DIY QI Charger with Digital Monitoring

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File: QI_Charger.sch

Title: QI Charger

Size: A	Date: 2019-01-03	**Rev: A**
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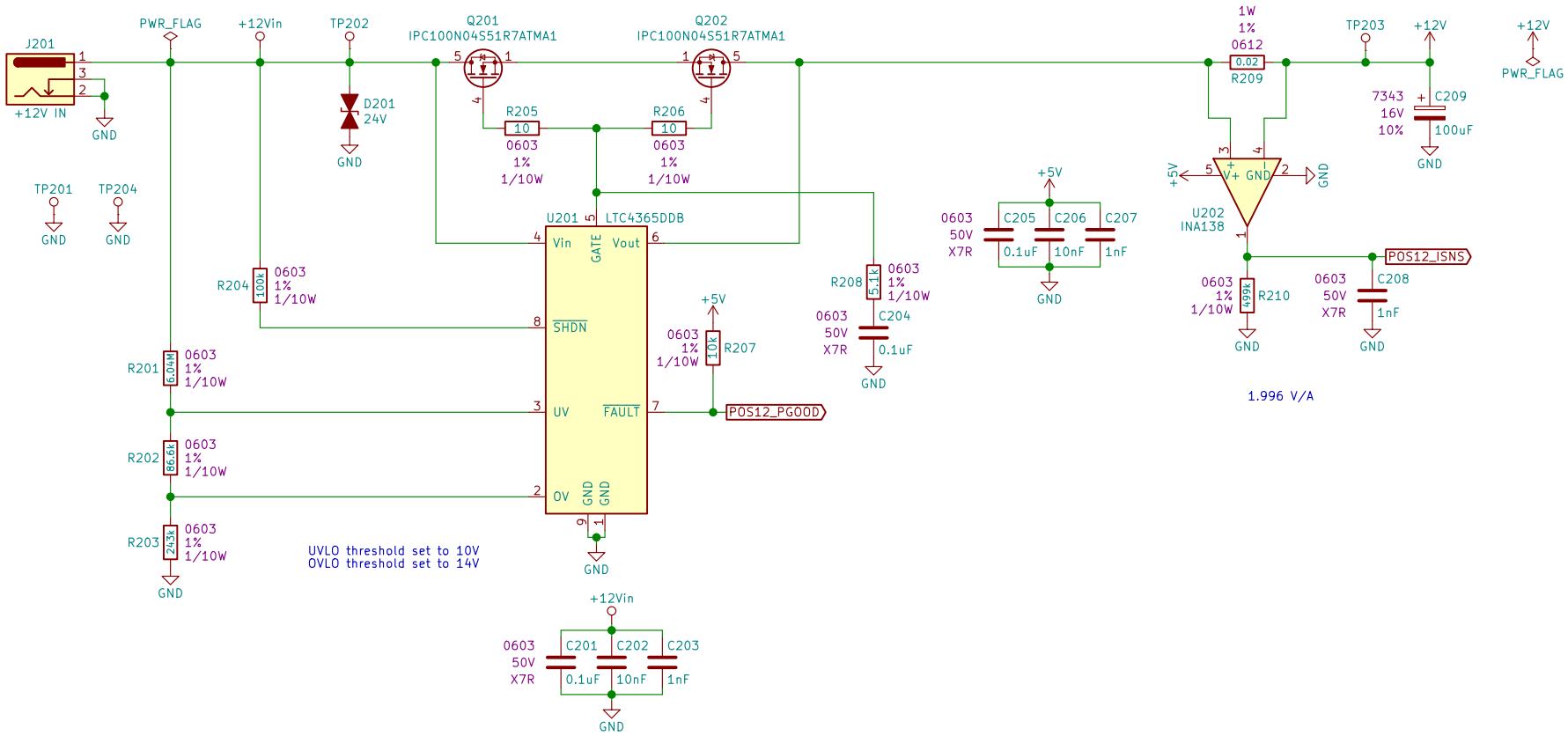

