

### DESCRIPTION

AMCOM's AM001510LN-P1 is a broadband Low Noise Amplifier module. It is designed for general purpose applications. It operates from 20 MHz to 1500 MHz with Noise Figure of 1.0 dB and small signal gain of 20 dB. The module operates using a 12V/70mA supply and uses SMA connectors for input and output. This amplifier module is compact at 1.25" (L) x 1.25" (W) x 0.563" (H).



### FEATURES

- Frequency Range: 20 - 1500MHz
- Gain: 20dB
- P1dB: +17dBm
- IP3: +35dBm
- Noise Figure: 1dB
- DC Power: 12V/70mA
- SMA Connector

### APPLICATIONS

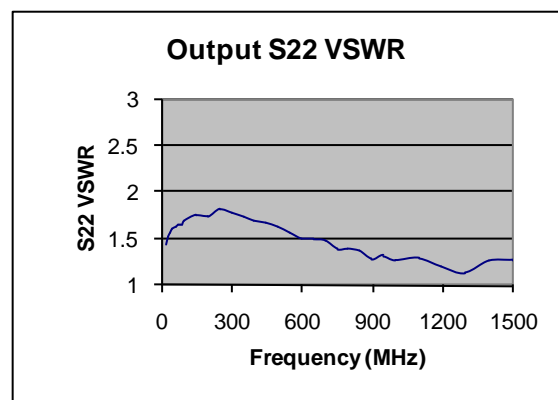
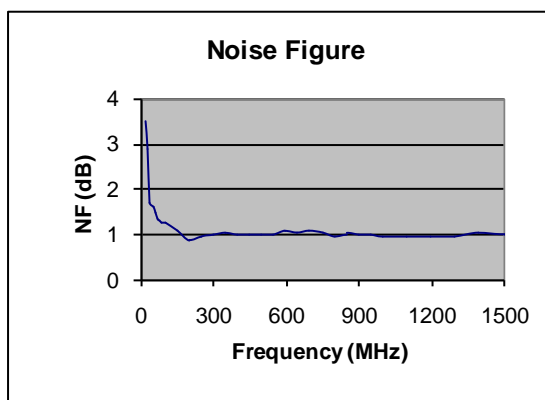
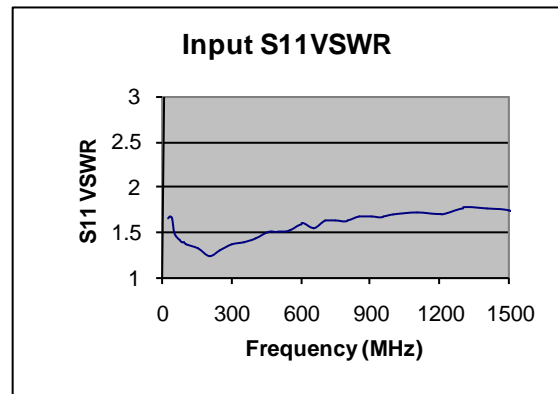
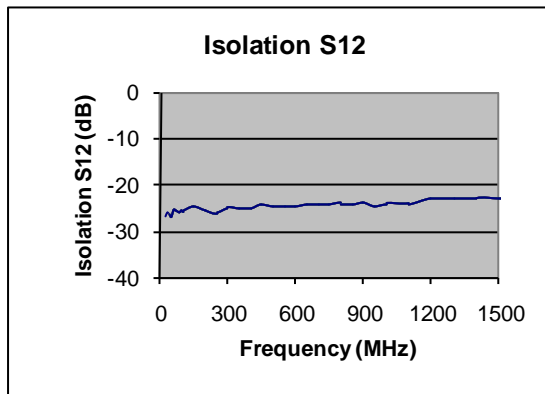
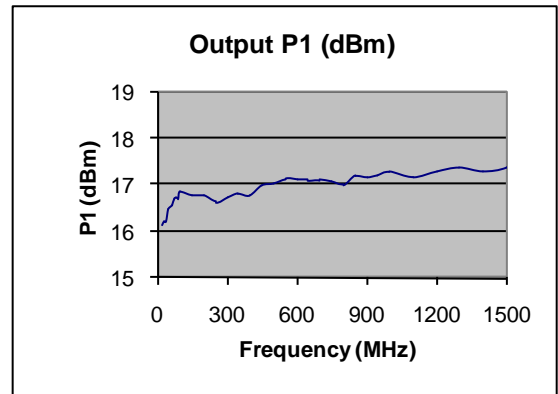
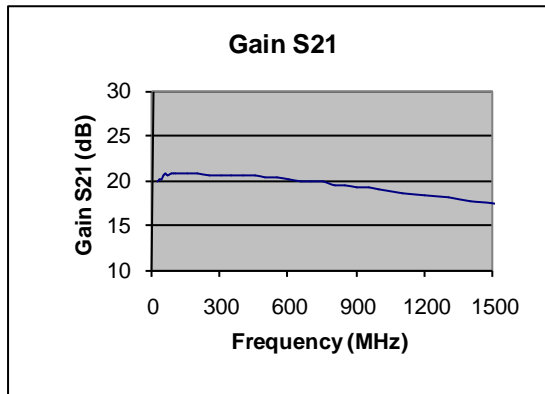
- Wireless Infrastructure
- Military & Aerospace
- Test and Measurement

