

HD28176

50MHz – 9GHz RF Amplifier

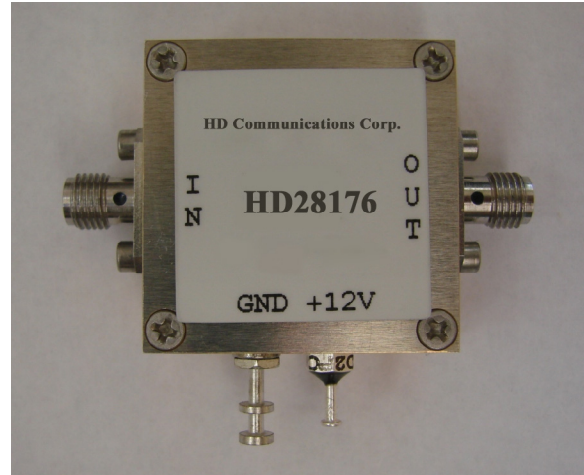
Features

- Frequency: 50MHz -9GHz
- Gain: 32dB
- P_{1dB}: +15.3dBm
- IP3: +28.1dBm
- Noise Figure: 4.5dB
- DC Power: 12V
- SMA Connector

Performance measured @ 2GHz

Description

HD28176 is an ultra wideband RF Amplifier operates with frequency range from 50MHz to 9GHz.



Electrical Specifications @ +25 °C, Z_S = Z_L = 50 Ohms

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	0.05		9.0
Gain				
f = 50MHz	dB		31.0	
f = 100MHz	dB		33.0	
f = 500MHz	dB		33.5	
f = 2.0GHz	dB		32.0	
f = 3.5GHz	dB		30.0	
f = 5.0GHz	dB		27.5	
f = 7.5GHz	dB		24.9	
f = 9.0GHz	dB		22.0	
P _{1dB}				
f = 50MHz	dBm		+13.5	
f = 100MHz	dBm		+13.8	
f = 500MHz	dBm		+14.7	
f = 2.0GHz	dBm		+15.3	
f = 3.5GHz	dBm		+15.1	
f = 5.0GHz	dBm		+15.7	

