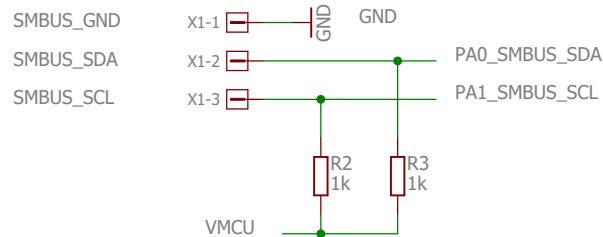
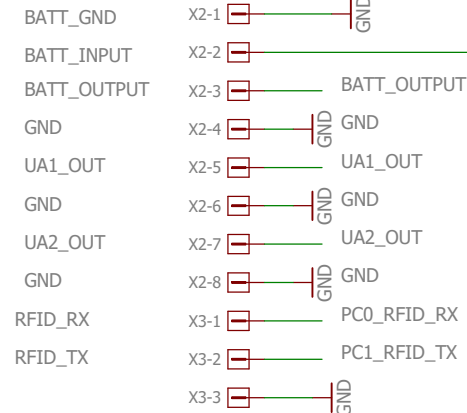


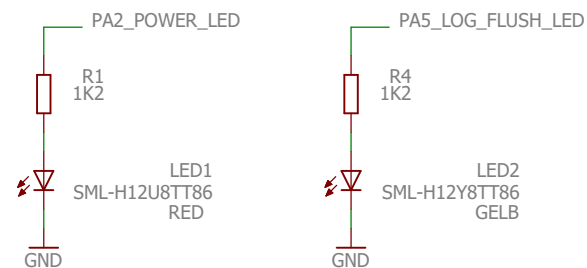
- Warum Strommessung im Pfad vor?
C3 rs_comp. 9015339

BATT_OUTPUT: 12V@900mA (Abschaltung Batterypack)
UA1_OUT: unter 11V@2A
UA2_OUT: unter 11V@2A
Gesamtstromverbrauch über SMBus

