

## HD24052

## 10 – 300MHz RF Amplifier

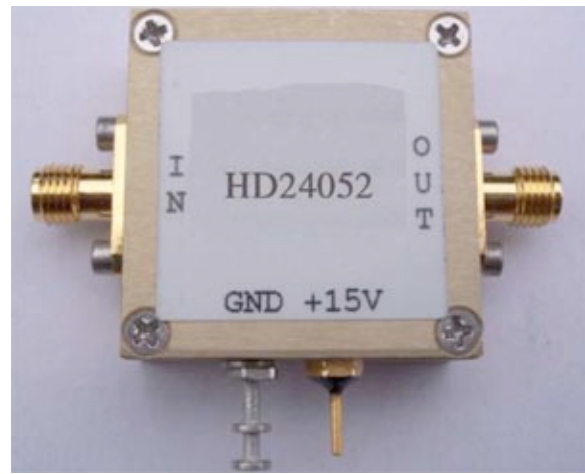
### Features

- Frequency Range: 10 - 300MHz
- Gain: 25dB
- P<sub>1dB</sub>: +20dBm
- IP3: +31dBm
- Noise Figure: 2.8dB
- DC Power: 15V/50mA
- SMA Connector

10MHz to 300MHz and operating temperature from -54°C to +85°C.

### Description

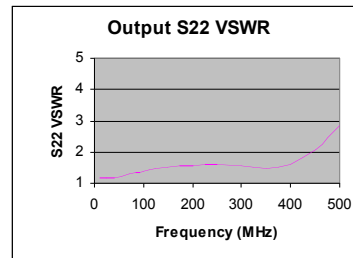
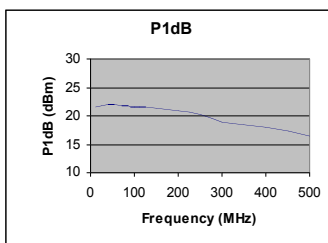
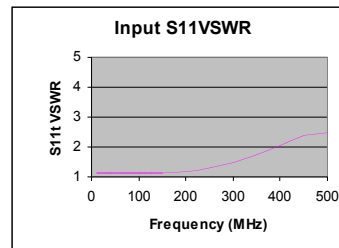
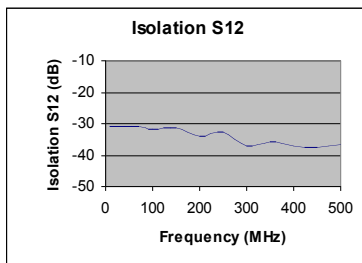
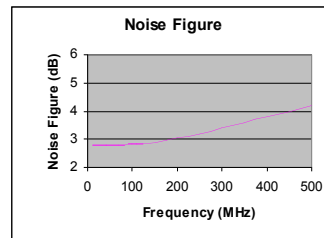
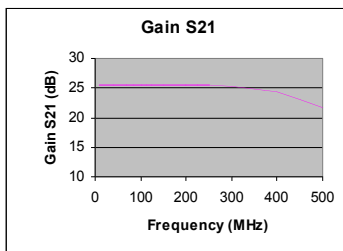
HD24052 is a wideband high performance high reliability RF Amplifier operates with frequency range from



### Electrical Specifications $Z_S = Z_L = 50 \text{ Ohms}$

Parameter	Unit	+25°C	0°C to +50°C	-54°C to +85°C
Frequency Range	MHz	10 - 300	20 - 250	20 - 250
Small Signal Gain (min.)	dB	25.0	24.0	23.5
Gain Flatness (max.)	dB	± 0.3	± 0.7	± 1.0
P <sub>1dB</sub> (min.)	dBm	+20.0	+19.0	+18.0
IP3 (min.)	dBm	+31.0		
IP2 (min.)	dBm	+36.0		
Reverse Isolation	dB	30		
Noise Figure (typ.)	dB	2.8	3.5	4.0
Input VSWR (max.)		1.5:1	1.7:1	1.9:1
Output VSWR (max.)		1.6:1	1.8:1	1.9:1
DC Power Supply	V	15	15	15
Supply Current	mA	50	52	54

**Typical Performance @ +25 °C**



Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)
10	25.6	-31.1	1.15	1.19
40	25.6	-30.8	1.15	1.19
70	25.6	-30.8	1.12	1.28
100	25.5	-31.8	1.13	1.38
150	25.5	-31.2	1.12	1.53
200	25.5	-33.8	1.18	1.58
250	25.5	-32.6	1.32	1.59
300	25.3	-37.3	1.48	1.55
350	24.9	-35.9	1.76	1.48
400	24.3	-37.1	2.05	1.62
450	23.0	-37.7	2.37	2.07
500	21.6	-36.8	2.48	2.83

**HD24052**

**10 – 300MHz RF Amplifier**

**Absolute Maximum Ratings**

Parameter	Absolute Maximum
RF Input Power CW	+10dBm
RF Input Power Short Term (1 minute max)	+17dBm
Supply Voltage	+17V
Operating Temperature	-54°C to +85°C
Storage Temperature	-62°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