



MEDIUM POWER AMPLIFIERS

Advanced Control Components designs and manufactures a wide variety of high-performance medium power amplifiers having output 1dB compression points in the ¼ to 2W range from RF through 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)	Flatness (+/-dB) (max)	1dB Compression (+dBm min)	Noise Figure (dB max)	IP3 (+dBm typ)	Supply Voltage (+VDC)	Current (mA max)	Standard Case Style
P20D	0.01 - 20	16	2.0	25	9	35	24	150	S020
P30D	0.01 - 30	10	2.0	25.5	9	35	20	130	S019
P60A	50 - 70	24	0.5	20	4.5	30	15	80	S004
P60F	50 - 70	30	0.5	30	4.5	40	24	360	P002
AP90M31	50 - 90	30	0.25	31	4	41	20	650	P008
P100N-1	0.01 - 100	26	1.0	23	7	33	15	150	P002
P100L-1	0.08 - 100	30	0.5	30	5	40	24	400	P002
P100LM	10 - 100	70	0.5	30	1.4	40	24	500	P007
P100A	90 - 110	25	0.5	33	9	43	24	700	P002
P150D	0.035 - 150	27	0.5	30	8	40	24	400	P002
P150P	0.08 - 150	60	0.75	30	1.5	40	24	500	P002
P150M	0.5 - 150	26	0.5	30	5	40	24	400	P002
P200A	100 - 200	40	0.5	33	6	43	24	700	P002
AP250M25	2 - 250	30	0.5	25	2	35	12	500	S018
P300AM	3 - 300	30	0.5	30	8	40	24	550	P002
P360A-3	350 - 372	16	0.5	36	8	46	24	850	S004
P400F	5 - 400	20	0.5	20	5	30	15	120	S004
P400C	10 - 400	20	0.5	30	7.8	40	24	400	P002
AP10M30	410 - 430	15	0.5	30	3	40	15	1200	S002
P150M-1	0.15 - 500	40	0.5	30	3	40	24	450	P002
P500A	2 - 500	37	0.5	30	3	40	24	500	P002
P500L	5 - 500	17	0.5	30	10	40	24	420	P002
P500AL	5 - 500	20	0.5	30	5	40	24	450	P002
P500B-2	5 - 500	24	0.5	33	6	43	24	700	P002A
P500A-2	10 - 500	33	0.5	33	5	43	24	750	P002A
P500F	50 - 500	33	0.5	23	9	33	15	200	P002
P600G	590 - 610	40	0.5	30	6	40	24	400	P012
P712A	412 - 712	30	0.5	27	10	37	20	450	P016
P720B-3	560 - 720	25	0.5	33	10	43	24	750	P016
P750A-1	10 - 750	30	0.5	28	8	38	20	500	P012
P750A	500 - 750	30	0.5	33	43	43	24	750	P012
P700S	650 - 750	40	0.5	34	6	44	24	700	P002A
P800A	10 - 800	30	0.5	25	6	35	20	450	P002
P800A-3	400 - 800	33	0.5	27	10	37	20	1000	P012
P960	400 - 960	33	0.5	30	10	40	24	800	P012
P1000E	0.02 - 1000	16	0.5	21	6	31	20	170	S001
P1G34	0.02 - 1000	22	0.5	34	8	44	20	1100	S003
P1GB	0.05 - 1000	30	1.0	30	6	40	20	600	P012
P10GD	0.5 - 1000	30	0.5	33	9	43	20	800	P012
P1000E-4	8 - 1000	33	0.75	21	5	31	20	200	S001
P1GB-1	10 - 1000	30	0.7	30	6	40	20	500	P012
P11GH	900 - 1350	25	1.0	23	10	33	20	350	P010
P1500	1000 - 1500	22	0.5	30	9	40	24	700	P012
P16GA	1380 - 1580	29	1.0	34	9	44	24	950	P012
P18GB	1700 - 1900	23	1.0	23	6	33	20	350	P011
AP1900M30	1700 - 1900	28	0.5	30	5.5	50	15	500	S002
P19GA-1	1850 - 1970	36	0.5	30	8	40	15	800	P013
P2GS-7	0.5 - 2000	30	1.0	30	8	40	20	800	P013



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P2GS-2	0.5 - 2000	40	1.0	23	4.3	33	15	350	P013
P2GF-2	10 - 2000	32	1.5	30	8	40	15	1000	P013
P2GF-3	100 - 2000	40	1.0	30	5	40	15	1000	P013
P2GA	1700 - 2300	22	1.0	23	5	33	15	240	P010
ACAM7932	100 - 4000	20	1.0	30	9	40	15	900	S009

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.