
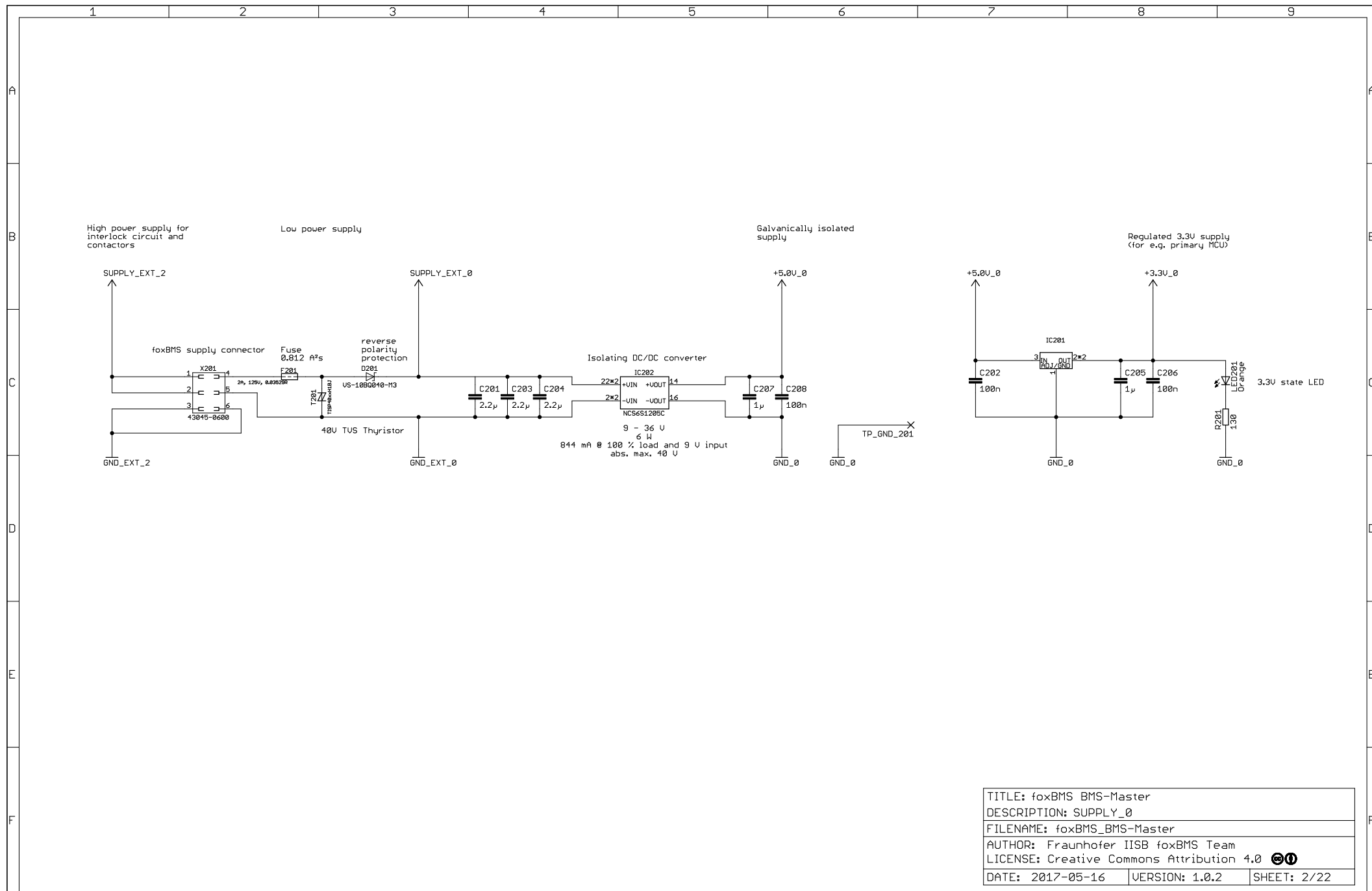



TITLE: foxBMS BMS-Master		
DESCRIPTION: Overview		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 1/22



TITLE: foxBMS BMS-Master		
DESCRIPTION: SUPPLY_0		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 2/22

Low power supply

SUPPLY\_EXT\_0

GND\_EXT\_0

Isolating DC/DC converter

IC302  
RS-2405D/H2

9 - 36 V  
2 W  
ca. 280 mA @ 100 % load and 9 V input  
no abs. max. value available

Galvanically isolated supply

+5.0V\_1

GND\_1

TP\_GND\_301

Regulated 3.3V supply  
(for e.g. secondary MCU)

