

JONOKUCHI - 13EM7 desktop amp - Bill of Materials

| Qty | Value | Description | Ref Des | Manufacturer | Mfg PN | Vendor | Vendor PN | Pice Each | Price Ext | Alternate 1 (Mouser) | Alternate 2 (DigiKey) | Alternate 3 Vendor | Alternate 3 Vendor PN | Notes |
|-----|-----------------|---|------------------|--------------|---------------------|-----------------|----------------------|-----------|-----------|----------------------|-----------------------|--------------------|-----------------------|---|
| 2 | 0.1uF 630V | 0.1uF 630V coupling cap, 15/22/27mm LS | C5, C6 | Wima | MKP4-0.1/630/5PCM15 | Mouser | MKP4-0.1/630/5PCM15 | \$ 0.77 | \$ 1.54 | 80-PHE426MD6100JR6L2 | P12158-ND | Parts Connexion | SOLEN-006-51541 | 0.1 or 0.22uF >=450V, lead spacing of 15mm, 22.5mm, or 27mm, recommend polypropylene film |
| 1 | 100uF 450V | 100uF 450V electrolytic cap, snap-in 25mm dia x 25mm tall (max) | C11 | Panasonic | EET-UQ2W101HA | Mouser | 667-EET-UQ2W101HA | \$ 2.94 | \$ 2.94 | 647-LLS2W101MELA | 493-2599-ND | | | Any 100-120uF 450V 25mm dia x 25mm tall (or smaller) |
| 2 | 220uF 450V | 220uF 450V electrolytic cap, snap-in 30mm dia x 25mm tall (max) | C9, C10 | Panasonic | EET-UQ2W221DA | Mouser | 667-EET-UQ2W221KF | \$ 5.29 | \$ 10.58 | 647-LGL2W221MELB25 | | | | Any 220-330uF 450V 30mm dia x 25mm tall (or smaller) |
| 2 | 1uF 100V | 1uF 100V film cap 5mm LS | C1, C2 | Wima | MKS2-1.0/100/10 | Mouser | 505-MKS21/100/10 | \$ 1.41 | \$ 2.82 | 505-MKS21/100/5 | 495-1169-ND | | | Any similar part is OK (noise filter) |
| 2 | 100uF 63V | 100uF 63V electrolytic cap 5mm LS | C7, C8 | Nichicon | UKW1J101MPD | Mouser | 647-UKW1J101MPD | \$ 0.47 | \$ 0.94 | 647-UPW1J101MPD | 493-1936-ND | Parts Connexion | NICHICON-72580 | Cathode bypass, use a good electrolytic cap, 13mm max diameter (16mm might squeeze in) |
| 4 | 10uF 450V | 10uF 450V electrolytic cap 5mm LS | C3, C4, C12, C13 | Panasonic | EEU-ED2W100 | Mouser | EEU-ED2W100 | \$ 1.00 | \$ 4.00 | 647-UPB2W100MHD | P13558-ND | | | 13mm max diameter (16mm might squeeze in) |
| 2 | JACK_MINI_PHONE | Jack, 1/8" stereo | J2, J3 | Kobiconn | 161-2903-E | Mouser | 161-2903E | \$ 0.72 | \$ 1.44 | 161-2905-E | CP1-3535NG-ND | | | Jacks with or without switch will fit PCB holes |
| 1 | | Jack, 1/4" stereo | J1 | Neutrik | NYS216 | Mouser | 568-NYS216 | \$ 0.70 | \$ 0.70 | | | Allied | 514-8640 | Other NYS21X parts fit PCB but are different height |
| 1 | 3N253 | Bridge rectifier 2A 50V 3N253 | D1 | Fairchild | 3N253 | Mouser | 512-3N253 | \$ 0.50 | \$ 0.50 | 625-2KBP005M-E4 | 2KBP005M-E4/51GI-ND | | | |
