

HD26005

1 –3000MHz RF Amplifier

Features

- Frequency Range:1-3000MHz
- Gain: 20dB
- P_{1dB} : +22dBm
- IP3: +35dBm
- Noise Figure: 4dB
- DC Power: 15V/110mA
- SMA Connector

Performance at 1500MHz

Description

HD26005 is a 20dB gain wideband flat response RF Amplifier operates with frequency range from 1 to 3000MHz.



Electrical Specifications @ +25 °C, $Z_s = Z_L = 50 \text{ Ohms}$, $V_{cc}=+15V$

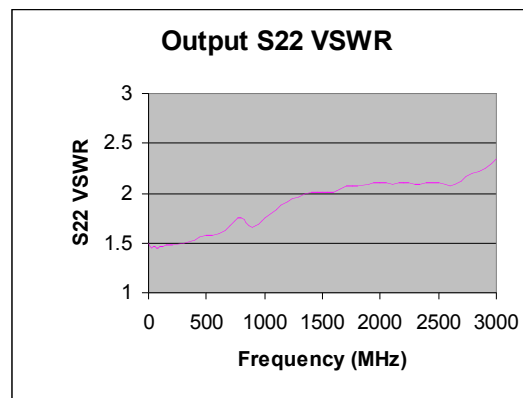
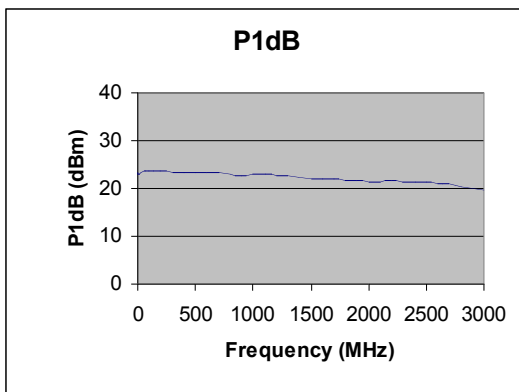
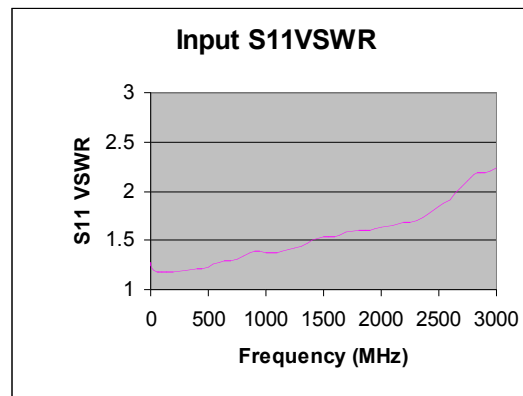
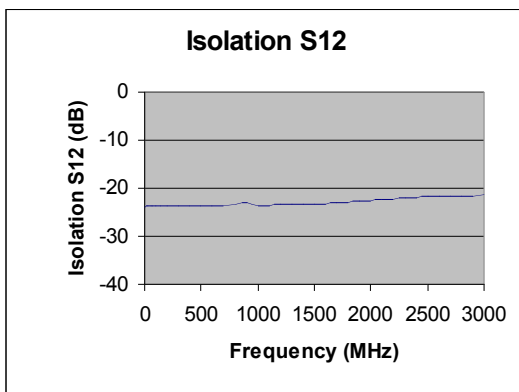
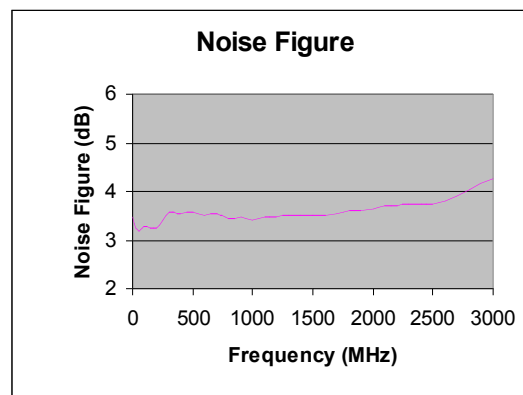
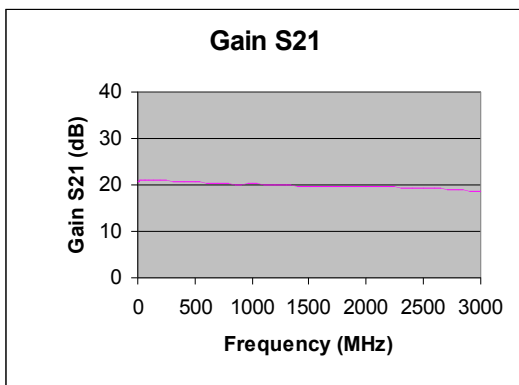
Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	1		3000
Gain $f = 1\text{MHz}$	dB		18.5	
$f = 10\text{MHz}$	dB		20.5	
$f = 100\text{MHz}$	dB		20.5	
$f = 500\text{MHz}$	dB		20.5	
$f = 1000\text{MHz}$	dB		20.0	
$f = 2000\text{MHz}$	dB		19.0	
$f = 3000\text{MHz}$	dB		18.0	
P_{1dB}	dBm		+22	
IP3	dBm		+35	
Noise Figure	dB		4.0	
Reverse Isolation	dB		-20	
VSWR Input VSWR			1.5:1	
Output VSWR			2.0:1	

