U104
R5F564MLDDFP#V1-ND

UP : B
RIGHT : D
DOWN : C
LEFT : A
CENTER : CENTER

SW101
SKRHABE010

TACT_A
TACT_D
TACT_C
TACT_B
TACT_CENTER

R104 100k
R103 100k
R125 10k

LED0
LED1
LED2
LED3

LED_SUB0
LED_SUB1
SEN_GATE

LEFT MOTOR
RIGHT MOTOR

TDI
TMS
TRST#
UPSEL_NMI

AD_MARKER_R_SEN
AD_MARKER_L_SEN
AD_POW
AD_LINE_R_SEN
AD_POT
AD_LINE_L_SEN
AD_SUB0
AD_SUB1

C101 10V 0.1u
C102 10V 0.1u
C103 10V 0.1u
C104 10V 0.1u
C105 10V 0.1u
C106 10V 1u
C107 10V 0.1u
C108 10V 0.1u
C109 10V 0.1u
C110 10V 0.1u
C111 10V 0.1u
C112 10V 10p
C113 10V 10p
C114 10V 0.1u
C115 10V 0.1u
C116 10V 0.1u
C117 10V 1u
C118 10V 1u
C119 16V 1u
C120 10V 1u

R107 20k
R110 10k
U102A
MCP6001T-I/LT
AD_POW

VR101 SV01A103AEA01
U103A
MCP6001T-I/LT
AD_POT

NX3225SA-12.000M-STD-CSR-1
X101

22 (DNP) R117
R118
R115 22
R116 22
R121 22
R122 22
R123 22 (DNP)
R124 22
R126 22
R127 22
R128 22
R129 22
R132 22
R133 22
R134 22
R135
R137 22
R138 22

R136 100k
D102 1SS352
SW102
SKQYACE010

R139 100k
R140 100k (DNP)

R101 10k
R102 10k
R105 10k
R106 10k

E1 Emulator
503480_1400
J101
1. TCK
2. GND
3. TRST#
4. EMLE
5. TDO
6. NC
7. MD/FINED
8. VCC
9. TMS
10. UB
11. TDI
12. GND
13. RES#
14. GND

U101
MCP1416T-E/OT
PWM_BUZZER
R111 100k
R112 0
D101 1SS352
B101
SMT-0540-T-7-R

R108 20k (DNP)
R109 20k (DNP)
oLED
TXD9_OLED
RXD9_OLED
J102
BM04B-SRSS-TB(LF)(SN)

R113 20k (DNP)
R114 20k (DNP)
BTmodule
J103
TXD2_BTM
RXD2_BTM
DF13-4P-1.25DSA

R119 100k
R120 100k
J104
1050270001
SPI mode
SPI_CS3
CPU_SPI_MOSI
CPU_SPI_SCK
SPI_MISO
SD_DAT2
SD_DAT3
SD_CMD
SD_CLK
SD_DAT0
SD_DAT1
SD_CD

R130 100k
R131 100k
U105
MR20H40CDF
SPI_CS1
SPI_SCK
SPI_MOSI
SPI_MISO

for Power Control Spare
503480_0400
J105
IO_SPARE3
IO_SPARE4

for I/O Control Spare
503480_0600
J106
IO_SPARE0
IO_SPARE1
IO_SPARE2

14	14_VCC	60_VCC	60
97	97_AVCC0	1_AVCC1	1
12	12_VSS	62_VSS	62
99	99_AVSS0	3_AVSS1	3
96	96_VREFH0	94_VREFL0	94
5	5_VCL		
2	2_EMLE		
6	6_VBATT		
7	7_MD/FINED		
10	10_RES#		
8	8_XCIN	9_XCOUT	9
11	11_P37/XTAL	13_P36/EXTAL	13
35	35_VCC_USB		
37	37_USB0_DP	36_USB0_DM	36
38	38_VSS_USB		
100	100_P05		
98	98_P07		
34	34_P12	33_P13	33
32	32_P14	31_P15	31
30	30_P16	29_P17	29
28	28_P20	27_P21	27
26	26_P22	25_P23	25
24	24_P24	23_P25	23
22	22_P26/TDO	21_P27/TCK	21
20	20_P30/TDI	19_P31/TMS	19
18	18_P32	17_P33	17
16	16_P34/TRST#	15_P35/UPSEL/NMI	15
95	95_P40	93_P41	93
92	92_P42	91_P43	91
90	90_P44	89_P45	89
88	88_P46	87_P47	87
4	4_PJ3		

