

## HD24503

## 10 – 800MHz Low Noise Amplifier

### Features

- Frequency Range: 10-800MHz
- Gain: 40dB
- P<sub>1dB</sub>: +17dBm
- IP3: +30dBm
- Noise Figure: 2.2dB
- DC Power: 10V-15V/100mA
- SMA Connector



Performance measured @ 400MHz

### Description

HD24503 is a 40dB gain wideband high dynamic range Low Noise Amplifier operates with frequency range from 10 to 800MHz.

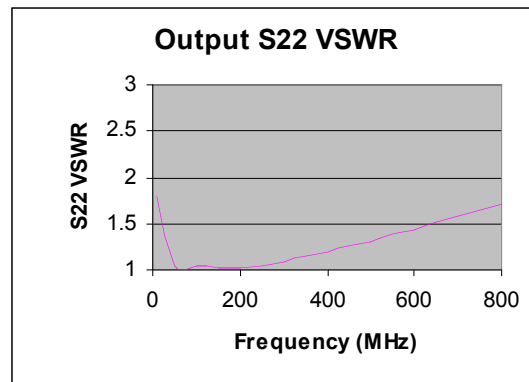
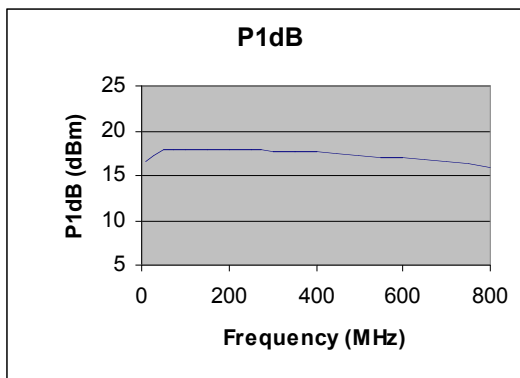
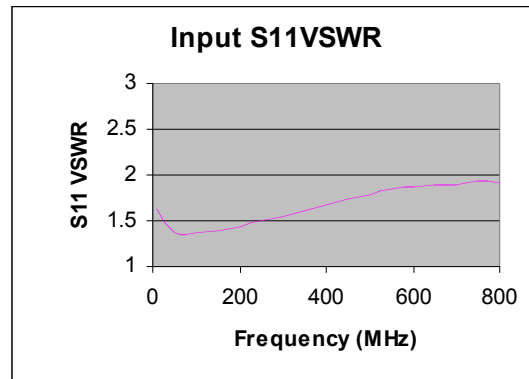
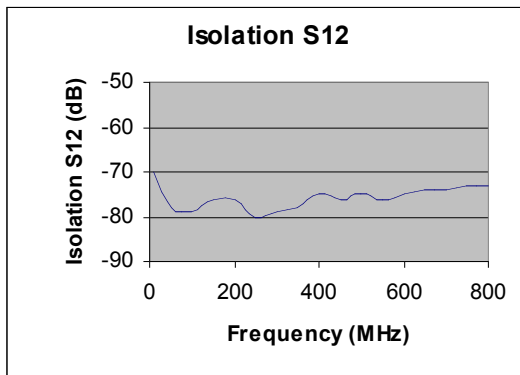
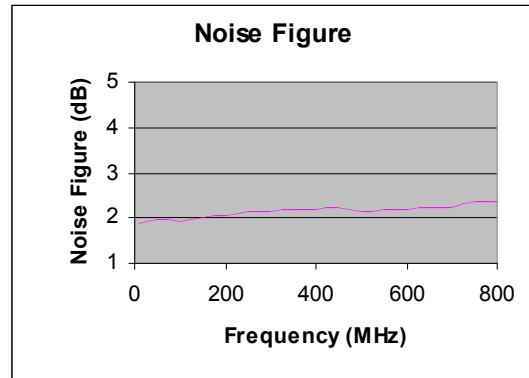
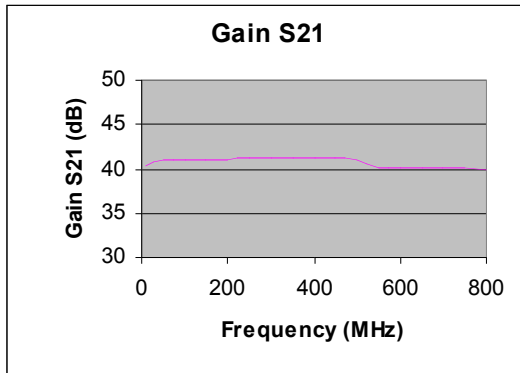
### Electrical Specifications @ +25 °C, Z<sub>in</sub> = Z<sub>out</sub> = 50 Ω

