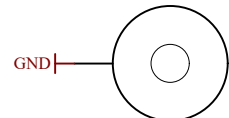
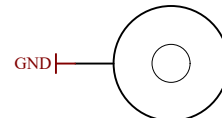


U_J1
J1.schdoc
U_J2
J2.schdoc
U_J3
J3.schdoc
U_SFP
SFP.schdoc
U_I2C_system
I2C_system.schdoc
U_SD
SD.schdoc
U_MISC
MISC.schdoc

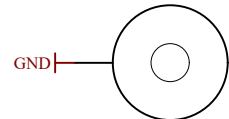
U_POWER_IN
POWER_IN.SchDoc
U_EX_Connectors
EX_Connectors.SchDoc
U_USB
USB.SchDoc
U_ETH
ETH.SchDoc
U_REV_CH
Revision_Changes.SchDoc



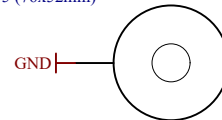
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



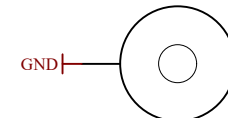
Mount.Hole 3.2mm für Unterlegscheibe



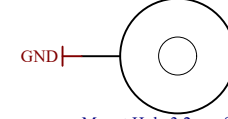
Mount.Hole 3.2mm für Unterlegscheibe



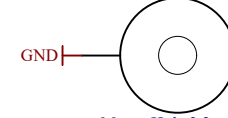
SNAP for TE0745 (76x52mm)



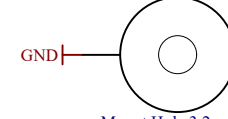
Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe



Mount.Hole 3.2mm für Unterlegscheibe

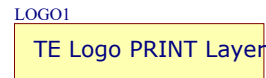
FIDU-DOT - small FIDU-DOT - small FIDU-DOT - small



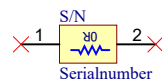
PM3 FIDU-DOT - small PM4 FIDU-DOT - small PM2 FIDU-DOT - small



PM5 PM6 PM1



LOGO PRINT



Serial
Serialnumber 6,3 x 6.3mm



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page1 of 27
Filename: TEB0745.schdoc		

A

B

C

D

1

2

3

4

MGT_TX7_N
MGT_TX7_P

MGT_TX6_N
MGT_TX6_P

MGT_TX5_N
MGT_TX5_P

MGT_TX4_N
MGT_TX4_P

B12_IO25
B12_L2_N
B12_L2_P
B12_L4_N
B12_L4_P
B12_L6_N
B12_L6_P

B12_L8_N
B12_L8_P
B12_L10_N
B12_L10_P
B12_L12_N
B12_L12_P
VCCIO_I2
B12_L14_N
B12_L14_P
B12_L16_N
B12_L16_P
B12_L18_N
B12_L18_P

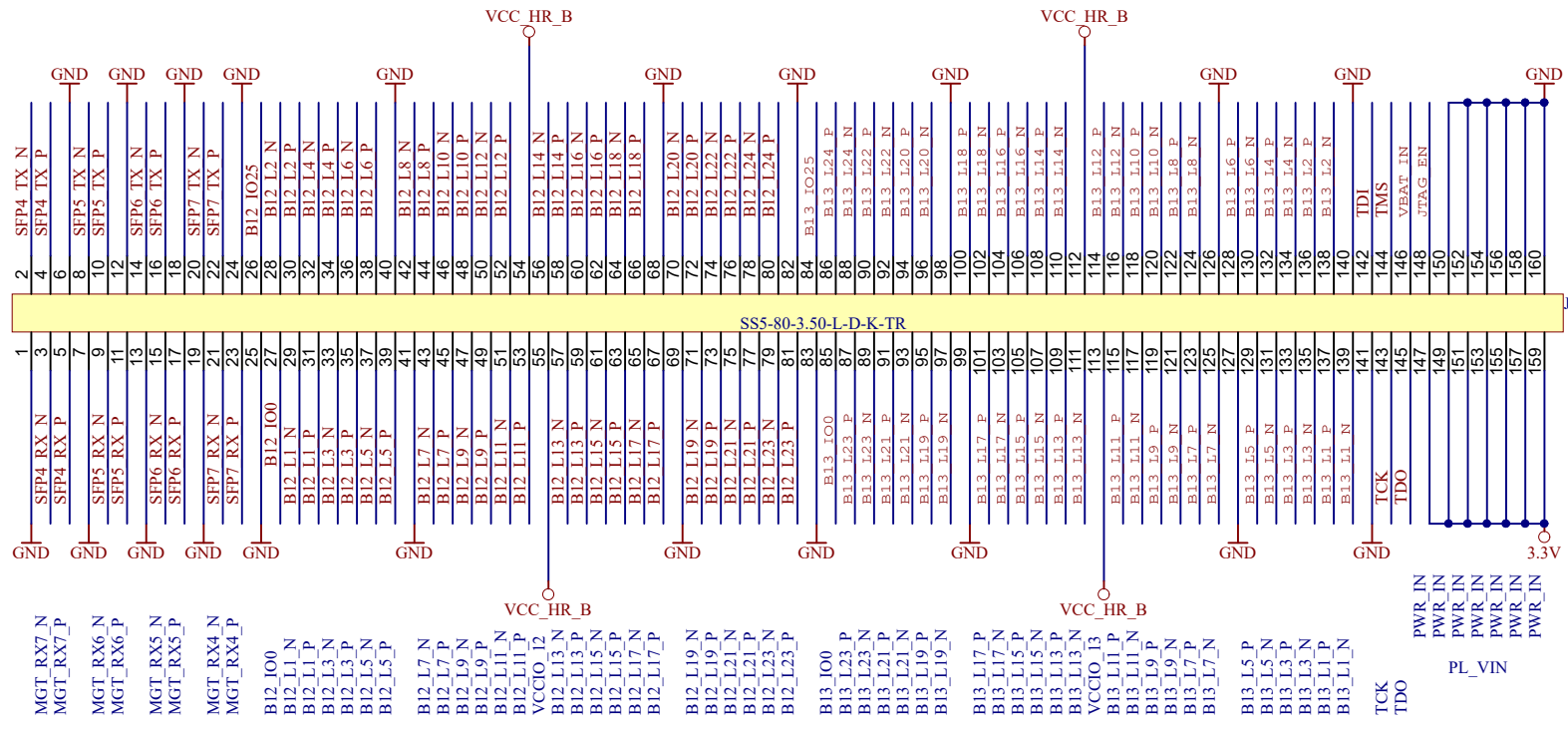
B12_L20_N
B12_L20_P
B12_L22_N
B12_L22_P
B12_L24_N
B12_L24_P

