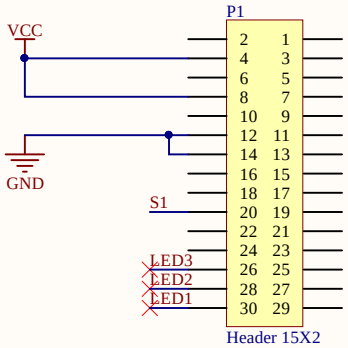
FRDM board connection

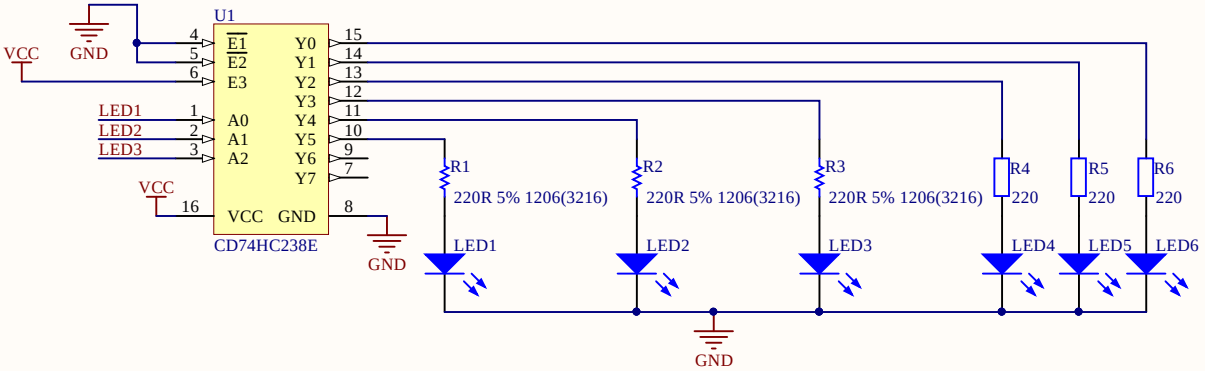


This is a 15x2 male header from the "Miscellaneous Connectors" library.

Make sure that you rotate and mirror the component so that the pin numbering is consistent with the FRDM quick reference card. If you have a K22F board, you will draw it as shown here; if you have a K20D50M you'll rotate it such that pin 1 appears at the bottom. Make sure that the power pins line up with the 3.3V supply on the FRDM board.

To see what this part looks like, search element14 #1918095. It will be soldered upside down to connect to J9 and J10 on the FRDM board. Therefore the solder will be on the top of the board!

3-to-8 line decoder and LEDs



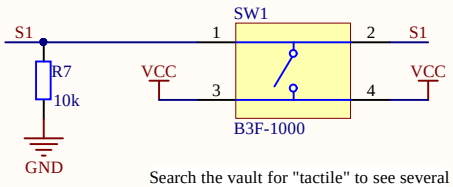
The integrated circuit can be found in the Altium Vault.

R1 - R3 are surface mount resistors in 1206 (metric 3216) size. These are also found in the Vault.

R4 - R6 are through hole resistors using the Axial 0.4 footprint. These are found in the Miscellaneous Devices library.

To find the LEDs, search the Vault for "5mm LED" and choose one of the THT (through hole technology) parts.

