
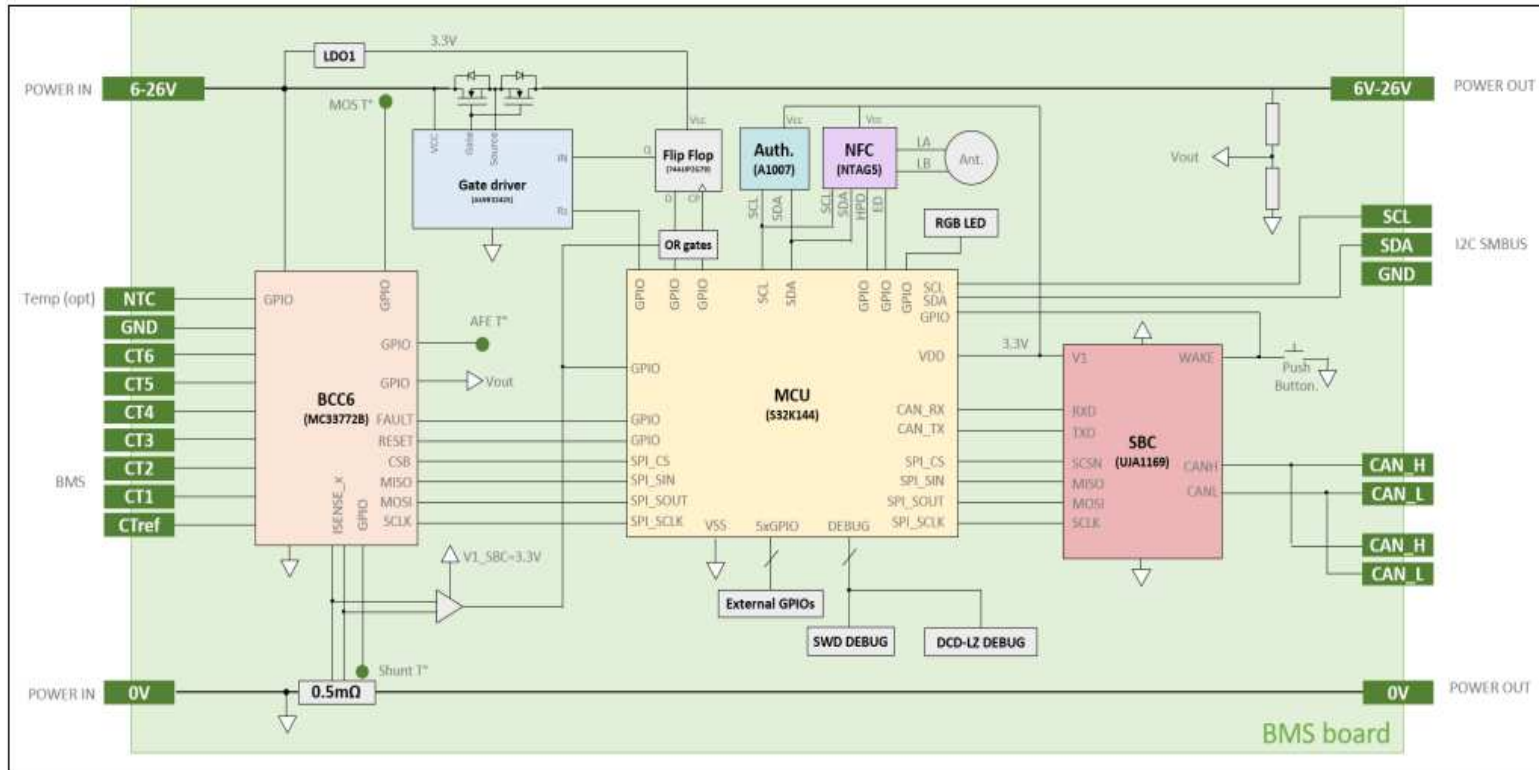


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02	Notes
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07	NFC
08	SWITCH
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Rev	Date	Revision History
X1	11 JAN 2019	Initial revision
A	01 APR 2019	Agile release
B	23 JAN 2020	- added inductor in parallel with the antenna - added protection on J19 and J21 - changed MCU to S32K144 - BOM optimisation
B1	22 MAY 2020	- JPI CHANGED TO DNP - J20 CHANGED TO POP - J6 CHANGED TO CLOSED - ADDED ALTERNATE PART NUMBER FOR J4&J5
C	26 OCT 2020	- replaced balance resistors by 1206 footprint - mapped J21 IO pins on DS-013 specification - Added 00hm series resistor in VCC_3V3_SBC - added I2C AUTH_NFC_Sxx bus to J18 connector - Added 00hm series resistor after C63 but before VCC_3V3_SBC - added VCC_5V_SBC on J3, J20 and J18 connectors - removed VCC_HARVEST signal from U2 - moved U10 pin 7 to VCC_3V3_SBC - changed C40 to 220nF and C41 to 1nF
D	21 JAN 2021	- added J25 I2C Master connector for external display