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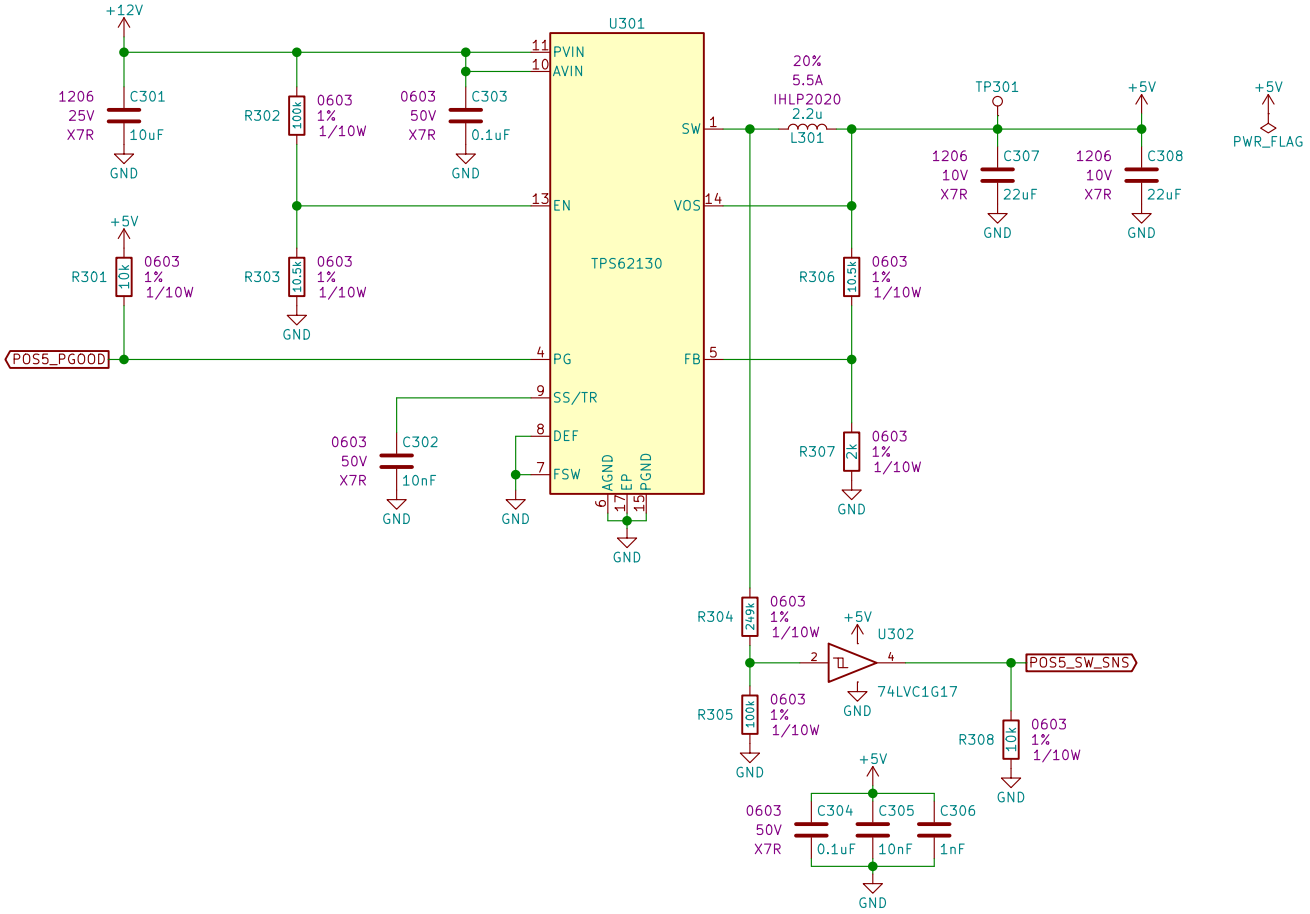

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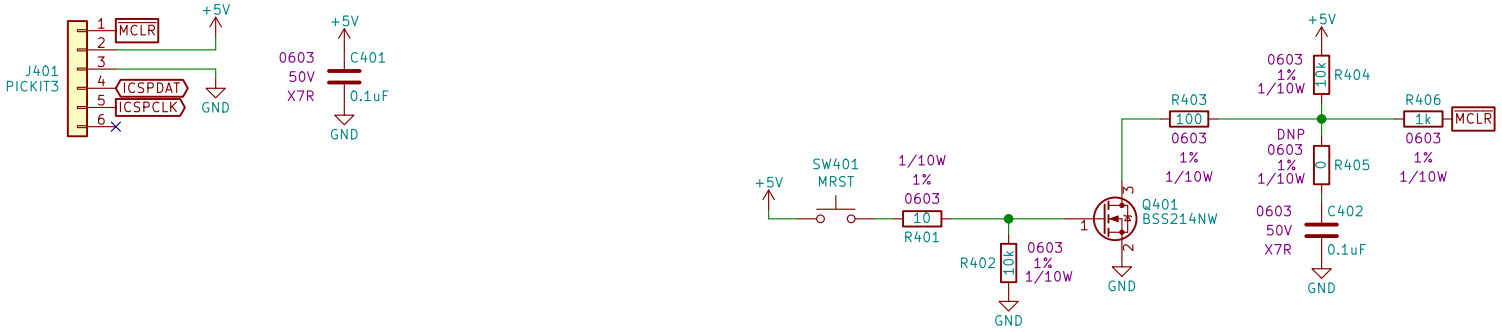

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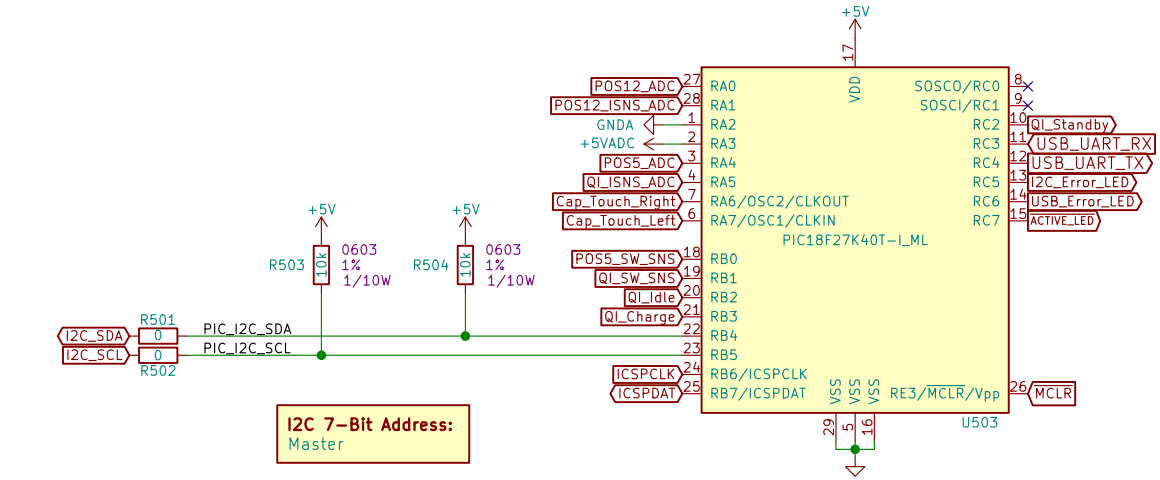

