

HD28177

100KHz–10Ghz RF Amplifier

Features

- Frequency: 100KHz -10GHz
- Gain: 27dB
- P_{1dB}: +15dBm
- IP3: +28dBm
- Noise Figure: 5dB
- DC Power: 12V
- SMA Connector

Performance measured @ 5GHz

Description

HD28177 is an ultra wideband RF Amplifier operates with frequency range from 100KHz to 10GHz.



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

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	GHz	0.0001		10
Gain	f = 100KHz	dB	29.0	
	f = 10MHz	dB	30.0	
	f = 100MHz	dB	33.0	
	f = 1.0GHz	dB	33.0	
	f = 3.5GHz	dB	30.0	
	f = 5.0GHz	dB	27.0	
	f = 8.0GHz	dB	24.0	
	f = 10.0Ghz	dB	20.0	
P _{1dB}	f = 100KHz	dBm	+13.2	
	f = 10MHz	dBm	+13.4	
	f = 100MHz	dBm	+13.8	
	f = 1.0GHz	dBm	+14.8	
	f = 3.5GHz	dBm	+15.1	
	f = 5.0GHz	dBm	+15.7	

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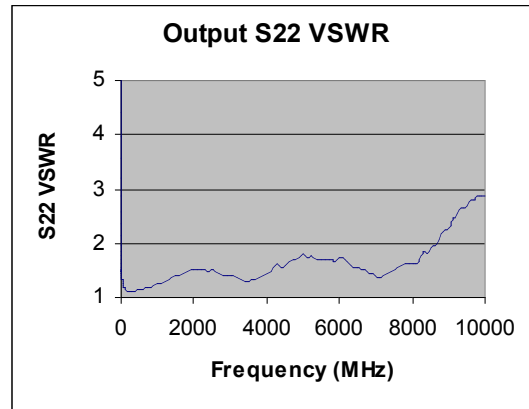
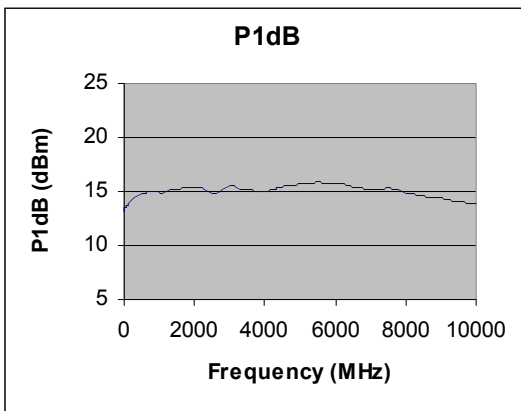
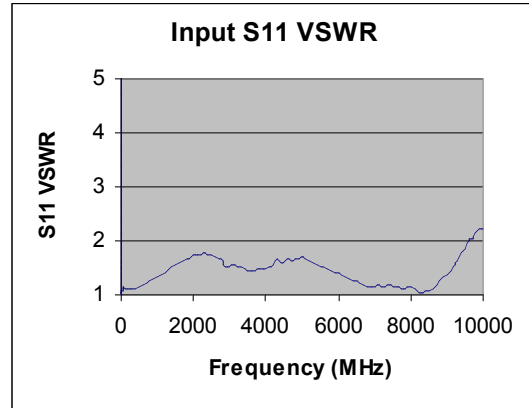
