LOW NOISE AMPLIFIERS

Today's communications systems require low noise amplifiers that can amplify the smallest of signals without generating distortion in the presence of adjacent strong signals. Advanced Control Components produces a line of low noise amplifiers offering low noise figure, moderate gain and some of the highest dynamic range specifications available in the industry. Advanced Control Components designs and manufactures a wide variety of low noise amplifiers from RF to millimeter-wave frequencies. The tables below list a small portion of the units we have designed. Most parameters such as bandwidth, gain, noise figure, compression point etc. can be tailored to your requirements. Contact the factory to discuss any modifications or additions of special functions such as gain control, power monitoring, temperature compensation, etc.

All models are available with hermetic seal and high-rel screening for mil and spaced-based applications.

Part Number	Frequency Range (MHz)	Gain (dB min)	Noise Figure (dB max)	1dB Compression (+dBm min)	IP3 (+dBm typ)	Supply Voltage (VDC)	Standard Case Style
L10-1	10	10	6.0	16	26	15	S026
L30APL	25 - 35	21	1.1	10	20	15	S026
L30A-3	25 - 35	25	2.5	15	25	15	S026
L30B	25 - 35	40	1.1	10	20	15	S025
L30C-1F	25 - 35	60	1.2	25	35	15	S024
L30-2B	25 - 35	80	1.3	10	20	15	S022
L60B	55 - 65	40	1.1	10	20	15	S025
L60E-2	55 - 65	70	1.0	15	25	15	S025
L60F	50 - 70	60	1.1	10	20	15	S025
L65A	55 - 75	20	1.4	5	15	15	S026
L70H	40 - 100	35	1.5	10	20	15	S025
L70B	40 - 100	40	1.1	10	20	15	S025
L135MF	130 - 140	45	1.3	0	10	15	S025
L150A	135 - 165	35	1.3	5	15	15	S025
L160A	130 - 190	40	1.4	7	17	15	S025
L140A	70 - 210	30	1.1	5	15	15	S025
ACAM7516	220 - 280	30	1.3	7	17	15	S024
L250F	220 - 280	43	1.3	3	13	15	S025
L270B	220 - 320	33	1.4	3	13	15	S025
L312A	300 - 325	35	1.4	15	25	15	S025
L430EF	400 - 460	45	1.4	10	20	15	S025
L450E	430 - 480	30	1.3	10	20	15	S025
L600A	575 - 625	37	1.7	20	30	20	S025
L735A	735 - 765	26	1.8	5	15	15	S025
L850RM	845 - 855	30	3.5	3	13	15	S024
L835A	800 - 870	15	1.5	10	20	15	S025
L900A-1	850 - 950	25	2.0	5	15	15	S025
L1000A	950 - 1050	25	2.6	6	16	15	S025
L1090B	1040 - 1090	27	2.5	5	15	15	S025
L11GB-1	960 - 1215	17.5	2.0	10	20	15	S026
L1225A	1125 - 1350	12	3.0	3	13	15	S025
L1300	1215 - 1365	30	2.0	3	13	15	S025
L13GE	1200 - 1400	25	2.0	18	28	15	S025
L13GSA-2	1200 - 1400	60	5.0	7	17	15	S024
L1479	1429 - 1529	18	3.5	0	10	15	S025
L1475A	1420 - 1545	10	5.0	0	10	12	S026
L157GA	1550 - 1600	30	2.0	5	15	15	S025
L1690A	1670 - 1710	30	2.3	0	10	20	S025
ANL1800M12-25	1700 - 1800	44	1.2	15	25	24	S003
ANP1800M2-23	1700 - 1800	44	2.0	23	33	24	S003
ANL1865M15-30	1850 - 1865	35	1.5	20	30	15	S025
ANP1990M12-15	1850 - 1990	25	1.2	15	25	16	S003
ANP1990M12-30	1850 - 1990	35	1.5	20	30	15	S025
ANL2G5-20	1700 - 2000	10	5.0	10	20	15	S013