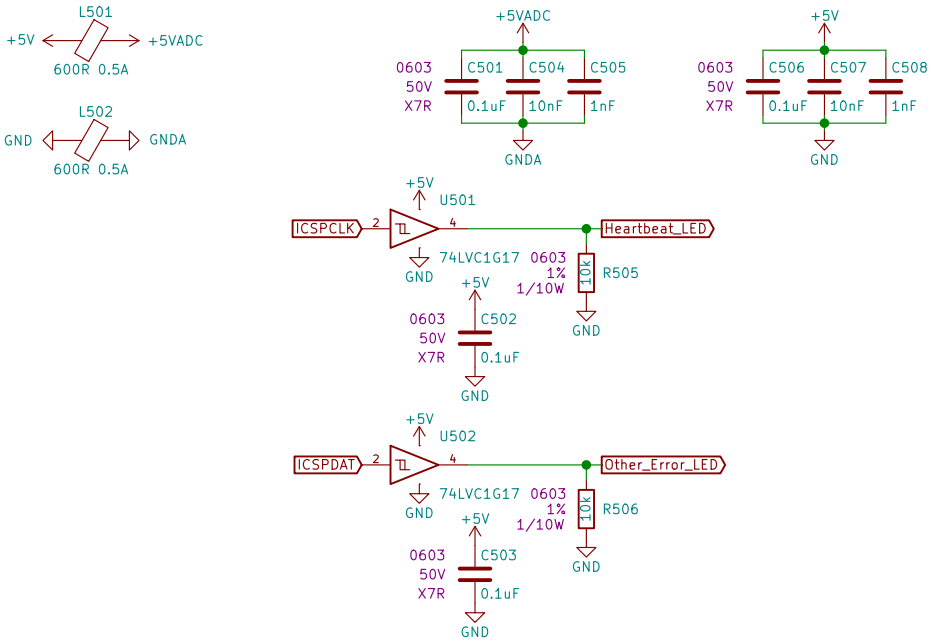

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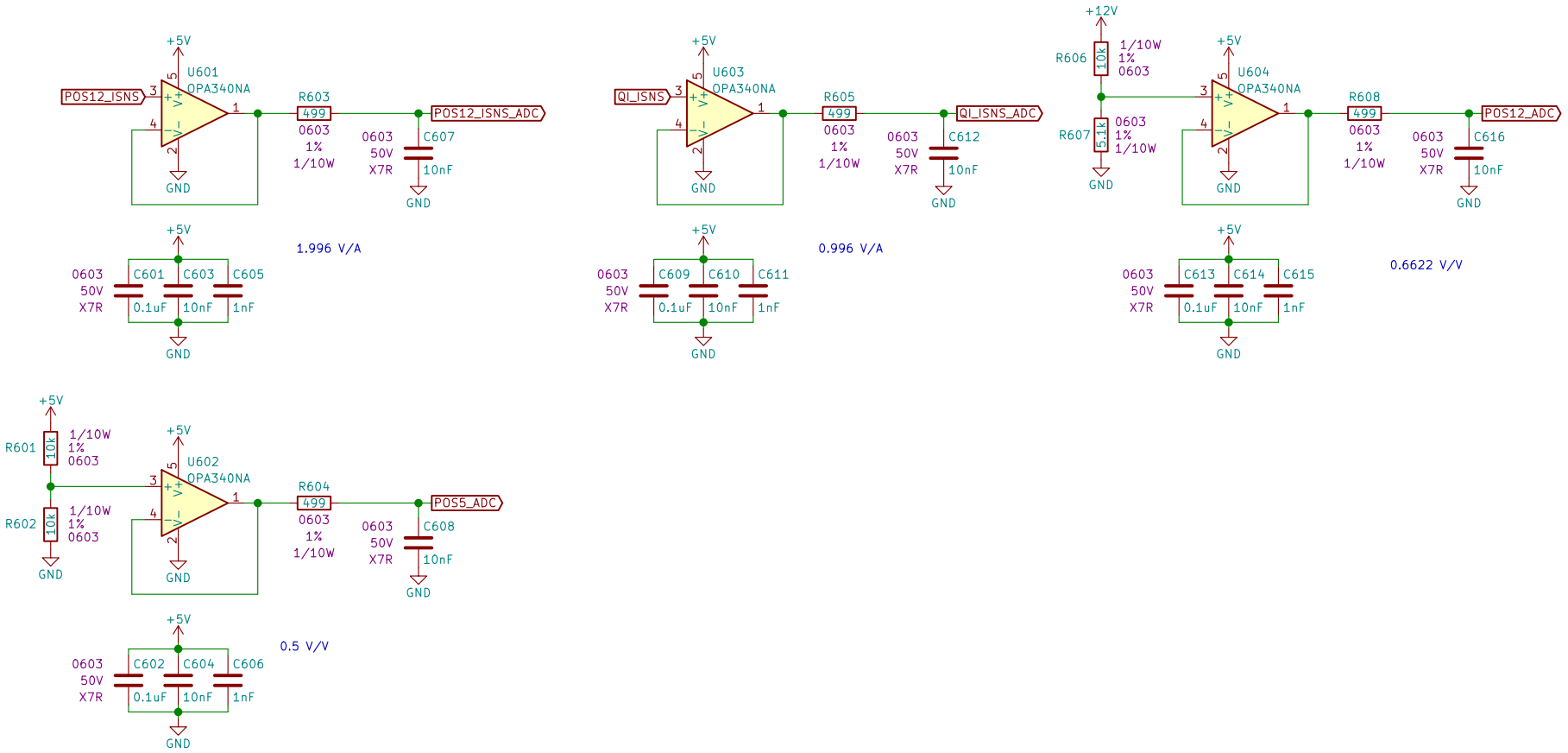