44	TXD2_BTM	44_P50	
43	RXD2_BTM	43_P51	
42	SCK2_BTM	42_P52	
41	IO_SPARE2	41_P53	
40	IO_SPARE1	40_P54/TRDATA2	
39	IO_SPARE0	39_P55/TRDATA3	
70	SPI_CS1	70_PA0	
69	G_INT	69_PA1	
68	SPI_CS3	68_PA2	
67	G_FSYNC	67_PA3	
66	SPI_CS0	66_PA4	
65	SPI_SCK	65_PA5	
64	SPI_MOSI	64_PA6	
63	SPI_MISO	63_PA7	
61	SENSOR_MOTOR_CW	61_PB0	
59	PWM_BUZZER	59_PB1	
58	DRIVE_MOTOR_EN	58_PB2	
57	PWM_SUB	57_PB3	
56	SENSOR_MOTOR_EN	56_PB4	
55	SCK9_OLED	55_PB5	
54	RXD9_OLED	54_PB6	RX64M RxD <- OLED TxD
53	TXD9_OLED	53_PB7	RX64M TxD -> OLED RxD
52	LED0	52_PC0	
51	LED1	51_PC1	
50	LED2	50_PC2	
49	LED3	49_PC3	
48	IO_SPARE4	48_PC4	
47	IO_SPARE3	47_PC5	
46	SENSOR_MOTOR_PWM	46_PC6	
45	UB	45_PC7/UB	
86	LEFT_MOTOR_CCW	86_PD0	
85	LEFT_MOTOR_CW	85_PD1	
84	SD_DAT2	84_PD2	
83	SD_DAT3	83_PD3	
82	SD_CMD	82_PD4	
81	SD_CLK	81_PD5	
80	SD_DAT0	80_PD6	
79	SD_DAT1	79_PD7	
78	RIGHT_MOTOR_CCW	78_PE0	
77	LEFT_MOTOR_PWM	77_PE1	
76	RIGHT_MOTOR_PWM	76_PE2	
75	RIGHT_MOTOR_CW	75_PE3	
74	SENSOR_MOTOR_CCW	74_PE4	
73		73_PE5	
72	SD_CD	72_PE6	
71	SD_WP	71_PE7	

