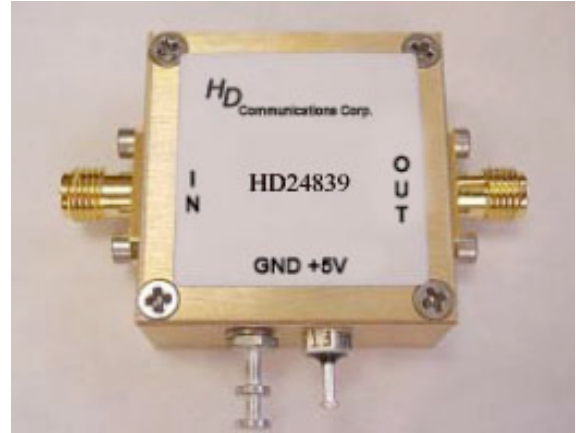


HD24839

30MHz - 3500MHz RF Amplifier

Features

- Frequency Range: 30 - 3500MHz
- Gain: 27dB
- P_{1dB} : +23dBm
- IP3: +35dBm
- Noise Figure: 6dB
- DC Power: 5V/160mA
- SMA Connector



Description

HD24839 is a 200mW output wideband flat response RF Amplifier operates with frequency range from 30MHz to 3500MHz.

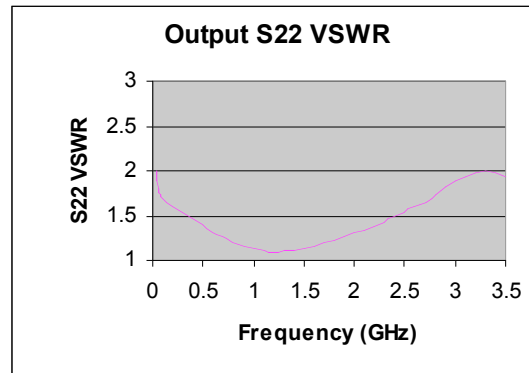
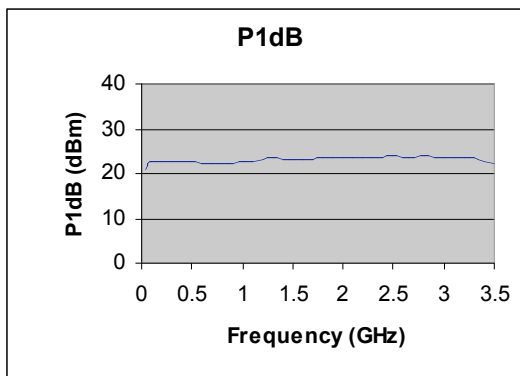
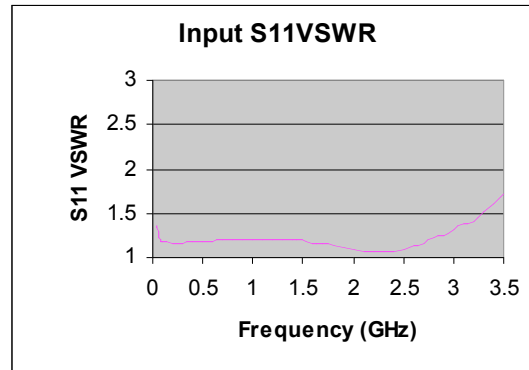
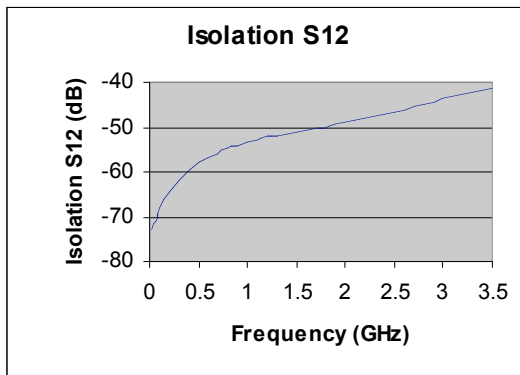
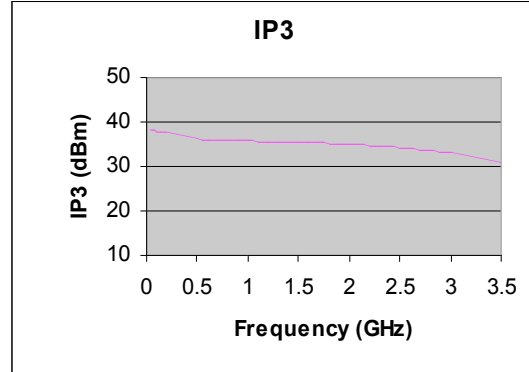
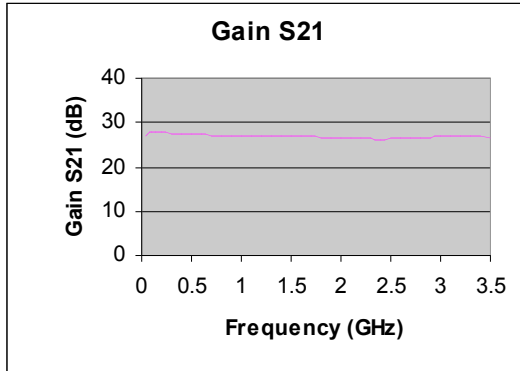
Electrical Specifications @ +25 °C, $Z_s = Z_L = 50 \text{ Ohms}$, $V_{cc}=+5V$