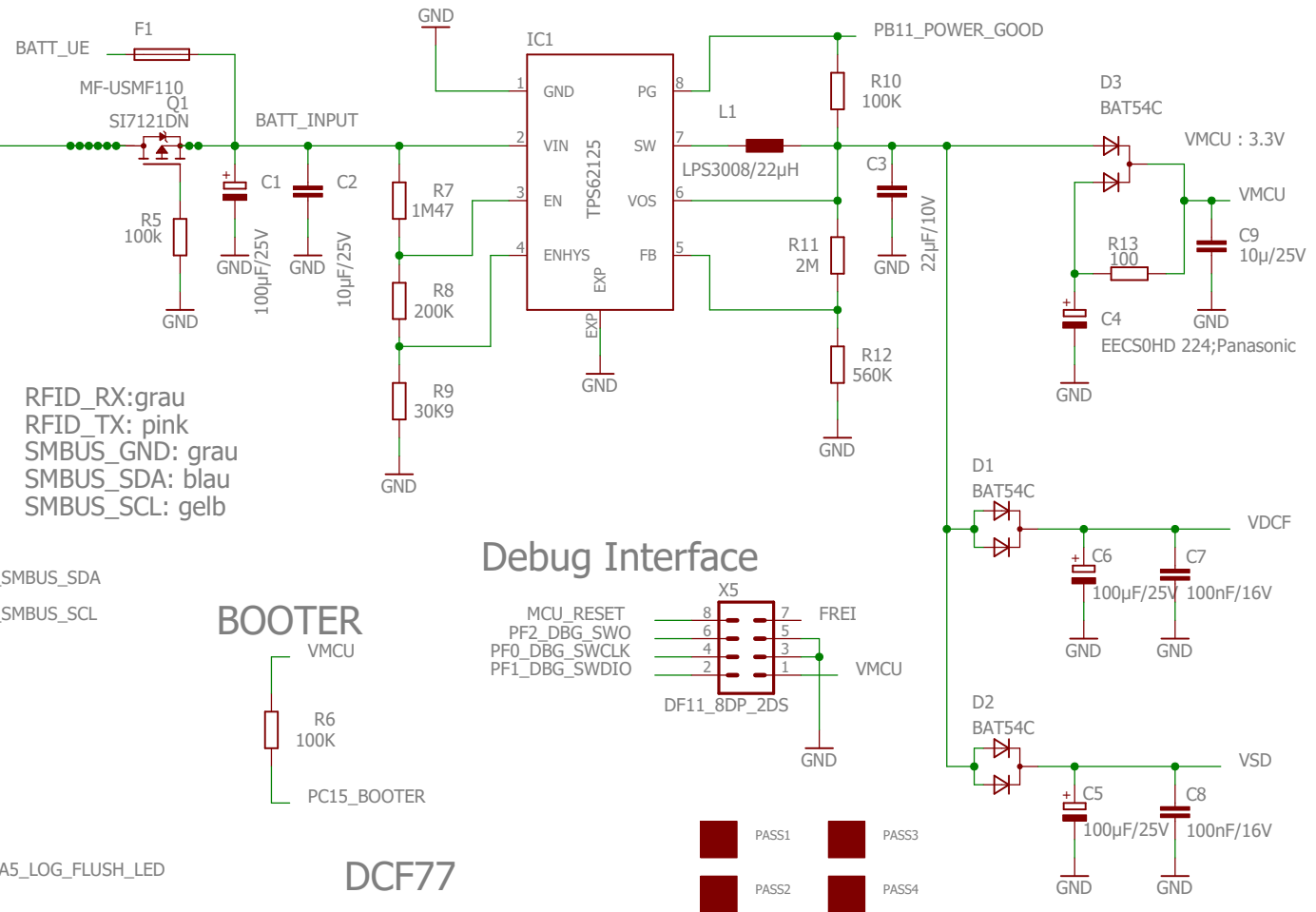
Power Input



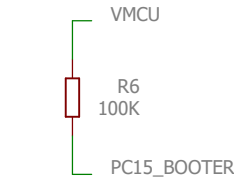
POWER_ON



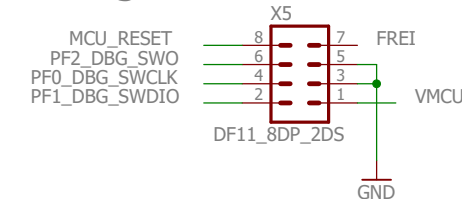
EFM32 Power Regulator



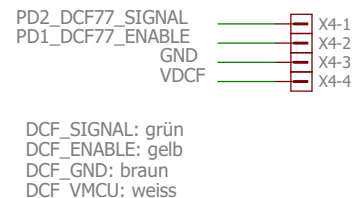
BOOTER



Debug Interface



DCF77



Power+Debug Interface+ SMBus

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EFM32 I/O + POWER

CL f. 32KHz crystal = 22pF as in STK3600

PA0_SMBUS_SDA	1
PA1_SMBUS_SCL	2
PA2_POWER_LED	3
PA3_CAM1_ENABLE	4
PA4_CAM2_ENABLE	5
PA5_LOG_FLUSH_LED	6
PA6_BATT_OUTPUT_POWER	7
PA8_PUSHBUTTON_UP	17
PA9_PUSHBUTTON_RIGHT	18
PA10_PUSHBUTTON_LEFT	19

EFM32G230F128

PA0/I2C0_SDA#0/TIM0_CC0#0,1
PA1/CMU_CLK1#0/I2C0_SCL#0/TIM0_CC1#0,1
PA2/CMU_CLK0#0/TIM0_CC2#0,1
PA3/TIM0_CDTI0#0
PA4/TIM0_CDTI1#0
PA5/LEU1_TX#1/TIM0_CDTI2#0
PA6/LEU1_RX#1
PA8/TIM2_CC0#0
PA9/TIM2_CC1#0
PA10/TIM2_CC2#0

IC2A

PB7_LFXTAL_P	15
PB8_LFXTAL_N	16
PB11_POWER_GOOD	21
PAD1	22 (n.b.)
PB13_HFXTAL_P	24
PB14_HFXTAL_N	25

EFM32G230F128

PB7/LFXTAL_P/US1_CLK#0
PB8/LFXTAL_N/US1_CS#0
PB11/DAC0_OUT0/OPAMP_OUT0/LETIM0_OUT0#1
PB12/DAC0_OUT1/OPAMP_OUT1/LETIM0_OUT1#1
PB13/HFXTAL_P/LEU0_TX#1
PB14/HFXTAL_N/LEU0_RX#1

IC2B

PE8_LCD_D0	56
PE9_LCD_D1	57
PE10_LCD_D2	58
PE11_LCD_D3	59
PE12_LCD_D4	60
PE13_LCD_D5	61
PE14_LCD_D6	62
PE15_LCD_D7	63

EFM32G230F128

PE8/PCNT2_S0IN#1
PE9/PCNT2_S1IN#1
PE10/TIM1_CC0#1/US0_TX#0
PE11/TIM1_CC1#1/US0_RX#0
PE12/TIM1_CC2#1/US0_CLK#0
PE13/ACMP0_O/US0_CS#0
PE14/LEU0_TX#2
PE15/LEU0_RX#2