B13_IO25
B13_L24_P
B13_L24_N
B13_L22_P
B13_L22_N
B13_L20_P
B13_L20_N

B13_L18_P
B13_L18_N
B13_L16_P
B13_L16_N
B13_L14_P
B13_L14_N
VCCIO_I3
B13_L12_P
B13_L12_N
B13_L10_P
B13_L10_N
B13_L8_P
B13_L8_N
B13_L6_P
B13_L6_N
B13_L4_P
B13_L4_N
B13_L2_P
B13_L2_N

B13_L16_P
B13_L16_N
B13_L14_P
B13_L14_N
B13_L2_P
B13_L2_N

TDI
TMS
VBAT_IN
JTAG_EN



SS5-80-3.50-L-D-K-TR



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 2 of 27
Filename: J1.schdoc		

1

2

3

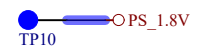
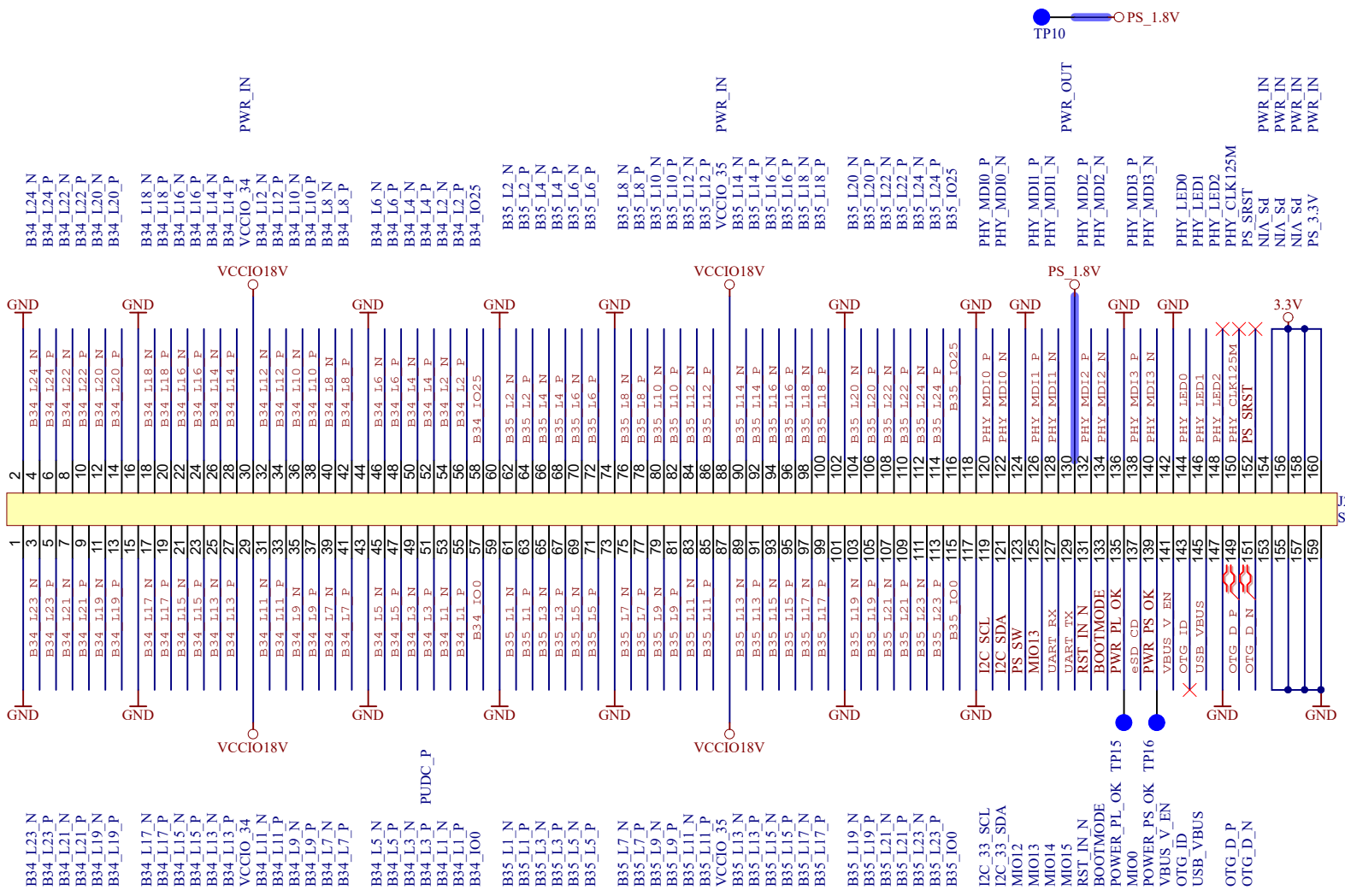
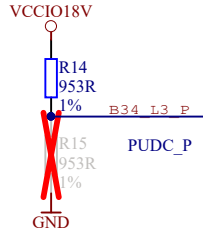
4

A

B

C

D



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 3 of 27
Filename: J2.schdoc		

