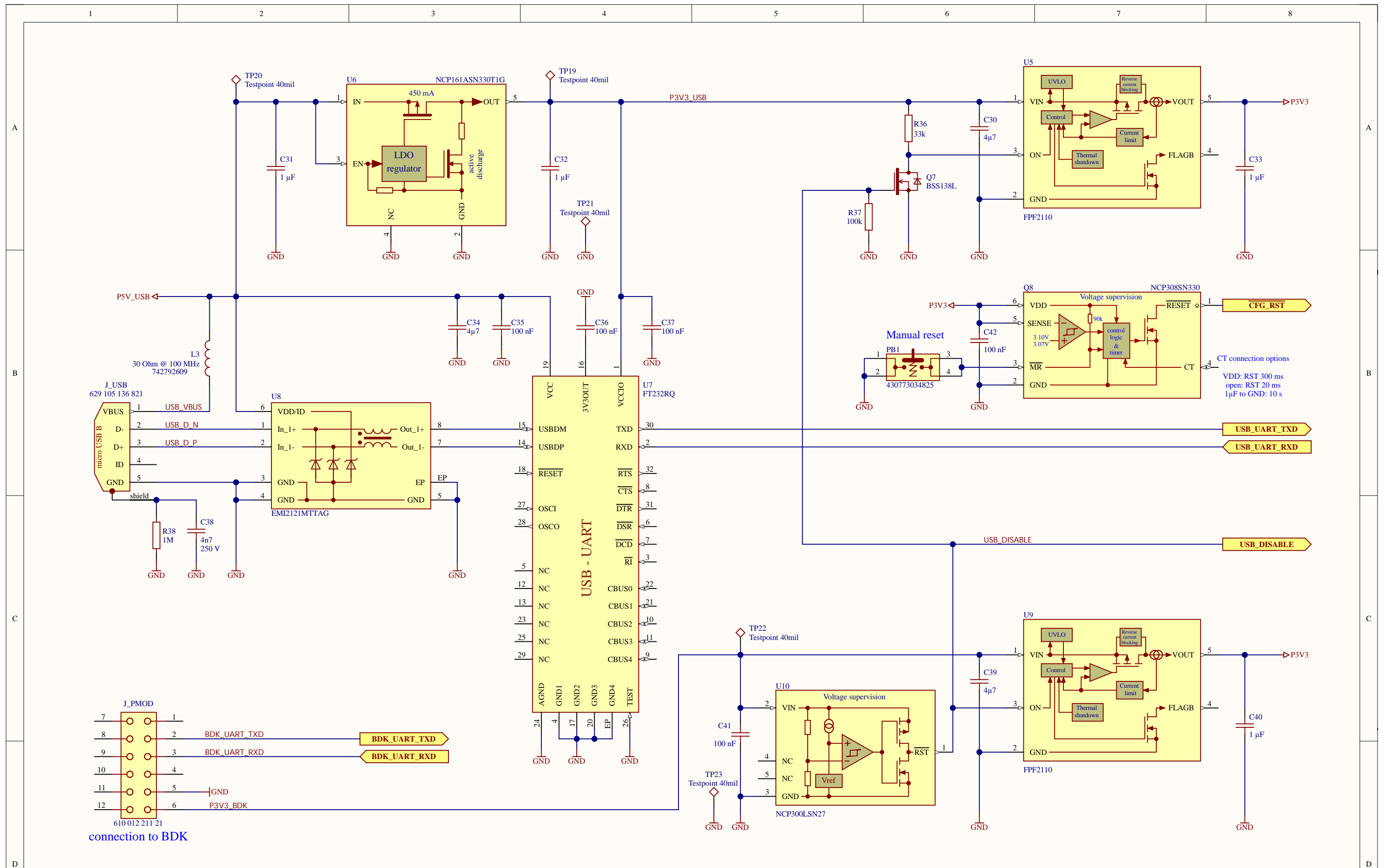


SECO-RANGEFINDER-GEVK		Assembly variant:	State:
<i>Top level diagram</i>		<i>standard_board</i>	<i>released</i>
Revision: 1.0	Repository revision: 1967		ON Semiconductor Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	01.Jun 2020 19:54		
File: Lidar_board.SchDoc	1/7		



