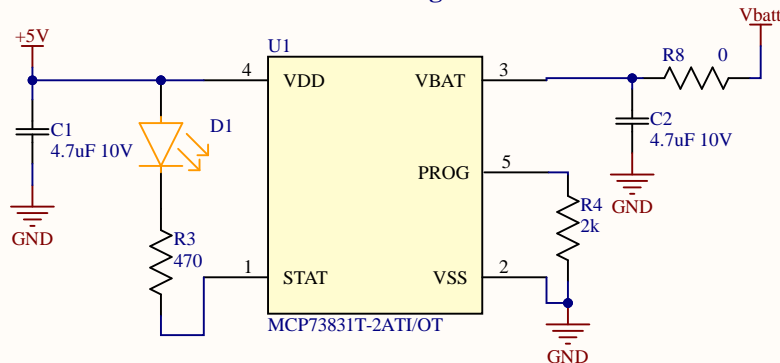
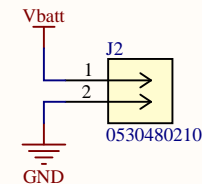


## Power Charger

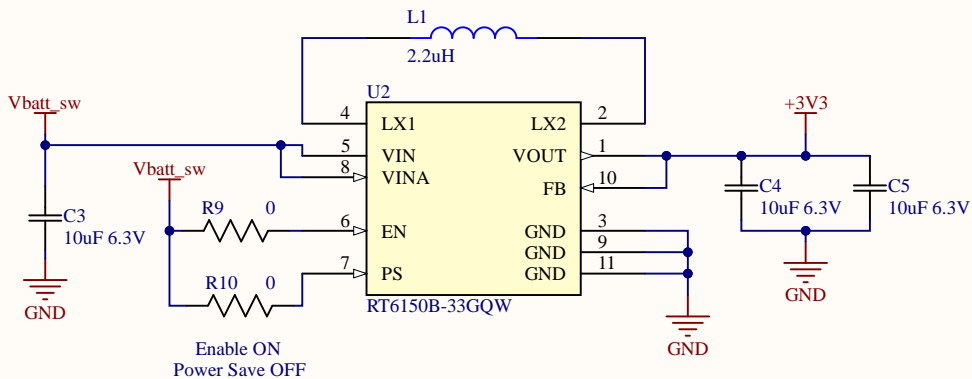


**Li Ion Battery**  
LP384260JU+PCM+MOLEX 51021-0200 35MM

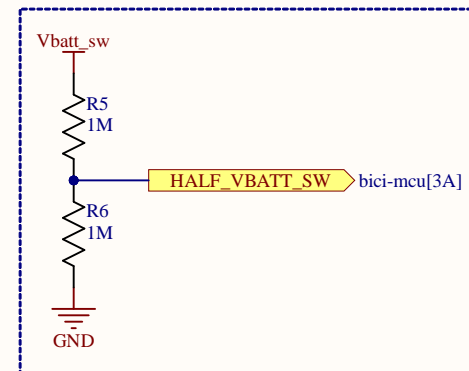


For best thermal performance, add vias from land area of EP to copper layer on opposite side of PCB

