

HD24053

10 – 1000MHz RF Amplifier

Features

- Frequency Range: 10 - 1000MHz
- Gain: 25dB
- P_{1dB}: +20dBm
- IP3: +33dBm
- Noise Figure: 4dB
- DC Power: 15V/125mA
- SMA Connector

that operates with a frequency range from 10MHz to 1000MHz and operating temperature from -54°C to +85°C.



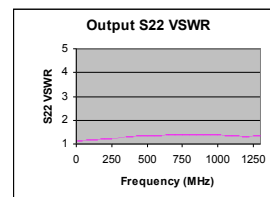
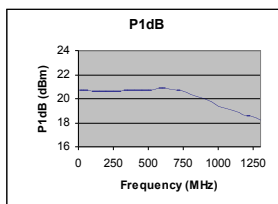
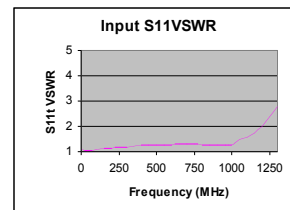
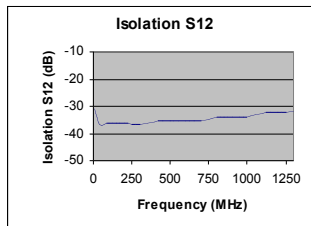
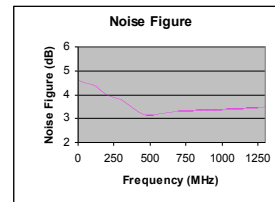
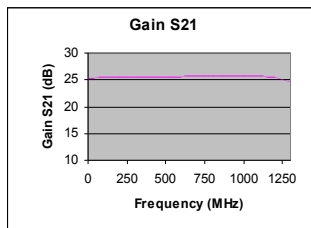
Description

HD24053 is a wideband, high performance, high reliability RF Amplifier

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 - 1000	10 - 1000	10 - 1000
Small Signal Gain (min.)	dB	25.0	24.0	24.0
Gain Flatness (max.)	dB	± 0.3	± 0.6	± 0.8
P _{1dB} (min.)	dBm	+20.0	+19.0	+19.0
IP3 (min.)	dBm	+31.0		
IP2 (min.)	dBm	+36.0		
Reverse Isolation	dB	32	30	30
Noise Figure (max.)	dB	4.0	5.5	5.5
Input VSWR (max.)		1.3:1	1.7:1	2.0:1
Output VSWR (max.)		1.5:1	1.8:1	2.0:1
DC Power Supply	V	15	15	15
Supply Current	mA	125	135	135

Typical Performance @ +25 °C



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Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)
10	25.3	-31.1	1.08	1.15
40	25.3	-36.8	1.04	1.15
100	25.4	-36	1.08	1.16
150	25.4	-36.1	1.11	1.19
200	25.5	-36.3	1.13	1.22
250	25.5	-36.8	1.16	1.23
300	25.5	-36.5	1.16	1.24
350	25.6	-36.3	1.21	1.28
400	25.6	-35.7	1.25	1.29
450	25.6	-35.5	1.26	1.34
500	25.6	-35.4	1.26	1.35
550	25.6	-35.4	1.27	1.36
600	25.6	-35.3	1.28	1.36
650	25.7	-35.2	1.29	1.37
700	25.7	-35.2	1.29	1.38
750	25.7	-35	1.29	1.38
800	25.7	-34.2	1.28	1.38
850	25.7	-34.1	1.27	1.39
900	25.7	-34	1.27	1.39
950	25.7	-33.9	1.28	1.38
1000	25.8	-33.8	1.28	1.38
1050	25.8	-33	1.47	1.36
1100	25.7	-32.7	1.55	1.34
1150	25.6	-32.4	1.75	1.33
1200	25.6	-32.1	1.98	1.32
1250	25.1	-32	2.38	1.34
1300	24.5	-31.8	2.80	1.36

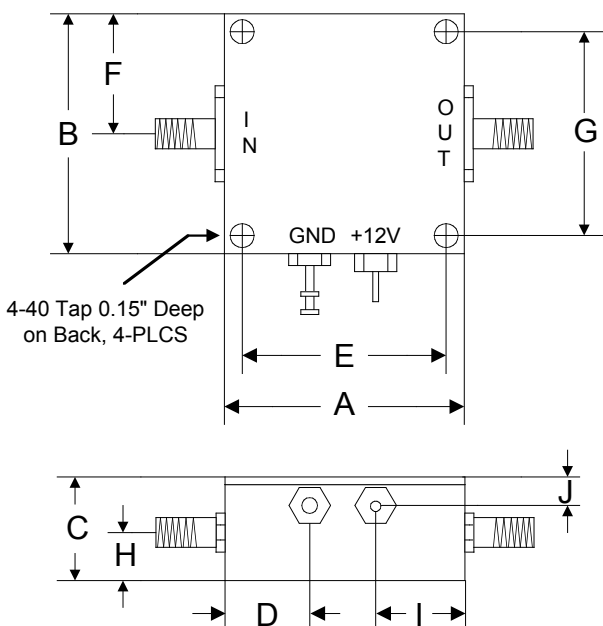
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Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power CW	+13dBm
RF Input Power Short Term (1 minute max)	+17dBm
Supply Voltage	+18V
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
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

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 Specifications contained herein are subject to change without notice.