

## HD24838

## 50MHz–3000MHz RF Amplifier

### Features

- Frequency Range: 50 - 3000MHz
- Gain: 24dB
- P<sub>1dB</sub>: +12dBm
- IP3: +24dBm
- Noise Figure: 4.5dB
- DC Power: 12V
- SMA Connector



Performance measured @ 2000MHz

### Description

HD24838 is a wideband flat response RF Amplifier operates with frequency range from 50MHz to 3000MHz.

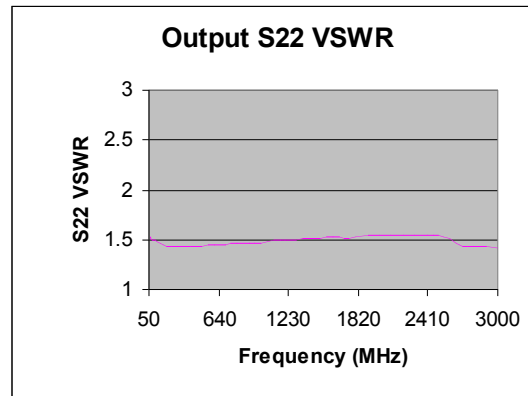
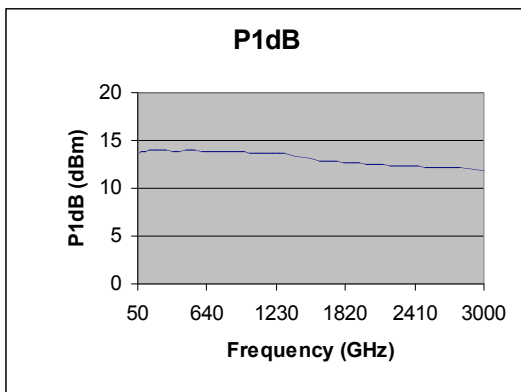
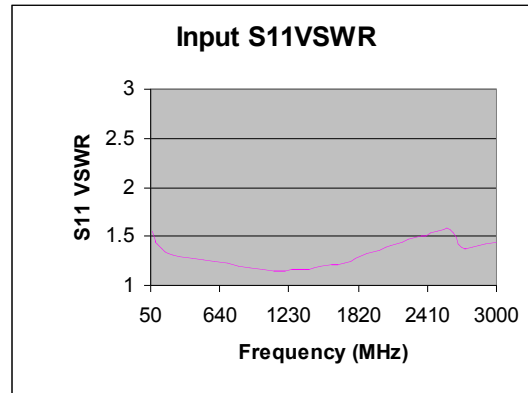
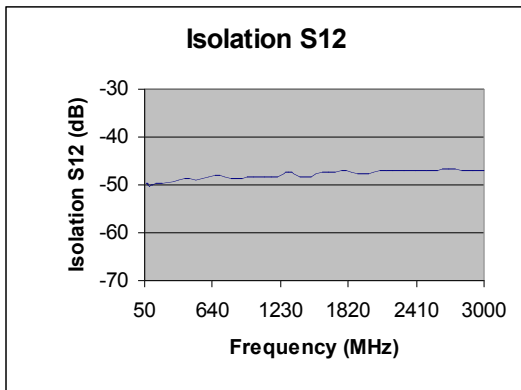
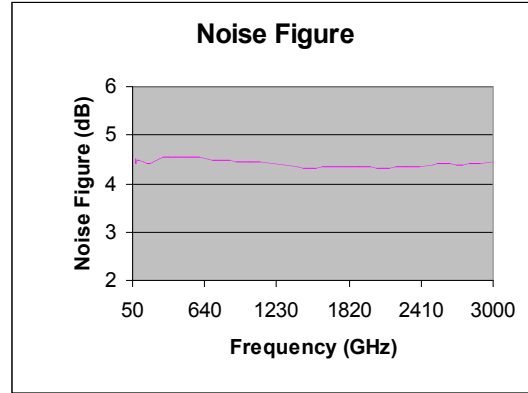
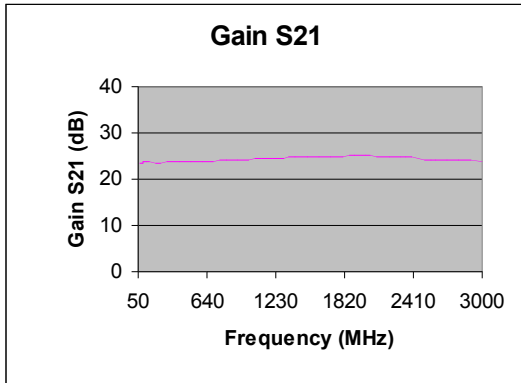
### Electrical Specifications @ +25 °C, Z<sub>s</sub> = Z<sub>L</sub> = 50 Ohms

