Vorsicht bei Anschluss auf zu hohen Stromverbrauch
VMCU Kurzschlussfehler(Der Controller geht defekt)
Goldcap R10 bildet Kurzschluss auf C4.

to_do: VMCU auf Schwankungen kontrollieren.
DCF 77 Schraubklemme passt nicht unter LB und Servo Platine
Einmaliger SD Kartenfehler: PC6_SD_CD gegen GND immer Durchgang

PB11_POWER_GOOD Wird ein Rechteckimpuls auf MCU_RESET ausgelöst? NEIN
Erhöhter Stromverbrauch >20mA und Error Battery Controller

EFM32 Power Regulator

Power Input

braun

BATT_GND X1-1 1 GND
BATT_INPUT X1-2 2
MKDS1/2-3,81

rot

BATT_INPUT
Q1
SI7121DN
R1 100k
C1 100µF/25V
C2 10µF/25V
R3 1M47
R4 200K
R5 30K9

IC1
TPS62125
GND, PG, VIN, SW, EN, VOS, ENHYS, FB, EXP

L1 LPS3008/22µH
PB11_POWER_GOOD
R7 100K
R8 2M
R9 560K
C3 22µF/10V
D4 BAT54C
VMCU : 3.3V
VMCU
C11 10µ/25V
R10 100
C4 EECS0HD 224;Panasonic

D1 BAT54C
VDCF
C6 100µF/25V
C8 100nF/16V

D2 BAT54C
VFRONT
C7 100µF/25V
C9 100nF/16V

D3 BAT54C
VSD
C5 100µF/25V
C10 100nF/16V

Debug Interface

X2
MCU_RESET 8 7 FREI
PF2_DBG_SWO 6 5
PF0_DBG_SWCLK 4 3
PF1_DBG_SWDIO 2 1 VMCU
DF11_8DP_2DS

POWER_ON

PA2_POWER_LED
R2 1K2
LED1 SML-H12U8TT86 RED

PA5_LOG_FLUSH_LED
R6 1K2
LED2 SML-H12Y8TT86 GELB

PIR Detector

weiss
braun
grün
gelb

VMCU_PIR1 X3-1 1.1 VMCU
VMCU_PIR2 X3-2 1.2 VMCU
GND_PIR1 X3-3 1.3
GND_PIR2 X3-4 1.4 GND
SIGNAL_PIR1 X3-5 1.5 PD6_PIR1_SIGNAL
SIGNAL_PIR2 X3-6 1.6 PD7_PIR2_SIGNAL
MKDS1/6-3,81

Light Barrier

weiss VMCU_LB X4-1 1 VFRONT
braun GND_LB X4-2 2 GND
grün SIGNAL_LB1 X4-3 3 PE13_LB1_SIGNAL
gelb SIGNAL_LB2 X4-4 4 PE14_LB2_SIGNAL
blau X4-5 5 RFID_GND_LB
MKDS1/5-3,81

Signal_LB1 und Signal_LB2
auf GND_LB brücken!

PASS1
PASS2

Power Input + EFM32 Power Regulator
+ Debug Interface + Power ON + SMBUS + PIR + LB

