

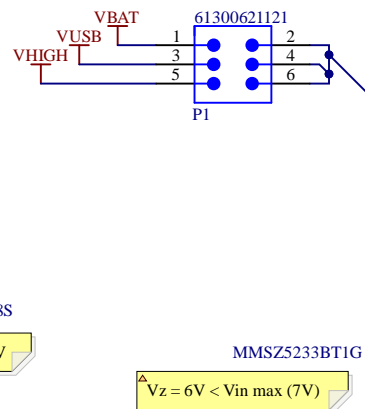
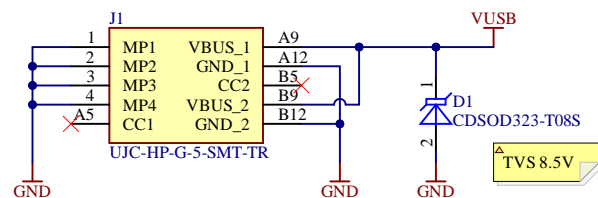
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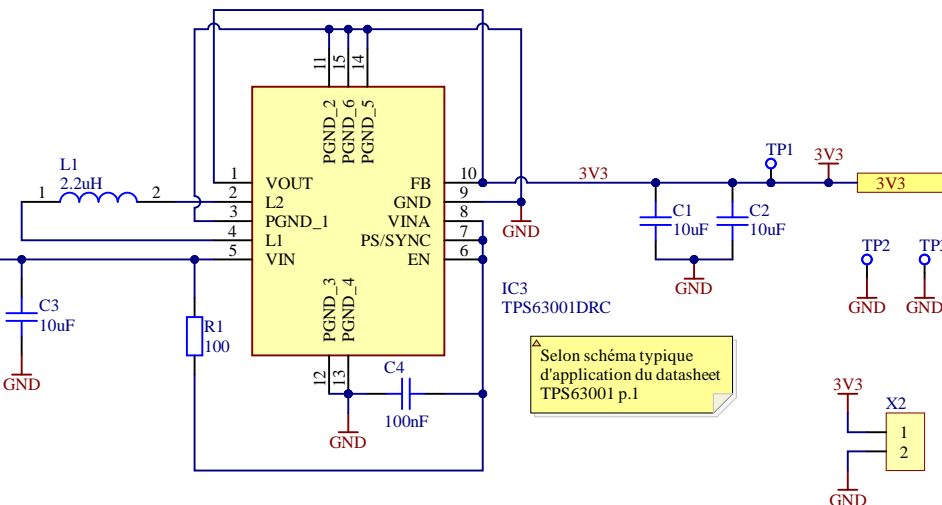
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4

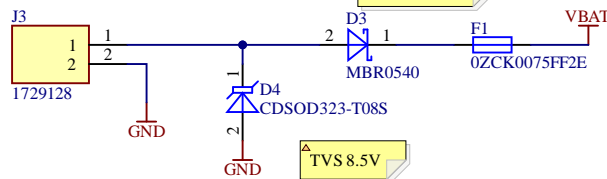
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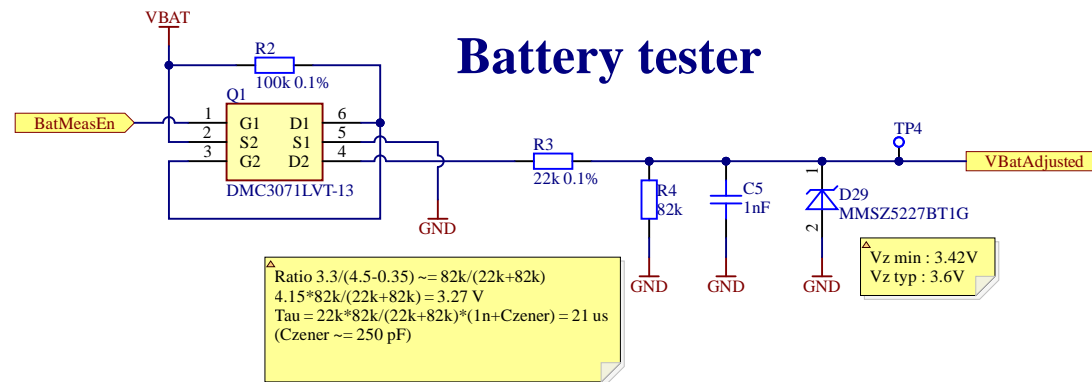
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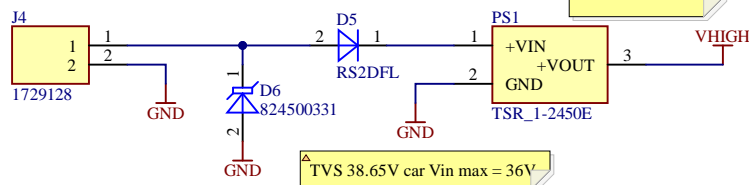
## Battery



