

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 Ω 100mW 0603 | C107696 | RC0603FR-07220RL |
| R7 | 180 k Ω 100mW 0603 | C123419 | RC0603FR-07180KL |
| R8 | 1 M Ω 100mW 0603 | C105578 | RC0603FR-071ML |
| R11 | 47 k Ω 100mW 0603 | C105579 | RC0603FR-0747KL |
| R50, R51 | 510 Ω 100mW 0603 | C114670 | RC0603FR-07510RL |
| R52, R54 | 20 k Ω 100mW 0603 | C105575 | RC0603FR-0720KL |
| R53, R56 (for 1 Watt speaker) R53, R56 (for DMG normal speaker) | 30 k Ω 100mW 0603 10 k Ω 100mW 0603 | C100001 C98220 | RC0603FR-0730KL RC0603FR-0710KL |
| R55, R71 | 100 k Ω 100mW 0603 | C14675 | RC0603FR-07100KL |
| R70 | 732 k Ω 100mW 0603 | C228042 | AC0603FR-07732KL |
| R80, R82, R83 | 1 k Ω 100mW 0603 | C22548 | RC0603FR-071KL |
| R81 (for 0.5A charging) R81 (for 0.9A charging) | 2 k Ω 100mW 0603 1.21 k Ω 100mW 0603 | C227483 C705737 | AC0603DR-072KL RT0603BRD071K21L |
| R84 | 100 Ω 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 μ 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 μ 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 |
| U3 | boost converter SOT-563 | C919459 | TPS61023DRLR |
| U4 | LDO 5v ultra-low noise | C2864504 | TPS7A2050PDBVR |
| U5 | 3.3v LDO SOT23-5 | C892187 | NCP161ASN330T1G |

MAINBOARD

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|------------------------------|---|-------------------------|---|
| 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 (clean audio with this but a little bit out of range for U3) OR 11.4A 2.7uH Power Inductor (not tested yet but totally inside the range for U3) | C285808 C5378560 | MHCB06030-3R3M-C1 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 C97437 | SKRRABE010 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 |
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| 2 pin conn | Ph 2.0 housing | C10408 | PH-2Y |
| 5 pin conn | Ph 2.0 housing | C10411 | PH-5Y |

AUDIO
BOARD
BOARD
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IPS
IPS OSD v5
For cables