+5.0V\_1


IC301

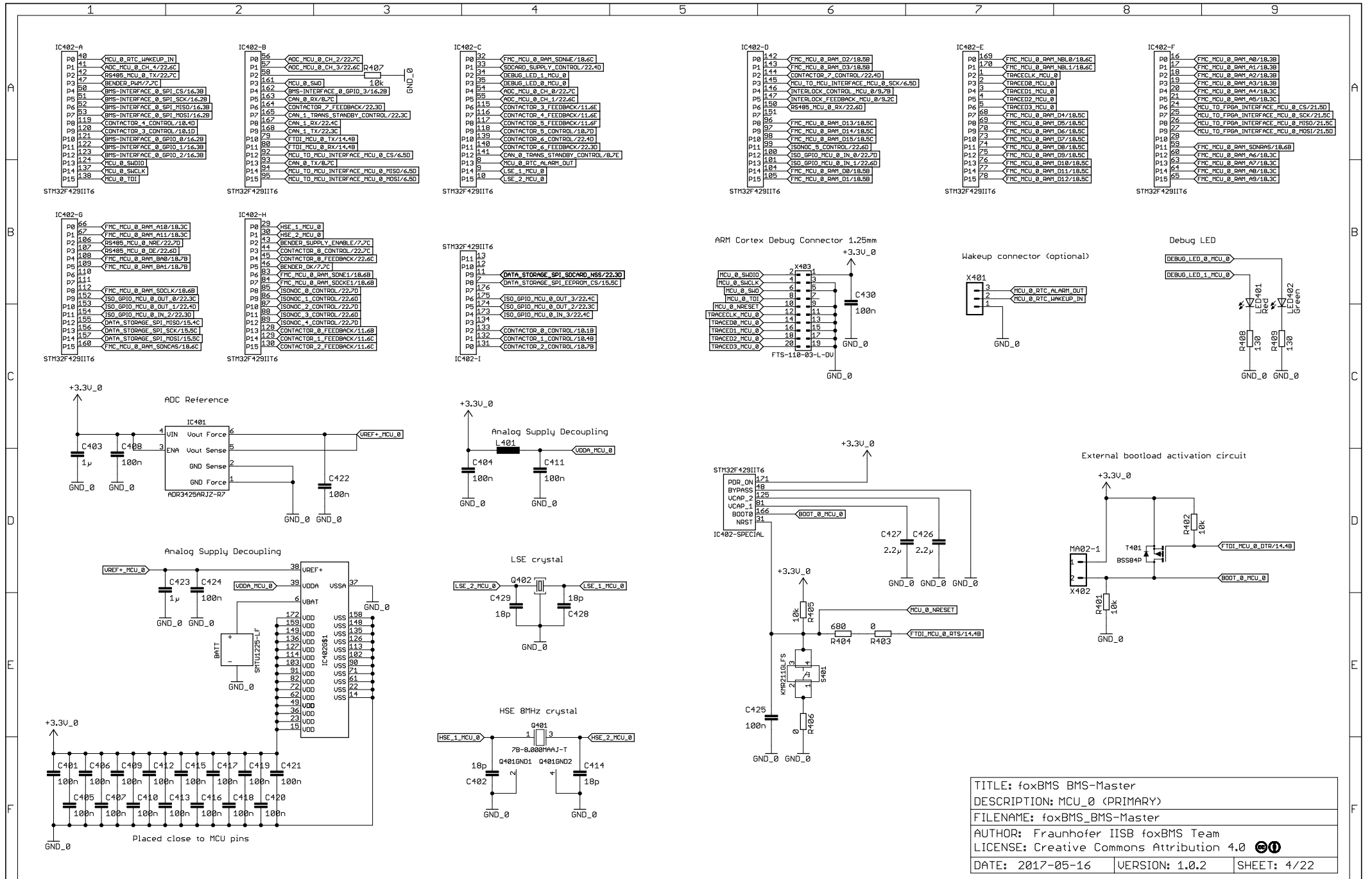
+3.3V\_1