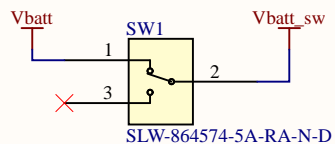
## Buck-Boost



## Low Power Detection

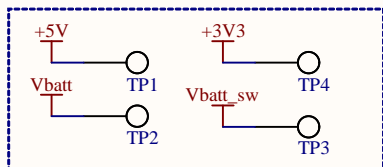


## Power Switch

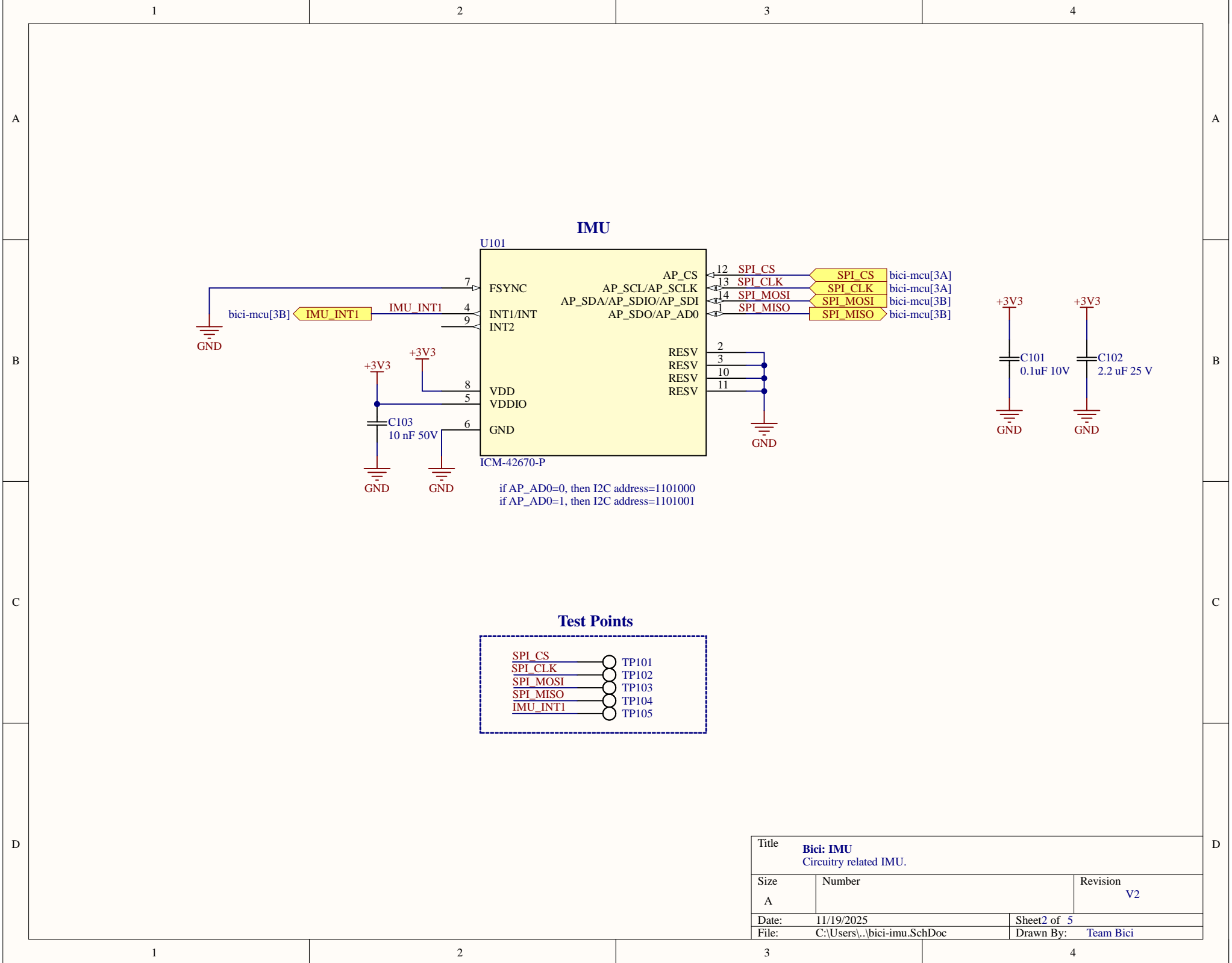


Switch in L position: ON  
Switch in R position: OFF

## Test Points



Title		
Bici: Power Management		
Circuitry related to system power and charging.		
Size	Number	Revision
A		V2
Date:	11/19/2025	Sheet1 of 5
File:	C:\Users\...\bici-power.SchDoc	Drawn By: Team Bici



