

Pre-Charger+Charger+TCPC+TCPM All-in-one Board

Contents

P01 TITLE (This page.)
P02 3-Level Buck VR
P03 Charger
P04 TCPM
P05 TCPC
P06 DCDC Converter 5V, 3.3V LDO

'a' at the end of part name refers to RAA489800 part
'b' at the end of part name refers to RAA489118 part

Board silk

Board Name	All in One Board
PCB No.	RTKA489EPRDE0000BU/0010BU
PCB Ver.	
S/N No.	
Country of production	Made IN USA
Logo	RENESAS logo
Display 1	
Display 2	
Display 3	

CONFIDENTIAL

The component values are subject to change until Silicon validation without notice.

DISCLAIMER

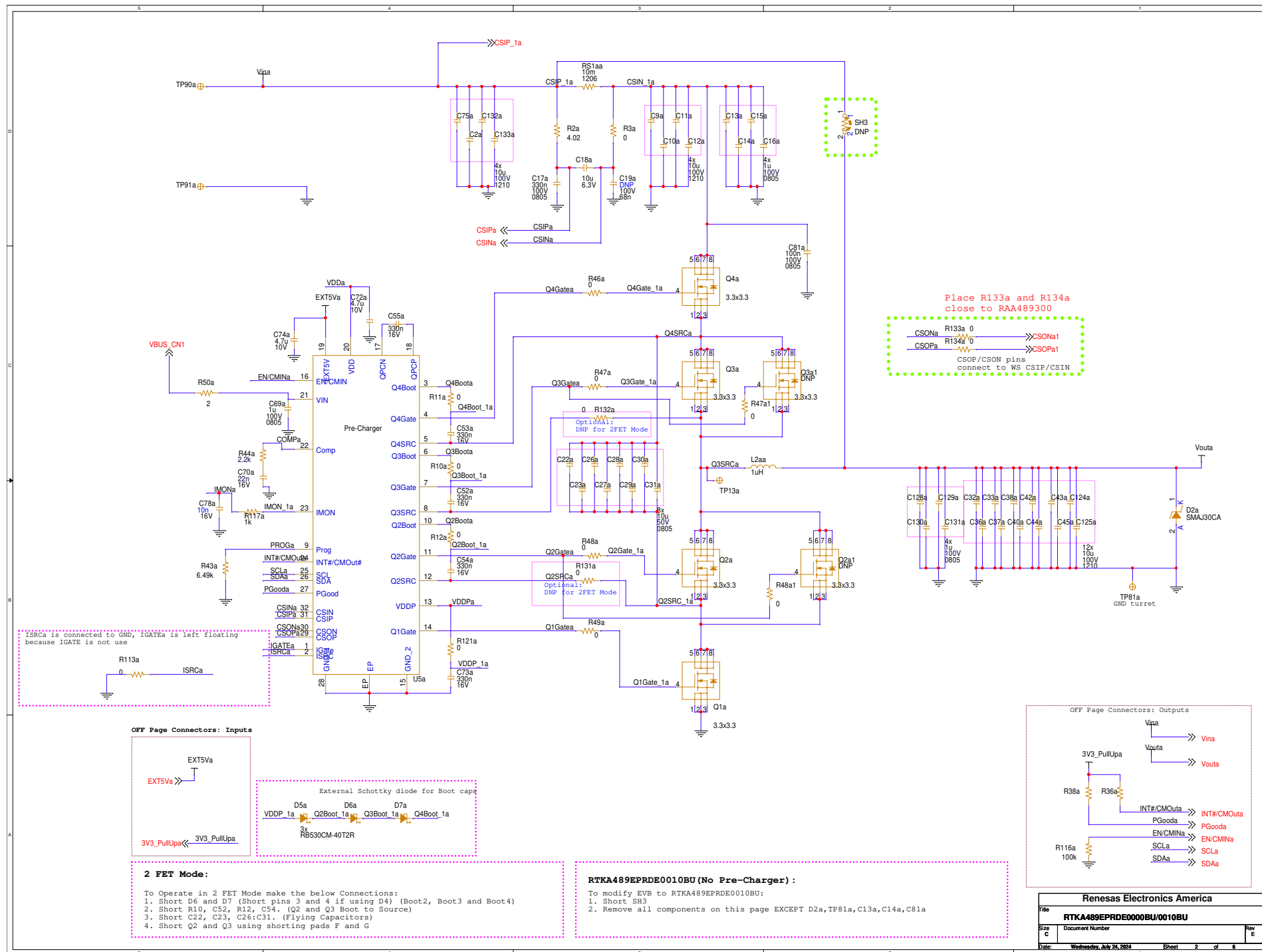
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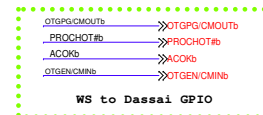
