

5W Cascaded Diamond Audio Amp - Bill of Materials

| Designator | Part             | Package   | Mouser order code    | Price   |  | Designator | Part            | Package  | Mouser order code    | Price  |
|------------|------------------|-----------|----------------------|---------|--|------------|-----------------|----------|----------------------|--------|
| R1         | 1K 1% resistor   | Mini MELF | 756-WRM0204C-1K0FI   | \$0.05  |  | Q1         | BC547C          | TO92     | 512-BC547CBU         | \$0.09 |
| R2         | 200Ω 1% resistor | Mini MELF | 594-CMA02040X2000GB3 | \$0.21  |  | Q2         | BC547C          | TO92     | 512-BC547CBU         | \$0.09 |
| R3         | 100Ω 1% resistor | Mini MELF | 71-SMM02040B1000JB30 | \$0.05  |  | Q3         | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R4         | 100Ω 1% resistor | Mini MELF | 71-SMM02040B1000JB30 | \$0.05  |  | Q4         | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R5         | 270Ω 1% resistor | Mini MELF | 594-MMA02040C2700FB3 | \$0.09  |  | Q5         | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R6         | 10K 1% resistor  | Mini MELF | 756-WRM0204C-10KFI   | \$0.05  |  | Q6         | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R7         | 220Ω 1% resistor | Mini MELF | 594-MMA02040C2200FB3 | \$0.09  |  | Q7         | 2N5089          | TO92     | 610-2N5089           | \$0.30 |
| R8         | 10K 1% resistor  | Mini MELF | 756-WRM0204C-10KFI   | \$0.05  |  | Q8         | 2N5089          | TO92     | 610-2N5089           | \$0.30 |
| R9         | 270Ω 1% resistor | Mini MELF | 594-MMA02040C2700FB3 | \$0.09  |  | Q9         | 2N5087          | TO92     | 610-2N5087           | \$0.30 |
| R10        | 680Ω 1% resistor | Mini MELF | 594-CMA02040X6800GB3 | \$0.32  |  | Q10        | 2N5087          | TO92     | 610-2N5087           | \$0.30 |
| R11        | 270Ω 1% resistor | Mini MELF | 594-MMA02040C2700FB3 | \$0.09  |  | Q11        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R12        | 1K5 1% resistor  | Mini MELF | 756-WRM0204C-1K5FI   | \$0.05  |  | Q12        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R13        | 1K5 1% resistor  | Mini MELF | 756-WRM0204C-1K5FI   | \$0.05  |  | Q13        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R14        | 47Ω 1% resistor  | Mini MELF | 594-CMA02040X4709GB3 | \$0.32  |  | Q14        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R15        | 47Ω 1% resistor  | Mini MELF | 594-CMA02040X4709GB3 | \$0.32  |  | Q15        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R16        | 47Ω 1% resistor  | Mini MELF | 594-CMA02040X4709GB3 | \$0.32  |  | Q16        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R17        | 47Ω 1% resistor  | Mini MELF | 594-CMA02040X4709GB3 | \$0.32  |  | Q17        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R18        | 1K5 1% resistor  | Mini MELF | 756-WRM0204C-1K5FI   | \$0.05  |  | Q18        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R19        | 1K5 1% resistor  | Mini MELF | 756-WRM0204C-1K5FI   | \$0.05  |  | Q19        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R20        | 220Ω 1% resistor | Mini MELF | 594-MMA02040C2200FB3 | \$0.05  |  | Q20        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R21        | 10K 1% resistor  | Mini MELF | 756-WRM0204C-10KFI   | \$0.05  |  | Q21        | BD180           | TO126    | 863-BD180G           | \$0.42 |
| R22        | 1K 1% resistor   | Mini MELF | 756-WRM0204C-1K0FI   | \$0.05  |  | Q22        | BD179           | TO126    | 863-BD179G           | \$0.39 |
| R23        | 1K 1% resistor   | Mini MELF | 756-WRM0204C-1K0FI   | \$0.05  |  | Q23        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R24        | 330Ω 1% resistor | Mini MELF | 71-SMM02040C3300FB00 | \$0.09  |  | Q24        | BD179           | TO126    | 863-BD179G           | \$0.39 |
| R25        | 330Ω 1% resistor | Mini MELF | 71-SMM02040C3300FB00 | \$0.09  |  | Q25        | BD180           | TO126    | 863-BD180G           | \$0.42 |
| R26        | 330Ω 1% resistor | Mini MELF | 71-SMM02040C3300FB00 | \$0.09  |  | Q26        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R27        | 10Ω 1% resistor  | Mini MELF | 71-SMM02040C2481FB30 | \$0.05  |  | Q27        | BD180           | TO126    | 863-BD180G           | \$0.42 |