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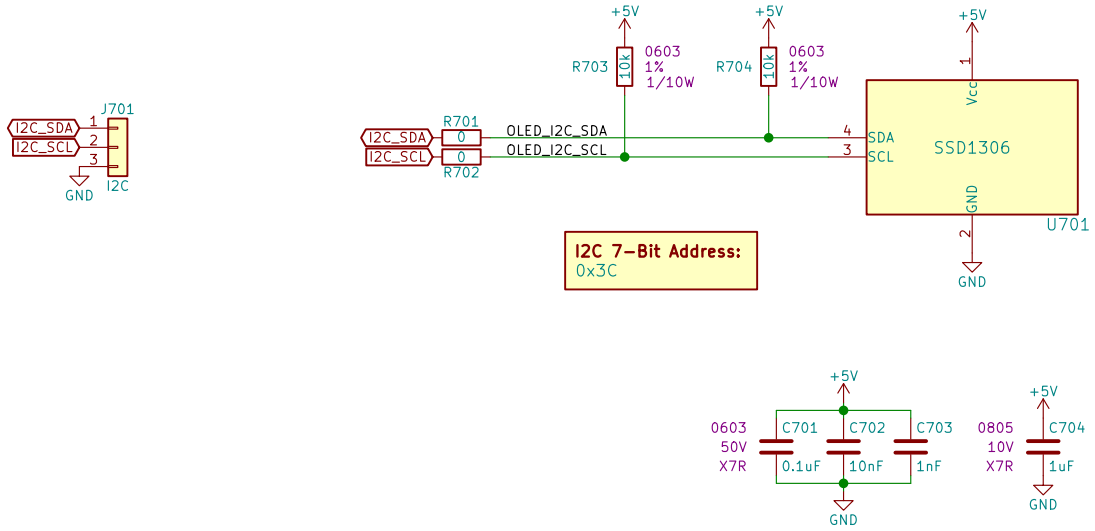

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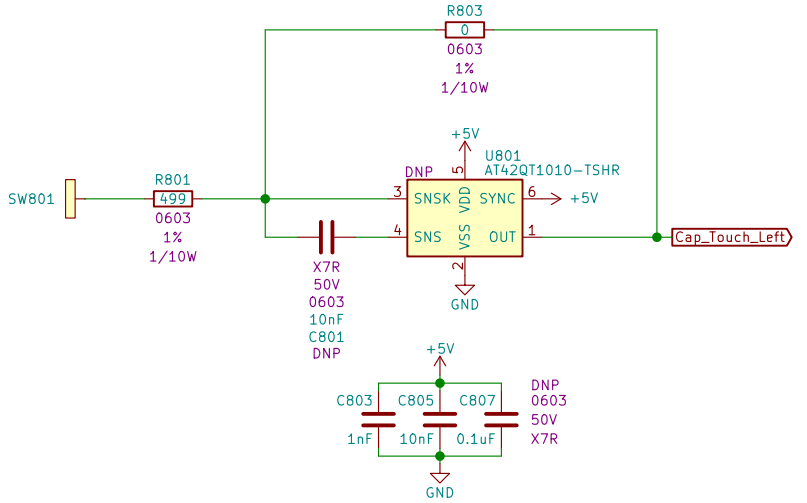

