REVISION HISTORY

REVISION	DESCRIPTION OF CHANGE	DATE	Approved
A	Release of Final Schematic	10/22/2024	Iain Galloway
A1	Changed BT1 to DNP, Li-Ion batteries cannot be shipped with baords.	10/22/2025	Iain Galloway
B	Completely removed BT1 from shcematic. Li-Ion batteries soldered or loose cannot be shipped with NXP boards.	10/22/2025	Iain Galloway
C	Several changes made to schematic per document PCML-94468_C.xlsx. New USB Connector J1 added. USB Conn changed to Full SMT.	1/22/2025	Iain Galloway
D	J1 Connector made SBU1 SBU2 NC. Updated footprint on U13. Added 47uF to input U13.	6/4/2025	Iain Galloway

X-MR-VMU-TROPIC

TABLE OF CONTENTS

SILKSCREEN

Silkscreen text is this COLOR in the schematic.

CAD NOTES:

CAD Notes are this COLOR in the schematic.

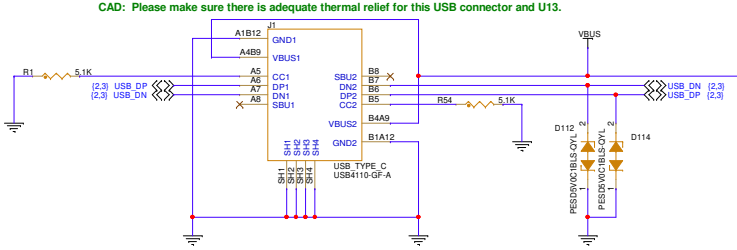
Microcontroller Product Group
6501 William Cannon Drive West
Austin, TX 78735-8598

ICAP Classification: CP: IUO: X PUBL

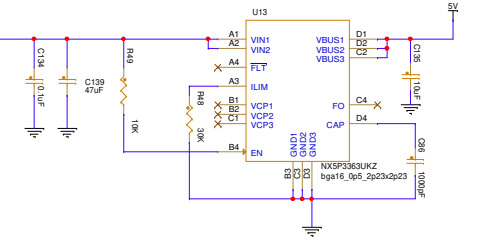
Designer: Michael Steffen	Drawing Title: SCH-94468
Drawn by: Michael Steffen	Page Title: Cover
Approved:	Size C / Document Number SCH-94468 PDF: SPF-94468 / Rev D
	Date: Thursday, August 28, 2025 / Sheet 1 of 7

USB TYPE-C

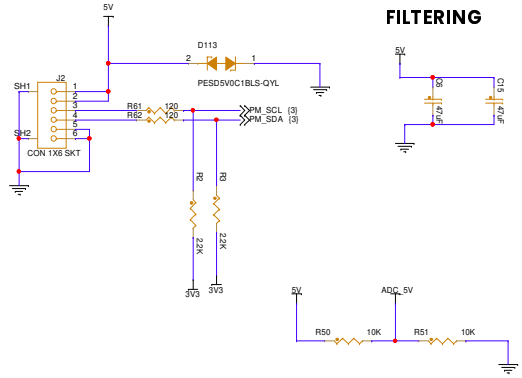
CAD: Please make sure there is adequate thermal relief for this USB connector and U13.



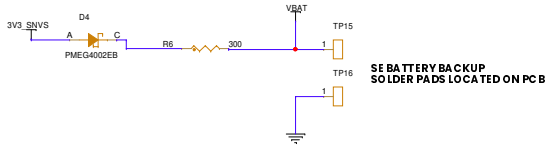
CAD: Please make sure there is adequate thermal relief for this USB connector and U13..