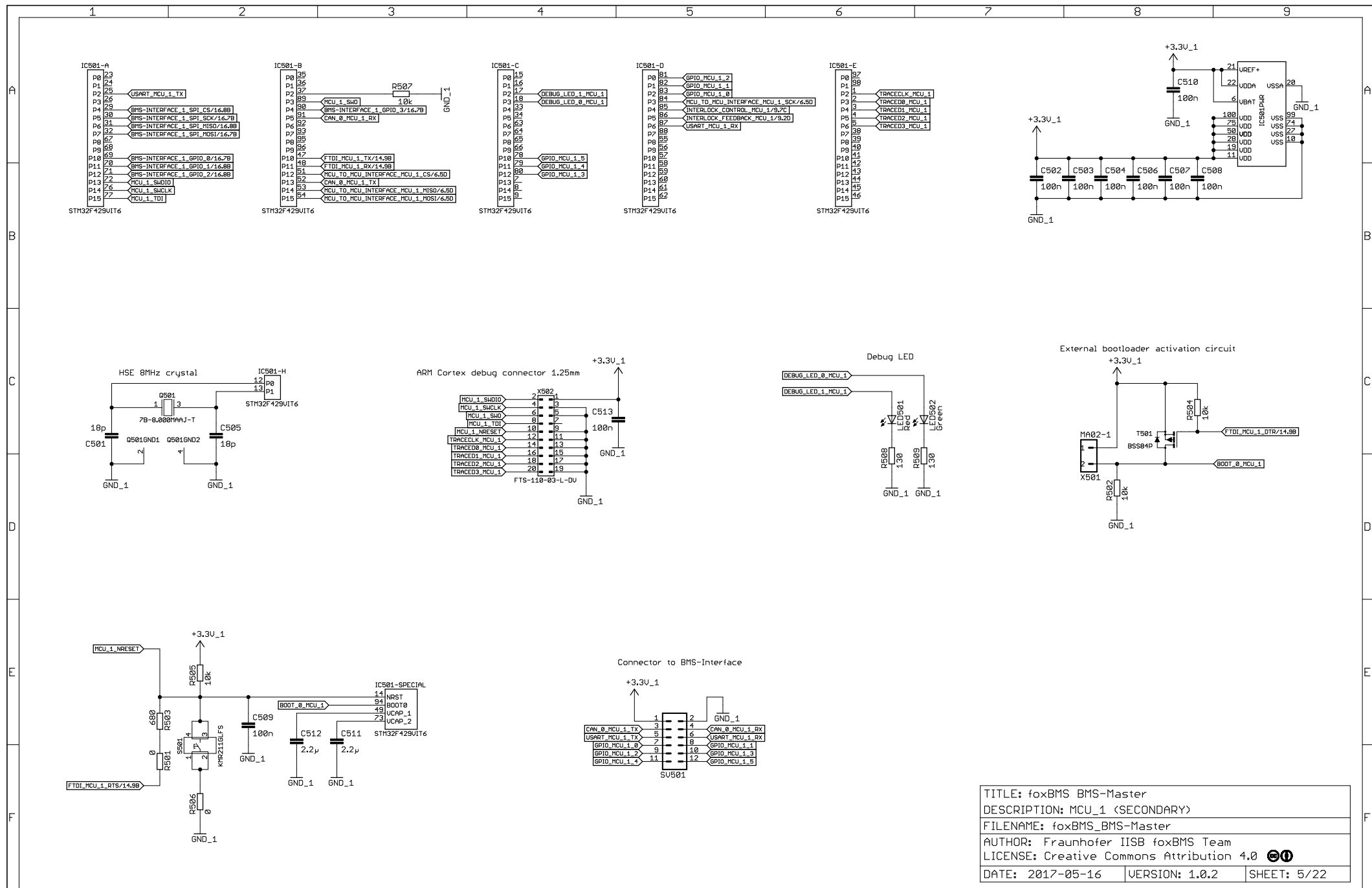
GND\_1

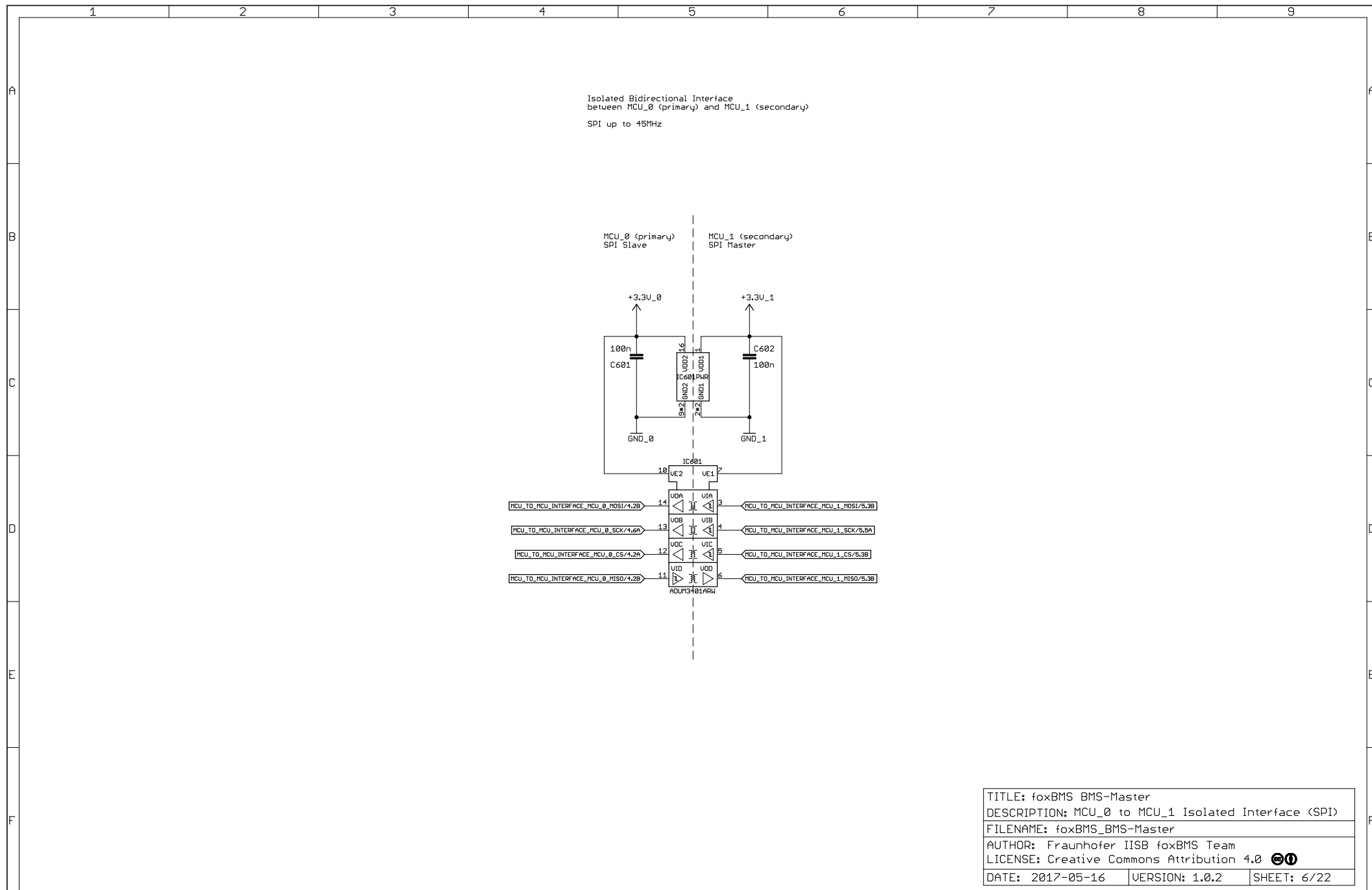
GND\_1


