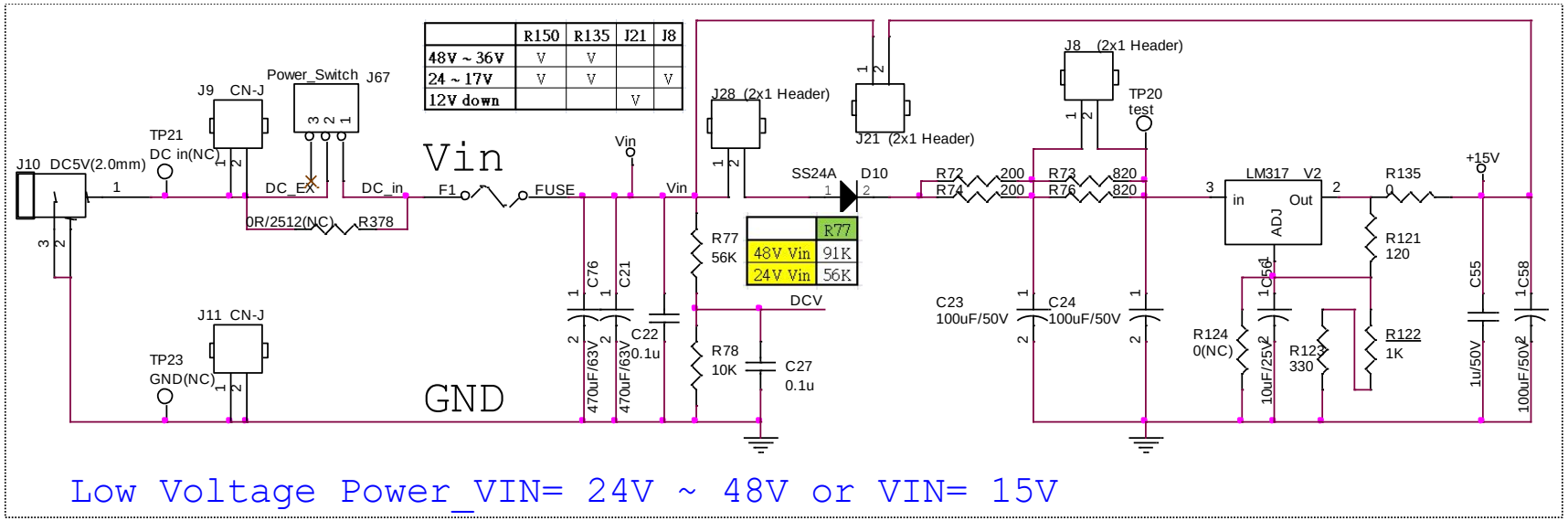
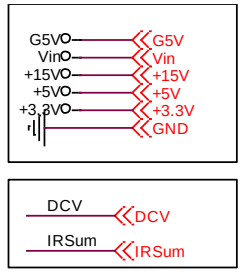
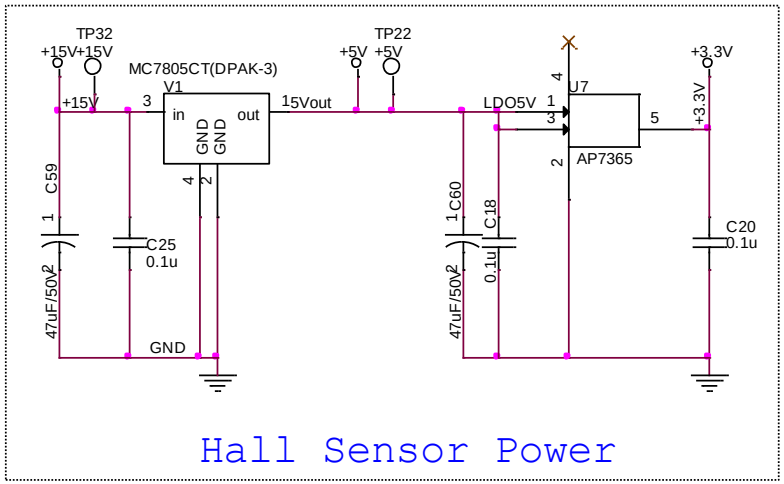
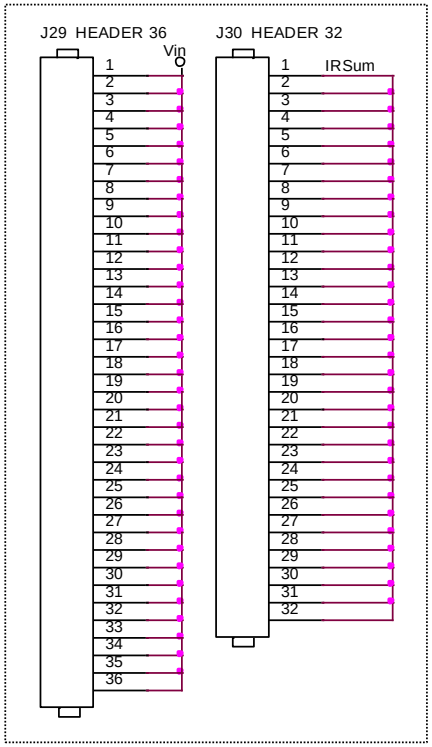


