

## LCU 6333 PCBA Bill of Materials

| Qty. | Symbol         | Name                           | Value | Package            | Manufacturer                                       | MPN                                                              |
|------|----------------|--------------------------------|-------|--------------------|----------------------------------------------------|------------------------------------------------------------------|
| 1    | -              | PCB 1040                       | -     | -                  | -                                                  | -                                                                |
| 1    | IC1            | IC, RFID, CL RC632             | -     | SO32               | NXP                                                | CL RC632 01T                                                     |
| 1    | IC2            | IC, MCU, ATXmega256A3          | -     | QFN64 / Atmel 64M2 | Atmel                                              | ATXmega256A3-MH                                                  |
| 1    | IC3            | IC, EEPROM, 512kbits, I2C      | -     | TSSOP8             | Microchip<br>Microchip<br>Atmel<br>ST              | 24AA512T-I/ST<br>24FC512T-I/ST<br>AT24C512B-TH-T<br>M24512-RDW6T |
| 1    | IC4            | IC, DC/DC converter            | -     | SC70               | AnalogicTech                                       | AAT3119JS-5.0                                                    |
| 1    | IC5            | IC, Voltage regulator, 3V0     | -     | SC-82AB            | On<br>Torex<br>New JRC                             | NCP583SQ30T1G<br>XC6215B302NR<br>NJU7747F4-03                    |
| 2    | T1, 2          | Transistor, PNP, BC807W        | -     | SOT323             | NXP<br>Infineon<br>Diodes<br>Semtech<br>Diotec     | BC807-25W<br>BC807-25W<br>BC807-25W<br>BC807-25W<br>BC807-25W    |
| 5    | T3, 4, 5, 6, 7 | Transistor, MOSFET, Dual N-ch  | -     | SOT363             | NXP<br>NXP<br>Diodes<br>Diodes<br>Vishay Siliconix | PMGD280UN<br>PMGD400UN<br>DMN5L06DWK<br>DMN5L06DW<br>Si1912EDH   |
| 1    | T8             | Transistor, 2xPNP "digital"    | -     | SOT363             | Diodes<br>ROHM<br>NXP<br>On                        | DDA123JU<br>UMB10NTN<br>PUMB10<br>MUN5135DW1TxG                  |
| 1    | T9             | Transistor, NPN+PNP, "digital" | -     | SOT363             | Diodes<br>On<br>LRC<br>NXP                         | DCX123JU<br>MUN5335DW1TxG<br>LMUN5335DW1T1G<br>PUMD10            |
| 1    | D1             | Diode, Schottky signal         | -     | SOD123             | Diodes<br>ST<br>Vishay<br>Diotec<br>MCC<br>Semtech | BAT46W<br>BAT46ZFILM<br>BAT46W<br>BAT46W<br>BAT46W<br>BAT46W     |

|   |          |                           |   |                        |                                                                  |                                                                                                      |
|---|----------|---------------------------|---|------------------------|------------------------------------------------------------------|------------------------------------------------------------------------------------------------------|
| 3 | D2, 3, 4 | Diode, 1N4148, SOD523     | - | SOD523                 | Fairchild<br>Diodes<br>Semtech<br>Consumi<br>MCC                 | 1N4148WT<br>1N4148WT<br>1N4148WT<br>1N4148WT<br>1N4148X                                              |
| 3 | D5, 8, 9 | Diode, Zener, 7V5         | - | SOD323                 | Vishay<br>NXP<br>Pan-Jit<br>Diodes<br>KEC<br>On Semi.<br>Toshiba | BZX384B7V5-V<br>BZX384B7V5<br>BZT52-B7V5S<br>BZT52C7V5S-7-F<br>KDZ7.5V-Y<br>MM3Z7V5ST1G<br>02DZ7.5-Y |
| 1 | D6       | Diode, Schottky rectifier | - | SOD123                 | ST<br>Fairchild<br>IR<br>On Semi.<br>TSC                         | STPS0520Z<br>MBR0520L<br>MBR0520PBF<br>MBR0520LT1G<br>B0520LW                                        |
| 1 | D7       | Diode, TVS                | - | SOT23                  | Diodes<br>NXP                                                    | DESD5V2S2UT<br>PESD5V2S2UT                                                                           |
| 1 | Y1       | Crystal, 13.56MHz         | - | 6.0x3.5mm              | Raltron<br>Rakon<br>Mercury                                      | H10S-13.560-18-3030-TR<br>13.5600MHz 3SMX-B 30/-/10/18<br>MF-13.560-H70904-001                       |
| 1 | Y2       | Crystal, 32768Hz, 12.5pF  | - | 7.0x1.5mm              | Abracon<br>Citizen<br>ECS                                        | ABS13-32.768KHZ-T<br>CM130-32.768KDZF-UT<br>ESC-.327-12.5-38                                         |
| 2 | L1, 2    | Inductor                  | - | Metric 3225 (EIA 1210) | TDK<br>XFMRs<br>Superworld<br>KOA                                | NLV32T-1R0J-PF<br>XFWI322522-1R0J<br>WI322522-1R0JF<br>LFC32TTE1R0J                                  |
| 6 | FB1-6    | Ferrite bead              | - | Metric 1608 (EIA 0603) | TDK<br>Tyco Sigma<br>Kemet<br>NIC<br>Superworld<br>Taiyo Yuden   | MMZ1608R601A<br>BMB1J0600LN2<br>BK-1608HS601TK<br>NCB0603R601TR035F<br>Z2K601-RD-10<br>BK1608HS601   |
| 1 | RV1      | Fuse, Resettable PTC      | - | Metric 3225 (EIA 1210) | Bourns<br>Tyco Raychem                                           | MF-USMF010<br>MICROSMD010F-2                                                                         |
| 1 | X1       | Connector                 | - | -                      | Samtec                                                           | IPT1-105-01-S-D (-K)                                                                                 |
| 1 | Z1       | Cable Assembly            | - | -                      | -                                                                | -                                                                                                    |

