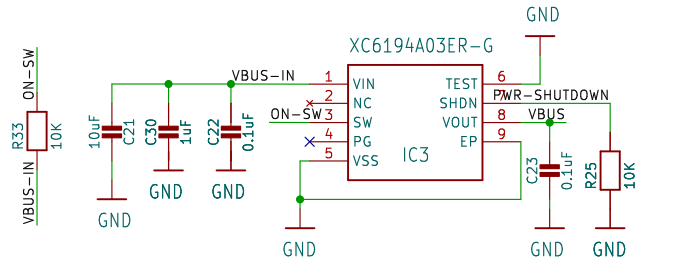


POWER SWITCH

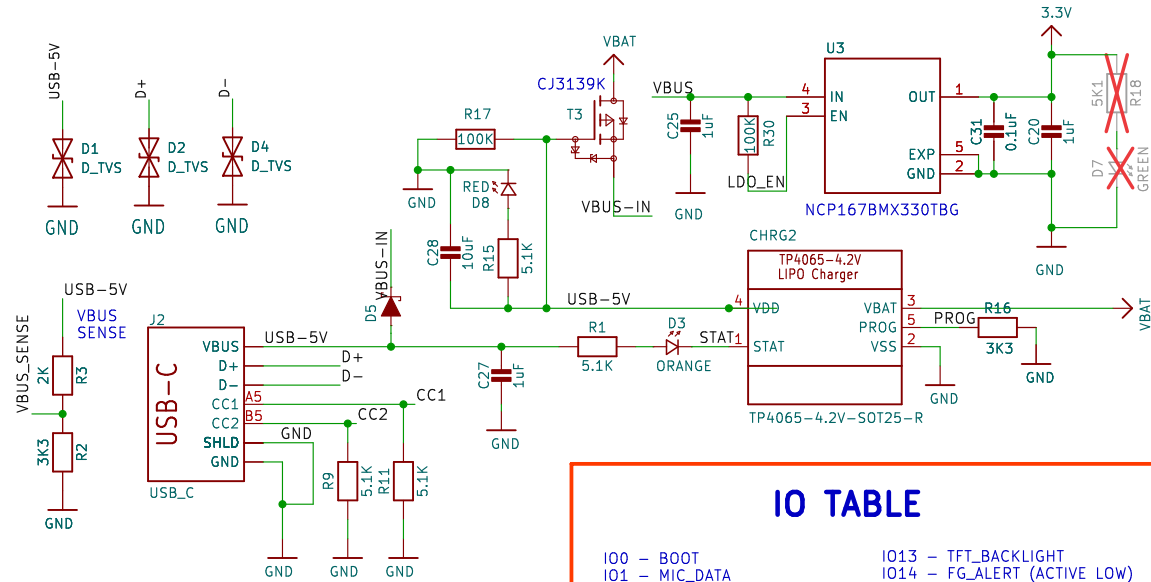
The diagram illustrates a power switch circuit using the XC6194A03ER-G IC. The circuit includes a 10K resistor (R33) on the VBUS-IN line, a 10uF capacitor (C21) on the VBUS-IN to GND, a 1uF capacitor (C30) on the VBUS-IN to GND, a 1uF capacitor (C22) on the VBUS-IN to GND, a 0.1uF capacitor (C23) on the PWR-SHUTDOWN pin to GND, and a 10K resistor (R25) on the PWR-SHUTDOWN pin to GND. The IC is labeled IC3.



