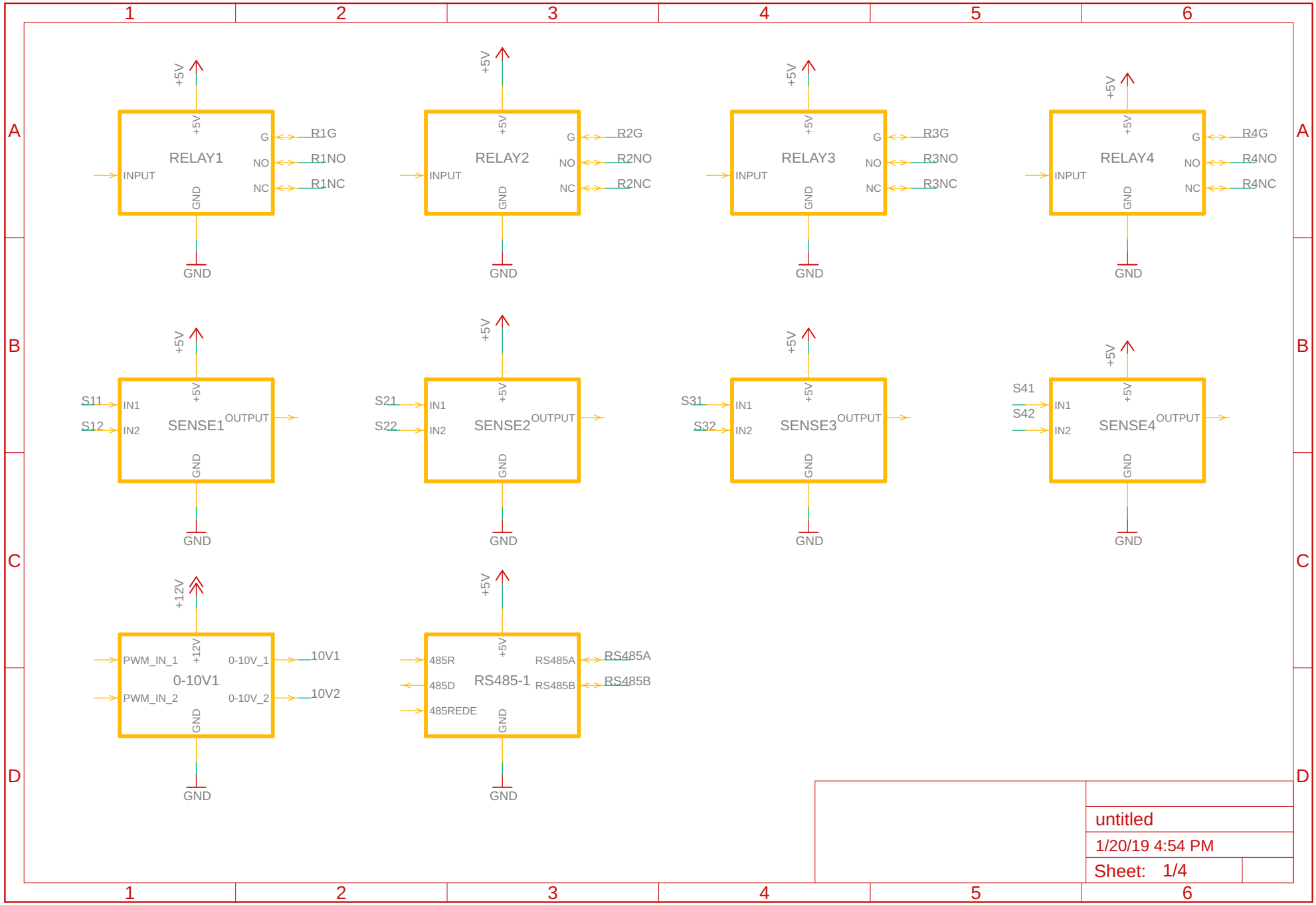
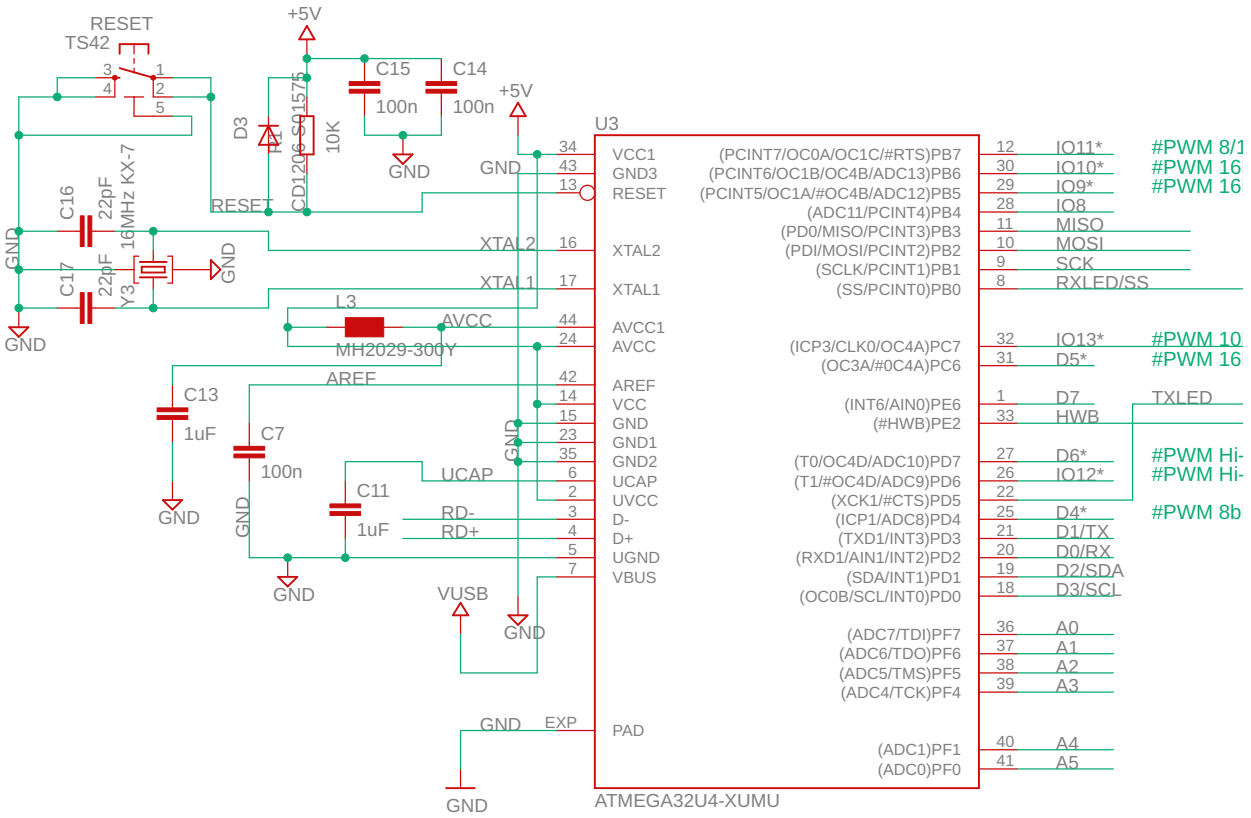
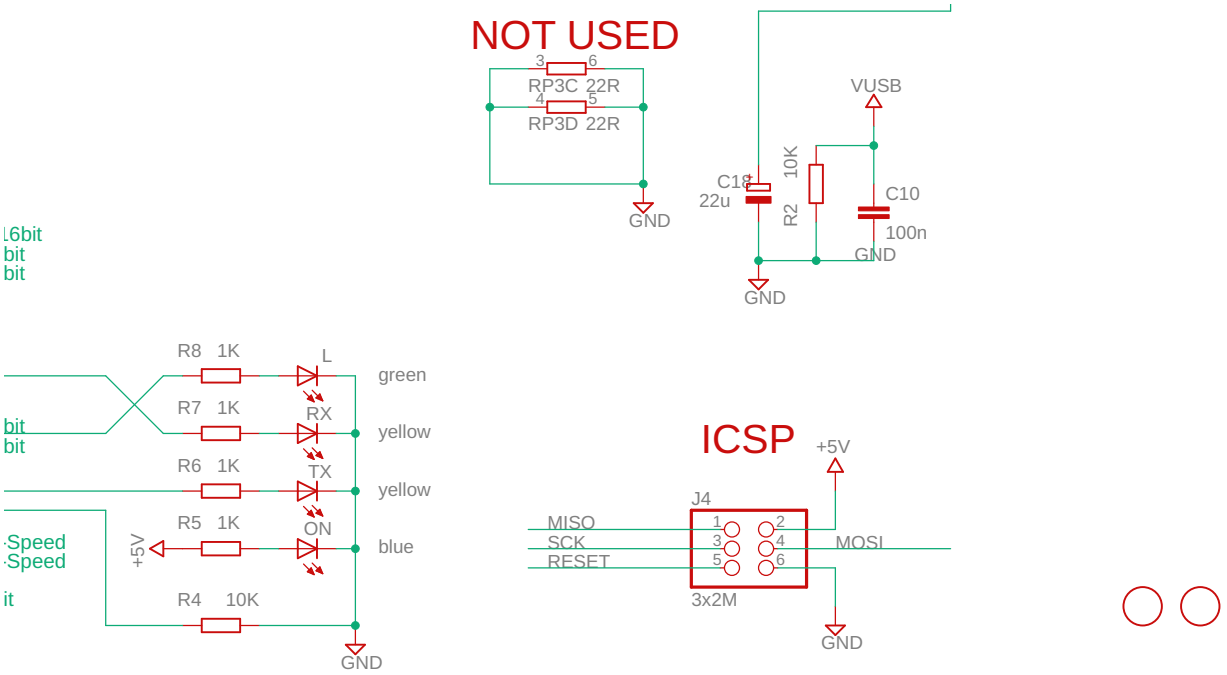
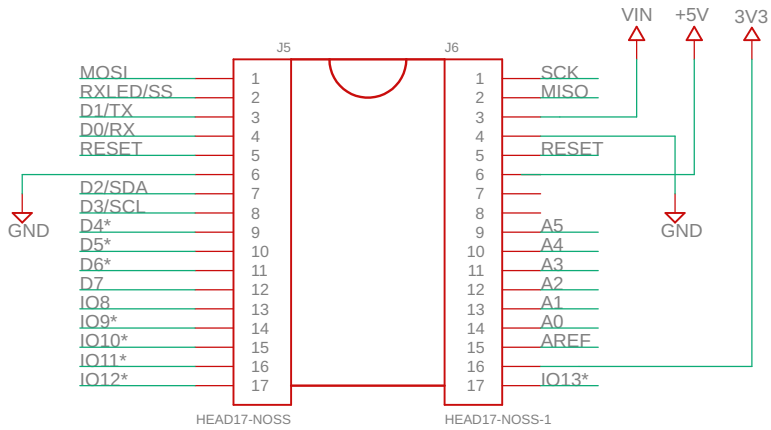

