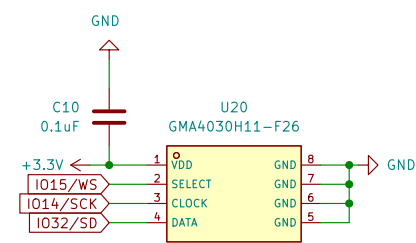
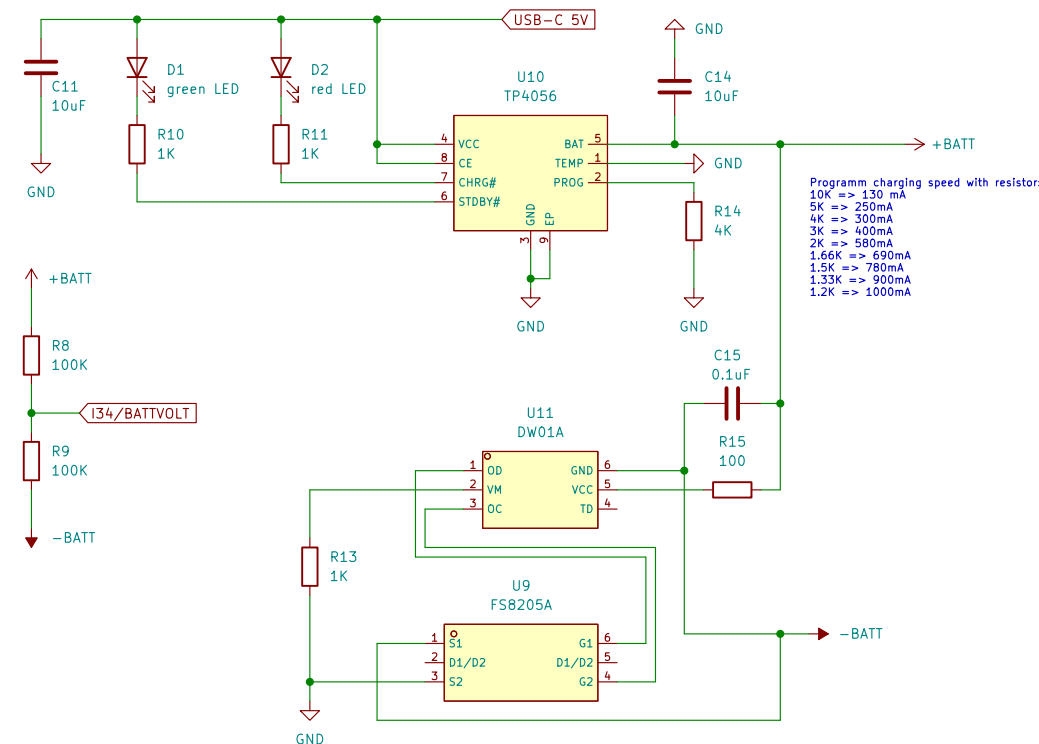


The diagram shows a microphone circuit. A yellow rectangular component labeled 'U20 GMA4030W11-F26' is connected to a +3.3V supply, GND, and a microphone input. The +3.3V supply is connected to pin 1 (VDD) and pin 4 (DATA). GND is connected to pin 2 (SELECT), pin 3 (CLOCK), and pin 5 (GND). The microphone input is connected to pin 6 (GND) and pin 7 (GND). The output of the microphone is connected to pin 8 (GND) and pin 9 (GND). The output signal is labeled 'MICROPHONE'.



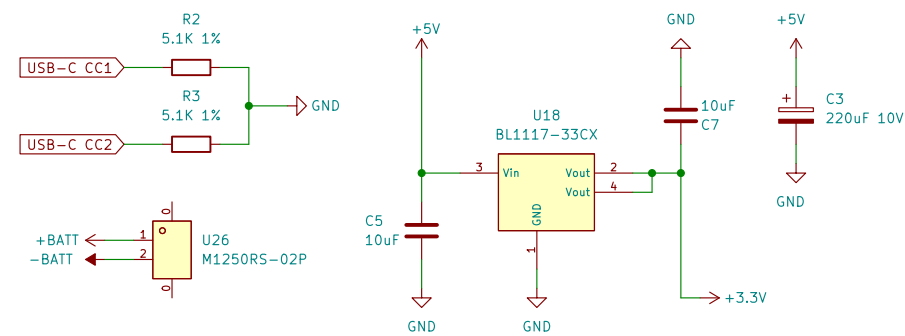
Programmable charging speed with resistor:

10K	=> 150 mA
5K	=> 250mA
4K	=> 300mA
3K	=> 400mA
2K	=> 500mA
1.66K	=> 600mA
1.5K	=> 700mA
1.33K	=> 900mA
1.2K	=> 1000mA



Power & filtering

The diagram illustrates a power and filtering circuit. It includes two USB-C connectors (CC1 and CC2) connected to resistors R2 and R3 (5.1K 1%) which are then connected to GND. A battery source (+BATT and -BATT) is connected to a voltage divider (U26, M1250RS-02P). The main power section features a 5V input connected to a 10uF capacitor (C5) and a voltage regulator (U18, BL1117-33CX). The regulator's output (Vout) is connected to a 10uF capacitor (C7) and a 3.3V output. A 220uF capacitor (C3) is also shown connected to the 5V input and GND.