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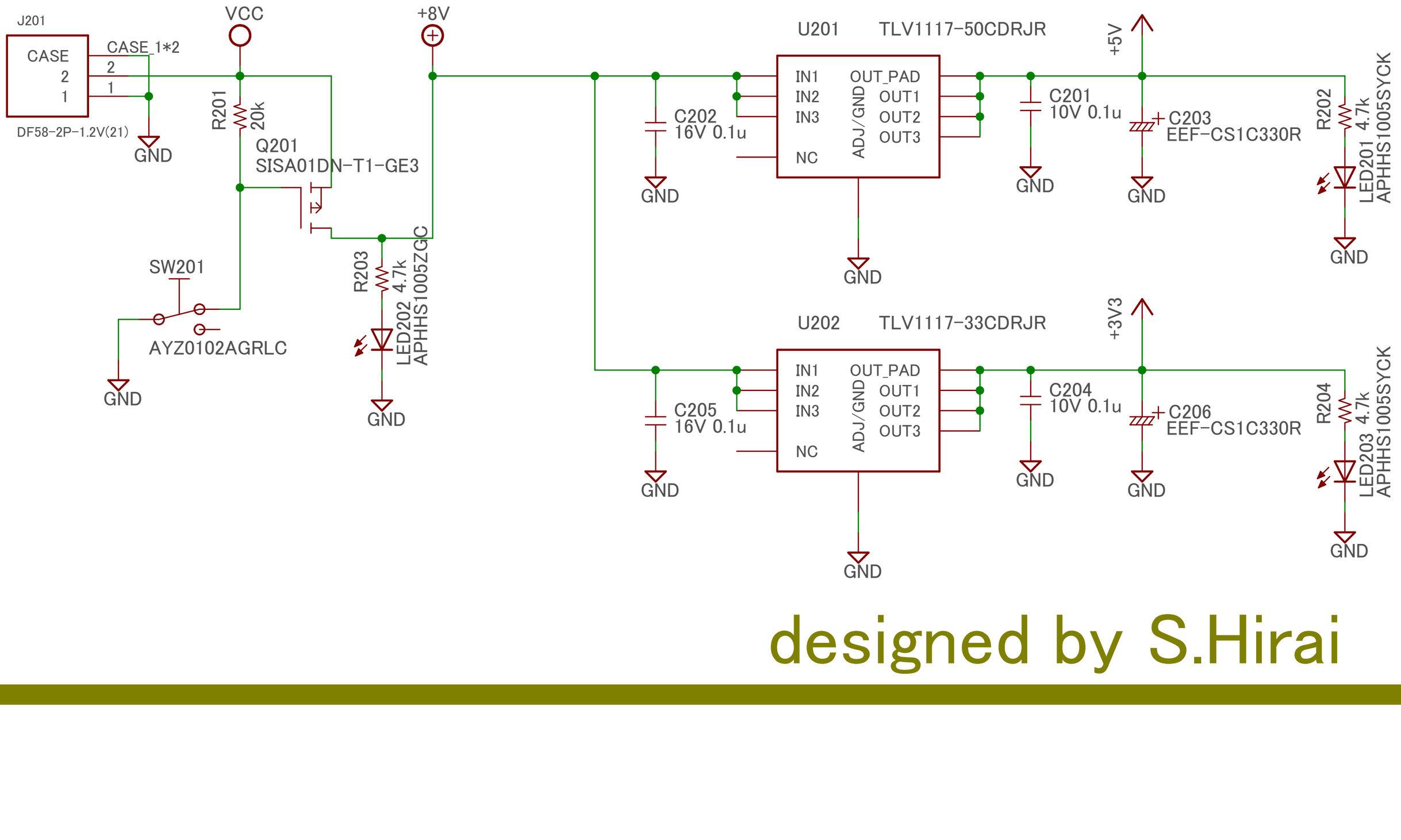
J201
CASE
2
1
CASE_1*2
DF58-2P-1.2V(21)
GND
VCC
R201
20k
Q201
SISA01DN-T1-GE3
SW201
AYZ0102AGRLC
GND
R203
4.7k
LED202
APHHS1005ZGC
GND
+8V
C202
16V 0.1u
GND
U201
TLV1117-50CDRJR
IN1
IN2
IN3
NC
OUT_PAD
ADJ/GND
OUT1
OUT2
OUT3
GND
C201
10V 0.1u
GND
+5V
C203
EEF-CS1C330R
GND
R202
4.7k
LED201
APHHS1005SYCK
GND
U202
TLV1117-33CDRJR
IN1
IN2
IN3
NC
OUT_PAD
ADJ/GND
OUT1
OUT2
OUT3
GND
C205
16V 0.1u
GND
C204
10V 0.1u
GND
+3V3
C206
EEF-CS1C330R
GND
R204
4.7k
LED203
APHHS1005SYCK
GND
designed by S.Hirai

