PICkit 2 Hardware Updates

Update Rework #1
Purpose: Allows VPP charge pump to source more current. This is done for general robustness and to support upcoming parts that may require more VPP current.
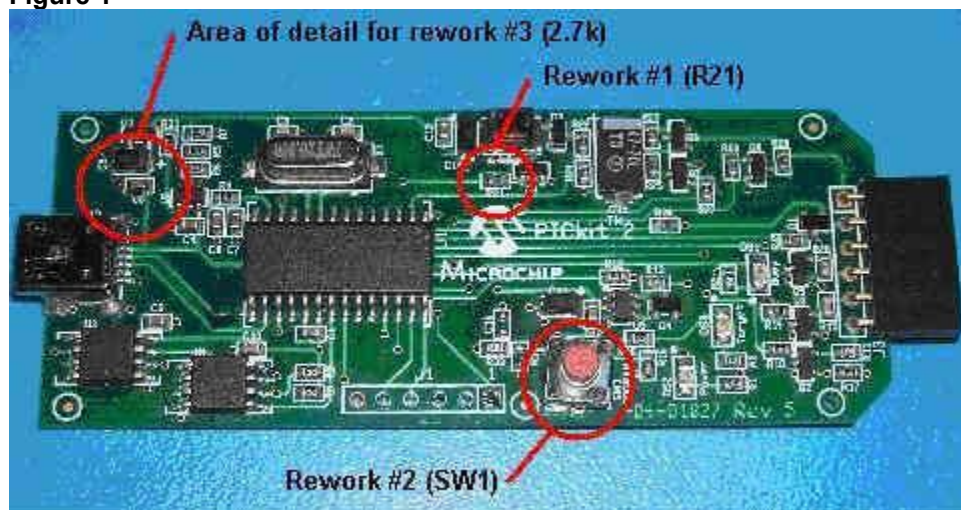1) Remove R21
2) Replace with 1k Ohm 5% 0603 resistor.

Update Rework #2
Purpose: Cosmetic only. It is not necessary to change the switch but is recommended to mark units which have been updated.
1) Remove SW1
2) Replace with new switch: ALPS SKHVBMD010
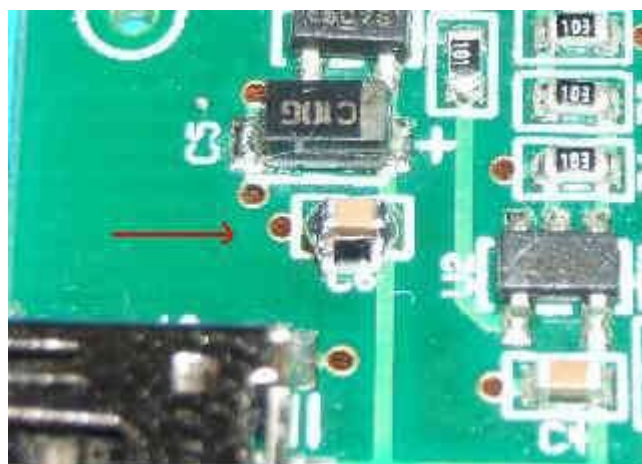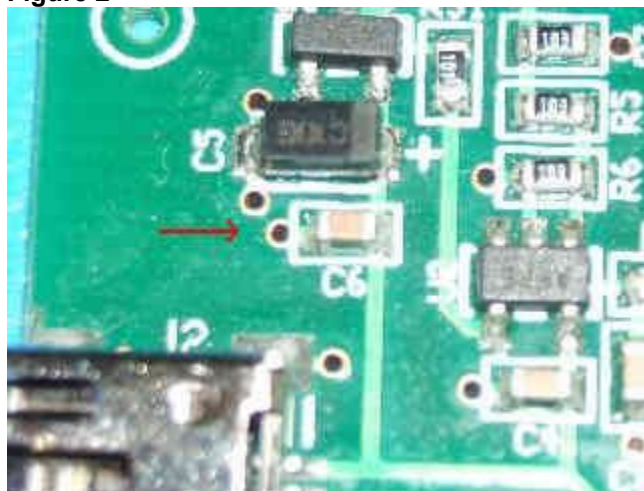
Figure 1

