

AMP11 BOM

Name	Value	Package		
C1	1000 uF 10V	CAP10MM_RAD	Bulk capacitor +5V	
C3	0.1 uF	SMT 0805	decoupling	
C4	0.1 uF	SMT 0805	decoupling	
C7	0.1 uF	SMT 0805	decoupling	
C10	0.1 uF	SMT 0805	decoupling	
C12	0.1 uF	SMT 0805	decoupling	
C13	330 pF 100V	SMT 0805	Output snubber with R51	
C14	0.1 uF	SMT 0805	decoupling	
C18	0.1 uF	SMT 0805	decoupling	
C21	0.1 uF	SMT 0805	decoupling	
C22	0.1 uF	SMT 0805	decoupling	
C24	0.1 uF	SMT 0805	decoupling	
C25	0.22 uF 50 V	CAP_4PIN	Output filter	
C28	0.22 uF 100V	CAP_4PIN	Output filter	
C30	0.1 uF	SMT 0805	decoupling	
C31	0.1 uF	SMT 0805	decoupling	
C32	0.1 uF 100V	CAP_4PIN	Output filter	
C35	0.1 uF	SMT 0805	decoupling	
C36	0.22 uF 50 V	CAP_4PIN	Output filter	
C40	390 pF	SMT 0805	Sets idle switching frequency & LP filters feedback	
C41	390 pF	SMT 0805	Sets idle switching frequency & LP filters feedback	
C50	150 uF 35V	RM3,5_DM8	+9V reg. Input buffering. Forms HP filter with R2	
C51	150 uF 35V	RM3,5_DM8	+9V buffering	
C55	1 uF 10V	SMT 0805	+5V additional decoupling	Note 1
C56	1 uF 10V	SMT 0805	+5V additional decoupling	Note 1
C81	1000 pF	SMT 0805	Output EMI / RFI filtering	
C82	1000 pF	SMT 0805	Output EMI / RFI filtering	
C90	33 pF	SMT 0805	Input RFI filtering	
C91	10 uF 10V	5MM_RAD_RM2.5	Stabilising of Q2 adj opin	4.7 uF - 22 uF
C101	1500 uF 35V d16 mm	RM7,62_DM16,5	Close up bulk power supply capacitor	
C102	1500 uF 35V d16 mm	RM7,62_DM16,5	Close up bulk power supply capacitor	
C110	0.1 uF	SMT 0805	decoupling	
C112	0.1 uF	SMT 0805	decoupling	
C200	3.3 uF	CAP_27.5_12HOLE	Input capacitor	Note 4
J1	(not supplied)	5.08 x 2	Speaker connection	
J4	(not supplied)	2.54X10	Signal inputs and LED outputs	
J5	(not supplied)	2.54x2	+5V section separator	
J20	(not supplied)	5.08 x 2	Power connector	
J21	(not supplied)	5.08 x 2	Power connector	

L1	TOROID_T80	TOROID_T80	Output filter	
L2	TOROID_T80	TOROID_T80	Output filter	
L5	HF choke 0805	SMT 0805	Separates power ground and signal ground	
POT1	5 K	TRIM_3_RM5_D6	Trims output offset	
Q2	LM317 100 mA TO-92	TO-92	+5V regulator	
Q4	BSS84 SOT23 P chan	SOT23	Thermal warning LED driver	
Q5	BSS84 SOT23 P chan	SOT23	FAULT LED driver	
Q6	BSS84 SOT23 P chan	SOT23	Input Overload LED driver	
Q10	TO220	TO220	+9V regulator. Preregulator for Q2	
R2	15 ohm 2W	Axial	Current limiting for Q10 +9V. Forms LP with C50	
R3	2.2 K	SMT 0805	Feedback, second resistor (in series with R114)	
R4	510 K	SMT 0805	Offset trim current limiter	
R5	8.2K	SMT 0805	REF voltage resistor	
R12	2.2 K	SMT 0805	Feedback, second resistor (in series with R103)	
R19	39 K	SMT 0805	Feedback dummy for unused channel	
R22	1 K	SMT 0805	Feedback network	
R26	510 K	SMT 0805	Offset trim current limiter	
R27	39 K	SMT 0805	Feedback dummy for unused channel	
R29	22 K	SMT 0805	Rin (input impedance and input gain setting)	<i>Note 4</i>
R30	1 K	SMT 0805	Output feedback network	
R31	22 K	SMT 0805	Rfeedback (input feedback, input gain setting)	<i>Note 4</i>
R37	10K	SMT 0805	Pullup for FAULT output	
R40	10K	SMT 0805	Pullup for enabling TP2050	
R45	10K	SMT 0805	Pullup for THWARN (Thermal warning) output	
R50	15 ohm 1W	CAP_4PIN	Output filter	
R51	20 ohm 1206	SMT 1206	Output snubber with C13	
R52	220 K	SMT 0805	Rail voltage limit sensing	<i>Note 5</i>
R53	10 K	SMT 0805	Disables negative rail voltage sensing	<i>Can be 10K</i>
R54	220 K	SMT 0805	Rail voltage limit sensing	<i>Note 5</i>
R56	750 ohm	SMT 0805	Voltage setting of Q10	
R57	120 ohm	SMT 0805	Voltage setting of Q10	
R59	2.2 K	SMT 0805	Discharging of +5V section	
R81	2.2 K	SMT 0805	Current limiting for HMUTE LED	<i>Note 2</i>
R82	2.2 K	SMT 0805	Current limiting for OVRLED LED (input overload indic	<i>Note 2</i>
R83	2.2 K	SMT 0805	Current limiting for FAULT indicator LED	<i>Note 2</i>
R84	2.2 K	SMT 0805	Current limiting for Thermal warning LED	<i>Note 2</i>
R103	10 K	SMT 0805	Feedback (in series with R12)	<i>Note 3</i>
R110	249 ohm	SMT 0805	Voltage setting of Q2	
R111	750 ohm	SMT 0805	Voltage setting of Q2	
R114	10 K	SMT 0805	Feedback (in series with R3)	<i>Note 3</i>
U1	Tripath TC2000	SOIC28MIC	Tripath input stage chip	
U2	Tripath TP2050	PSOP36_065	Tripath power stage chip	

U10 Watchdog 4.75V TO-92 TO-92 Disables un-muting until +5V is stable

Note 1 Additional +5V decoupling. Use value between 0.33 uF and 10 uF

Note 2 Current limiting. Depends on LED type

Note 3 Optimal value depends on rail voltage. See assembly instructions

Note 4 Optimal value depends on input signal source level. See assembly instructions

Note 5 Sets voltage sensing limits. See TC2001 data sheet for details