USB, POWER PATHS, CHARGING AND FILTERING

The schematic diagram illustrates the USB, power paths, charging, and filtering for the NCP167BMX330TBG. Key components and connections include:

- USB-C Connector (J2):** Connected to the USB-C controller (U3) and the power management IC (U3).
- USB-C Controller (U3):** Manages USB data and power. Pins include VBUS, D+, D-, CC1, CC2, SHLD, and GND.
- Power Management IC (U3):** NCP167BMX330TBG, which includes a TP4065-4.2V Lipo Charger (U3) and a TP4065-4.2V-SOT25-R (U3).
- Charging and Filtering:** Includes components like R17 (100K), R15 (5.1K), R16 (3K3), R18 (5K1), R19 (5.1K), R20 (100K), R21 (5.1K), R22 (5.1K), R23 (5.1K), R24 (5.1K), R25 (5.1K), R26 (5.1K), R27 (5.1K), R28 (5.1K), R29 (5.1K), R30 (5.1K), R31 (5.1K), R32 (5.1K), R33 (5.1K), R34 (5.1K), R35 (5.1K), R36 (5.1K), R37 (5.1K), R38 (5.1K), R39 (5.1K), R40 (5.1K), R41 (5.1K), R42 (5.1K), R43 (5.1K), R44 (5.1K), R45 (5.1K), R46 (5.1K), R47 (5.1K), R48 (5.1K), R49 (5.1K), R50 (5.1K), R51 (5.1K), R52 (5.1K), R53 (5.1K), R54 (5.1K), R55 (5.1K), R56 (5.1K), R57 (5.1K), R58 (5.1K), R59 (5.1K), R60 (5.1K), R61 (5.1K), R62 (5.1K), R63 (5.1K), R64 (5.1K), R65 (5.1K), R66 (5.1K), R67 (5.1K), R68 (5.1K), R69 (5.1K), R70 (5.1K), R71 (5.1K), R72 (5.1K), R73 (5.1K), R74 (5.1K), R75 (5.1K), R76 (5.1K), R77 (5.1K), R78 (5.1K), R79 (5.1K), R80 (5.1K), R81 (5.1K), R82 (5.1K), R83 (5.1K), R84 (5.1K), R85 (5.1K), R86 (5.1K), R87 (5.1K), R88 (5.1K), R89 (5.1K), R90 (5.1K), R91 (5.1K), R92 (5.1K), R93 (5.1K), R94 (5.1K), R95 (5.1K), R96 (5.1K), R97 (5.1K), R98 (5.1K), R99 (5.1K), R100 (5.1K).



I00	= BOOT	I013	= TFT_BACKLIGHT
I01	= MIC_DATA	I014	= FG_ALERT (ACTIVE LOW)
I02	= MIC_BCLK	I015	= TFT_DC
I03	= MIC_WS	I016	= TFT_CS
I04	= RTC_INT (ACTIVE LOW)	I017	= TFT_RESET
I05	= I2C2 - SDA (TOUCH)	I018	= BUZZER
I06	= BM1270_INT1	I020	= PWR - SHUTDOWN
I07	= BM1270_INT2	I033	= USER_FLASH_CS
I08	= I2C - SDA	I034	= VBUS_SENSE
I09	= I2C - SCL	I035	= SPL_MOSI
I010	= I2C2 - SCL (TOUCH)	I036	= SPL_SCK
I011	= TOUCH_INT	I037	= SPL_MISO
I012	= TOUCH_RESET		

IMU + MAGNETOMETER

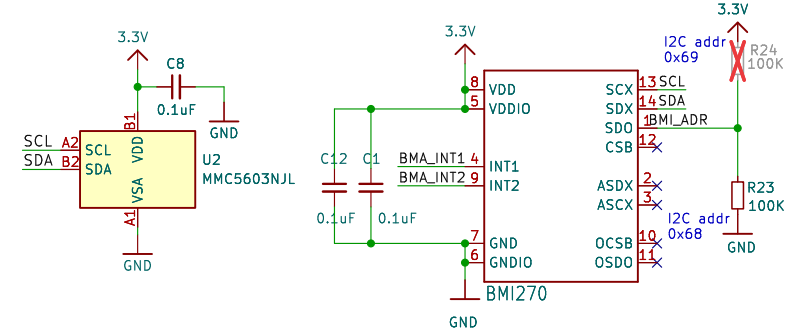
The diagram shows two separate circuit boards connected to a common I2C bus. The first board contains an IMU (MMC5603JNL) and the second board contains a Magnetometer (BMA270).

