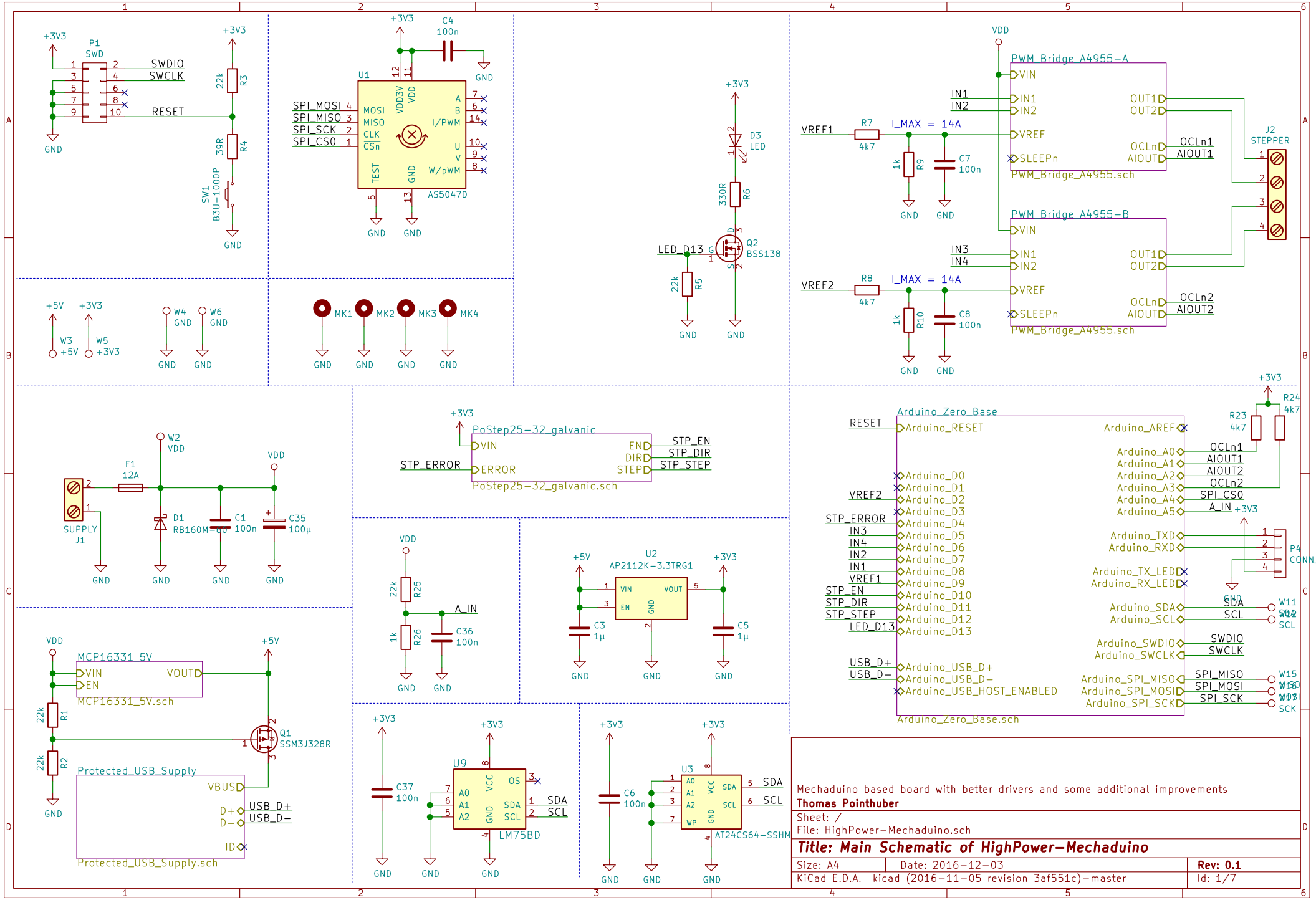