1
2
3
4
5
6
A
B
C
D
+5V
RELAY1
INPUT
GND
G
NO
NC
R1G
R1NO
R1NC
RELAY2
R2G
R2NO
R2NC
RELAY3
R3G
R3NO
R3NC
RELAY4
R4G
R4NO
R4NC
SENSE1
S11
S12
IN1
IN2
OUTPUT
SENSE2
S21
S22
SENSE3
S31
S32
SENSE4
S41
S42
+12V
0-10V1
PWM_IN_1
PWM_IN_2
0-10V_1
0-10V_2
10V1
10V2
RS485-1
485R
485D
485REDE
RS485A
RS485B
untitled
1/20/19 4:54 PM
Sheet: 1/4

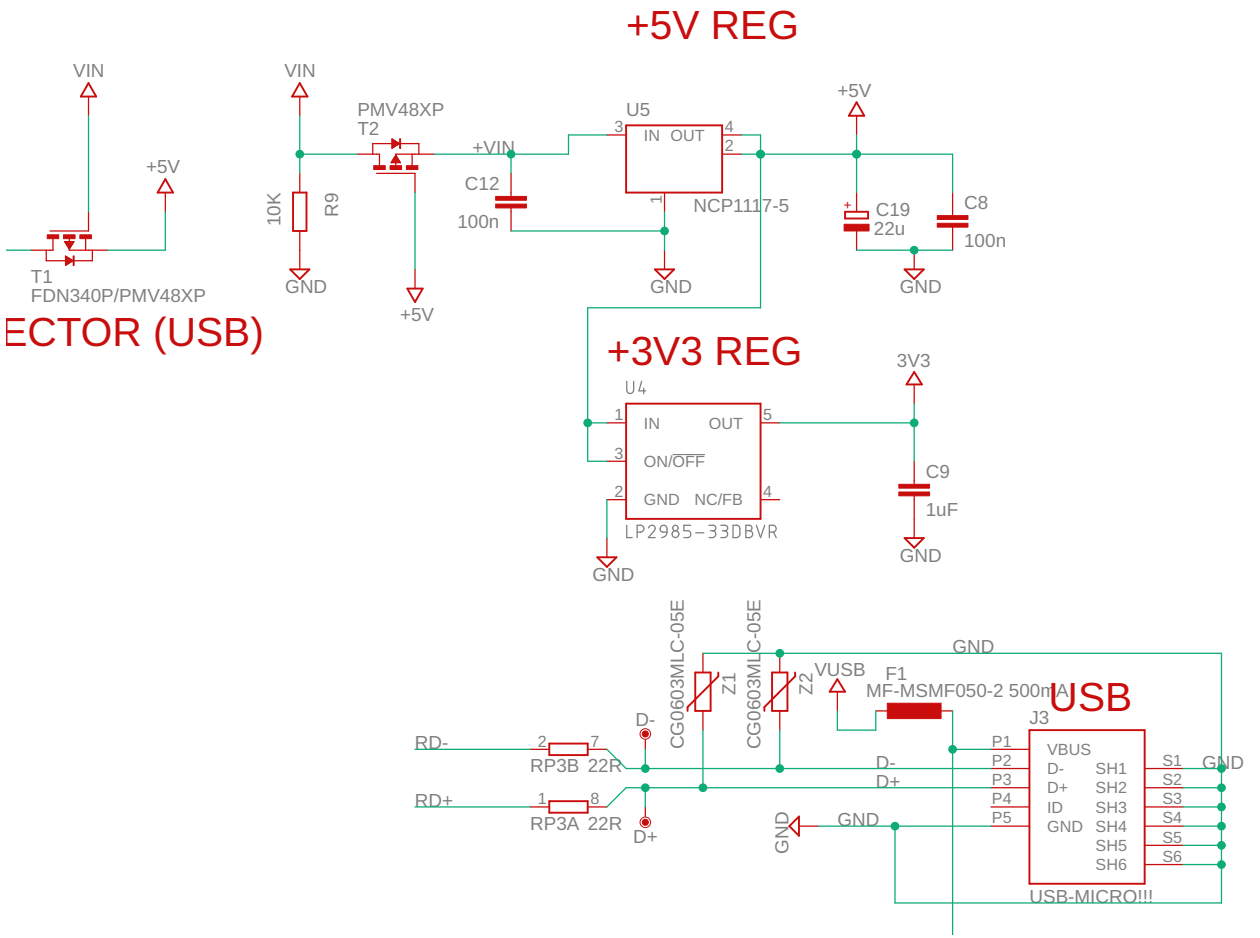

RESET
TS42
+5V
C15
100n
C14
100n
D3
CD1206-S01575
10K
GND
U3
VCC1
GND3
RESET
XTAL2
XTAL1
AVCC1
AVCC
AREF
VCC
GND
GND1
GND2
UCAP
UVCC
D-
D+
UGND
VBUS
PAD
(PCINT7/OC0A/OC1C/#RTS)PB7
(PCINT6/OC1B/OC4B/ADC13)PB6
(PCINT5/OC1A/#OC4B/ADC12)PB5
(ADC11/PCINT4)PB4
(PD0/MISO/PCINT3)PB3
(PDI/MOSI/PCINT2)PB2
(SCLK/PCINT1)PB1
(SS/PCINT0)PB0
(ICP3/CLK0/OC4A)PC7
(OC3A/#0C4A)PC6
(INT6/AIN0)PE6
(#HWB)PE2
(T0/OC4D/ADC10)PD7
(T1/#OC4D/ADC9)PD6
(XCK1/#CTS)PD5
(ICP1/ADC8)PD4
(TXD1/INT3)PD3
(RXD1/AIN1/INT2)PD2
(SDA/INT1)PD1
(OC0B/SCL/INT0)PD0
(ADC7/TDI)PF7
(ADC6/TDO)PF6
(ADC5/TMS)PF5
(ADC4/TCK)PF4
(ADC1)PF1
(ADC0)PF0
IO11*
IO10*
IO9*
IO8
MISO
MOSI
SCK
RXLED/SS
IO13*
D5*
D7
HWB
D6*
IO12*
D4*
D1/TX
D0/RX
D2/SDA
D3/SCL
A0
A1
A2
A3
A4
A5
#PWM 8/1
#PWM 16
#PWM 16
#PWM 10
#PWM 16
TXLED
#PWM Hi-
#PWM Hi-
#PWM 8b
ATMEGA32U4-XUMU
C16
22pF
16MHz KX-7
C17
22pF
Y3
L3
MH2029-300Y
C13
1uF
C7
100n
C11
1uF
RD-
RD+
VUSB
EXP