LEFT MOTOR
DRIVE_MOTOR_EN
LEFT_MOTOR_CCW
LEFT_MOTOR_PWM
LEFT_MOTOR_CW
U301A
74LVC2G08DC
U301B
74LVC2G08DC
DRIVE MOTOR
U302
RT9625AZQW
1_BOOT2
2_GND
3_PWM2
4_EN2
5_EN1
6_PWM1
7_POR
8_BOOT1
16_UGATE2
15_PHASE2
14_LGATE2
13_GND
12_VCC
9_UGATE1
10_PHASE1
11_LGATE1
17_GND
R301 2.2
R302 2.2
R303 1
R304 0
R305 100k
R306 2.2
R310 0
R312 1
C301 16V 1u
C303 16V 1u
C304 50V 0.01u
C306 10V 0.1u
C307 16V 1u
Q301 SIZ322DT-T1-GE3
Q302 SIZ322DT-T1-GE3
C302 EEF-CS1C330R
U301PWR
+3V3
+8V
GND
MOT1_OUTA
MOT1_OUTB

RIGHT MOTOR
DRIVE_MOTOR_EN
RIGHT_MOTOR_CCW
RIGHT_MOTOR_PWM
RIGHT_MOTOR_CW
U303A
74LVC2G08DC
U303B
74LVC2G08DC
DRIVE MOTOR
U304
RT9625AZQW
R313 2.2
R316 2.2
R318 1
R320 0
R321 2.2
R322 0
R323 1
C309 16V 1u
C310 16V 1u
C311 50V 0.01u
C312 10V 0.1u
C313 16V 1u
Q303 SIZ322DT-T1-GE3
Q304 SIZ322DT-T1-GE3
U303PWR
MOT2_OUTA
MOT2_OUTB

SENSOR MOTOR
SENSOR_MOTOR_EN
SENSOR_MOTOR_CCW
SENSOR_MOTOR_PWM
SENSOR_MOTOR_CW
U305A
74LVC2G08DC
U305B
74LVC2G08DC
U306
RT9625AZQW
R324 2.2
R325 2.2
R326 1
R327 0
R328 100k
R329 2.2
R330 0
R331 1
C314 16V 1u
C316 16V 1u
C317 50V 0.01u
C318 10V 0.1u
C319 16V 1u
Q305 SIZ322DT-T1-GE3
Q306 SIZ322DT-T1-GE3
C315 EEF-CS1C330R
U305PWR
J303
BM02B-SRSS-TB(LF)(SN)
PAD1
PAD2

+5V
C305 10V 1u
C308 10V 1u
20021321-00010C4LF
J301
J302
LEFT MOTOR
RIGHT MOTOR
LEFT_TCLKC
LEFT_TCLKD
RIGHT_TCLKA
RIGHT_TCLKB
R307 0 (DNP)
R308 0
R309 0 (DNP)
R311 0
R314 0 (DNP)
R315 0
R317 0
R319 0 (DNP)
1: MOT OUT A
2: MOT OUT B
3: Vcc (5V)
4: GND
5: A−
6: A+
7: B−
8: B+
9: NC
10: NC
1: NC
2: NC
3: Vcc (5V)
4: GND
5: A−
6: A+
7: B−
8: B+
9: MOT OUT A
10: MOT OUT B