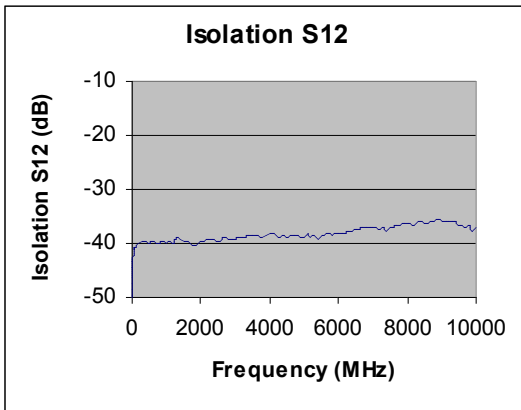
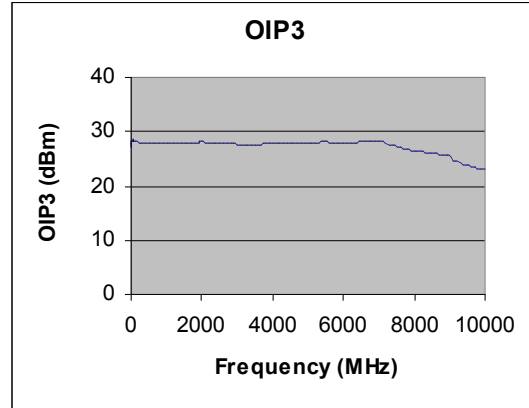
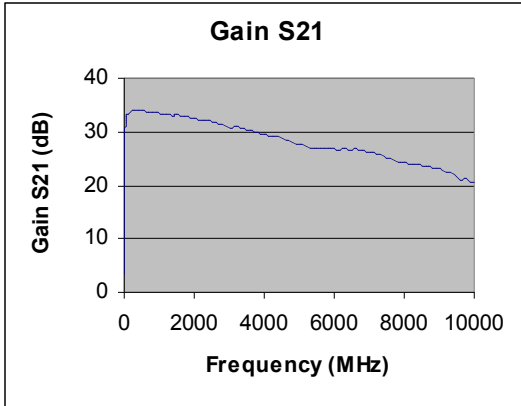
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f = 8.0GHz	dBm		+14.8	
f = 10.0GHz	dBm		+13.0	
Parameter	Unit	Minimum	Typical	Maximum
IP3 f = 100KHz	dBm		+27.0	
f = 10MHz	dBm		+28.2	
f = 100MHz	dBm		+28.1	
f = 1.0GHz	dBm		+28.0	
f = 3.5GHz	dBm		+27.4	
f = 5.0GHz	dBm		+28.0	
f = 8.0GHz	dBm		+26.4	
f = 10.0GHz	dBm		+23.0	
Noise Figure f = 5.0GHz	dB		5.0	
VSWR f = 5.0GHz				
Input VSWR			1.7:1	
Output VSWR			1.8:1	
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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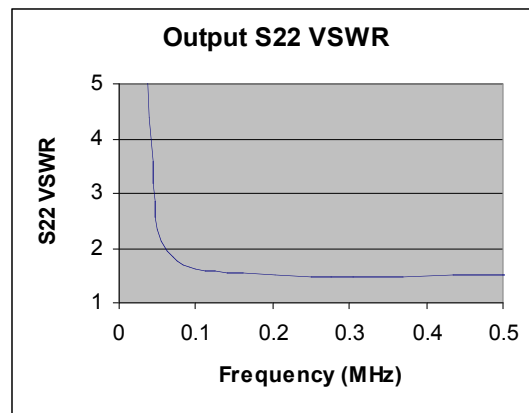
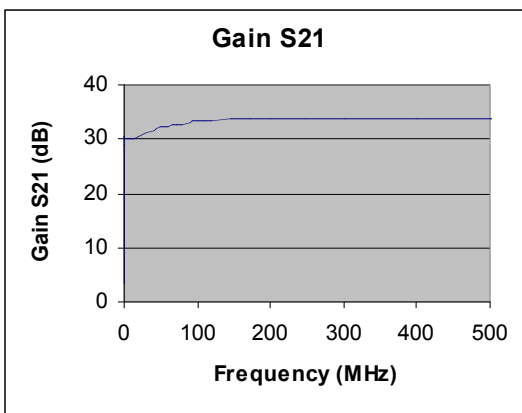
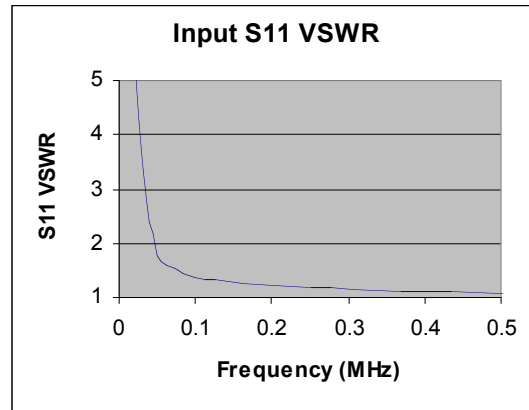
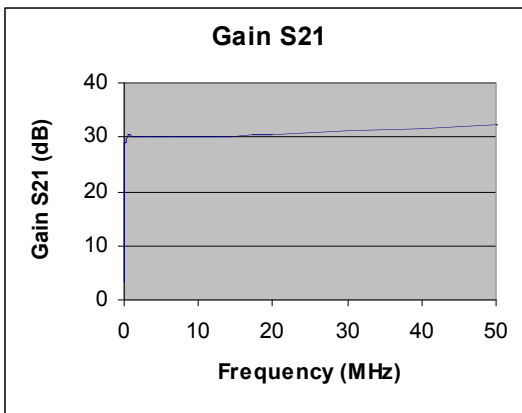
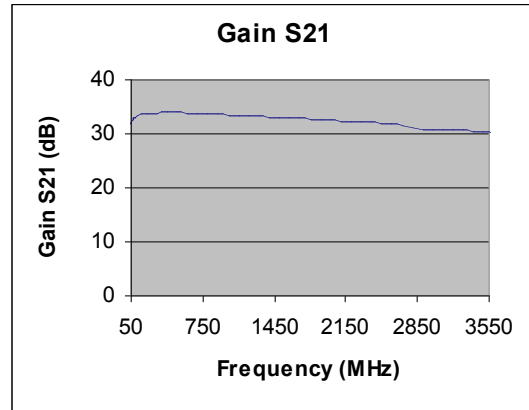
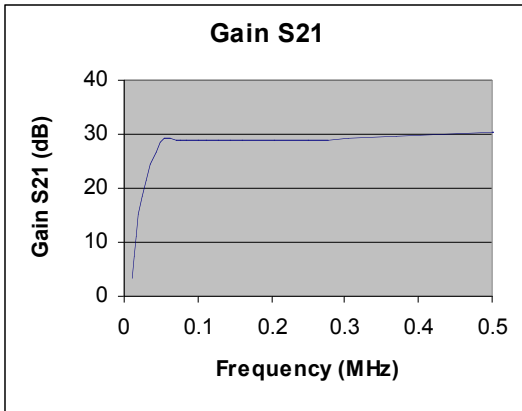
Typical Performance @ +25 °C