1

2

3

4

A

A

B

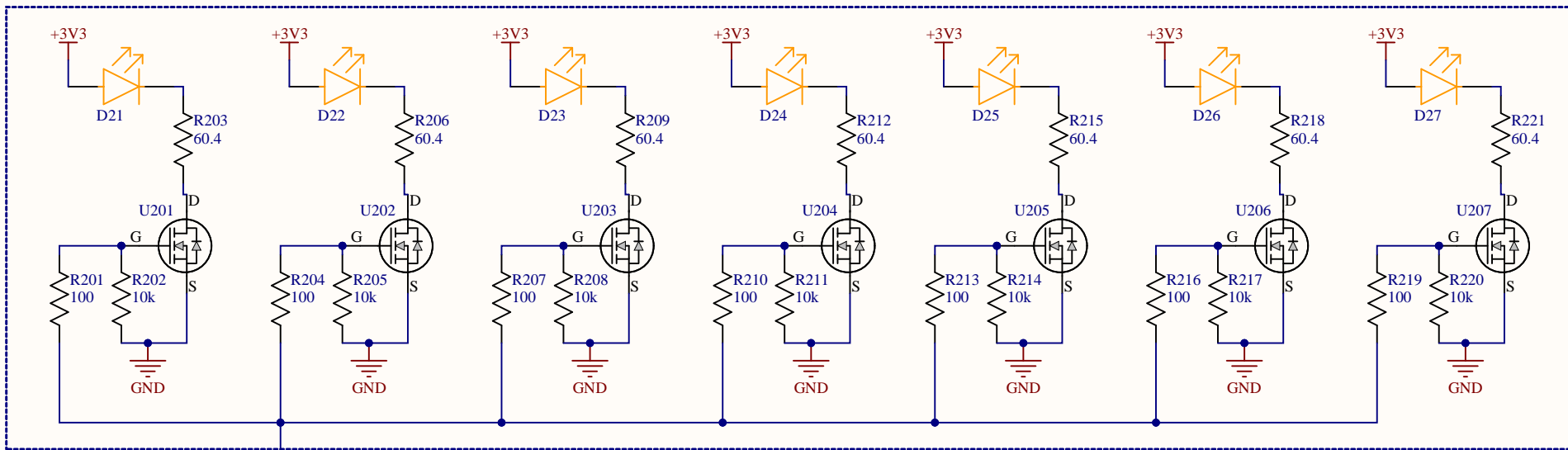
B

C

C

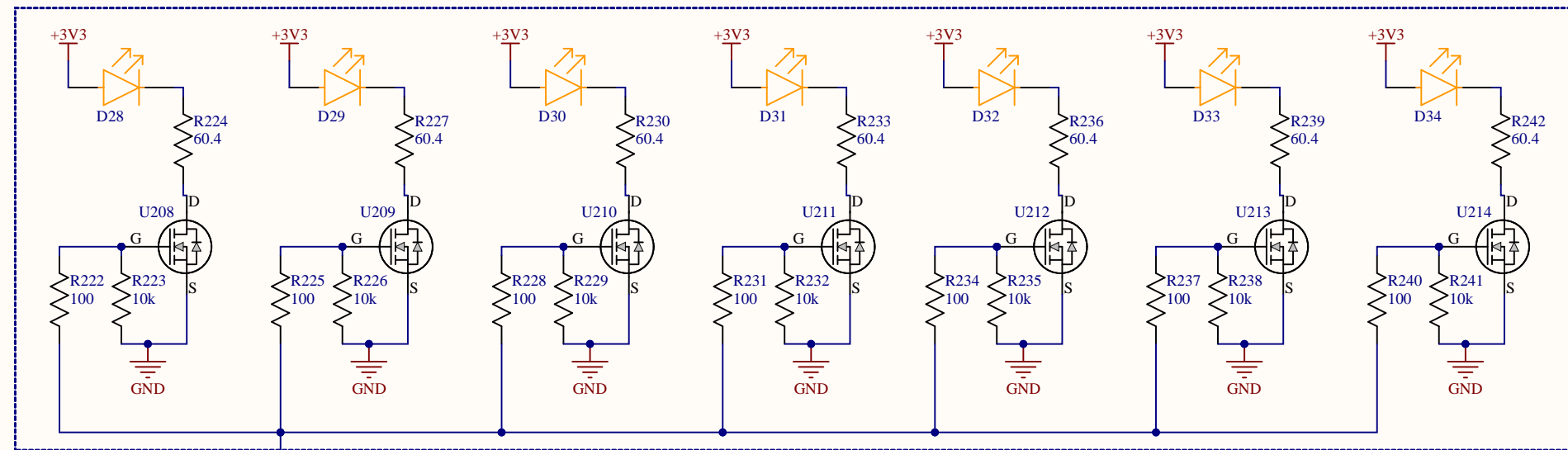
D

D



Left Indicator Light Circuit

bici-mcu[3B] Left-Lights-PWM TP201



Right Indicator Light Circuit

bici-mcu[3B] Right-Lights-PWM TP202

