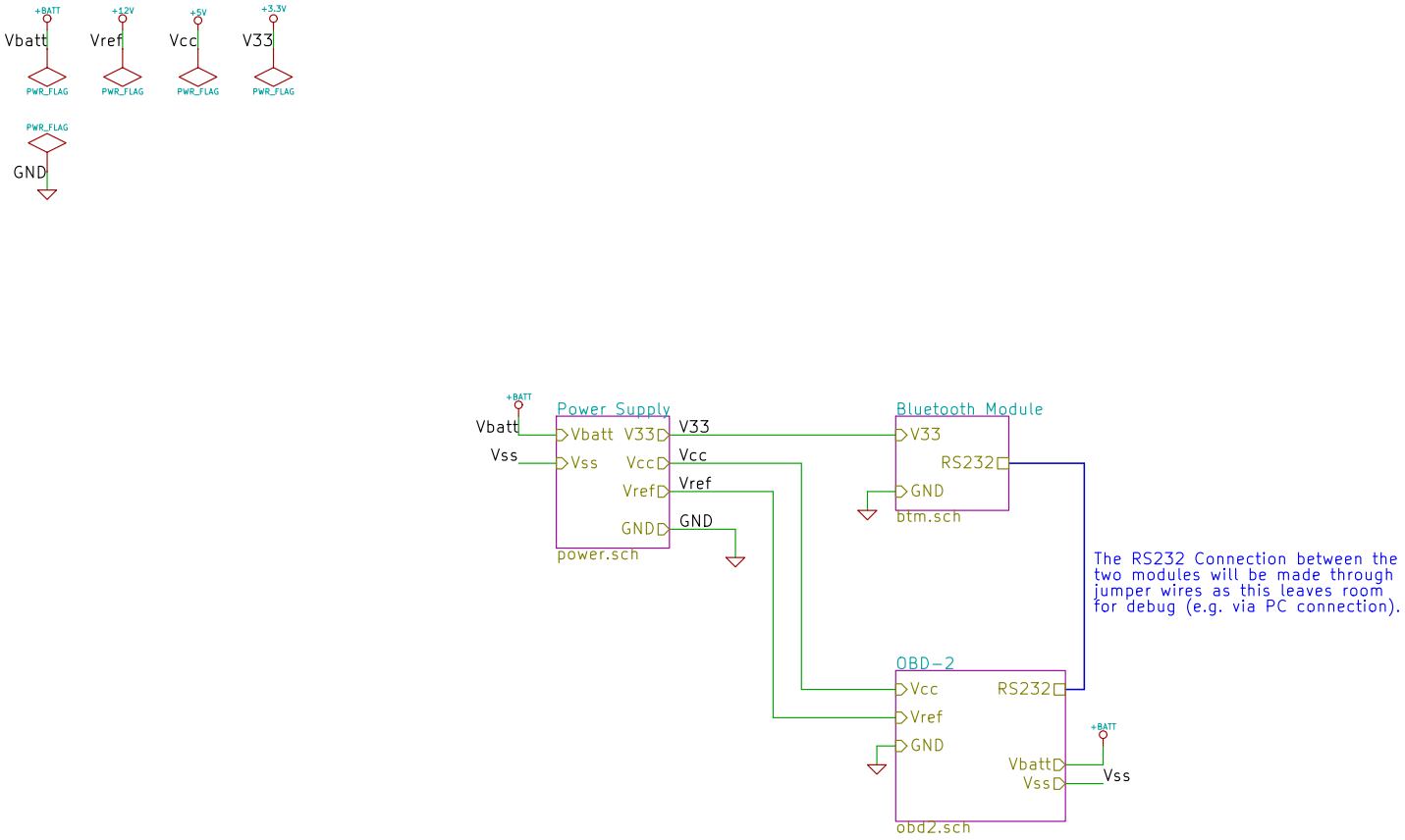
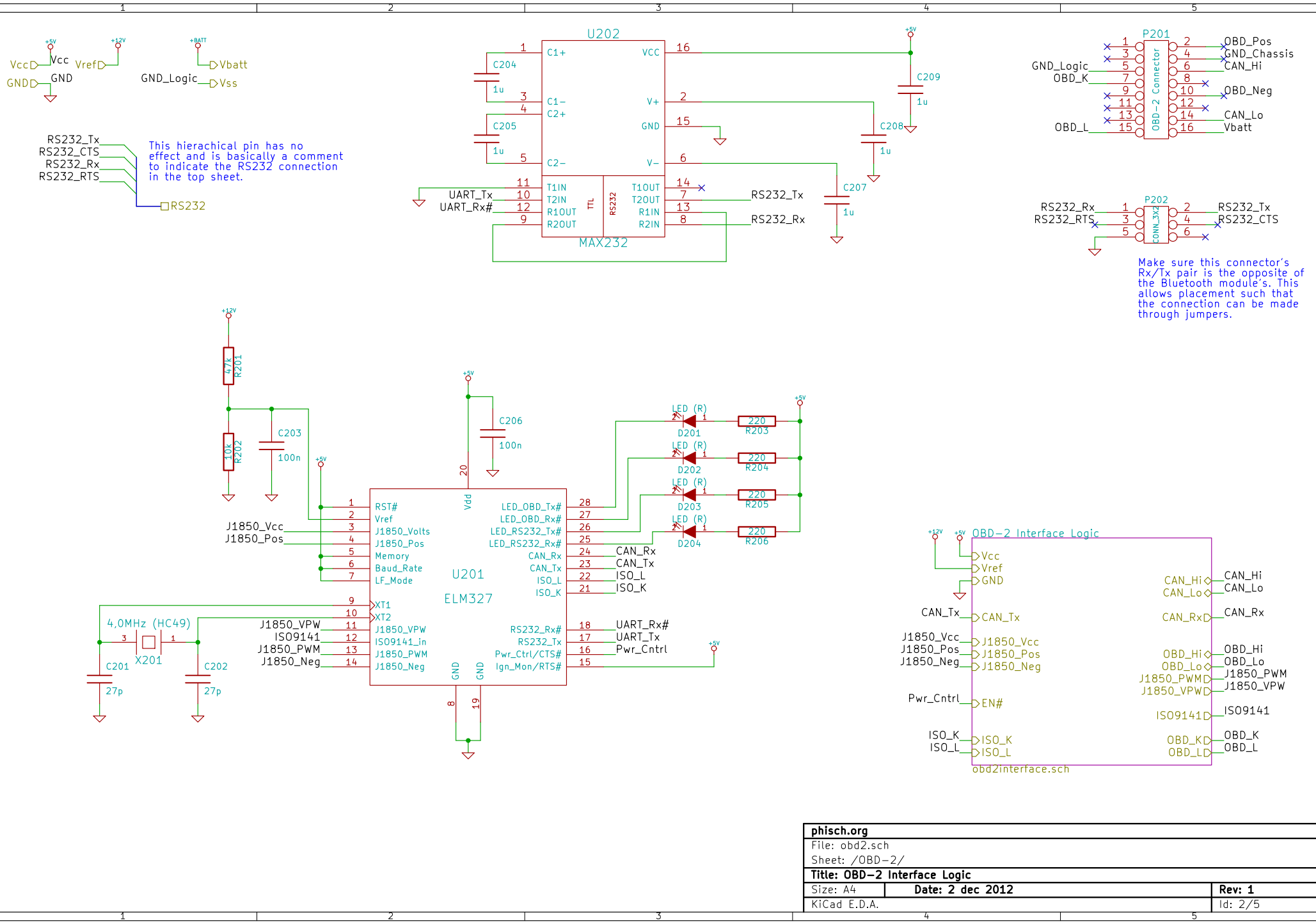
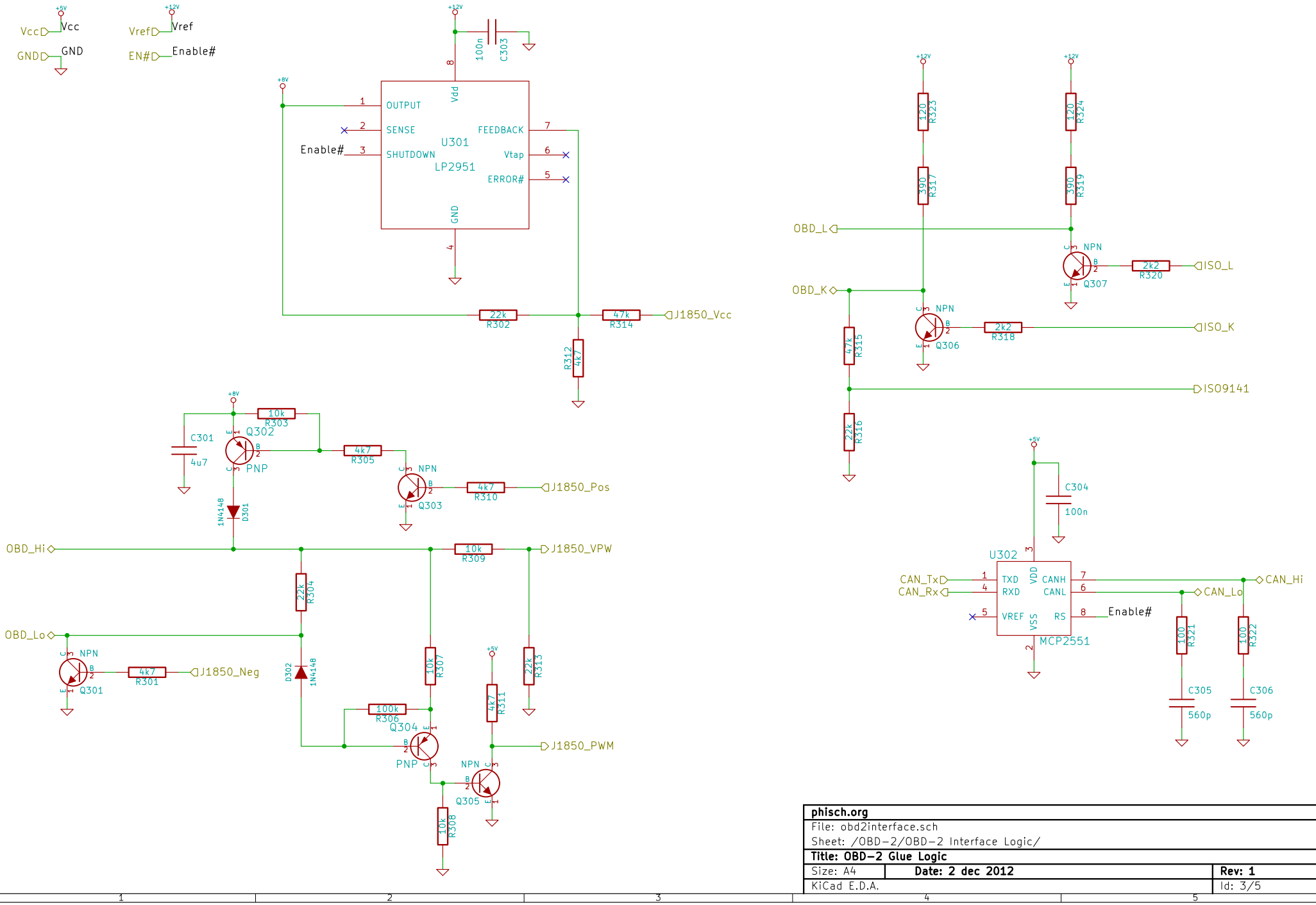