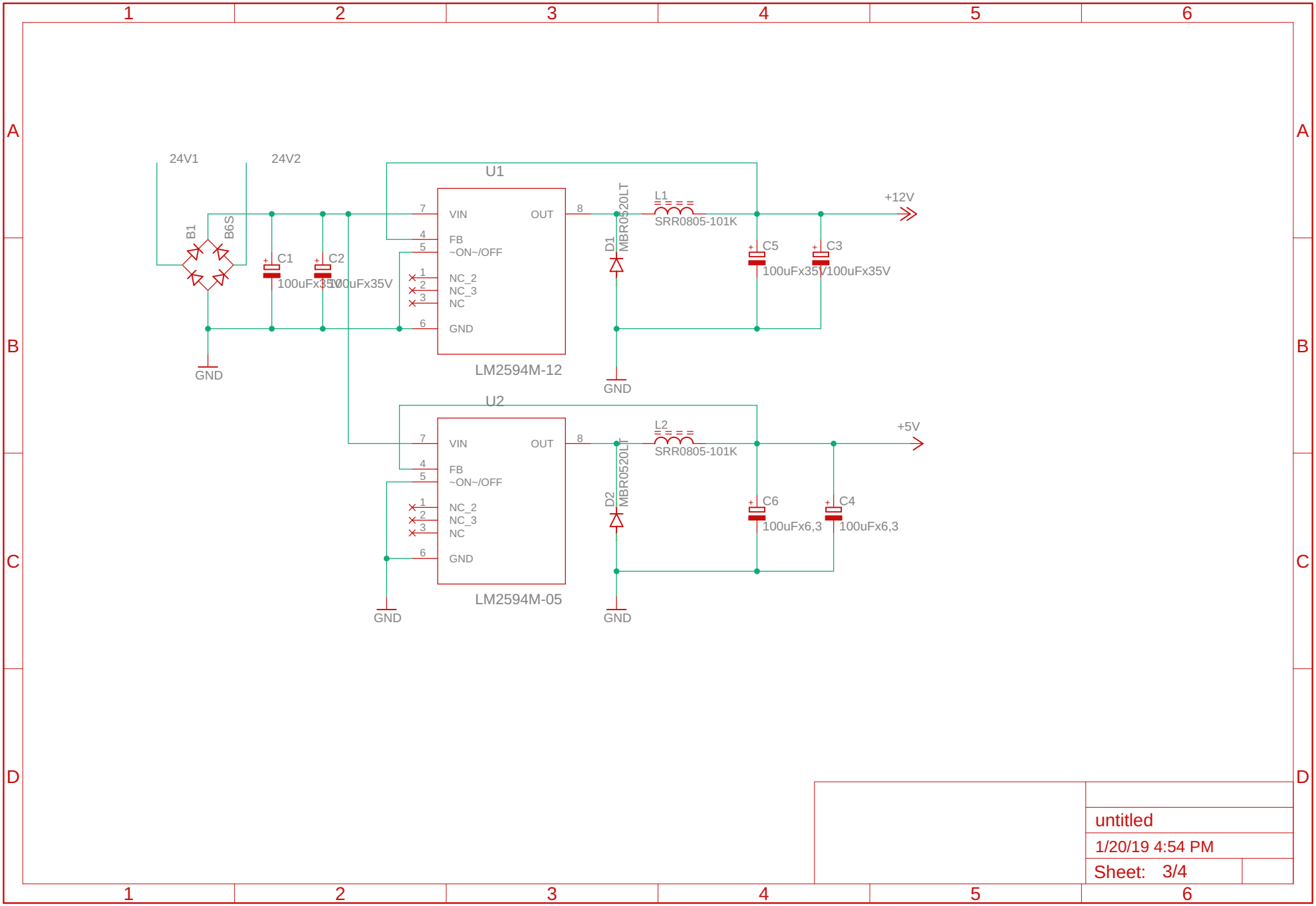

NOT USED
RP3C 22R
RP3D 22R
GND
VUSB
C18
22u
10K
R2
C10
100n
GND
GND
L6bit
bit
bit
R8 1K
L
green
R7 1K
RX
yellow
R6 1K
TX
yellow
R5 1K
ON
blue
+5V
R4 10K
GND
bit
bit
Speed
Speed
it
ICSP
+5V
J4
MISO
SCK
RESET
MOSI
3x2M
GND


VIN
+5V
3V3
J5
J6
MOSI
RXLED/SS
D1/TX
D0/RX
RESET
D2/SDA
D3/SCL
D4*
D5*
D6*
D7
IO8
IO9*
IO10*
IO11*
IO12*
GND
SCK
MISO
RESET
GND
A5
A4
A3
A2
A1
A0
AREF
IO13*
HEAD17-NOSS
HEAD17-NOSS-1

VUSB

+5V SELI


+5V REG
VIN
+5V
T1
FDN340P/PMV48XP
ECTOR (USB)
VIN
PMV48XP
T2
10K
R9
GND
+5V
+VIN
C12
100n
U5
IN OUT
NCP1117-5
GND
+5V
C19
22u
C8
100n
GND
+3V3 REG
U4
IN
OUT
ON/OFF
GND NC/FB
LP2985-33DBVR
GND
3V3
C9
1uF
GND
CG0603MLC-05E
Z1
CG0603MLC-05E
Z2
VUSB
F1
MF-MSMF050-2 500mA
GND
USB
J3
D-
D+
ID
GND
VBUS
SH1
SH2
SH3
SH4
SH5
SH6
P1
P2
P3
P4
P5
S1
S2
S3
S4
S5
S6
GND
USB-MICRO!!!
RD-
RP3B 22R
RD+
RP3A 22R
D-
D+
GND


1
2
3
4
5
6
A
B
C
D
24V1
24V2
B1
B6S
C1
100uFx35V
C2
100uFx35V
U1
VIN
OUT
FB
~ON~/OFF
NC_2
NC_3
NC
GND
LM2594M-12
D1
MBR0520LT
L1
SRR0805-101K
+12V
C5
100uFx35V
C3
100uFx35V
U2
LM2594M-05
D2
MBR0520LT
L2
SRR0805-101K
+5V
C6
100uFx6,3
C4
100uFx6,3
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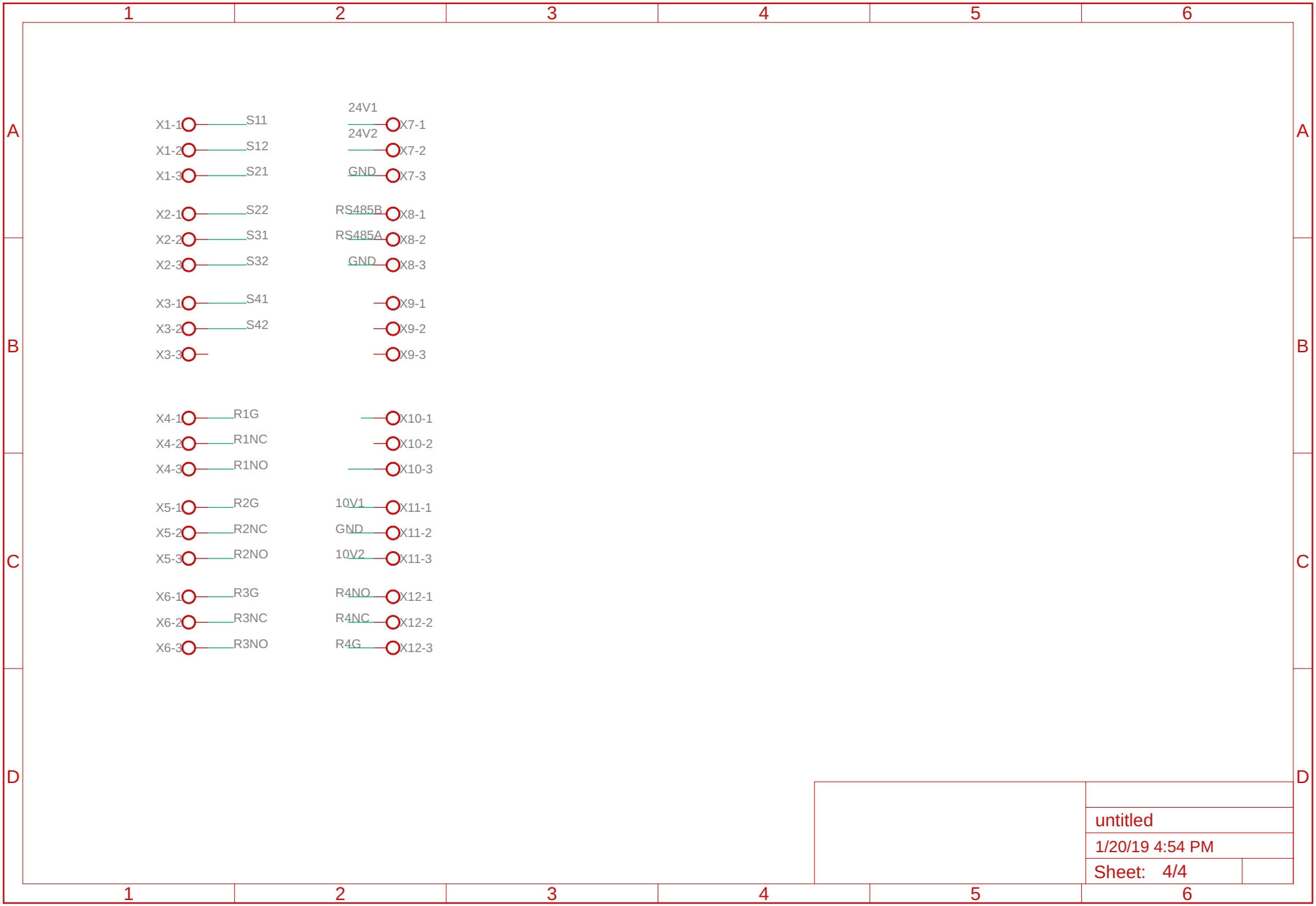
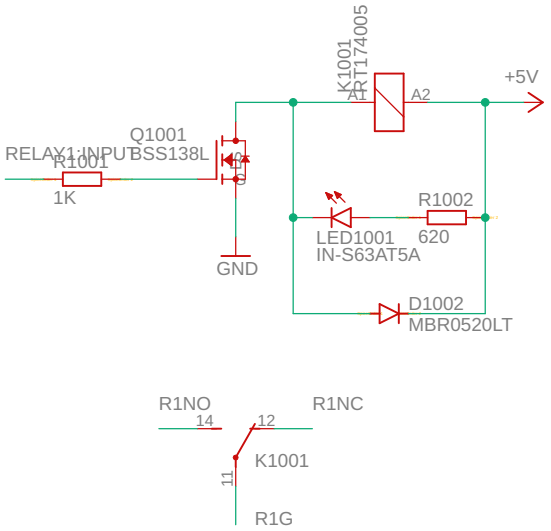
1/20/19 4:54 PM
Sheet: 3/4


