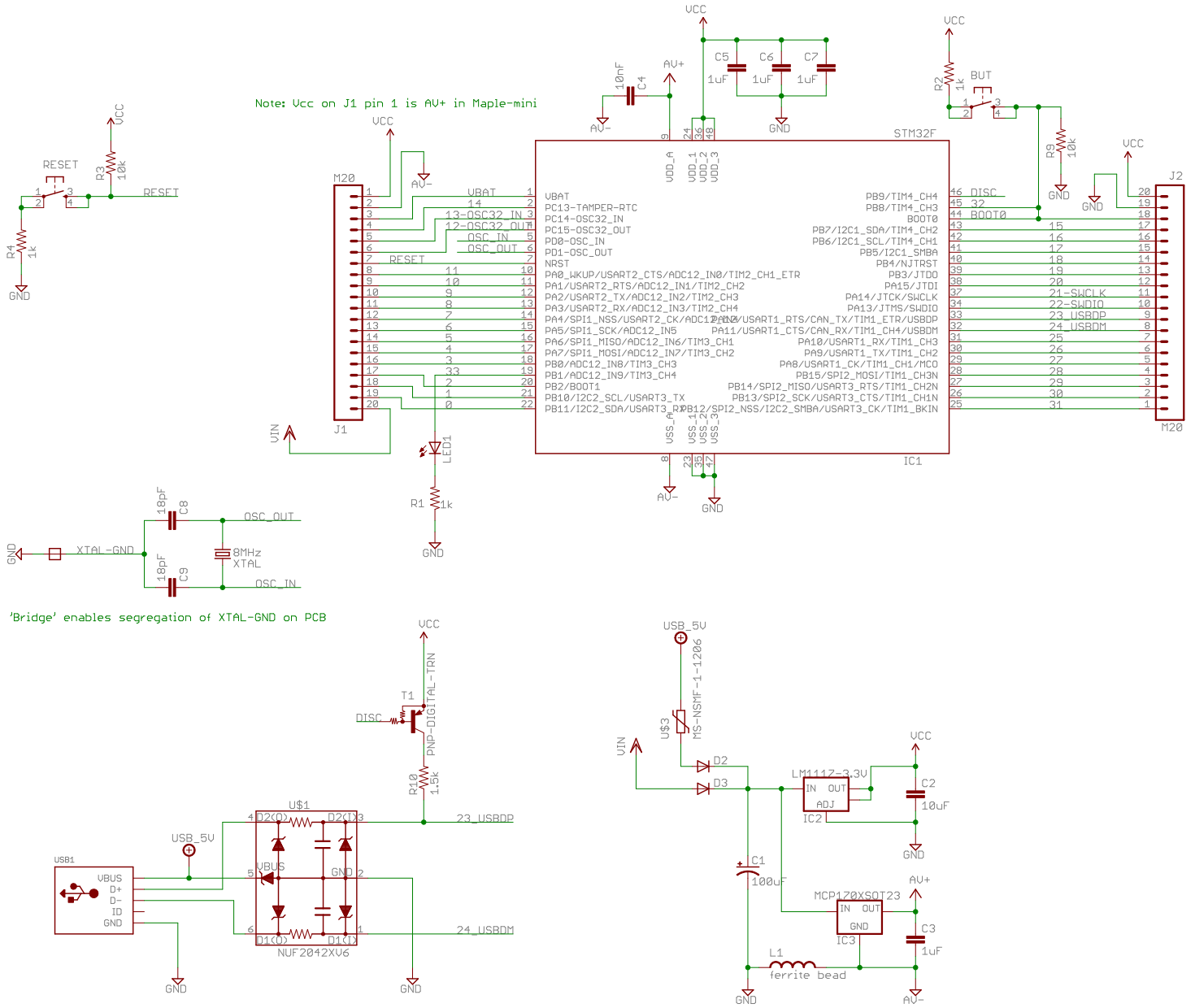

NOTES

+ Improved digital power regulator MCP1700T
  with LM117 to increase power capacity & voltage tolerance

+ Improved 7-component USB "rup" resistor control with
  two component 'digital' PNP + pull-up (siy's mini48 inspired)

+ Improved discrete component USB termination & filter
  with NUF2042 integrated USB upstream ESD & filter

+ Added Vusb protection with Polyfuse

= Replaced SMD USB socket, buttons & LED with through-hole
= Changed all 0402 capacitors & resistors to 0805
= Replaced 0603 Ferrite Bead with 0805

= Retained (vs mini48) BUT/BOOT0 1k pull-up (R2)
  This protects external device pins from
  accidental BUT button push

= Retained (vs mini48) RESET 1k pull-down (R4)
  This protects external device pins from
  accidental RESET button push

- Did not add mini48's capacitor across RESET button
  ST documentation says NRST has 2.5ms time delay.
  I assUme that debounces RESET button (confirm?)
  Ref: RM0008 7.1.2 Power Reset
  STM32F103x8 STM32FxB Datasheet (CD00161566 rev 14)

- Did not add 32.76kHz RTC Crystal+caps

? Replace AV+ pin with Vcc connection, retain MCP170x
? Retain AV- (AGND)
  MCP170x likely okay at higher voltages when only driving ADC.
  However drawing more than a few mA current
  when Vin > 7-9V may damage it. This removes value of AV+

Orone-mini-T6-v0Xr001

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Derived from Maple mini by okie
and Mini48 by siy at
https://github.com/siy/openstm32hw

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