RDDRONE-BMS772

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DO NOT POPULATE

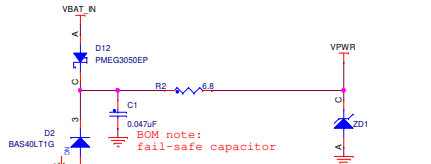
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C26,C103,C12,C102,C6,C104, C54,C34,C106,C101,C49,C105, C100,C29,C107,C22,C18,JP1,C99	DNP	03 - BCC
R105,R106,J21	DNP	04 - MCU
R49,C66,R50,J22	DNP	05 - SBC
L2	DNP	07 - NFC
Q8,HS1,HS3,R99,HS2,HS4,J4,J5, Q3,Q7,Q4	DNP	08 - SWITCH

DEFAULT JUMPER

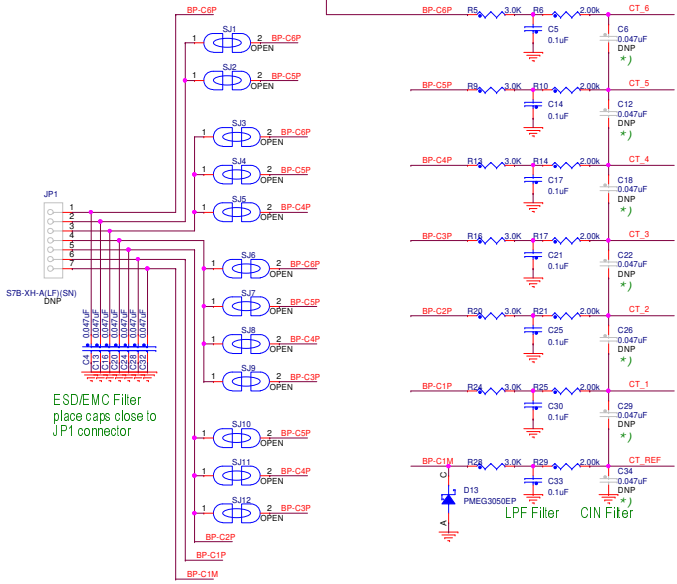
REF DES	JUMPER	PAGE NAME
SJ7,SJ10,SJ9,SJ6,SJ11,SJ8, SJ1,SJ2,SJ12,SJ4,SJ3,SJ5	OPEN	03 - BCC
J6	CLOSED	05 - SBC
SJ15,SJ16	OPEN	07 - NFC

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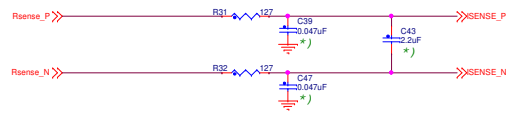
BCC Power Supply