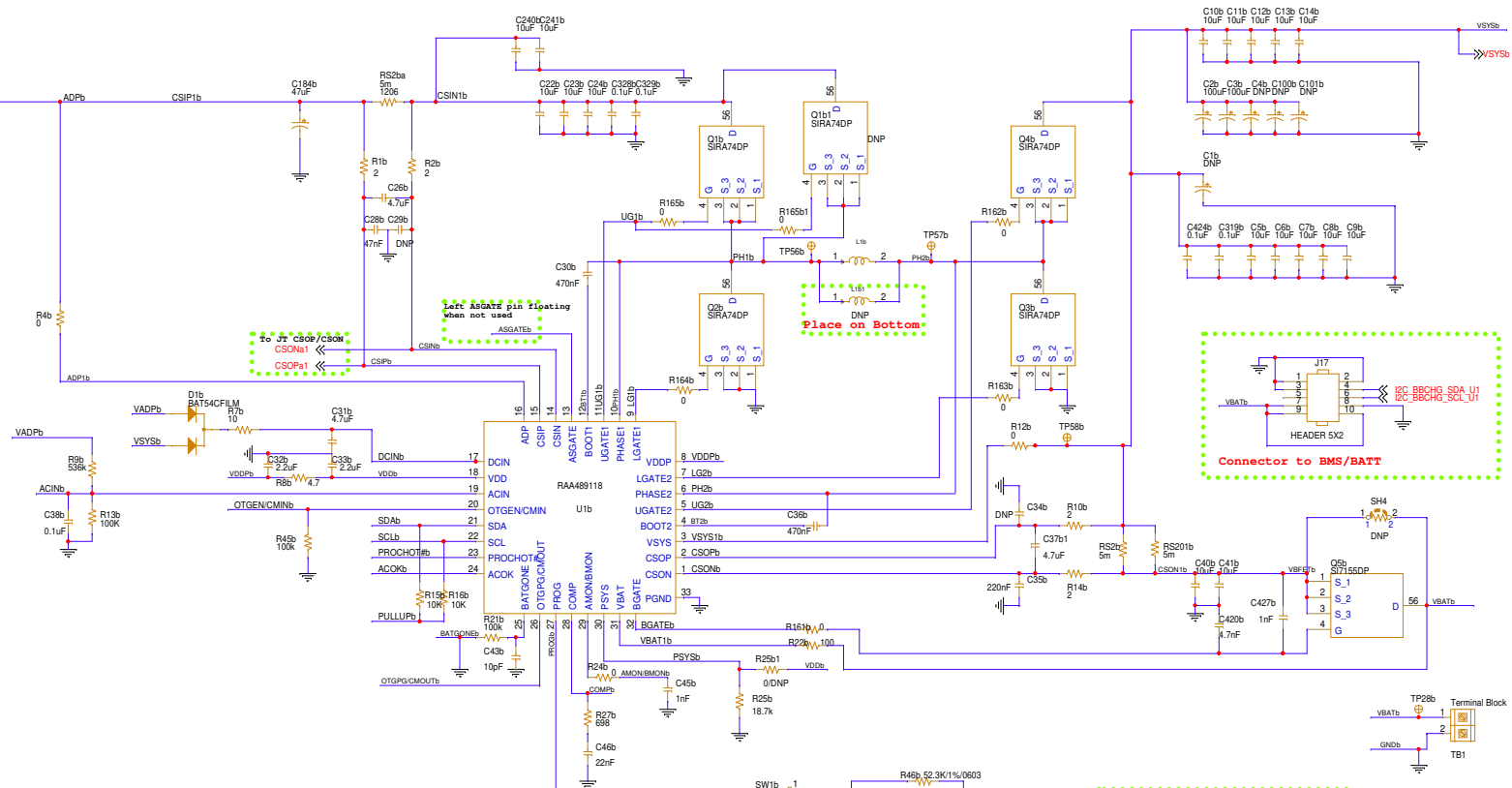
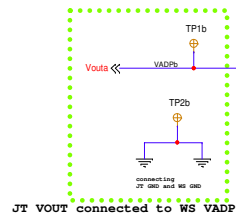
Revision History

Date	Rev	Description
2023.07.24	0v1	*First edition
2023.10.11		*Second edition
2023.11.10		*Third edition
2024.03.24	D	*Fourth edition. Updated WS and JT resistors.
2024.06.18	E	*Fifth edition. Updated JT and silkscreen

Renesas electronics		Approval	
		Check	
Revision	0v1	Creation	Bonhyun Ku
Date	Nov 10, 2023		

Renesas Electronics America			
File		RTKA489EPRDE0000BU/0010BU	
Size	Document Number	Rev	E
C			
Date: Wednesday, July 24, 2024		Sheet	1 of 6





Minimum effective cap
BOOT1 and BOOT2 pins:

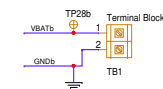
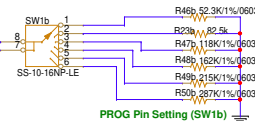
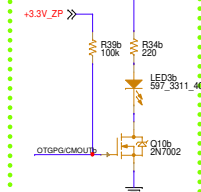
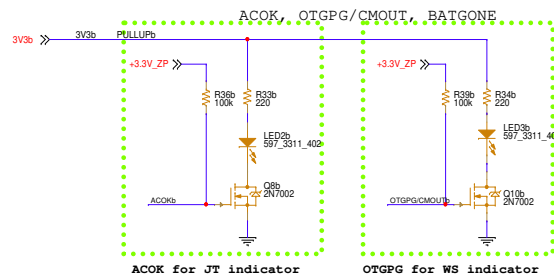
BOOT1 and BOOT2 capacitance:
At least 0.25µF at 5V and x50 high side FET effective gate capacitance

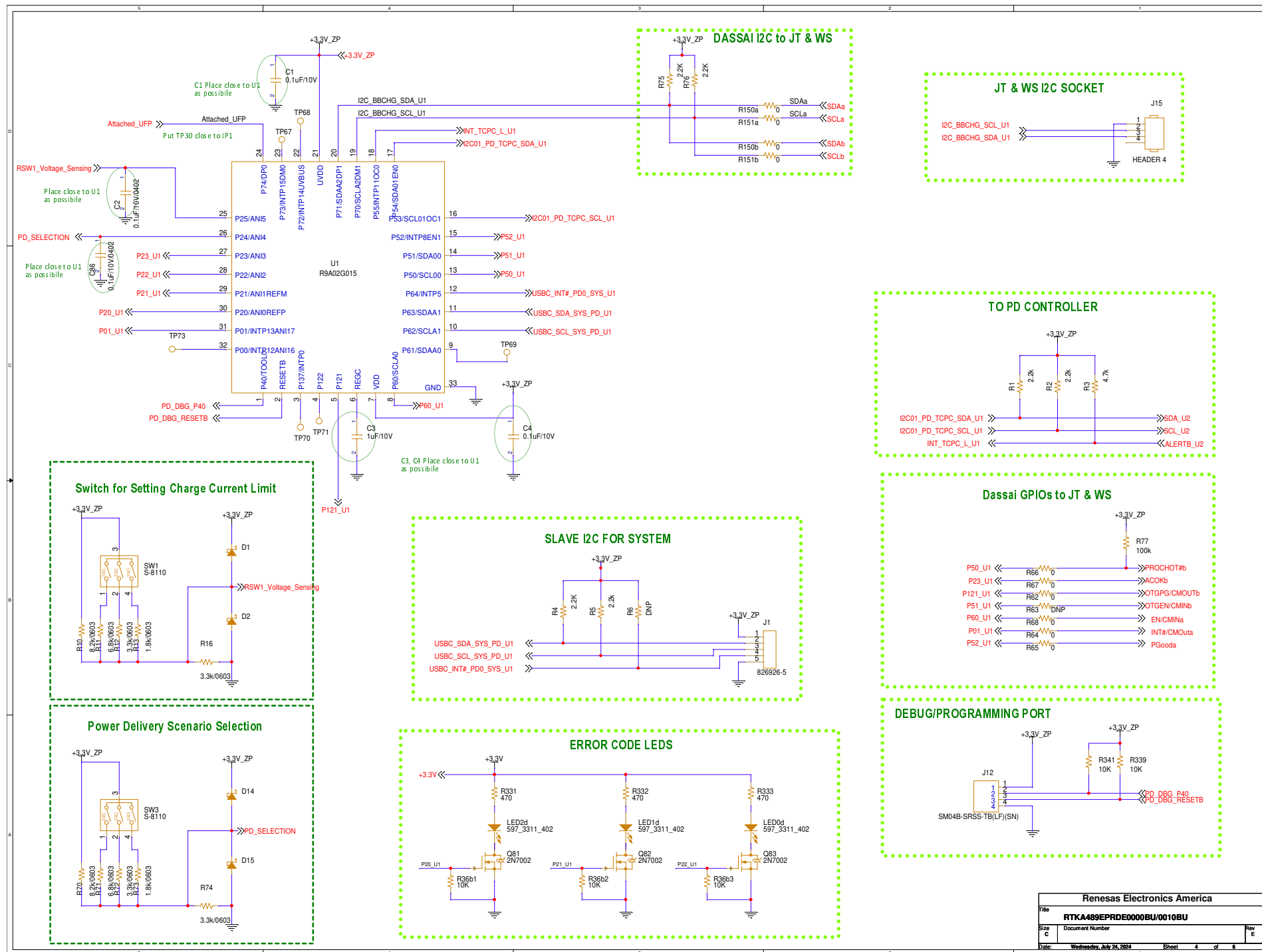
VDD and VDDP capacitance:
At least 0.4µF at 5V and x1.6 effective gate capacitance at boot pin at 5V