FILTERING

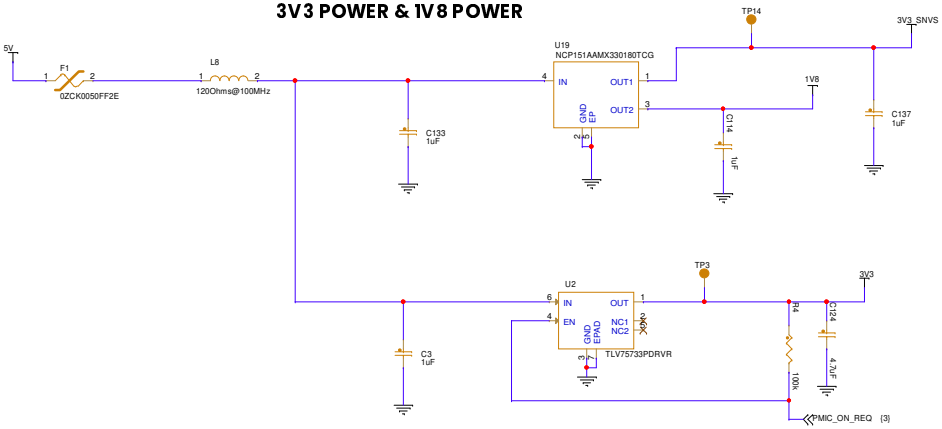


RTC BATTERY CIRCUIT



SE BATTERY BACKUP
SOLDER PADS LOCATED ON PCB

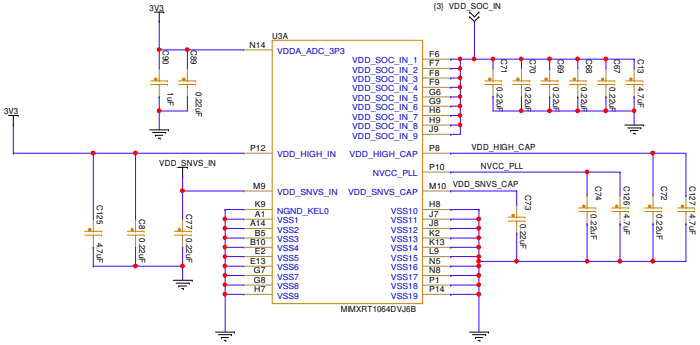
3V3 POWER & 1V8 POWER



POWER PORTION OF I.MX1064

Place 0.22uF next to F6 & F7, 0.22uF next to F8 & F9 and so on.

Place decaps with the lowest value closer to the IC and the Largest after the closest value



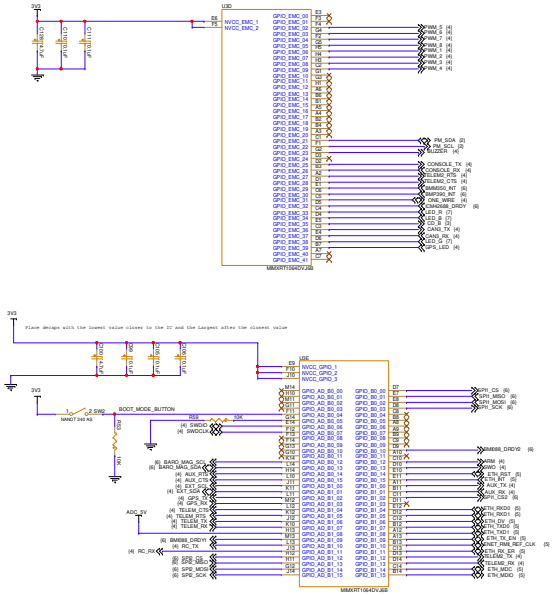
Drawing Title: **SCH-94468**

Page Title: **POWER DELIVERY**

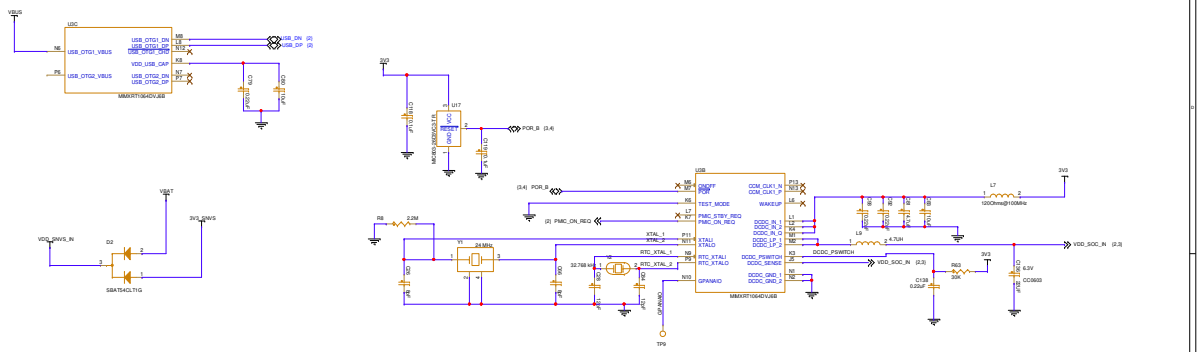
Size	Document Number	Rev
C	SCH-94468 PDF: SPF-94468	D