1
2
3
4
5
6
A
B
C
D
X1-1
S11
X1-2
S12
X1-3
S21
X2-1
S22
X2-2
S31
X2-3
S32
X3-1
S41
X3-2
S42
X3-3
X4-1
R1G
X4-2
R1NC
X4-3
R1NO
X5-1
R2G
X5-2
R2NC
X5-3
R2NO
X6-1
R3G
X6-2
R3NC
X6-3
R3NO
24V1
X7-1
24V2
X7-2
GND
X7-3
RS485B
X8-1
RS485A
X8-2
GND
X8-3
X9-1
X9-2
X9-3
X10-1
X10-2
X10-3
10V1
X11-1
GND
X11-2
10V2
X11-3
R4NO
X12-1
R4NC
X12-2
R4G
X12-3
untitled
1/20/19 4:54 PM
Sheet: 4/4



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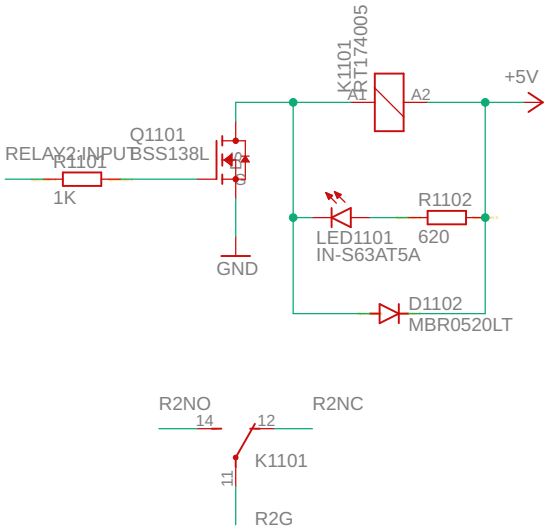

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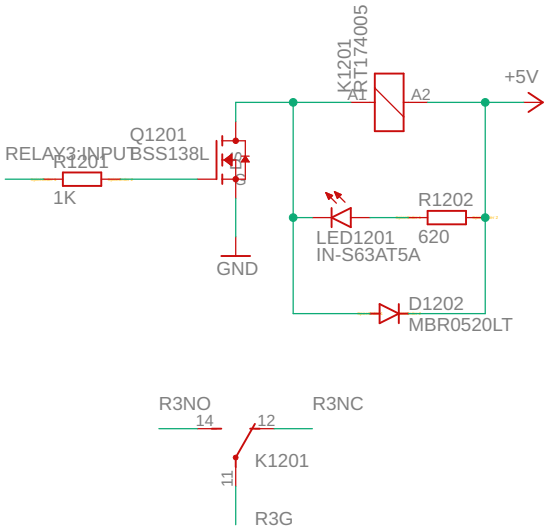

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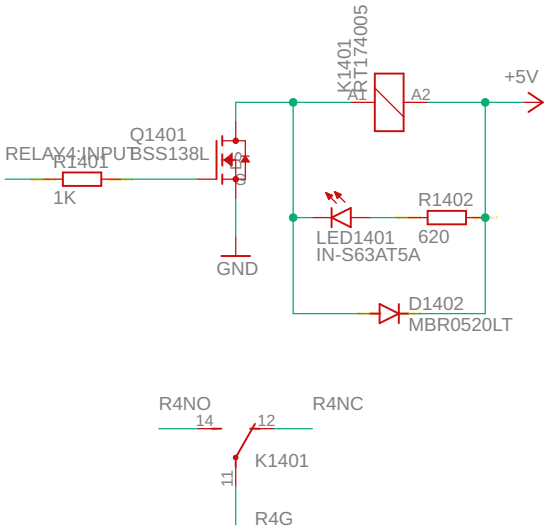

