

## VIS 2.0 GAMEBOY DMG BOM

This is a DIY project for electronic enthusiasts. For this reason, I am not responsible for any damage incurred while attempting this project or after completion of the project. You alone accept all risk since you are 100% liable for damage to yourself or your property.

| COMPONENT   | DESCRIPTION                | LCSC CODE | Mfr. Part #                              |
|---|----------------------------|-----------|--|
| DA1, DA2, DA3, DA4  | 100mA Switching Diode      | C2910234  | DA204U                                   |
| D1  | 30V 2A SBD Diode           | C12889    | B230A-13-F                               |
| D2  | 100mA Switching Diode      | C111695   | 1SS355VMTE-17                            |
| F1, F2  | 6V 2A fuse 0603            | C2757930  | BSMD0603L-200                            |
| Q1  | 30V 4.2A P channel mo      | C306862   | AO3401A                                  |
| Quartz Crystal  | 4.1943 MHz                 |           | (Aliexpress) or grab from the DMG PCB    |
| Potentiometer   | 10k 5pin                   |           | (Aliexpress) or grab from the DMG PCB    |
| RAM x 2   | SOP-28 SRAM                | C1349771  | AS6C6264-55SIN or grab from DMG/SDMG PCB |
| DMG or SDMG CPU   |                            |           | grab from DMG/SDMG PCB                   |
| Link port   |                            |           | Grab from DMG PCB or from the DMG-07     |
| Power Switch  | 1212 pin 2P4T              | C2939338  | SK24D02G4 or grab from the DMG PCB       |
| Slot cartdridge   | 32 pin                     |           | (Aliexpress) or grab from the DMG PCB    |
| 5 pin conn  | Ph 2.0                     | C10402    | PH-5AW                                   |
| DC Jack 3.5 mm x 1.35 mm  | 2.5x0.7mm 2A 24V           | C381119   | DC-002-2.0A-1.3                          |
| Flat connector  | 21 pin pitch 1.25mm        |           | Made-in-china.com                        |
| R1, R2, R3, R4  | 220 $\Omega$ 100mW 0603    | C107696   | RC0603FR-07220RL                         |
| R7  | 180 k $\Omega$ 100mW 0603  | C123419   | RC0603FR-07180KL                         |
| R8  | 1 M $\Omega$ 100mW 0603    | C105578   | RC0603FR-071ML                           |
| R11   | 47 k $\Omega$ 100mW 0603   | C105579   | RC0603FR-0747KL                          |
| R50, R51  | 510 $\Omega$ 100mW 0603    | C114670   | RC0603FR-07510RL                         |
| R52, R54  | 20 k $\Omega$ 100mW 0603   | C105575   | RC0603FR-0720KL                          |
| R53, R56 (for 1 Watt speaker)   | 30 k $\Omega$ 100mW 0603   | C100001   | RC0603FR-0730KL                          |
| R53, R56 (for 1 Watt speaker, less powerful but low noise from speakers at max level) | 25.5 k $\Omega$ 100mW 0603 | C861257   | RT0603BRD0725K5L                         |
| R53, R56 (for DMG normal speaker)   | 10 k $\Omega$ 100mW 0603   | C98220    | RC0603FR-0710KL                          |
| R55, R71  | 100 k $\Omega$ 100mW 0603  | C14675    | RC0603FR-07100KL                         |
| R70   | 732 k $\Omega$ 100mW 0603  | C228042   | AC0603FR-07732KL                         |
| R80, R82, R83   | 1 k $\Omega$ 100mW 0603    | C22548    | RC0603FR-071KL                           |
| R81 (for 0.5A charging)   | 2 k $\Omega$ 100mW 0603    | C227483   | AC0603DR-072KL                           |
| R81 (for 0.9A charging)   | 1.21 k $\Omega$ 100mW 0603 | C705737   | RT0603BRD071K21L                         |
| R84   | 100 $\Omega$ 100mW 0603    | C105588   | RC0603FR-07100RL                         |
| C10, C75, C82, C92, C93, C94  | 100 nF 50V 0603            | C14663    | CC0603KRX7R9BB104                        |
| C11, C12, C13, C14, C15   | 10 nF 50V 0603             | C100042   | CC0603KRX7R9BB103                        |
| C16, C17, C18, C19  | 100 pF 50V 0603            | C14665    | CC0603JRNPO9BN101                        |
| C21, C22  | 27 pF 50V 0603             | C162215   | GRM1885C1H270FA01D                       |
| C37, C74, C81   | 10 $\mu$ F 10V 0603        | C77044    | GRM188R61A106KE69D                       |
| C50, C51  | 390 nF 16V 0603            | C437460   | GCM188R71C394KA55D                       |
| C52, C53, C54, C55, C56, C72, C73, C78, C95   | 1 uF 16V 0603              | C77049    | GRM188R71C105KE15D                       |
| C70, C71  | 100 $\mu$ F 6.3V D=5mm     | C336192   | EEE0JA101WR                              |
| C76, C77  | 22 uF 10V 0603             | C84419    | GRM188R61A226ME15D                       |
| U1  | SOT23-6 Battery            | C18164398 | DW01A                                    |
| U2  | TP4056                     | C16581    | TP4056-42-ESOP8                          |