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Part Number	Frequency Range (MHz)	Gain (dB min)	Noise Figure (dB max)	1dB Compression (+dBm min)	IP3 (+dBm typ)	Supply Voltage (VDC)	Standard Case Style
ANP2120M15-10	2030 - 2120	30	1.5	10	20	15	S003
L215GC	2100 - 2200	29	3.0	5	15	15	S024
ANL2220M12-25	2130 - 2220	25	1.2	15	25	15	S003
L22GBALC	2100 - 2300	15	4.0	3	13	15	S025
ANP2300M12-10	2200 - 2300	25	1.2	10	20	12	S003
ANL2400M15-20	1700 - 2400	23	1.5	10	20	15	S006
L245GA	1800 - 2400	20	3.5	0	10	15	S025
L29GA	2400 - 2700	25	2.4	5	15	15	S024
L3GA	2900 - 3100	20	4.0	10	20	15	S025

Notes:

- All specifications guaranteed at +25°C.
- Operating temperature range: -50°C to +70°C. Extended operating temperature range available,
- VSWR is specified at 2.0:1 maximum input and output at 50Ω. Typical performance is 1.7:1.
- All models can be optimized for different frequency ranges.
- Custom packaging is available for all models.
- Standard package finish: Chemical film per MIL-C-5541, Class C.
- RF connectors per MIL-PRF-39012 (SMA female standard)

ENVIRONMENTAL SPECIFICATIONS:

MIL-E-5400, MIL-STD-202, MIL-E-16400
Operating Temp: -50°C to +70°C
Storage Temp: -65°C to +125°C
Humidity: MIL-STD-202F, M103, Cond B
Shock: MIL-STD-202F, M213, Cond B
Altitude: MIL-STD-202F, M105, Cond B
Vibration: MIL-STD-202F, M204, Cond B
Thermal Shock: MIL-STD-202F, M107, Cond A
Temperature Cycle: MIL-STD-202F, M105C, Cond D

SCREENING :

Standard Screening:
Internal Visual per MIL-STD-883, Method 2017
Temperature Cycle: -65°C to +100°C, 10 cycles
Optional High-Rel Screening (Ref MIL-PRF-38534):
Internal Visual per MIL-STD-883, Method 2017
Stabilization Bake per MIL-STD-883, Method 1008
Temperature Cycle per MIL-STD-883, Method 1010
Constant Acceleration per MIL-STD-883, Method 2001
Burn-in per MIL-STD-883, Method 1015
Leak Test per MIL-STD-883, Method 1014
External Visual per MIL-STD-883, Method 2009

Refer to Standard Amplifier Outline Drawing specification for mechanical details

OPTIONS:

- Custom frequency ranges available to 40GHz
- Alternate standard and custom packaging
- Available as open cards or drop-in modules
- Hermetic seal
- Integrated power supplies
- Multiple outputs
- Interstage access points
- Hi-rel screening
- Supply voltage options
- Voltage-controlled gain
- Temperature compensation
- Input and output limiting
- Integrated filters
- Unit-to-unit gain and phase matching
- Detected outputs
- Power monitoring

*** Contact the factory for price and delivery or to discuss options and custom requirements**

Advanced Control Components is your source for custom amplifiers and amplifier assemblies. With complete design and test capability to 40GHz, we have the resources to help develop and realize a new design, build to an existing specification or replace an obsolete component. From commercial to space qualified applications, we can help.

In addition to high performance amplifier design capability, Advanced Control Components produces custom amplifier-based multi-function assemblies to 40GHz. With our extensive expertise, we can integrate a wide variety of components and functions such as mixers, limiters, switches, attenuators, combiners/dividers, filters, detectors, etc. Additional capabilities include microprocessor control and monitoring, RF signal monitoring, and power supply conditioning. Contact the factory to discuss your design and application.

LNA-0205

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