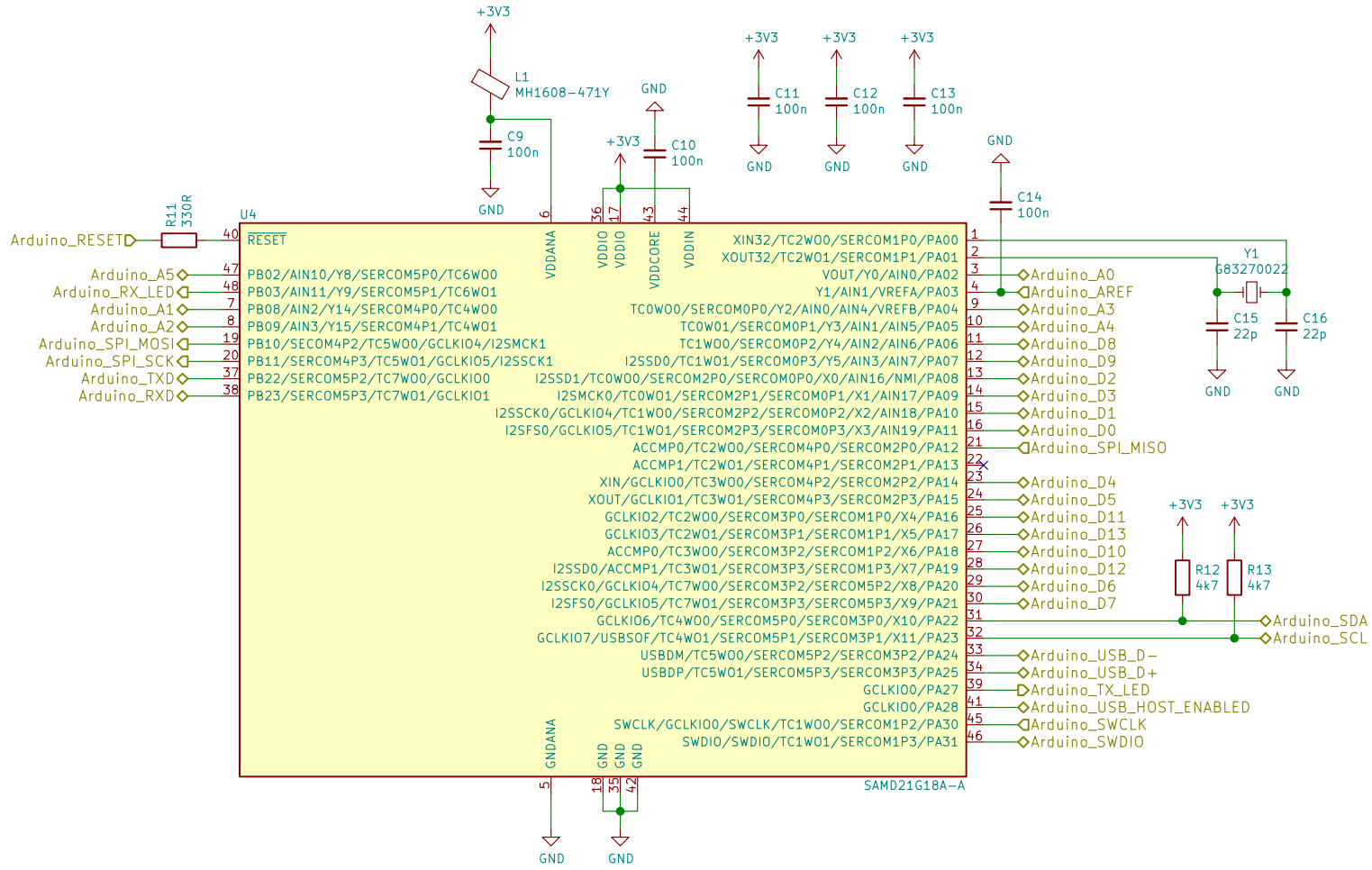

