

Bill Of Material for D1V33 OK

Date: 5-May-09 Spencerhk

| Item | Qty | Reference | Part Name | Manufacturer | Description | Price | Total |
|------|-----|---|----------------------|-----------------|---|-------------|----------|
| 1 | 4 | Q23-24 Q29-30 | 2AS970,BL | TOSHIBA | PNP LOW NOISE TRANSISTOR | | Provided |
| 2 | 4 | Q21-22 Q27-28 | 2SC2240,BL | TOSHIBA | LOW NOISE NPN SILICON TRANSISTOR | | Provided |
| 3 | 4 | Q2-Q7 Q12-Q17 | 2SJ74 | TOSHIBA | P-CHANNEL,LOW NOISE JFET | not use | |
| 4 | 4 | Q50 | 2SJ148 | Toshiba | MOSFET P CHAN TO-92 | not use | |
| 5 | 20 | Q1 Q4-6 Q9-11 Q14-16 Q19-20 Q41-48 | 2SK170; BL | Toshiba | N-CHANNEL, LOW NOISE JFET | | Provided |
| 6 | 8 | Q3, Q8, Q13, Q18 & Q37 Q38 Q39 Q40 | 2SK369; BL | Toshiba | N-CHANNEL, LOW NOISE JFET | | Provided |
| 7 | 4 | Q25-26 Q31-32 | 2SK246; GR | Toshiba | N-CHANNEL, LOW NOISE JFET | | Provided |
| 8 | 4 | Q49 | 2SK982 | Toshiba | MOSFET N CHANN TO-92 | not use | |
| 9 | 2 | T1-2 | 51698-LF3 | MIDCOM | MIDCOM 51698-LF3 SPDIF PULSE TRANSFORMER | | Provided |
| 10 | 3 | U4 U11 U17 | 74HC86 | Hitachi | QUADRUPLE 2-INPUT EXCLUSIVE-OR | | Provided |
| 11 | 16 | D1-8 D37-44 | Optional | On Semi | Fred Diode | not use | |
| 12 | 16 | D21-27 D29 D11-18 | BYV27-150 | PHILIPS | SOFT SCHOKY DIODE 150V 2A | | Provided |
| 13 | 4 | C4-C15 C25-C36 | 10u 100V or above | Rifa or Wima | Film capacitor MKP | not use | |
| 14 | 4 | C10 C20 C31 C41 | 100u 25V | Panasonic FM | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 15 | 21 | C82 C104 C106 C132 C134 C153 C155 C181 C183 C196 C199 C202 C209-210 C222 C230 C233 C235 C239 C241 C243 | 100u 10V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 16 | 8 | C177 C124 C140 C189 C149 C128 C100 C173 | 100u 10V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 17 | 4 | C52 C54 C70 C72 | 120u 50V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 18 | 1 | C205 | 220u 35V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 19 | 20 | C6 C17 C27 C38 C49-50 C67-68 C102 C120 C122 C130 C136 C138 C151 C169 C171 C179 | 12u 35V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 20 | 4 | C24 C35 C223 C229 | 2200u 16V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 21 | 4 | C84-85 C88-89 | 220u 25V | Muse BP | ALUMINUM ELECTROLYTIC CAP. | not provide | |
| 22 | 4 | C45-46 C63-64 | 470u 25V | Panasonic FA | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 23 | 4 | C110 C158-159 C109 | 470u 25V | Panasonic FA | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 24 | 4 | C115-116 C164-165 | 470u 25V | Panasonic FA | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 25 | 2 | C83 C86 | 5600u 35V | Panasonic Audio | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 26 | 4 | C59-60 C77-78 | 560u 35V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 27 | 5 | C3 C14 C87 C90 C226 | 560u 35V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 28 | 12 | C11 C21 C32 C42 C142-145 C191-194 | 56u 35V | Panasonic FC | ALUMINUM ELECTROLYTIC CAP. | | Provided |
