

## PowerampC300

Designator	Footprint
C1	10 uF polypropylene film capacitor > 63 V
C10,C11,C13,C15,C23,C24	0.1 uF / 100 nF polypropylene film capacitor > 250V
C12,C14,C16,C17,C18,C19	100 uF electrolytic capacitors > 160 V
C2	470 pF polypropylene film capacitor
C21	NC (could place 10 uF ceramic here)
C22	NC (could place 47 uF > 50V electrolytic here)
C25	0 ohm resistor ( $\frac{1}{4}$ watt) or wire
C3	100 or 150 pF mica or ceramic C0G capacitor
C4,C5	0.1 uF / 100 nF ceramic disc capacitor
C6,C20	NC
C7,C8	1000 uF, 10 V electrolytic capacitor
C9	100 or 150 pF mica or ceramic C0G capacitor
D1	33 V zener diode
D2	3 mm RED LED
D3,D4,D11,D12,D13,D14	1N4148 DO-35 diode
D5,D6	1N4007 DO-41 diode
D7,D8,D9,D10	44 V zener diodes
J1,J2,J3	Male spade quick connectors (or terminal blocks)
J4,J5,J6,J7	NC
J8	2 position 5 mm terminal block
J9	SMA connector
JP1,JP2	2 pin 2.54 mm spacing male pin header
L1	air core 1 uH (approximate) inductor, 18 gauge/1 mm wire
Q11,Q12,Q15	TO-220 MJE15032
Q10,Q16	TO-220 MJE15033
Q17,Q19,Q21,Q23	TO-264 MJL3281A
Q18,Q20,Q22,Q24	TO-264 MJL1302A
Q3,Q4,Q8,Q9,Q14	TO-92 2N5401
Q1,Q2,Q5,Q6,Q7,Q13	TO-92 2N5551
R1,R5,R17	$\frac{1}{4}$ watt 1000 ohms
R10	100 ohm potentiometer
R11	3 watt 6.8k ohms
R12	$\frac{1}{4}$ watt 200 ohms
R13	3 watt 5.6k ohms (could use 6.8k ohms here)
R15	$\frac{1}{4}$ watt 330 ohms
R16	1 watt 6.8k ohms
R18	NC
R19	3 watt 33 ohms
R2,R14	$\frac{1}{4}$ watt 10k ohms
R20	$\frac{1}{4}$ watt 10 ohms
R21	$\frac{1}{4}$ watt 390 ohms
R22	200 ohm potentiometer
R24,R29,R30	$\frac{1}{4}$ watt 120 ohms
R25,R28	3 watt 6.8k ohms
R26,R27	$\frac{1}{4}$ watt 33 ohms
R3,R4	$\frac{1}{4}$ watt 180 ohms
R31,R32	3 watt 33 ohms
R33,R34,R35,R36,R37,R38,R39,R40	5 watt 0.39 ohms, noninductive sandblock resistor

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R41	3 watt 4.7 ohms
R42	3 watt 4.7 ohms
R43	3 watt 10k ohms
R44,R45,R46,R47,R48,R49,R50,R51	1 watt 1 ohm
R6,R7,R23,R52	$\frac{1}{4}$ watt 100 ohms
R8,R9	$\frac{1}{4}$ watt 56 ohms
U1	NC