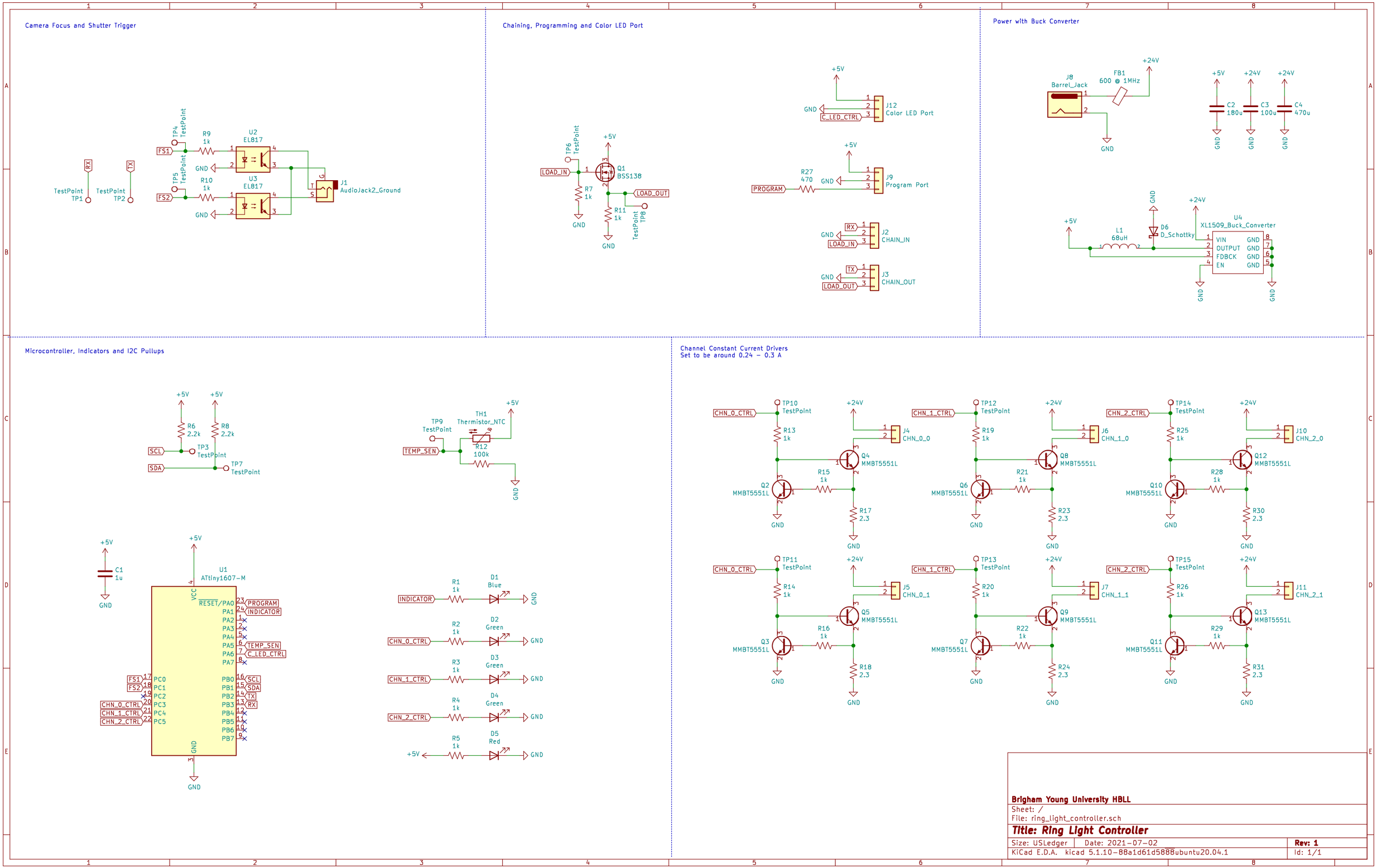
Camera Focus and Shutter Trigger
Chaining, Programming and Color LED Port
Power with Buck Converter
Microcontroller, Indicators and I2C Pullups
Channel Constant Current Drivers
Set to be around 0.24 – 0.3 A
TP4 TestPoint
TP5 TestPoint
FS1
FS2
R9 1k
R10 1k
U2 EL817
U3 EL817
J1 AudioJack2_Ground
RX
TX
TestPoint TP1
TestPoint TP2
TP6 TestPoint
LOAD_IN
Q1 BSS138
R7 1k
R11 1k
LOAD_OUT
TestPoint TP8
J12 Color LED Port
C_LED_CTRL
R27 470
PROGRAM
J9 Program Port
J2 CHAIN_IN
J3 CHAIN_OUT
J8 Barrel_Jack
FB1 600 @ 1MHz
C2 180u
C3 100u
C4 470u
L1 68uH
D6 D_Schottky
U4 XL1509_Buck_Converter
VIN
OUTPUT
FDBCK
EN
GND
+5V
+24V
R6 2.2k
R8 2.2k
SCL
SDA
TP3 TestPoint
TP7 TestPoint
TP9 TestPoint
TH1 Thermistor_NTC
R12 100k
TEMP_SEN
C1 1u
U1 ATtiny1607-M
VCC
RESET/PA0
PA1
PA2
PA3
PA4
PA5
PA6
PA7
PC0
PC1
PC2
PC3
PC4
PC5
PB0
PB1
PB2
PB3
PB4
PB5
PB6
PB7
CHN_0_CTRL
CHN_1_CTRL
CHN_2_CTRL
INDICATOR
R1 1k
D1 Blue
R2 1k
D2 Green
R3 1k
D3 Green
R4 1k
D4 Green
R5 1k
D5 Red
TP10 TestPoint
TP11 TestPoint
TP12 TestPoint
TP13 TestPoint
TP14 TestPoint
TP15 TestPoint
R13 1k
R14 1k
R19 1k
R20 1k
R25 1k
R26 1k
J4 CHN_0_0
J5 CHN_0_1
J6 CHN_1_0
J7 CHN_1_1
J10 CHN_2_0
J11 CHN_2_1
Q2 MMBT5551L
Q3 MMBT5551L
Q4 MMBT5551L
Q5 MMBT5551L
Q6 MMBT5551L
Q7 MMBT5551L
Q8 MMBT5551L
Q9 MMBT5551L
Q10 MMBT5551L
Q11 MMBT5551L
Q12 MMBT5551L
Q13 MMBT5551L
R15 1k
R16 1k
R21 1k
R22 1k
R28 1k
R29 1k
R17 2.3
R18 2.3
R23 2.3
R24 2.3
R30 2.3
R31 2.3
Brigham Young University HBLL
Sheet: /
File: ring_light_controller.sch
Title: Ring Light Controller
Size: USLedger
Date: 2021-07-02
Rev: 1
KiCad E.D.A. kicad 5.1.10-88a1d61d588Bubuntu20.04.1
Id: 1/1