IMU (MMC5603JNL) Connections:

- VDD:** Connected to 3.3V.
- VSA:** Connected to GND.
- SCL:** Connected to I2C SCL (pin A2).
- SDA:** Connected to I2C SDA (pin B2).
- Capacitors:** A 0.1uF capacitor (C8) is connected between VDD and GND.

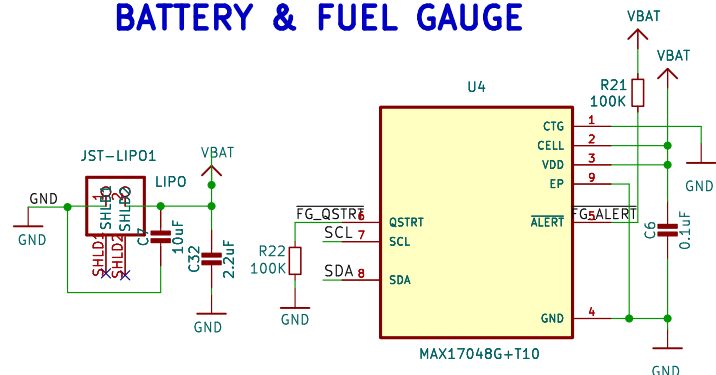
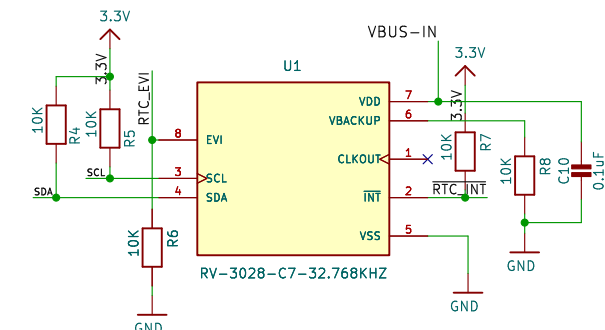
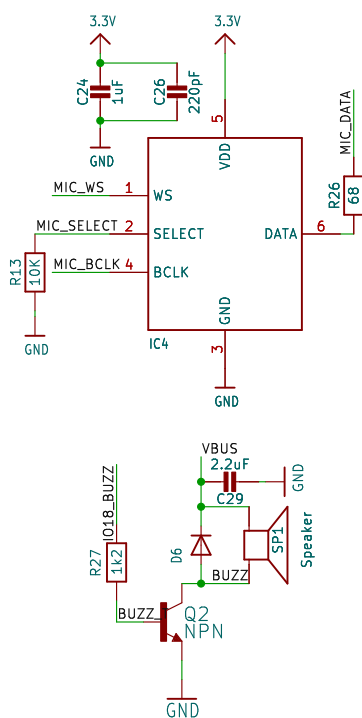
Magnetometer (BMA270) Connections:

- VDD:** Connected to 3.3V.
- VDDIO:** Connected to 3.3V.
- INT1:** Connected to GND.
- INT2:** Connected to GND.
- GND:** Connected to GND.
- GNDIO:** Connected to GND.
- Capacitors:** Two 0.1uF capacitors (C1, C2) are connected between VDD and GND.
- I2C Address:** The BMA270 is configured for I2C address 0x68 (B1).
- I2C Connections:**
 - SCL:** Connected to I2C SCL (pin 13).
 - SDA:** Connected to I2C SDA (pin 14).
 - CSB:** Connected to I2C CSB (pin 12).
 - ASDX:** Connected to GND (pin 2).
 - ASCS:** Connected to GND (pin 3).
 - OCSB:** Connected to GND (pin 10).
 - OSDO:** Connected to GND (pin 11).
- Resistors:** A 100k resistor (R23) is connected between SCL and GND. A 100k resistor (R24) is connected between SDA and GND.