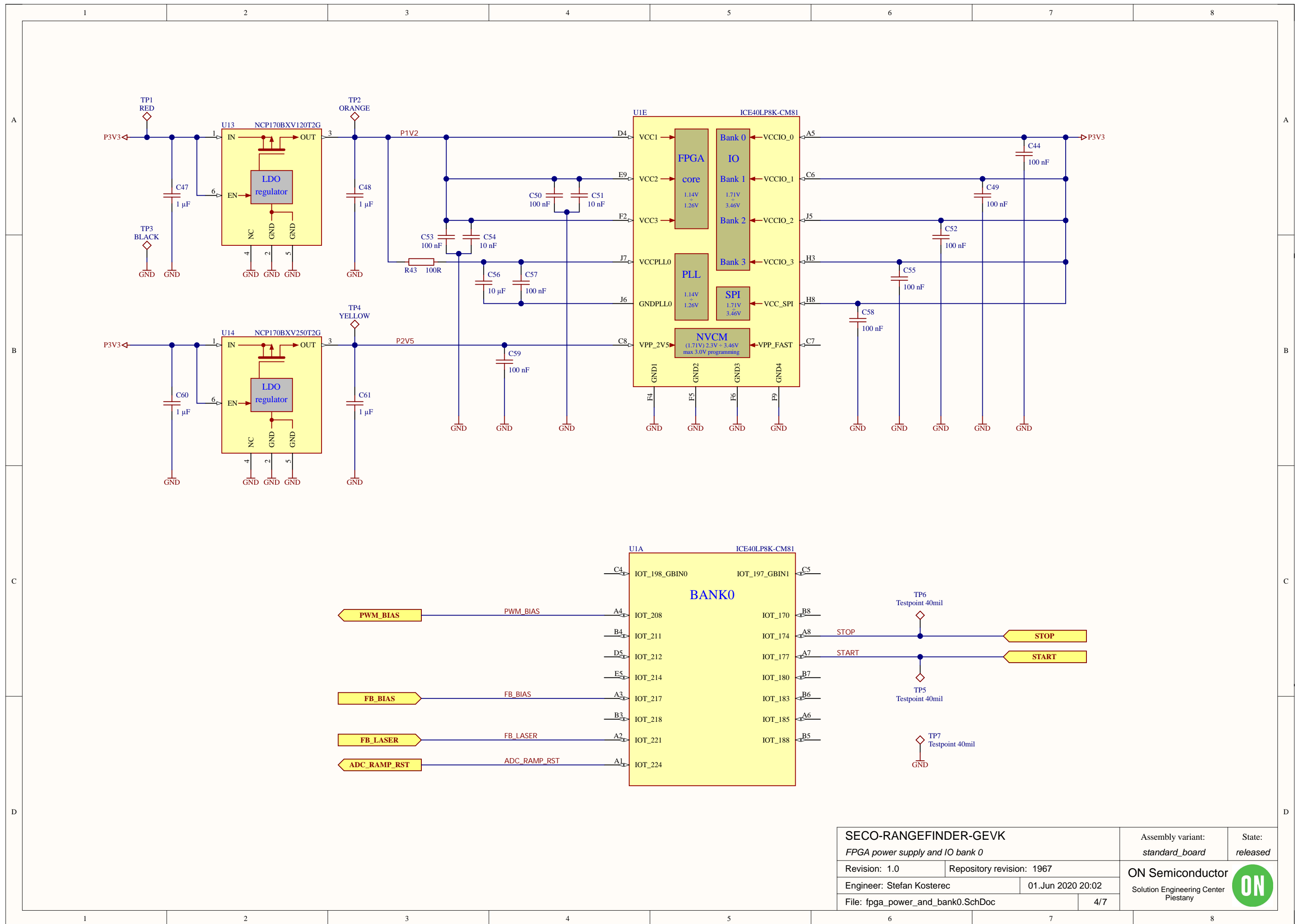


connection to BDK

Note: BDK connection has higher priority

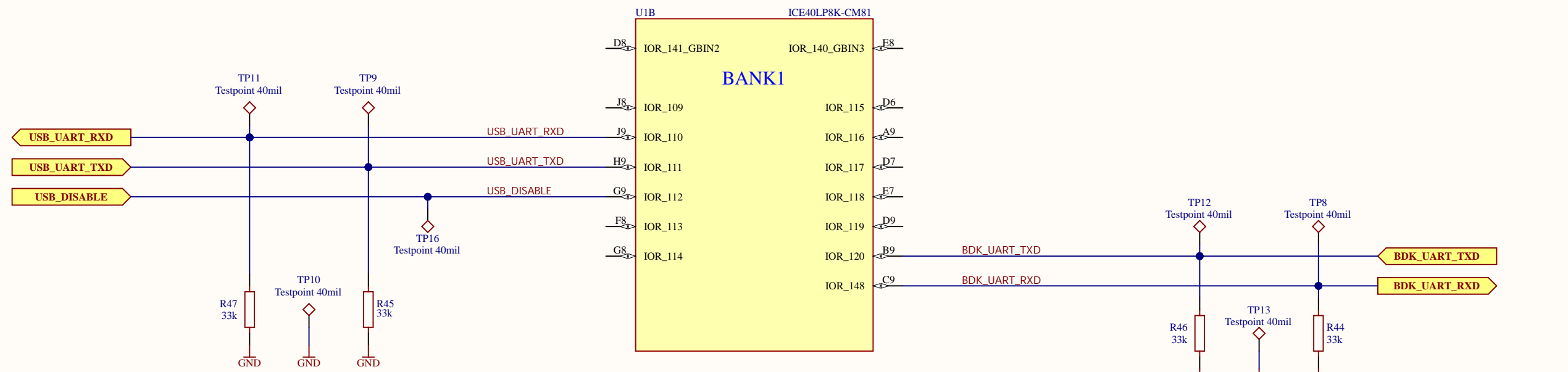
SECO-RANGEFINDER-GEVK		Assembly variant:	State:
Power supply and communication		standard_board	released
Revision: 1.0	Repository revision: 1967	ON Semiconductor Solution Engineering Center Piešťany	
Engineer: Stefan Kosterec	01.Jun 2020 19:52		
File: power_and_communication.SchDoc	2/7		