Update Rework #3
Purpose: Adding this resistor from +5V_USB to GND help prevent "unrecognized device" USB errors by bleeding capacitor voltage to ensure a proper POR.
See Figure 1 for area of detail. See Figure 2 for detail.
1) Add 2.7k Ohm 5% 0603 resistor across C6. Resistor may be placed on top of or next to C6.
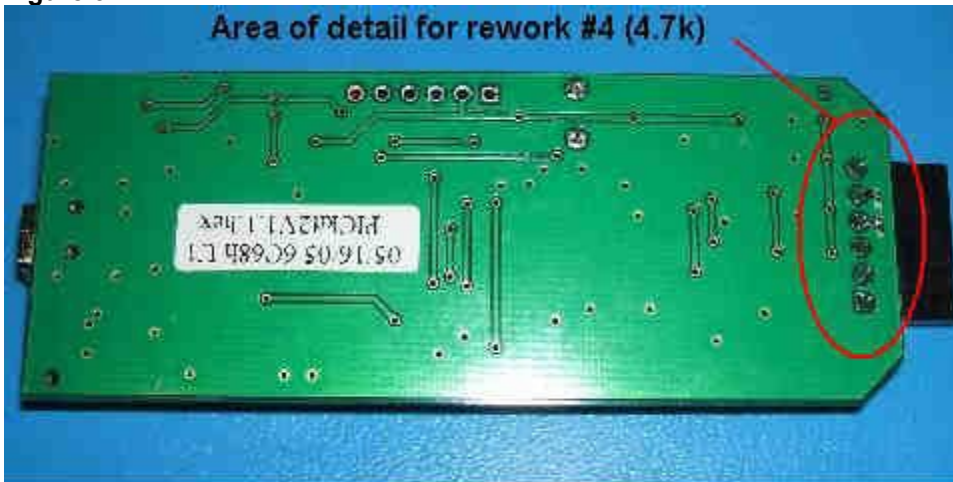
Figure 2

Update Rework #4

Purpose: This is the most important update. The pull-down resistors from PGC to GND and PGD to GND are necessary for reliable debugging using PICkit 2.

See Figure 3 for area of detail. See Figures 4 & 5 for details of 2 possible rework options.
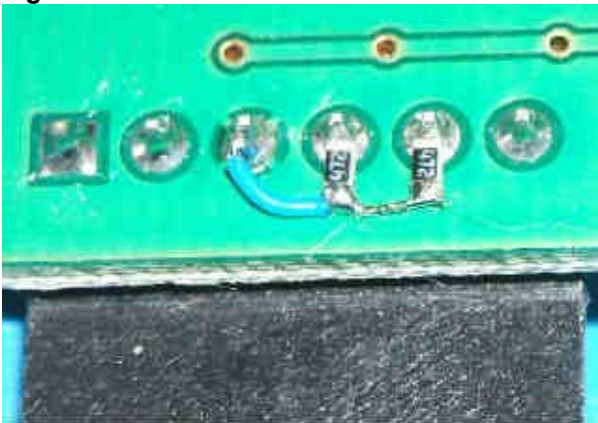
Figure 3

Area of detail for rework #4 (4.7k)

Option 1

See Figure 4 for detail
1) Solder one end of a 4.7k Ohm 5% 0603 resistor to the back side of pin 4 of J3
2) Solder one end of a 4.7k Ohm 5% 0603 resistor to the back side of pin 5 of J3
3) Solder a wire to the back side of pin 3 of J3
4) Solder the wire to the unconnected end of the resistor on pin 4
5) Solder the wire to the unconnected end of the resistor on pin 5

Figure 4

Option 2

See Figure 5 for detail.
1) Scrape solder mask off groundplane on back side of board in front of pin 4 of J3
2) Scrape solder mask off groundplane on back side of board in front of pin 5 of J3
3) Solder one end of a 4.7k Ohm 5% 0603 resistor to the back side of pin 4 of J3
4) Solder one end of a 4.7k Ohm 5% 0603 resistor to the back side of pin 5 of J3
5) Solder unconnected end of resistor on pin 4 to exposed groundplane.
6) Solder unconnected end of resistor on pin 5 to exposed groundplane.

Figure 5