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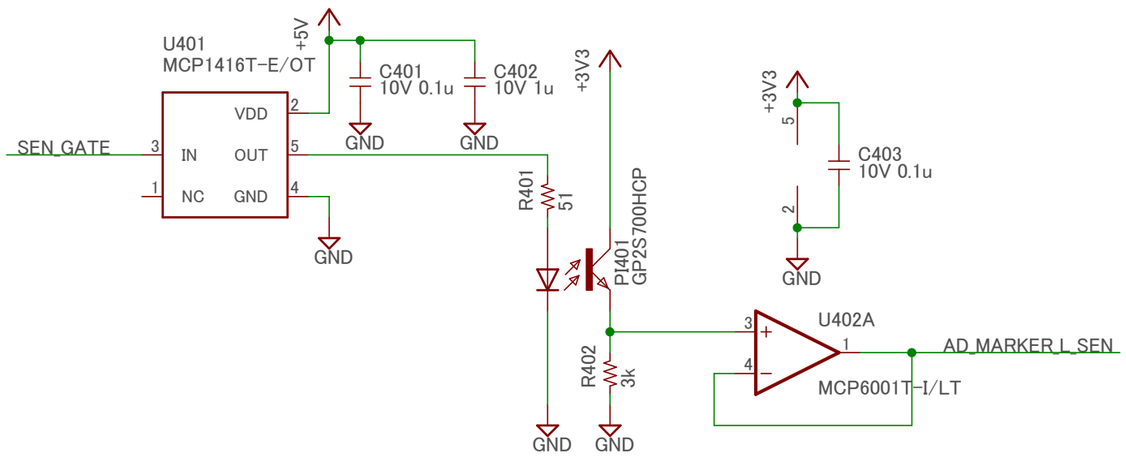
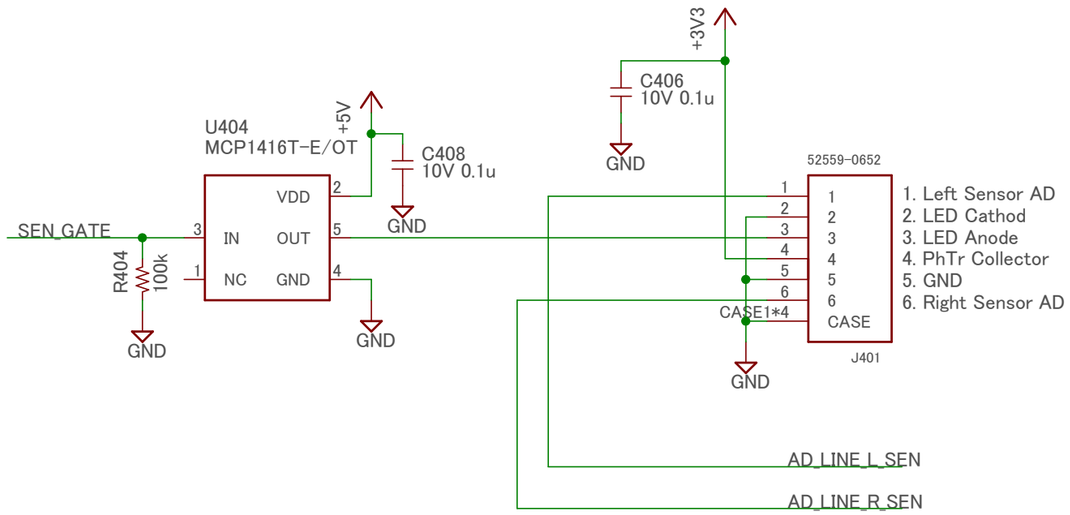
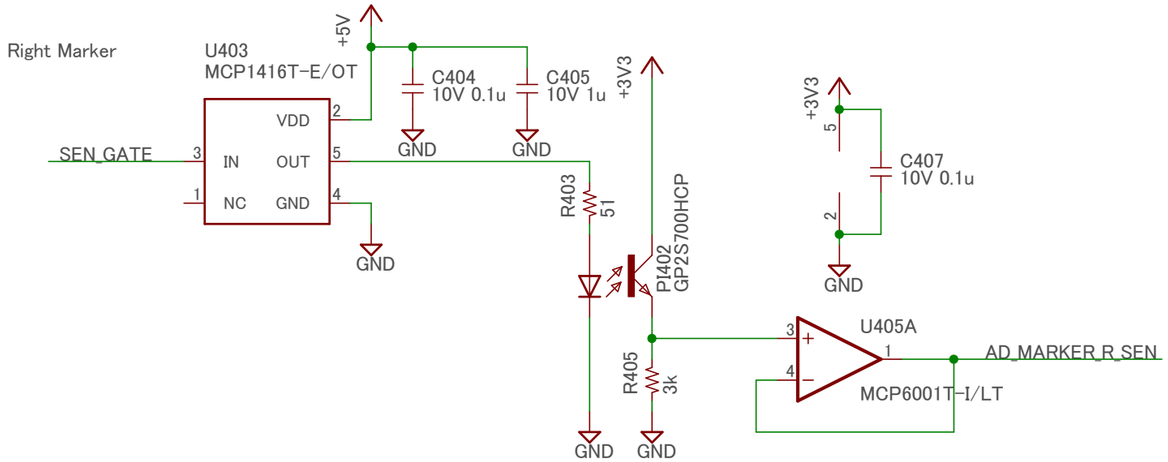
Left Marker