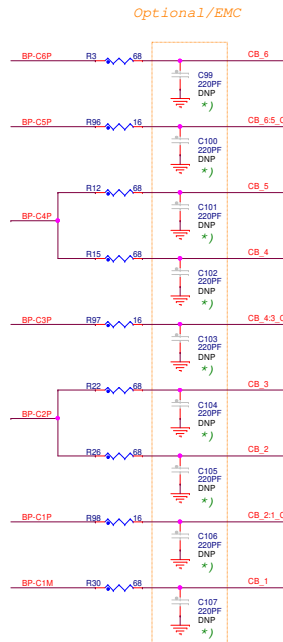
Cell voltage measurement



Filtering Current Sensor



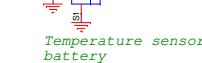
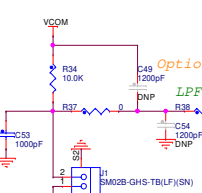
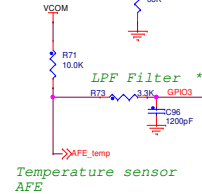
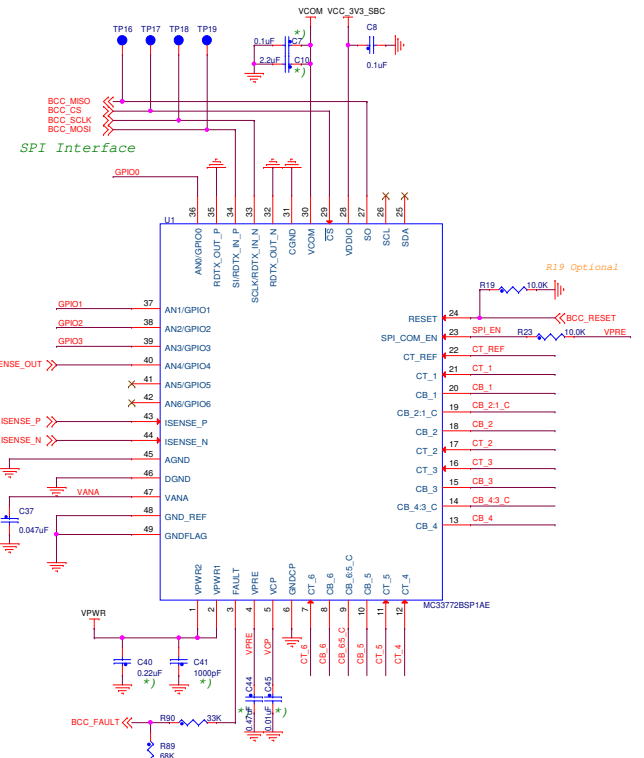
Balancing Circuit



*) Place close to U1 PIN

BCC

Battery Cell Controller

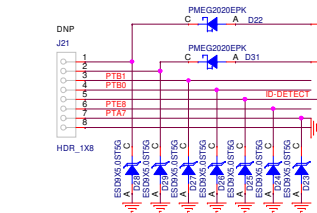
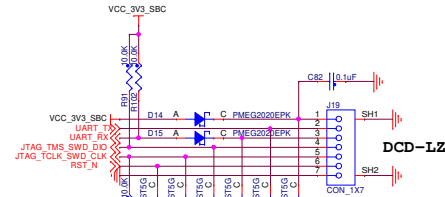
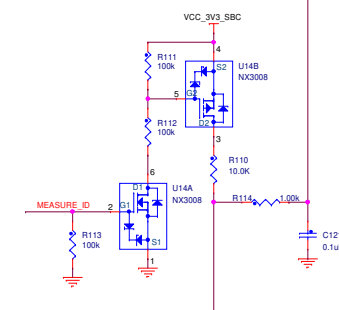
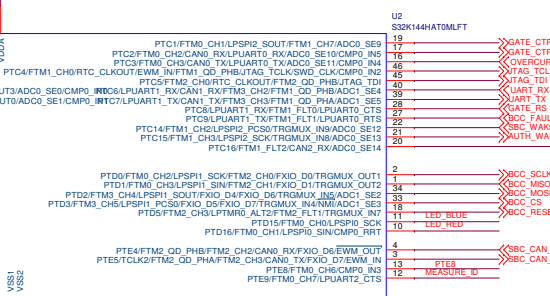
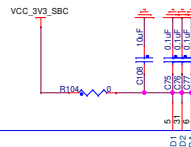
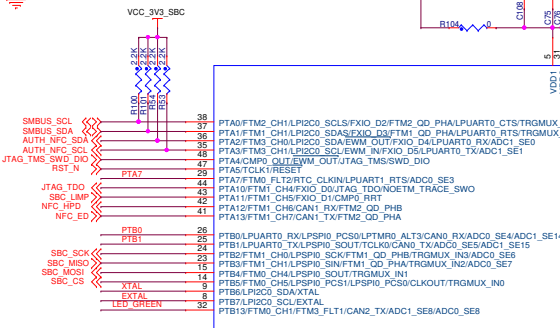
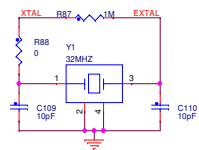
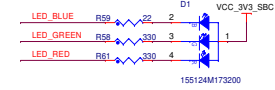
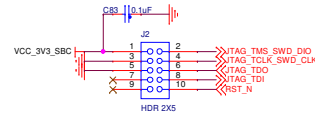
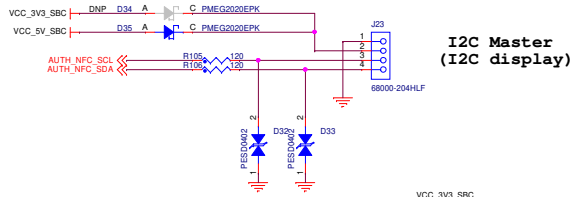
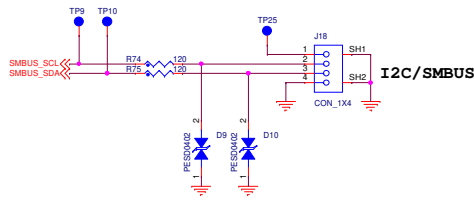