## Battery tester



## High DC Voltage



HEIG-VD / TIN / IAI  
Route de Cheseaux, 1  
CH-1401 Yverdon-les-Bains  
<http://iai.heig-vd.ch>  
[iai@heig-vd.ch](mailto:iai@heig-vd.ch)

**HEIG** <sup>VD</sup> **IAI**  
Institut  
d'Automatisation  
industrielle

### Title Power Supply

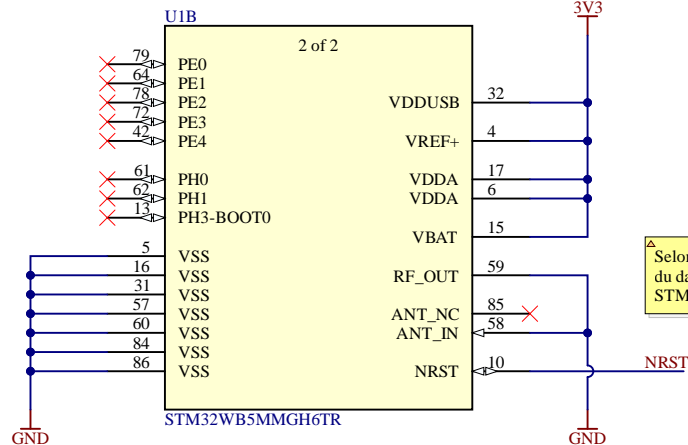
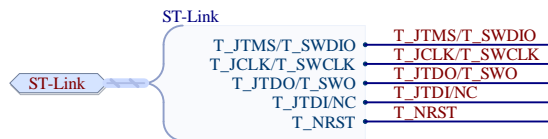
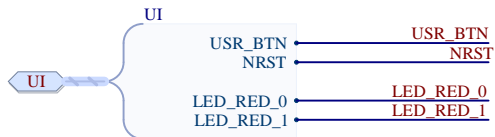
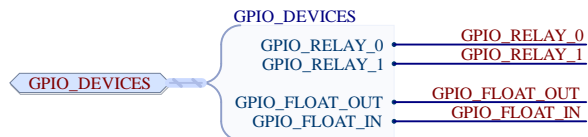
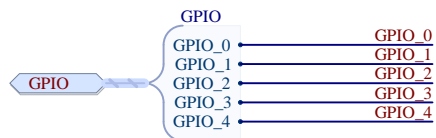
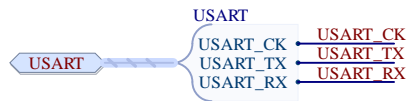
Project Name Rainette				Project ID			
Format	A4	VCS	No	Version	1.0.0	Review	0
Date	07.06.2025	Author	DPI	Checked by	*	Page	2 / 6
File	Power_Supply.SchDoc						

1

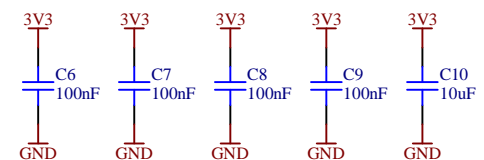
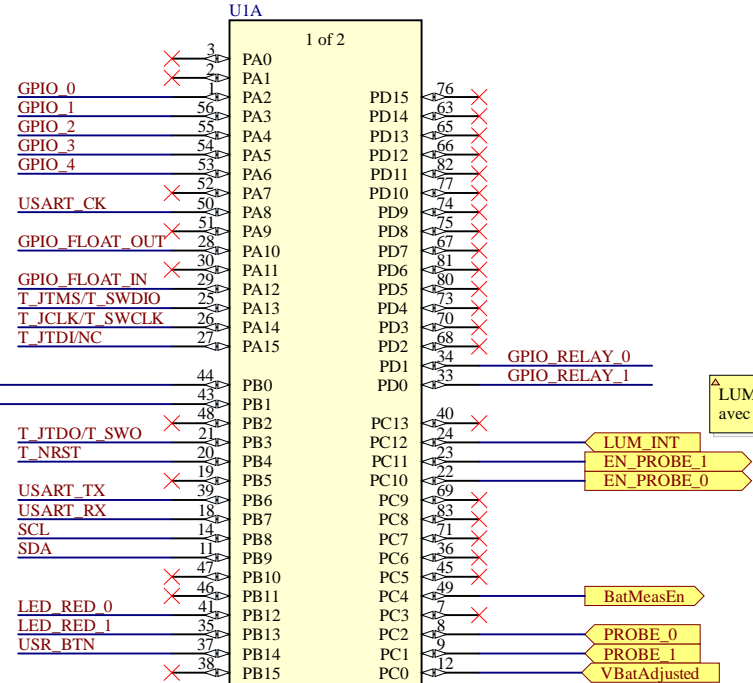
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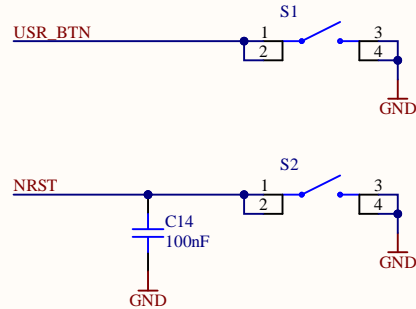
Modèle récupéré sur la page  
<https://www.st.com/en/microcontrollers-microprocessors/stm32wb5mmg.html> et via Ultra Librarian