J2
SS5-80-3.50-L-D-K-TR

A

B

C

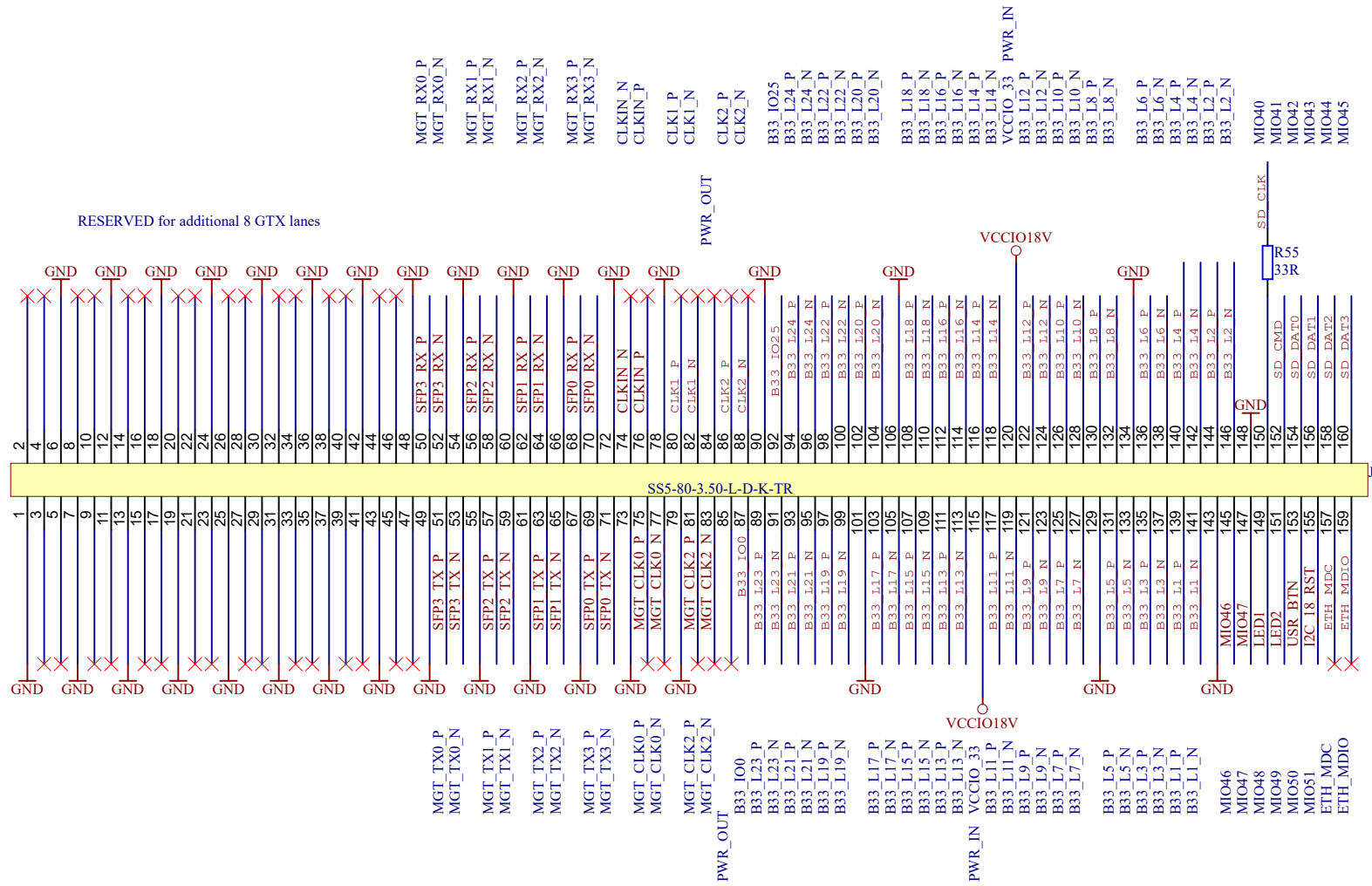
D

1

2

3

4



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page4 of 27
Filename: J3.schdoc		