Date: Thursday, August 28, 2025 | Sheet 2 of 7

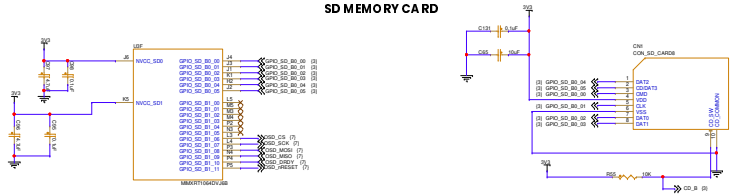
CHIP TO GPIO



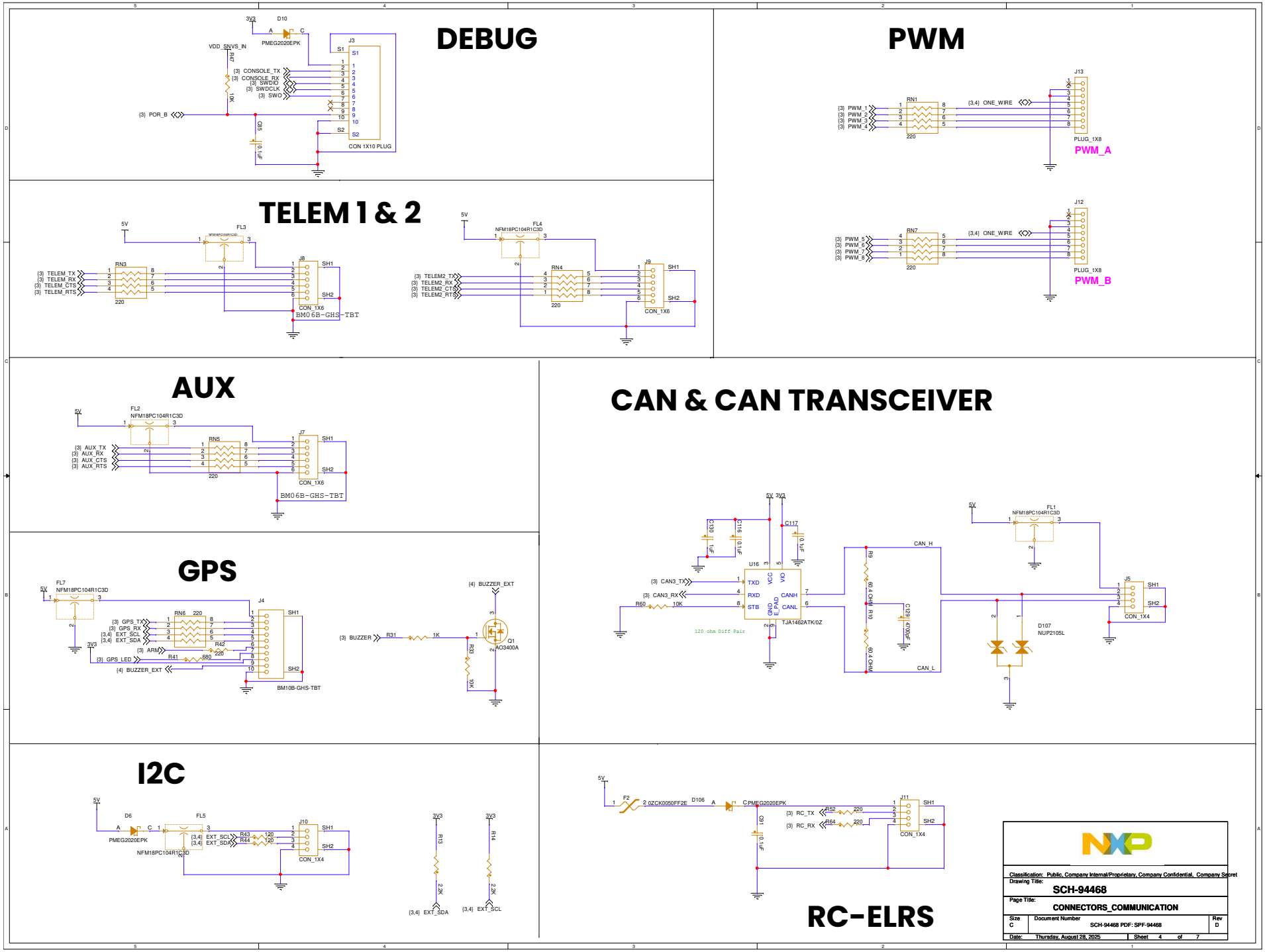
POWER AND CLOCKS



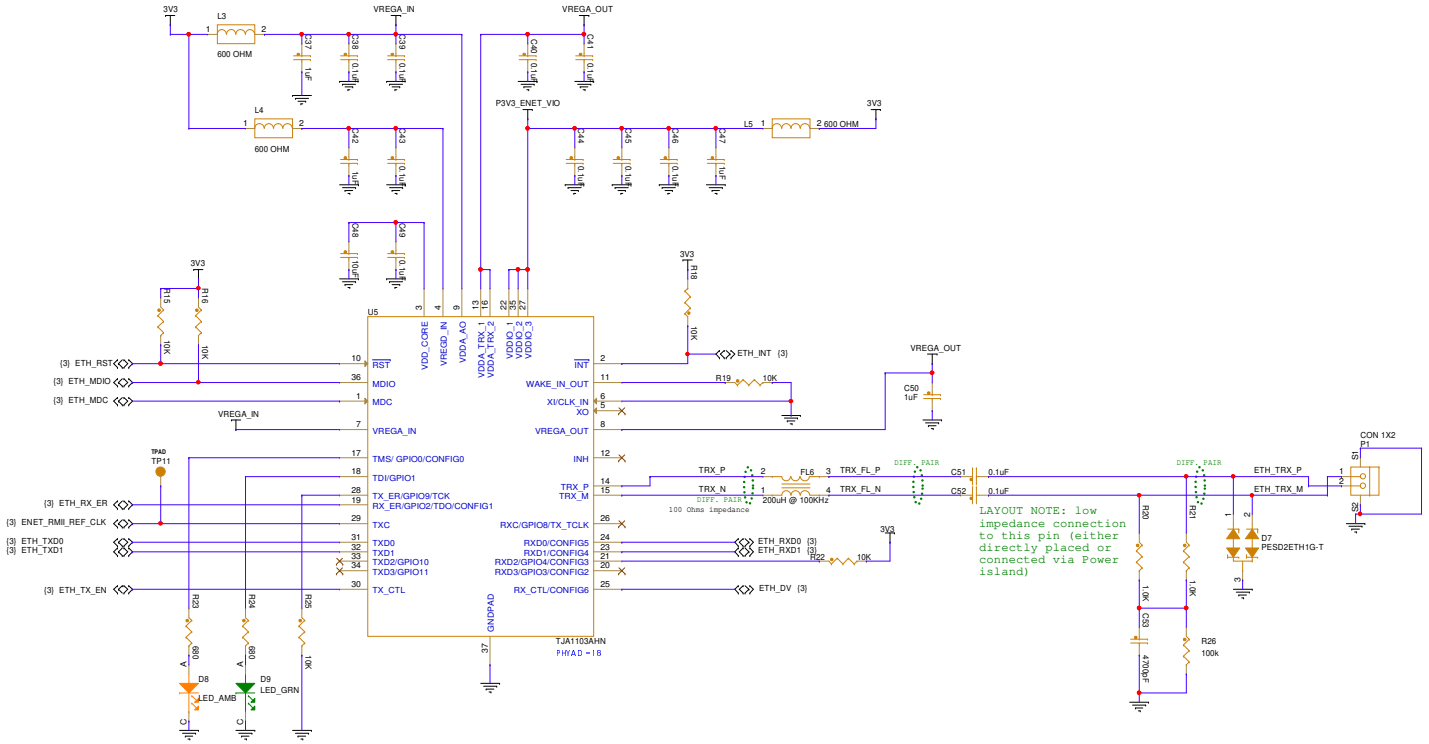
SD MEMORY CARD



Classification: Public, Company Internal/Proprietary, Company Confidential, Company Secret		
Drawing Title: SCH-94468		
Page Title: i.MXRT1064_GPIO		
Size: D	Document Number: SCH-94468 PDF: SPF-94468	Rev: D
Date: Thursday, August 29, 2020	Sheet 3 of 7	


DEBUG
PWM
TELEM 1 & 2
AUX
CAN & CAN TRANSCEIVER
GPS
I2C
RC-ELRS
PWM_A
PWM_B
PMEG2020EPK
NFM18PC104R1C3D
BM06B-GHS-TBT
BM10B-GHS-TBT
TJA1462ATK/0Z
AO3400A
NUP2105L
CON 1X10 PLUG
PLUG_1X8
CON_1X6
CON_1X4
120 ohm Diff Pair
Classification: Public, Company Internal/Proprietary, Company Confidential, Company Secret
Drawing Title:
SCH-94468
Page Title:
CONNECTORS_COMMUNICATION
Size C
Document Number
SCH-94468 PDF: SPF-94468
Rev D
Date: Thursday, August 28, 2025
Sheet 4 of 7

ETHERNET 100BASE-T1



Move D8, D9 LED to top side of PCB.

