

JLAudiophile-1200D Parts List				
Designator	Value	Qty.	Mnf Part No.	Alternatives
Resistors	All resistors are 1/4W unless otherwise specified			
R1, R13	100K	2		
R2, R3	2.2K	4		
R4, R19	120K	2		
R5	220R	1		Warning! Operating frequency should be 250 kHz to 330 kHz only.
R6, R7, R22	10R	3		
R8, R17, R20	3K	3		
R10, R12	5.6K (3W)	2		
R14	360R	1		
R15	47K	1		
R11, R18	6.8K	2		
R9, R16, R21	10K	2		
R23	4.7R (1/2W)	1		
R25	12R (1/2W) (5%)	3		R25 should be higher than other gate resistors
R26, R29, R30, R33, R34	10R (1/2W)	2		
R27, R28, R31, R32	10K 0805 SMD	4		6.8K to 10K ohms
R35	10R (5W)	1		
R36	2K (5W)	1		
Osc	100R (Trimmer)	1	3362P-1-101LF	
Diodes				
Z1, Z2	1N4734	2		
Z3	1N4744	1		Solder under the PCB (see build guide)
D5, D6, D7, D8	1N4148	4		
D3, D4	MUR120	2		Onsemi MUR120 only for best performance!
D9, D10	MUR460 (Solder under the PCB)	2		>= 4A, 400V switching or schottky diode MUR8100E or MUR860, solder under PCB, follow schem
4004, D1, D2	1N4007	3		
GREEN	5mm diffused green LED	1		Adjust resistor if will use high brightness
BLUE	5mm diffused blue LED	1		Adjust resistor if will use high brightness
WHITE	5mm diffused white LED	1		Adjust resistor if will use high brightness

B1	2W10	1	2W01	2A Rectifier Equivalent
Capacitors				Electrolytic Caps: For Taiwanese brands, use Higher Voltage for Better Reliability
C1	22uf	1	UES1V220MPM	Input capacitor, 8mm max dia electrolytic
C2, C3, C4, C5	1nf 100V	4		5mm pitch polypropylene or C0G ceramic, 100V or higher
C6, C14, C16, C20	100nf, 50V SMD	4		0805 SMD, 50V or higher
C7	100pf, 50V	1		100pf to 330pf 50v ceramic
C19, C25, C26, C27, C28	100nf, 100V	5		5mm pitch polypropylene, 100V or higher
C8, C18	330uf, 50V	2		10mm dia, 330u or higher, 50V or higher
C9, C15	22uf, 50V	2		8mm dia, 50V or higher
C10, C11, C12, C13, C17, C21	100uf, 25V	6	ULD1E101MED1TD	8mm dia, 100u or higher, 25V or higher, 10000 hours, 105deg
C22	47uf, 25V	1	UPW1V470MED or 35ZLH47MEFCT5X11 or 476ULG025MFF	IMPORTANT! 105Deg, low ESR, long life > 5000h high ripple current, preferably aluminum organic capacitor 10mm dia max
C23, C24	150pf, 1KV	2		5mm pitch, 100pf up to 220pf, 1KV
C29	100nf, 250V	1		7.5mm pitch polypropylene
C30, Rail to rail cap	470nf, 275VAC	2		22mm pitch, 470n, 250VAC or higher, or X2 type, polypropylene only
C31, C32, C33, C34	100uf, 100V	4		100u or higher, 100V or higher, 13mm - max diameter
Transistors				
Q1, Q2, Q3, Q4	IPP320N20N3	4		Do not use other mosfets except for new Infineon OptiMOS n-mosfets Qg 60 to 80 nC, 200V
T2, T4	ZXTN25100BFH	2	SOT23 021	
T3, T5	ZXTP25100BFH	2	SOT23 056	
ICs				
IC1	LM317	1		
IC2	IRS2092	1	IRS2092PBF	
Inductors				

L1	T157-2	1	Micrometals 157-2	
#17 gauge solid wire	86 inches			wind to 22uH (39 turns)
Miscellaneous				
IN+, IN-	Terminal block 2 pins	1	5mm pitch	
+V, +SPK, GND, -V	Faston Tab Male	4	63849-1	
12VAC, Mute	Molex, Male	2	2.5mm pitch	22-23-2021 .100" (2.54mm) Center Header - 2 Pin
Aluminum Angle Bar 3.5 x 6.25 x 2"	Heatsink	1		Any heatsink with flat surface area 3.5" x 6.25", able to dissipate 120W
Brass Standoff + M3 Screw + Nut	Brass Standoff 6+6mm	4		6+6mm M3 Male, M3 Female, M3 screw and bolt, 4 set (8mm if IRFP (TO-247) mosfets are used)
IC holder 16pin hirel	IC Holder 16 pins	1		
TO220 screw / bolt + Plastic Washer	TO-220 Mount kit	5		M3 screw for TO-220
Kapton Tape	TO-220 Insulator	1		TO-220 Insulation Pads