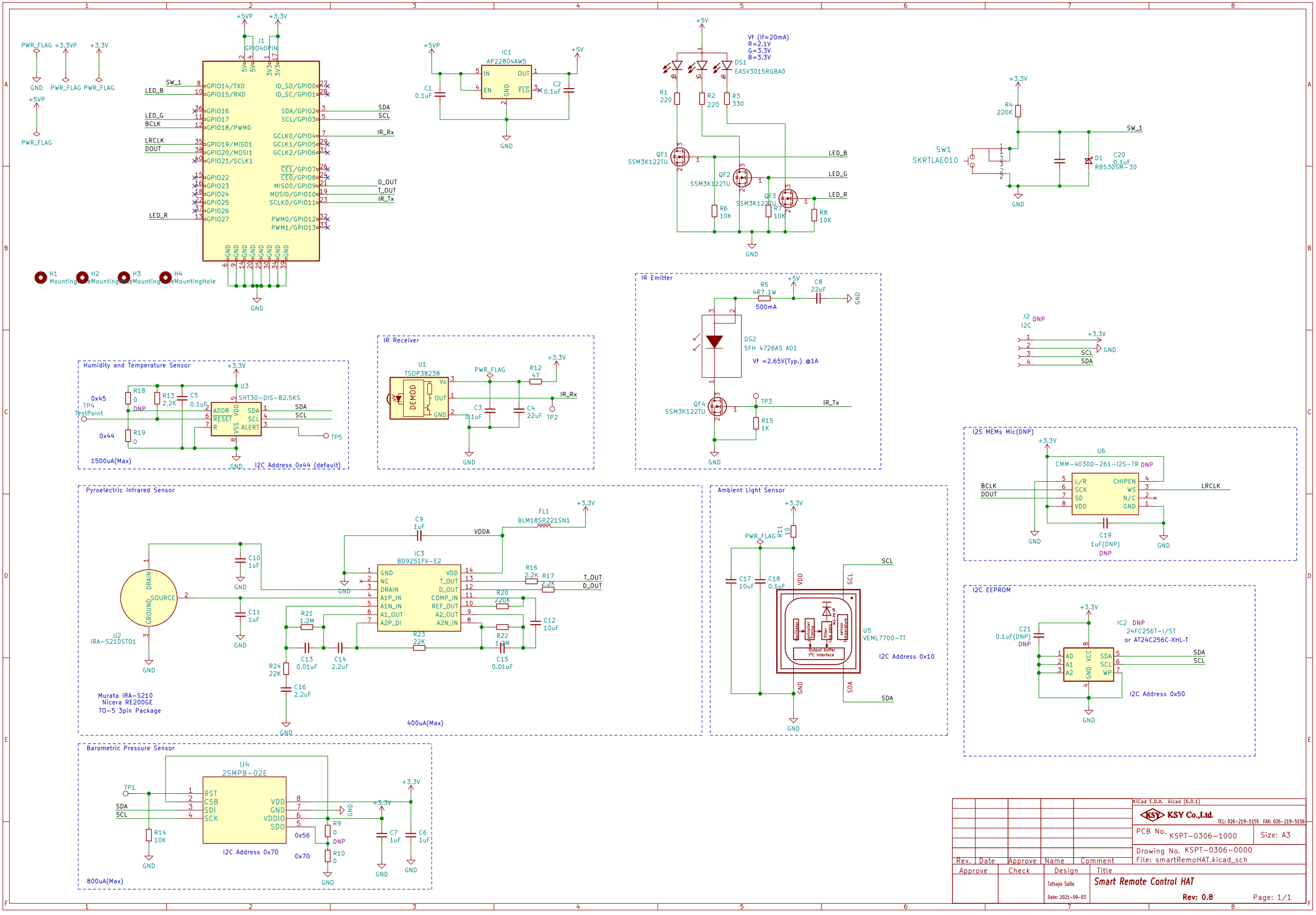
PWR_FLAG +3.3VP +3.3V
GND PWR_FLAG PWR_FLAG
+5VP
PWR_FLAG
+5VP +3.3V
J1
GPIO40PIN
SW_1
LED_B
LED_G
BCLK
LRCLK
DOUT
LED_R
GPIO14/TXD
GPIO15/RXD
GPIO16
GPIO17
GPIO18/PWM0
GPIO19/MISO1
GPIO20/MOSI1
GPIO21/SCLK1
GPIO22
GPIO23
GPIO24
GPIO25
GPIO26
GPIO27
ID_SD/GPIO0
ID_SC/GPIO1
SDA/GPIO2
SCL/GPIO3
GCLK0/GPIO4
GCLK1/GPIO5
GCLK2/GPIO6
CE1/GPIO7
CE0/GPIO8
MISO0/GPIO9
MOSI0/GPIO10
SCLK0/GPIO11
PWM0/GPIO12
PWM1/GPIO13
SDA
SCL
IR_Rx
D_OUT
T_OUT
IR_Tx
H1 MountingHole
H2 MountingHole
H3 MountingHole
H4 MountingHole
GND
+5VP
IC1
AP22804AW5
IN
OUT
EN
GND
FLG
C1 0.1uF
C2 0.1uF
+5V
+5V
Vf (If=20mA)
R=2.1V
G=3.3V
B=3.3V
DS1
EASV3015RGBA0
R1 220
R2 220
R3 330
QF1 SSM3K122TU
QF2 SSM3K122TU
QF3 SSM3K122TU
R6 10K
R7 10K
R8 10K
LED_B
LED_G
LED_R
GND
+3.3V
R4 220K
SW_1
SW1 SKRTLAE010
D1 RB530SM-30
C20 0.1uF
GND
Humidity and Temperature Sensor
+3.3V
U3
SHT30-DIS-B2.5KS
0x45
TP4 TestPoint
R18 0
DNP
R13 2.2K
C5 0.1uF
ADDR
RESET
R
VDD
VSS
SDA
SCL
ALERT
SDA
SCL
TP5
0x44
R19 0
1500uA(Max)
GND
I2C Address 0x44 (default)
IR Receiver
U1
TSOP38238
DEMOD
Vs
OUT
GND
PWR_FLAG
R12 47
+3.3V
IR_Rx
C3 0.1uF
C4 22uF
TP2
GND
IR Emitter
R5 4R7 1W
500mA
+5V
C8 22uF
GND
DS2
SFH 4726AS A01
Vf =2.65V(Typ.) @1A
QF4 SSM3K122TU
TP3
IR_Tx
R15 1K
GND
J2 DNP
I2C
+3.3V
GND
SCL
SDA
I2S MEMs Mic(DNP)
+3.3V
U6
CMM-4030D-261-I2S-TR DNP
BCLK
DOUT
L/R
