Short Form Catalog v7.1

Presented by

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PowerAmp Design specializes in high power operational amplifiers for industrial applications. With a new concept for component amplifiers, these hybrid circuit designs feature surface mount component construction on an insulated metal substrate. Integrated heat sink and fan provide optimum cooling. Our new approach decreases weight and system complexity while increasing power density.

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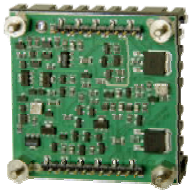
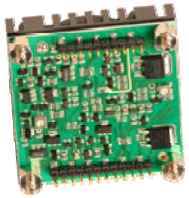
Power Operational Amplifiers ***RoHS compliant model*

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit
 PAD01**	±15 - ±50 30 - 100	5	7	50	30	90 [100]	35	• 30mm square footprint • External compensation • Programmable current limit • PAD01-1 available[3]	NA	 EVAL01
 PAD04**	±15 - ±100 30 - 200	5	7	60	30	180 [350]	200	• Advance information[1] • 30mm square footprint • External compensation • PAD04-1 available[3]	NA	 EVAL01
 PAD20**	±15 - ±75 30 - 150	5	7	80	40	130 [10]	5	• Temperature reporting • Over-temp shutdown • 4-wire current limit • 40mm square footprint	PAD125 PAD131	 EVAL20

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD38	±15 - ±100 30 - 200	10	25	250	125	180 [33]	10	• External compensation • Programmable current limit	NA	NA
 PAD39	±15 - ±50 30 - 100	10	25	200	125	80 [80]	10	• External compensation • Programmable current limit	NA	NA
 PAD108**	±15 - ±100 30 - 200	10	12	200	100	180 [300]	170	• External compensation • Programmable current limit	NA	NA
 PAD111**	±15 - ±50 30 - 100	15	50	250	170	90 [500]	130	• External compensation • Programmable current limit	NA	NA

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD112	±15 - ±75 30 - 150	5	7	100	50	130 [30]	14	• Temperature reporting • Over-temp shutdown • 4-wire current limit	PAD125 PAD131	 EVAL112
 PAD113**	±15 - ±250 30 - 500	1.5	3	96	29	480 [15]	40	• Temperature reporting • Over-temp shutdown • 4-wire current limit • PAD113-1 available[3]	PAD125 PAD131	 EVAL112
 PAD115A**	±10 - ±150 20 - 300	20	30	400	165	280 [7]	8	• Temperature reporting • Over-temp shutdown	PAD125 PAD131	 EVAL118
 PAD117A	±5 - ±50 10 - 100	15	20	250	100	90 [23]	8	• RRIO (rail to rail input/output) • Temperature reporting • Over-temp shutdown • 4-wire current limit	PAD125 PAD131	 EVAL117
 PAD118	±10 - ±50 20 - 100	30	40	400	165	90 [20]	8	• Temperature reporting • Over-temp shutdown	PAD125 PAD131	 EVAL118

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD119A**	±10 - ±100 20 - 200	20	30	400	165	90 [20]	8	• Temperature reporting • Over-temp shutdown	PAD125 PAD131	 EVAL118
 PAD126	±20 - ±250 40 - 500	10	12	450	150	480 [25]	50	• Temperature reporting • Over-temp shutdown • 4-wire current limit • PAD126-1 available[3]	PAD125 PAD131	 EVAL126
 PAD127	±5 - ±50 10 - 100	30	40	450	225	90 [10]	8	• RRIO (rail to rail input/output) • Temperature reporting • Over-temp shutdown • 4-wire current limit	PAD125 PAD131	 EVAL127
 PAD128	±10 - ±50 10 - 100	20	30	400	140	90 [20]	16	• RRIO w/PAD130 • Temperature reporting • Over-temp shutdown • 4-wire current limit • Low distortion	PAD125 PAD131	 EVAL129

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD129**	±10 - ±100 20 - 200	15	20	400	140	90 [20]	37	• RRIO w/PAD132 • Temperature reporting • Over-temp shutdown • 4-wire current limit • High power bandwidth	PAD125 PAD131	 EVAL129
 PAD135**	±15 - ±100 30 - 200	5	10	80	40	180 [350]	200	• Low cost • Small size 40mm square • High voltage- 200 volts • 350kHz power bandwidth • 200V/µS slew rate • 40mm square footprint • PAD135-1 available[3]	NA	 EVAL135
 PAD136**	±15 - ±100 30 - 200	7	10	150	100	180 [350]	200	• Low cost • Small size 40X45mm • High voltage- 200 volts • 350kHz power bandwidth • 200V/µS slew rate • Higher power version of PAD135-1	NA	Pinout is same as PAD135 but user will need to supply heat sink
 PAD137	±5 - ±50 10 - 100	20	30	400	140	90 [23]	8	• RRIO (rail to rail input/output) • Temperature reporting • Over-temp shutdown • 4-wire current limit	PAD125 PAD131	 EVAL137