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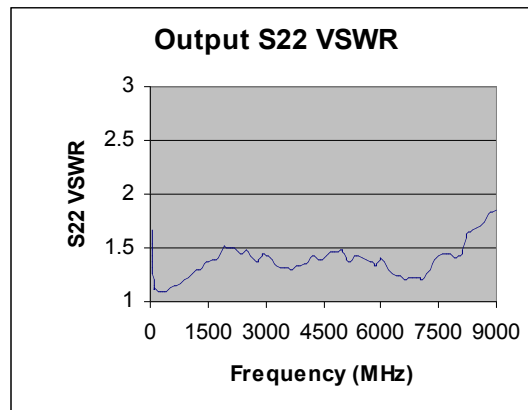
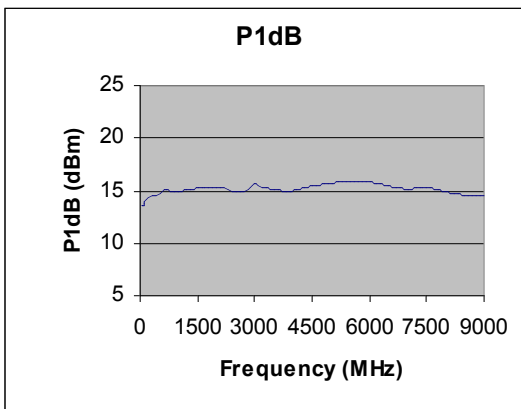
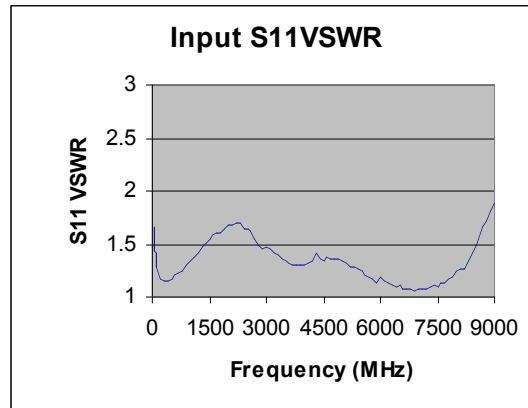
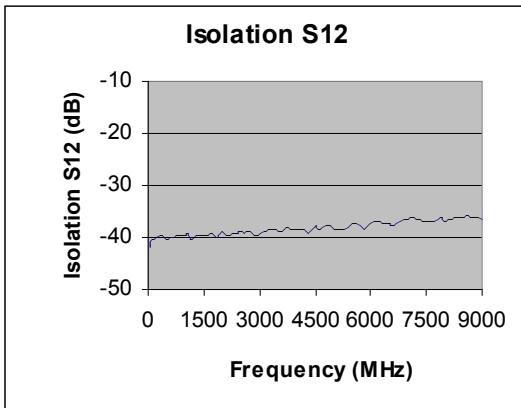
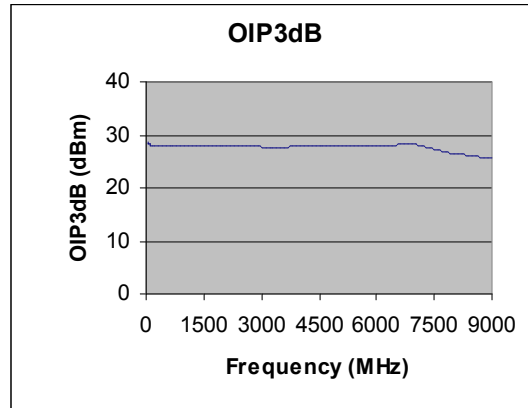
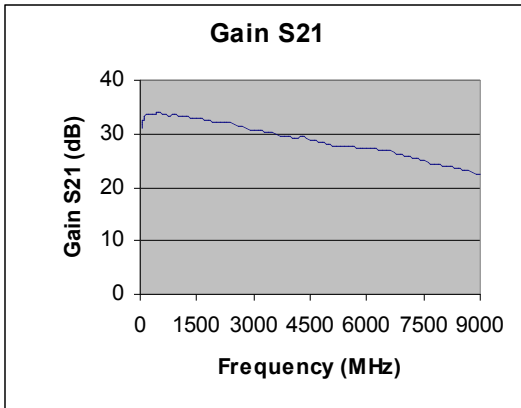
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f = 7.5GHz	dBm		+15.3	
f = 9.0GHz	dBm		+14.3	
Parameter	Unit	Minimum	Typical	Maximum
IP3 f = 50MHz	dBm		+28.5	
f = 100MHz	dBm		+28.1	
f = 500MHz	dBm		+27.9	
f = 2.0GHz	dBm		+28.1	
f = 3.5GHz	dBm		+27.4	
f = 5.0GHz	dBm		+28.0	
f = 7.5GHz	dBm		+27.3	
f = 9.0GHz	dBm		+25.6	
Noise Figure f = 2.0GHz	dB		4.5	
VSWR f = 2.0GHz				
Input VSWR			1.7:1	
Output VSWR			1.5:1	
DC Power Supply	V	10	12	18
Supply Current	mA		110	
Operating Temperature	°C	-40		+85
Size	inch	1.250"(L) x 1.250"(W) x 0.563"(H)		
Weight	Oz.	1.6		