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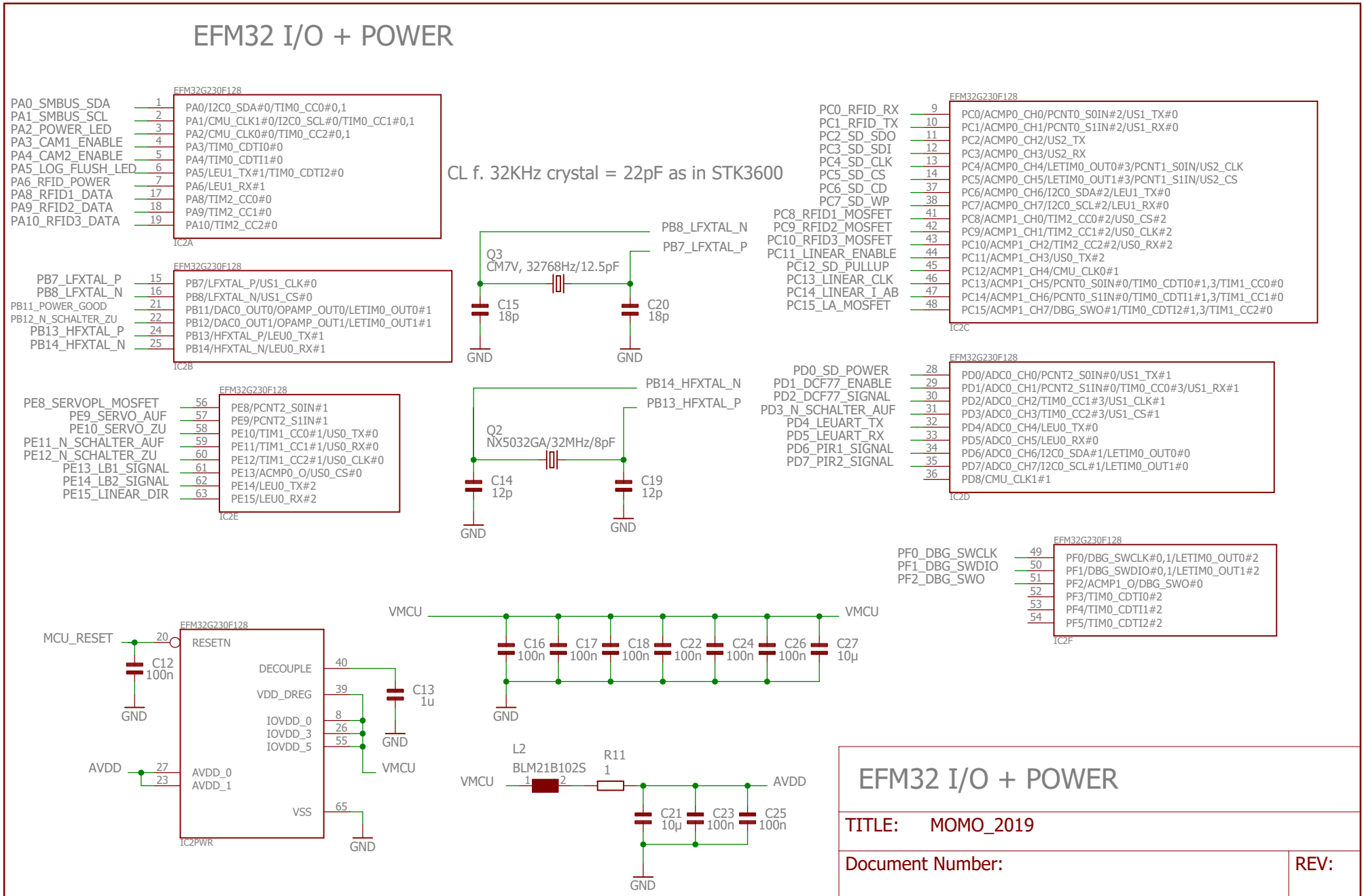
EFM32 I/O + POWER



