



POWER AMPLIFIERS

Advanced Control Components designs and manufactures high-performance power amplifiers from 2 watts to several hundred watts 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)	IP3 (+dBm typ)	Supply Voltage (VDC)	Current (mA max)	Standard Case Style
PL32M30-40	0.01 - 32	14	0.5	30	40	24	250	S003
P100M33	1 - 100	30	0.5	33	43	24	800	P002A
P500I	30 - 500	40	1.0	36	45	28	1800	P002B
P894M33-45	824 - 894	40	1.0	33	45	24	2500	P002B
P894M40-50	869 - 894	35	1.0	40	50	15	5500	P001
P894M42-54	869 - 894	36	0.5	42	54	15	5500	P001
P900M44-54	800 - 900	36	0.5	44	54	15	6000	P001
P915M40-50	869 - 915	34	0.5	40	50	15	5000	3" x 7" x 1"
P915M42-54	890 - 915	36	0.5	42	54	15	5500	P001
P940M37-47	800 - 940	40	0.5	37	47	15	3000	P004
P940M48-58	935 - 940	10	0.5	48	58	110VAC	-	19" RACK
P960M42-54	935 - 960	36	0.5	42	54	15	5500	P001
P960M47-57	935 - 960	42	0.5	47	57	24-30	6000	9.6" x 9.6" x 5.5"
ACAM7907	10 - 1000	30	1.0	33	43	15	1000	P003
PL1G34-44	20 - 1000	22	0.5	34	44	20	1000	S003
PL1G40-50	500 - 1000	27	1.0	40	50	110VAC	6000	19" RACK
PL1215M30-40	960 - 1215	40	1.0	30	40	15	600	P004
AP1225M40	950 - 1225	40	1.0	40	50	15	5500	P001
P1470M40	1450 - 1470	30	1.0	40	50	15	5000	P001
AP1500M33	800 - 1500	39	1.0	33	43	15	800	P004
P1600M41	1620 - 1660	50	1.0	41	51	15	3500	P005
P1700M42	1200 - 1700	30	1.0	42	50	15	7000	P001
P1700M41	1200 - 1700	35	1.5	41	50	12.6	5000	8" x 6" x 1.5"
P1700M42-52	1500 - 1700	65	0.5	42	52	15	7000	P006
P1700M33	1600 - 1700	40	0.5	33	43	15	2500	P004
P1800M40	900 - 1800	30	1.0	40	50	15	4500	P001
PL1850M42-52	1650 - 1850	33	0.5	42	52	24	5500	8" x 4" x 3"
PL1880M47-57	1805 - 1880	42	0.5	47	57	24-30	8000	9.6" x 9.6" x 5.5"
PL1R9G40-50	1700 - 1900	30	1.0	40	50	15	5500	P001
P1990M45	1930 - 1990	40	1.0	45	55	110VAC	-	19" RACK
PL2G40-50	1000 - 2000	27	1.0	40	50	110VAC	-	19" RACK
PL2G40-52	1000 - 2000	27	1.0	40	52	24	5500	P006
P2G33-43	1000 - 2000	30	0.5	33	43	15	1000	P004
P2G43	1000 - 2000	33	1.25	43	53	220VAC	-	19" RACK
P2G40	1000 - 2000	43	-	40	50	15	-	P001
PL2G37-47	1800 - 2000	20	1.0	37	47	24	2000	P001
PL2G46-56	1800 - 2000	20	1.0	46	56	110VAC	-	19" RACK
PL2G42-52	1800 - 2000	30	0.5	42	52	15	4500	P001
PL2G48-58	1900 - 2000	35	0.5	48	58	24	10000	8" x 10" x 1.5"
PL2110M43-53	2000 - 2110	30	1.0	43	53	24	6000	P001
PL2200M44-54	1700 - 2200	36	0.5	44	54	24	6000	P001
P2290M36	2200 - 2290	40	0.5	36	46	24	2500	P004
PL2300M40-50	2100 - 2300	30	1.0	40	50	24	5500	P001
P2300M42	2200 - 2300	40	1.0	42	52	24	5500	P001
PL2400M40-52	1800 - 2400	40	1.0	40	52	110VAC	-	19" RACK
P2500M40	1500 - 2500	30	1.0	40	50	24	5500	P001
AP2500G43	1500 - 2500	30	1.0	43	53	15	6500	P001
PL2R5G33-43	2300 - 2500	30	1.0	33	43	24	1500	P004

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PL2R5G37-47	2400 - 2500	20	1.0	37	47	24	2000	P001
AP2505M37	2475 - 2505	35	0.2	37	47	220VAC	-	19" RACK
PL2600M33-43	2000 - 2600	39	1.0	33	43	24	800	P004
PL2R6G40-50	2100 - 2600	30	1.0	40	50	24	5000	P005
PL2690M34-44	2670 - 2690	35	0.5	34	44	24	950	P004
PL2700M43-53	2500 - 2700	27	1.0	43	53	24	6000	P001
PL2R7G50-60	2500 - 2700	60	1.0	50	60	110VAC	-	19" RACK
P3G37	2500 - 3000	30	1.0	37	47	24	3500	P001
PL3G40-50	2500 - 3000	30	1.0	40	50	24	5500	P001
AP3450M50	3150 - 3450	40	1.0	40	50	15	6000	P005

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.

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