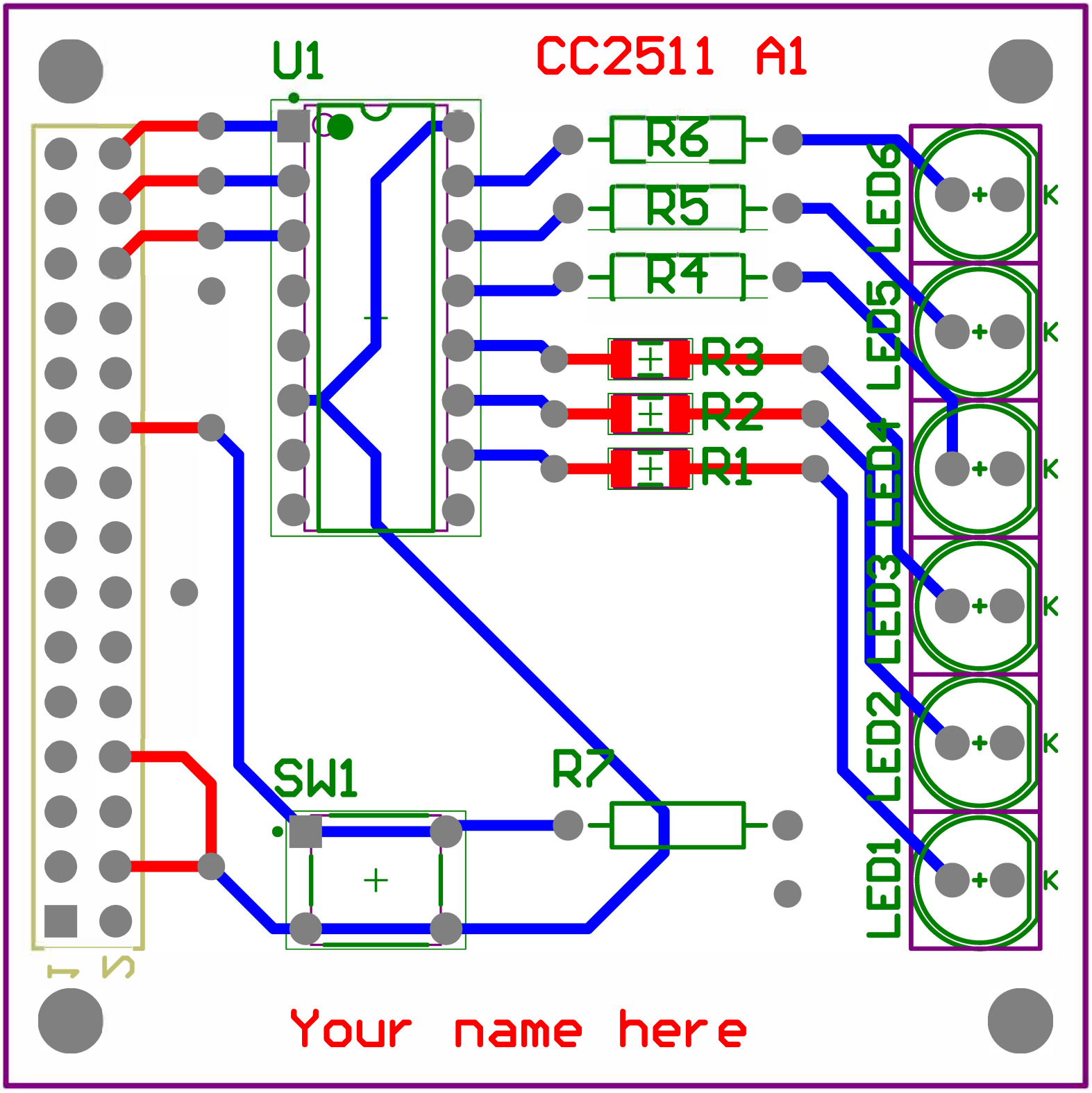
Switch



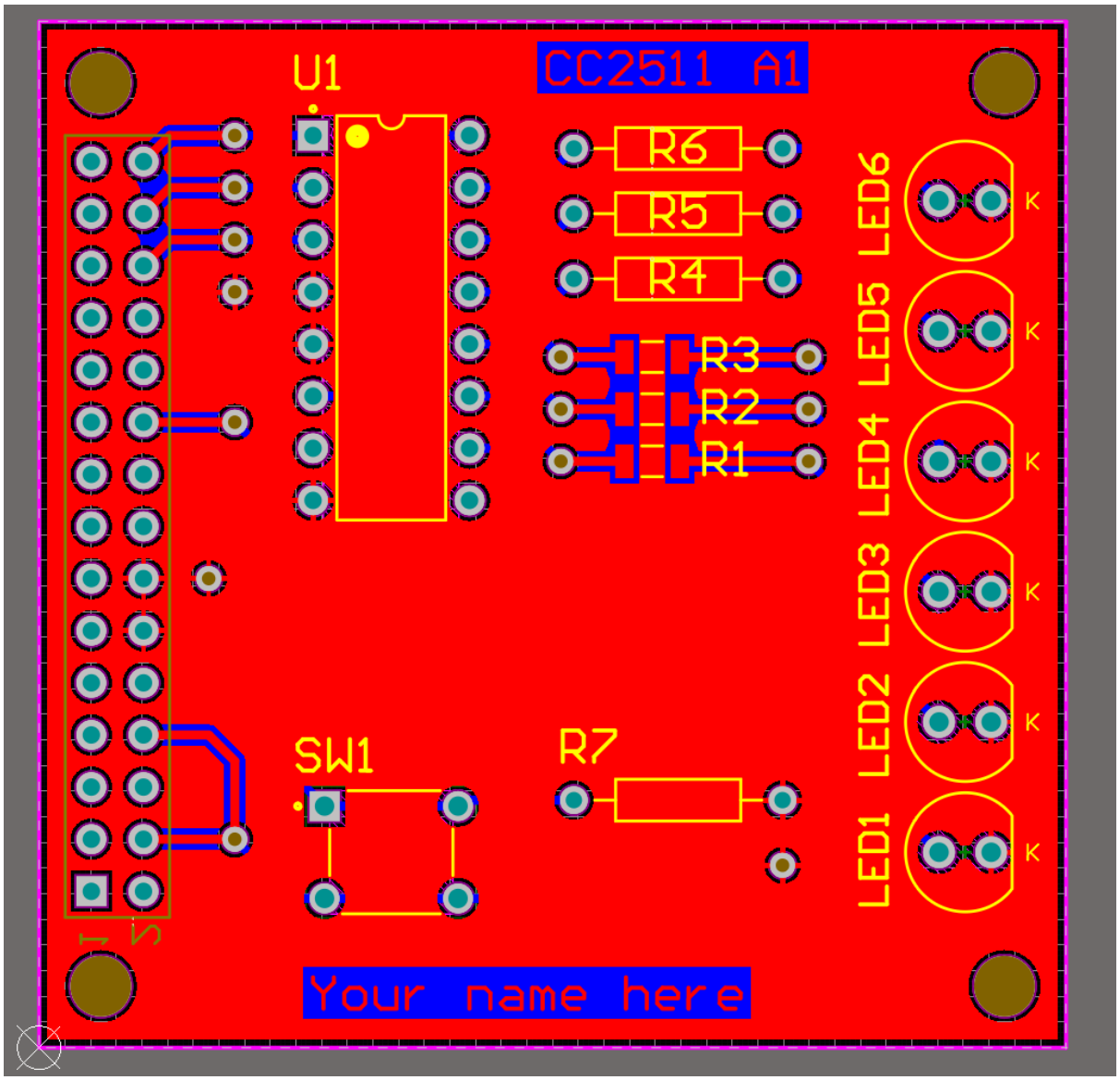
Search the vault for "tactile" to see several tactile switch footprints. This is the through-hole version.

CC2511 Assignment 1	Drawn by: Bronson Philippa	JAMES COOK UNIVERSITY AUSTRALIA
Sheet 1 of 1		
Date: 31/07/2019 Time: 1:45:31 PM	Revision: 1.3	
File: Main.SchDoc		

Note: ground plane polygons are not shown in this printout. You will also need to add ground planes to the top and bottom layers.