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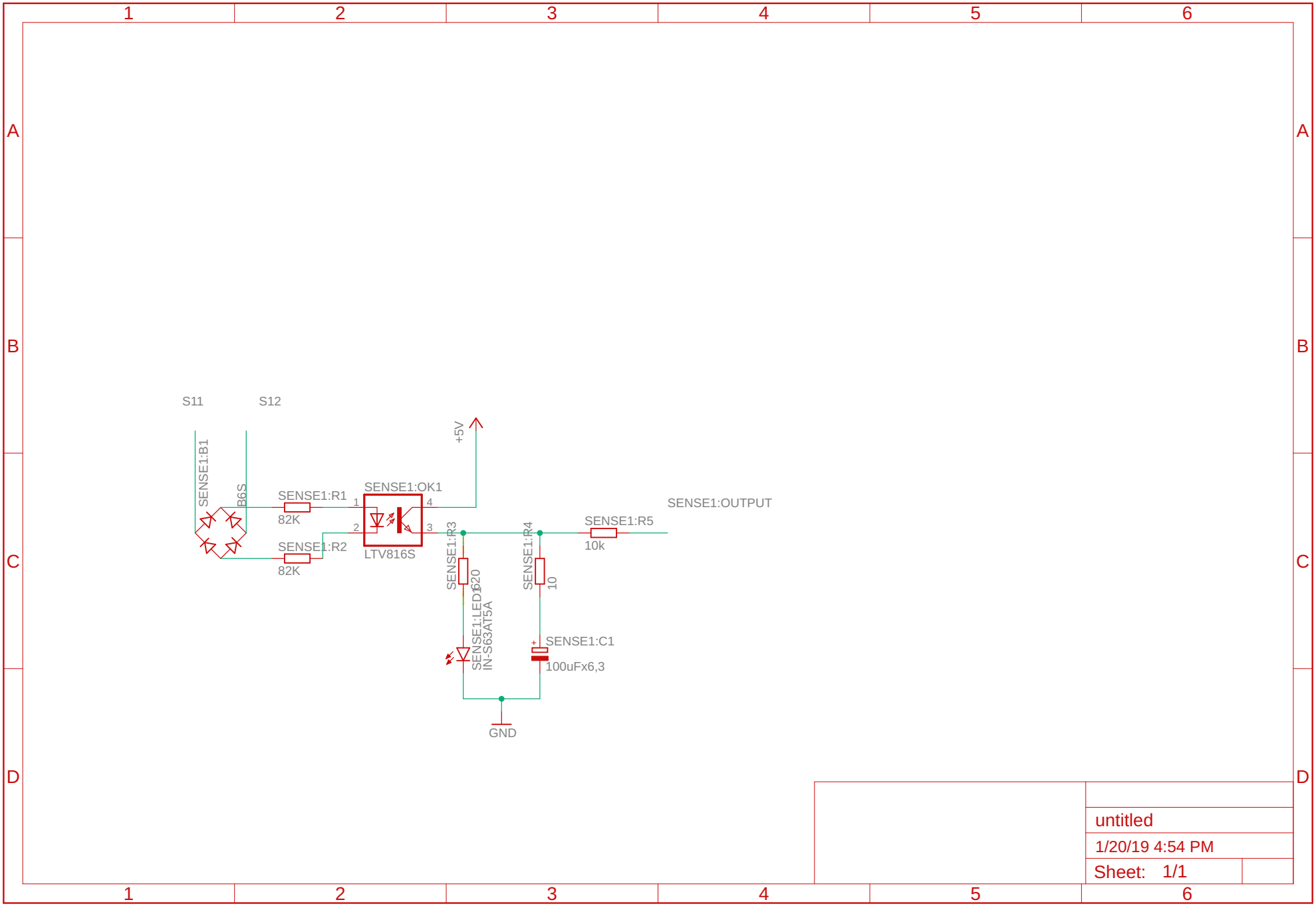