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	10		800
Gain				
f = 10MHz	dB		40.0	
f = 400MHz	dB		41.0	
f = 800MHz	dB		39.5	
P <sub>1dB</sub>	dBm		+17	
IP3	dBm		+30	
Noise Figure	dB		2.2	
Reverse Isolation	dB		-74	
VSWR				
Input VSWR			1.7:1	
Output VSWR			1.2:1	
DC Power Supply	V	10	12	15
Supply Current	mA		100	

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**Typical Performance @ +25 °C**





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**Typical Performance @ +25 °C**

Frequency(MHz)	NF (dB)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	P <sub>1dB</sub> (dBm)
10	1.88	40.28	-70	1.63	1.79	+16.6
50	1.95	41.06	-78	1.37	1.05	+17.9
100	1.93	41.05	-79	1.37	1.04	+17.9
150	2.01	41.08	-76	1.40	1.03	+17.9
200	2.07	41.11	-76	1.44	1.03	+17.8
250	2.14	41.16	-80	1.49	1.05	+17.8
300	2.16	41.18	-79	1.55	1.09	+17.7
350	2.20	41.20	-78	1.60	1.14	+17.7
400	2.19	41.17	-75	1.67	1.19	+17.7
450	2.24	41.14	-76	1.74	1.25	+17.4
500	2.15	41.05	-75	1.79	1.31	+17.2
550	2.18	40.09	-76	1.84	1.38	+17.1
600	2.19	40.08	-75	1.87	1.44	+16.9
650	2.21	40.06	-74	1.89	1.51	+16.7
700	2.24	40.03	-74	1.90	1.57	+16.6
750	2.35	40.01	-73	1.93	1.64	+16.4
800	2.36	39.80	-73	1.92	1.70	+16.0

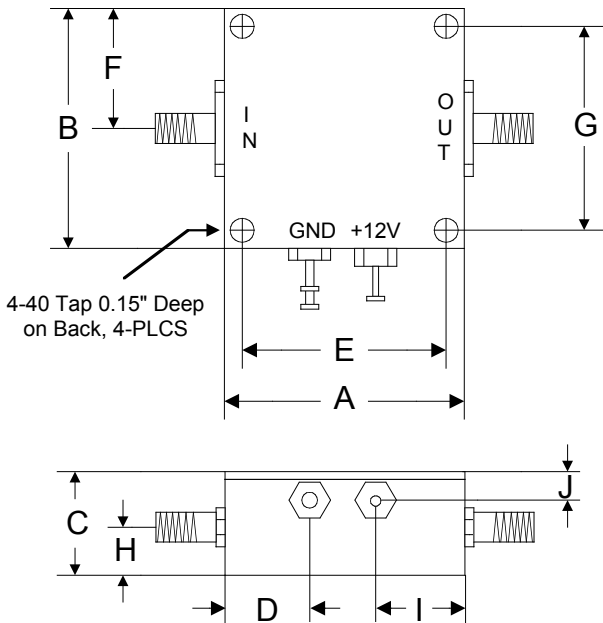
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**Absolute Maximum Ratings**

Parameter	Absolute Maximum
RF Input Power	+13dBm
Supply Voltage	+16V
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
<b>Inch</b>	1.250	1.250	0.563	0.450	1.000	0.625	1.000	0.250	0.500	0.187
<b>mm</b>	31.75	31.75	14.29	11.43	25.40	15.88	25.40	6.35	12.70	4.76