

High voltage isolation conditions:

- relevant norm: DIN EN 60664-1:2008-01
- type: functional isolation
- electrical field: homogeneous
- pollution degree: 2
- isolator class: 3b
- transient voltage: 4300 V DC
- continuous (working) voltage: 1250 V DC (selected due to design space constraints on PCB)

PCB design (according to conditions above):

- clearance: 1.3 mm
- creepage distance: 12.5 mm

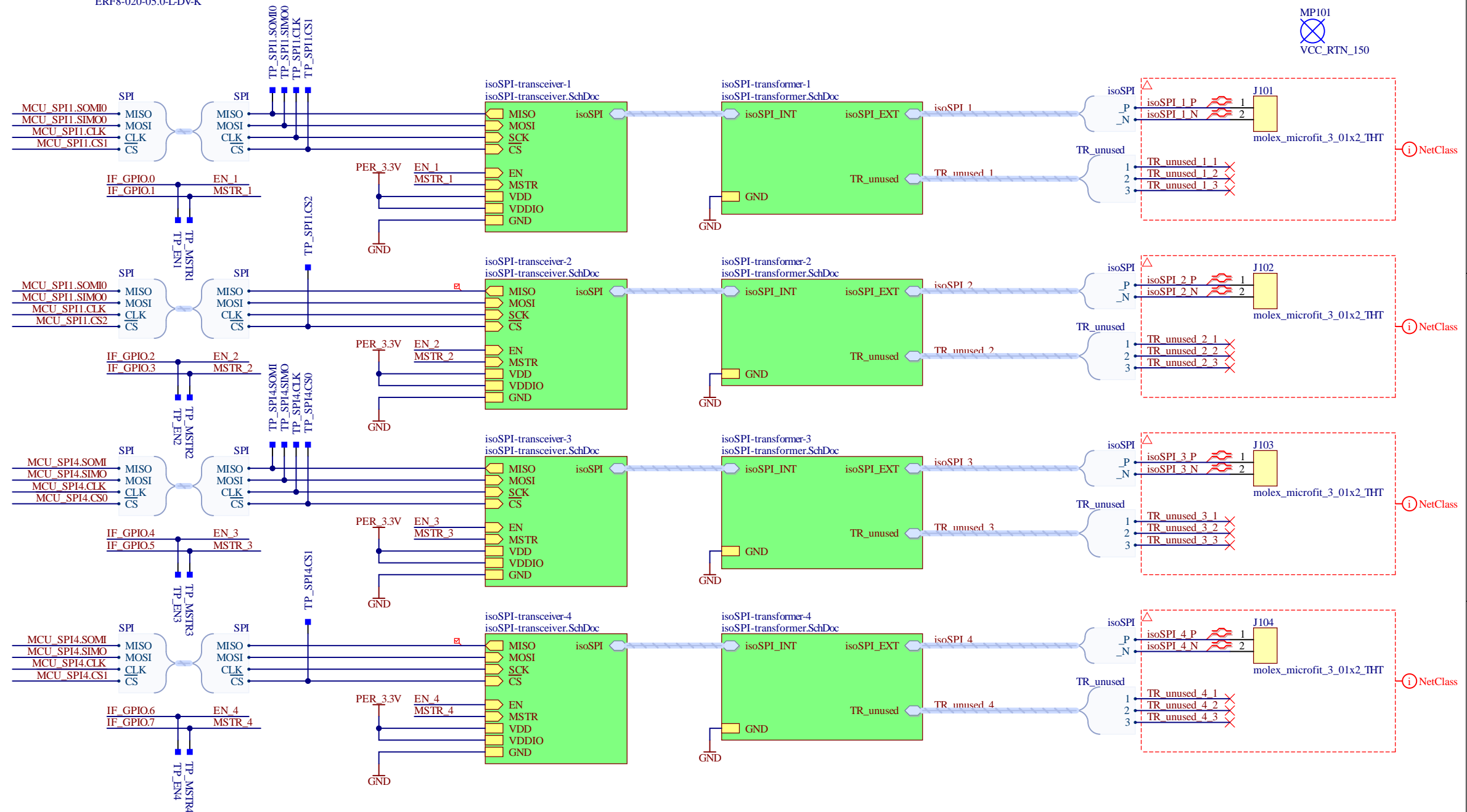
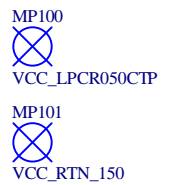
Isolation transformer (HM2102NLT):

- pollution degree: 2
- isolator class: 1
- clearance: >10 mm
- transient voltage: 4300 V DC
- continuous (working) voltage: 1600 V DC

SMT spacers for mounting on master



Lightpipe for debug LED on master



foxbms.org

developed by:

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Project

foxBMS 2 Interface LTC6820

Author

foxBMS Team

Description

isoSPI Communication

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File

foxbms2-interface-ltc6820.SchDoc

Version

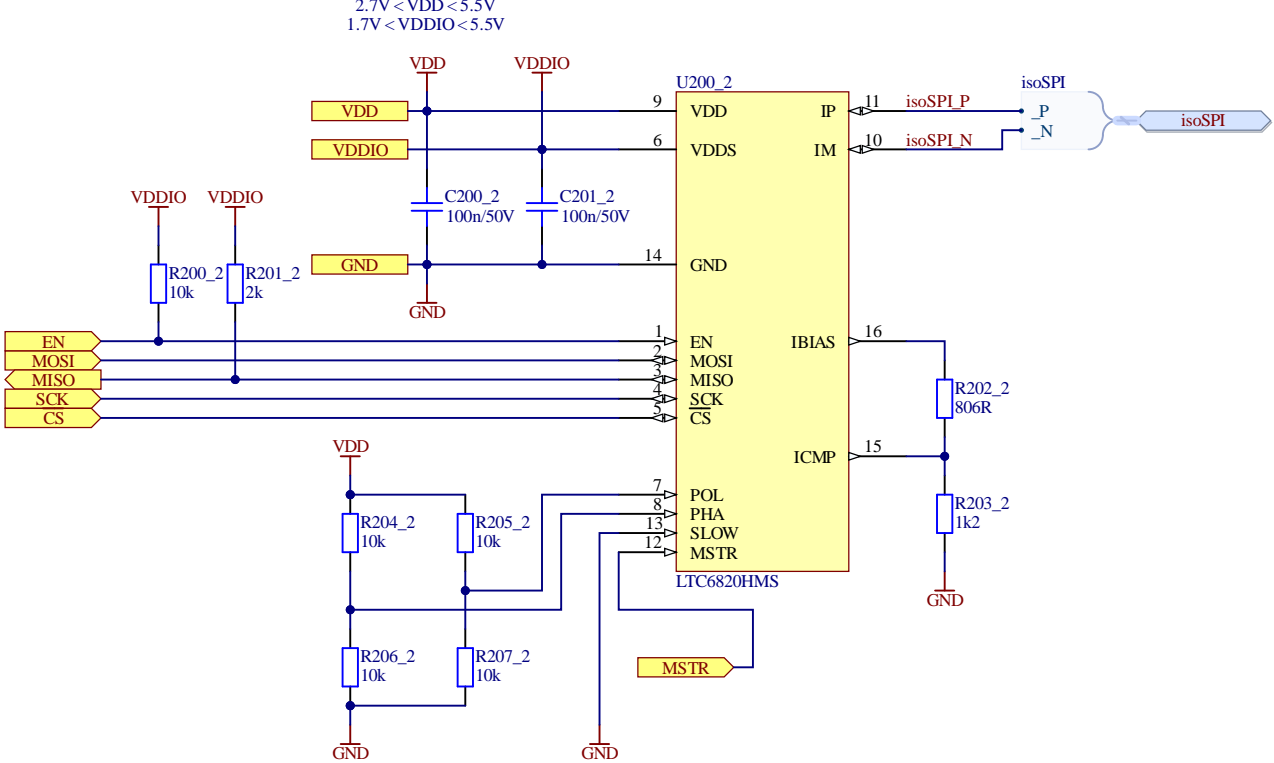
1.0.3

Release Date

2021-11-11

Sheet

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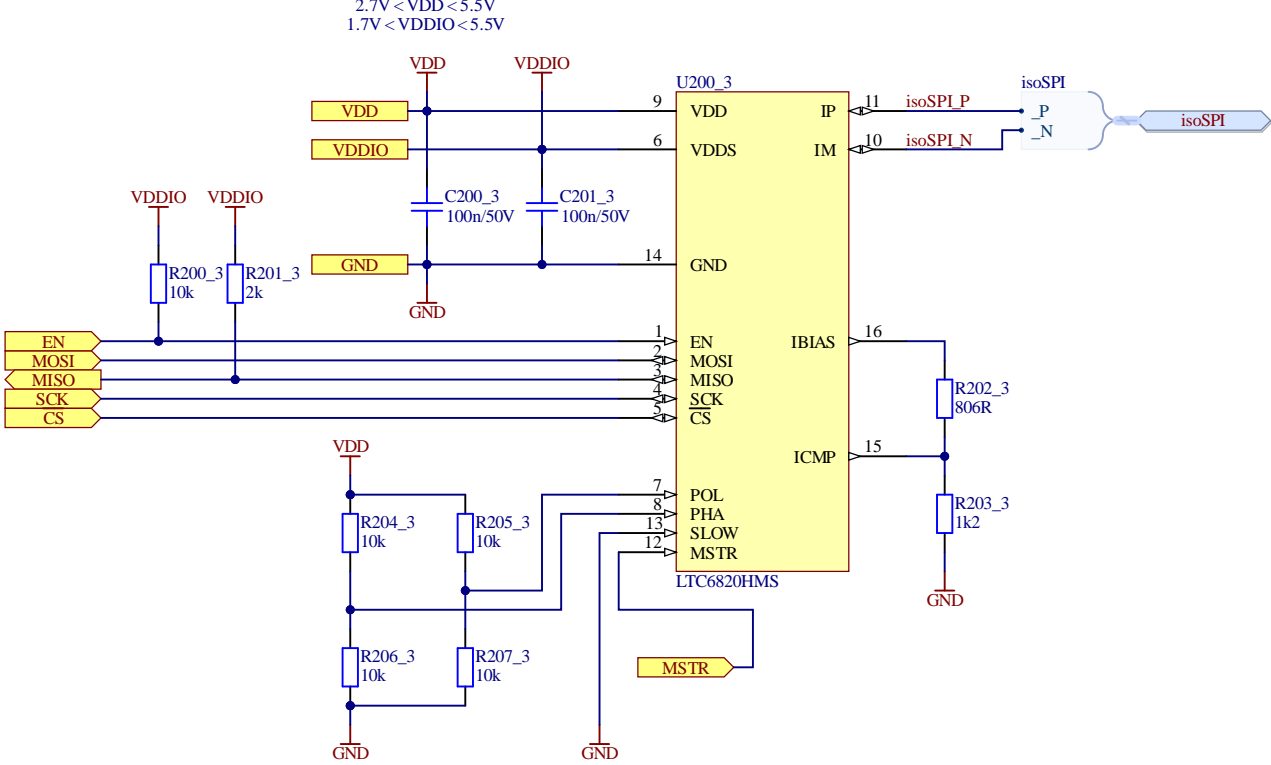