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|                              |   |                             |   |
|------------------------------|---|-----------------------------|---|
| U3                           | boost converter SOT-563   | C919459                     | TPS61023DRLR                                |
| U4                           | LDO 5v ultra-low noise  | C2864504                    | TPS7A2050PDBVR                              |
| U5                           | 3.3v LDO SOT23-5  | C892187                     | NCP161ASN330T1G                             |
| U5 alternative not tested    | 3.3v LDO SOT23-5  | C3021095                    | TPNCP161ASN330T1G                           |
| U6                           | Audio Amp VSSOP-10 Amps   | C2872995                    | LM4853MM/NOPB                               |
| L1                           | 6A 3.3uH Power Inductor<br>(clean audio with this but a little bit out of range for U3)<br><br>OR<br><br>11.4A 2.7uH Power Inductor<br>(inside the range for U3 but introduce a little audio noise) | C285808<br><br><br>C5378560 | MHCB06030-3R3M-C1<br><br><br>FEXL0730A-2R7M |
| L2                           | 200mA 5.6uH ±5% 1210 Power Induct   | C295106                     | NLV32T-5R6J-EF                              |
| LED GREEN                    | 25mA 0603   | C965805                     | XL-1608SYGC-06                              |
| LED RED                      | 20mA 0603   | C125099                     | LTST-C191KRKT                               |
| -----                        | -----   | -----                       | -----                                       |
| L1, L2, L3                   | 420mA 33uH 1210   | C2047418                    | BRL3225T330K                                |
| Audio Jack                   |   | C397344                     | PJ-3655-SMT                                 |
| R1, R2                       | 1 kΩ 125mW 0805   | C95781                      | RC0805FR-071KL                              |
| C1, C2, C3                   | 100 μF 6.3V 4mm SMD   | C401761                     | EEFT0J101AR                                 |
| Audio speaker                | 1w 8Ω   |                             | (Retrosix)                                  |
| 2 pin conn                   | Ph 2.0  | C16965                      | PH-2AW                                      |
| 5 pin conn                   | Ph 2.0  | C10402                      | PH-5AW                                      |
| -----                        | -----   | -----                       | -----                                       |
| Wheel IPS                    | Contrast wheel  | C2925423                    | SIQ-02FVS3                                  |
| CHIP NH245                   | NH245   | C27643                      | SN74LVC8T245PWR                             |
| D1, D2, D3, D4               | Dual Common Cathode   | C2903788                    | BAT54 o BAT54C                              |
| RR2, RR3, RR4                | 620 Ω 100mW 0603  | C137695                     | RC0603FR-07620RL                            |
| RB2, RG2, RB3, RG3, RB4, RG4 | 470 Ω 100mW 0603  | C114669                     | RC0603FR-07470RL                            |
| RB1, RG1                     | 1 kΩ 100mW 0603   | C22548                      | RC0603FR-071KL                              |
| RR1                          | 1.21 kΩ 100mW 0603  | C705737                     | RT0603BRD071K21L                            |
| C1, C2                       | 120 nF 16V 0603   | C384792                     | 0603B124K160CT                              |
| CL1, CL2, CL3, CL4           | 1 uF 16V 0603   | C77049                      | GRM188R71C105KE15D                          |
| 18 pin connector             | FFC/FCP pitch 0.5mm   | C283125                     | THD0510-18CL-GF                             |
| Tactile switches x 6         | 7mm 0.6mm Round Button  | C125046<br>C97437           | SKRRABE010<br>SKRRAAE010                    |
| RGB LEDs x 4                 | Reverse mounting LED  | C2802677                    | E6CC1205RGBC3UDA                            |
| Flat connector               | 21 pin pitch 1.25mm   |                             | Made-in-china.com                           |
| LED buttons switches x 3     | 300mA SPDT  | C109335                     | SSSS811101                                  |
| -----                        | -----   | -----                       | -----                                       |
| PCB Welding Terminal x 4     | PCB Welding Terminal  | C481440                     | TS30000                                     |
| Mounting resistors x 9       | 0 Ω 250mW 1206  | C17888                      | 1206W4F0000T5E                              |
| -----                        | -----   | -----                       | -----                                       |
| 2 pin conn                   | Ph 2.0 housing  | C10408                      | PH-2Y                                       |
| 5 pin conn                   | Ph 2.0 housing  | C10411                      | PH-5Y                                       |

MAINBOARD

BOARD

AUDIO

IPS

IPS OSD v5

BRACKET

For cables