|   |     |                         |          |                        |   |   |
|---|-----|-------------------------|----------|------------------------|---|---|
| 1 | Z2  | LED Assembly            | -        | -                      | - | - |
| 1 | C1  | Capacitor, ceramic, C0G | 47p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C2  | DO NOT MOUNT            | -        | Metric 1608 (EIA 0603) | - | - |
| 1 | C3  | Capacitor, ceramic, C0G | 470p 50V | Metric 1608 (EIA 0603) | - | - |
| 1 | C4  | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C5  | Capacitor, ceramic, X5R | 1u 6V3   | Metric 1608 (EIA 0603) | - | - |
| 1 | C6  | Capacitor, ceramic, C0G | 22p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C7  | Capacitor, ceramic, C0G | 330p 50V | Metric 1608 (EIA 0603) | - | - |
| 1 | C8  | Capacitor, ceramic, C0G | 47p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C9  | Capacitor, ceramic, C0G | 47p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C10 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C11 | Capacitor, ceramic, C0G | 68p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C12 | Capacitor, ceramic, C0G | 68p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C13 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C14 | DO NOT MOUNT            | -        | Metric 1608 (EIA 0603) | - | - |
| 1 | C15 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C16 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C17 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C18 | Capacitor, ceramic, C0G | 18p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C19 | Capacitor, ceramic, C0G | 18p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C20 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C21 | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C22 | Capacitor, ceramic, C0G | 330p 50V | Metric 1608 (EIA 0603) | - | - |
| 1 | C23 | Capacitor, ceramic, C0G | 330p 50V | Metric 1608 (EIA 0603) | - | - |
| 1 | C24 | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C25 | Capacitor, ceramic, X5R | 22u 6V3  | Metric 3216 (EIA 1206) | - | - |
| 1 | C26 | Capacitor, ceramic, X5R | 22u 6V3  | Metric 3216 (EIA 1206) | - | - |
| 1 | C27 | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C28 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C29 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C30 | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C31 | Capacitor, ceramic, X7R | 10n 10V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C32 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C33 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C34 | Capacitor, ceramic, C0G | 15p 50V  | Metric 1608 (EIA 0603) | - | - |
| 1 | C35 | Capacitor, ceramic, X7R | 1n 25V   | Metric 1608 (EIA 0603) | - | - |
| 1 | C36 | Capacitor, ceramic, X5R | 22u 6V3  | Metric 3216 (EIA 1206) | - | - |
| 1 | C37 | Capacitor, ceramic, X7R | 1n 25V   | Metric 1608 (EIA 0603) | - | - |
| 1 | C38 | Capacitor, ceramic, X7R | 1n 25V   | Metric 1608 (EIA 0603) | - | - |