Depending on the number of cells of the battery, jumpers need to be set. By default, no jumpers are set. Refer to the table below to set the jumpers to the desired configuration.

		Jumpers position											
		SJ1	SJ2	SJ3	SJ4	SJ5	SJ6	SJ7	SJ8	SJ9	SJ10	SJ11	SJ12
# Cells	3s												
	4s												
	5s												
	6s												

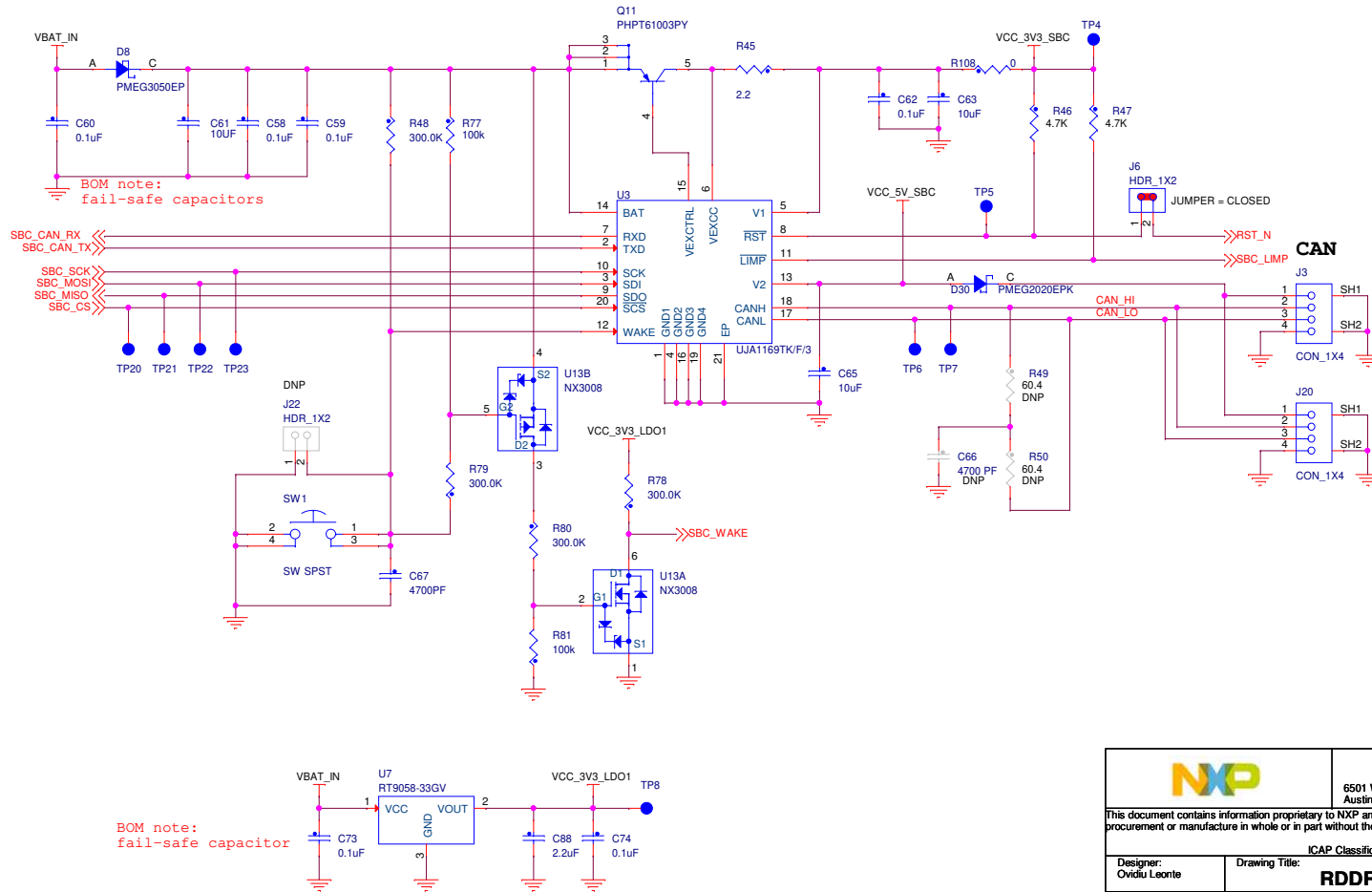
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MCU