| 29 | 90 | C1 C3 C12 C16 C22 C26 C33 C37 C47-48 C51 C53 C55-58 C65-66 C69 C71 C73-76 C79-81 C91-94 C99 C101 C103 C105 C107-108 C111-114 C117-119 C121 C123 C127 C129 C131 C133 C135 C137 C139 C141 C148 C150 C152 C154 C156-157 C160-163 C166-168 C170 C172 C176 C178 C180 C182 C184 C186 C188 C190 C195 C198 C201 C206 C212-213 C218 C221 | 0.047u 50V 5% | Panasonic ECQ-V | RADIAL FILM CAPACITOR, MKT | | Provided |
| 30 | 16 | C8 C19 C29 C40 C97 C98 C125 C126 C146 C147 C174 C175 C203-204 C211 C220 | 0.1u, 100V K | Wima | RADIAL FILM CAPACITOR, MKT | | Provided |
| 31 | 4 | C95-96 C225 C231 | 0.1u 160V K | Epcos | RADIAL FILM CAPACITOR, MKP | | Provided |
| 32 | 4 | C7 C18 C28 C39 | 10nf, 50VJ | Nessei | RADIAL FILM CAPACITOR, MKT | | Provided |
| 33 | 2 | C9 C30 | 150p, 5% | CDE | Silver Mica | | Provided |
| 34 | 4 | C2 C13 C23 C34 | 2700pf, 5% | CDE | Silver Mica | | Provided |
| 35 | 1 | C197 | 330pf,K | Murata | Axial FILM CAPACITOR, Ceramic | | Provided |
| 36 | 1 | C200 | 47nf,J | Epcos | RADIAL FILM CAPACITOR, MKT | | Provided |
| 37 | 8 | J3-4 J8 J17 J25 J27-29 | CON-SIP-2P | China | GENERIC 2 PIN SIP HEADER .100 | | Provided |
| 38 | 10 | J1 J12-15 J18-19 J23-24 J26 | CON-SIP-2P pin strip | China | GENERIC 2 PIN SIP HEADER .100 | | Provided |
| 39 | 10 | J2 J5-7 J9 J20-22 J30-31 | CON-SIP-3P | China | GENERIC 3 PIN SIP HEADER .100 | | Provided |
| 40 | 3 | J10-11 J16 | CON-SIP-2P pin strip | China | GENERIC 3 PIN SIP HEADER .100 | | Provided |
| 41 | 1 | U15 | CS8414 | Crystal | Receiver IC 96kHz (\$20) | not provide | |
| 42 | 1 | U15 replacement | DIR9001 converter | Ti | Receiver IC 96kHz (\$25) | not provide | |
| 43 | 5 | D20 D31 D45-47 | DIODE,1N4148 | Semtech | 100V 500mA diode | | Provided |
| 44 | 13 | H1-13 | HEATSINK_SMALL | China | 630 x 600 x 1000 mil (L x W x H) | | Provided |
| 45 | 19 | L2-20 | 47uH | China | Radial inductors 100mA type | | Provided |
| 46 | 1 | L21 | Bead | China | Inductor Bead | | Provided |
| 47 | 3 | Q34 Q36 Q52 | IRF610 | IR | MOSFET N CHANN POWER 200V 1.8A | | Provided |
| 48 | 3 | Q33 Q35 Q51 | IRF9610 | IR | MOSFET P CHAN 200V 1.8A | | Provided |
| 49 | 7 | D9-10 D19 D28 D30 D32 D48 | LED - Green or Red | China | LIGHT EMITTING DIODE | | Provided |
| 50 | 4 | D33-36 | LM336-5V | Fairchild | PROGRAMMABLE PRECISION | | Provided |
| 51 | 5 | U2 U5 U9 U12 U20 | LM317T | ST or NS | POSITIVE VOLTAGE REGULATOR; ADJUSTABLE | | Provided |
| 52 | 4 | U3 U6 U10 U13 | LM337T | ST or NS | NEGATIVE VOLTAGE REGULATOR;ADJUSTABLE | | Provided |
| 53 | 5 | U18 U21-24 | LT1117-5V | Linear or | Voltage Regulator | | Provided |
| 54 | 4 | U1 U7-8 U14 | PCM63P | Burr Brown | 20bit Digital to Analogy Converter (\$25) | not provide | |
| 55 | 2 | R81-82 | RES-2W,0.47R | Metal film | Metal film resistor | not provide | |
| 56 | 4 | R57 R58 R75 R76 | RES-1/4W,10R, | Metal film | Metal film resistor | not provide | |