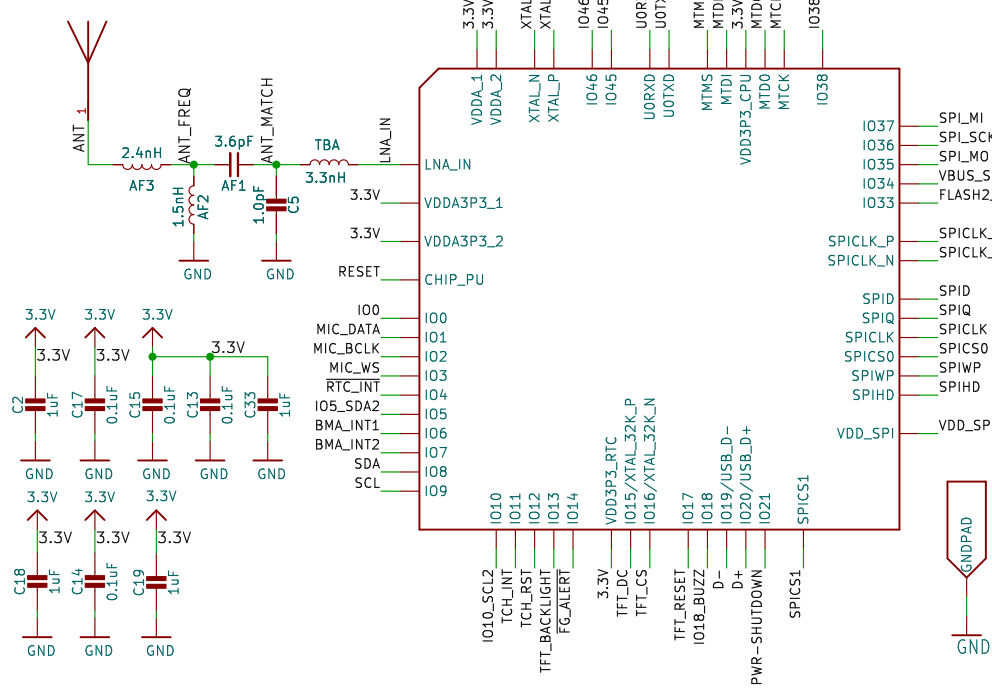
BATTERY & FUEL GAUGE

The diagram illustrates the connection of a MAX17048G+T10 IC (U4) for battery and fuel gauge applications. The IC is connected to a JST-LIPO01 battery (GND, SHLD, SHLD, SHLD, SHLD, LIPO) and a VBAT supply. The circuit includes a 100K resistor (R21) connected to VBAT, a 100K resistor (R22) connected to FG_QSTRT, and a 0.1uF capacitor (C6) connected to G5_ALERT. The IC pins are labeled: CTG, CELL, VDD, EP, ALERT, G5_ALERT, GND, and 4. The IC is identified as MAX17048G+T10.

[illegible][illegible]

The schematic diagram illustrates the pin connections for the ESP32-S3-PICO-1-N8R2 module. The module is shown as a central component with various pins and their corresponding connections. The connections are as follows:

- Antenna:** ANT_1 is connected to an antenna.
- Power and Ground:**
 - VDDA_1, VDDA_2, VDDA_3P_1, VDDA_3P_2, VDDA_3P_3, VDDA_3P_4, VDDA_3P_5, VDDA_3P_6, VDDA_3P_7, VDDA_3P_8, VDDA_3P_9, VDDA_3P_10, VDDA_3P_11, VDDA_3P_12, VDDA_3P_13, VDDA_3P_14, VDDA_3P_15, VDDA_3P_16, VDDA_3P_17, VDDA_3P_18, VDDA_3P_19, VDDA_3P_20, VDDA_3P_21, VDDA_3P_22, VDDA_3P_23, VDDA_3P_24, VDDA_3P_25, VDDA_3P_26, VDDA_3P_27, VDDA_3P_28, VDDA_3P_29, VDDA_3P_30, VDDA_3P_31, VDDA_3P_32, VDDA_3P_33, VDDA_3P_34, VDDA_3P_35, VDDA_3P_36, VDDA_3P_37, VDDA_3P_38, VDDA_3P_39, VDDA_3P_40, VDDA_3P_41, VDDA_3P_42, VDDA_3P_43, VDDA_3P_44, VDDA_3P_45, VDDA_3P_46, VDDA_3P_47, VDDA_3P_48, VDDA_3P_49, VDDA_3P_50, VDDA_3P_51, VDDA_3P_52, VDDA_3P_53, VDDA_3P_54, VDDA_3P_55, VDDA_3P_56, VDDA_3P_57, VDDA_3P_58, VDDA_3P_59, VDDA_3P_60, VDDA_3P_61, VDDA_3P_62, VDDA_3P_63, VDDA_3P_64, VDDA_3P_65, VDDA_3P_66, VDDA_3P_67, VDDA_3P_68, VDDA_3P_69, VDDA_3P_70, VDDA_3P_71, VDDA_3P_72, VDDA_3P_73, VDDA_3P_74, VDDA_3P_75, VDDA_3P_76, VDDA_3P_77, VDDA_3P_78, VDDA_3P_79, VDDA_3P_80, VDDA_3P_81, VDDA_3P_82, VDDA_3P_83, VDDA_3P_84, VDDA_3P_85, VDDA_3P_86, VDDA_3P_87, VDDA_3P_88, VDDA_3P_89, VDDA_3P_90, VDDA_3P_91, VDDA_3P_92, VDDA_3P_93, VDDA_3P_94, VDDA_3P_95, VDDA_3P_96, VDDA_3P_97, VDDA_3P_98, VDDA_3P_99, VDDA_3P_100, VDDA_3P_101, VDDA_3P_102, VDDA_3P_103, VDDA_3P_104, VDDA_3P_105, VDDA_3P_106, VDDA_3P_107, VDDA_3P_108, VDDA_3P_109, VDDA_3P_110, VDDA_3P_111, VDDA_3P_112, VDDA_3P_113, VDDA_3P_114, VDDA_3P_115, VDDA_3P_116, VDDA_3P_117, VDDA_3P_118, VDDA_3P_119, VDDA_3P_120, VDDA_3P_121, VDDA_3P_122, VDDA_3P_123, VDDA_3P_124, VDDA_3P_125, VDDA_3P_126, VDDA_3P_127, VDDA_3P_128, VDDA_3P_129, VDDA_3P_130, VDDA_3P_131, VDDA_3P_132, VDDA_3P_133, VDDA_3P_134, VDDA_3P_135, VDDA_3P_136, VDDA_3P_137, VDDA_3P_138, VDDA_3P_139, VDDA_3P_140, VDDA_3P_141, VDDA_3P_142, VDDA_3P_143, VDDA_3P_144, VDDA_3P_145, VDDA_3P_146, VDDA_3P_147, VDDA_3P_148, VDDA_3P_149, VDDA_3P_150, VDDA_3P_151, VDDA_3P_152, VDDA_3P_153, VDDA_3P_154, VDDA_3P_155, VDDA_3P_156, VDDA_3P_157, VDDA_3P_158, VDDA_3P_159, VDDA_3P_160, VDDA_3P_161, VDDA_3P_162, VDDA_3P_163, VDDA_3P_164, VDDA_3P_165, VDDA_3P_166, VDDA_3P_167, VDDA_3P_168, VDDA_3P_169, VDDA_3P_170, VDDA_3P_171, VDDA_3P_172, VDDA_3P_173, VDDA_3P_174, VDDA_3P_175, VDDA_3P_176, VDDA_3P_177, VDDA_3P_178, VDDA_3P_179, VDDA_3P_180, VDDA_3P_181, VDDA_3P_182, VDDA_3P_183, VDDA