3.3V state LED

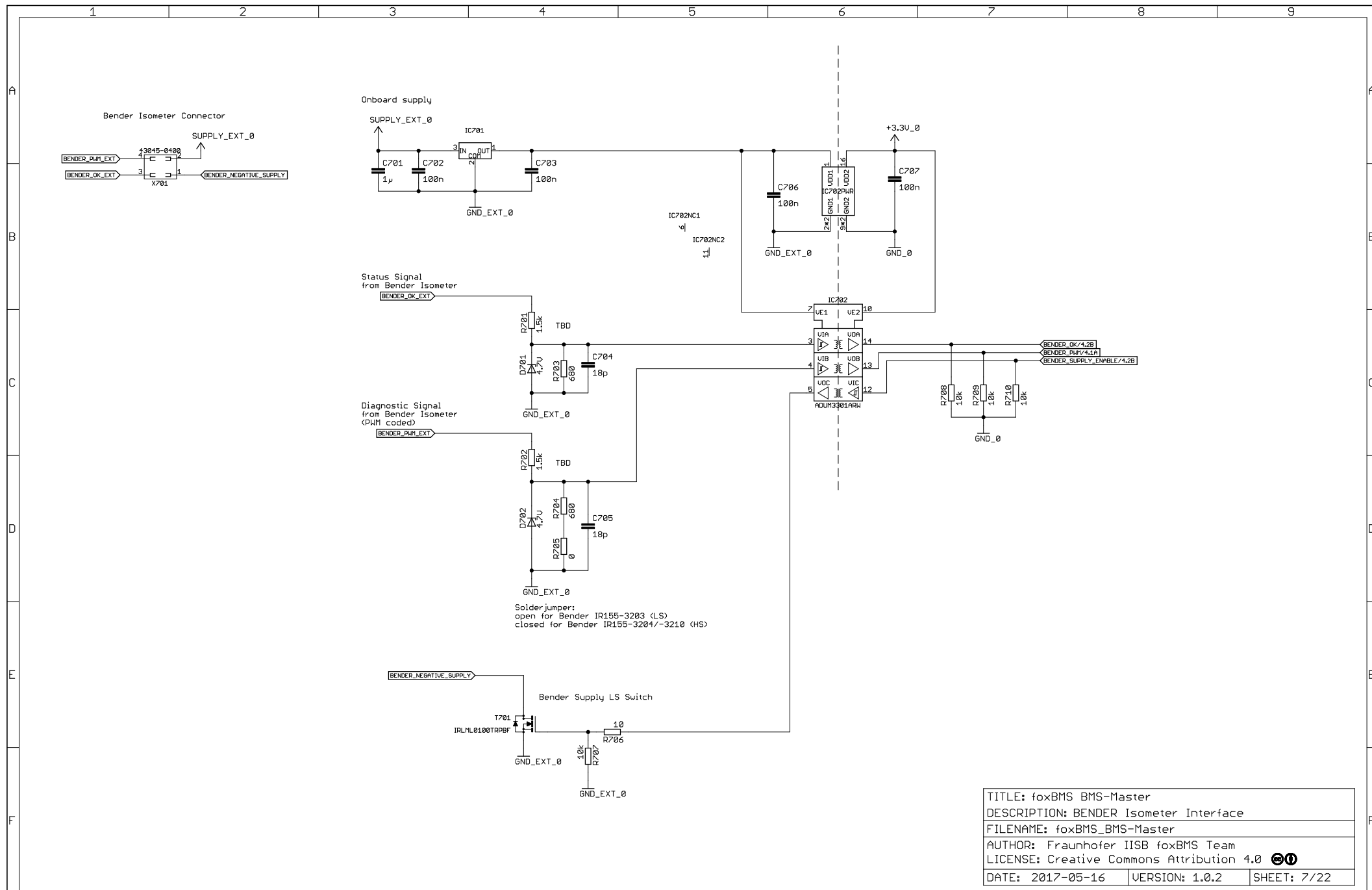
TITLE: foxBMS BMS-Master		
DESCRIPTION: SUPPLY_1		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 3/22