Performance measured @ 500MHz

### Electrical Specifications @ +25 °C, $Z_{in} = Z_{out} = 50 \Omega$ , $V_{cc} = +12V$

Parameter	Unit	Minimum	Typical	Maximum
Frequency Range	MHz	20		1500
Gain				
f = 20MHz	dB		20.0	
f = 100MHz	dB		20.7	
f = 500MHz	dB		20.3	
f = 1000MHz	dB		19.0	
f = 1500MHz	dB		17.5	
Gain Flatness (20-1000MHz)	dB		± 1.0	
$P_{1dB}$	dBm		+17	
IP3	dBm		+35	
Noise Figure	dB		1.0	
Reverse Isolation	dB		-24	
VSWR				
Input VSWR			1.5:1	
Output VSWR			1.7:1	
DC Power Supply	V	9	12	18
Supply Current	mA		70	

Typical Performance @ +25 °C



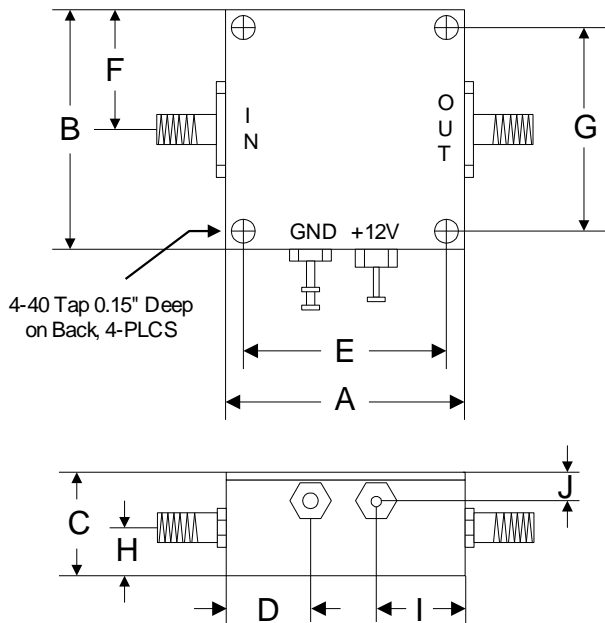
## Typical Performance @ +25 °C

Freq(MHz)	NF (dB)	S21 (dB)	S12 (dB)	S11(VSWR)	S22(VSWR)	P <sub>1dB</sub> (dBm)	P <sub>sat</sub> (dBm)
20	3.491	19.99	-27.03	1.653	1.446	+16.12	+20.94
30	2.893	20.05	-26.03	1.670	1.526	+16.21	+20.96
40	1.679	20.15	-26.65	1.659	1.575	+16.22	+21.03
50	1.584	20.52	-26.91	1.502	1.611	+16.47	+21.07
60	1.493	20.67	-25.41	1.451	1.631	+16.57	+21.06
70	1.324	20.64	-25.40	1.401	1.648	+16.70	+21.00
80	1.301	20.68	-25.86	1.384	1.661	+16.72	+21.06
90	1.269	20.69	-25.64	1.376	1.657	+16.72	+21.07
100	1.245	20.71	-25.79	1.355	1.697	+16.86	+21.00
150	1.061	20.86	-24.84	1.309	1.759	+16.78	+20.77
200	0.855	20.70	-25.74	1.236	1.747	+16.78	+20.63
250	0.952	20.50	-26.17	1.300	1.818	+16.64	+20.81
300	0.975	20.48	-25.06	1.362	1.785	+16.73	+20.89
350	1.019	20.48	-25.30	1.389	1.745	+16.82	+20.89
400	0.997	20.46	-25.08	1.423	1.707	+16.79	+20.90
450	1.007	20.46	-24.49	1.494	1.678	+17.01	+20.86
500	0.998	20.38	-24.87	1.496	1.639	+17.05	+20.87
550	0.992	20.31	-24.68	1.506	1.580	+17.14	+20.79
600	1.058	20.16	-24.86	1.593	1.516	+17.13	+20.85
650	1.027	20.00	-24.36	1.545	1.507	+17.11	+20.75
700	1.059	19.96	-24.33	1.616	1.494	+17.11	+20.76
750	1.032	19.82	-24.24	1.621	1.388	+17.07	+20.76
800	0.967	19.53	-24.09	1.619	1.399	+17.02	+20.63
850	1.010	19.50	-24.33	1.663	1.366	+17.21	+20.60
900	0.986	19.32	-24.05	1.665	1.286	+17.16	20.58
950	0.976	19.16	-24.55	1.664	1.320	+17.23	+20.53
1000	0.954	19.00	-24.11	1.696	1.269	+17.28	+20.52
1100	0.965	18.64	-24.14	1.721	1.291	+17.19	+20.25
1200	0.946	18.29	-23.04	1.695	1.197	+17.31	+20.27
1300	0.967	18.01	-23.15	1.768	1.131	+17.38	+20.46
1400	1.016	17.70	-22.84	1.754	1.261	+17.29	+20.50
1500	0.983	17.50	-22.85	1.736	1.271	+17.38	+20.47
1600	1.078	17.07	-22.86	1.651	1.315	+17.73	+20.13
1700	1.077	16.69	-22.27	1.669	1.382	+18.01	+19.94
1800	1.101	16.47	-21.99	1.637	1.425	+18.20	+19.98
1900	1.071	16.15	-22.12	1.644	1.571	+18.53	+19.86
2000	1.090	15.65	-22.10	1.563	1.671	+18.49	+19.52

### Absolute Maximum Ratings

Parameter	Absolute Maximum
RF Input Power	+13dBm
Supply Voltage	+25V
Operating Temperature	-40 °C to +85 °C
Storage Temperature	-55 °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