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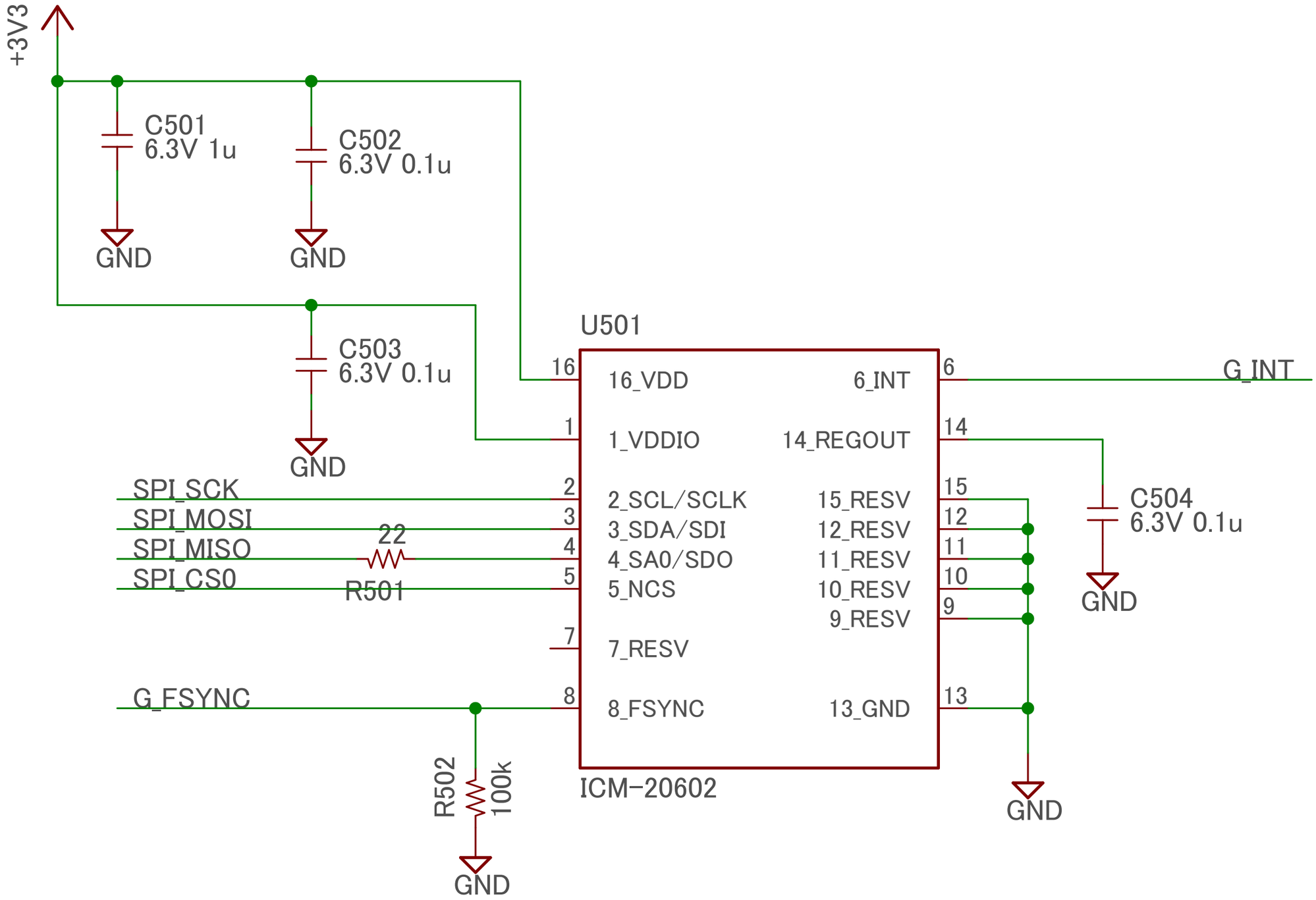

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