IC2E

PC0_RFID_RX	9
PC1_RFID_TX	10
PC2_SD_SDO	11
PC3_SD_SDI	12
PC4_SD_CLK	13
PC5_SD_CS	14
PC6_SD_CD	37
PC7_SD_WP	38
PC8_MEASURE_ON_UA1	41
PC9_MEASURE_ON_UA2	42
PC10_SD_POWER	43
PC12_SD_PULLUP	44
PC13_PUSHBUTTON_DOWN	45
PC14_PUSHBUTTON_SET	46
PC15_BOOSTER	47

EFM32G230F128

PC0/ACMP0_CH0/PCNT0_S0IN#2/US1_TX#0
PC1/ACMP0_CH1/PCNT0_S1IN#2/US1_RX#0
PC2/ACMP0_CH2/US2_TX
PC3/ACMP0_CH3/US2_RX
PC4/ACMP0_CH4/LETIM0_OUT0#3/PCNT1_S0IN/US2_CLK
PC5/ACMP0_CH5/LETIM0_OUT1#3/PCNT1_S1IN/US2_CS
PC6/ACMP0_CH6/I2C0_SDA#2/LEU1_TX#0
PC7/ACMP0_CH7/I2C0_SCL#2/LEU1_RX#0
PC8/ACMP1_CH0/TIM2_CC0#2/US0_CS#2
PC9/ACMP1_CH1/TIM2_CC1#2/US0_CLK#2
PC10/ACMP1_CH2/TIM2_CC2#2/US0_RX#2
PC11/ACMP1_CH3/US0_TX#2
PC12/ACMP1_CH4/CMU_CLK0#1
PC13/ACMP1_CH5/PCNT0_S0IN#0/TIM0_CDTI0#1,3/TIM1_CC0#0
PC14/ACMP1_CH6/PCNT0_S1IN#0/TIM0_CDTI1#1,3/TIM1_CC1#0
PC15/ACMP1_CH7/DBG_SWO#1/TIM0_CDTI2#1,3/TIM1_CC2#0

IC2C

PD0_ADC_IA1_IN	28
PD1_DCF77_ENABLE	29
PD2_DCF77_SIGNAL	30
PD3_ADC_IA2_IN	31
PD4_LEUART_TX	32
PD5_LEUART_RX	33
PD6_ADC_UA1_IN	34
PD7_ADC_UA2_IN	35
PD8_LCD_POWER	36

EFM32G230F128

PD0/ADC0_CH0/PCNT2_S0IN#0/US1_TX#1
PD1/ADC0_CH1/PCNT2_S1IN#0/TIM0_CC0#3/US1_RX#1
PD2/ADC0_CH2/TIM0_CC1#3/US1_CLK#1
PD3/ADC0_CH3/TIM0_CC2#3/US1_CS#1
PD4/ADC0_CH4/LEU0_TX#0
PD5/ADC0_CH5/LEU0_RX#0
PD6/ADC0_CH6/I2C0_SDA#1/LETIM0_OUT0#0
PD7/ADC0_CH7/I2C0_SCL#1/LETIM0_OUT1#0
PD8/CMU_CLK1#1