Title <b>Bici: Turn Signal Lights</b> Circuitry related to light feedback to user and surrounding cars.		
Size A	Number	Revision V2
Date:	11/19/2025	Sheet3 of 5
File:	C:\Users\...\bici-turn-lights.SchDoc	Drawn By: Team Bici

1

2

3

4

A

B

C

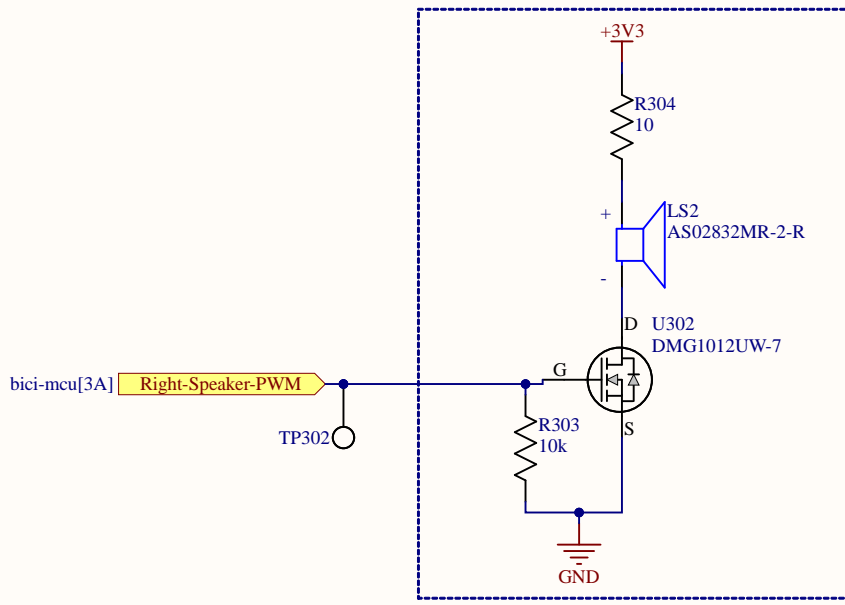
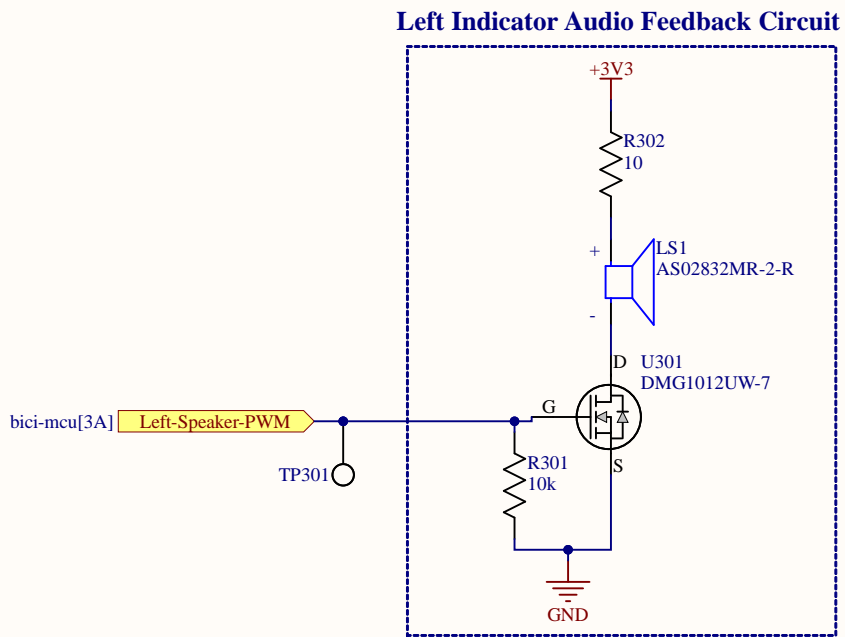
D