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|------|-----|---|--------------------|---------------|---|-------------|----------|
| 57 | 28 | R6 R15 R26 R36 R77-80 R85-87 R88 R92-94 R96 R99-104 R106- 108 R110-111 R115-116 | RES-1/4W,100, | Metal film | Metal film resistor | not provide | |
| 58 | 8 | R5 R14 R25 R35 R117 R125 R158-159 | RES-1/4W,100K, | Metal film | Metal film resistor | not provide | |
| 59 | 6 | R7 R16 R27 R37 R155-156 | RES-1/4W,100k, | Metal film | Metal film resistor | not provide | |
| 60 | 12 | R41-42 R51-54 R59-60 R69-72 | RES-1/4W,10k, | Metal film | Metal film resistor | not provide | |
| 61 | 4 | R141-144 | RES-1/4W,10k, | Metal film | Metal film resistor | not use | |
| 62 | 1 | R120 | RES-1/4W,120R, | Metal film | Metal film resistor | not provide | |
| 63 | 6 | R91 R121 R123 R128 R157 R160 | RES-1/4W,150, | Metal film | Metal film resistor | not provide | |
| 64 | 4 | R47-48 R65-66 | RES-1/4W,15k, | metal film | Metal film resistor | not provide | |
| 65 | 5 | R55-56 R73-74 R114 | RES-1/4W,1k, | Metal film | Metal film resistor | not provide | |
| 66 | 4 | R4 R13 R24 R34 | RES-1/2W,1k5, | RMA 1/2W | Carbon resistor or metal film (1/4W) | not provide | |
| 67 | 1 | R153 | RES-1/4W,2.7k, | Metal film | Metal film resistor | not provide | |
| 68 | 4 | R3 R12 R23 R33 | RES-1/4W,10R, | Metal film | Metal film resistor | not provide | |
| 69 | 4 | R19 R30 R20 R40 | RES-1/2W,22 to 47R | RMA 1/2W | Carbon resistor or metal film (1/4W) | not provide | |
| 70 | 2 | R89 R124 | RES-1/4W,2k2, | Metal film | Metal film resistor | not provide | |
| 71 | 8 | R97-98 R105 R109 R112-113 R126-127 | RES-1/4W,300, | Metal film | Metal film resistor | not provide | |
| 72 | 4 | R148-151 | RES-1/4W,22R, | Metal film | Metal film resistor | not provide | |
| 73 | 8 | R28-29 R129-130 R133-134 R137-138 | RES-1/4W,330k, | Metal film | Metal film resistor | not use | |
| 74 | 1 | R90 | RES-3W,470R, | Metal film | Metal film resistor | not provide | |
| 75 | 5 | R118-119 R146-147 R161 | RES-1/4W,4R7, | Metal film | Metal film resistor | not provide | |
| 76 | 6 | R49-50 R67-68 R83-84 | RES-1/4W,4k7, | Metal film | Metal film resistor | not provide | |
| 77 | 5 | R45-46 R63-64 R154 | RES-1/4W,5k1, | Metal film | Metal film resistor | not provide | |
| 78 | 1 | R145 | RES-1/4W,680R, | Metal film | Metal film resistor | not provide | |
| 79 | 4 | K1-4 | RLY-RY5W-K, | Takamisawa | 5V relay 2P2T | | Provided |
| 80 | 1 | U16 | SM5842AP or APT | NPC | High Performance Digital Filter (\$30) | not provide | |
| 81 | 1 | U16 Alternate part PMD100 + | PMD100 + CBD | Pacific Audio | HDCC decoder (\$25) + converter board kit | not provide | |
| 82 | 4 | R1 R10 R21 R31 | 100R | 20 turns type | VARIABLE RESISTOR (TOP ADJUST | | Provided |
| 83 | 4 | R8-9 R17-18 | 100k optional | 20 turns type | TYPE) | not use | |
| 84 | 8 | R38-39 R131-132 R135-136 R139-140 | 100k optional | 20 turns type | VARIABLE RESISTOR (TOP ADJUST | not use | |
| 85 | 8 | R2 R11 R22 R32 R43-44 R61-62 J1 J12-15 J18-19 J23-24 J26 J10- J11 J16 | 5k | 20 turns type | VARIABLE RESISTOR (TOP ADJUST | | Provided |
| 86 | 13 | 28 pins IC socket | Jumper 2 pin | Green or Red | Jumper pin to short pin - 2.5mm | | Provided |
| 87 | 6 | 14 pins IC socket | 2.5mm | IC socket | IC socket, round, gold plated | | Provided |
| 88 | 3 | Heatsink kit - screw, spring | 2.5mm | IC socket | IC socket, round, gold plated | | Provided |
| 89 | 13 | washer, insulation, plastic washer | TO-220, M3 | TO-220, M3 | TO-220 insulation and M3 size | | Provided |
| 90 | 1 | PCB - D1V33 | PCB | 2mm PCB | ROHS | | Provided |

Detail of Jfets:

| Grade | Part | Jfet | Idss | Qty |
|-------|------|----------------------------------|-----------------------|-----|
| BL | K170 | Q1/Q6/Q11/Q16 & Q43/Q44/Q47/Q48 | 8 to 10mA match | 8 |
| BL | K170 | Q5/Q10/Q15/Q20 & Q41/Q42/Q45/Q46 | Total >=15mA, match | 8 |
| BL | K369 | Q3/Q8/Q13/Q18 & Q37/Q38/Q39/Q40 | about 10mA or above | 8 |
| BL | K170 | Q4/Q9/Q14/Q19 | 9.0mA or above; match | 4 |
| GR | K246 | Q25/Q26/Q31/Q32 | ~3mA; GR grade | 4 |
| | | | | 32 |

| | |
|---------------|----------|
| Total | \$165.00 |
| S & H | \$20.00 |
| 4% paypal fee | \$7.40 |
| Grand Total | \$192.40 |
| 7.75% HKD | \$1,491 |

Payment must be in HKD\$1491 by paypal
Paypal address at skcheung68@gmail.com