

uTracer heater regulator BOM Rev.E

4/23/2019 Revs use letters to avoid confusion with schematic revs. O="original"

| Qty          | Ord qty | Cost  | Ext Cost       | Ref Nos.            | Vendor          | Part#                | Pkg              | Description   | Comment                     |
|--------------|---------|-------|----------------|---------------------|-----------------|----------------------|------------------|---|-----------------------------|
| 1            | 1       | 0.17  | \$0.17         | C206                | Mouser          | K104K15X7RF53L2      | CNPOLC-CER1      | cap, 0.1uF 50V 10% X7R  |                             |
| 2            | 2       | 1.73  | \$3.46         | C203,C205           | Mouser          | R82CC4330Z330J       | 7.2 x 7.2 x 13mm | cap, 3.3uF 50V 5% polyester 105C Kemet  |                             |
| 2            | 2       | 1.17  | \$2.34         | C201,C202           | Mouser          | RXW471M1VBK-1016     | 10D 20H 5LS mm   | cap, 470uF 35V AL 105C low ESR 6000hr Leion                                     |                             |
| 1            | 1       | 0.54  | \$0.54         | C204                | Mouser          | FG24X7R1H105KRT06    | CNPOLC-CER3      | cap, ceramic, 1uF 50V 10% X7R   |                             |
| 1            | 1       | 0.29  | \$0.29         | C207                | Mouser          | SR215C224KAA         | CNPOLC-CER3      | cap, ceramic, 0.22uF 50V 10% X7R  |                             |
| 4            | 4       | 0.21  | \$0.84         | D203,D204,D205,D206 | Mouser          | 863-1N4007G          | DO41             | diode, 1N4007, 1000V, 1A  |                             |
| 1            | 1       | 0.41  | \$0.41         | D208                | Mouser          | 78-BAT86S-TAP        | DO35             | diode, Schottky, BAT86  |                             |
| 1            | 1       | 0.14  | \$0.14         | D207                | Mouser          | 512-1N5241B          | DO35             | diode, Zener, 11V, 1N5237B, 5%, 0.5W  |                             |
| 1            | 1       | 6.49  | \$6.49         | P201-P211           | Mouser          | 929450-01-36-I       | 0.1" spacing     | header strip, male, cuttable, 3M 36posn gold .295/.13"                          |                             |
| 1            | 10      | 0.90  | \$8.97         |                     | Amazon/Gadgeter |                      | 14x14x7mm        | heatsink w/stick tape for XL4005. Search for "Gadgeter 10pcs Aluminum Heatsink" |                             |
| 1            | 1       | 6.65  | \$6.65         | IC201               | Mouser          | LT1884CN8#PBF        | DIL08            | IC, opamp, LT1884CP, precision  |                             |
| 1            | 1       | 11.84 | \$11.84        | IC202               | Mouser          | MAX6325CPA+          | DIL08            | IC, voltage ref, MAX6325, 2.5V, 0.5ppm, 0.04%acc, Maxim                         |                             |
| 2            | 0       | 0.00  | \$0.00         | L202, L203          |                 |                      | 0.6"D x 0.34W    | inductor, 40uH, 5A, removed from two modules like A204                          |                             |
| 1            | 1       | 0.18  | \$0.18         | JP201               | Mouser          | 855-M20-9770242      | 0.1" spacing     | jumper, 2-pin header, gold  |                             |
| 1            | 1       | 0.34  | \$0.34         | JP201               | Mouser          | 855-M7767-05         | 0.1" spacing     | jumper, shunt, closed top, gold   |                             |
| 3            | 5       | 1.99  | \$9.95         | A204, L202, L203    | eBay jacobs     | XL4005               | 2 x 1" module    | module, 5A DC Buck Step Down Voltage Converter                                  | two used just for inductors |
| 1            | 5       | 3.20  | \$16.00        | for A203            | Elecrow         |                      | 3.7 x 2.4"       | PCB, Heater regulator board incl ship, China--20days, see article               |                             |
| 2            | 2       | 1.60  | \$3.20         | R202,R205           | Mouser          | 3386P-1-102LF        | 3/8 square       | pot, 1K cermet top adjust Bourns  |                             |
| 1            | 1       | 1.60  | \$1.60         | R208                | Mouser          | 3386P-1-501LF        | 3/8 square       | pot, 500R cermet top adjust Bourns  |                             |
| 1            | 1       | 0.18  | \$0.18         | R210                | Mouser          | MFR-25FBF52-2M26     | 6.3 x 2.4mm      | res, 2.26M 1% 100ppm 1/4W metal film Yageo                                      |                             |
| 1            | 1       | 1.56  | \$1.56         | R209                | Mouser          | PTF5620K000BZEB      | 6.35 x 2.31mm    | res, 20K 0.1% 5ppm 1/8W metal film Vishay                                       |                             |
| 1            | 1       | 0.15  | \$0.15         | R212                | Mouser          | CF1/4C203J           | R-US_0207/10     | res, 20K 1/4W 5%  |                             |
| 1            | 1       | 0.15  | \$0.15         | R211                | Mouser          | CF1/4C271J           | R-US_0207/10     | res, 2.7K 1/4W 5%   |                             |
| 1            | 1       | 0.14  | \$0.14         | R214                | Mouser          | MO2CT631R271J        | 15.5 x 6mm       | res, 270 5% 200ppm 2W metal oxide KOA   |                             |
| 3            | 3       | 0.89  | \$2.67         | R201,R203,R206      | Mouser          | PTF5640K000BYEB      | 6.35 x 2.31mm    | res, 40K 0.1% 10ppm 1/8W metal film Vishay                                      |                             |
| 1            | 1       | 1.11  | \$1.11         | R207B               | Mouser          | RN55D6984FB14        | 6.1 x 2.29mm     | res, 6.98M 1% 100ppm 1/8W metal film Vishay                                     |                             |
| 1            | 1       | 1.96  | \$1.96         | R204                | Mouser          | PTF5660K000BZBF      | 6.35 x 2.31mm    | res, 60K 0.1% 5ppm 1/8W metal film Vishay                                       |                             |
| 1            | 1       | 0.20  | \$0.20         | R207A               | Mouser          | YR1B82K5CC           | 6.35 x 2.31mm    | res, 82.5K 0.1% 15ppm 1/8W metal film TE Con                                    |                             |
| 2            | 2       | 0.46  | \$0.92         |                     | Mouser          | 115-47-308-41-001000 | DIL08            | socket, 8-pin minidip, gold   |                             |
| 4            | 4       | 0.29  | \$1.16         |                     | Mouser          | 2053-440-AL-7        |                  | Standoff, 0.25x3/16 #4 F/F, AL  | for heater reg board        |
| 1            | 1       | 7.90  | \$7.90         | S202                | Mouser          | M2024SS1W01          | 1/4" panel hole  | switch, SP3T, toggle,NKK, "DPDT" with spcl conn ref DS p.A56                    | for heater voltage          |
| <b>TOTAL</b> |         |       | <b>\$91.51</b> |                     |                 |                      |                  |   |                             |

46 components

Note-1 Search eBay for "5pcs XL4005". Vendor is jacobsparts.