_3P_184, VDDA_3P_185, VDDA_3P_186, VDDA_3P_187, VDDA_3P_188, VDDA_3P_189, VDDA_3P_190, VDDA_3P_191, VDDA_3P_192, VDDA_3P_193, VDDA_3P_194, VDDA_3P_195, VDDA_3P_196, VDDA_3P_197, VDDA_3P_198, VDDA_3P_199, VDDA_3P_200, VDDA_3P_201, VDDA_3P_202, VDDA_3P_203, VDDA_3P_204, VDDA_3P_205, VDDA_3P_206, VDDA_3P_207, VDDA_3P_208, VDDA_3P_209, VDDA_3P_210, VDDA_3P_211, VDDA_3P_212, VDDA_3P_213, VDDA_3P_214, VDDA_3P_215, VDDA_3P_216, VDDA_3P_217, VDDA_3P_218, VDDA_3P_219, VDDA_3P_220, VDDA_3P_221, VDDA_3P_222, VDDA_3P_223, VDDA_3P_224, VDDA_3P_225, VDDA_3P_226, VDDA_3P_227, VDDA_3P_228, VDDA_3P_229, VDDA_3P_230, VDDA_3P_231, VDDA_3P_232, VDDA_3P_233, VDDA_3P_234, VDDA_3P_235, VDDA_3P_236, VDDA_3P_237, VDDA_3P_238, VDDA_3P_239, VDDA_3P_240, VDDA_3P_241, VDDA_3P_242, VDDA_3P_243, VDDA_3P_244, VDDA_3P_245, VDDA_3P_246, VDDA_3P_247, VDDA_3P_248, VDDA_3P_249, VDDA_3P_250, VDDA_3P_251, VDDA_3P_252, VDDA_3P_253, VDDA_3P_254, VDDA_3P_255, VDDA_3P_256, VDDA_3P_257, VDDA_3P_258, VDDA_3P_259, VDDA_3P_260, VDDA_3P_261, VDDA_3P_262, VDDA_3P_263, VDDA_3P_264, VDDA_3P_265, VDDA_3P_266, VDDA_3P_267, VDDA_3P_268, VDDA_3P_269, VDDA_3P_270, VDDA_3P_271, VDDA_3P_272, VDDA_3P_273, VDDA_3P_274, VDDA_3P_275, VDDA_3P_276, VDDA_3P_277, VDDA_3P_278, VDDA_3P_279, VDDA_3P_280, VDDA_3P_281, VDDA_3P_282, VDDA_3P_283, VDDA_3P_284, VDDA_3P_285, VDDA_3P_286, VDDA_3P_287, VDDA_3P_288, VDDA_3P_289, VDDA_3P_290, VDDA_3P_291, VDDA_3P_292, VDDA_3P_293, VDDA_3P_294, VDDA_3P_295, VDDA_3P_296, VDDA_3P_297, VDDA_3P_298, VDDA_3P_299, VDDA_3P_300, VDDA_3P_301, VDDA_3P_302, VDDA_3P_303, VDDA_3P_304, VDDA_3P_305, VDDA_3P_306, VDDA_3P_307, VDDA_3P_308, VDDA_3P_309, VDDA_3P_310, VDDA_3P_311, VDDA_3P_312, VDDA_3P_313, VDDA_3P_314, VDDA_3P_315, VDDA_3P_316, VDDA_3P_317, VDDA_3P_318, VDDA_3P_319, VDDA_3P_320, VDDA_3P_321, VDDA_3P_322, VDDA_3P_323, VDDA_3P_324, VDDA_3P_325, VDDA_3P_326, VDDA_3P_327, VDDA_3P_328, VDDA_3P_329, VDDA_3P_330, VDDA_3P_331, VDDA_3P_332, VDDA_3P_333, VDDA_3P_334, VDDA_3P_335, VDDA_3P_336, VDDA_3P_337, VDDA_3P_338, VDDA_3P_339, VDDA_3P_340, VDDA_3P_341, VDDA_3P_342, VDDA_3P_343, VDDA_3P_344, VDDA_3P_345, VDDA_3P_346, VDDA_3P_347, VDDA_3P_348, VDDA_3P_349, VDDA_3P_350, VDDA_3P_351, VDDA_3P_352, VDDA_3P_353, VDDA_3P_354, VDDA_3P_355, VDDA_3P_356, VDDA_3P_357, VDDA_3P_358, VDDA_3P_359, VDDA_3P_360, VDDA_3P_361, VDDA_3P_362, VDDA_3P_363, VDDA_3P_364, VDDA_3P_365,