| 4 | HLMP1301 | LED, 3mm dia, red | D6, D7, D8, D9 | Avago | HLMP-1301 | Mouser | HLMP-1301 | \$ 0.36 | \$ 1.44 | | | Allied | 782-0015 | Other LEDs will work but recommend Avago HLMP1301 |
| 4 | CSD01060A | Rectifier, 1A 600V SiC Schottky TO-220 | D2, D3, D4, D5 | CREE | CSD01060A | Parts Connexion | DIODES-68247 | \$ 0.46 | \$ 1.84 | | SD01060A-ND | | | Higher voltage or current OK |
| 1 | | Volume control, 100k stereo | RV1 | Alps | RK27112S0C0A104 | Mouser | 688-RK27112S20C0A104 | \$ 14.37 | \$ 14.37 | | | Parts Connexion | ALPS-64605 | Inexpensive alternate Alpha RV122F-20-15F-A100K, Mouser #313-1240F-100K, \$3.16, different height |
| 4 | 1k CC | Resistor, 1K ohm 1/2W carbon comp | R1, R2, R12, R13 | IRC | RC20GF102J | Mouser | 66-RC20GF102J | \$ 0.38 | \$ 1.52 | 588-OF102JE | OF102JE-ND | | | Must be carbon comp, any value between 100 ohms and 2K is fine |
| 2 | 10 2W | Resistor, 10 ohm 2W small film | R22, R23 | KOA | SPR2CT521R100J | Mouser | 660-SPR2CT521R100J | \$ 0.16 | \$ 0.32 | 594-5083NW10R00J * | PPC10W-2CT-ND * | Parts Connexion | KIWAME-009-66136 | |
| 2 | 100 2W | Resistor, 100 ohm 2W small film | R20, R21 | KOA | SPR2CT521R101J | Mouser | 660-SPR2CT521R101J | \$ 0.16 | \$ 0.32 | 594-5083NW100R0J * | PPC100W-2CT-ND * | Parts Connexion | KIWAME-045-66160 | |
| 2 | 330 2W | Resistor, 330 ohm 2W small film | R9, R11 | KOA | SPR2LT521R331J | Mouser | 660-SPR2LT521R331J | \$ 0.24 | \$ 0.48 | 594-5083NW330R0J * | PPC330W-2CT-ND * | Parts Connexion | KIWAME-063-66172 | |
| 2 | 1k 2W | Resistor, 1k ohm 2W small film | R8, R10 | KOA | SPR2LT521R102J | Mouser | 660-SPR2LT521R102J | \$ 0.24 | \$ 0.48 | 594-5083NW1K000J * | PPC1.0KW-2CT-ND * | Parts Connexion | KIWAME-081-66184 | * Prefer KOA / Kiwame carbon film, but 2W small metal film can be used |
| 2 | 10k | Resistor, 10k ohm 2W small film | R16, R17 | KOA | SPR2C103J | Mouser | 660-SPR2C103J | \$ 0.16 | \$ 0.32 | 594-5083NW10K00J * | PPC10KW-2CT-ND * | Parts Connexion | KIWAME-117-66208 | |
| 1 | 47k | Resistor, 47k ohm 2W small film | R3 | KOA | SPR2CT521R473J | Mouser | 660-SPR2CT521R473J | \$ 0.16 | \$ 0.16 | 594-5083NW47K00J * | PPC47KW-2CT-ND * | Parts Connexion | KIWAME-141-66224 | |
| 2 | 100k 2W | Resistor, 100k ohm 2W small film | R14, R15 | KOA | SPR2CT521R104J | Mouser | 660-SPR2CT521R104J | \$ 0.16 | \$ 0.32 | 594-5083NW100K0J * | PPC100KW-2CT-ND * | Parts Connexion | KIWAME-153-66232 | |
| 3 | 220k 2W | Resistor, 220k ohm 2W small film | R4, R6, R7 | KOA | SPR2LT521R224J | Mouser | 660-SPR2LT521R224J | \$ 0.24 | \$ 0.72 | 594-5083NW220K0J * | PPC220KW-2CT-ND * | Parts Connexion | KIWAME-165-66240 | |
