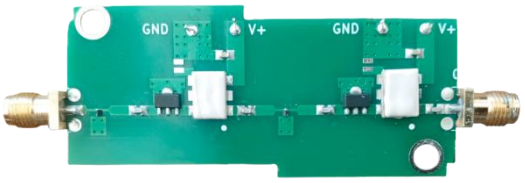
ANT-ALM01
Antenom 10-6000 MHz Amplifier-Limiter Board

SPECIFICATIONS:

- No metal case, only board
- Flat Gain, ±1.5 dB over 50–6000 MHz
- High Gain, typ. 28.40 dB at 2 GHz
- High Output Power, P1dB typ. +16.1 dBm at 2 GHz
- High Linearity, OIP3 typ. +41.1 dBm at 50 MHz; +28.95 dBm at 2 GHz
- Integrated input limiter for protection against high-level signals
- Broadband dynamic range without external matching components
- Broad Bandwidth: 0.01 to 6.0 GHz



Model no.	**ANT-ALM01**
Connectors	**SMA Female**

KEY FEATURES

Feature	Advantages
Broad Bandwidth: 0.01 to 6 GHz	**Covers multiple communication bands with a single amplifier module: Cellular, PCS, LTE, WiMAX, UHF, VHF, L band, Satcom, radar, etc.**
Unconditionally Stable	**No risk of damage to other components from impedance mismatch or internal oscillation**
Integrated Input Limiter	**Protects the amplifier against high input power levels, enhancing robustness**
Ultra Flat Gain	**±1.0 dB over 10 to 50 MHz; ±1.5 dB over 50 to 6000 MHz; supports a variety of multi band applications**
Compact PCB Module	**Small form factor, easy to integrate into various RF systems.**

APPLICATIONS

- Base station front-end and driver stages
- Wireless communication systems (LTE, Wi-Fi, 5G sub-6 GHz)
- CATV / broadband distribution
- Test and measurement equipment
- General-purpose RF amplifier module

PRODUCT OVERVIEW

The ANT-ALM01 Antenom 10–6000 MHz Amplifier-Limiter Board is a wideband RF module designed for high gain, flat response, and strong linearity across a broad frequency range. Featuring a two-stage cascade amplifier topology, the board achieves approximately 30 dB gain while maintaining stability and consistent performance. An integrated input limiter provides protection against high input power levels, increasing the reliability of the system under demanding conditions. With 50 Ω input and output ports, the module requires no external matching components, making it easy to integrate into wireless, broadband, and test environments. Compact PCB design and low power consumption further enhance its suitability for a wide range of RF applications.

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Electrical Specifications at 25°

Parameter	Condition (GHz)	Min.	Typ.	Max.	Units
Frequency Range		0.01		6	GHz
Gain	0.05 0.8 2.0 3.0 4.0 5.0 6.0		25.7 28.1 28.4 27.8 27.4 26.9 25.8		dB
Gain Flatness	0.01-0.05 0.05-6.0		±1.0 ±1.5		dB
Input Return Loss	0.05 0.8 2.0 3.0 4.0 5.0 6.0		10.93 15.23 18.40 21.28 24.47 17.73 12.24		dB
Output Return Loss	0.05 0.8 2.0 3.0 4.0 5.0 6.0		21.56 12.74 15.19 13.43 16.97 14.31 12.55		dB
Output Power at 1dB Compression	0.05 1.0 2.0 3.0 4.0 5.0 6.0		16.4 16.3 16.1 14.5 13.9 6.7 7.8		dBm
Output IP3	0.05 0.5 2.0 3.0 4.0 5.0 6.0		41.11 33.05 28.95 25.75 24.25 19.15 19.		dBm
Noise Figure	0.05 0.8 2.0 3.0 4.0 5.0 6.0		7.0 7.0 7.1 7.1 7.1 7.1 7.4	8.2 8.6	dB
Device Operating Voltage		+4.8	+5.0	+5.2	V
Device Operating Current		144	164	184	mA
Active Directivity (Isolation-Gain)	0.01-6		18.5		dB

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Typical Performance Data/Curves

Frequency (MHz)	Gain (dB)	Directivity (dB)	VSWR IN	VSWR OUT	Power Out @1 dB COMPR. (dBm)	Noise Figure (dB)	Output IP3 (dBm)
10.00	23.64	22.64	1.86	1.26	16.51	8.0	41.57
50.00	25.68	19.80	1.80	1.20	16.40	7.0	41.11
500.00	27.67	15.85	1.44	1.39	16.16	6.9	33.05
1000.00	28.20	16.33	1.35	1.66	16.3	7.1	30.05
1400.00	28.22	17.40	1.41	1.42	16.51	7.1	29.62
1600.00	28.33	17.36	1.39	1.32	16.48	7.1	29.49
1800.00	28.58	17.24	1.29	1.35	16.40	7.1	29.30
2000.00	28.40	16.63	1.27	1.42	16.1	7.1	28.95
2400.00	28.16	15.97	1.42	1.50	15.37	7.1	27.69
3000.00	27.79	17.47	1.20	1.55	14.5	7.1	25.75
3400.00	27.73	18.73	1.12	1.55	14.6	7.1	25.29
3800.00	27.78	19.67	1.13	1.39	14.57	7.1	24.82
4000.00	27.45	18.85	1.13	1.33	13.9	7.1	24.25
4600.00	27.70	20.73	1.30	1.50	9.7	7.2	20.99
5000.00	26.97	22.00	1.30	1.47	6.7	7.1	19.15
5500.00	26.50	16.95	1.33	1.33	4.91	7.3	18.85
6000.00	25.79	20.02	1.65	1.62	7.8	7.4	19.35