

Short Form Catalog v6.3

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PowerAmp Design

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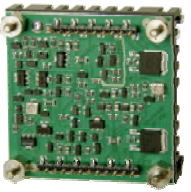

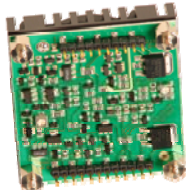



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PowerAmp Design specializes in high power operational amplifiers for industrial applications. With a new concept for component amplifiers, these hybrid circuit designs feature surface mount component construction on an insulated metal substrate. Integrated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










Power Operational Amplifiers









*RoHS compliant











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	<ul style="list-style-type: none"> • 30mm square footprint • External compensation • Programmable current limit 	NA	 EVAL01
 PAD20	±15 - ±75 30 - 150	5	7	80	40	130 [10]	5	<ul style="list-style-type: none"> • Temperature reporting • Over-temp shutdown • 4-wire current limit • 40mm square footprint 	PAD125 PAD131	 EVAL20
 PAD38	±15 - ±100 30 - 200	10	25	250	125	180 [33]	10	<ul style="list-style-type: none"> • External compensation • Programmable current limit 	NA	NA
 PAD39	±15 - ±50 30 - 100	10	25	200	125	80 [80]	10	<ul style="list-style-type: none"> • 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*
 PAD108*	±15 - ±100 30 - 200	10	12	200	100	180 [300]	170	<ul style="list-style-type: none"> External compensation Programmable current limit 	NA	NA
 PAD111*	±15 - ±50 30 - 100	15	50	250	170	90 [500]	130	<ul style="list-style-type: none"> External compensation Programmable current limit 	NA	NA
 PAD112	±15 - ±75 30 - 150	5	7	100	50	130 [30]	14	<ul style="list-style-type: none"> 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	<ul style="list-style-type: none"> Temperature reporting Over-temp shutdown 4-wire current limit 	PAD125 PAD131	 EVAL112
 PAD115A*	±10 - ±150 20 - 300	20	30	400	165	280 [7]	8	<ul style="list-style-type: none"> 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*
 PAD117A	±5 - ±50 10 - 100	15	20	250	100	90 [23]	8	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • Temperature reporting • Over-temp shutdown 	PAD125 PAD131	 EVAL118
 PAD119A*	±10 - ±100 20 - 200	20	30	400	165	90 [20]	8	<ul style="list-style-type: none"> • Temperature reporting • Over-temp shutdown 	PAD125 PAD131	 EVAL118
 PAD126	±20 - ±250 40 - 500	10	12	450	150	480 [25]	50	<ul style="list-style-type: none"> • Temperature reporting • Over-temp shutdown • 4-wire current limit 	PAD125 PAD131	 EVAL126
 PAD127	±5 - ±50 10 - 100	30	40	450	225	90 [10]	8	<ul style="list-style-type: none"> • RRIO (rail to rail input/output) • Temperature reporting • Over-temp shutdown • 4-wire current limit 	PAD125 PAD131	 EVAL127

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*
 PAD128	±10 - ±50 10 - 100	20	30	400	140	90 [20]	16	<ul style="list-style-type: none"> • RRIO w/PAD130 • Temperature reporting • Over-temp shutdown • 4-wire current limit • Low distortion 	PAD125 PAD130 PAD131	 EVAL129
 PAD129*	±10 - ±100 20 - 200	15	20	400	140	90 [20]	37	<ul style="list-style-type: none"> • RRIO w/PAD132 • Temperature reporting • Over-temp shutdown • 4-wire current limit • High power bandwidth 	PAD125 PAD131 PAD132	 EVAL129
 PAD135*	±15 - ±100 30 - 200	5	10	80	40	180 [350]	200	<ul style="list-style-type: none"> • Low cost • Small size 40mm square • High voltage- 200 volts • 350kHz power bandwidth • 200V/μS slew rate • 40mm square footprint 	NA	 EVAL135
 PAD136*	±15 - ±100 30 - 200	7	10	150	100	180 [350]	200	<ul style="list-style-type: none"> • Low cost • Small size 40X45mm • High voltage- 200 volts • 350kHz power bandwidth • 200V/μS slew rate • Higher power version of PAD135 	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	<ul style="list-style-type: none"> • RRIO (rail to rail input/output) • Temperature reporting • Over-temp shutdown • 4-wire current limit 	PAD125 PAD131	 EVAL137