1

2

3

4

A

B

C

D

1

2

3

4

A

A

U_SFP_0
SFP_0.schdoc



U_SFP_1
SFP_1.schdoc



U_SFP_2
SFP_2.schdoc



U_SFP_3
SFP_3.schdoc



U_SFP_4
SFP_4.schdoc



U_SFP_5
SFP_5.schdoc



U_SFP_6
SFP_6.schdoc



U_SFP_7
SFP_7.schdoc



B

B

C

C

D


D

1

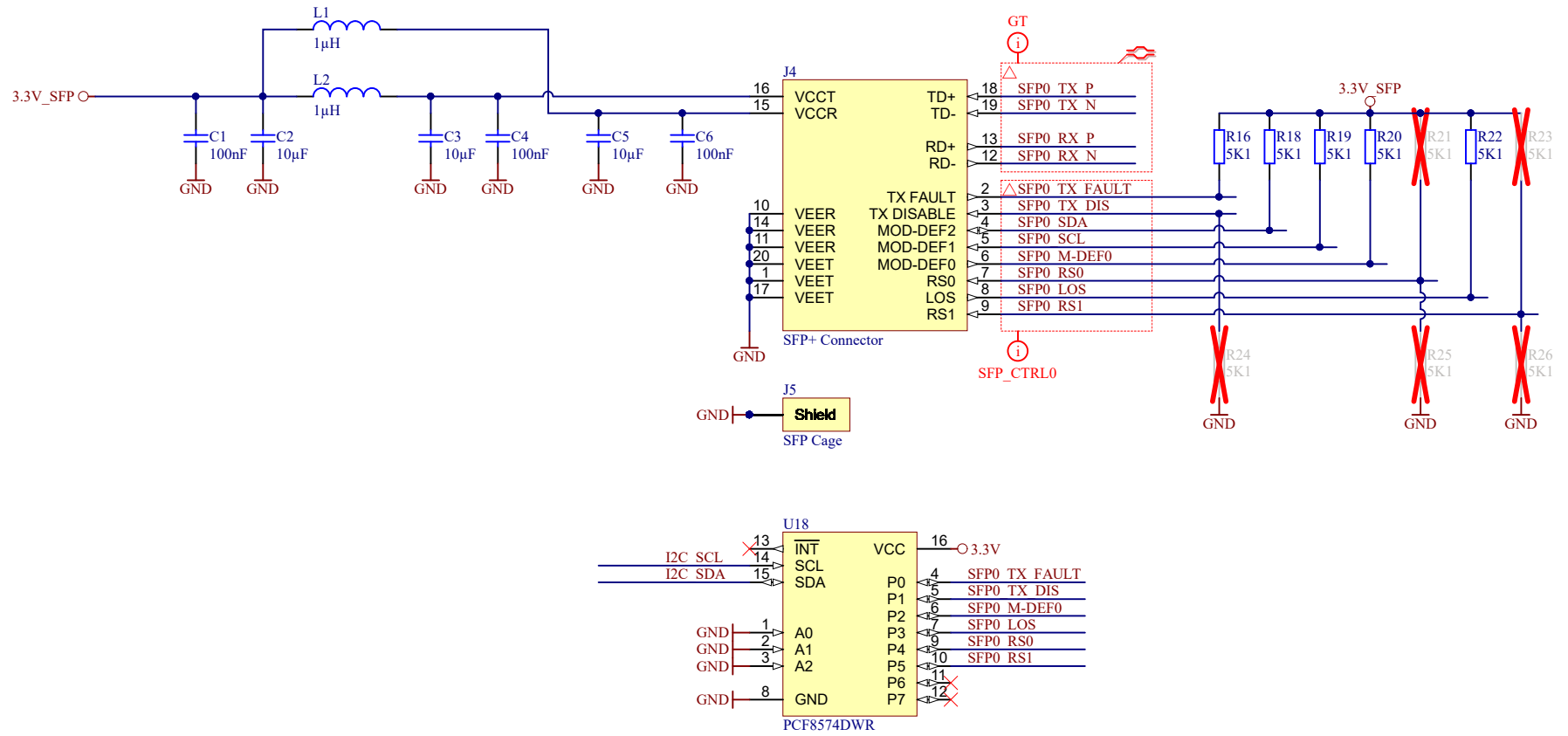
2


3

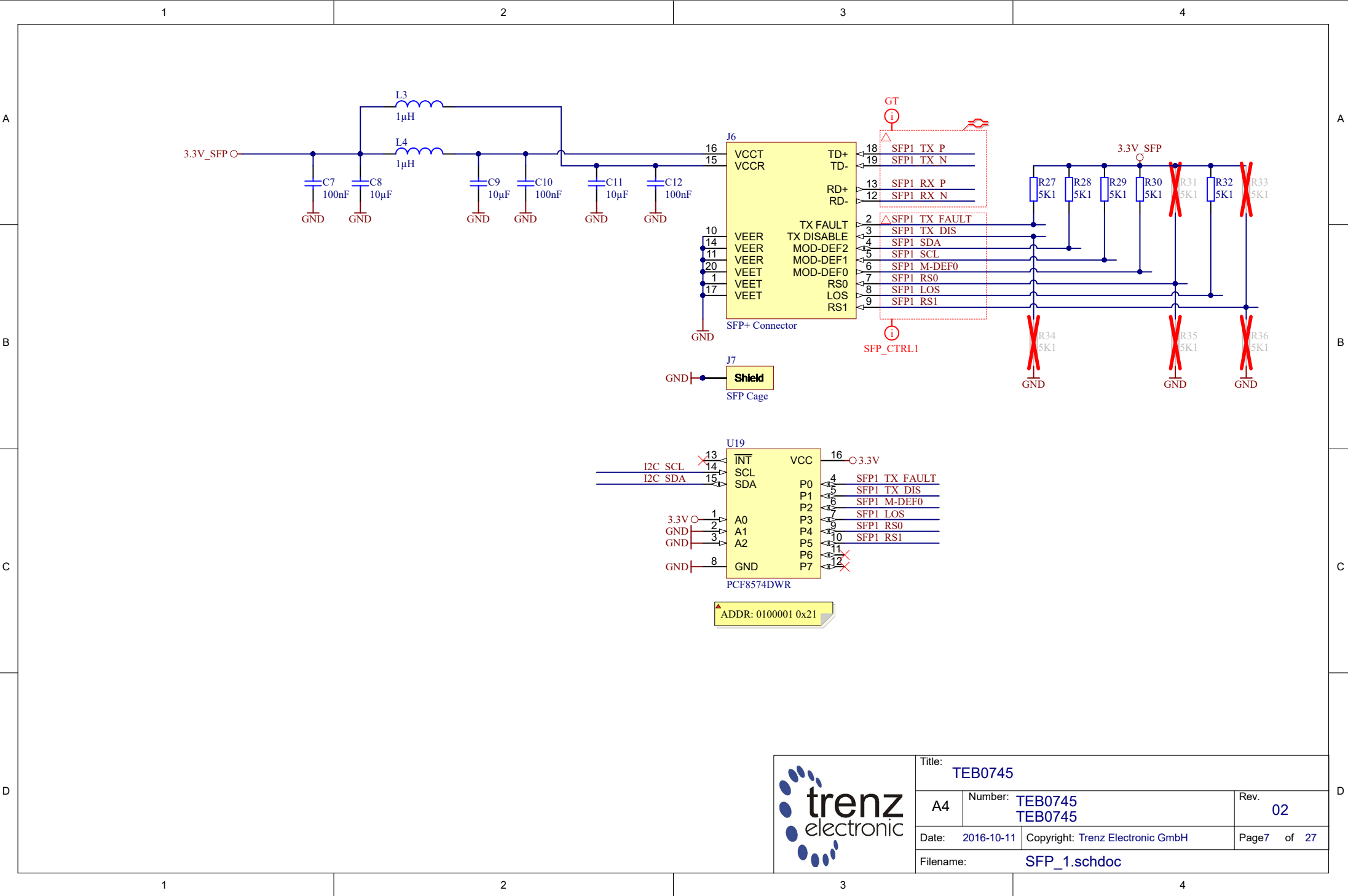
4


	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page5 of 27
	Filename: SFP.schdoc		

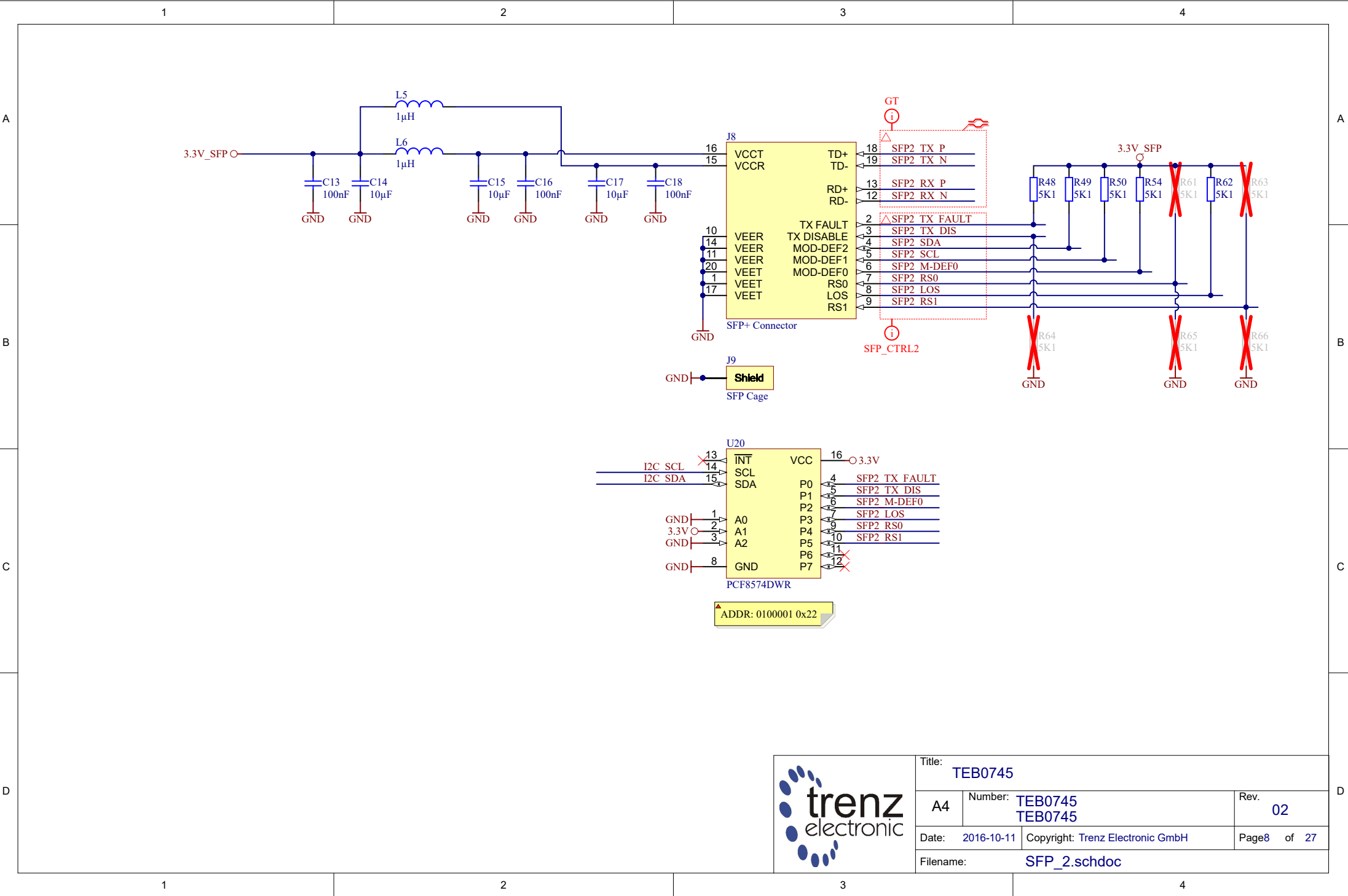
The module signal ground contacts, VeeR and VeeT, should be isolated from the module case.