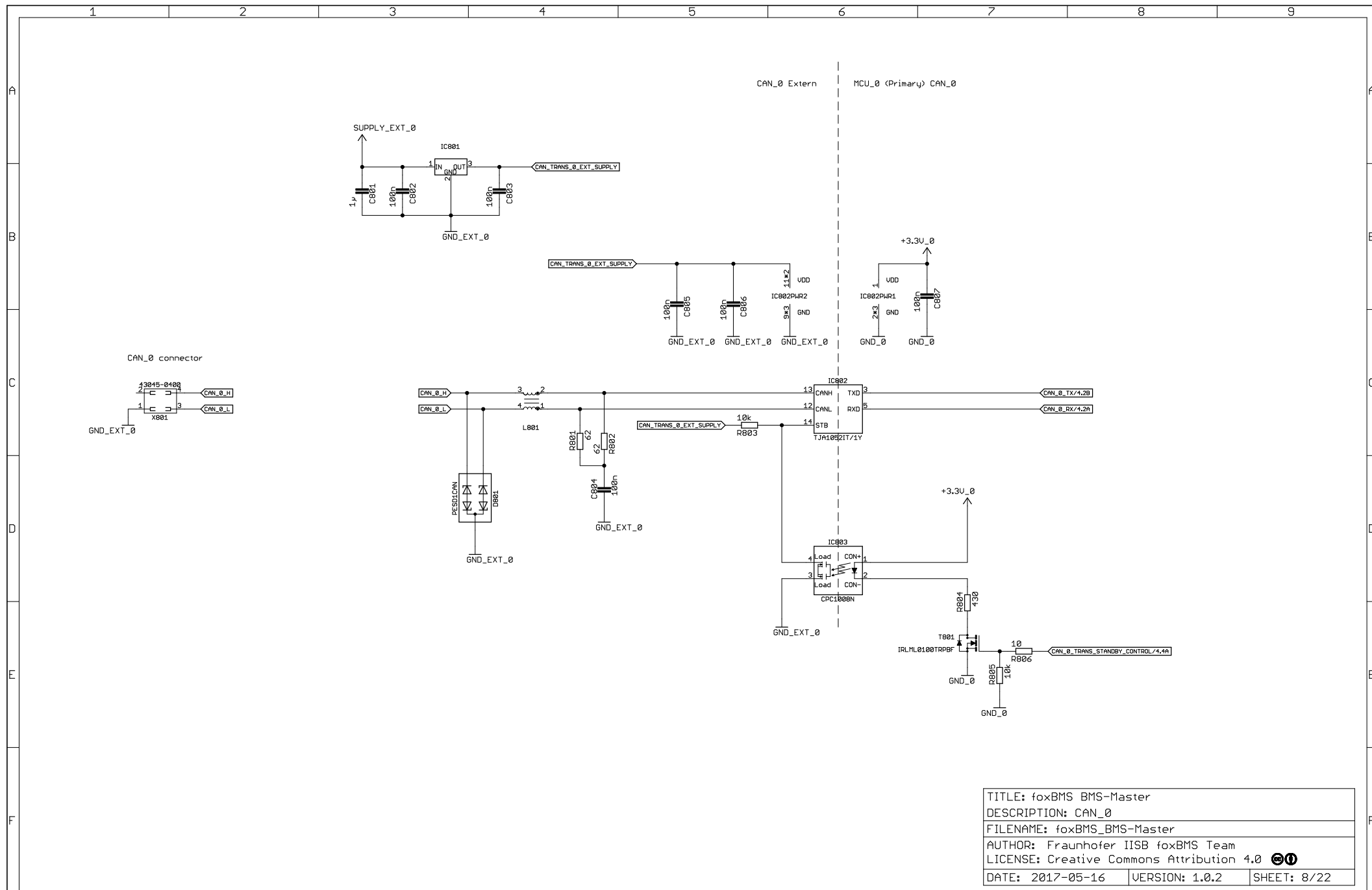




TITLE: foxBMS BMS-Master		
DESCRIPTION: MCU_0 to MCU_1 Isolated Interface (SPI)		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 6/22



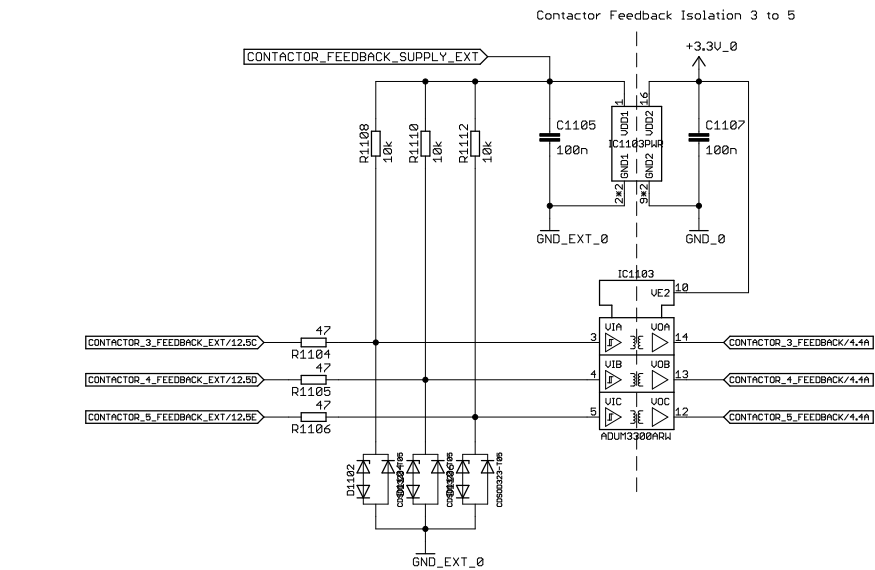
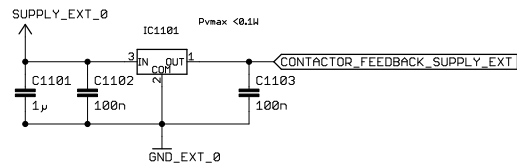
TITLE: foxBMS BMS-Master		
DESCRIPTION: BENDER Isometer Interface		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 7/22




