+BATT

P4
P6

6 to 60V Operating Voltage Rang

R12 470k
ADC/V_BAT
C18 10nF
R13 22k

[Uin (max) = 60V, Uadc max = 3.3V]
Gain K = R13/R12+R13 = 0.9553 (-> 73.8V abs. max)
Fc = 1/K*R12*C18*2pi = 0.76kHz

+3.3V
D2 LED
Rx 330
LED

MOTOR P2
6 A
5 B   +5V_protected
4
3
2 Mot+
1 Mot-

+5V_protected
C17 1uF

Bus2 P1
4 +5V
3
2 CANH
1 CANL

DBG P5
7 +3.3V
6
5 Reset
4 Swdio
3 Swdclk
2 Tx
1 Rx

U1 STM32F303CCT6
7   NRST
44 BOOT0
1   VBAT
48 VDD_1
24 VDD_2
36 VDD_3
35 VSS_3
23 VSS_2
47 VSS_1
9   VDDA/VREF+
8   VSSA/VREF-

PA0 10 GPIO_ADC
PA1 11 LED
PA2 12
PA3 13
PA4 14 CAN_SPEED
PA5 15 ADC/I_MOT
PA6 16 ADC/V_BAT
PA7 17
PA8 29 PWM1
PA9 30 PWM2
PA10 31 Mot_En_1
PA11 32 Mot_En_2
PA12 33 I
PA13 34 Swdio
PA14 37 Swdclk
PA15 38 TESTPT

PB0 18
PB1 19
PB2 20
PB3 39
PB4 40 GPIO_A
PB5 41 GPIO_B
PB6 42 A
PB7 43 B
PB8 45
PB9 46
PB10 21 Tx
PB11 22 Rx
PB12 25
PB13 26
PB14 27
PB15 28

PC13 2
PC14/OSC32_IN 3
PC15/OSC32_OUT 4

PF0/OSC_IN 5
PF1/OSC_OUT 6

Reset
C5 100n

+3.3V
C6 100n C7 100n C9 100n

+3.3V
+3.3V_A
C8 1uF C10 10n

IC3 MAX3051
8 RS   VCC
     CANH CANH
4 RXD
1 TXD   CANL CANL
5 SHDN GND

CAN_SPEED
+3.3V
C13 100n

U2 DRV8323RS
6   VM   VDRAIN 7
5   VCP   GHA   8
4   CPH   SHA   9
27 CPL   GLA   10
3   DGND
36 DVDD   GHB   17
35 AGND   SHB   16
2   PGND   GLB   15
33 ENABLE
37 INHA   GHC   18
38 INLA   SHC   19
39 INHB   GLC   20
40 INLB
41 INHC   nFAULT 28
72 INLC
30 SDI   SPC   21
29 SDO   SNC   22
31 SCLK   SPB   14
32 nSCS   SNB   13
26 VREF
23 SOC   SPA   11
24 SOB   SNA   12
25 SOA
34 CAL   CB   44
47 VIN   SW   45
48 nSHDN   FB   1
43 BGND   NC   46
             Thermal_Pad

CVRA
Sheet: /
File: _autosave-_autosave-working_1.kicad_sch
Title: Motor control board
Size: A3   Date: 11 apr 2015   Rev: V00
KiCad E.D.A. eeschema 7.0.6   Id: 1/1