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Typical Performance @ +25 °C



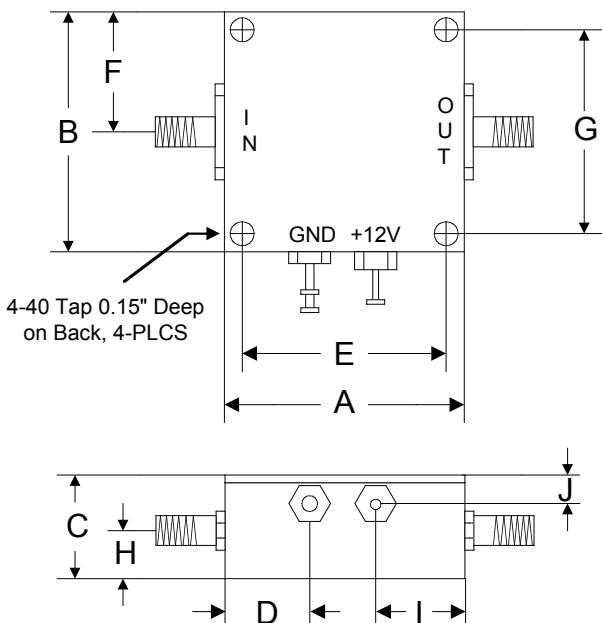
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Absolute Maximum Ratings

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