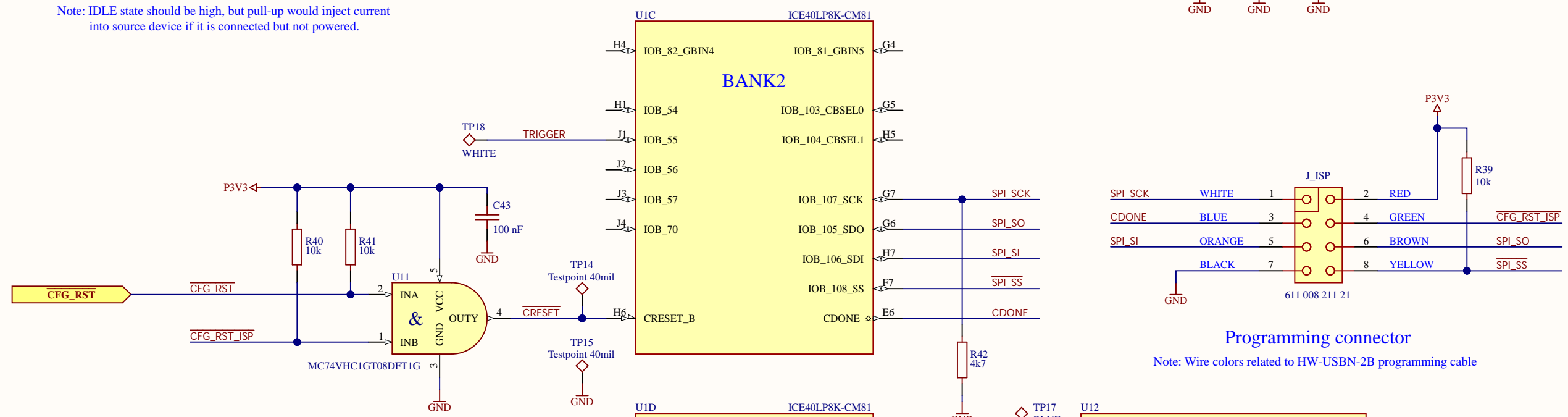


SECO-RANGEFINDER-GEVK		Assembly variant:	State:
FPGA power supply and IO bank 0		standard_board	released
Revision: 1.0	Repository revision: 1967		ON Semiconductor Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	01.Jun 2020 20:02		
File: fpga_power_and_bank0.SchDoc	4/7		



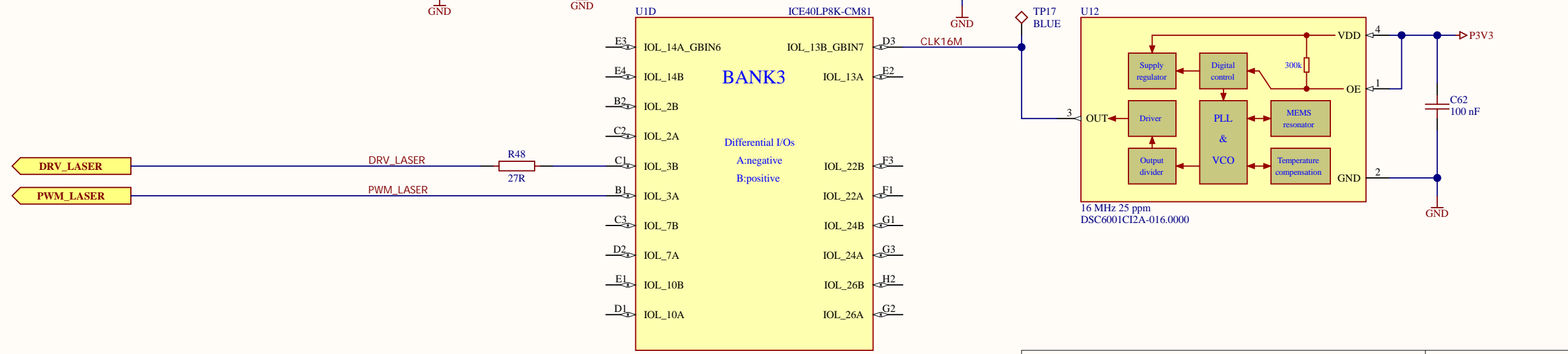


Note: IDLE state should be high, but pull-up would inject current into source device if it is connected but not powered.