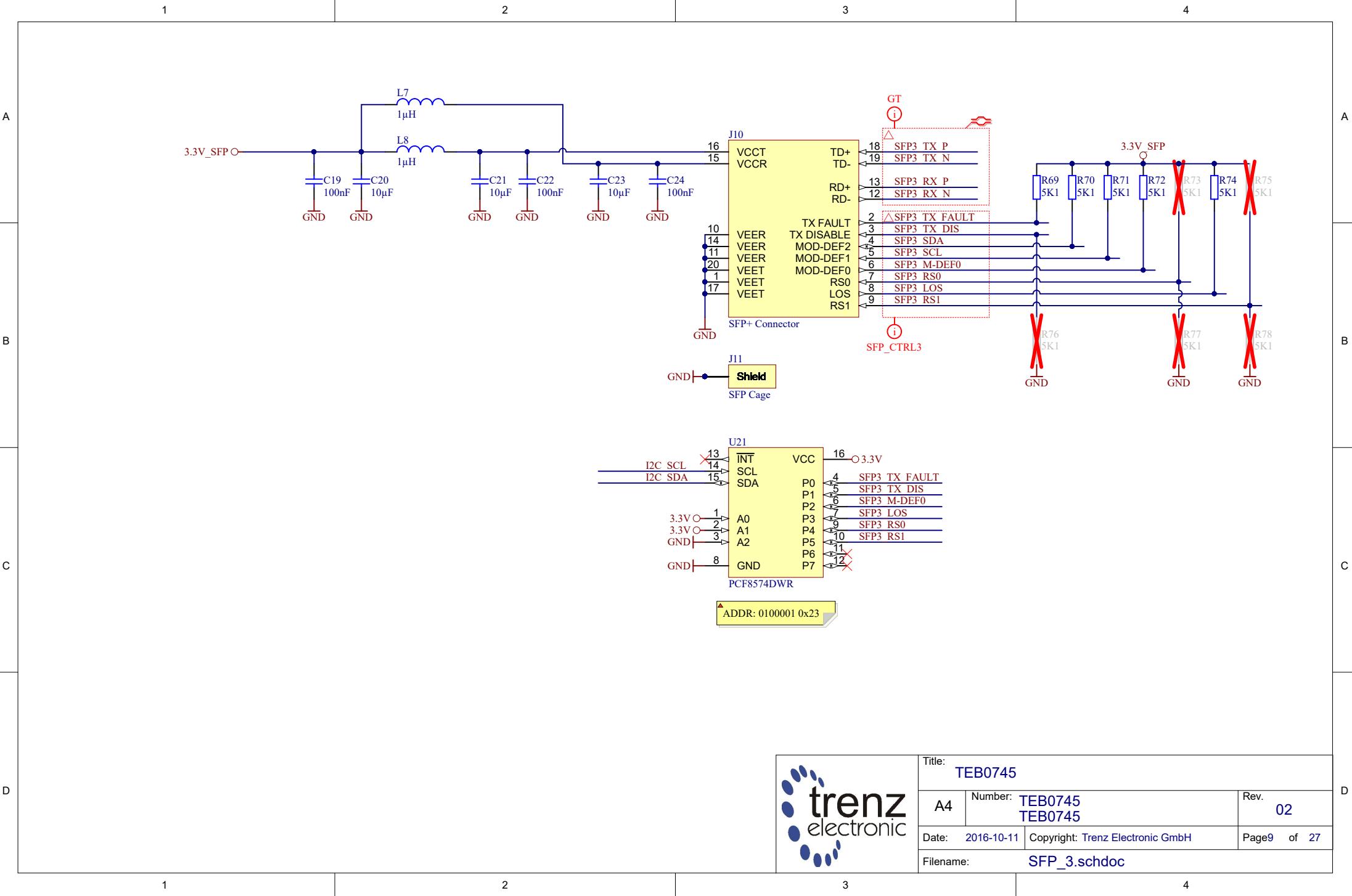
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 6		of 27	
Filename: SFP_0.schdoc			




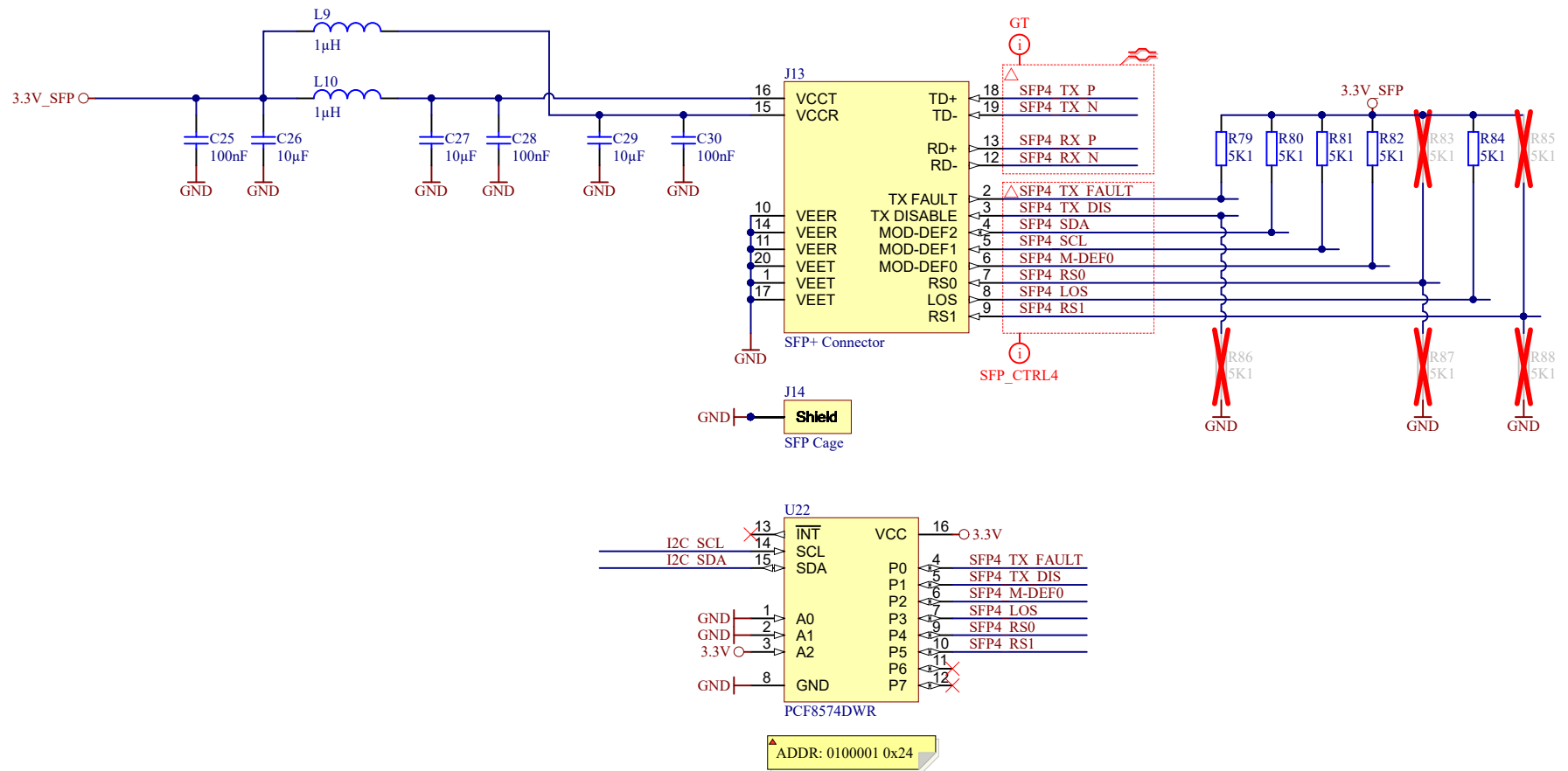
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 7		of 27	
Filename: SFP_1.schdoc			