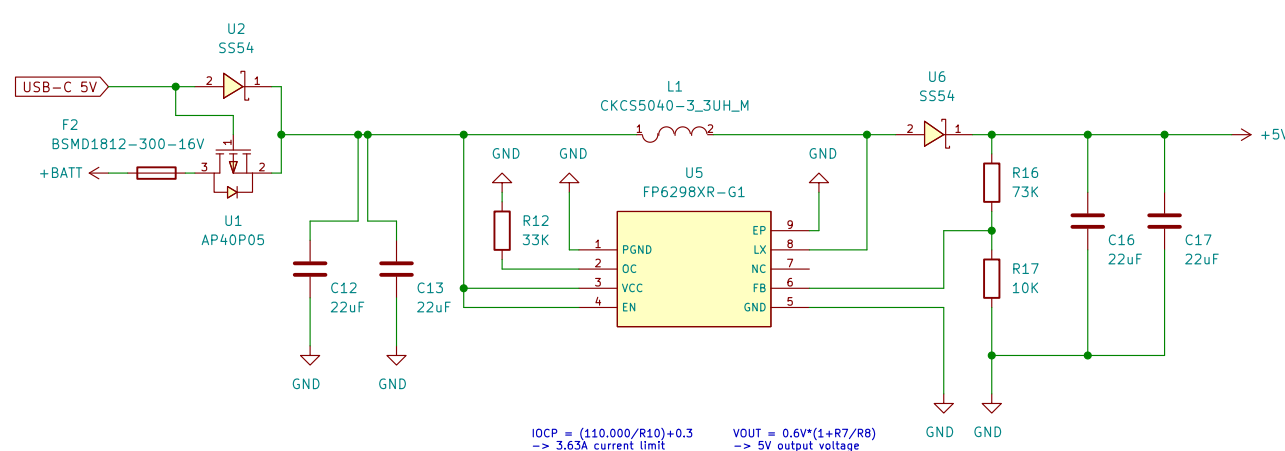
The diagram shows a 5V converter circuit. It starts with a USB-C 5V input connected to a MOSFET (U1, AP40P05) and a diode (U2, S554). The MOSFET's gate is driven by a BSM1812-300-16V MOSFET (F2). The MOSFET's drain is connected to a buck converter IC (U5, FP6298XR-G1) via an inductor (L1, CKCS5040-3.3uH_M). The buck converter's output is connected to a diode (U6, S554) and a filter network consisting of resistors R16 (73K), R17 (10K), and capacitors C16 (22uF) and C17 (22uF). The output is labeled +5V.

Key components and their values:

- U1: AP40P05
- U2: S554
- F2: BSM1812-300-16V
- U5: FP6298XR-G1
- L1: CKCS5040-3.3uH_M
- U6: S554
- R16: 73K
- R17: 10K
- C12: 22uF
- C13: 22uF
- C16: 22uF
- C17: 22uF

Calculations for the buck converter output:

$$I_{DCP} = \frac{(110,000/R_{10}) + 0.3}{1} \rightarrow 3.63A \text{ current limit}$$

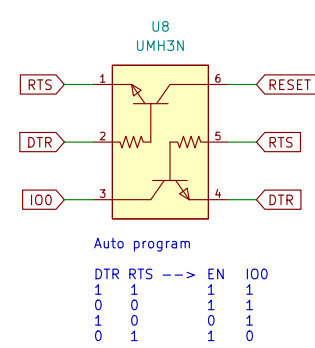
$$V_{OUT} = 0.6V \cdot (1 + R_7/R_8) \rightarrow 5V \text{ output voltage}$$


$I_{OCP} = (110.000/R10)+0.3$ $V_{OUT} = 0.6V \cdot (1+R7/R8)$
 $\rightarrow 3.63A$ current limit $\rightarrow 5V$ output voltage

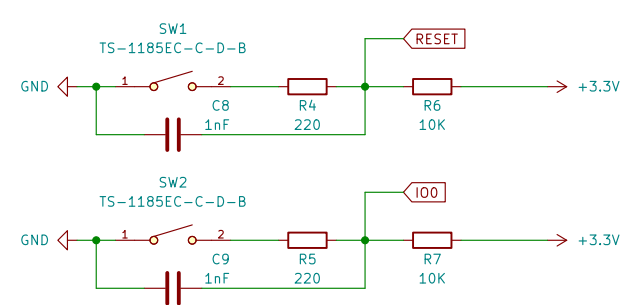
$$V_{OUT} = 0.6V \cdot (1 + R7/R8)$$

→ 5V output voltage

Autoreset



Reset



Main button

SW3
TS-1102S-C-A-B

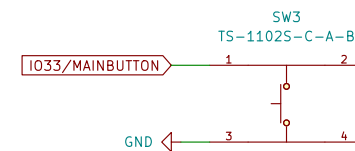
1033/MAINBUTTON

1 2

3 4

GND

Keep pressed to start/end deep sleep,
press once to cycle animations,
press twice or three times to switch to specific animation.



Keep pressed to start/end deep sleep.
press once to cycle animations.
press twice or three times to switch to specific animation