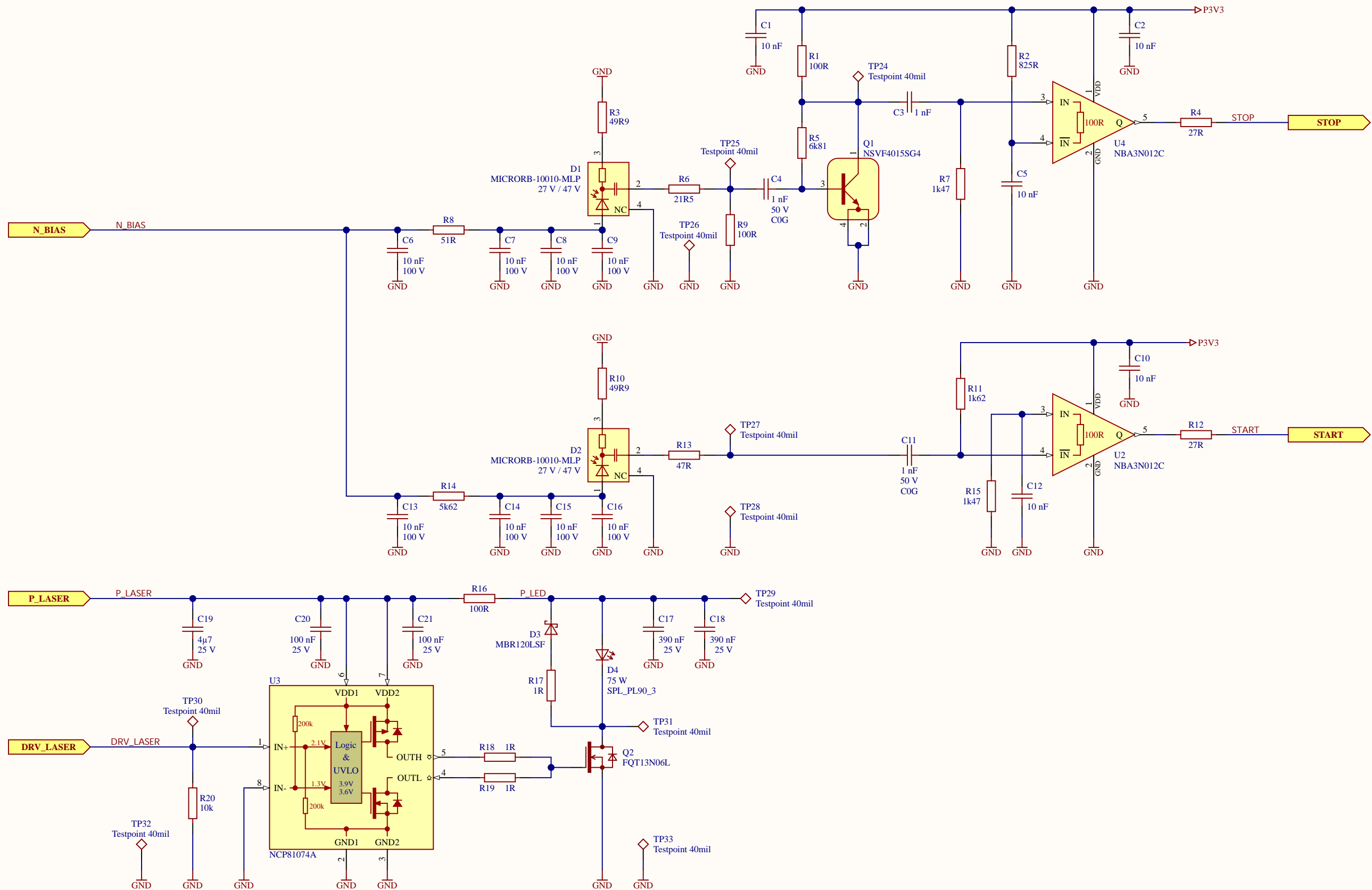


Programming connector

Note: Wire colors related to HW-USBN-2B programming cable

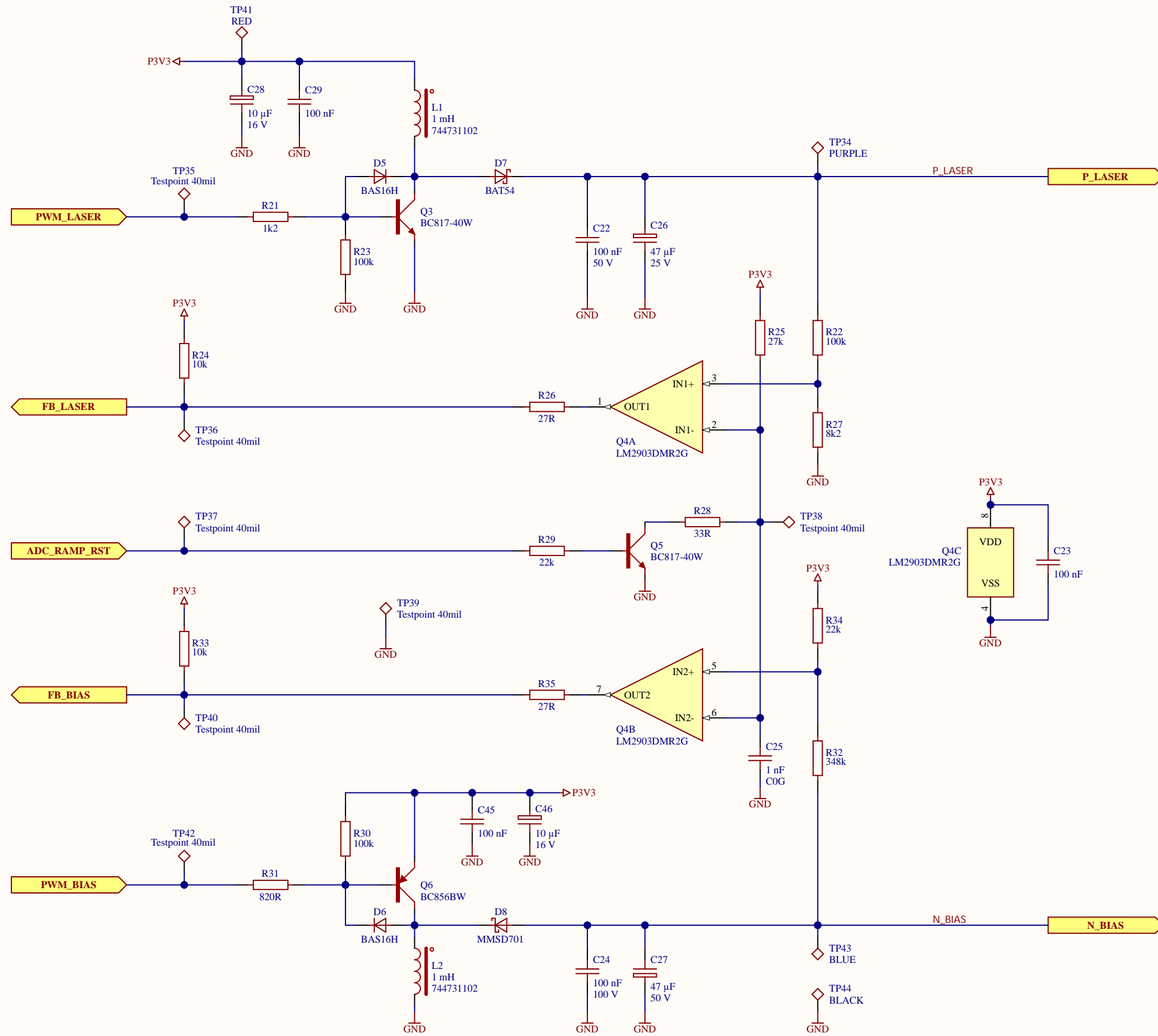


SECO-RANGEFINDER-GEVK		Assembly variant:	State:
FPGA IO banks 1,2,3		standard_board	released
Revision: 1.0	Repository revision: 1967	ON Semiconductor Solution Engineering Center Piešťany	
Engineer: Stefan Kosterec	01.Jun 2020 20:03		
File: fpga_banks_1_2_3.SchDoc	4/7		



SECO-RANGEFINDER-GEVK		Assembly variant:	State:
Laser driver and SiPM receivers		standard_board	released
Revision: 1.0	Repository revision: 1967		ON Semiconductor Solution Engineering Center Piešťany
Engineer: Stefan Kosterec	01.Jun 2020 20:03		
File: laser_driver_and_SiPM.SchDoc	5/7		





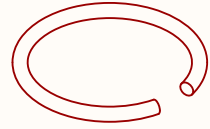
SECO-RANGEFINDER-GEVK		Assembly variant:	State:
DC-DC converters for laser power supply and SiPM bias supply		standard_board	released
Revision: 1.0	Repository revision: 1967	ON Semiconductor Solution Engineering Center Piešťany	
Engineer: Stefan Kosterec	01.Jun 2020 20:04		
File: dc_dc_converters.SchDoc	6/7		



