

Hey, so you ordered a BD139 Thing. Here's a Bill of Materials for your convenience, containing part numbers and stuff. A packing list is supplied with this.

Manufacturer Part Number	Digi-Key Part Number	Customer Reference	Quantity
ECA-1HHG222	P5576-ND	C2/C4	2
ECA-1HHG470	P5570-ND	C1/C3	2
1984617	277-1721-ND	LS1/LS2	2
SJ1-3523NG	CP1-3523NG-ND	J1	1
PJ-037A	CP-037A-ND	J2	1
BD13916S	BD13916S-ND	Q2/Q3/Q5/Q6	4
PN2222ABU	PN2222AFS-ND	Q1/Q4	2
CFR-25JB-52-11R	11QBK-ND	R1/R6	2
CFR-25JB-52-2K2	2.2KQBK-ND	R3/R8	2
CFR-25JB-52-330R	330QBK-ND	R4/R9	2
CFR-25JB-52-620R	620QBK-ND	R2/R7	2
SQP10AJB-16R	16W-10-ND	R5/R10	2
WP7113VRVC1C	754-2184-ND	D1	1
CFR-25JB-52-10K	10KQBK-ND	R11	1
374724B00035G	HS323-ND		1

If you want to mess around with the design, feel free to contact me.

You can also get the Gerber/KiCad files from Github:

<https://github.com/Chlorophytus/bd139thing.git>

– Roland M.

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#### INSTRUCTIONS ON MAKING:

1. Solder non-power resistors: **R1/R2/R3/R4/R6/R7/R8/R9/R11**
2. Solder LED: **D1**
3. Solder headphone jack: **J1**
4. Solder power jack: **J2**
5. Solder power resistors: **R5/R10**
6. Solder speaker terminal blocks: **LS1/LS2**
7. Solder **SMALL** capacitors, 47uF: **C1/C3**
8. Solder **BIG** capacitors, 2200uF: **C2/C4**
9. Solder the PN2222s (**Q1/Q4**) first then the BD139s (**Q2/Q3/Q5/Q6**)
10. Apply the heatsink on the exposed square.

#### NOTES:

Use bookshelf speakers that are 4-8 ohms. I don't have any recommendations.

Use a 12V >3A power supply, center positive.

<https://www.digikey.com/product-detail/en/cui-inc/SDI36-12-U-P6/102-5155-ND/9817244>