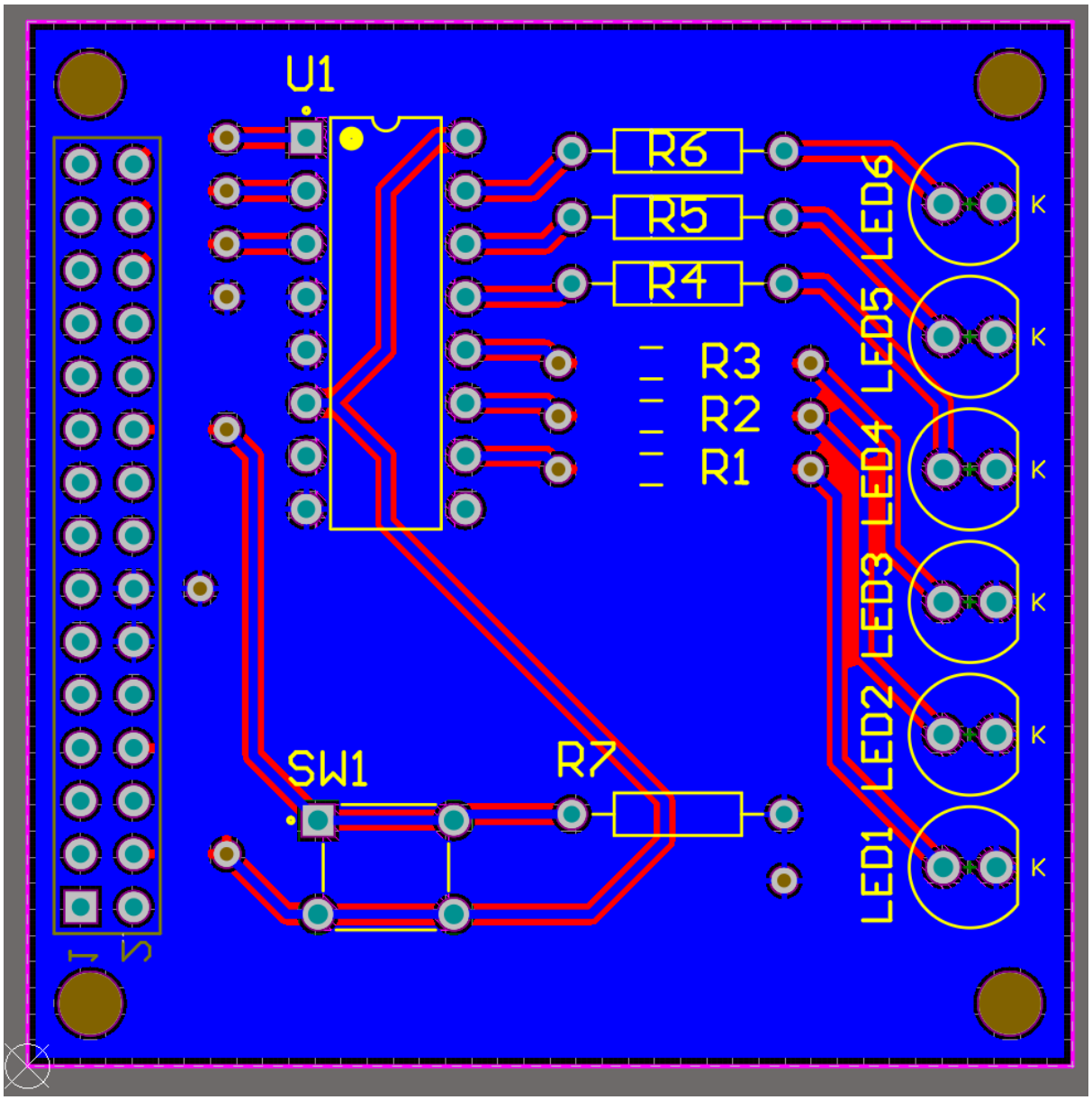
Screenshot of finished product, with top layer selected:



Checklist:

- 2 of the pins in the header are connected to both ground planes. You can see this by the thin tracks coming into the circle from top, bottom, left and right.
- The vias in the middle of the polygons are connected to ground. Again, notice the tracks connecting the vias to the polygons. If you don't see this, make sure your polygons and your vias both have their net set to GND.
- There is a keepout track (pink) around the outside of the board.
- Your name is placed on the top layer (red).