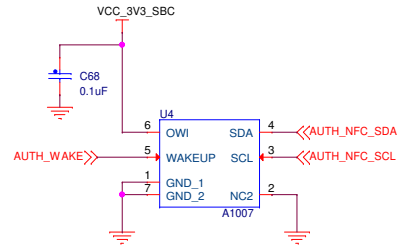
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SBC



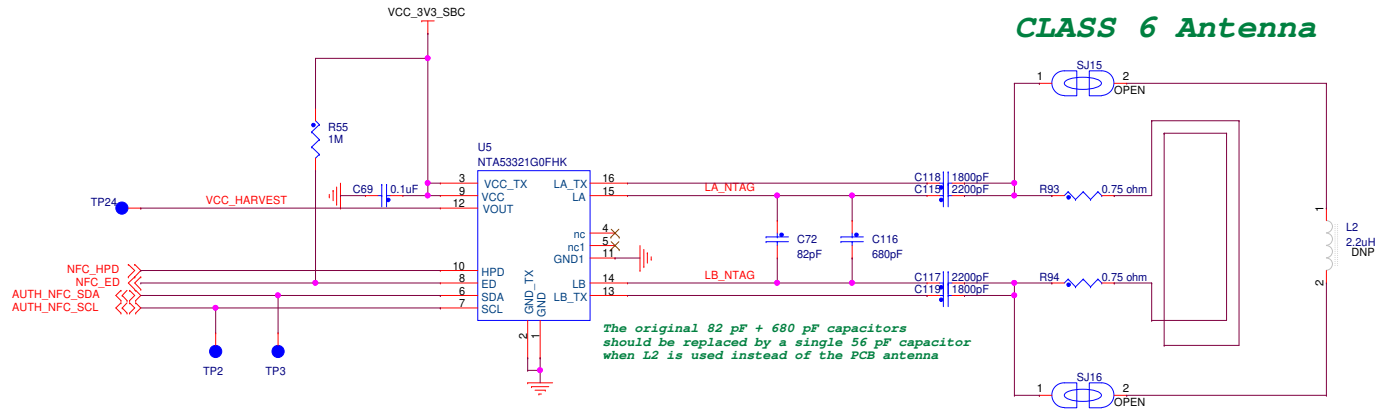
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NFC



CLASS 6 Antenna

The original 82 pF + 680 pF capacitors should be replaced by a single 56 pF capacitor when L2 is used instead of the PCB antenna

By removing the 0.75 ohm resistors and connecting the solder jumpers, users can use L2 instead of PCB antenna.