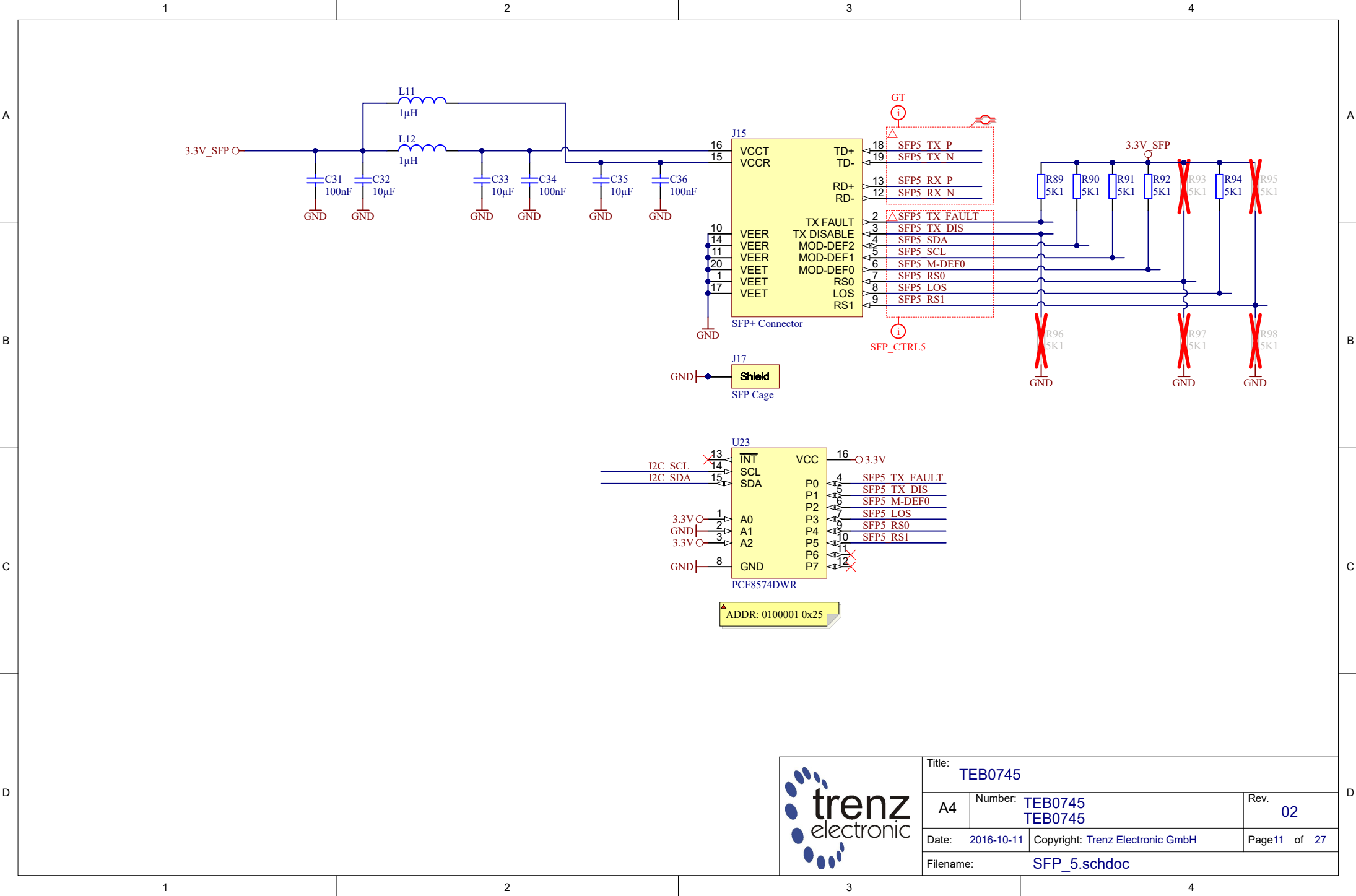
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 8		of 27	
Filename: SFP_2.schdoc			