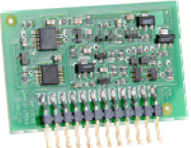



Model	V _{RANGE} (V) V _{TOTAL} (V)	I _C (A)	I _{PK} (A)	P _{OUT} (W)	P _{DISS} (W)	P _{BW} V _{P-P} [kHz]	SR V/μS	Features	Accessory Modules	Evaluation Kit*
 PAD138*	±15 - ±100 30 - 200	10	12	240	75	180 [30]	30	<ul style="list-style-type: none"> • Low cost • Small size 40mm square • High voltage- 200 volts • 30kHz power bandwidth • 30V/μS slew rate 	NA	 EVAL138
 PAD141*	±6 - ±50 12 - 100	10	15	240	75	90 [28]	7	<ul style="list-style-type: none"> • Low cost • Small size 40mm square • Single supply operation • High voltage- 100 volts • 28kHz power bandwidth • 7V/μS slew rate 	NA	 EVAL138
 PAD148*	±15 - ±100 30 - 200	10	12	240	125	180 [150]	100	<ul style="list-style-type: none"> • 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	<ul style="list-style-type: none"> • 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
 PAD183*	±15 - ±175 30 - 350	1.5	2.0	70	35	330 [100]	100	<ul style="list-style-type: none"> • Low cost • Small size 40mm square • High voltage- 350 volts • 100kHz power bandwidth • 100V/μS slew rate • 40mm square footprint 	NA	 EVAL183

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/ μ S	Features	Accessory Modules	Evaluation Kit*
 PAD188	$\pm 25 - \pm 262.5$ 50 - 525	0.1	0.2	10	5	960 [2]	3	<ul style="list-style-type: none"> External compensation Programmable current limit Conformal coated 1mA quiescent current 	NA	 EVAL188
 PAD189A	$\pm 50 - \pm 525$ 100 - 1050	1.5	1.5	180	60	960 [10]	30	<ul style="list-style-type: none"> External compensation 4-wire current limit Conformal coated 	NA	 EVAL189
 PAD195	$\pm 50 - \pm 520$ 100 - 1040	0.1	0.2	40	20	1000 [1]	20	<ul style="list-style-type: none"> External compensation Programmable current limit Conformal coated 1mA quiescent current 	NA	 EVAL195
 PAD196	$\pm 50 - \pm 1025$ 100 - 2050	0.05	0.1	24	12	2000 [0.5]	5	<ul style="list-style-type: none"> External compensation Programmable current limit Conformal coated 1mA quiescent current 	NA	 EVAL196
 PAD541	$\pm 10 - \pm 50$ 20 - 100	5	7.0	100	50	80 [57]	14	<ul style="list-style-type: none"> Low cost SIP design 0.63" height High voltage- 100 volts External compensation Programmable current limit 	NA	 EVAL541

*RoHS compliant

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	<ul style="list-style-type: none"> • Programmable functions • Precision 150mV sense voltage • Temp stable sense voltage • Ground referenced outputs 	All except PAD135 & PAD183
 PAD130	Dual Boost Power Supply	±8 - ±50 16 - 100	±Vs±9V	<ul style="list-style-type: none"> • Converts PAD128 to RRIO amp • Makes other amp models rail to rail at inputs 	PAD128
 PAD131	Fan Controller	12-15	5-15V varies w/temp	<ul style="list-style-type: none"> • Increases fan life • Reduces audible fan noise 	All amplifier models with "Temp" output
 PAD132	Dual Boost Power Supply	±8 - ±150 16 - 300	±Vs±9V	<ul style="list-style-type: none"> • Converts PAD129 to RRIO amp • Makes other amp models rail to rail at inputs 	PAD129

Notes:

*Amplifiers and accessory modules are purchased separately. For [contacts](#) in your area please consult website.

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

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

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