L2 can be used for extended range operation

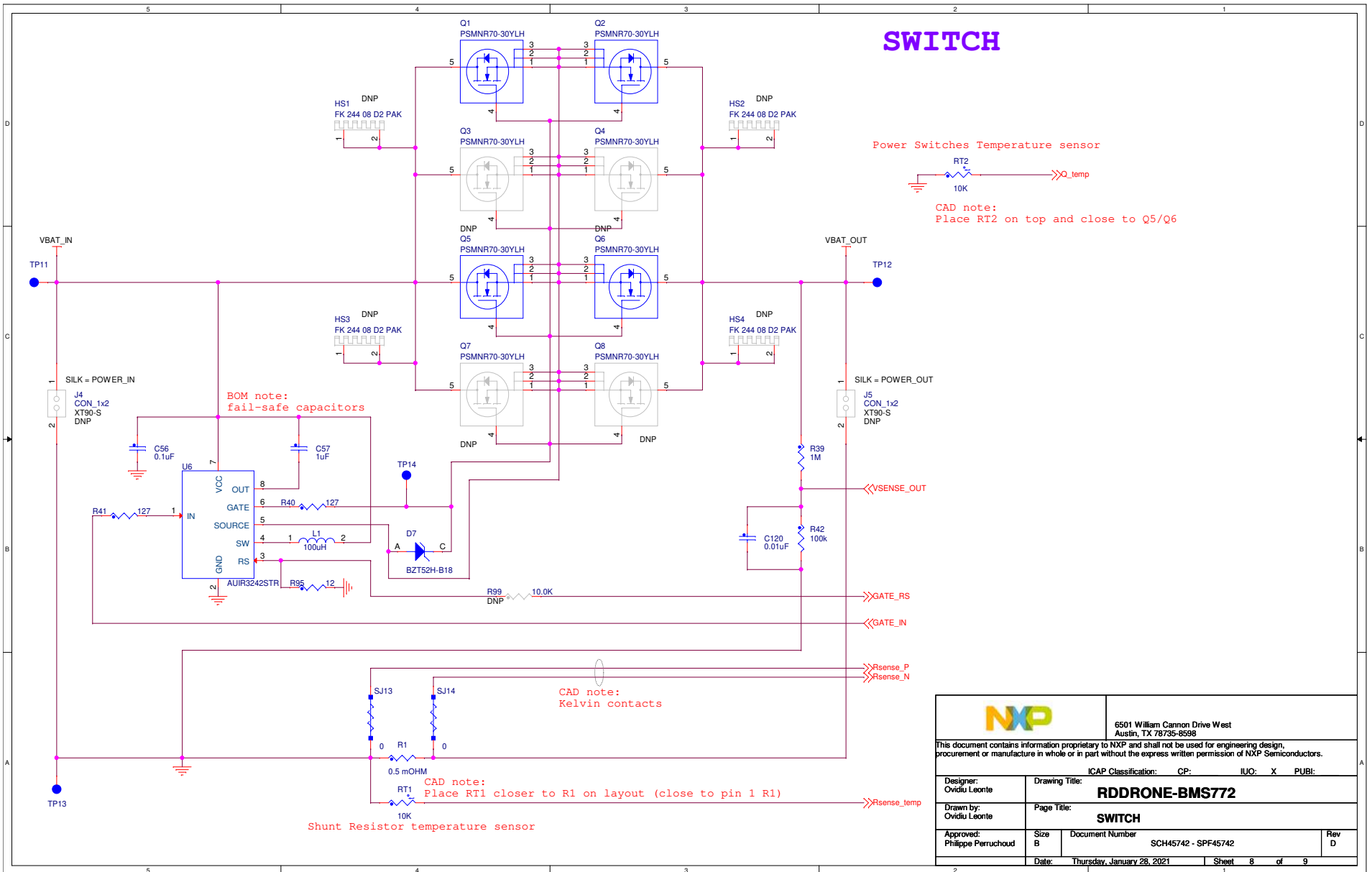
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SWITCH

Power Switches Temperature sensor

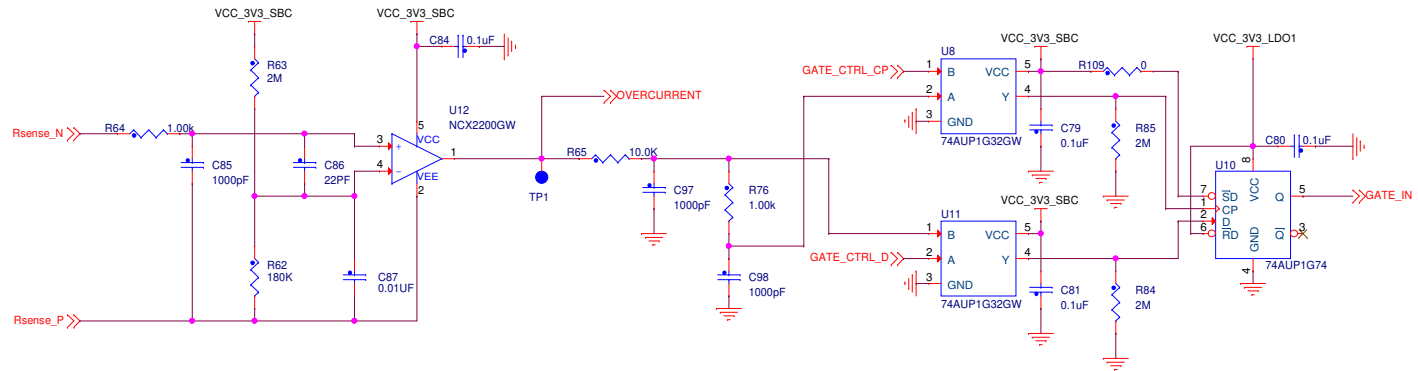



CAD note:
Place RT2 on top and close to Q5/Q6



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OVERCURRENT



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