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| --- | --- | --- | --- | --- | --- |
| **Parts List** |  |  |  |  |  |
| Title: | 60-SECOND TIMER CIRCUIT | Rev. No.: | 1.0 |  |  |
| Doc. No.: | CPE 2303L - FINALS |  |  |  |  |
|  |  |  |  |  |  |
| **Device** | **Package** | **Parts** | **Value** | **Qty** | **Description** |
| 10-XX | B3F-10XX | S1, S2 |  | 2 | OMRON SWITCH |
| 7SEG-CK | 7SEG-13 | D1, D2 |  | 2 | 7-segment DISPLAY |
| JACK-PLUG1 | SPC4078 | J1 |  | 1 | DC POWER JACK |
| C-US025-025X050 | C025-025X050 | C2 | 0.01uF | 1 | CAPACITOR, American symbol |
| C-US025-025X050 | C025-025X050 | C3, C5 | 0.1uF | 2 | CAPACITOR, American symbol |
| R-US\_0204/7 | 0204/7 | R17, R18, R19 | 1K | 3 | RESISTOR, American symbol |
| CPOL-USE1.8-4 | E1,8-4 | C1 | 1uF | 1 | POLARIZED CAPACITOR, American symbol |
| R-US\_0204/7 | 0204/7 | R1, R2, R3, R4, R5, R6, R7, R8, R9, R10, R11, R12, R13, R14 | 330 | 14 | RESISTOR, American symbol |
| CPOL-USE1.8-4 | E1,8-4 | C4 | 470uF | 1 | POLARIZED CAPACITOR, American symbol |
| 507302B00000G | TO-220H | HS1 | 507302B00000G | 1 | TO220H HEATSINK |
| R-US\_0204/7 | 0204/7 | R15 | 680K | 1 | RESISTOR, American symbol |
| R-US\_0204/7 | 0204/7 | R16 | 68K | 1 | RESISTOR, American symbol |
| 7476N | DIL16 | IC8 | 7476N | 1 | Dual J-K FLIP FLOP, preset and clear |
| 74ALS08N | DIL14 | IC5 | 74ALS08N | 1 | Quad 2-input AND gate |
| 74LS14N | DIL14 | IC7 | 74LS14N | 1 | Hex schmitt trigger INVERTER |
| 74LS32N | DIL14 | IC9 | 74LS32N | 1 | Quad 2-input OR gate |
| 74LS48N | DIL16 | IC3, IC4 | 74LS48N | 2 | BCD to seven segment DECODER/DRIVER |
| 74LS90N | DIL14 | IC1, IC2 | 74LS90N | 2 | Decade, divide by twelve and binary COUNTER |
| 7805T | TO220H | IC10 | 7805T | 1 | Positive VOLTAGE REGULATOR |
| LM555N | DIL08 | IC6 | LM555N | 1 | TIMER |

**Parts Key**

10-XX OMRON SWITCH

7SEG-CK 7-segment DISPLAY

JACK-PLUG1 DC POWER JACK

C-US025-025X050 CAPACITOR, American symbol

R-US\_0204/7 RESISTOR, American symbol

CPOL-USE1.8-4 POLARIZED CAPACITOR, American symbol

507302B00000G TO220H HEATSINK

7476N Dual J-K FLIP FLOP, preset and clear

74ALS08N Quad 2-input AND gate

74LS14N Hex schmitt trigger INVERTER

74LS32N Quad 2-input OR gate

74LS48N BCD to seven segment DECODER/DRIVER

74LS90N Decade, divide by twelve and binary COUNTER

7805T Positive VOLTAGE REGULATOR

LM555N TIMER

**Manufacturing Notes**

1. Dimension tolerance: +/- 0.5 mm  
2. PCB Dimensions: 90mm x 75mm  
3. PCB thickness: 1.6 mm  
4. Copper thickness: 35 um (minimum)  
5. Solder mask color: green  
6. Silkscreen color: white   
7. Pad finish: tin  
8. Through-Hole packaging.