	1.152	41.39	-61.53	1.289	2.476	+25.31	+26.50
30	1.082	41.35	-63.39	1.282	2.474	+25.34	+26.62
40	0.974	41.40	-62.19	1.278	2.473	+25.44	+26.64
50	0.953	41.37	-61.26	1.284	2.470	+25.50	+26.66
60	0.963	41.39	-60.85	1.289	2.450	+25.49	+26.72
75	0.980	41.40	-58.44	1.289	2.466	+25.54	+26.80
100	0.973	41.01	-58.36	1.298	2.449	+25.80	+26.93
125	0.963	41.00	-56.54	1.302	2.459	+25.70	+27.01
150	0.930	40.85	-54.83	1.315	2.472	+25.61	+27.08
175	0.948	40.80	-56.33	1.355	2.475	+25.67	+27.07
200	0.906	40.69	-59.89	1.360	2.427	+25.61	+27.13
225	0.935	40.53	-55.69	1.371	2.409	+25.48	+27.12
250	0.958	40.62	-54.10	1.406	2.351	+25.33	+27.07
275	0.940	40.64	-55.83	1.430	2.305	+25.28	+27.10
300	0.976	40.39	-58.50	1.467	2.345	+25.40	+27.11
325	1.027	40.43	-52.02	1.487	2.266	+25.36	+27.02
350	1.081	40.22	-53.85	1.513	2.174	+25.34	+26.96
375	1.113	40.17	-50.59	1.559	2.117	+25.39	+26.88
400	1.151	40.00	-54.55	1.566	2.007	+25.20	+26.71
425	1.217	39.89	-52.51	1.606	1.965	+25.21	+26.62
450	1.230	39.76	-52.39	1.637	1.864	+25.17	+26.63
475	1.255	39.67	-53.42	1.646	1.687	+25.13	+26.81
500	1.256	39.49	-52.29	1.682	1.675	+25.21	+27.06
525	1.267	39.37	-52.38	1.692	1.558	+25.53	+27.27
550	1.277	39.08	-54.11	1.702	1.454	+25.57	+27.47
575	1.288	38.97	-54.18	1.699	1.367	+25.67	+27.50
600	1.292	38.58	-52.16	1.675	1.264	+25.70	+27.51
625	1.290	38.41	-51.19	1.695	1.206	+25.61	+27.50
650	1.299	38.06	-53.26	1.703	1.190	+25.40	+27.51
675	1.306	37.61	-53.84	1.729	1.248	+25.80	+27.49
700	1.326	37.02	-54.20	1.748	1.374	+26.17	+27.45

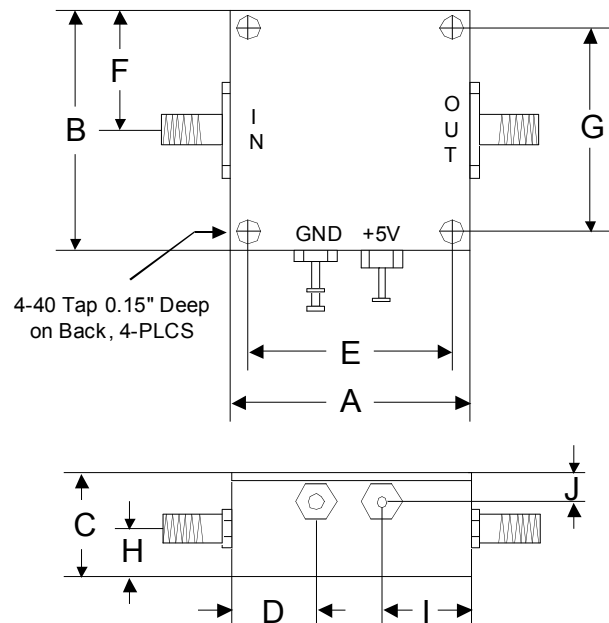
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Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+15dBm
Supply Voltage	+6V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °C to +125 °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