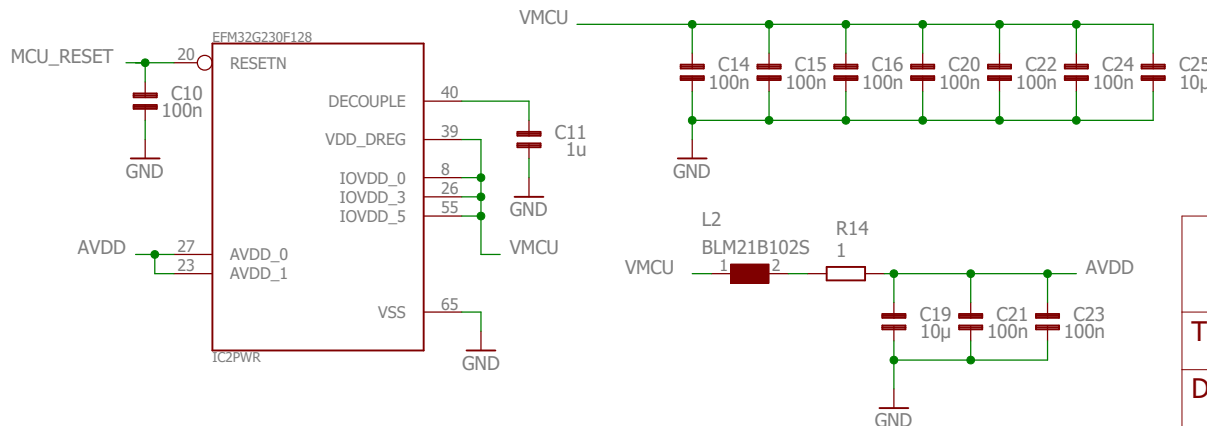
IC2D

PF0_DBG_SWCLK	49
PF1_DBG_SWDIO	50
PF2_DBG_SWO	51
PF3_LCD_ENABLE	52
PF4_LCD_RV	53
PF5_LCD_RS	54

EFM32G230F128

PF0/DBG_SWCLK#0,1/LETIM0_OUT0#2
PF1/DBG_SWDIO#0,1/LETIM0_OUT1#2
PF2/ACMP1_O/DBG_SWO#0
PF3/TIM0_CDTI0#2
PF4/TIM0_CDTI1#2
PF5/TIM0_CDTI2#2

IC2F