EFM32 I/O + POWER

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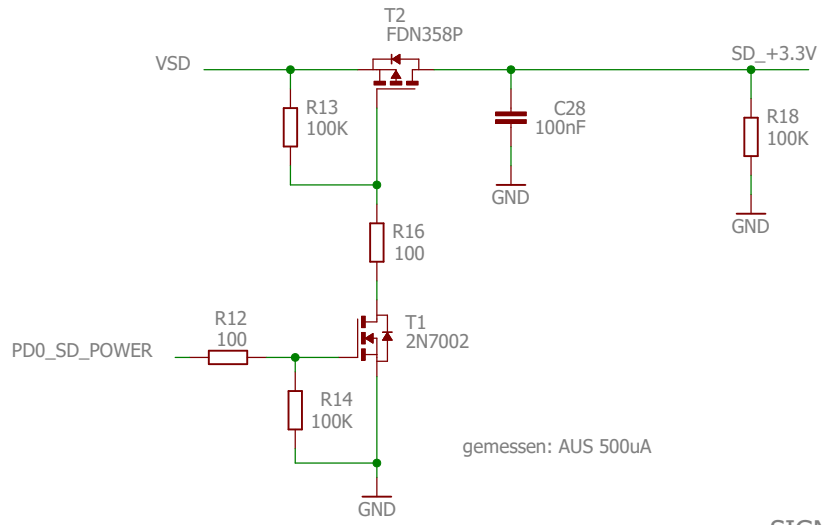
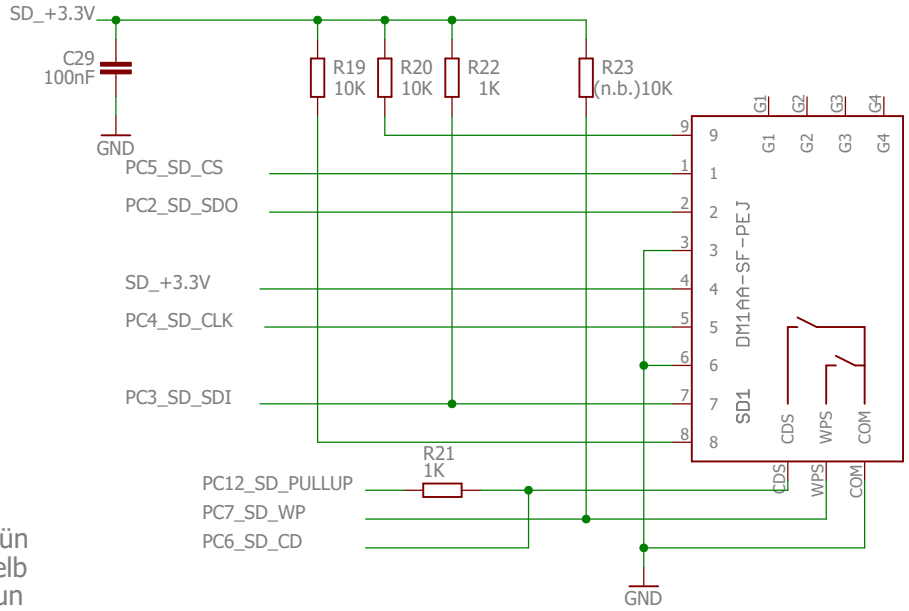
SD SOCKET + DCF77 + LEUART



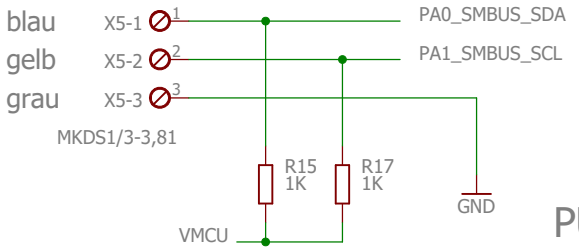
gemessen: AUS 500uA

Activity



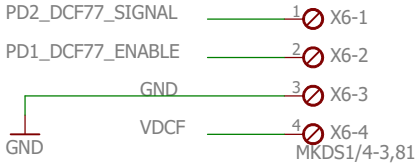
SMBUS Abfrage

SMBUS_SDA: blau
SMBUS_SCL: gelb
SMBUS_GND: grau

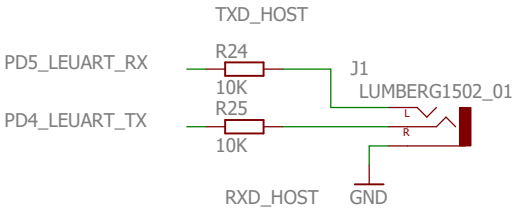


DCF77

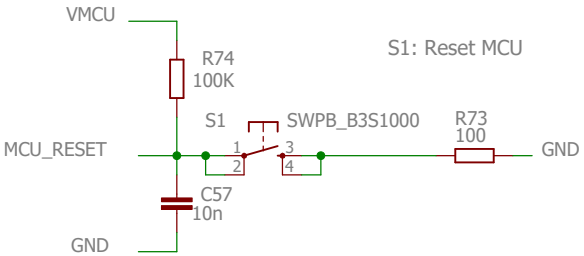
SIGNAL: grün
ENABLE: gelb
GND: braun
VDCF: weiss