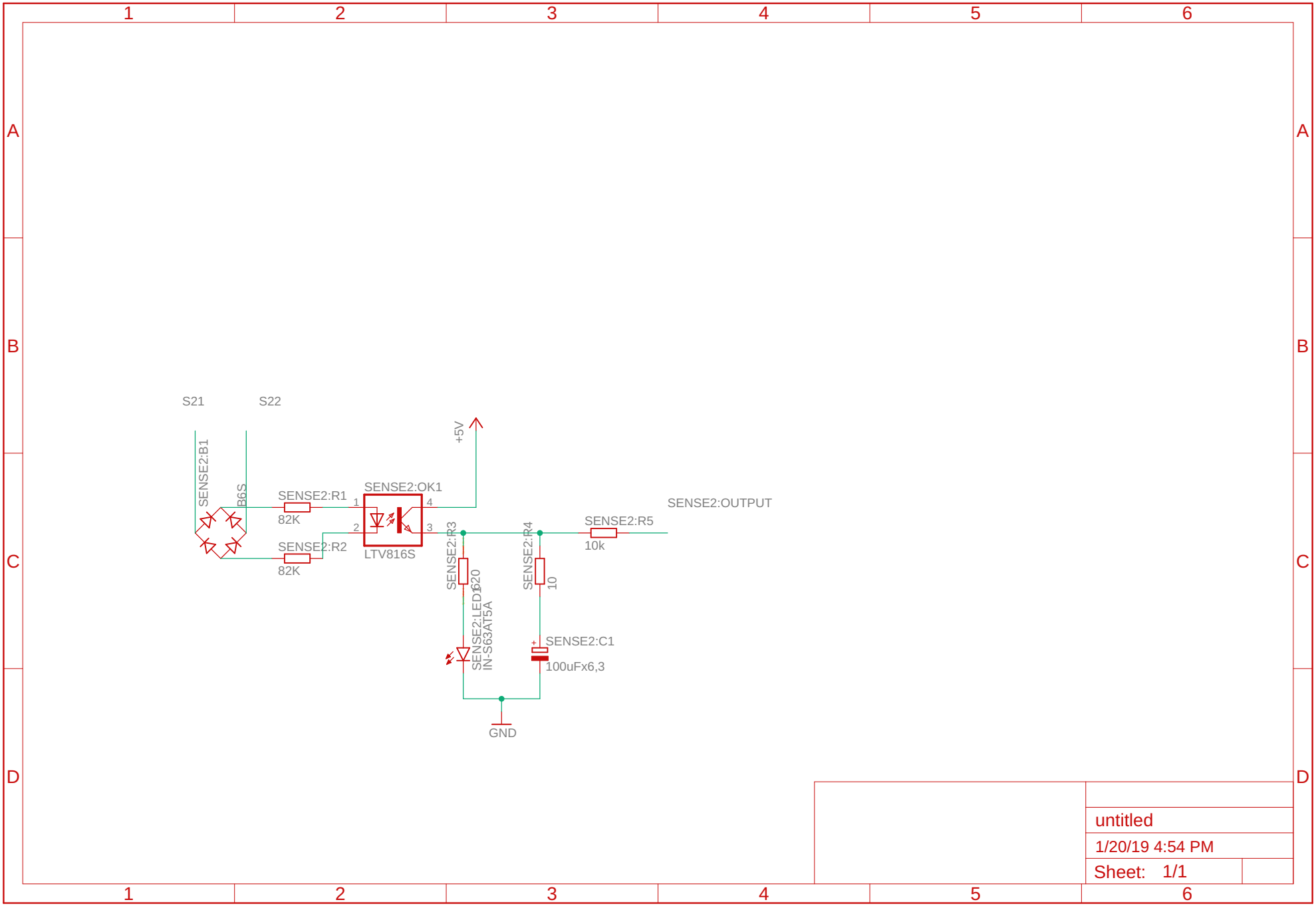
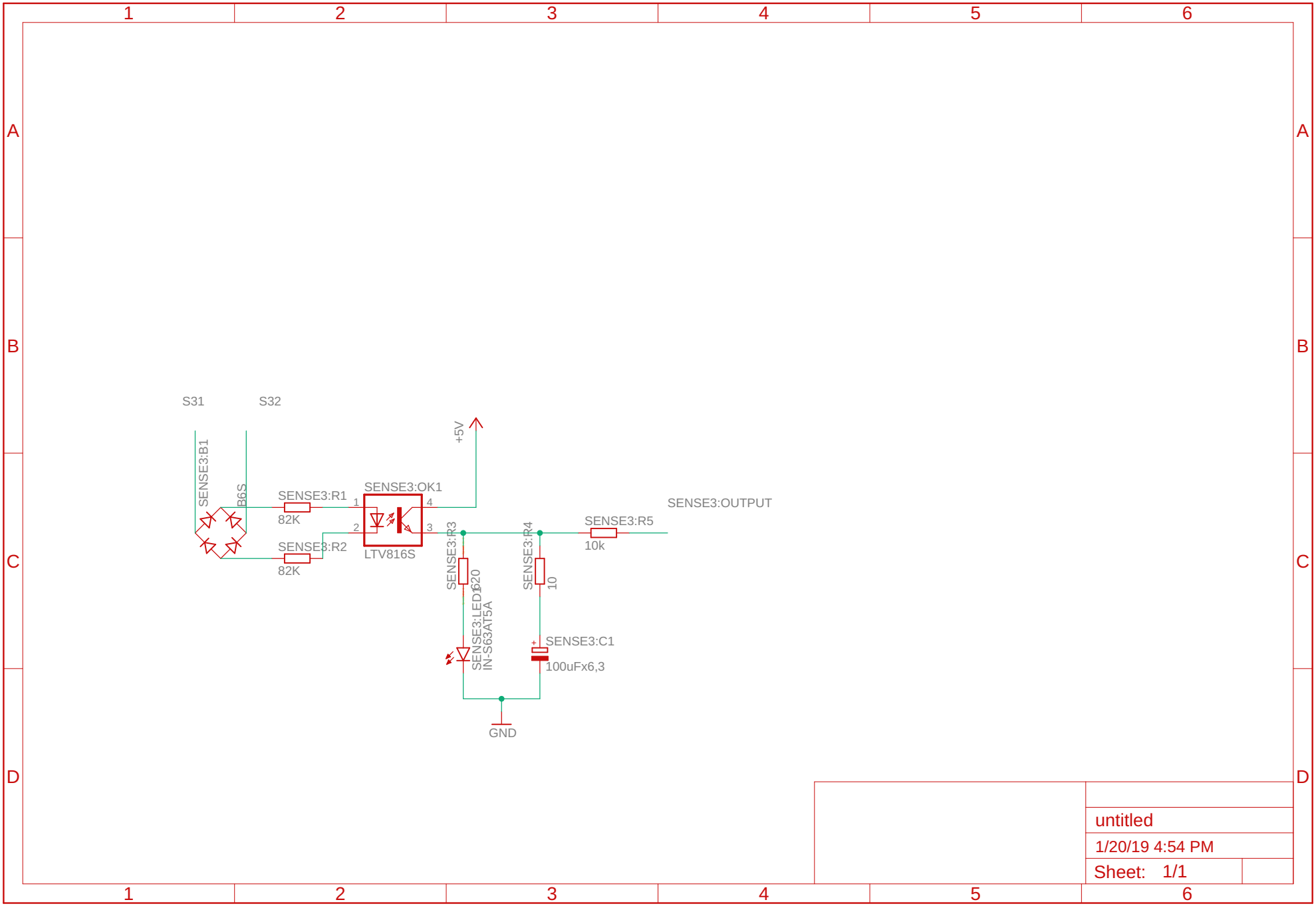
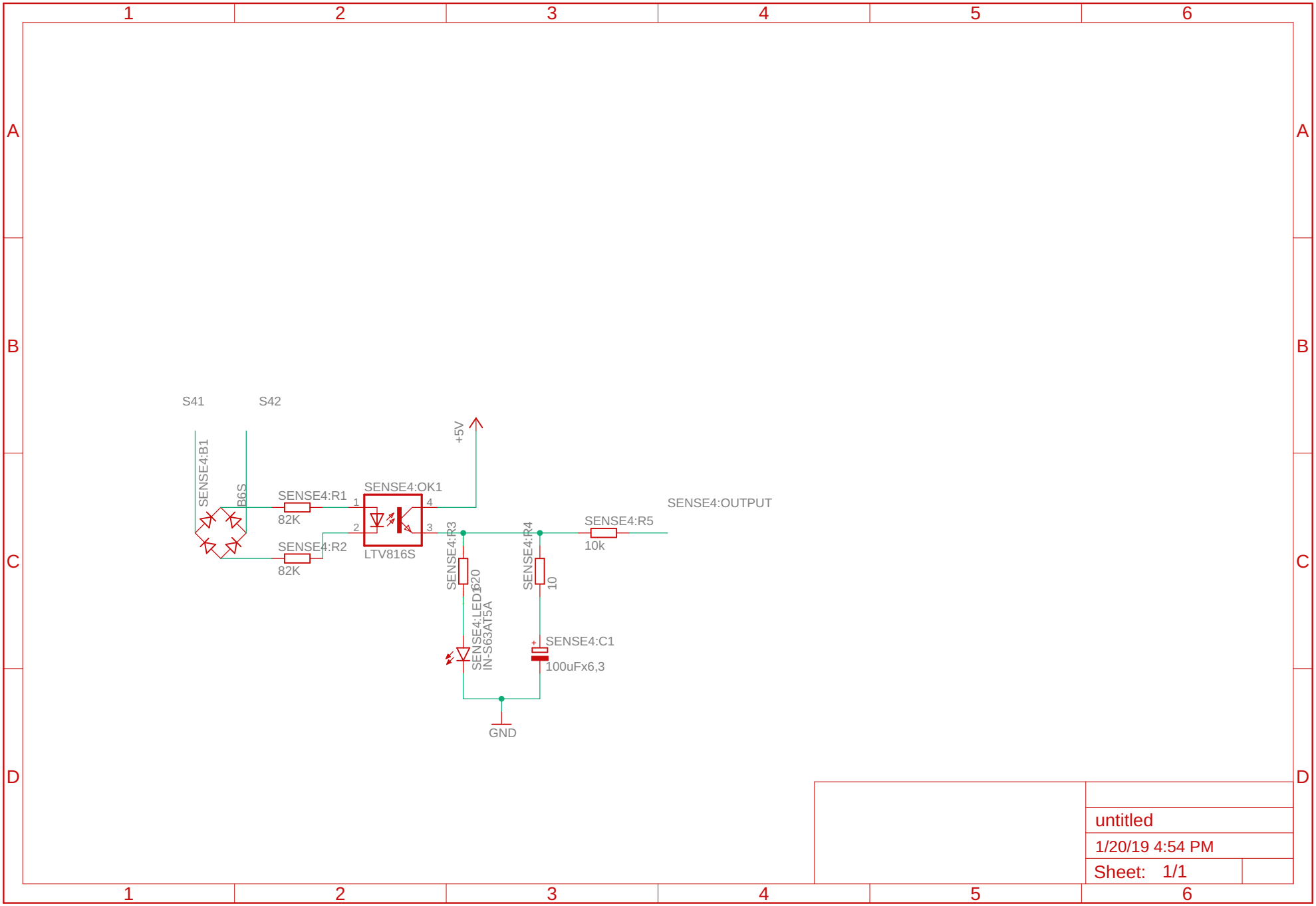
