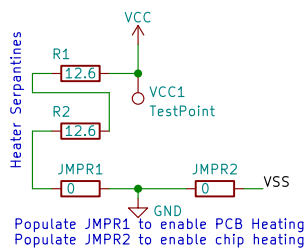
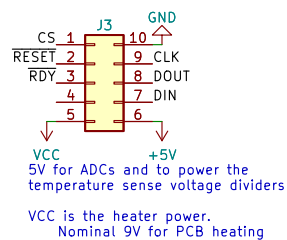


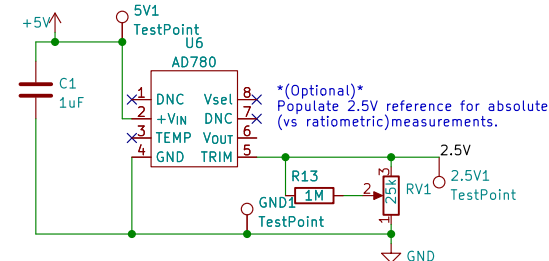
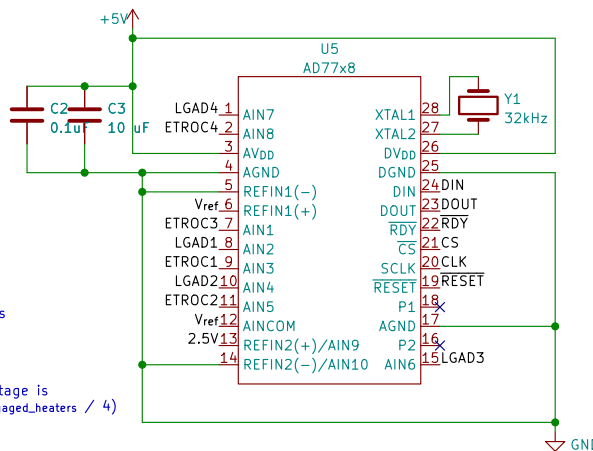
Single Resistance:
 $R = 34.6 \cdot T [C] + 9600$
 Four in Series:
 $R_{ser} = 4 \cdot R = 138.4 \cdot T [C] + 38400$
 $V_{sense} = V \cdot (R_{ser} / (R_{ser} + 40k))$
 $\rightarrow 4.5mV/[C]$ near $T=0 [C]$



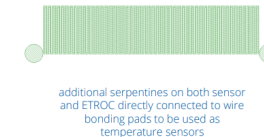
Populate JMPR1 to enable PCB Heating
 Populate JMPR2 to enable chip heating



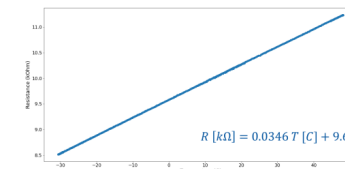
VCC is the heater power.
 Nominal 9V for PCB heating
 For chip heating, Nominal voltage is
 $V = \sqrt{3.2 \cdot 150 \cdot N_{engaged_heaters} / 4}$



New dummies: serpentes as temperature sensors



additional serpentes on both sensor
 and ETROC directly connected to wire
 bonding pads to be used as
 temperature sensors



Sheet: /
 File: etl_module_pcb_thermal_mockup_v3.kicad_sch

Title:

Size: A4
 KiCad E.D.A. kicad (6.0.11)

Date:
 Rev:
 Id: 1/1