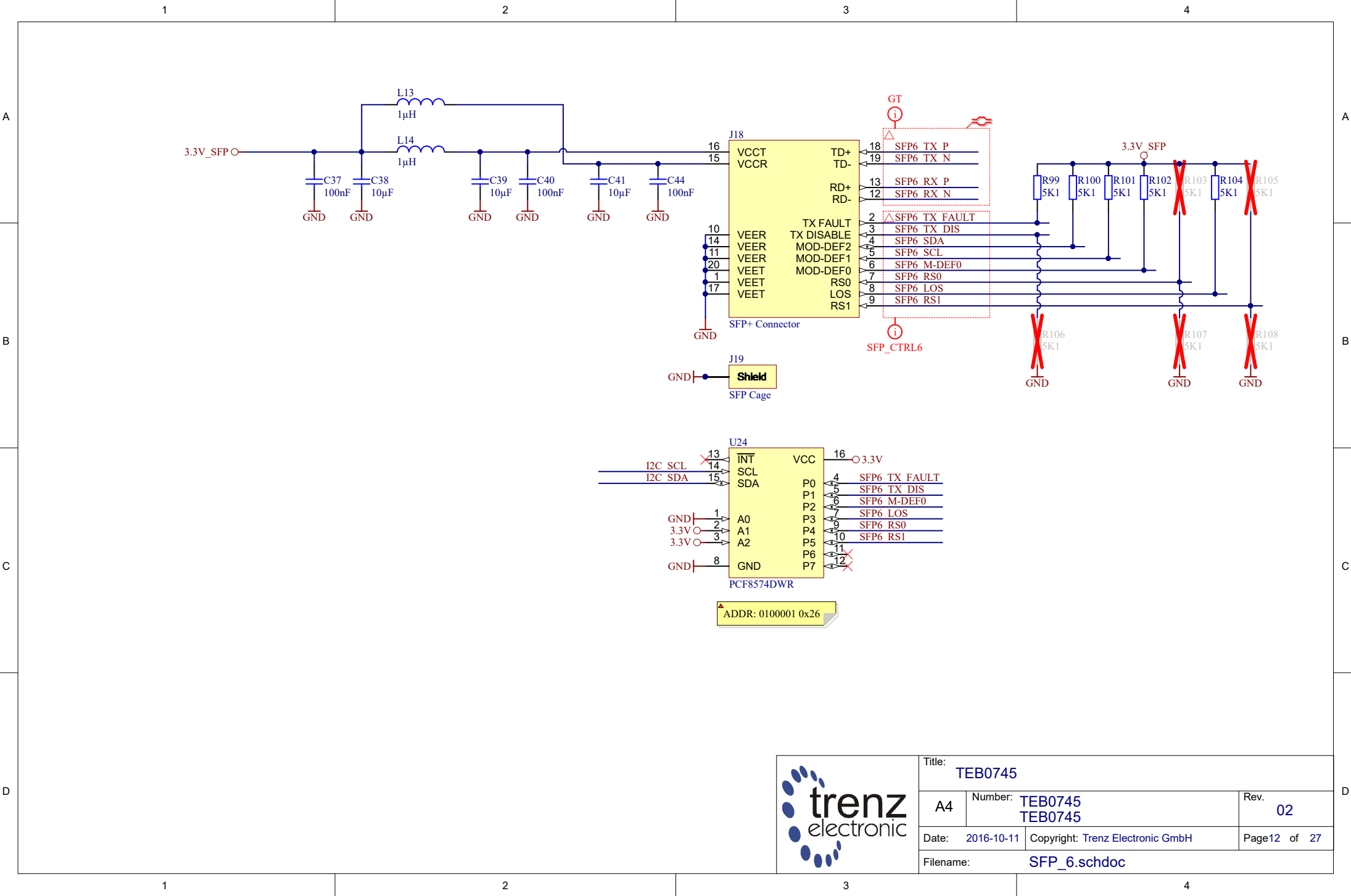
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 9		of 27	
Filename: SFP_3.schdoc			




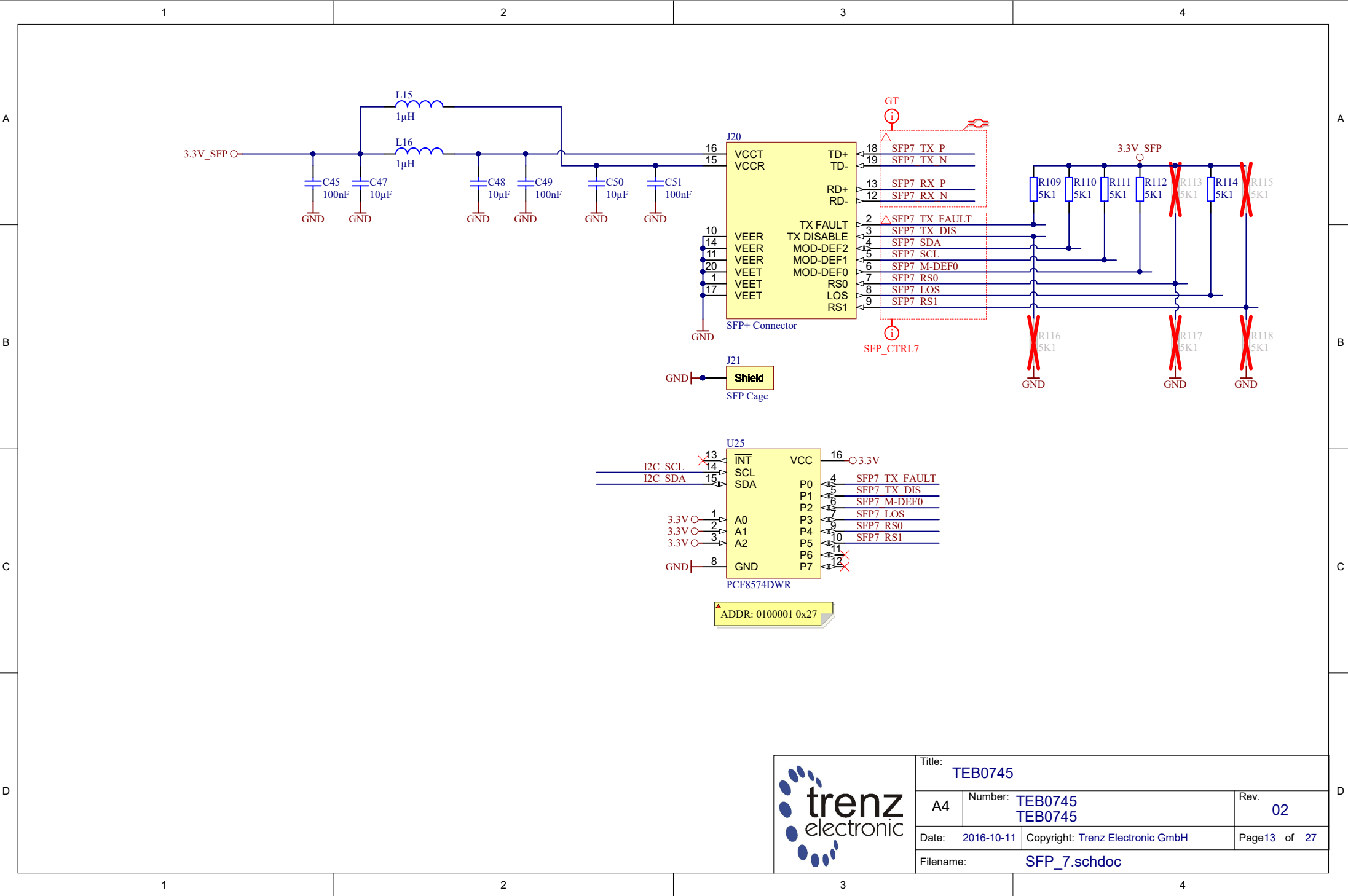
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 10 of 27		Filename: SFP_4.schdoc	