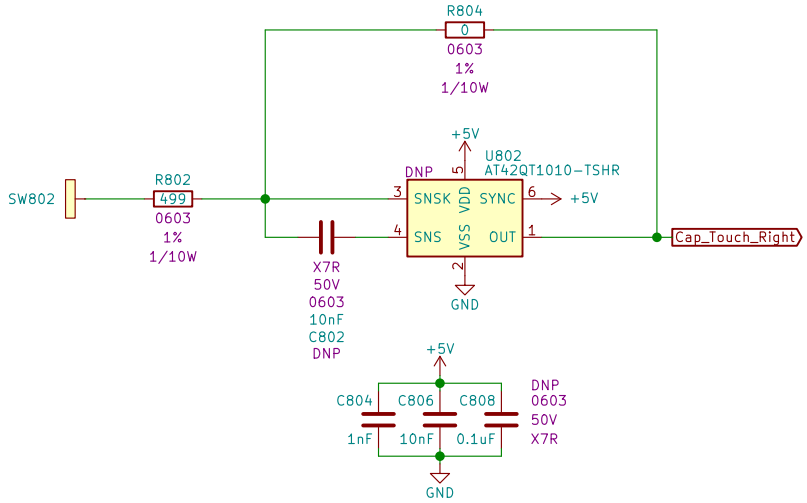

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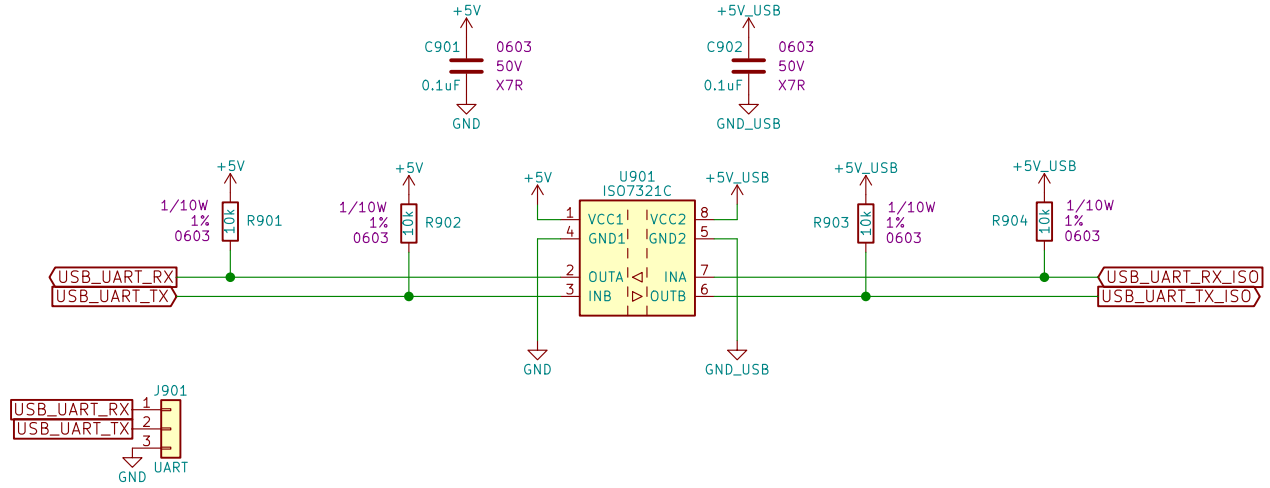