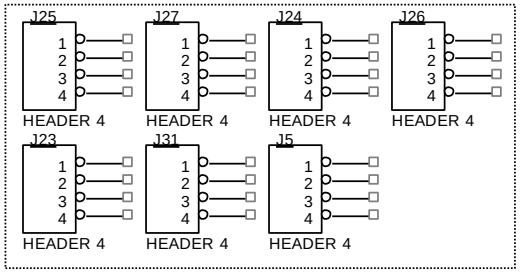
Low Voltage Power_VIN= 24V ~ 48V or VIN= 15V



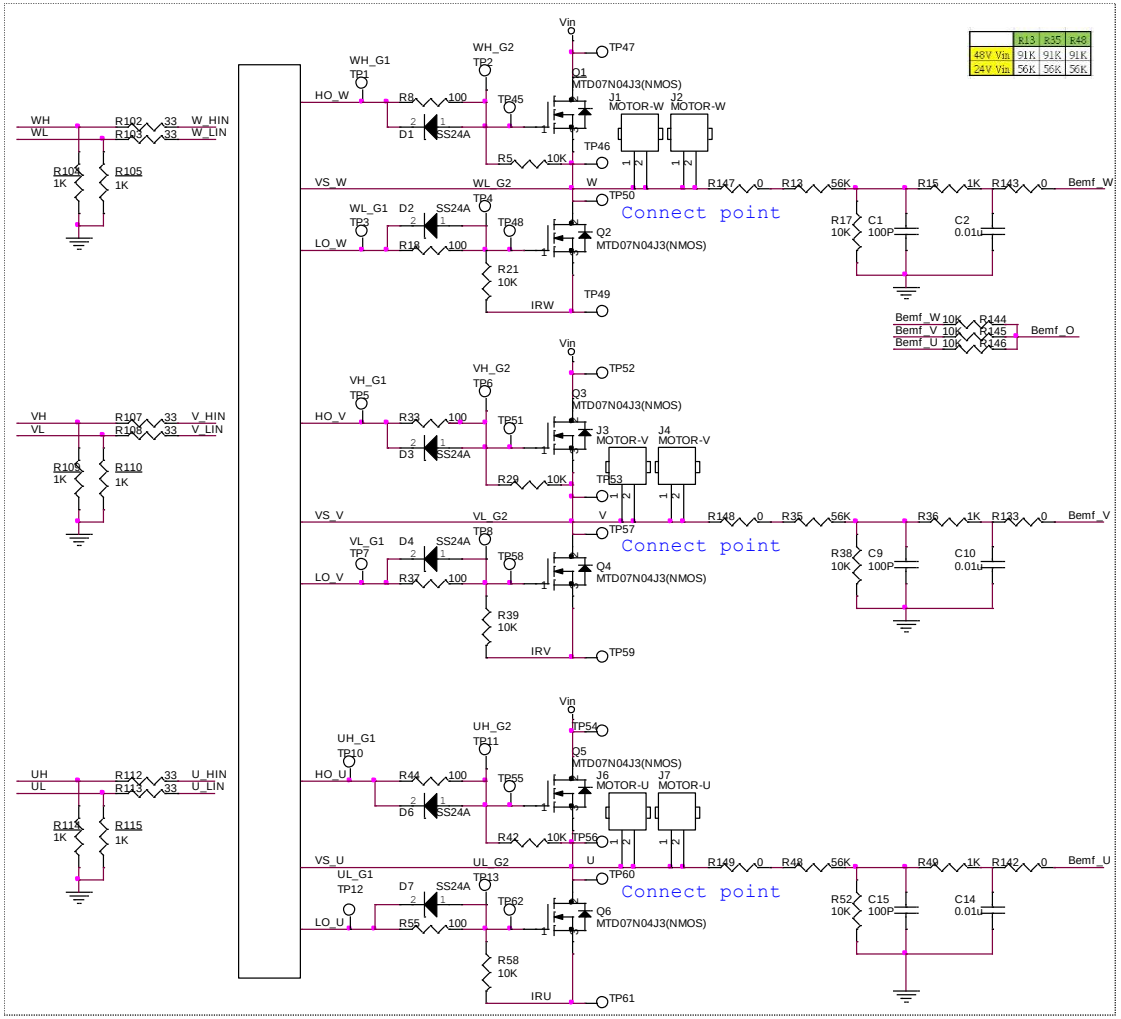


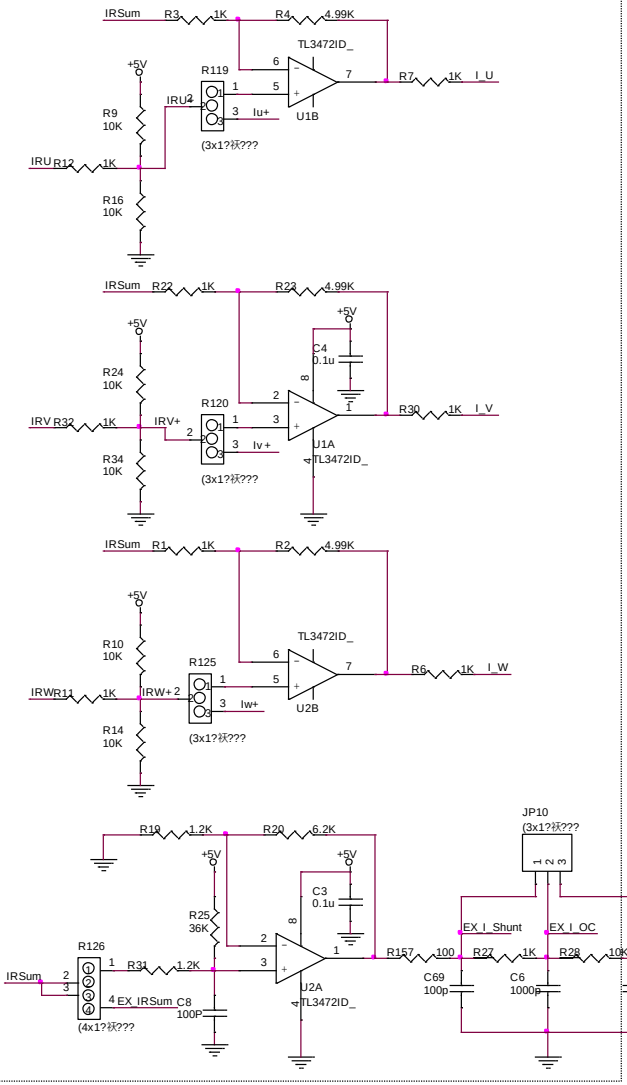
Hall Sensor Power

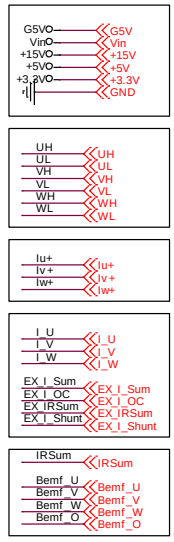


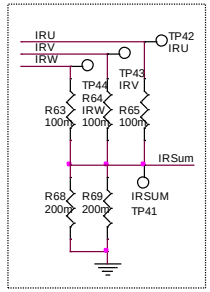


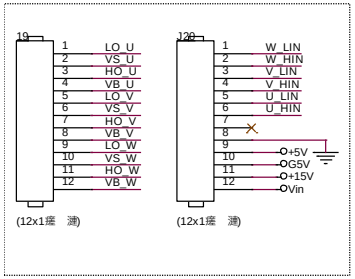
Title	Power		
Size A4	Document Number <Doc>		Rev 1.0
Date: Tuesday, June 03, 2025	Sheet 2 of 3		