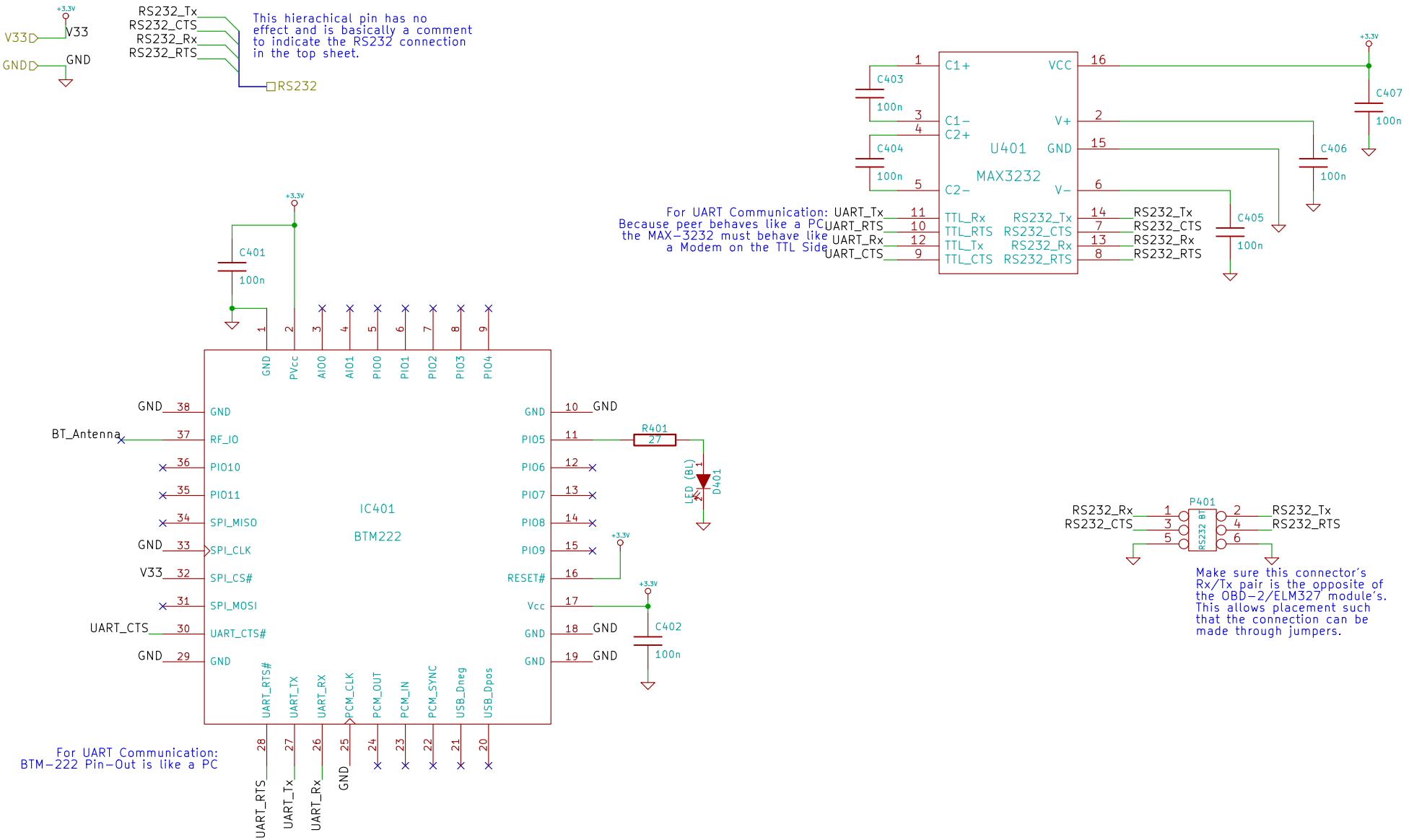


phisch.org		
File: obd2diag.sch		
Sheet: /		
Title: OBD-2 Diagnosis Bluetooth Interface		
Size: A4	**Date: 2 dec 2012**	**Rev: 1**
KiCad E.D.A.		Id: 1/5


Vcc
GND
Vref
Vbatt
GND_Logic
Vss
RS232_Tx
RS232_CTS
RS232_Rx
RS232_RTS
RS232
This hierachical pin has no effect and is basically a comment to indicate the RS232 connection in the top sheet.