EFM32 I/O + POWER

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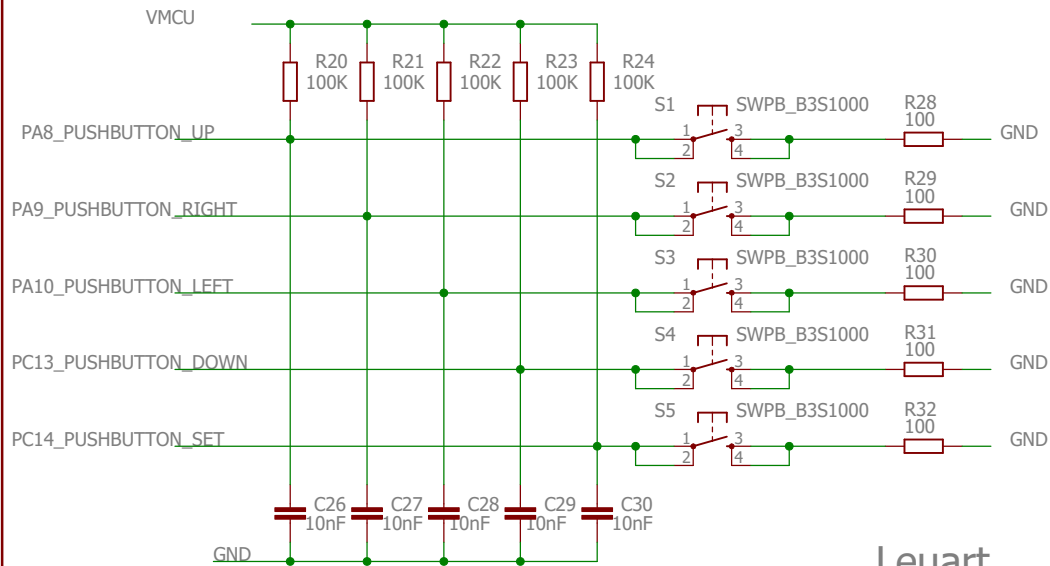
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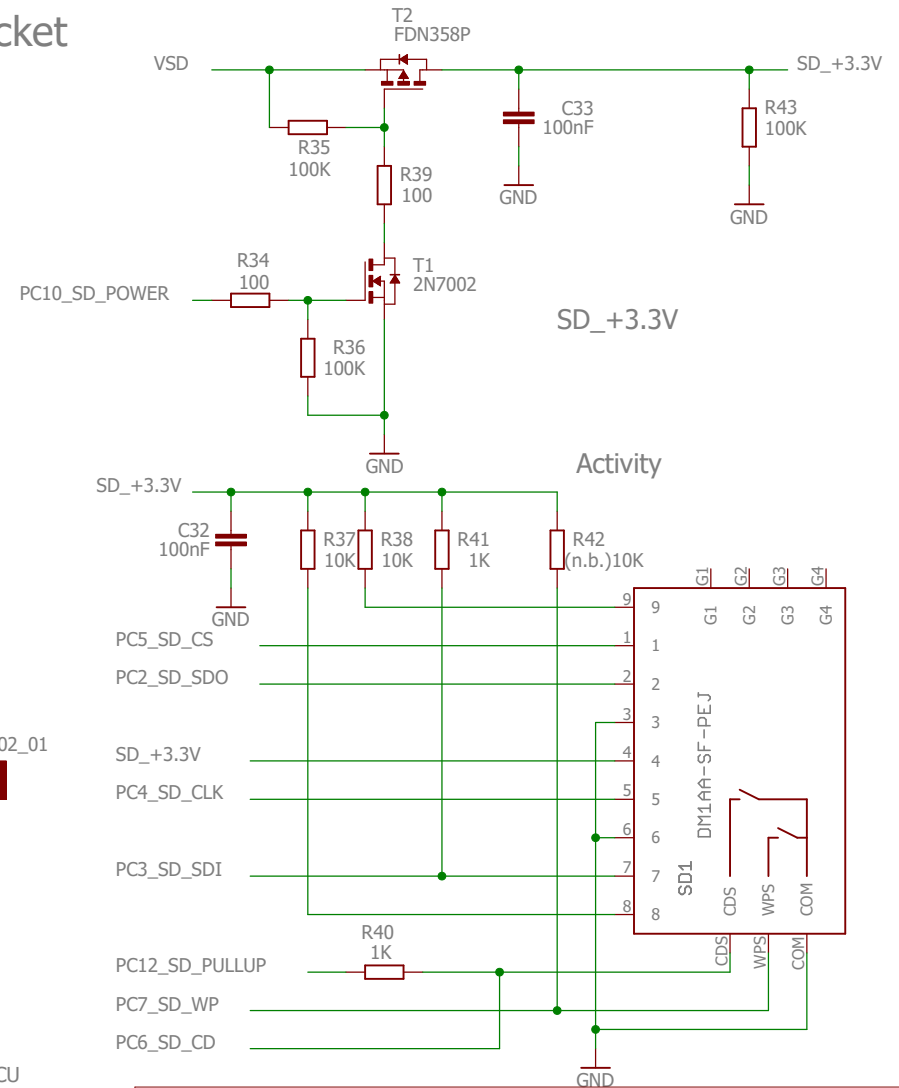
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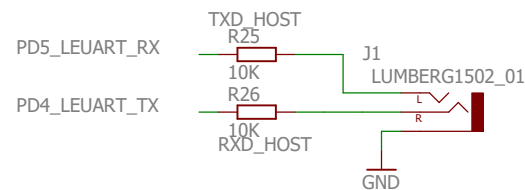
User Pushbutton