Classification: Public, Company Internal/Proprietary, Company Confidential, Company Secret

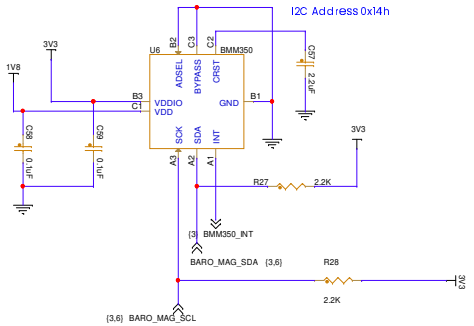
Drawing Title: **SCH-94468**

Page Title: **ETHERNET**

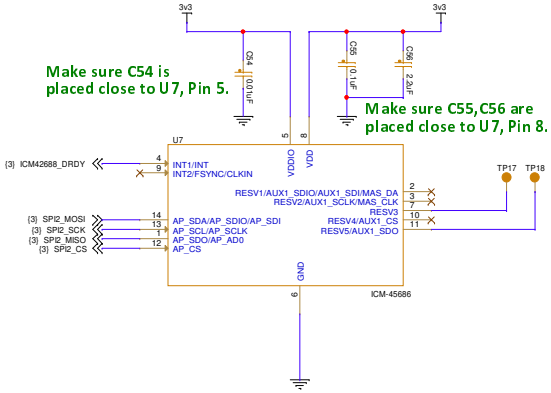
Size	Document Number	Rev
C	SCH-94468 PDF: SPF-94468	D

Date: Thursday, August 28, 2025 Sheet 5 of 7

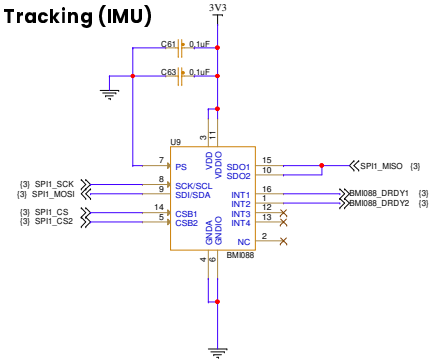
MAGNETOMETER



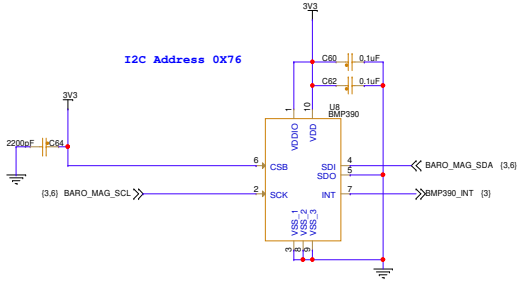
Accelerometer, Gyroscope, 6-Axis Sensor Output



6-Axis Motion Tracking (IMU) Gyroscope



Pressure Sensor



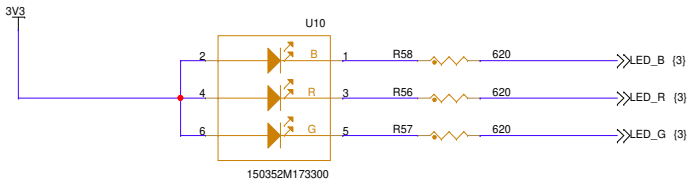
Classification: Public, Company Internal/Proprietary, Company Confidential, Company Secret

Drawing Title: **SCH-94468**

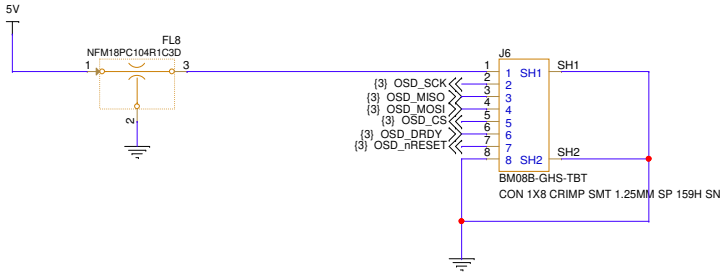
Page Title: **IMU**

Size	Document Number	Rev
C	SCH-94468 PDF: SPF-94468	D

Date: Thursday, August 28, 2025 | Sheet 6 of 7



LED



SPI (OSD)

Drawing Title: **SCH-94468**

Page Title: **LED**

Size	Document Number	Rev
B	SCH-94468 PDF: SPF-94468	D

Date: Thursday, August 28, 2025 | Sheet 7 of 7