U202
C1+
C1−
C2+
C2−
VCC
V+
GND
V−
T1IN
T2IN
R1OUT
R2OUT
T1OUT
T2OUT
R1IN
R2IN
TTL
RS232
MAX232
C204
C205
C206
C207
C208
C209
1u
100n
UART_Tx
UART_Rx#
RS232_Tx
RS232_Rx
P201
OBD-2 Connector
OBD_Pos
GND_Chassis
CAN_Hi
OBD_Neg
CAN_Lo
Vbatt
GND_Logic
OBD_K
OBD_L
P202
CONN_3X2
RS232_Rx
RS232_Tx
RS232_RTS
RS232_CTS
Make sure this connector's Rx/Tx pair is the opposite of the Bluetooth module's. This allows placement such that the connection can be made through jumpers.
R201
4.7k
R202
10k
C203
100n
U201
ELM327
RST#
Vref
J1850_Volts
J1850_Pos
Memory
Baud_Rate
LF_Mode
XT1
XT2
J1850_VPW
ISO9141_in
J1850_PWM
J1850_Neg
Vdd
GND
LED_OBD_Tx#
LED_OBD_Rx#
LED_RS232_Tx#
LED_RS232_Rx#
CAN_Rx
CAN_Tx
ISO_L
ISO_K
RS232_Rx#
RS232_Tx
Pwr_Ctrl/CTS#
Ign_Mon/RTS#
UART_Rx#
UART_Tx
Pwr_Cntrl
J1850_Vcc
J1850_Pos
J1850_VPW
ISO9141
J1850_PWM
J1850_Neg
4,0MHz (HC49)
X201
C201
C202
27p
LED (R)
D201
D202
D203
D204
220
R203
R204
R205
R206
OBD−2 Interface Logic
Vcc
Vref
GND
CAN_Tx
J1850_Vcc
J1850_Pos
J1850_Neg
Pwr_Cntrl
EN#
ISO_K
ISO_L
CAN_Hi
CAN_Lo
CAN_Rx
OBD_Hi
OBD_Lo
J1850_PWM
J1850_VPW
ISO9141
OBD_K
OBD_L
obd2interface.sch
phisch.org
File: obd2.sch
Sheet: /OBD−2/
Title: OBD−2 Interface Logic
Size: A4
Date: 2 dec 2012
Rev: 1
KiCad E.D.A.
Id: 2/5



phisch.org		
File: obd2interface.sch		
Sheet: /OBD-2/OBD-2 Interface Logic/		