P1
SWD
SWDIO
SWCLK
RESET
R3
22k
R4
39R
SW1
B3U-1000P
U1
SPI_MOSI
SPI_MISO
SPI_SCK
SPI_CS0
AS5047D
C4
100n
D3
LED
R6
330R
Q2
BSS138
LED_D13
R5
22k
W3
W5
W4
W6
MK1
MK2
MK3
MK4
PWM_Bridge_A4955-A
PWM_Bridge_A4955-B
PWM_Bridge_A4955.sch
VREF1
VREF2
R7
R8
4k7
I_MAX = 14A
R9
R10
1k
C7
C8
100n
J2
STEPPER
OCLn1
AIOUT1
OCLn2
AIOUT2
F1
12A
SUPPLY
J1
D1
RB160M-60
C1
C35
100µ
PoStep25-32_galvanic
PoStep25-32_galvanic.sch
STP_ERROR
STP_EN
STP_DIR
STP_STEP
R25
R26
A_IN
C36
U2
AP2112K-3.3TRG1
C3
C5
1µ
MCP16331_5V
MCP16331_5V.sch
Q1
SSM3J328R
R1
R2
Protected_USB_Supply
Protected_USB_Supply.sch
VBUS
USB_D+
USB_D-
ID
U9
LM75BD
C37
U3
AT24CS64-SSHM
C6
SDA
SCL
Arduino_Zero_Base
Arduino_Zero_Base.sch
RESET
VREF2
IN3
IN4
IN2
IN1
VREF1
LED_D13
R23
R24
P4
CONN_01X04
W11
W12
W15
W16
Mechaduino based board with better drivers and some additional improvements
Thomas Pointhuber
Sheet: /
File: HighPower-Mechaduino.sch
Title: Main Schematic of HighPower-Mechaduino
Size: A4
Date: 2016-12-03
Rev: 0.1
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master
Id: 1/7