SiPM optics

Laser LED optics

SR1
Stainless snap ring DIN7993B D25



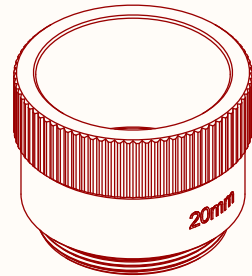
OR1
O ring 22x2 NBR 70



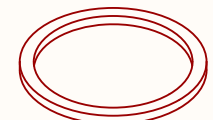
LENS1



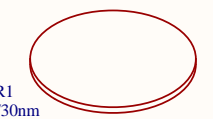
Lens alternatives:
1. LA1951-B (Thorlabs)
2. RP25ONBK7 (Changchun Realpoo Photoelectric)



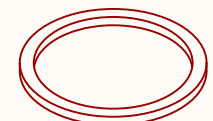
A1
knurled 20 mm C-CS Lens Adapter modified for Lidar SiPM



W1T
Fibre sealing washer for T-14 1/2-08 (25x21x1.5)

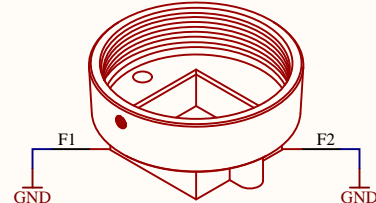


FILTER1
BP905/30nm
Optical bandpass filter 905 nm



W1B
Fibre sealing washer for T-14 1/2-08 (25x21x1.5)

H1
CS mount PCB lens holder 20 mm



S1A
screw M2x4 ISO7045

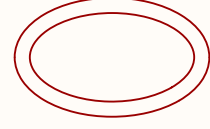


S1B
screw M2x4 ISO7045

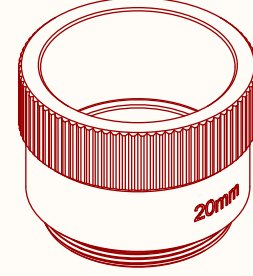
SR2
Stainless snap ring DIN7993B D25



OR2
O ring 22x2 NBR 70



LENS2



A2
knurled 20 mm C-CS Lens Adapter modified for Lidar laser LED

SPLA



Plastic spacer M3 F/F 10/40 HEX6

SPRA



Plastic spacer M3 F/F 10/40 HEX6

SPLB



plastic spacer M/F M3x10 HEX6

SPRB



plastic spacer M/F M3x10 HEX6

JFL



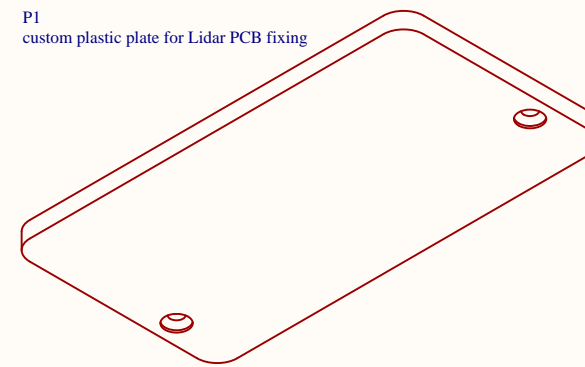
746 631 3 R
Redcube terminal right angle

JFR



746 631 3 R
Redcube terminal right angle

P1
custom plastic plate for Lidar PCB fixing



SL



screw M3x8 ISO7046

SR



screw M3x8 ISO7046

FD1



Fiducial 1mm

FD2



Fiducial 1mm



S_ON_top
ON symbol



S_ON_bottom
ON symbol

Note: Screws S1A, S1B, S2A and S2B shall be enclosed in H1 and H2 delivery package

SECO-RANGEFINDER-GEVK

Mechanical components

Revision: 1.0

Repository revision: 1967

Engineer: Stefan Kosterec

01.Jun 2020 20:48

File: mechanical.SchDoc

7/7

Assembly variant:

standard_board

State:

released

ON Semiconductor

Solution Engineering Center
Piestany