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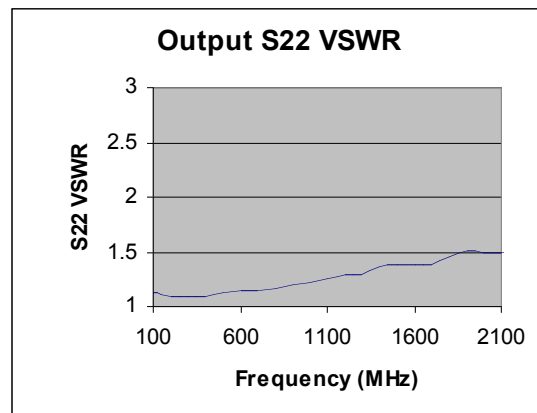
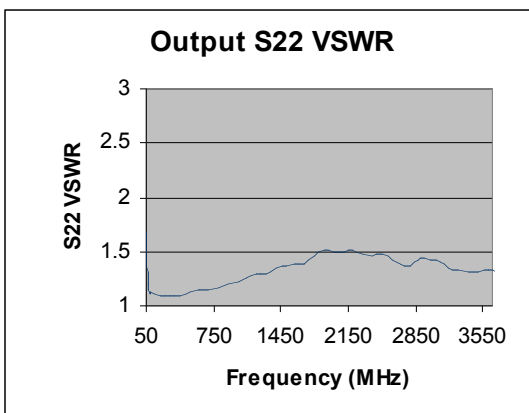
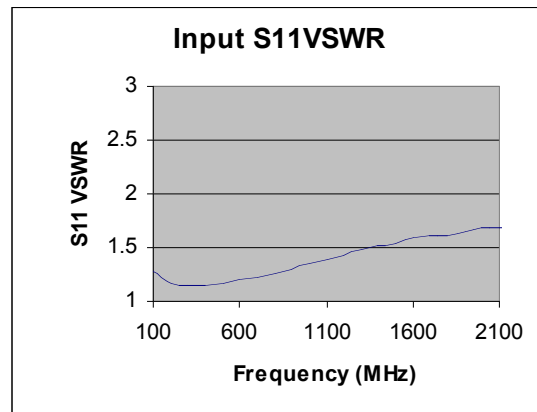
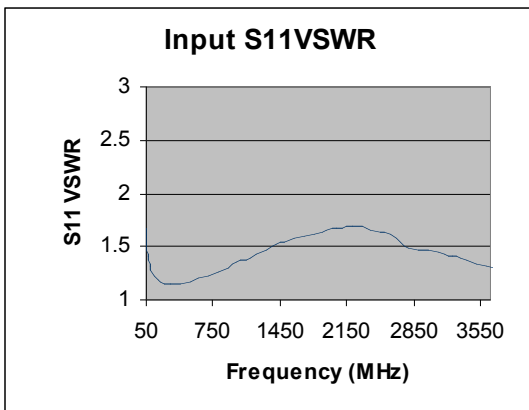
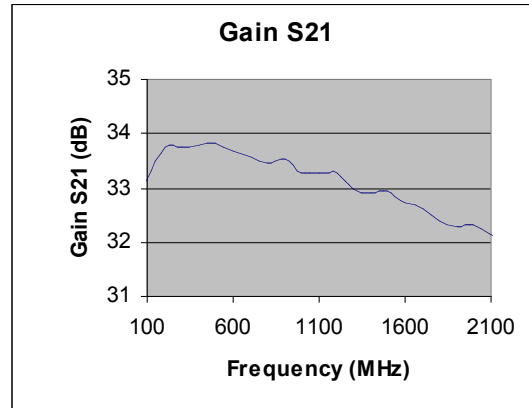
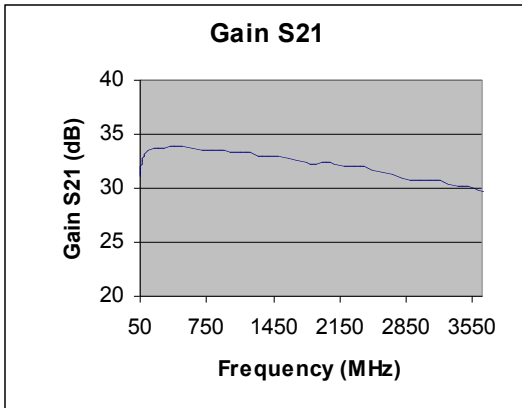
Typical Performance @ +25 °C



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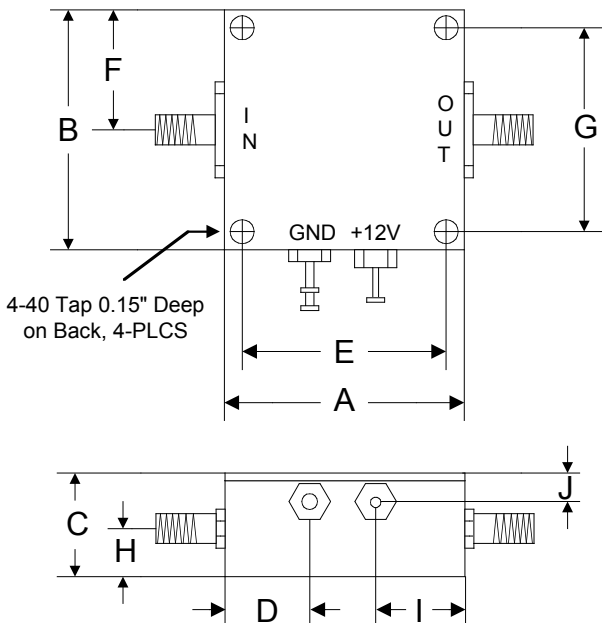
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Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+15dBm
Supply Voltage	+25V
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