Minimal Schematic to create an Arduino Zero compatible board

Thomas Pointhuber

Sheet: /Arduino_Zero_Base/
File: Arduino_Zero_Base.sch

Title: Arduino Zero base schematic

Size: A4	Date: 2016-12-03	**Rev: 0.1**
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master		Id: 2/7

CALCULATIONS

ISET

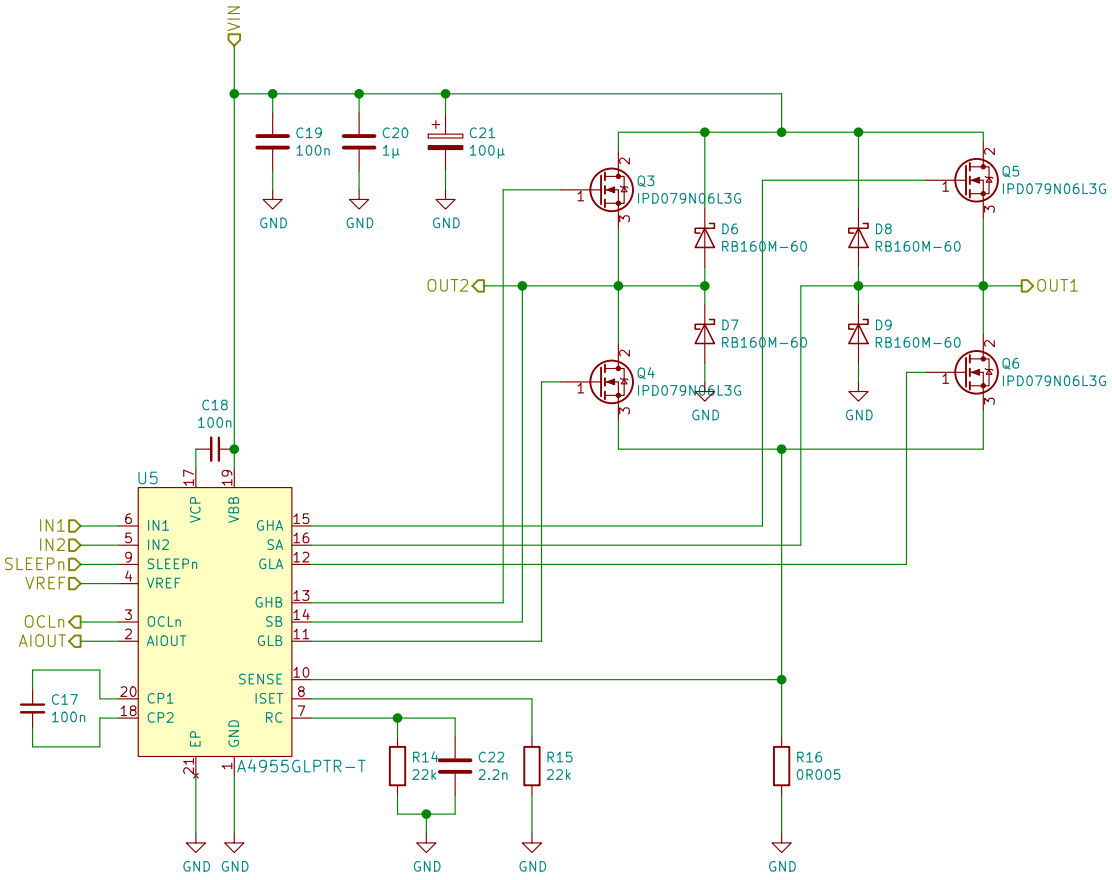
I_GATE_HS = 42.8mA
I_GATE_LS = 80.7mA

RC

T_OFF = 49.4µs
T_BLANK = 6.7µs

Current Limiter

I_MAX = 10A
VREF_MAX = 0.5V



Thomas Pointhuber	
Sheet: /PWM_Bridge_A4955-A/	
File: PWM_Bridge_A4955.sch	
Title: A4955 PWM Bridge	
Size: A4	Date: 2016-12-03
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master	Id: 3/7