A

B

C

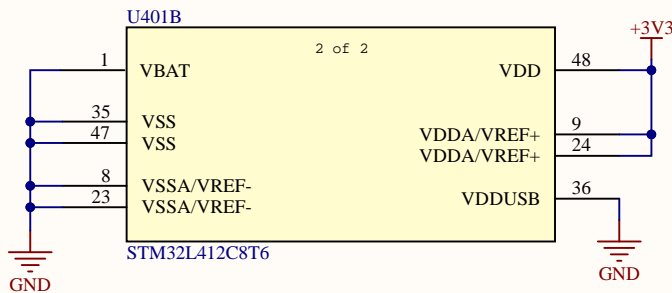
D



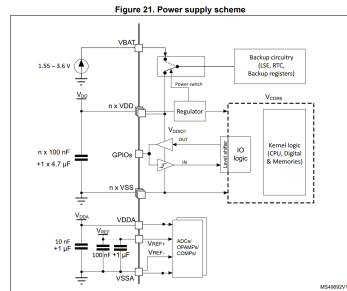
Title <b>Bici: Turn Signal Audio</b> Circuitry related to audio feedback to user.		
Size A	Number	Revision V2
Date:	11/19/2025	Sheet 4 of 5
File:	C:\Users\...\bici-turn-audio.SchDoc	Drawn By: Team Bici

## STM Power

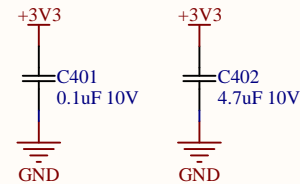
## STM I/O



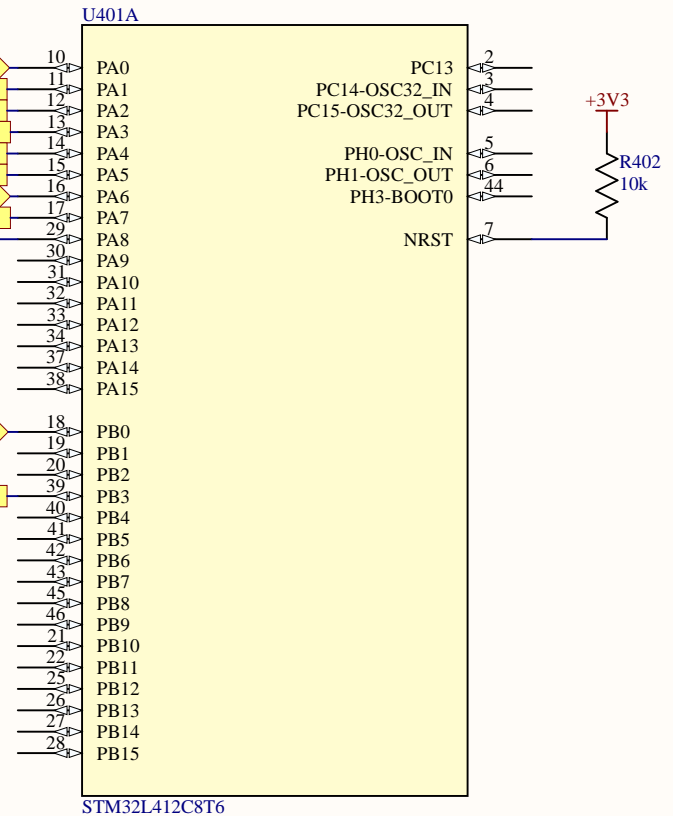
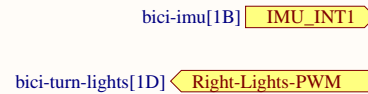
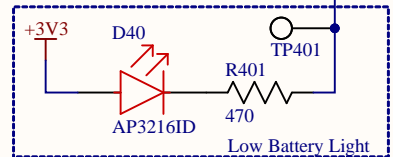
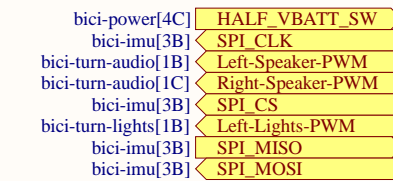
6.1.6 Power supply scheme