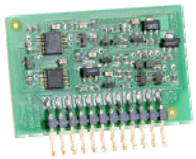
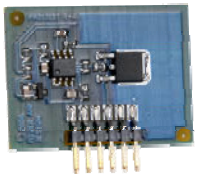
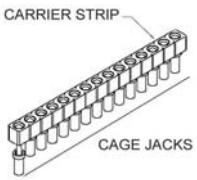
Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD138**	±15 - ±100 30 - 200	10	12	240	75	180 [30]	30	• Low cost • Small size 40mm square • High voltage- 200 volts • 30kHz power bandwidth • 30V/µS slew rate • PAD138-1 available[3]	NA	 EVAL138
 PAD141**	±6 - ±50 12 - 100	10	15	240	75	90 [28]	7	• Low cost • Small size 40mm square • Single supply operation • High voltage- 100 volts • 28kHz power bandwidth • 7V/µS slew rate • PAD141-1 available[3]	NA	 EVAL138
 PAD149** Release date TBA	±15 - ±100 30 - 200	10	12	240	125	180 [150]	100	• Advance Information[1] • Low cost • High voltage- 200 volts • 100kHz power bandwidth • Temperature Reporting • Short circuit protection • External shutdown	NA	NA
 PAD150**	±15 - ±50 30 - 100	10	20	200	125	90 [500]	200	• Low cost • Small size 40X45mm • High voltage- 100 volts • 500kHz power bandwidth • 200V/µS slew rate • Higher current version of PAD136	NA	Pinout is same as PAD135 but user will need to supply heat sink

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD183**	±15 - ±175 30 - 350	1.5	2.0	70	35	330 [100]	100	• Low cost • Small size 40mm square • High voltage- 350 volts • 100kHz power bandwidth • 100V/µS slew rate • 40mm square footprint • PAD183-1 available[3]	NA	 EVAL183
 PAD188	±25 - ±262.5 50 - 525	0.1	0.2	10	5	960 [2]	3	• External compensation • Programmable current limit • Conformal coated • 1mA quiescent current • PAD188-1 available[3]	NA	 EVAL188
 PAD189A	±50 - ±525 100 - 1050	1.5	1.5	180	60	960 [10]	30	• External compensation • 4-wire current limit • Conformal coated • PAD189A-1 available[3]	NA	 EVAL189
 PAD195	±50 - ±520 100 - 1040	0.1	0.2	40	20	1000 [1]	20	• External compensation • Programmable current limit • Conformal coated • 1mA quiescent current • PAD195-1 available[3]	NA	 EVAL195
 PAD196	±50 - ±1025 100 - 2050	0.05	0.1	24	12	2000 [0.5]	5	• External compensation • Programmable current limit • Conformal coated • 1mA quiescent current • PAD196-1 available[3]	NA	 EVAL196

Model	V_{RANGE} (V) V_{TOTAL} (V)	I_C (A)	I_{PK} (A)	P_{OUT} (W)	P_{DISS} (W)	P_{BW} V_{P-P} [@kHz]	SR V/µS	Features	Accessory Modules	Evaluation Kit*
 PAD541	±10 - ±50 20 - 100	5	7.0	100	50	80 [57]	14	• Low cost SIP design • 0.63" height • High voltage- 100 volts • External compensation • Programmable current limit	NA	 EVAL541

Accessory modules provide additional optional features for the power op amp models.

Accessory Modules

Model	Function	V_{RANGE} (V) V_{TOTAL} (V)	OUTPUT	Features	Compatible Amplifiers*
 PAD125	Current Limit	±8 - ±250 16 - 500	5V Logic Signals	• Programmable functions • Precision 150mV sense voltage • Temp stable sense voltage • Ground referenced outputs	All models with external shutdown feature
 PAD131	Fan Controller	12-15	5-15V varies w/temp	• Increases fan life • Reduces audible fan noise	All amplifier models with "Temp" output
 CJS01**	Cage Jack Strip	NA	NA	• Inexpensive socket strip	All amplifier models except PAD541

Model	Voltage	Current	Output Power	Features
 RSP-500	48V	10.5A	504W	• Adjustable output voltage • Universal input voltage • Power factor correction • Current limited • Forced air cooling

Notes:

*Amplifiers and accessory modules are purchased separately. For contacts in your area please consult website.

**RoHS compliant model

[1]ADVANCE INFORMATION: Product is in development. The specifications shown are the design goals and subject to change.

[2] PRELIMINARY INFORMATION: Product is entering the production phase. The specifications shown are current but subject to change.

[3] The -1 version of the model has no heat sink or fan for custom applications. See data sheet for full specifications. Other models may have -1 versions available upon request.

I_C: Continuous output current; **I_{PK}:** Peak output current; **P_{OUT}:** Power output capability; **P_{DISS}:** Power dissipation capability

P_{BW}: Power bandwidth; **SR:** Slew rate

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