LEUART



PUSHBUTTON



S1: Reset MCU

SD SOCKET + DCF77 + LEUART	
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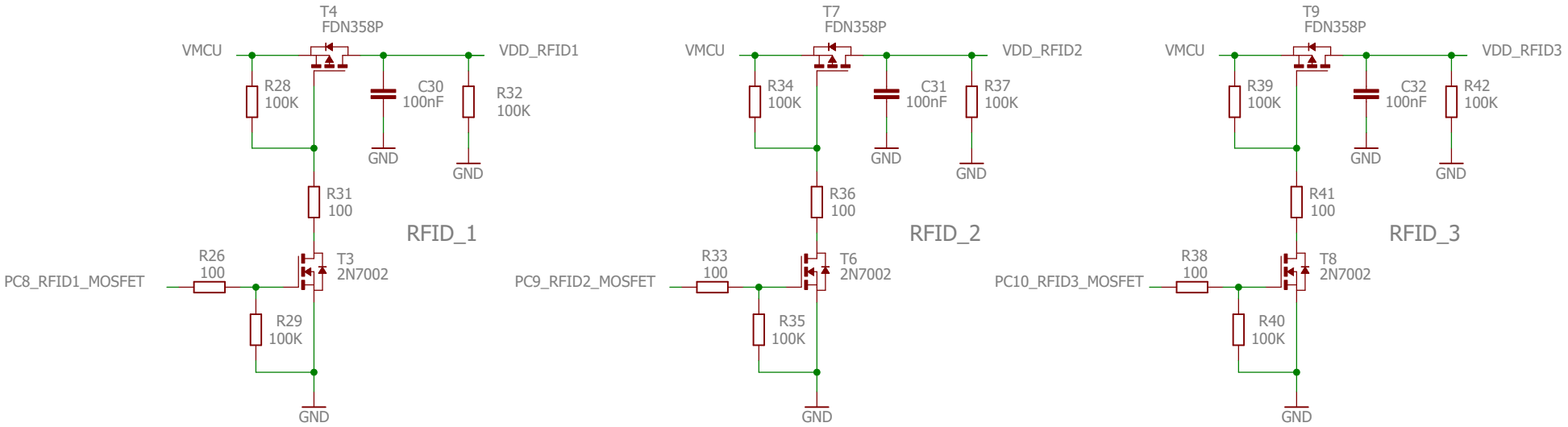
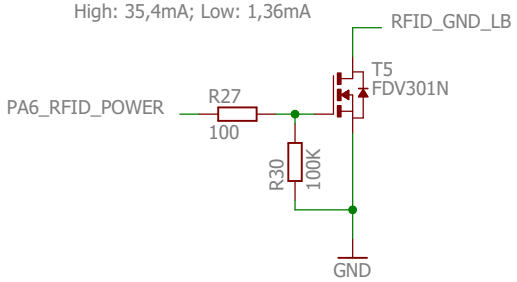
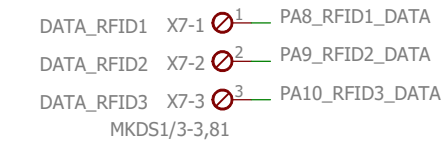
RFID_Trigger

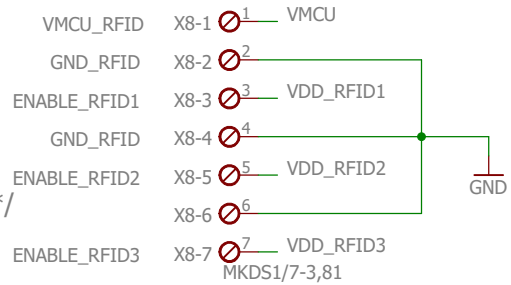


RFID_GND_FRONTPLATTE



RFID Daten die mit Anschluss RFID_GND geschalten werden, werden auf PE11_N_SCHALTER_AUF eingelesen./*pink*/