| R28        | 10Ω 1% resistor  | Mini MELF | 71-SMM02040C2481FB30 | \$0.05  |  | Q28        | BD179           | TO126    | 863-BD179G           | \$0.39 |
| R29        | 330Ω 1% resistor | Mini MELF | 71-SMM02040C3300FB00 | \$0.09  |  | Q29        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R30        | 10Ω 1% resistor  | Mini MELF | 71-SMM02040C2481FB30 | \$0.05  |  | Q30        | BD179           | TO126    | 863-BD179G           | \$0.39 |
| R31        | 10Ω 1% resistor  | Mini MELF | 71-SMM02040C2481FB30 | \$0.05  |  | Q31        | BD180           | TO126    | 863-BD180G           | \$0.42 |
| R32        | 56Ω 1% resistor  | Mini MELF | 71-SMM02040C5609FB30 | \$0.09  |  | Q32        | 2N3906          | TO92     | 512-2N3906BU         | \$0.09 |
| R33        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | Q33        | 2N3904          | TO92     | 512-2N3904BU         | \$0.09 |
| R34        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  |            |                 |          |                      |        |
| R35        | 56Ω 1% resistor  | Mini MELF | 71-SMM02040C5609FB30 | \$0.09  |  | C1         | Not used        |          |                      |        |
| R36        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C2         | 2n2 25V NP0     | 1206     | 603-CC126JRNPO9BN222 | \$0.11 |
| R37        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C3         | 220p 50V NP0    | 1206     | 77-VJ1206A221KXAPBC  | \$0.04 |
| R38        | 56Ω 1% resistor  | Mini MELF | 71-SMM02040C5609FB30 | \$0.09  |  | C4         | 10μ 25V Electro | 5mm dia  | 667-EEA-GA1V100      | \$0.09 |
| R39        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C5         | 10μ 25V Electro | 5mm dia  | 667-EEA-GA1V100      | \$0.09 |
| R40        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C6         | 33p 50V NP0     | 1206     | 77-VJ1206A330JXAPBC  | \$0.04 |
| R41        | 56Ω 1% resistor  | Mini MELF | 71-SMM02040C5609FB30 | \$0.09  |  | C7         | 33p 50V NP0     | 1206     | 77-VJ1206A330JXAPBC  | \$0.04 |
| R42        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C8         | 22n MKS2        | 5mm MKS2 | 505-MKS2D022201A00MS | \$0.15 |
| R43        | 1Ω 1% resistor   | Mini MELF | 71-SMM02040B1008JB30 | \$0.10  |  | C9         | 22p 50V NP0     | 1206     | 77-VJ1206A220KXAPBC  | \$0.04 |
| R44        | 47Ω 1% resistor  | Mini MELF | 594-CMA02040X4709GB3 | \$0.32  |  | C10        | Not used        |          |                      |        |
| R45        | 1K8 1% resistor  | Mini MELF | 594-MMA02040C1801FB3 | \$0.08  |  | C11        | Not used        |          |                      |        |
| R46        | 200Ω 1% resistor | Mini MELF | 594-CMA02040X2000GB3 | \$0.21  |  |            |                 |          |                      |        |
| R47        | 2K2 1% resistor  | Mini MELF | 756-WRM0204C-2K2FI   | \$0.05  |  | D1         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
| R48        | 2K2 1% resistor  | Mini MELF | 756-WRM0204C-2K2FI   | \$0.05  |  | D2         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
| R49        | 22K 1% resistor  | Mini MELF | 594-MMA02040C2202FB3 | 0.093   |  | D3         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
| R50        | 220Ω 1% resistor | Mini MELF | 594-MMA02040C2200FB3 | \$0.05  |  | D4         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
| R51        | 220Ω 1% resistor | Mini MELF | 594-MMA02040C2200FB3 | \$0.05  |  | D5         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D6         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D7         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D8         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D9         | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D10        | LL4148          | SOD-80   | 512-LL4148           | \$0.04 |
|            |                  |           |                      |         |  | D11        | TZM5228         | SOD-80   | 78-TZM5228B          | \$0.11 |
|            |                  |           | Grand total:         | \$12.89 |  | D12        | TZM5228         | SOD-80   | 78-TZM5228B          | \$0.11 |