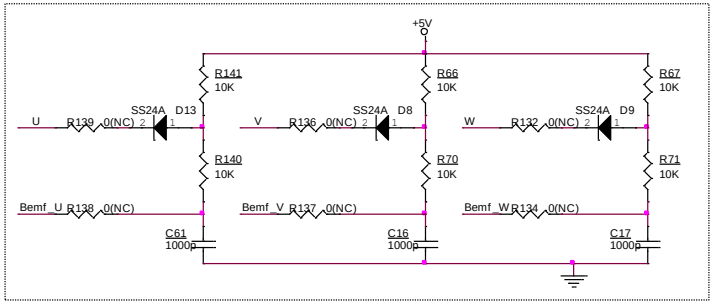






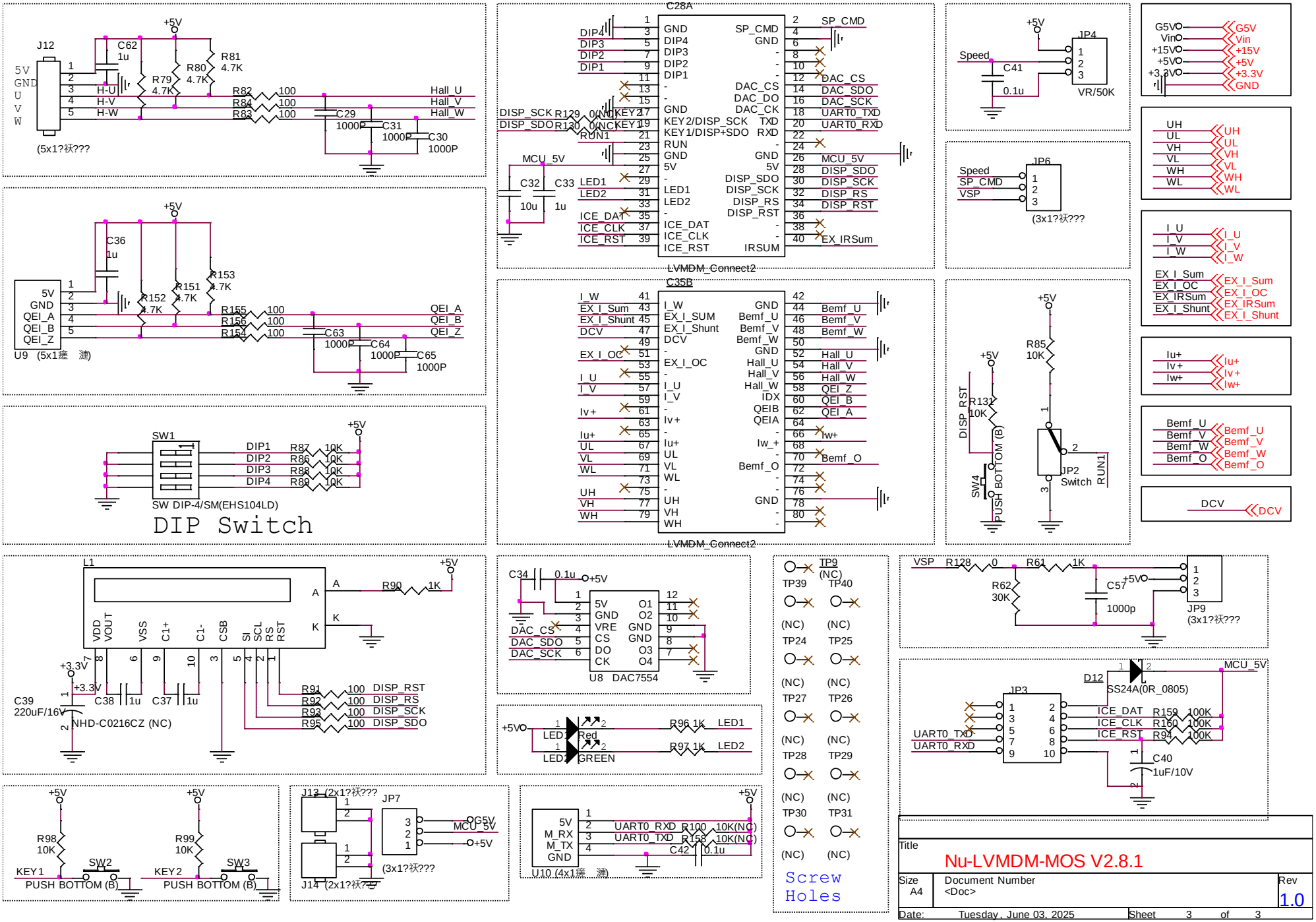




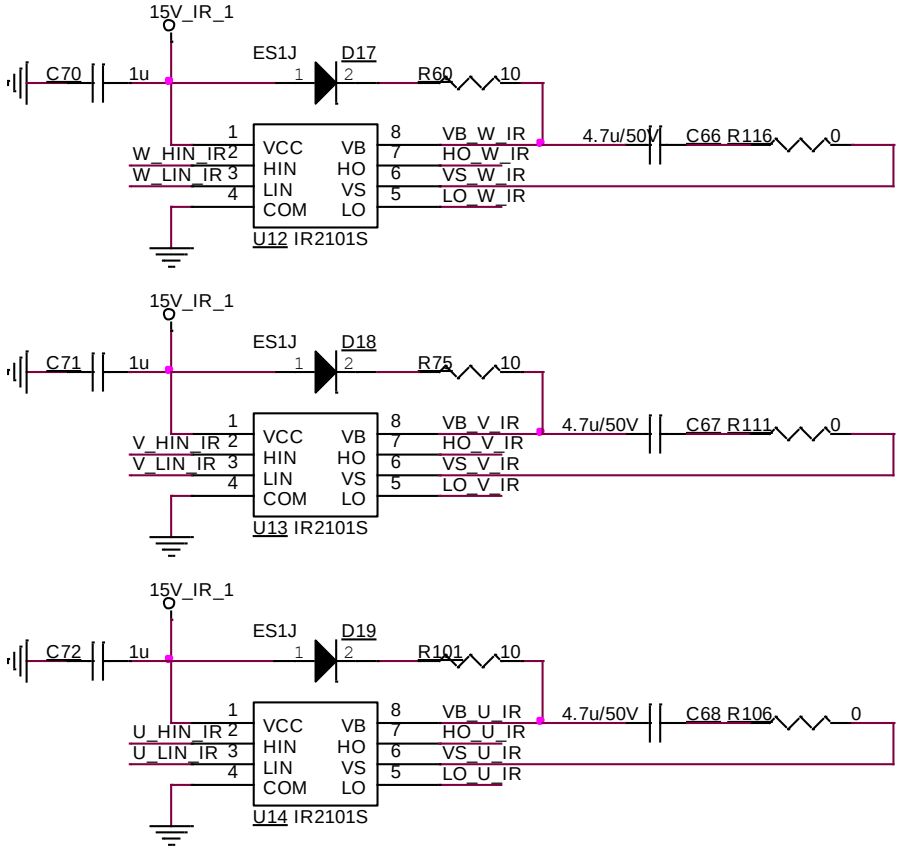


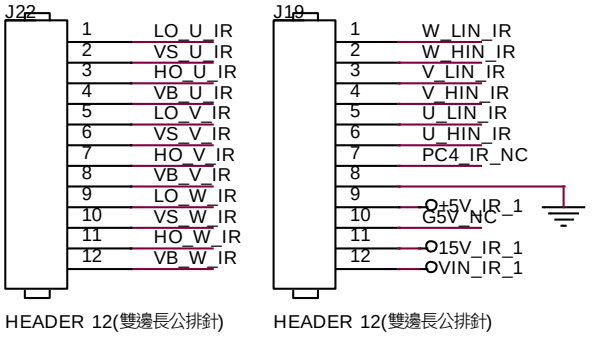
Bemf & IPD Switch															
	R149	R142	R138	R139	R148	R133	R136	R137	R147	R143	R134	R132	R144	R145	R146
Bemf_U	V	V													
Bemf_V					V	V									
Bemf_W									V	V					
Bemf_O	V	V			V	V			V	V			V	V	V
IPD_U			V	V											
IPD_V							V	V							
IPD_W											V	V			

Title	Driver Board		
Size A3	Document Number <Doc>		Rev V1.0
Date: Tuesday, June 03, 2025		Sheet 1 of 3	