RFID_Trigger		
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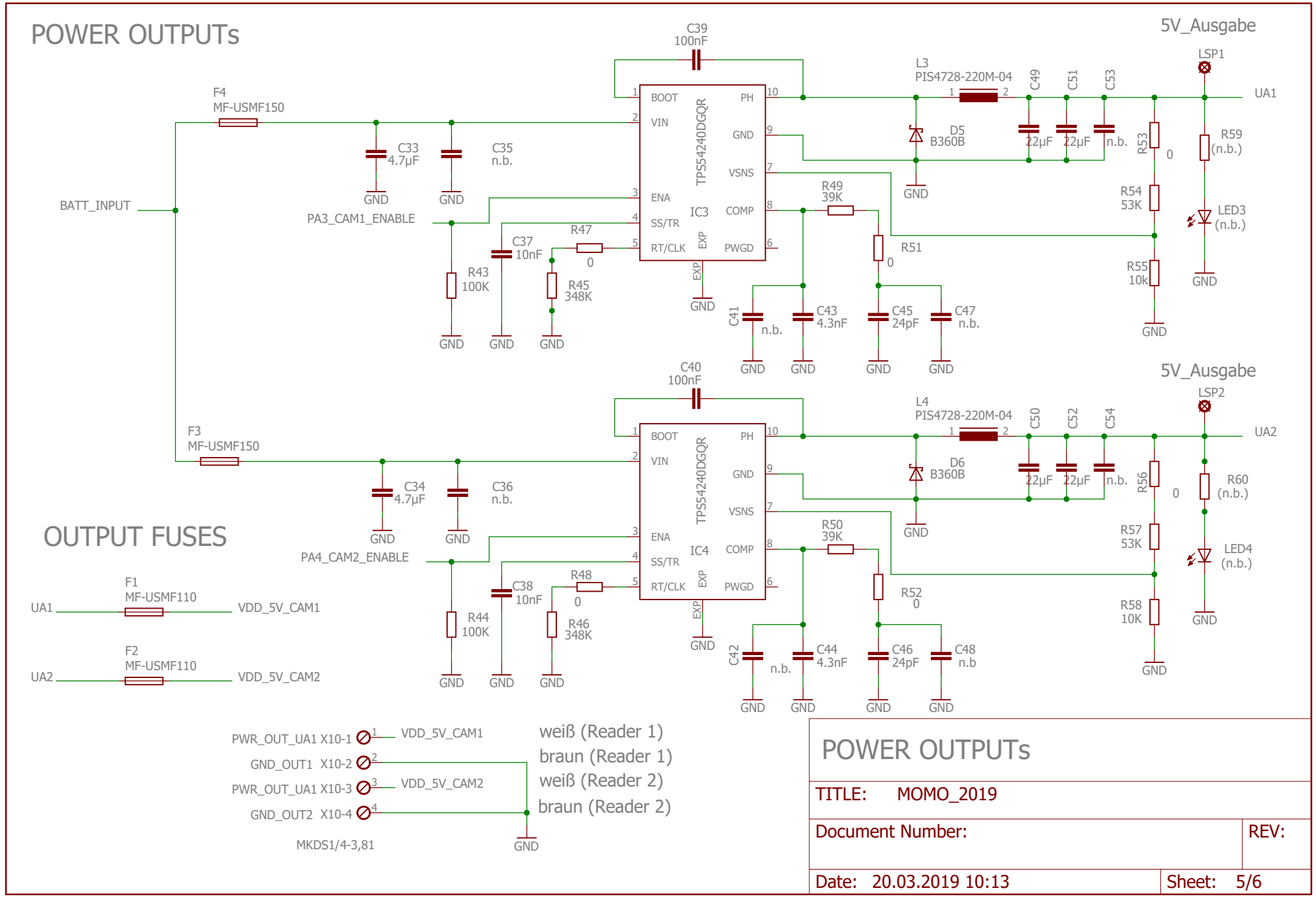
POWER OUTPUTs
5V_Ausgabe
C39
100nF
L3
PIS4728-220M-04
LSP1
F4
MF-USMF150
C33
4.7µF
C35
n.b.
C49
C51
C53
UA1
D5
B360B
22µF
22µF
n.b.
R53
0
R59
(n.b.)
BATT_INPUT
PA3_CAM1_ENABLE
IC3
TPS54240DGQR
BOOT
VIN
ENA
SS/TR
RT/CLK
EXP
PH
GND
VSNS
COMP
PWGD
R49
39K
R54
53K
LED3
(n.b.)
C37
10nF
R47
0
R43
100K
R45
348K
R51
0
R55
10k
C41
n.b.
C43
4.3nF
C45
24pF
C47
n.b.
C40
100nF
5V_Ausgabe
L4
PIS4728-220M-04
LSP2
F3
MF-USMF150
C34
4.7µF
C36
n.b.
C50
C52
C54
UA2
D6
B360B
22µF
22µF
n.b.
R56
0
R60
(n.b.)
PA4_CAM2_ENABLE
IC4
R50
39K
R57
53K
LED4
(n.b.)
C38
10nF
R48
0
R44
100K
R46
348K
R52
0
R58
10K
C42
n.b.
C44
4.3nF
C46
24pF
C48
n.b
OUTPUT FUSES
F1
MF-USMF110