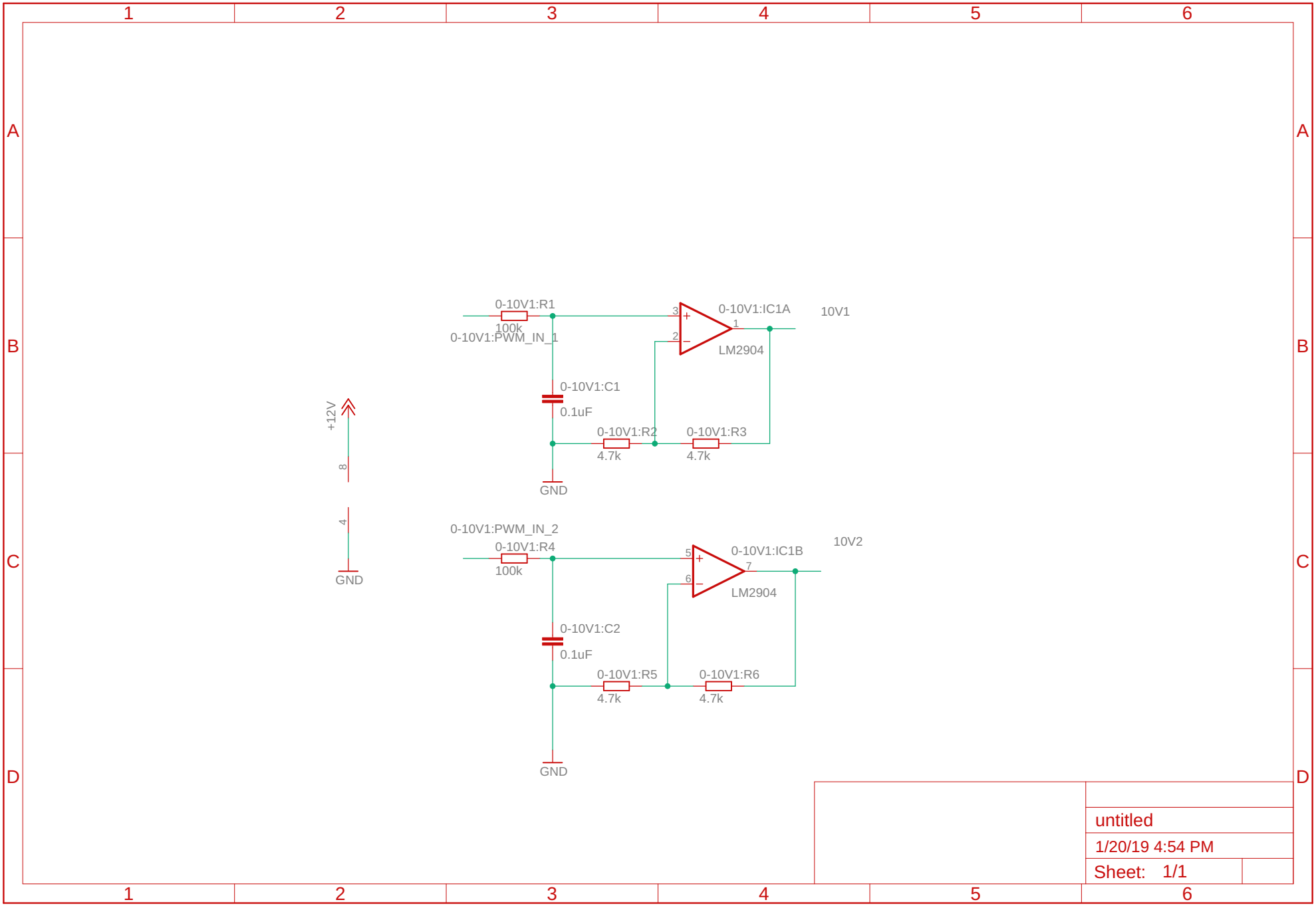
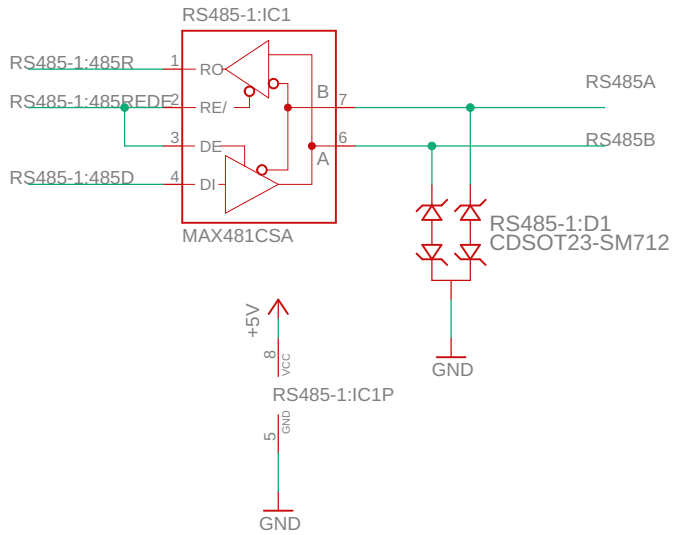