Title: OBD-2 Glue Logic		
Size: A4	**Date: 2 dec 2012**	**Rev: 1**
KiCad E.D.A.		Id: 3/5



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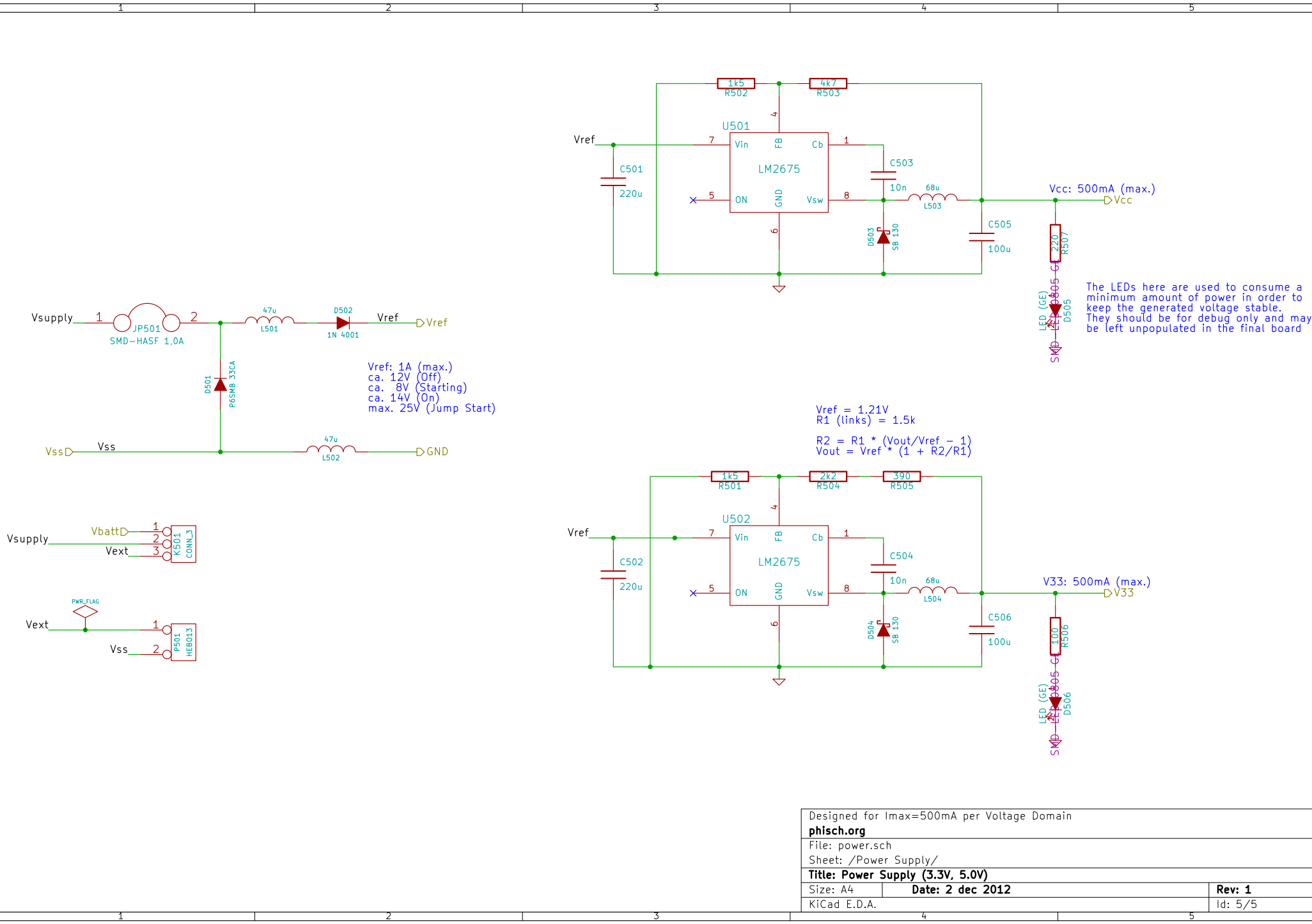
File: btm.sch		
Sheet: /Bluetooth Module/		
Title: Bluetooth Module		
Size: A4	**Date: 2 dec 2012**	**Rev: 1**
KiCad E.D.A.		Id: 4/5


Vsupply
JP501
SMD-HASF 1,0A
47u
L501
D502
1N 4001
Vref
Vref
D501
P6SMB 33CA
Vss
Vss
47u
L502
GND
Vref: 1A (max.)
ca. 12V (Off)
ca. 8V (Starting)
ca. 14V (On)
max. 25V (Jump Start)
Vbatt
Vsupply
Vext
K501
CONN_3
PWR_FLAG
Vext
Vss
P501
HEB013
1k5
R502
4k7
R503
U501
Vref
C501
220u
LM2675
Vin
FB
Cb
ON
GND
Vsw
C503
10n
68u
L503
Vcc: 500mA (max.)
Vcc
C505
100u
D503
SB 130
220
R507
LED (GE)
SMD LED 0805 CL
D505
The LEDs here are used to consume a minimum amount of power in order to keep the generated voltage stable. They should be for debug only and may be left unpopulated in the final board
Vref = 1.21V
R1 (links) = 1.5k
R2 = R1 * (Vout/Vref - 1)
Vout = Vref * (1 + R2/R1)
1k5
R501
2k2
R504
390
R505
U502
Vref
C502
220u
LM2675
C504
10n
68u
L504
V33: 500mA (max.)
V33
C506
100u
D504
SB 130
100
R506
LED (GE)
SMD LED 0805 CL
D506
Designed for Imax=500mA per Voltage Domain
phisch.org
File: power.sch
Sheet: /Power Supply/
Title: Power Supply (3.3V, 5.0V)
Size: A4
Date: 2 dec 2012
Rev: 1
KiCad E.D.A.
Id: 5/5