SD Socket

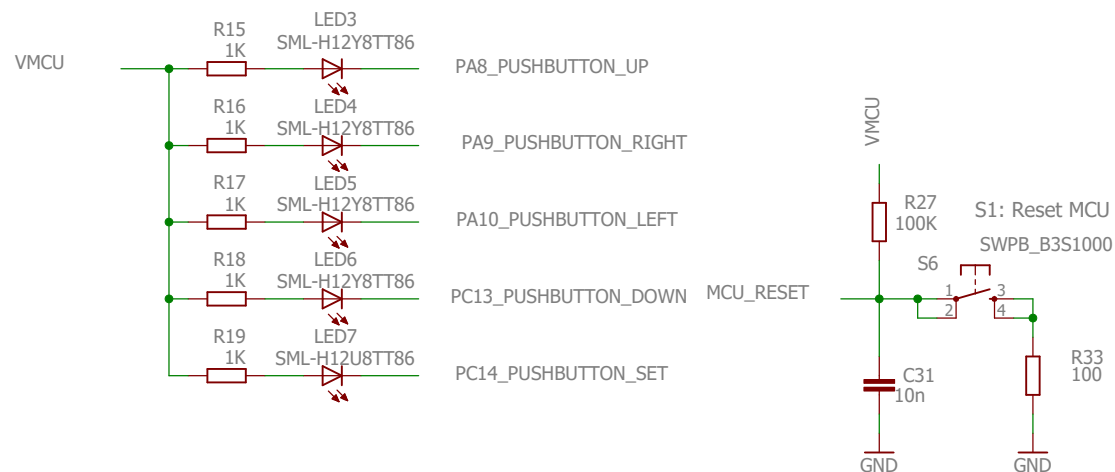


Leuart



Leds

gemessen: AUS 0uA, AN: 5 x 1,33mA



User Pushbutton&Leds+Leuart+SD Socket+DCF77

TITLE: TAMDL_V2

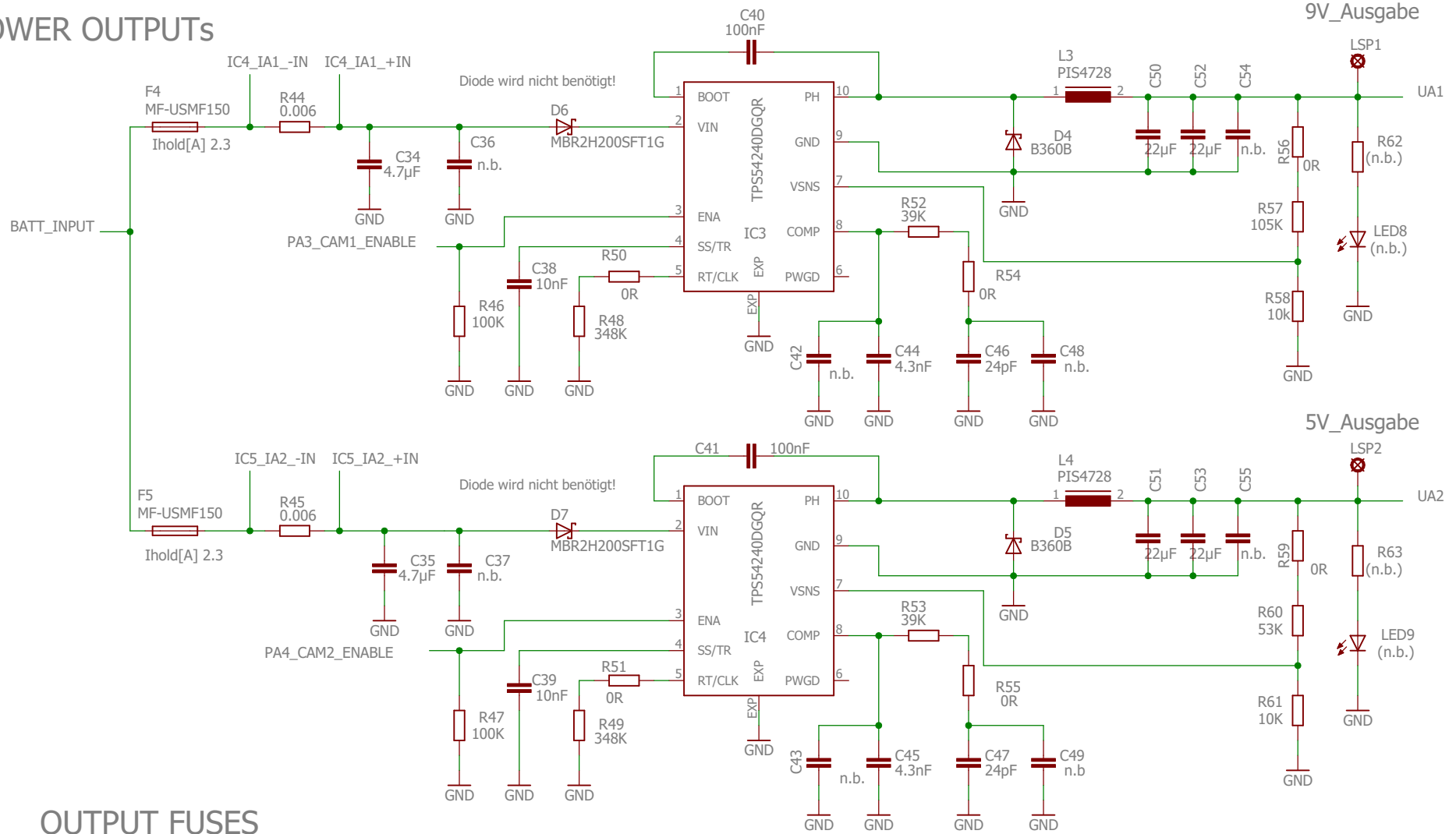
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REV:

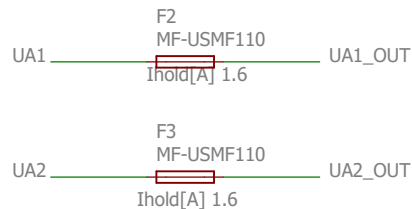
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POWER OUTPUTs



OUTPUT FUSES



POWER OUTPUTs & FUSES

TITLE: TAMDL_V2

Document Number:

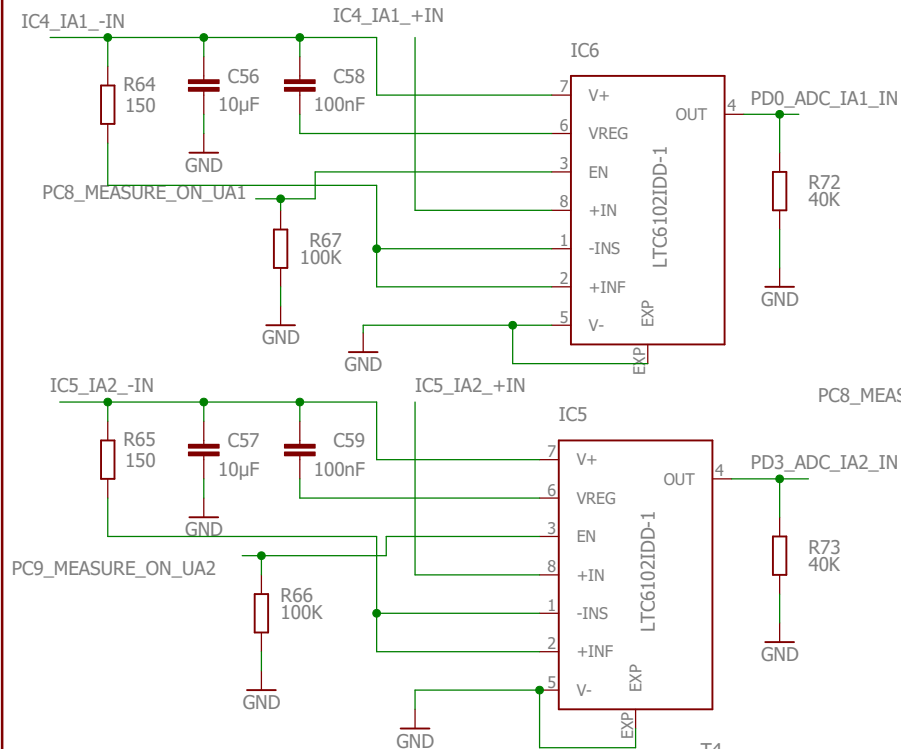
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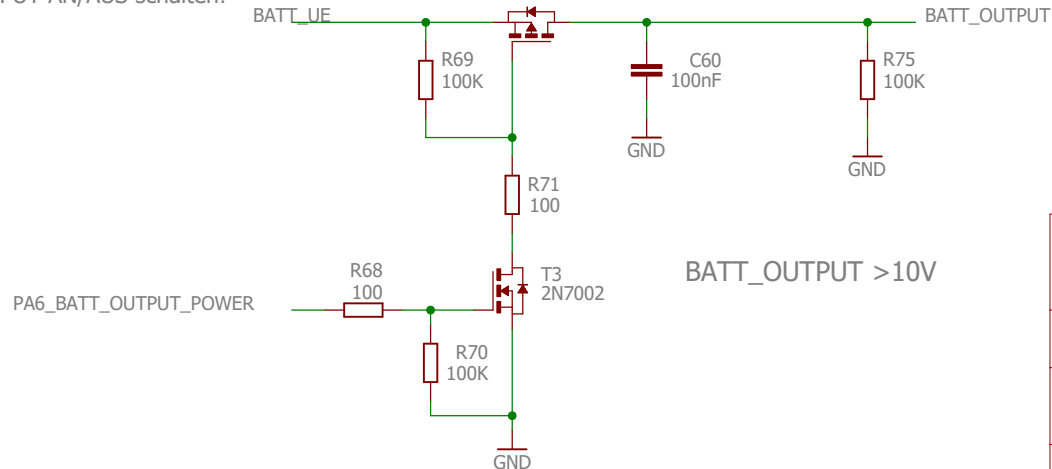
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Output Measurements Current