1
2
3
4
5
6
A
B
C
D
S11
S12
SENSE1:B1
B6S
SENSE1:R1
82K
SENSE1:R2
82K
SENSE1:OK1
LTV816S
+5V
SENSE1:R3
620
SENSE1:LED1
IN-S63AT5A
SENSE1:R4
10
SENSE1:R5
10k
SENSE1:OUTPUT
SENSE1:C1
100uFx6,3
GND
untitled
1/20/19 4:54 PM
Sheet: 1/1


1
2
3
4
5
6
A
B
C
D
S21
S22
SENSE2:B1
B6S
SENSE2:R1
82K
SENSE2:R2
82K
SENSE2:OK1
LTV816S
+5V
SENSE2:R3
620
SENSE2:LED1
IN-S63AT5A
SENSE2:R4
10
SENSE2:R5
10k
SENSE2:OUTPUT
SENSE2:C1
100uFx6,3
GND
untitled
1/20/19 4:54 PM
Sheet: 1/1


1
2
3
4
5
6
A
B
C
D
S31
S32
SENSE3:B1
B6S
SENSE3:R1
82K
SENSE3:R2
82K
SENSE3:OK1
LTV816S
+5V
SENSE3:OUTPUT
SENSE3:R5
10k
SENSE3:R3
620
SENSE3:R4
10
SENSE3:LED1
IN-S63AT5A
SENSE3:C1
100uFx6,3
GND
untitled
1/20/19 4:54 PM
Sheet: 1/1


1
2
3
4
5
6
A
B
C
D
S41
S42
SENSE4:B1
B6S
SENSE4:R1
82K
SENSE4:R2
82K
SENSE4:OK1
LTV816S
+5V
SENSE4:OUTPUT
SENSE4:R5
10k
SENSE4:R3
620
SENSE4:R4
10
SENSE4:LED1
IN-S63AT5A
SENSE4:C1
100uFx6,3
GND
untitled
1/20/19 4:54 PM
Sheet: 1/1


1
2
3
4
5
6
A
B
C
D
0-10V1:R1
100k
0-10V1:PWM_IN_1
0-10V1:IC1A
LM2904
10V1
0-10V1:C1
0.1uF
0-10V1:R2
4.7k
0-10V1:R3
4.7k
GND
+12V
8
4
GND
0-10V1:PWM_IN_2
0-10V1:R4
100k
0-10V1:IC1B
LM2904
10V2
0-10V1:C2
0.1uF
0-10V1:R5
4.7k
0-10V1:R6
4.7k
GND
untitled
1/20/19 4:54 PM
Sheet: 1/1



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1/20/19 4:54 PM	
Sheet: 1/1	