UA1
VDD_5V_CAM1
F2
MF-USMF110
UA2
VDD_5V_CAM2
PWR_OUT_UA1 X10-1
GND_OUT1 X10-2
PWR_OUT_UA1 X10-3
GND_OUT2 X10-4
VDD_5V_CAM1
VDD_5V_CAM2
MKDS1/4-3,81
weiß (Reader 1)
braun (Reader 1)
weiß (Reader 2)
braun (Reader 2)
POWER OUTPUTs
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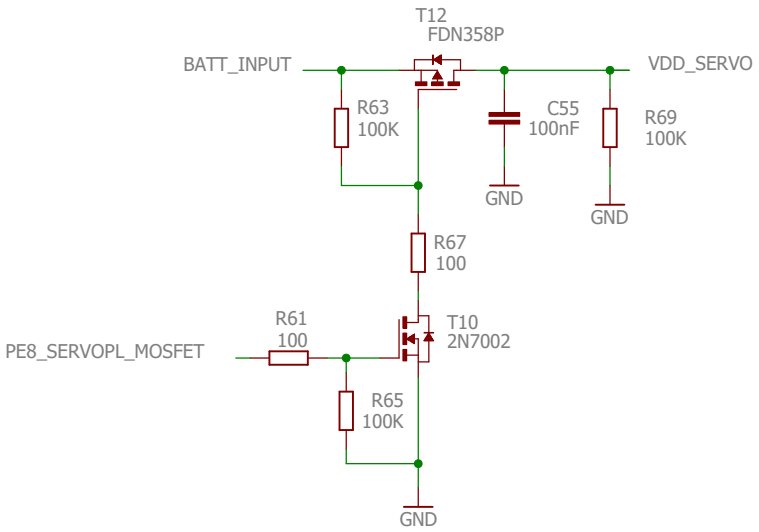
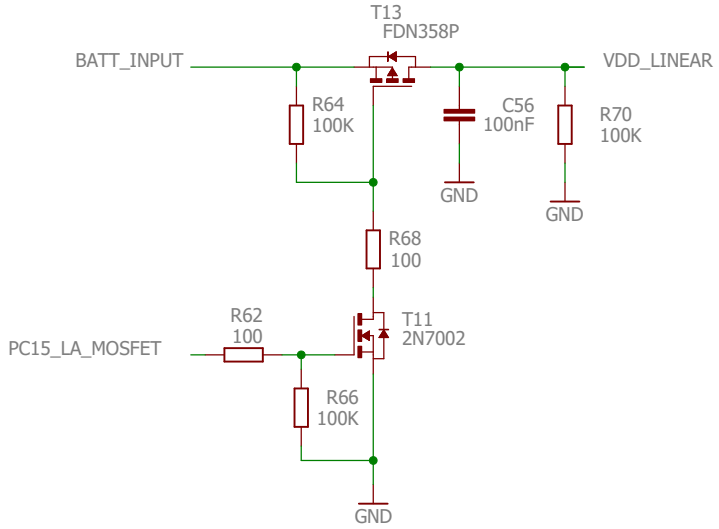
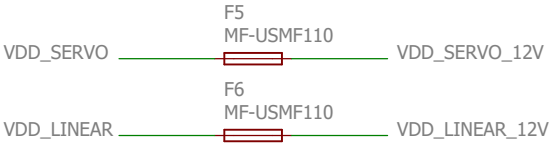
SERVOANSTEUERUNG

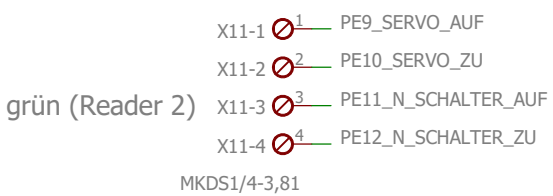


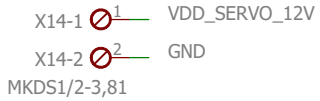
LINEARAKTUATOR

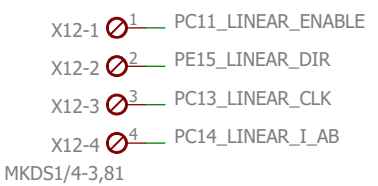


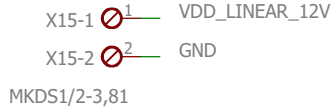
FUSES

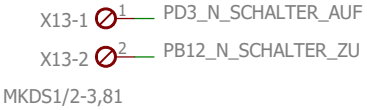












SERVOANSTEUERUNG + LINEARAKTUATOR

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