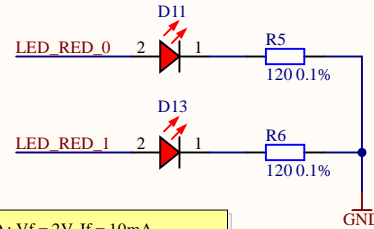
HEIG-VD / TIN / IAI Route de Cheseaux, 1 CH-1401 Yverdon-les-Bains <a href="http://iai.heig-vd.ch">http://iai.heig-vd.ch</a> <a href="mailto:iai@heig-vd.ch">iai@heig-vd.ch</a>		<b>HEIG</b> VD IAI Institut d'Automatisation industrielle	
Title <b>STM32</b>			
Project Name Rainette		Project ID	
Format A4	VCS No	Version 1.0.0	Review 0
Date 07.06.2025	Author DPI	Checked by *	
File STM32.SchDoc			
Page 3 / 6			



## Buttons

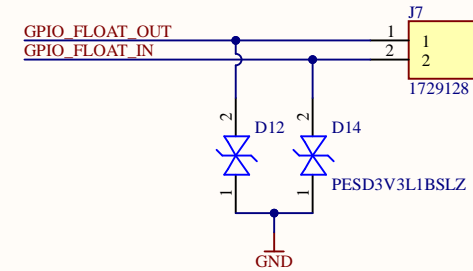


## Leds

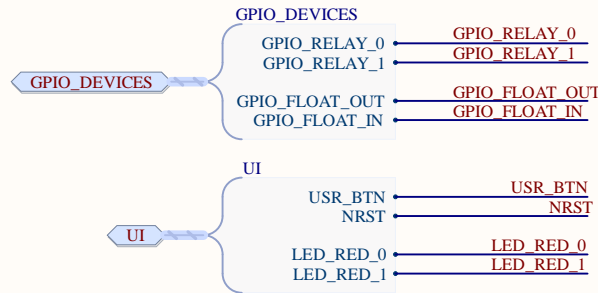
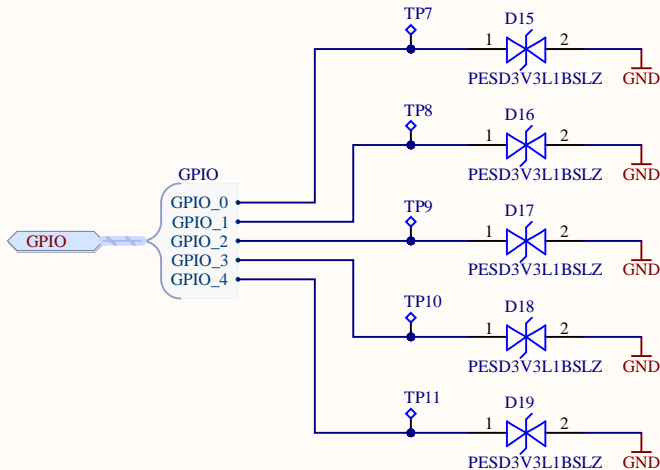


RED : Vf = 2V, If = 10mA.  
 $R_r = (3.3 - V_f) / I_f = 130 \rightarrow 120 \text{ Ohm}$

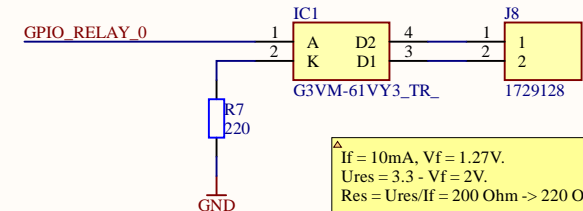
## Float



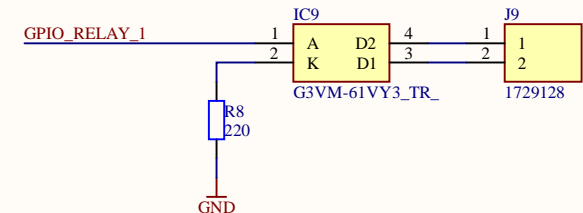
## GPIO



## MOSFET Relays



If = 10mA, Vf = 1.27V.  
Ures = 3.3 - Vf = 2V.  
Res = Ures / If = 200 Ohm  $\rightarrow$  220 Ohm



Title		
Size	Number	Revision
A4		
Date:	6.07.2025	Sheet of
File:	C:\Users\...\Digital_GPIO.SchDoc	Drawn By:

## 1



3



## C

A