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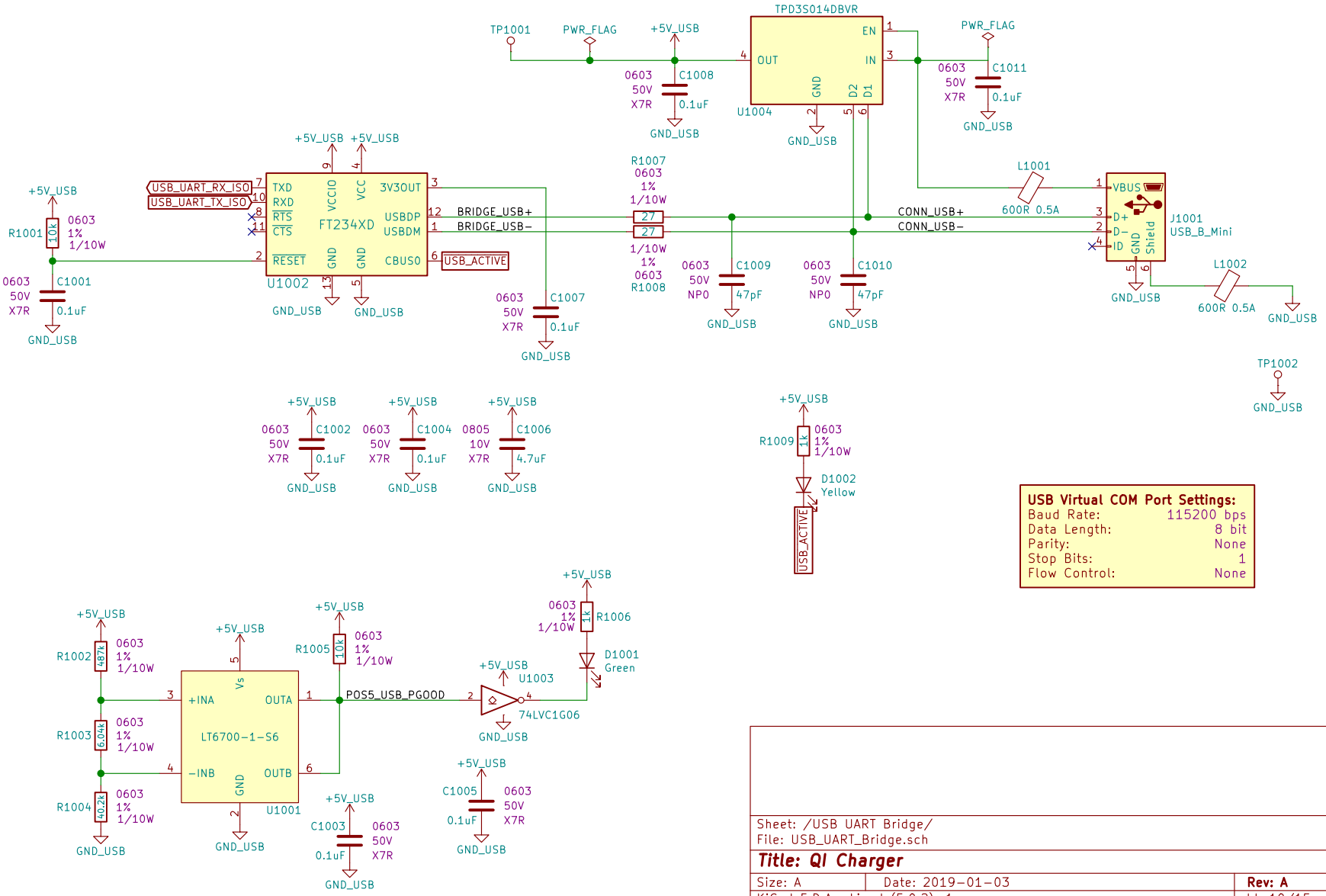
TP1001
PWR_FLAG
+5V_USB
TPD3S014DBVR
EN
OUT
IN
GND
D2
D1
U1004
C1008
0603
50V
X7R
0.1uF
GND_USB
PWR_FLAG
C1011
L1001
600R 0.5A
VBUS
D+
D-
ID
GND
Shield
J1001
USB_B_Mini
L1002
TP1002
R1001
10k
0603
1%
1/10W
C1001
USB_UART_RX_ISO
USB_UART_TX_ISO
TXD
RXD
RTS
CTS
RESET
VCCIO
VCC
3V3OUT
USBDP
USBDM
CBUS0
FT234XD
U1002
BRIDGE_USB+
BRIDGE_USB-
R1007
R1008
27
C1007
C1009
47pF
C1010
CONN_USB+
CONN_USB-
C1002
C1004
C1006
0805
10V
4.7uF
R1009
1k
D1002
Yellow
USB_ACTIVE
USB Virtual COM Port Settings:
Baud Rate: 115200 bps
Data Length: 8 bit
Parity: None
Stop Bits: 1
Flow Control: None
R1002
487k
R1003
6.04k
R1004
40.2k
R1005
R1006
D1001
Green
LT6700-1-S6
+INA
-INB
OUTA
OUTB
Vs
GND
U1001
POS5_USB_PGOOD
U1003
74LVC1G06
C1003
C1005
Sheet: /USB UART Bridge/
File: USB_UART_Bridge.sch
Title: QI Charger
Size: A
Date: 2019-01-03
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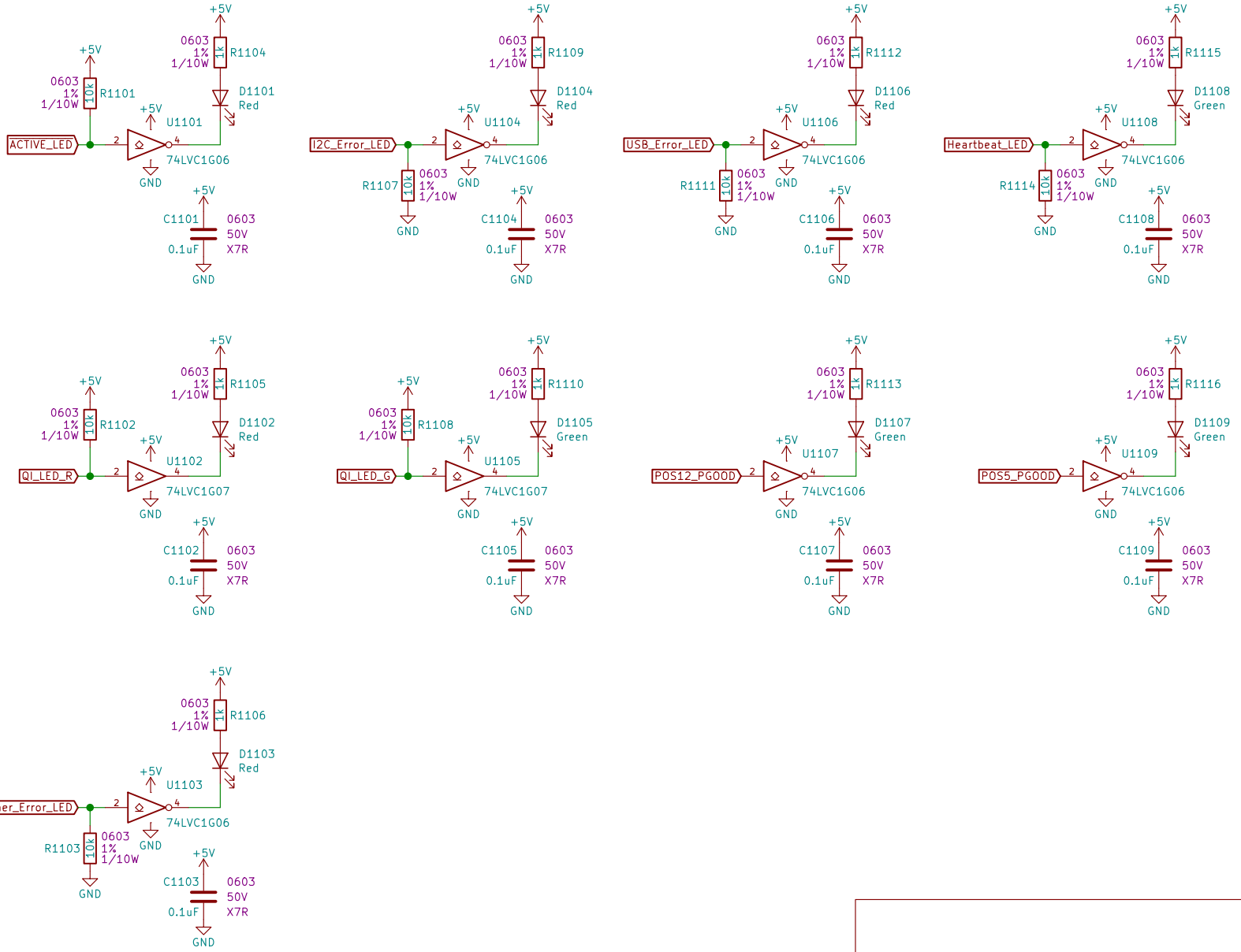
Id: 10/15



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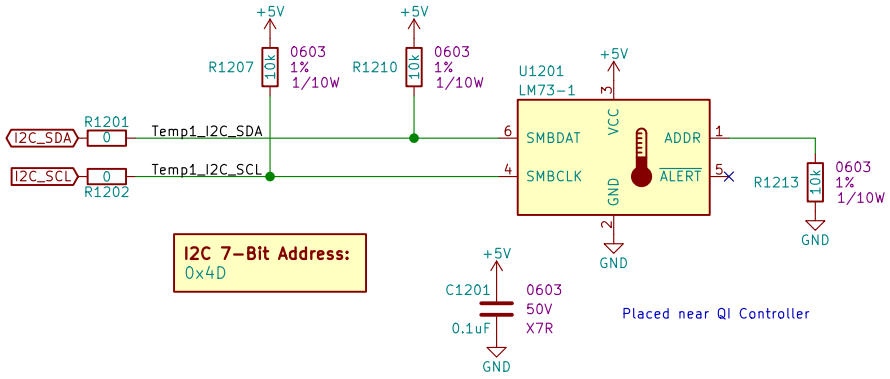