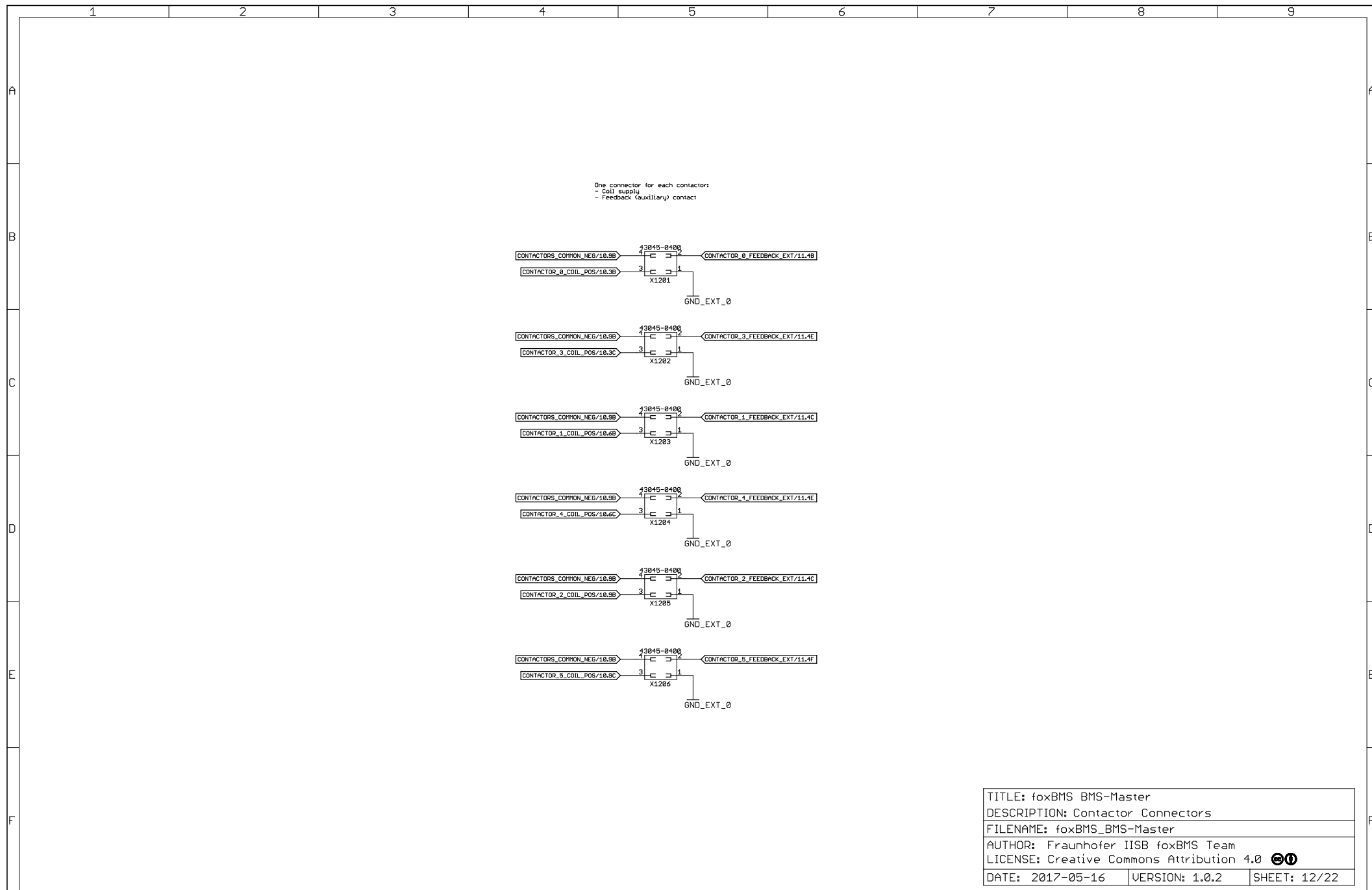









TITLE: foxBMS BMS-Master		
DESCRIPTION: Contactor Feedback		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 11/22

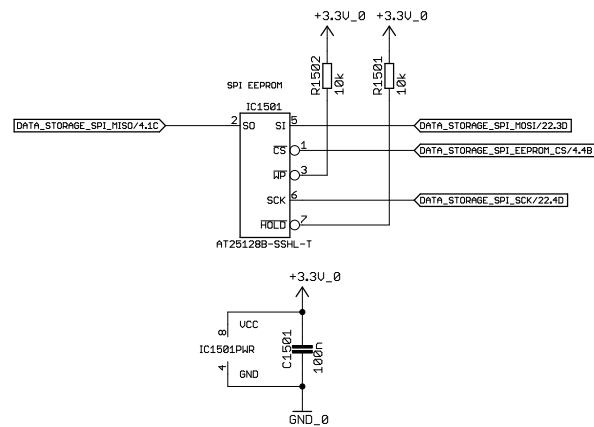



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B										B
C										C
D										D
E										E
F										F