Screenshot of finished product, with bottom layer selected:



- As above, notice the connections to the ground polygon at the header, vias, and many of the components.

Photo of finished product:

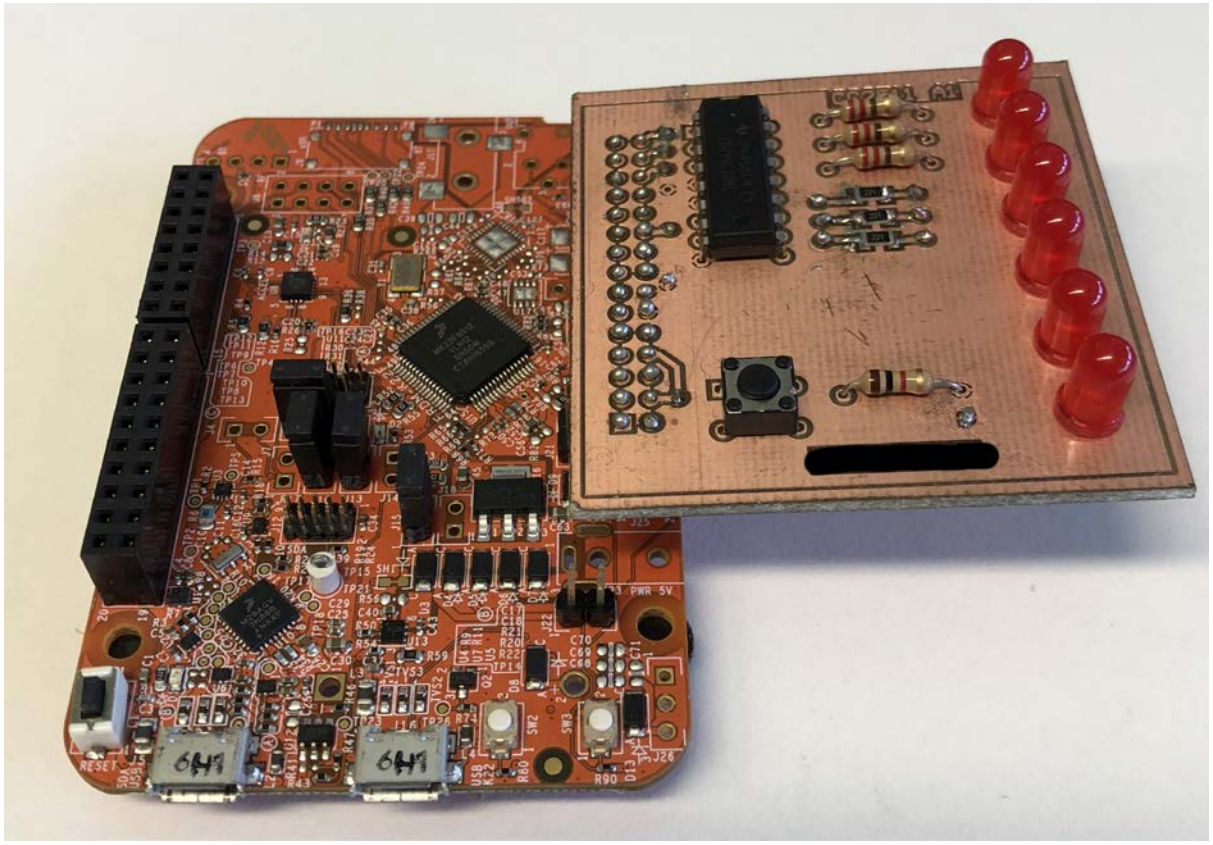


Photo of underside of PCB: