

## Table of Content

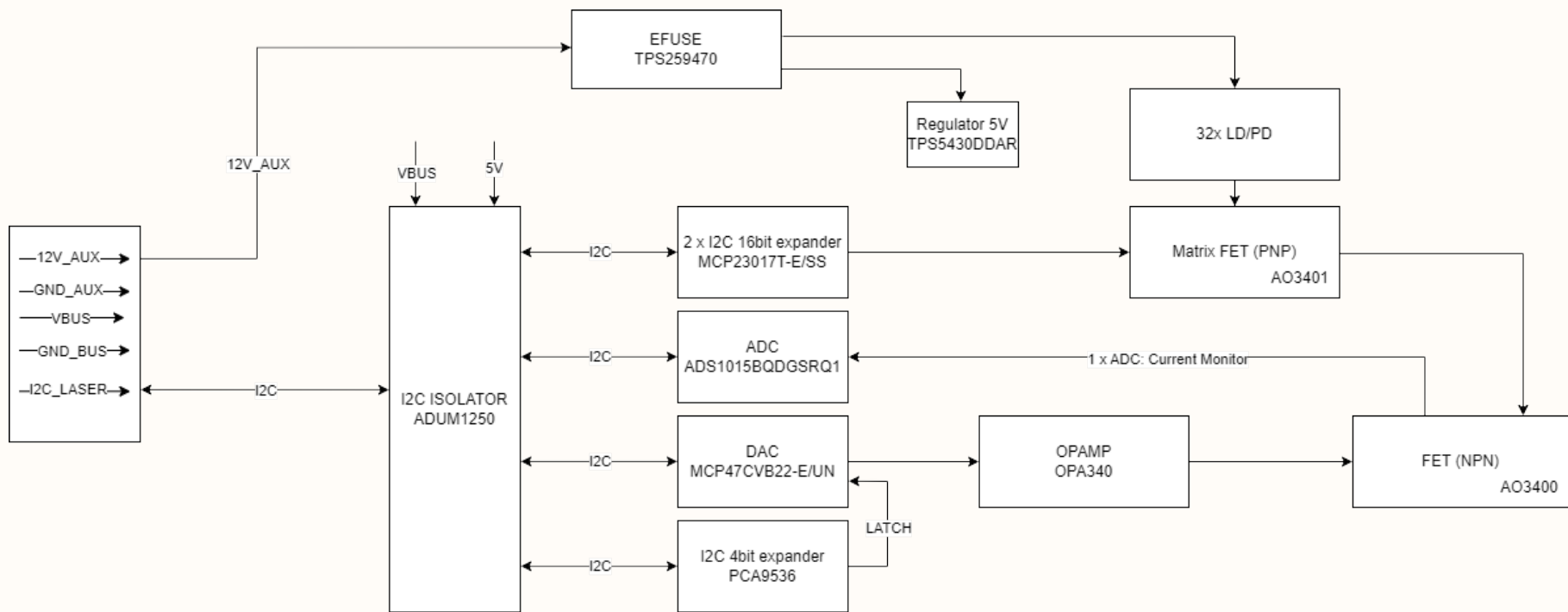
PAGE	COMPONENT/ FUNCTION
001	INDEX
002	BLOCK_DIAGRAM
003	EFUSE_AND_REGULATOR
004	COMMUNICATION
005	CURRENT_SOURCE
006	SWITCHING

## NANORACK LASER

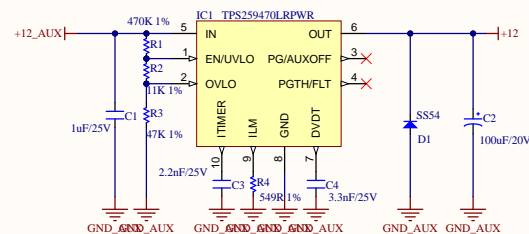
### Schematic V1.0.0



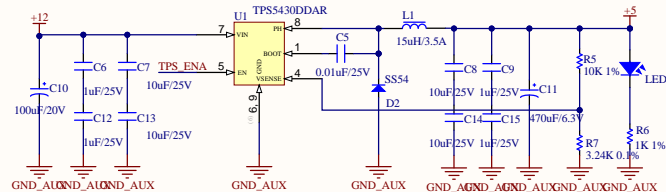
Project: <b>BEE-PC1</b>	Sub-system: <b>NANORACK_LASER.PrjPcb</b>	
Design by: <b>Hung Nguyen D.</b>	Sheet title: <b>INDEX.SchDoc</b>	Sheet <b>1</b> of <b>6</b>
Checked by: <b>Bao Bui Q.</b>	Document No: <b>1</b>	Size: <b>A3</b>
Approved by: <b>SLT</b>	Revision: <b>V1.0.0</b>	Date: <b>10/3/2024</b>



Project: <b>BEE-PC1</b>	Sub-system: <b>NANORACK_LASER.PrjPcb</b>	
Design by: <b>Hung Nguyen D.</b>	Sheet title: <b>BLOCK_DIAGRAM.SchDoc</b>	Sheet <b>2</b> of <b>6</b>
Checked by: <b>Bao Bui Q.</b>	Document No: <b>2</b>	Size: <b>A3</b>
Approved by: <b>SLT</b>	Revision: <b>V1.0.0</b>	Date: <b>10/3/2024</b>



EFUSE



REGULATOR

$$SR\left(\frac{V}{ms}\right) = \frac{V_{IN}(V)}{t_R(ms)}$$

$$C_{avdt}(pF) = \frac{2000}{SR\left(\frac{V}{ms}\right)}$$

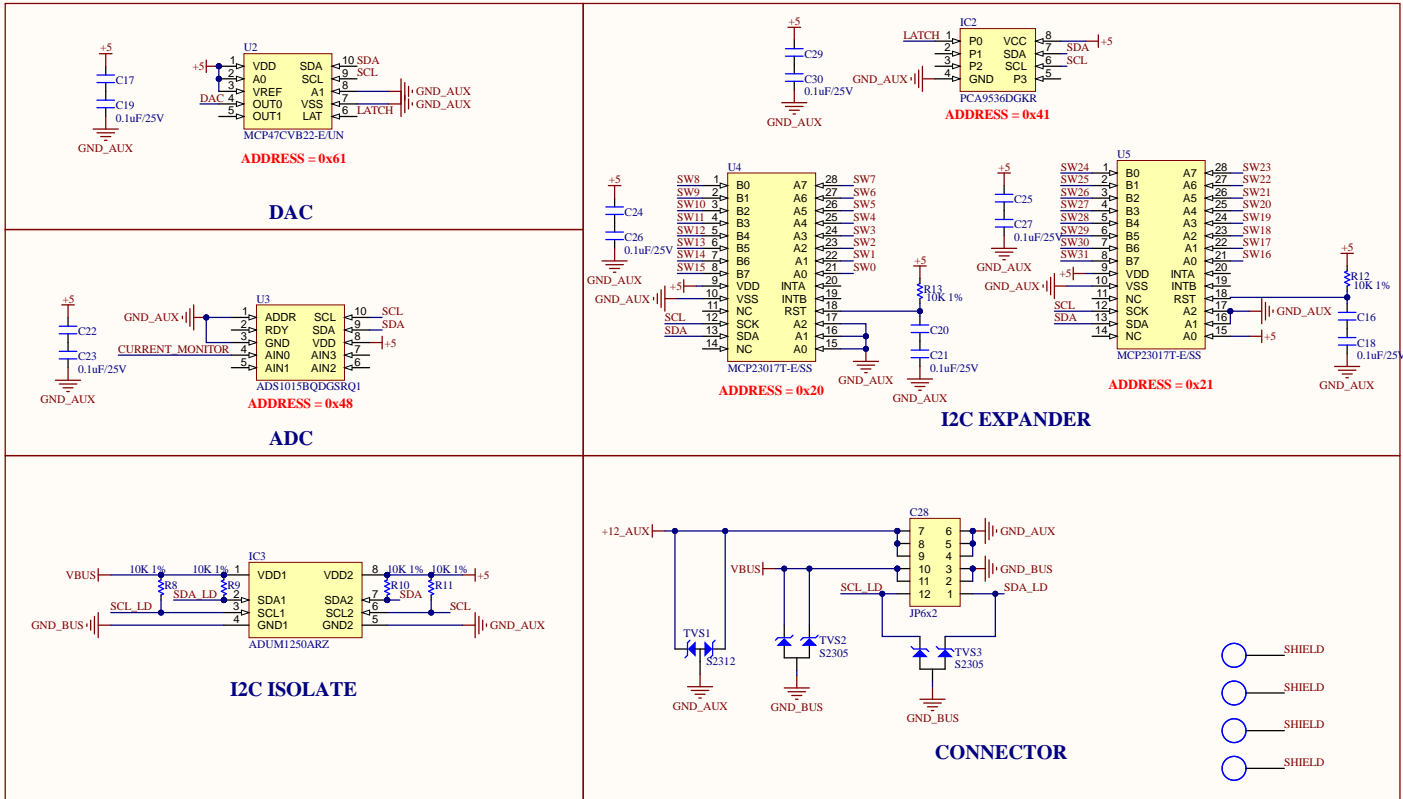
$$I_{INRUSH}(mA) = SR(V/ms) \times C_{OUT}(uF)$$

$$R_{LIM}(\Omega) = \frac{3334}{I_{LIM}(A)}$$

$$R_2 = \frac{R_1 \times 1,221}{V_{OUT} - 1,221}$$

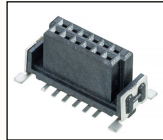


Project: <b>BEE-PC1</b>	Sub-system: <b>NANORACK_LASER.PrjPcb</b>	
Design by: <b>Hung Nguyen D.</b>	Sheet title: <b>EFUSE_AND_REGULATOR.SchDoc</b>	Sheet <b>3</b> of <b>6</b>
Checked by: <b>Bao Bui Q.</b>	Document No: <b>3</b>	Size: <b>A3</b>
Approved by: <b>SLT</b>	Revision: <b>V1.0.0</b>	Date: <b>10/3/2024</b>

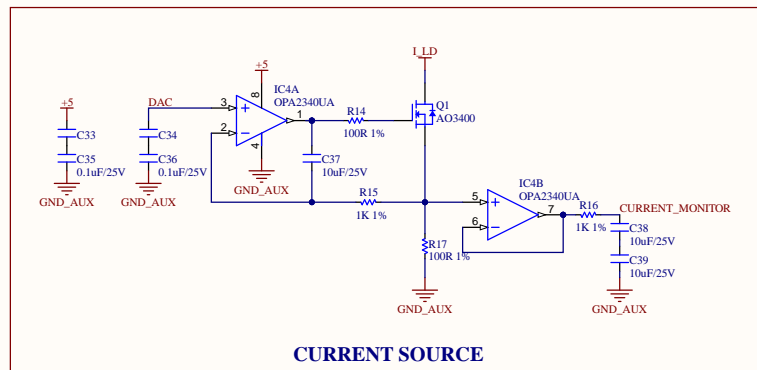


Harwin Inc. M55-6001242R

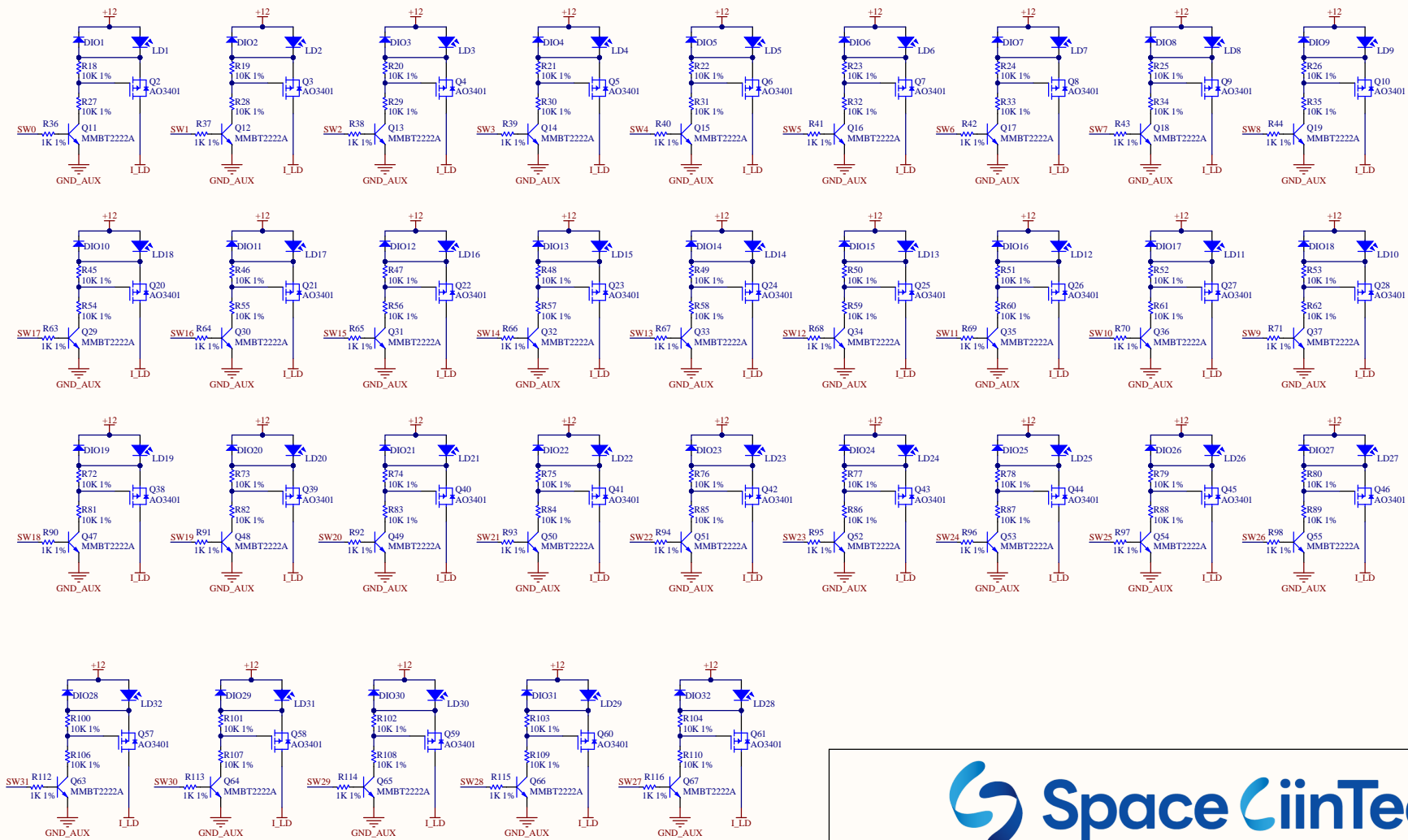
- ELECTRICAL:  
CURRENT RATING: 1.2A AC/DC/1  
VOLTAGE RATING: 100V AC/DC/1  
MAX CURRENT: 0.75A per CONTACT
- ENVIRONMENTAL:  
TEMPERATURE RANGE: -55°C TO +125°C
- PHYSICAL:  
PITCH-MATING: 0.050" (1.27mm)



Project: BEE-PC1	Sub-system: NANORACK_LASER.PrjPcb	
Design by: Hung Nguyen D.	Sheet title: COMMUNICATION.SchDoc	Sheet 4 of 6
Checked by: Bao Bui Q.	Document No: 4	Size: A3
Approved by: SLT	Revision: V1.0.0	Date: 10/3/2024



Project: <b>BEE-PC1</b>	Sub-system: <b>NANORACK_LASER.PrjPcb</b>	
Design by: <b>Hung Nguyen D.</b>	Sheet title: <b>CURRENT_SOURCE.SchDoc</b>	Sheet <b>5</b> of <b>6</b>
Checked by: <b>Bao Bui Q.</b>	Document No: <b>5</b>	Size: <b>A3</b>
Approved by: <b>SLT</b>	Revision: <b>V1.0.0</b>	Date: <b>10/3/2024</b>



Project: <b>BEE-PC1</b>	Sub-system: <b>NANORACK_LASER.PrjPcb</b>	
Design by: <b>Hung Nguyen D.</b>	Sheet title: <b>SWITCHING.SchDoc</b>	Sheet <b>6</b> of <b>6</b>
Checked by: <b>Bao Bui Q.</b>	Document No: <b>6</b>	Size: <b>A3</b>
Approved by: <b>SLT</b>	Revision: <b>V1.0.0</b>	Date: <b>10/3/2024</b>