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	30		3500
Gain				
f = 30MHz	dB		27	
f = 1000MHz	dB		27	
f = 2000MHz	dB		26.5	
f = 3500MHz	dB		26	
P_{1dB}	dBm		+23	
IP3 at 2000MHz	dBm		+35	
Noise Figure at 2000MHz	dB		6.0	
Reverse Isolation	dB	-40	-50	
VSWR				
f = 30-3500MHz				
Input VSWR			2.0:1	
Output VSWR			2.0:1	
DC Power Supply	V		5	6
Supply Current	mA		160	

HD24839

30MHz - 3500MHz RF Amplifier

Typical Performance @ +25 °C



HD24839

30MHz - 3500MHz RF Amplifier

Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)
30	27.12	-73.0	1.37	2.00	8.53	+20.7
50	27.48	-71.5	1.29	1.80	7.70	+21.9
75	27.70	-70.1	1.19	1.74	7.60	+22.6
100	27.79	-68.1	1.17	1.70	7.50	+22.8
200	27.77	-64.5	1.16	1.61	7.43	+22.7
300	27.61	-61.6	1.16	1.54	7.31	+22.5
400	27.51	-59.5	1.17	1.46	7.14	+22.5
500	27.41	-57.6	1.18	1.39	6.99	+22.5
600	27.25	-56.7	1.18	1.32	6.87	+22.4
700	27.19	-55.8	1.20	1.26	6.70	+22.3
800	27.17	-54.8	1.20	1.21	6.48	+22.3
900	27.10	-54.1	1.20	1.16	6.34	+22.4
1000	27.05	-53.3	1.20	1.14	6.25	+22.6
1100	27.01	-52.9	1.20	1.11	6.16	+22.8
1200	26.97	-52.2	1.21	1.09	6.09	+23.2
1300	26.95	-51.9	1.20	1.10	5.85	+23.6
1400	26.90	-51.5	1.20	1.11	5.88	+23.3
1500	26.86	-50.9	1.20	1.13	5.87	+23.2
1600	26.80	-50.6	1.16	1.16	5.80	+23.2
1700	26.75	-50.2	1.16	1.19	5.78	+23.3
1800	26.70	-50.0	1.13	1.22	5.83	+23.4
1900	26.64	-49.5	1.11	1.26	5.80	+23.5
2000	26.54	-49.0	1.09	1.30	5.87	+23.7
2100	26.52	-48.6	1.06	1.34	5.91	+23.7
2200	26.40	-48.0	1.07	1.38	5.94	+23.7
2300	26.35	-47.6	1.07	1.43	5.97	+23.7
2400	26.25	-47.1	1.07	1.48	6.06	+23.7
2500	26.33	-46.5	1.10	1.54	6.24	+23.8
2600	26.34	-46.1	1.13	1.60	6.34	+23.6
2700	26.37	-45.4	1.15	1.64	6.54	+23.6
2800	26.58	-44.8	1.22	1.74	6.64	+23.8
2900	26.53	-44.3	1.25	1.82	6.94	+23.6
3000	26.81	-43.6	1.31	1.90	7.21	+23.6
3100	26.91	-43.2	1.38	1.94	7.42	+23.6

HD24839

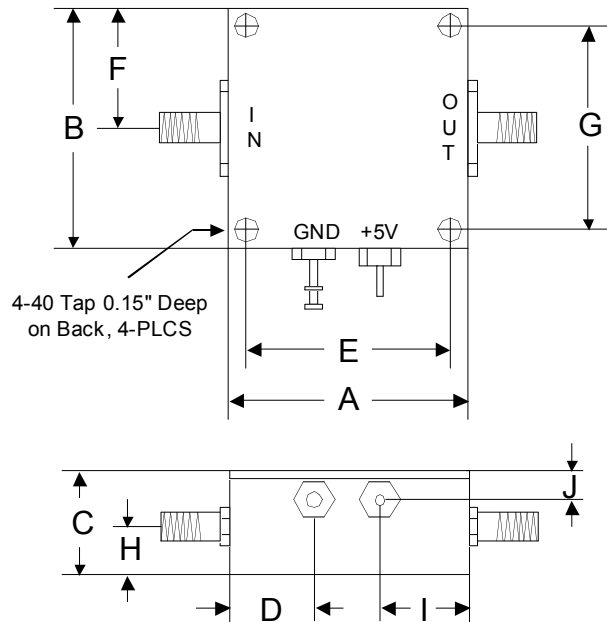
30MHz - 3500MHz RF Amplifier

3200	26.92	-42.7	1.41	1.98	7.75	+23.4
3300	27.06	-42.1	1.51	1.99	8.01	+23.5
3400	26.87	-41.8	1.61	1.98	8.24	+22.6
3500	26.38	-41.5	1.71	1.94	8.59	+22.1

Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+2dBm
Supply Voltage	+6V
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