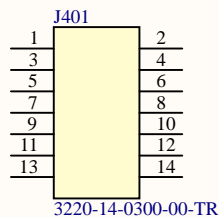
**Caution:** Each power supply pair ( $V_{DD}/V_{SS}$ ,  $V_{DDA}/V_{SSA}$ , etc.) must be decoupled with filtering ceramic capacitors as shown above. These capacitors must be placed as close as possible to, or below, the appropriate pins on the underside of the PCB to ensure the good functionality of the device.



**C401:** There are supposed to be n of these per datasheet but I cannot figure out what n is.



## Programming/Debugging Connector



**J401:** To the right is the only pinout I can find on the STLink-V3Minie datasheet and I'm really confused on how to actually connect everything. Would love some guidance!!  
[https://www.st.com/resource/en/user\\_manual/um2910-stlinkv3minie-debuggerprogrammer-tiny-probe-for-stm32-microcontrollers-stmicroelectronics.pdf](https://www.st.com/resource/en/user_manual/um2910-stlinkv3minie-debuggerprogrammer-tiny-probe-for-stm32-microcontrollers-stmicroelectronics.pdf)

6.3

### STDC14 connector (CN4)

The STDC14 connector (CN4) enables the connection to an STM32 target using the JTAG or SWD protocol, respecting from pin 3 to pin 12 the MIP110 (Arm® Cortex® debugging connector) pinout. It also advantageously provides two UART signals for the Virtual COM port. The related pinout for the STDC14 connector is listed in Table 4.

Figure 6. STDC14 connector (CN4) top view

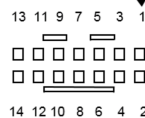


Table 4. STDC14 connector (CN4) pinout

STDC14 pin number	MIP110 pin number	Pin description	Type
1	-	Reserved <sup>1)</sup>	-
2	-	Reserved <sup>1)</sup>	-
3	1	T_VCC	I
4	2	T_TMS/T_SWIDIO	I/O
5	3	GND	S
6	4	T_JCLK/T_SWCLK	O
7	5	GND	S
8	6	T_TDO/T_SWO <sup>2)</sup>	I
9	7	Reserved <sup>1)</sup>	-
10	8	T_TDI/TDNC <sup>3)</sup>	O
11	9	GNDDetect	O
12	10	T_NRST	O
13	-	T_VCP_RX	O
14	-	T_VCP_TX	I

1. Do not connect on target.  
2. SWO is optional, required only for Serial Wire Viewer (SWV) trace.  
3. NC means is not required for SWD connection.

**U401A:**  
- PA0 is ADC in (for low battery detection)  
- PA8 is active-low output for low battery light  
- PA2 and PA3 are associated with TIM15 for PWM  
- PA5 and PB3 are associated with TIM2 for PWM  
- PB0 configured as EXTI0 (external interrupt input) for IMU\_INT1

Title <b>Bici: MCU</b> Circuitry related to embedded MCU.		
Size A	Number	Revision V2
Date:	11/19/2025	Sheet 5 of 5
File:	C:\Users\...\bici-mcu.SchDoc	Drawn By: Team Bici