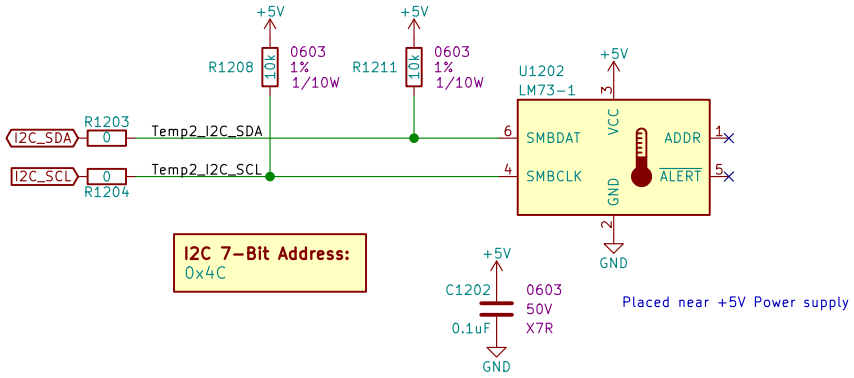

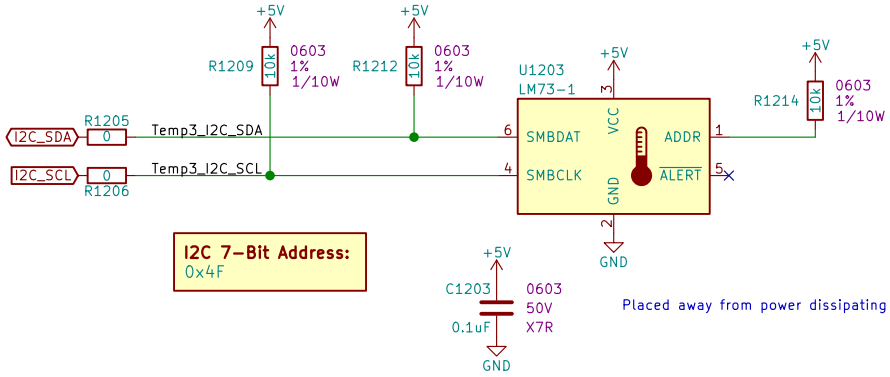

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Size: A	Date: 2019-01-03	**Rev: A**
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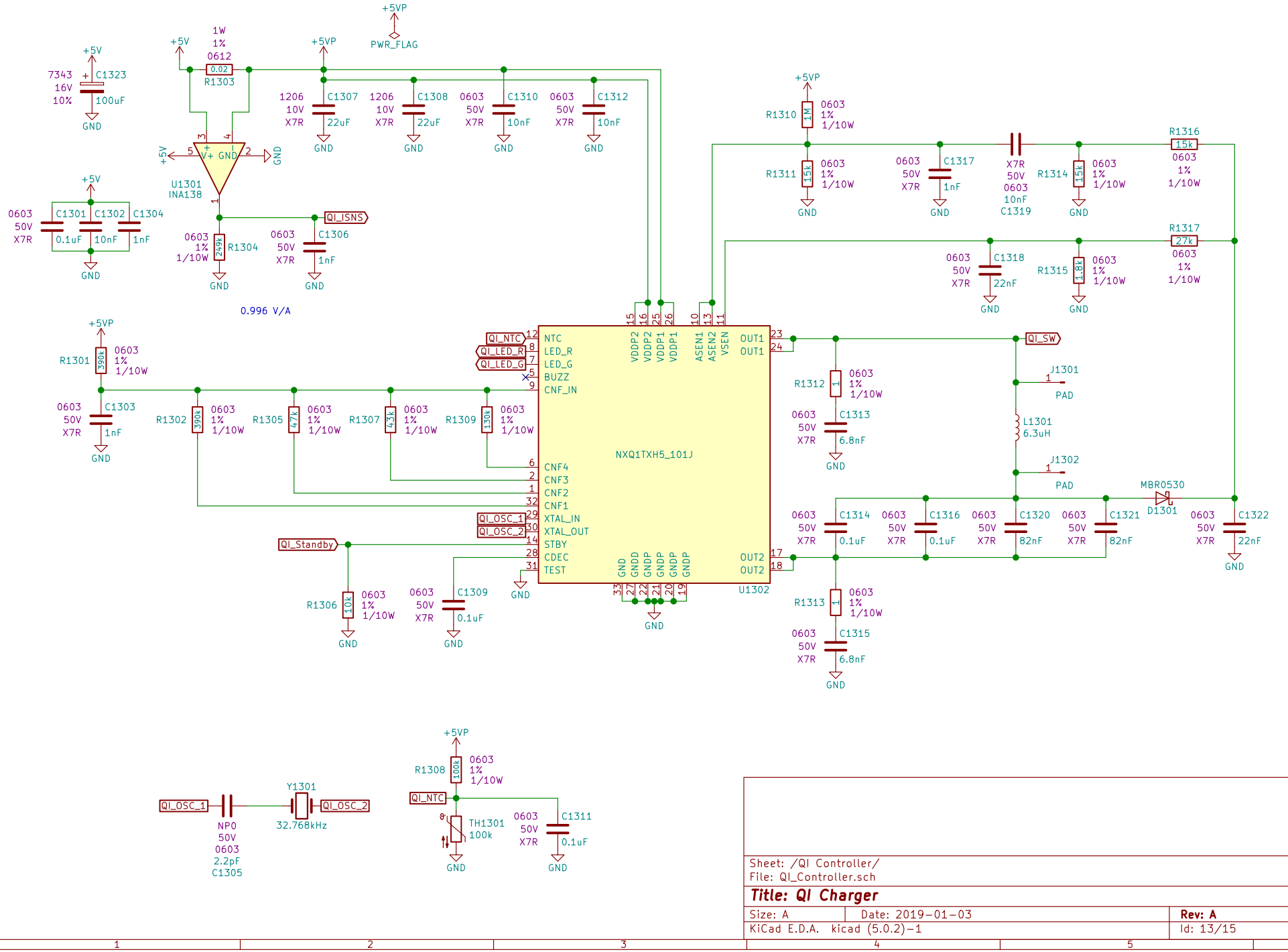
+5VP
PWR_FLAG
+5V
1W
1%
0612
0.02
R1303
7343
16V
10%
C1323
100uF
GND
1206
10V
X7R
C1307
22uF
C1308
C1310
0603
50V
10nF
C1312
U1301
INA138
V+ GND
0603
1%
1/10W
249k
R1304
QI_ISNS
C1306
1nF
C1301
C1302
C1304
0.1uF
0.996 V/A
R1310
1M
R1311
15k
C1317
X7R
50V
0603
10nF
C1319
R1314
R1316
R1317
27k
C1318
22nF
R1315
1.8k
R1301
390k
C1303
R1302
R1305
47k
R1307
43k
R1309
130k
QI_NTC
QI_LED_R
QI_LED_G
NTC
LED_R
LED_G
BUZZ
CNF_IN
CNF4
CNF3
CNF2
CNF1
XTAL_IN
XTAL_OUT
STBY
CDEC
TEST
VDDP2
VDDP1
ASEN1
ASEN2
VSEN
OUT1
OUT2
GNDD
GNDP
NXQ1TXH5_101J
U1302
QI_SW
R1312
1
C1313
6.8nF
J1301
PAD
L1301
6.3uH
J1302
MBR0530
D1301
C1314
0.1uF
C1316
C1320
82nF
C1321
C1322
22nF
QI_OSC_1
QI_OSC_2
QI_Standby
R1306
10k
C1309
R1313
C1315
Y1301
32.768kHz
NP0
2.2pF
C1305
R1308
100k
TH1301
C1311
Sheet: /QI Controller/
File: QI_Controller.sch
Title: QI Charger