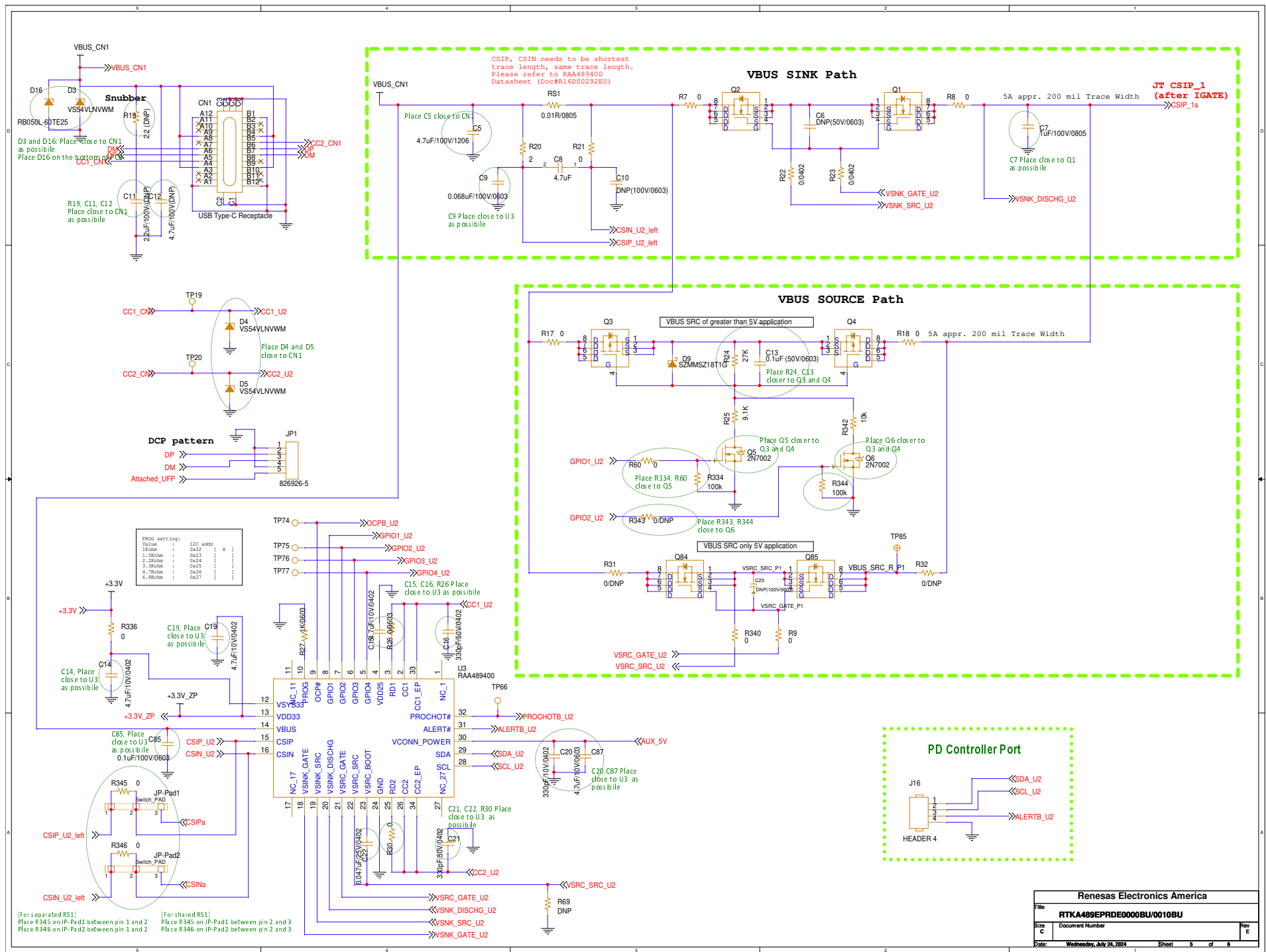
DCIN capacitance:
At least 0.4 μ F at 30V

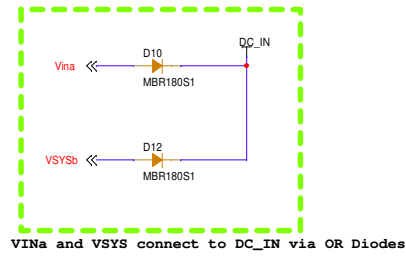
L1 and Rcomp selection:

- 2.2 μ H & 6980 Ω m: 2-cell to 4-cell
- 3.3 μ H & 3.1k Ω m5-cell to 7-cell









VCONN AND Pre-Charger EXT5V