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DC Power Supply	V		15	
Supply Current	mA		110	

Typical Performance @ +25 °C



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Test Data @ +25 °C

Frequency(MHz)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	NF (dB)	P _{1dB} (dBm)
1	18.82	-26.15	1.738	1.805	3.67	+20.50
2.5	20.29	-24.45	1.419	1.562	3.57	+23.17
5	20.77	-23.84	1.274	1.496	3.48	+23.40
10	20.84	-23.73	1.211	1.467	3.35	+23.10
25	20.93	-23.59	1.188	1.456	3.26	+23.50
50	20.98	-23.55	1.180	1.463	3.17	+23.70
75	20.95	-23.56	1.178	1.453	3.26	+23.75
100	20.95	-23.57	1.181	1.461	3.27	+23.70
200	20.90	-23.68	1.182	1.476	3.24	+23.65
300	20.85	-23.64	1.189	1.496	3.57	+23.50
400	20.75	-23.76	1.215	1.526	3.54	+23.40
500	20.66	-23.71	1.227	1.580	3.57	+23.35
600	20.46	-23.81	1.269	1.589	3.52	+23.26
700	20.44	-23.70	1.290	1.680	3.55	+23.18
800	20.22	-23.22	1.336	1.758	3.43	+23.04
900	20.05	-22.90	1.394	1.655	3.48	+22.55
1000	20.20	-23.60	1.378	1.752	3.41	+23.02
1100	20.15	-23.54	1.373	1.829	3.49	+22.95
1200	20.00	-23.47	1.411	1.910	3.47	+22.70
1300	19.91	-23.41	1.432	1.957	3.51	+22.53
1400	19.79	-23.39	1.501	2.014	3.51	+22.40
1500	19.59	-23.36	1.542	2.016	3.50	+22.04
1600	19.62	-23.18	1.535	2.008	3.52	+21.94
1700	19.65	-22.96	1.580	2.069	3.55	+21.96
1800	19.58	-22.86	1.595	2.073	3.60	+21.70
1900	19.59	-22.68	1.608	2.096	3.61	+21.64
2000	19.57	-22.57	1.641	2.098	3.65	+21.50
2100	19.56	-22.40	1.648	2.089	3.70	+21.40
2200	19.52	-22.22	1.685	2.102	3.72	+21.54
2300	19.47	-22.05	1.695	2.087	3.74	+21.47
2400	19.48	-21.84	1.766	2.111	3.75	+21.44
2500	19.39	-21.71	1.849	2.108	3.75	+21.33
2600	19.30	-21.59	1.903	2.073	3.80	+21.16
2700	19.08	-21.56	2.037	2.121	3.91	+20.91



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2800	18.81	-21.55	2.178	2.198	4.03	+20.33
2900	18.61	-21.51	2.191	2.244	4.15	+19.90
3000	18.55	-21.26	2.230	2.345	4.25	+19.80

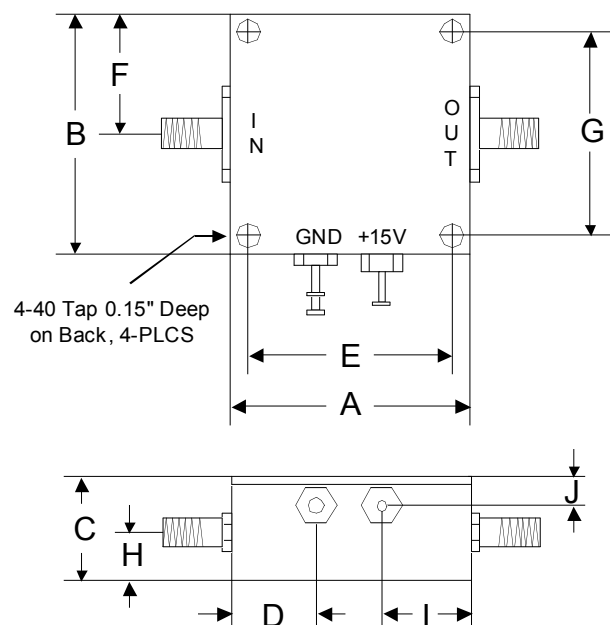
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Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+10dBm
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

Warning:

Unit must be connected to input and output before apply DC power, or permanent damage may occur with open source and load.