|   |     |                         |          |                        |   |   |
|---|-----|-------------------------|----------|------------------------|---|---|
| 1 | C39 | Capacitor, ceramic, X5R | 10u 6V3  | Metric 1608 (EIA 0603) | - | - |
| 1 | C40 | Capacitor, ceramic, X5R | 10u 6V3  | Metric 1608 (EIA 0603) | - | - |
| 1 | C41 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C42 | Capacitor, ceramic, X5R | 10u 6V3  | Metric 1608 (EIA 0603) | - | - |
| 1 | C43 | Capacitor, ceramic, X5R | 1u 6V3   | Metric 1608 (EIA 0603) | - | - |
| 1 | C44 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C45 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C46 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C47 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C48 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C49 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C50 | Capacitor, ceramic, X5R | 10u 6V3  | Metric 1608 (EIA 0603) | - | - |
| 1 | C51 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) |   |   |
| 1 | C52 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C53 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C54 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C55 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | C56 | Capacitor, ceramic, X5R | 10u 6V3  | Metric 1608 (EIA 0603) | - | - |
| 1 | C57 | Capacitor, ceramic, X7R | 100n 16V | Metric 1608 (EIA 0603) | - | - |
| 1 | R1  | Resistor                | 2R7      | Metric 1608 (EIA 0603) | - | - |
| 1 | R2  | Resistor                | 10k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R3  | Resistor                | 1k       | Metric 1608 (EIA 0603) | - | - |
| 1 | R4  | Resistor                | 180R     | Metric 1608 (EIA 0603) | - | - |
| 1 | R5  | Resistor                | 180R     | Metric 1608 (EIA 0603) | - | - |
| 1 | R6  | Resistor                | 47k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R7  | Resistor                | 270R     | Metric 1608 (EIA 0603) | - | - |
| 1 | R8  | Resistor                | 0R       | Metric 1608 (EIA 0603) | - | - |
| 1 | R9  | Resistor                | 3k3      | Metric 1608 (EIA 0603) | - | - |
| 1 | R10 | Resistor                | 820R     | Metric 1608 (EIA 0603) | - | - |
| 1 | R11 | Resistor                | 0R       | Metric 1608 (EIA 0603) | - | - |
| 1 | R12 | DO NOT MOUNT            | -        | Metric 1608 (EIA 0603) | - | - |
| 1 | R13 | Resistor                | 10k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R14 | Resistor                | 10k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R15 | Resistor                | 10k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R16 | Resistor                | 1M       | Metric 1608 (EIA 0603) | - | - |
| 1 | R17 | Resistor                | 10k      | Metric 1608 (EIA 0603) | - | - |
| 1 | R18 | Resistor                | 100k     | Metric 1608 (EIA 0603) | - | - |
| 1 | R19 | Resistor                | 100k     | Metric 1608 (EIA 0603) | - | - |
| 1 | R20 | Resistor                | 3k3      | Metric 1608 (EIA 0603) | - | - |

|   |     |          |        |                        |   |   |
|---|-----|----------|--------|------------------------|---|---|
| 1 | R21 | Resistor | 3k3    | Metric 1608 (EIA 0603) | - | - |
| 1 | R22 | Resistor | 180R   | Metric 1608 (EIA 0603) | - | - |
| 1 | R23 | Resistor | 180R   | Metric 1608 (EIA 0603) | - | - |
| 1 | R24 | Resistor | 3k3    | Metric 1608 (EIA 0603) | - | - |
| 1 | R25 | Resistor | 3k3    | Metric 1608 (EIA 0603) | - | - |
| 1 | R26 | Resistor | 3k3    | Metric 1608 (EIA 0603) | - | - |
| 1 | R27 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |
| 1 | R28 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |
| 1 | R29 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |
| 1 | R30 | Resistor | 2k7    | Metric 1608 (EIA 0603) | - | - |
| 1 | R31 | Resistor | 2k7    | Metric 1608 (EIA 0603) | - | - |
| 1 | R32 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |
| 1 | R33 | Resistor | 470k   | Metric 1608 (EIA 0603) | - | - |
| 1 | R34 | Resistor | 3k3    | Metric 1608 (EIA 0603) | - | - |
| 1 | R35 | Resistor | 1k     | Metric 1608 (EIA 0603) | - | - |
| 1 | R36 | Resistor | 120R   | Metric 1608 (EIA 0603) | - | - |
| 1 | R37 | Resistor | 120R   | Metric 1608 (EIA 0603) | - | - |
| 1 | R38 | Resistor | 10k 1% | Metric 1608 (EIA 0603) | - | - |
| 1 | R39 | Resistor | 2k2 1% | Metric 1608 (EIA 0603) | - | - |
| 1 | R40 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |
| 1 | R41 | Resistor | 10k    | Metric 1608 (EIA 0603) | - | - |