

## PARTS LIST: NiMH PP3 Charger Rev 1 Bill of Materials

Reference	Qty	Value	Notes
<b>C1,C2</b>	2	47u 35V	Electrolytic 6.3 mm dia, 2.5 mm pitch
<b>C3</b>	1	1u 50V	0805 X7R Capacitor
<b>C4,C5,C6,C10</b>	4	100n	0805 X7R Capacitor
<b>C7</b>	1	10n	0805 X7R Capacitor
<b>C8,C9</b>	2	33p	0603 Capacitor
<b>D1,D2</b>	2	BAS16	Diode SOT-23
<b>D3,D4</b>	2	1N5242B	12V Zener DO-35
<b>D5</b>	1	3mm LED	3mm LED Red HOT alert
<b>D6</b>	1	3mm LED	3mm LED Orange Charging
<b>D7</b>	1	3mm LED DNF	3mm LED, future use
<b>D8</b>	1	3mm LED	3mm LED Green Charge Complete
<b>F1</b>	1	PRG21BC6R8MM1RA	0805 Fuse PTC
<b>F2</b>	1	BK60-020	Polyfuse 400 mA
<b>J1</b>	1	24V_INPUT	DC Jack Socket 5.5 / 2.1 mm
<b>J2</b>	1	PP3 Batt Holder	Keystone 1294 or Multicomp MP000351
<b>J3</b>	1	Pin Header 3-way	For charge enable (or jumper if no microcontroller)
<b>J4</b>	1	Pin Header 5-way	For ADC inputs to microcontroller
<b>J5</b>	1	Pin Header 4-way	For microcontroller LED and button
<b>Q1,Q2</b>	2	BSS308PE	P-channel MOSFET SOT-23
<b>Q3,Q5,Q6</b>	3	BC847	NPN Transistor SOT-23
<b>Q4</b>	1	BD135	NPN Power Transistor
<b>R1,R9,R11, R12,R21,R22</b>	6	10k	0805 Resistor
<b>R2,R8,R13</b>	3	4.7k	0805 Resistor
<b>R3,R7,R15,R16</b>	4	47k	0805 Resistor
<b>R4,R5,R20</b>	3	2.2k	0805 Resistor
<b>R6,R25</b>	2	100R	0805 Resistor
<b>R10</b>	1	125R	0805 Resistor
<b>R14,R23,R24</b>	3	1k	0805 Resistor
<b>R17,R18</b>	2	7.5k	0805 Resistor
<b>R19</b>	1	220k	0805 Resistor
<b>R26</b>	1	91R	0805 Resistor
<b>R27</b>	1	82R	0805 Resistor
<b>SW1</b>	1	B3F Tact Switch	Tactile Switch 12x12 mm or similar
<b>SW2</b>	1	RS1010	User_Global_Library:RS1010
<b>TH1</b>	1	NCU18XH103F6SRB	0603 Thermistor NTC 10 kohm 3380K
<b>U1,U2</b>	2	TL431CZ	TL431CZ or TL431ACZ TO-92 Adjustable Reference
<b>U3</b>	1	LM7805	7805 Regulator TO-220 or (preferably) pin-compatible DC-DC converter
<b>U4,U5,U6</b>	3	74HC4060	SOIC-16 Oscillator/Divider
<b>U7</b>	1	74AHC1G32	74HC1G32 or 74AHC1G32 OR Gate SOT23-5
<b>U8</b>	1	NCV303LSN45T1G	4.5V Reset IC Open Drain SOT23-5
<b>X1</b>	1	8 MHz	Crystal HC49-U
<b>Case</b>	1	G407 Enclosure	Multicomp G407 or similar