Size: A
Date: 2019-01-03
Rev: A
KiCad E.D.A. kicad (5.0.2)-1
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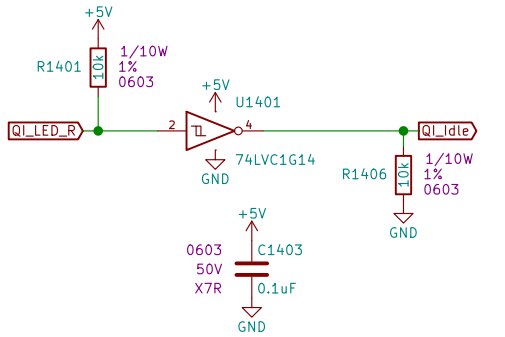

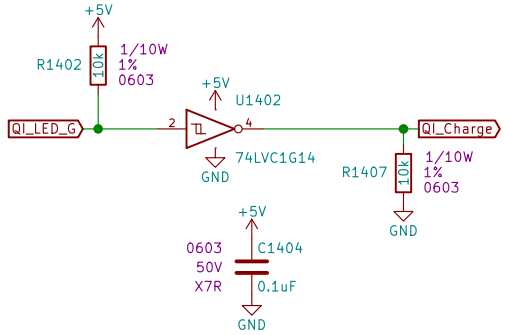

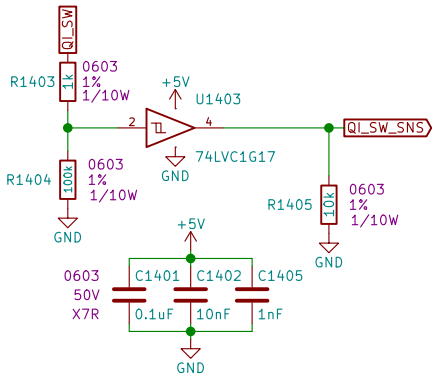

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Title: QI Charger		
Size: A	Date: 2019-01-03	**Rev: A**
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H1501
3mm Mounting Hole

H1503
3mm Mounting Hole

H1505
3mm Mounting Hole

H1507
3mm Mounting Hole

H1502
3mm Mounting Hole

H1504
3mm Mounting Hole

H1506
3mm Mounting Hole

H1508
3mm Mounting Hole

#4-40 Screw
MK1501

#4-40 Screw
MK1507

#4-40 Screw
MK1511

#4-40 Screw
MK1515

#4-40 Screw
MK1502

#4-40 Screw
MK1508

#4-40 Screw
MK1512

#4-40 Screw
MK1516

#4-40 Standoff
MK1503

#4-40 Standoff
MK1505

#4-40 Standoff
MK1509

#4-40 Standoff
MK1513

#4-40 Standoff
MK1504

#4-40 Standoff
MK1506

#4-40 Standoff
MK1510

#4-40 Standoff
MK1514

Sheet: /Mechanical/
File: Mechanical.sch

Title: QI Charger

Size: A	Date: 2019-01-03	**Rev: A**
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