POL, PHA -> see table

SLOW = VDD -> slow mode
SLOW = GND -> fast mode

MSTR = VDD -> master mode
MSTR = GND -> slave mode

Table 4. SPI Modes			
MODE	POL	PHA	DESCRIPTION
0	0	0	SCK Idles Low, Latches on Rising (1st) Edge
1	0	1	SCK Idles Low, Latches on Falling (2nd) Edge
2	1	0	SCK Idles High, Latches on Falling (1st) Edge
3	1	1	SCK Idles High, Latches on Rising (2nd) Edge



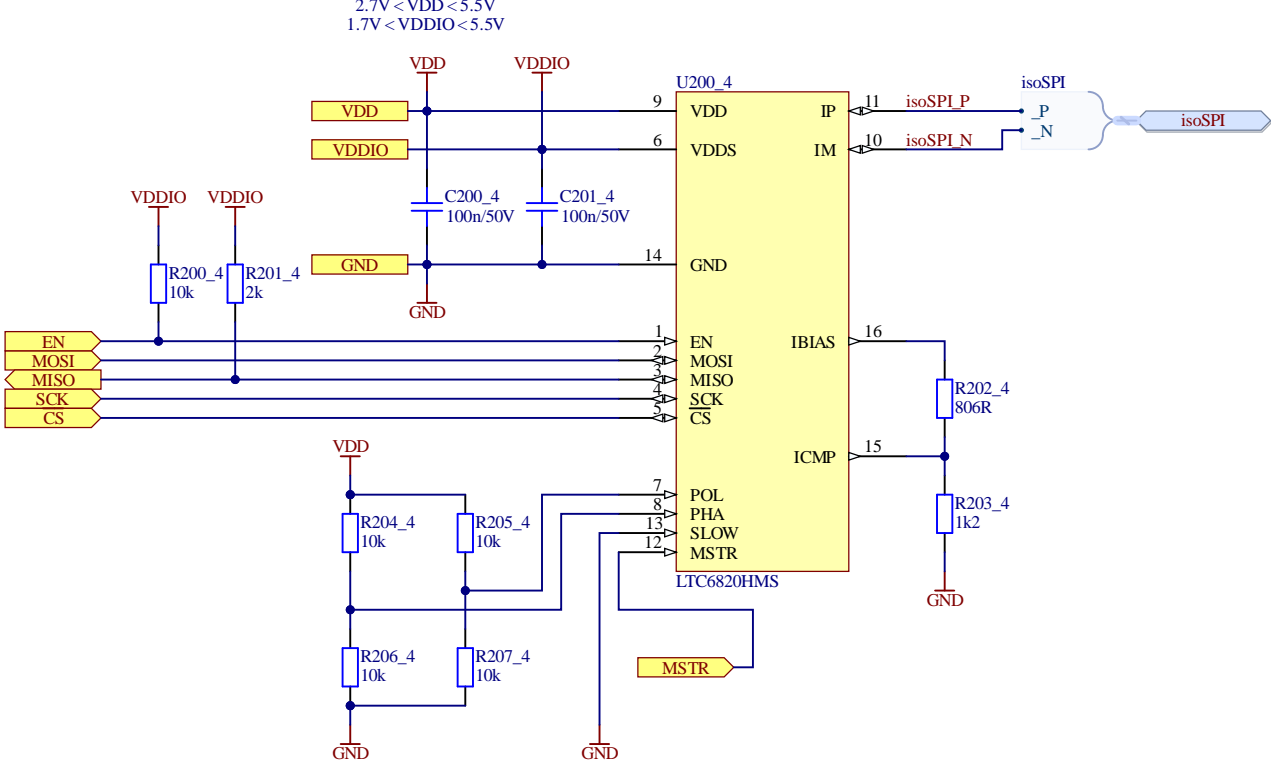
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