Measure Current mit 12V Pegel



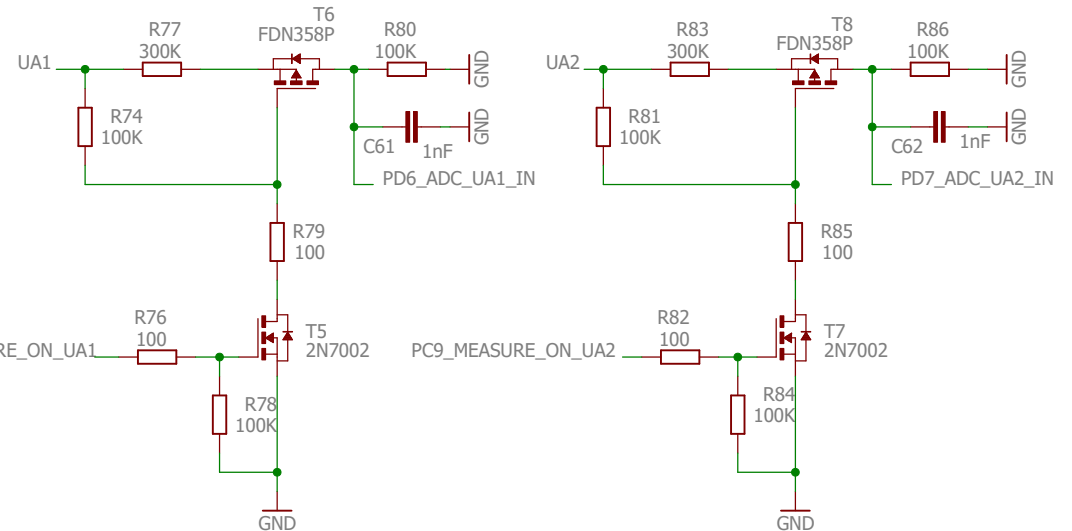
BATT_OUTPUT AN/AUS schalten!



BATT_OUTPUT >10V

Output Measurements Voltage

Teilverhältnis: 12V:4= 3V (PD6_ADC_UA1_IN;PD7_ADC_UA2_IN)



Taktung der Messungen durch
PC8_MEASURE_ON_UA1
PC9_MEASURE_ON_UA2

Output Measurements Current&Voltage

TITLE: TAMDL_V2

Document Number:

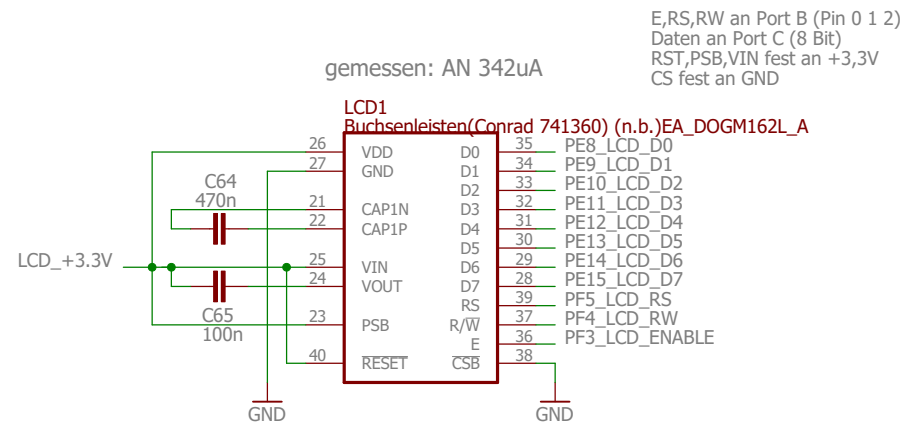
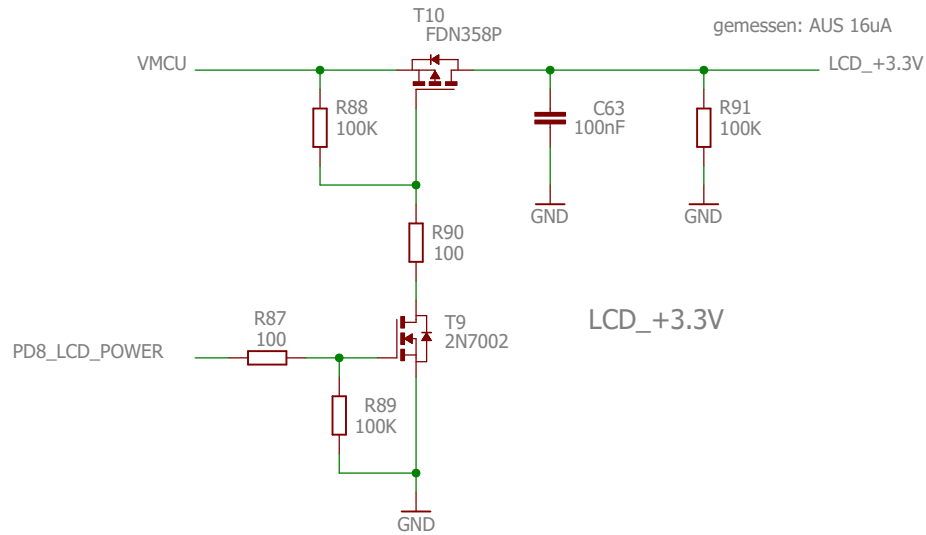
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LCD ANZEIGE

LCD AN/AUS schalten!



LCD ANZEIGE

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