SCK
SD
VDD
CHIPEN
WS
N/C
GND
LRCLK
C19 1uF(DNP) DNP
GND
GND
Pyroelectric Infrared Sensor
+3.3V
FL1
BLM18SP221SN1
C9 1uF
VDDA
IC3
BD9251FV-E2
GND
NC
DRAIN
A1P_IN
A1N_IN
A1_OUT
A2P_DI
VDD
T_OUT
D_OUT
COMP_IN
REF_OUT
A2_OUT
A2N_IN
R16 2.2K
R17 2.2K
T_OUT
D_OUT
R20 220K
C12 10uF
C10 1uF
C11 1uF
DRAIN
SOURCE
GROUND
U2
IRA-S210ST01
R21 1.2M
R23 22K
R22 1.2M
C13 0.01uF
C14 2.2uF
C15 0.01uF
R24 22K
C16 2.2uF
Murata IRA-S210
Nicera RE200GE
TO-5 3pin Package
400uA(Max)
GND
Ambient Light Sensor
+3.3V
PWR_FLAG
R11 10
C17 10uF
C18 0.1uF
VDD
SCL
SDA
U5
VEML7700-TT
Oscillator
Photo diode
Amplifier
filter
ALS-PD
sensor Temperature
Output buffer
I²C Interface
I2C Address 0x10
GND
GND
SDA
SCL
SDA
I2C EEPROM
+3.3V
C21 0.1uF(DNP) DNP
IC2 DNP
24FC256T-I/ST
or AT24C256C-XHL-T
A0
A1
A2
GND
VCC
SDA
SCL
WP
SDA
SCL
I2C Address 0x50
GND
Barometric Pressure Sensor
U4
2SMPB-02E
TP1
SDA
SCL
RST
CSB
SDI
SCK
VDD
GND
VDDIO
SDO
+3.3V
+3.3V
GND
R14 10K
R9 0
DNP
R10 0
0x56
0x70
C7 1uF
C6 1uF
I2C Address 0x70
GND
GND
GND
800uA(Max)
KiCad E.D.A. kicad (6.0.1)
KSY Co.,Ltd.
TEL: 026-219-5155 FAX: 026-219-5156
PCB No. KSPT-0306-1000
Size: A3
Drowing No. KSPT-0306-0000
File: smartRemoHAT.kicad_sch
Rev. Date Approve Name Comment
Approve Check Design Title
Tatsuya Saito
Date: 2021-09-03
Smart Remote Control HAT
Rev: 0.8
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