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	50		3000
Gain				
f = 50MHz	dB		23	
f = 1000MHz	dB		24	
f = 3000MHz	dB		24	
P <sub>1dB</sub>	dBm		+14	
IP3	dBm		+26	
Noise Figure	dB		4.5	
Reverse Isolation	dB		-47	
VSWR				
f = 50-3000MHz				
Input VSWR			1.4:1	1.7:1
Output VSWR			1.5:1	1.7:1
DC Power Supply	V	10	12	15
Supply Current	mA		100	

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**Typical Performance @ +25 °C**





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Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	Noise Figure (dB)
50	23.00	-50.8	1.70	1.61	4.51
60	23.11	-50.1	1.62	1.56	4.52
70	23.40	-49.7	1.55	1.53	4.50
80	23.48	-49.6	1.50	1.50	4.40
90	23.55	-50.2	1.46	1.50	4.49
100	23.73	-49.9	1.43	1.49	4.48
200	23.62	-49.5	1.33	1.44	4.41
300	23.73	-49.2	1.30	1.44	4.53
400	23.64	-48.7	1.28	1.44	4.55
500	23.79	-49.1	1.26	1.44	4.55
600	23.84	-48.2	1.24	1.45	4.54
700	23.79	-48.1	1.23	1.45	4.49
800	24.10	-48.7	1.20	1.46	4.47
900	24.06	-48.8	1.18	1.47	4.46
1000	24.18	-48.2	1.17	1.47	4.45
1100	24.39	-48.3	1.15	1.49	4.45
1200	24.49	-48.4	1.15	1.49	4.40
1300	24.65	-47.4	1.16	1.50	4.39
1400	24.80	-48.2	1.17	1.51	4.35
1500	24.78	-48.2	1.19	1.52	4.33
1600	24.98	-47.2	1.21	1.53	4.35
1700	24.75	-47.3	1.22	1.52	4.34
1800	24.97	-47.1	1.28	1.53	4.34
1900	25.01	-47.5	1.32	1.54	4.36
2000	25.04	-47.8	1.36	1.55	4.35
2100	24.99	-47.0	1.40	1.55	4.37
2200	24.90	-47.0	1.44	1.55	4.35
2300	24.81	-46.9	1.48	1.55	4.35
2400	24.83	-46.9	1.50	1.55	4.35
2500	24.31	-47.0	1.56	1.54	4.39
2600	24.08	-46.9	1.57	1.51	4.40
2700	24.07	-46.7	1.39	1.43	4.38
2800	24.05	-47.1	1.39	1.44	4.41
2900	24.00	-47.0	1.42	1.44	4.42
3000	23.93	-46.9	1.44	1.42	4.43

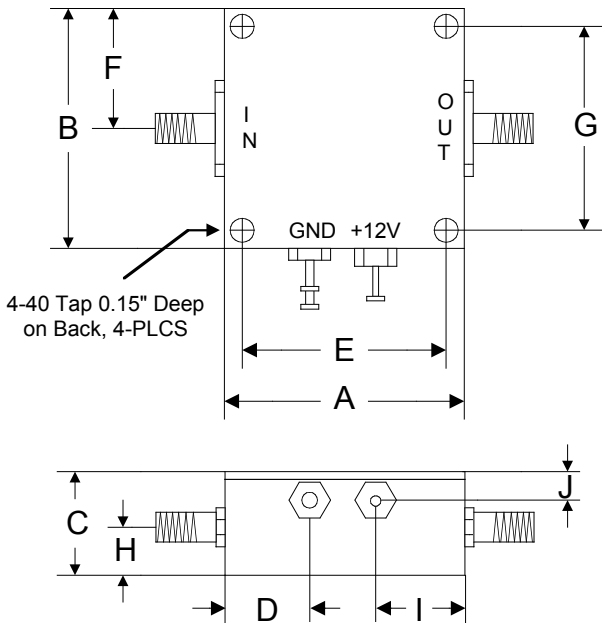
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### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+15dBm
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