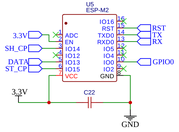
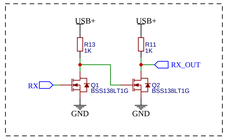


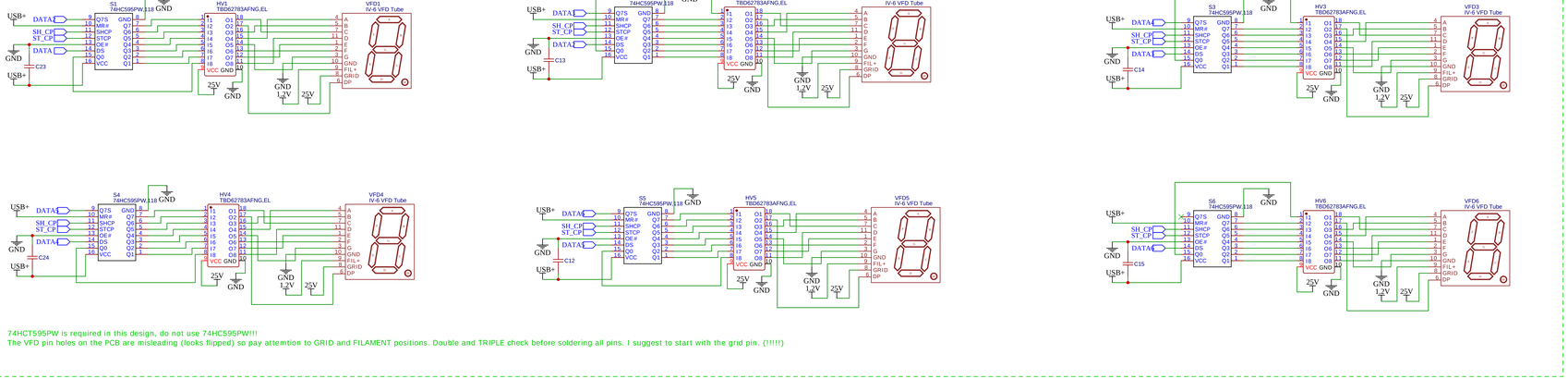
ESP-M2 is used for its tiny footprint

GPIO4, GPIO5 and GPIO12 are unused in the design and perfect for any use.

3.3V to 5V Level shifting for WS2812

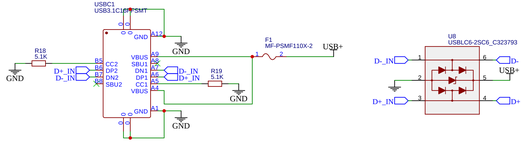


VFD + shift registers

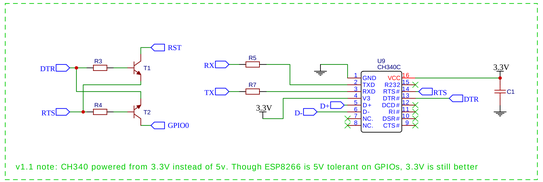


74HCT595PW is required in this design, do not use 74HC595PW!!!

The VFD pin holes on the PCB are misleading (looks flipped) so pay attemtion to GRID and FILAMENT positions. Double and TRIPLE check before soldering all pins. I suggest to start with the grid pin. (!!!!!)

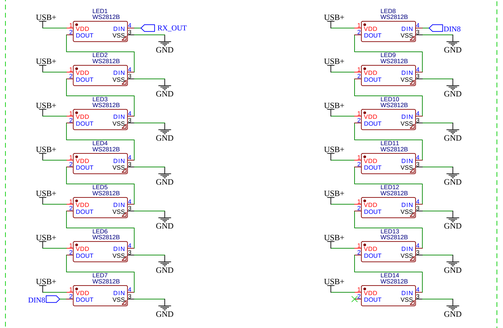


USB to SERIAL + auto-reset



v1.1 note: CH340 powered from 3.3V instead of 5v. Though ESP8266 is 5V tolerant on GPIOs, 3.3V is still better

Colon leds

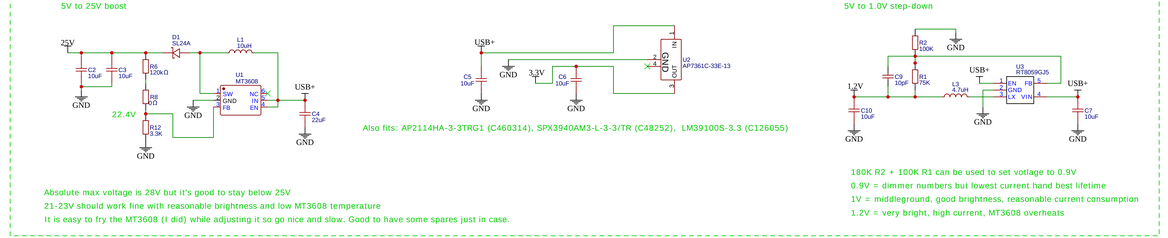


Powered from 3.3V for lower brightness + no level shifter required. Out of spec but tested on several different chips

Depending on exact chip used, you will have to adjust colors in the sketch

WS2812B are almost too bright. WS2812C (lcsc C114587) recommended for lower max brightness.

3.3V, 25V, 1.2V voltages



TITLE:	FLORA IV-6 VFD Clock	REV: 1.1
EasyEDA	Company:	Sheet: 1/1
	Date: 2020-12-21	Drawn By: NiceThings