| 2 | 1M | Resistor, 1M metal film | R18, R19 | Vishay | RN60D1004FRE6 | Mouser | 71-RN60D-F-1M/R | \$ 0.12 | \$ 0.24 | 71-CCF60-1M-E3 | CMF1.00MHFCT-ND | | | Metal film |
| 1 | 220 5W | Resistor, 220 ohm 5W wirewound | R5 | Vishay | CW005220R0JE73 | Mouser | 71-CW005220R0JE73 | \$ 0.56 | \$ 0.56 | 71-CW5-220 | PPC5D220CT-ND | | | Wirewound 5W |
| 2 | F2UEE | Switch, DPDT alt action pushbutton | SW1, SW2 | C&K Switch | 51281 | Mouser | 611-F2UEE | \$ 1.45 | \$ 2.90 | 611-F2UEEAU * | 401-1223-ND | Allied | 855-1028 | * Can use gold contact version but it's expensive |
| 2 | F2UEE | Switch cap | SW1, SW2 | C&K Switch | 21125 | Mouser | 611-21125 | \$ 0.35 | \$ 0.70 | | 401-1215-ND | | | Switch cap, you can get different colors & shapes |
| 2 | 13EM7 | Tube socket, octal PCB | VT1, VT2 | China | | Parts Connexion | SOCKET-55291 | \$ 1.95 | \$ 3.90 | | | Allied | 587-0024 | Most octal PCB sockets will fit PCB - check chassis hole diameter |
| 1 | | PCB | | pmillett | | pmillett | Jonokuchi | \$ 40.00 | \$ 40.00 | | | | | via eBay |
| 1 | | RCA jack black with insulator | J4 | | | Parts Connexion | CONNEX-53452 | \$ 6.55 | \$ 6.55 | NYS367-0 | | | | Parts Connexion RCA sold in pairs |
| 1 | | RCA jack red with insulator | J5 | | | Parts Connexion | CONNEX-53466 | \$ 5.25 | \$ 10.50 | NYS367-2 | | | | Parts Connexion binding posts sold in pairs |
| 2 | | Speaker binding posts (dual 1.75" centers) | J6, J7 | | | Parts Connexion | CONNEX-53466 | \$ 5.25 | \$ 10.50 | 164-19B2-EX | | | | Parts Connexion binding posts sold in pairs |
| 1 | | Fuse1A slow-blow 5mm x 20mm | | Schurter | 34.3117 | Mouser | 693-0034.3117 | \$ 0.27 | \$ 0.27 | 486-1338-ND | | | | |
| 1 | | IEC AC inlet, with switch and fuse | J8 | Qualtek | 761-18/003 | Mouser | 562-761-18/003 | \$ 6.50 | \$ 6.50 | 576-0218001.MXP | Q300-ND | Allied | 689-4214 | |
| 2 | | Tube, 13EM7 | VT1, VT2 | | | RES | 13EM7 | \$ 6.00 | \$ 12.00 | | | | | Available from most tube dealers |
| 2 | | Output transformer | T1, T2 | Eddor | GSXE10-8-8K | Eddor | GSXE10-8-8K | \$ 26.10 | \$ 52.20 | | | | | |
| 1 | | Power transformer | T3 | Eddor | XPWR168-120/240 | Eddor | XPWR168-120/240 | \$ 43.95 | \$ 43.95 | | | | | |

\$ 228.02

Suppliers

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| Mouser | www.mouser.com |
| Digi-Key | www.digikey.com |
| Allied | www.alliedelec.com |
| Parts Connexion | www.partsconnexion.com |
| Eddor | www.eddorusa.com |
| RES | www.vacuumtubes.net |
| pmillett | www.pmillett.com |