Rev: 0.1

CALCULATIONS

ISET

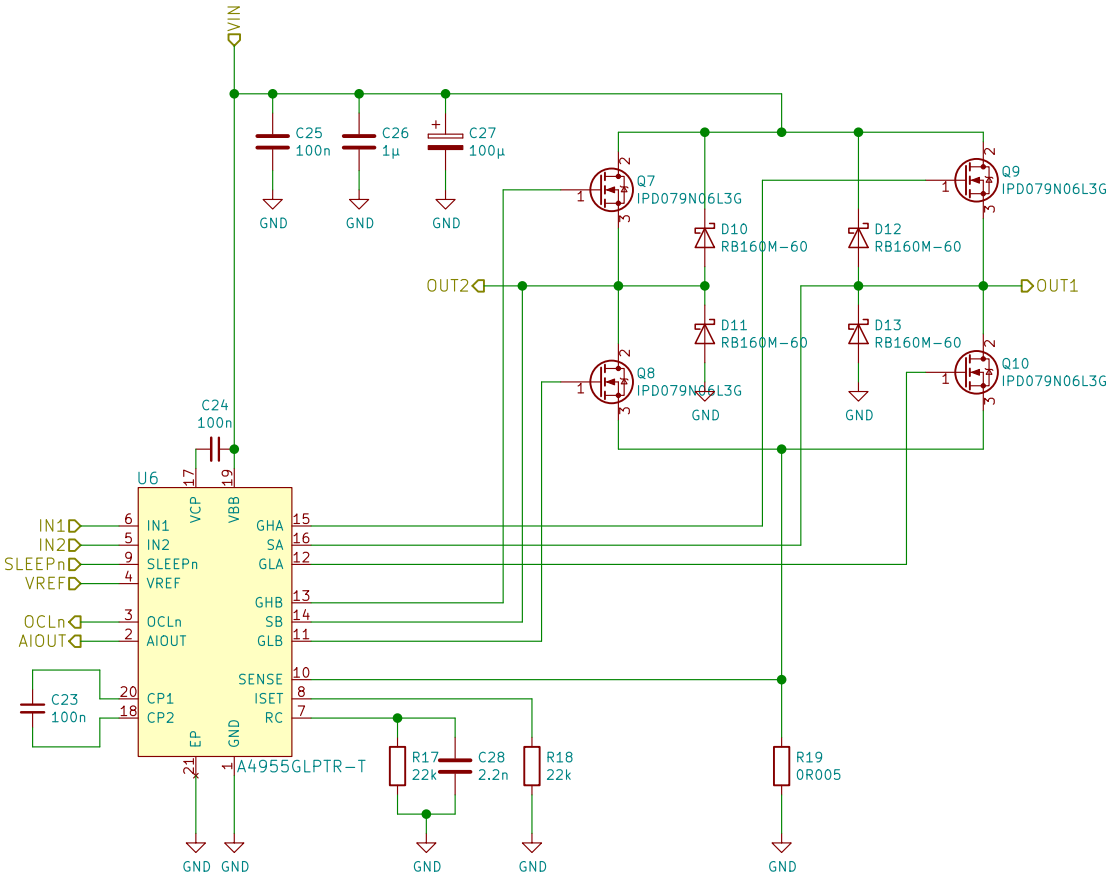
I_GATE_HS = 42.8mA
I_GATE_LS = 80.7mA

RC

T_OFF = 49.4µs
T_BLANK = 6.7µs

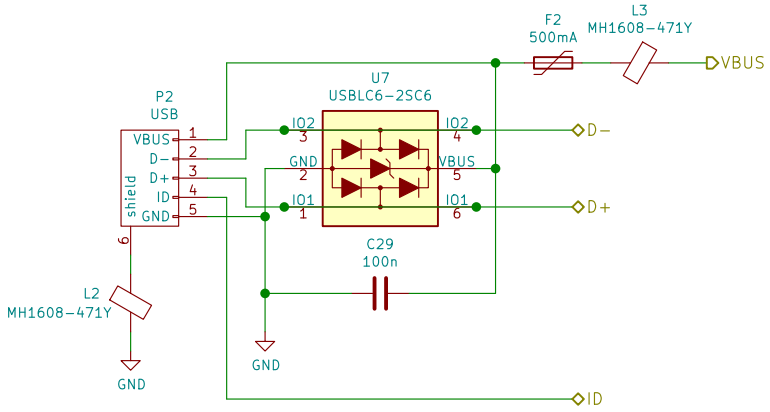
Current Limiter

I_MAX = 10A
VREF_MAX = 0.5V



Thomas Pointhuber	
Sheet: /PWM_Bridge_A4955-B/	
File: PWM_Bridge_A4955.sch	
Title: A4955 PWM Bridge	
Size: A4	Date: 2016-12-03
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master	Id: 4/7

Rev: 0.1



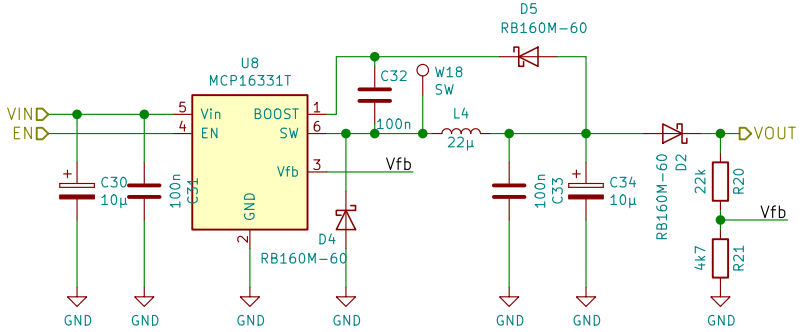
Thomas Pointhuber		
Sheet: /Protected_USB_Supply/ File: Protected_USB_Supply.sch		
Title: USB input including protection circuit		
Size: A4	Date: 2016-12-03	**Rev: 0.1**
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master		Id: 5/7

CALCULATIONS

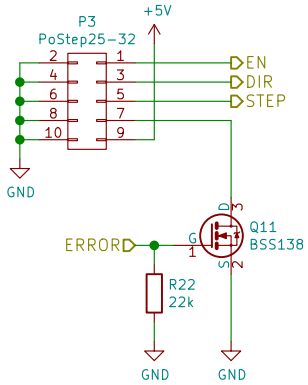
OUTPUT VOLTAGE

R_TOLERANCE = 5%
U_OUT_MIN = 4.18V
U_OUT_MAX = 4.93V

R_TOLERANCE = 1%
U_OUT_MIN = 4.47V
U_OUT_MAX = 4.62V



Thomas Pointhuber		
Sheet: /MCP16331_5V/ File: MCP16331_5V.sch		
Title: Step Down with input range of 10V–50V		
Size: A4	Date: 2016-12-03	**Rev: 0.1**
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master		Id: 6/7



Thomas Pointhuber		
Sheet: /PoStep25-32_galvanic/ File: PoStep25-32_galvanic.sch		
Title: ProStep25-32 input including optional galvanic separation		
Size: A4	Date: 2016-12-03	**Rev: 0.1**
KiCad E.D.A. kicad (2016-11-05 revision 3af551c)-master		Id: 7/7