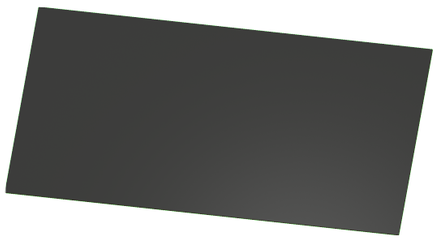
Input Protection

Variant: DRAFT

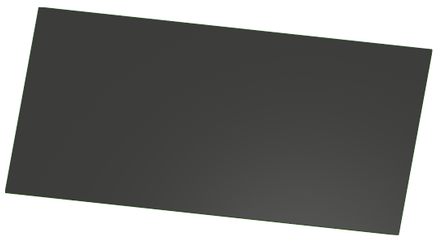
2026-02-07

Rev + (Unreleased)

TOP VIEW



BOTTOM VIEW



NOTES

Comment

Not fitted components are marked as ✗

DRAFT - Very early stage of schematic, ignore details.
PRELIMINARY - Close to final schematic.
CHECKED - There shouldn't be any mistakes. Contact the engineer if you find any.
RELEASED - A board with this schematic has been sent to production.

Date: 07-Feb-2026

DESIGN CONSIDERATIONS

DESIGN NOTE: Example text for informational design notes.

DESIGN NOTE: Example text for debug notes.

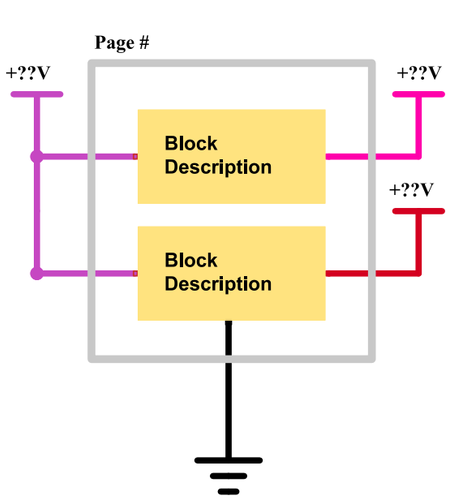
DESIGN NOTE: Example text for cautionary design notes.

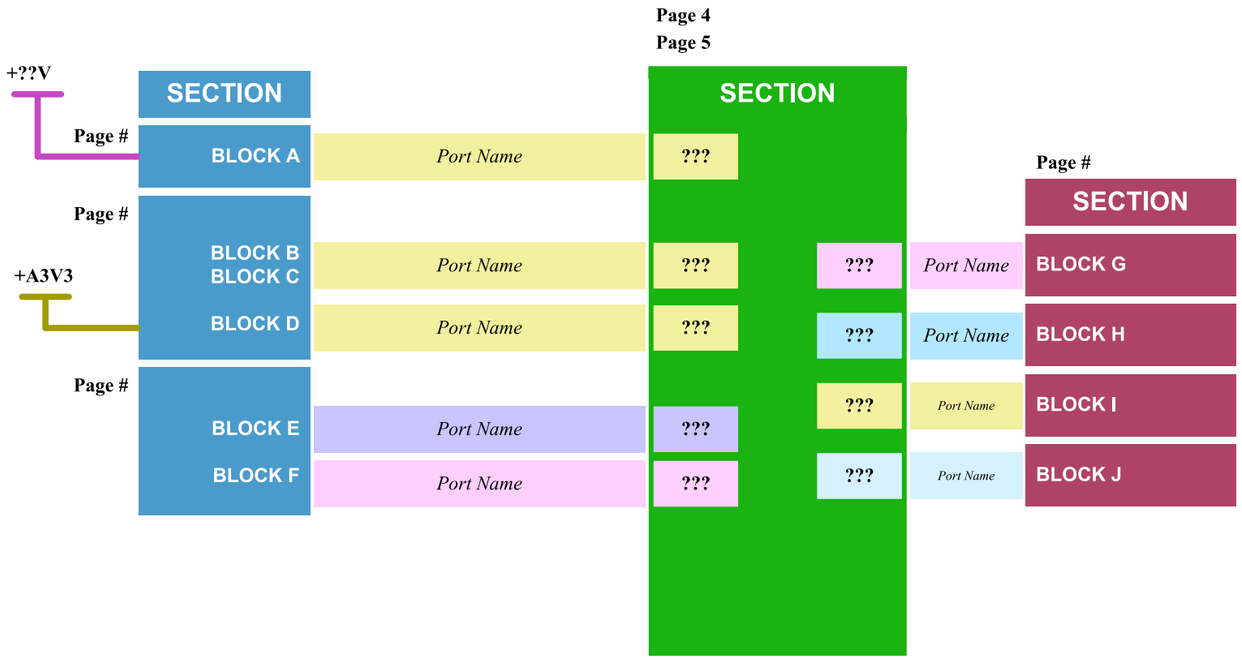
DESIGN NOTE: Example text for critical design notes.

LAYOUT NOTE: Example text for critical layout guidelines.

Comments:	Company: University of Newcastle		Variant: DRAFT	Git Hash: a736dc4
	Board Name: **Input Protection**		Project Name: **Assignment 1**	
Sheet Title:	File Name: Input-Protection.kicad_sch	Designer: R. HICKS	Date: 2025-01-12	Revision: + (Unreleased)
Sheet Path: /		Reviewer:	Size: **A3**	Sheet: **1** of **4**

[2] BLOCK DIAGRAM





TARGET SPECIFICATIONS:

INPUT VOLTAGE:	-50 - +50 V
OUTPUT VOLTAGE:	??
Spec 3	??
Spec 4	??

Comments:	Company: **University of Newcastle**		Variant: DRAFT	Git Hash: a736dc4
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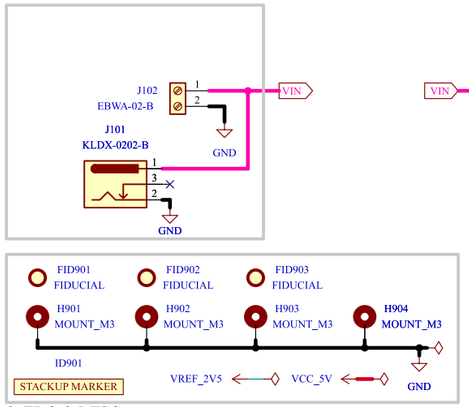
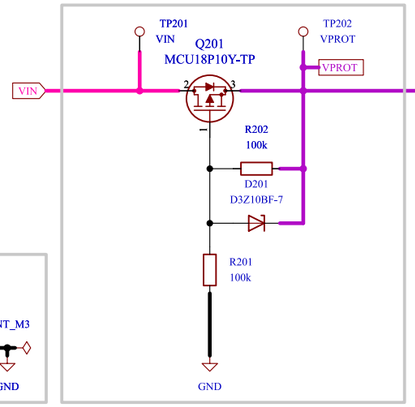
Sheet Title: BLOCK DIAGRAM	File Name: Block Diagram.kicad_sch	Designer: R. HICKS	Date: 2025-01-12	Revision: + (Unreleased)
Sheet Path: /Block Diagram/		Reviewer:	Size: **A3**	Sheet: **2** of **4**

[3] Schematic

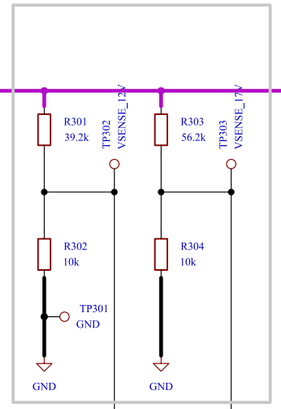
1. INTERCONNECTS



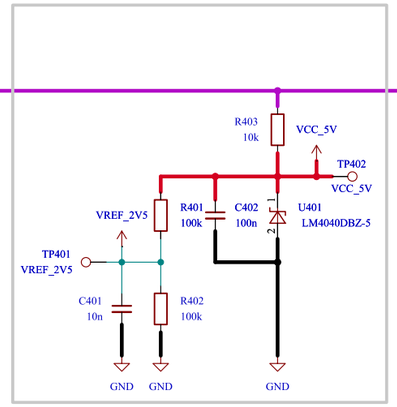
2. REVERSE POLARITY PROTECTION



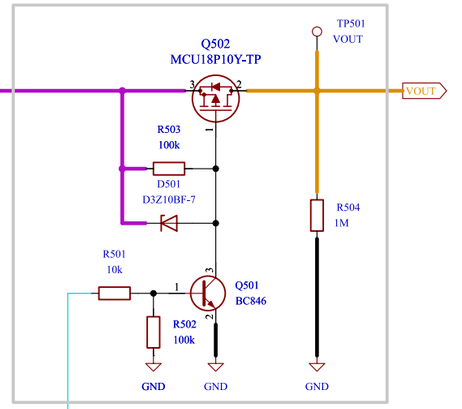
3. VOLTAGE SENSING



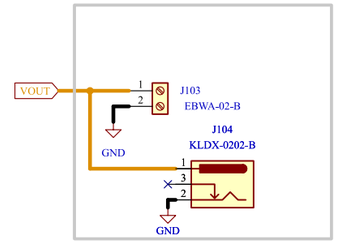
4. 5V & 2V5 VREF



5. PASS ELEMENT

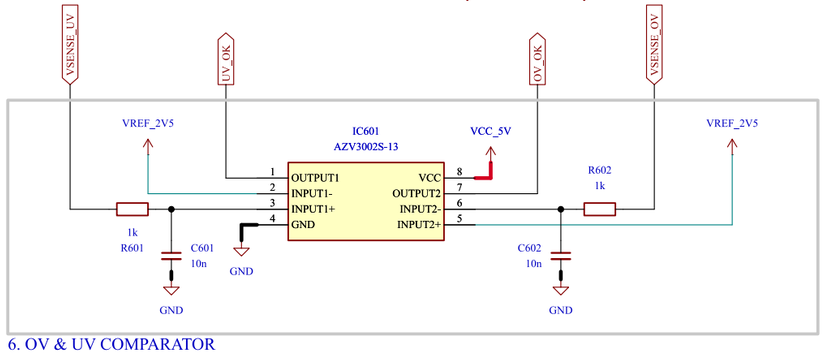


1. INTERCONNECTS (CONT.)

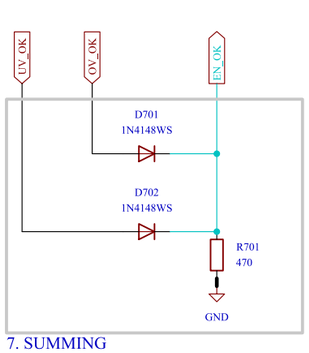


9. ERC & MISC.

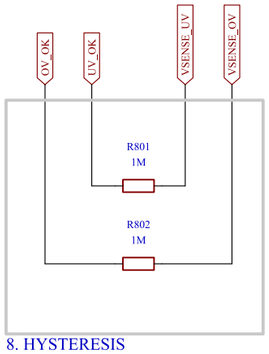
6. OV & UV COMPARATOR



7. SUMMING



8. HYSTERESIS



Comments:	Company: University of Newcastle		Variant: DRAFT	Git Hash: a736dc4
	Board Name: **Input Protection**		Project Name: **Assignment 1**	
Sheet Title: Schematic	File Name: Schematic.kicad_sch	Designer: R. HICKS	Date: 2025-01-12	Revision: + (Unreleased)
Sheet Path: /Schematic/		Reviewer:	Size: **A3**	Sheet: **3** of **4**

[4] REVISION HISTORY

Comments:	Company: University of Newcastle		Variant: DRAFT	Git Hash: a736dc4	
	Board Name: **Input Protection**		Project Name: **Assignment 1**		
Sheet Title: REVISION HISTORY	File Name: Revision History.kicad_sch	Designer: R. HICKS	Date: 2025-01-12	Revision: + (Unreleased)	
	Sheet Path: /Revision History/	Reviewer:	Size: **A4**	Sheet: **4** of **4**	