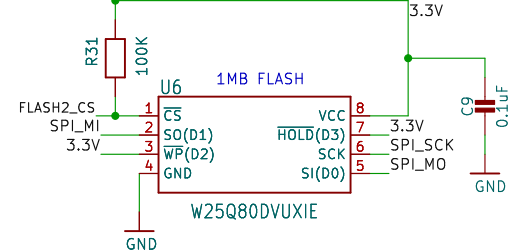


USER FLASH

The diagram illustrates the connection of a W25Q80DVUXIE 1MB flash chip (U6) to a 3.3V supply and ground. The chip is connected as follows:

- VCC (Pin 8):** Connected to the 3.3V supply.
- GND (Pin 4):** Connected to ground.
- CS (Pin 1):** Connected to the 3.3V supply through a 100K resistor (R31).
- SPI_M0 (Pin 5):** Connected to the 3.3V supply.
- SPI_SCK (Pin 6):** Connected to the 3.3V supply.
- SI(D0) (Pin 5):** Connected to the 3.3V supply.
- SCK (Pin 6):** Connected to the 3.3V supply.
- SD(D1) (Pin 3):** Connected to the 3.3V supply.
- WP(D2) (Pin 4):** Connected to ground.
- FLASH2_CS (Pin 1):** Connected to the 3.3V supply through a 100K resistor (R31).
- SPI_M1 (Pin 2):** Connected to the 3.3V supply.

The chip is labeled "1MB FLASH" and "W25Q80DVUXIE". A 0.1uF capacitor (C9) is connected between the 3.3V supply and ground.



BUTTONS

POWER

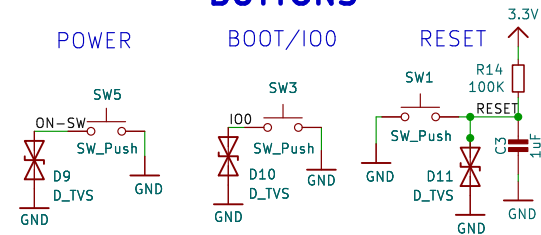
ON-SW SW5
D9 D_TVS
SW_Push
GND

BOOT/I/OO

SW3
100
SW_Push
D10 D_TVS
GND

RESET

SW1
SW_Push
D11 D_TVS
R14 100K
3.3V
1uF
GND



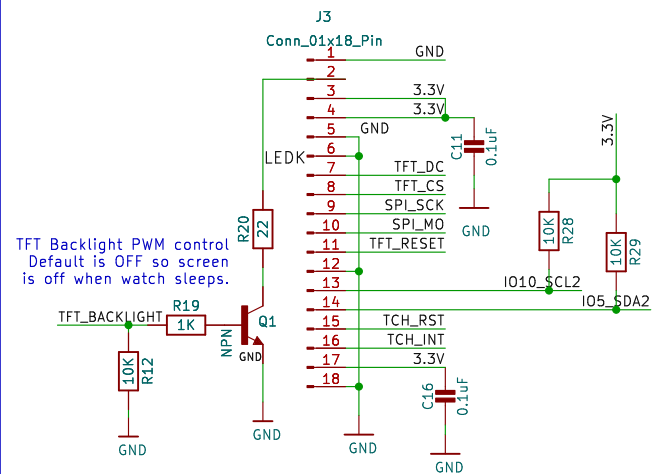
SCREEN + TOUCH

TFT Backlight PWM control
Default is OFF so screen
is off when watch sleeps.

J3
Conn_01x18_Pin

1 GND
2 3.3V
3 3.3V
4 GND
5 LEDK
6 TFT_DC
7 TFT_CS
8 SPI_SCK
9 SPI_M0
10 TFT_RESET
11 GND
12 IO10_SCL2
13 TCH_RST
14 TCH_INT
15 3.3V
16 GND

R20 22K
R22 22K
R19 1K
R12 10K
R28 10K
R29 10K
C11 0.1uF
C16 0.1uF
Q1 NPN
GND



Id: 1/1