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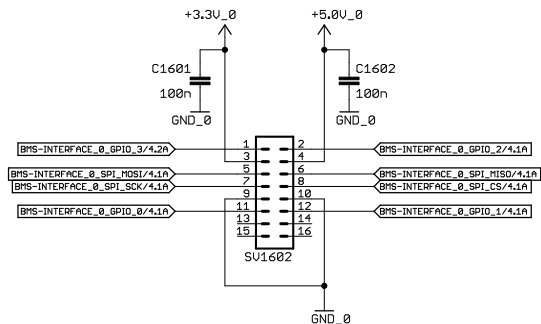
TITLE: foxBMS BMS-Master		
DESCRIPTION: Isolated RS485		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 13/22



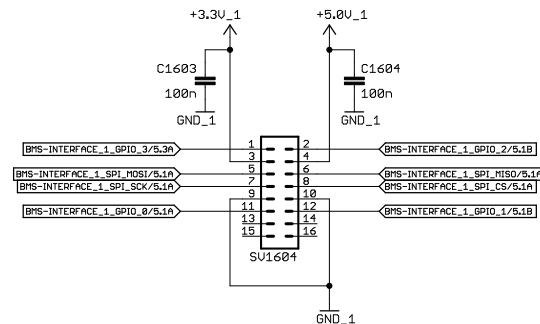


TITLE: foxBMS BMS-Master		
DESCRIPTION: EEPROM		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 15/22

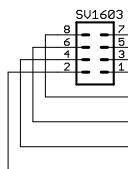
Connector to BMS-Interface 0 (Primary)



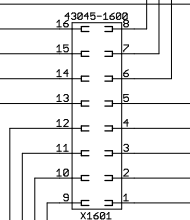
Connector to BMS-Interface 1 (Secondary)



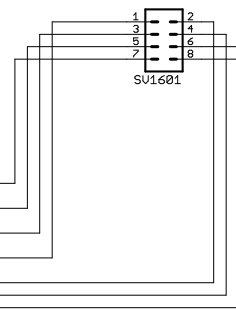
Board-to-board connector  
BMS-Master Basic to BMS-Interface



Connector to first BMS-Slave



Board-to-board connector  
BMS-Master Basic to BMS-Interface




TITLE: foxBMS BMS-Master		
DESCRIPTION: BMS-Interface Interface		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 16/22



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B										B
C										C
D										D
E										E
F										F


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TITLE: foxBMS BMS-Master		
DESCRIPTION: Analog Inputs		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 17/22




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B										B
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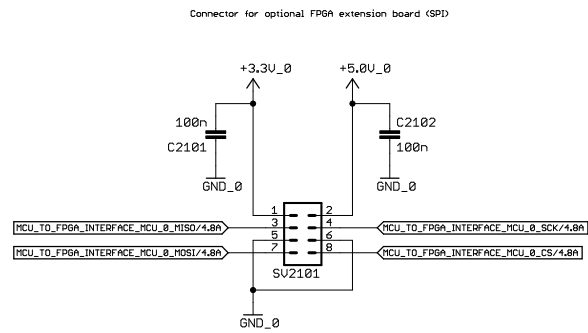
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TITLE: foxBMS BMS-Master		
DESCRIPTION: Isolated GPIO 4x In / 4x Out		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 19/22

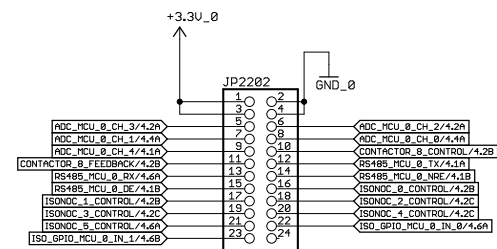
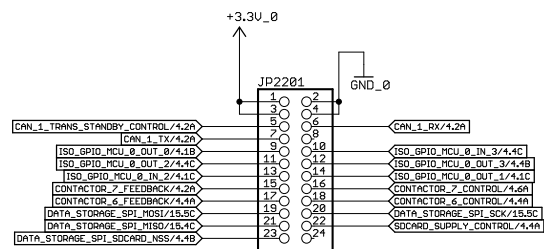
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B										B
C										C
D										D
E										E
F										F


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TITLE: foxBMS BMS-Master		
DESCRIPTION: Isolated Normally Open Contacts		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 20/22



TITLE: foxBMS BMS-Master		
DESCRIPTION: FPGA SPI Interface up to 45MHz		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 21/22



TITLE: foxBMS BMS-Master		
DESCRIPTION: Connectors to BMS-Extension		
FILENAME: foxBMS_BMS-Master		
AUTHOR: Fraunhofer IISB foxBMS Team		
LICENSE: Creative Commons Attribution 4.0 		
DATE: 2017-05-16	VERSION: 1.0.2	SHEET: 22/22