J12
5V
GND
U
V
W
(5x1?祆???
C62
1u
R79
4.7K
R80
4.7K
R81
4.7K
H-U
H-V
H-W
R82 100
R84 100
R83 100
Hall_U
Hall_V
Hall_W
C29
1000P
C31
1000P
C30
1000P
U9 (5x1瘥 漣)
C36
1u
R152
4.7K
R151
4.7K
R153
4.7K
R155 100
R156 100
R154 100
QEI_A
QEI_B
QEI_Z
C63
1000P
C64
1000P
C65
1000P
SW1
SW DIP-4/SM(EHS104LD)
DIP1
DIP2
DIP3
DIP4
R87 10K
R86 10K
R88 10K
R89 10K
DIP Switch
C28A
LVMDM_Connect2
GND
DIP4
DIP3
DIP2
DIP1
KEY2/DISP_SCK
KEY1/DISP+SDO
RUN
5V
LED1
LED2
ICE_DAT
ICE_CLK
ICE_RST
SP_CMD
DAC_CS
DAC_DO
DAC_CK
TXD
RXD
DISP_SDO
DISP_SCK
DISP_RS
DISP_RST
IRSUM
DISP_SCK
DISP_SDO
R129 0(NC)
R130 0(NC)
KEY2
KEY1
RUN1
MCU_5V
C32
10u
C33
1u
C35B
LVMDM_Connect2
I_W
EX_I_SUM
EX_I_Shunt
DCV
EX_I_OC
I_U
I_V
Iv+
Iu+
UL
VL
WL
UH
VH
WH
Bemf_U
Bemf_V
Bemf_W
Hall_U
Hall_V
Hall_W
IDX
QEIB
QEIA
Iw_+
Bemf_O
Iw+
DAC_CS
DAC_SDO
DAC_SCK
UART0_TXD
UART0_RXD
EX_IRSum
Speed
C41
0.1u
JP4
VR/50K
JP6
SP_CMD
VSP
(3x1?祆???
R85
10K
R131
10K
DISP_RST
SW4
PUSH BOTTOM (B)
JP2
Switch
RUN1
G5V
Vin
+15V
+5V
+3.3V
GND
UH
UL
VH
VL
WH
WL
I_U
I_V
I_W
EX_I_Sum
EX_I_OC
EX_IRSum
EX_I_Shunt
Iu+
Iv+
Iw+
Bemf_U
Bemf_V
Bemf_W
Bemf_O
DCV
L1
VDD
VOUT
VSS
C1+
C1-
CSB
SI
SCL
RS
RST
A
K
R90 1K
C39
220uF/16V
NHD-C0216CZ (NC)
C38 1u
C37 1u
R91 100 DISP_RST
R92 100 DISP_RS
R93 100 DISP_SCK
R95 100 DISP_SDO
C34 0.1u
U8 DAC7554
5V
GND
VRE
CS
DO
CK
O1
O2
GND
GND
O3
O4
DAC_CS
DAC_SDO
DAC_SCK
LED1 Red
LED2 GREEN
R96 1K LED1
R97 1K LED2
TP9
(NC)
TP39
TP40
TP24
TP25
TP27
TP26
TP28
TP29
TP30
TP31
Screw
Holes
VSP
R128 0
R61 1K
R62
30K
C57
1000p
JP9
(3x1?祆???
D12
SS24A(0R_0805)
MCU_5V
JP3
ICE_DAT
ICE_CLK
ICE_RST
R159 100K
R160 100K
R94 100K
UART0_TXD
UART0_RXD
C40
1uF/10V
R98
10K
R99
10K
KEY1
KEY2
SW2
SW3
PUSH BOTTOM (B)
J13 (2x1?祆???
J14 (2x1?祆???
JP7
(3x1?祆???
G5V
MCU_5V
U10 (4x1瘥 漣)
5V
M_RX
M_TX
GND
UART0_RXD
UART0_TXD
R100 10K(NC)
R158 10K(NC)
C42 0.1u
Title
Nu-LVMDM-MOS V2.8.1
Size
A4
Document Number
<Doc>
Rev
1.0
Date: Tuesday, June 03, 2025
Sheet 3 of 3





Title	IR1201 Gate Driver	
Size A4	Document Number <Doc>	Rev V1.0
Date: Tuesday, June 03, 2025	Sheet 1 of 2	