		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 11 of 27		Filename: SFP_5.schdoc	



		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 12 of 27		Filename: SFP_6.schdoc	

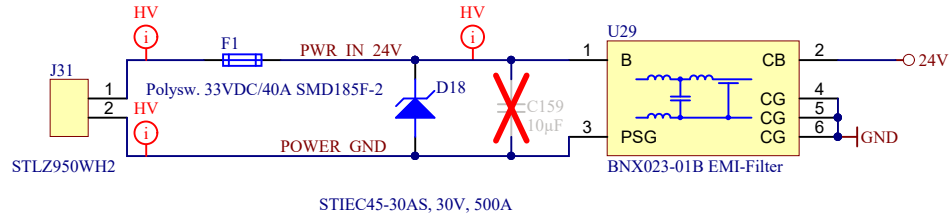
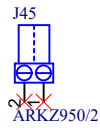
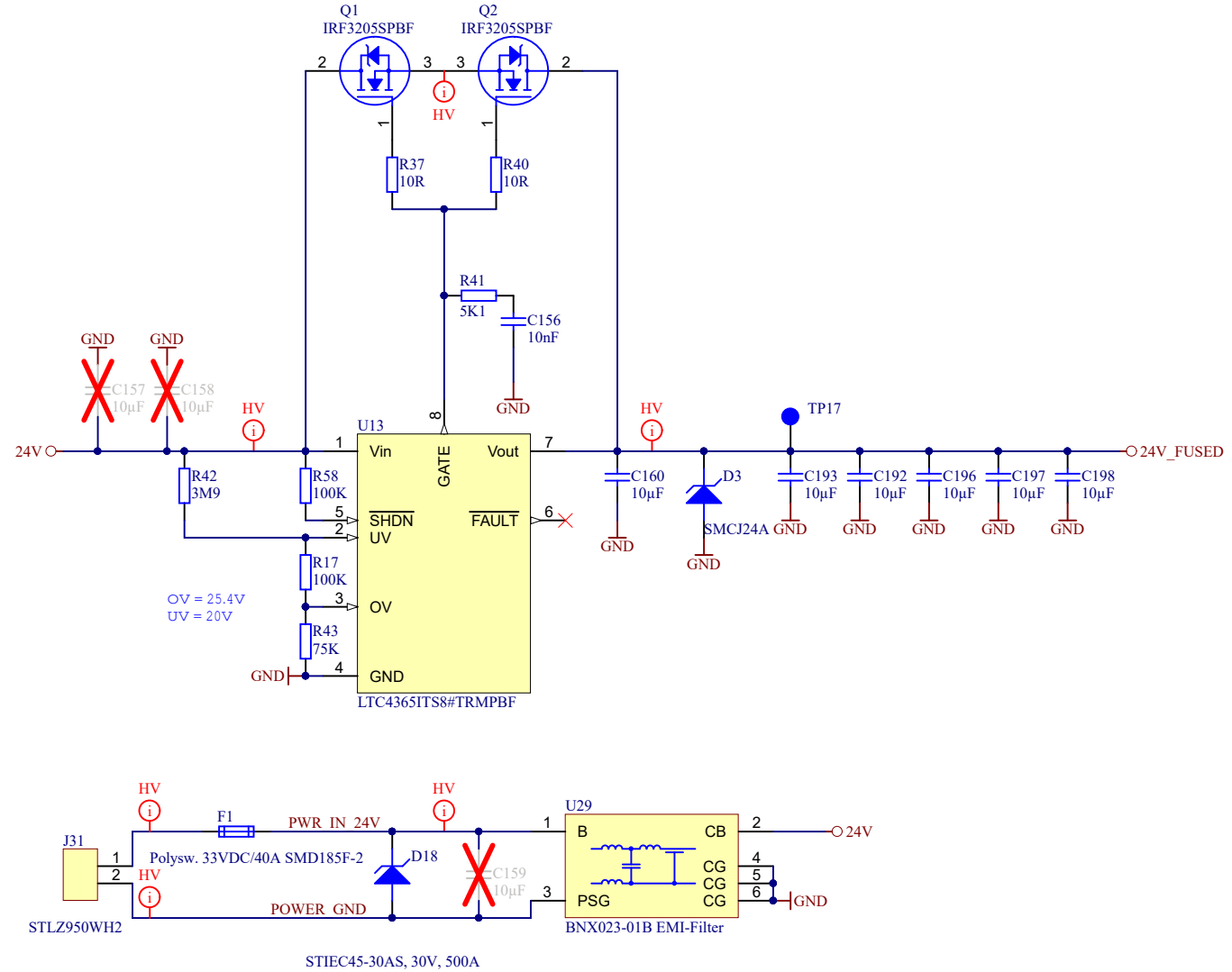


		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Page 13 of 27		Page 13 of 27	
Filename: SFP_7.schdoc			

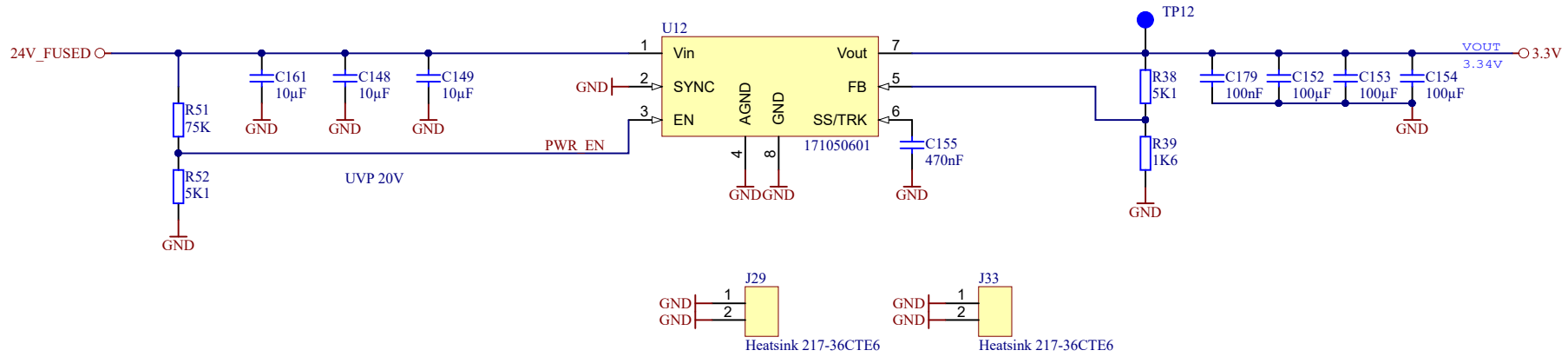
U_POWER_3V3
POWER_3V3.SchDoc


U_POWER_5V
POWER_5V.SchDoc

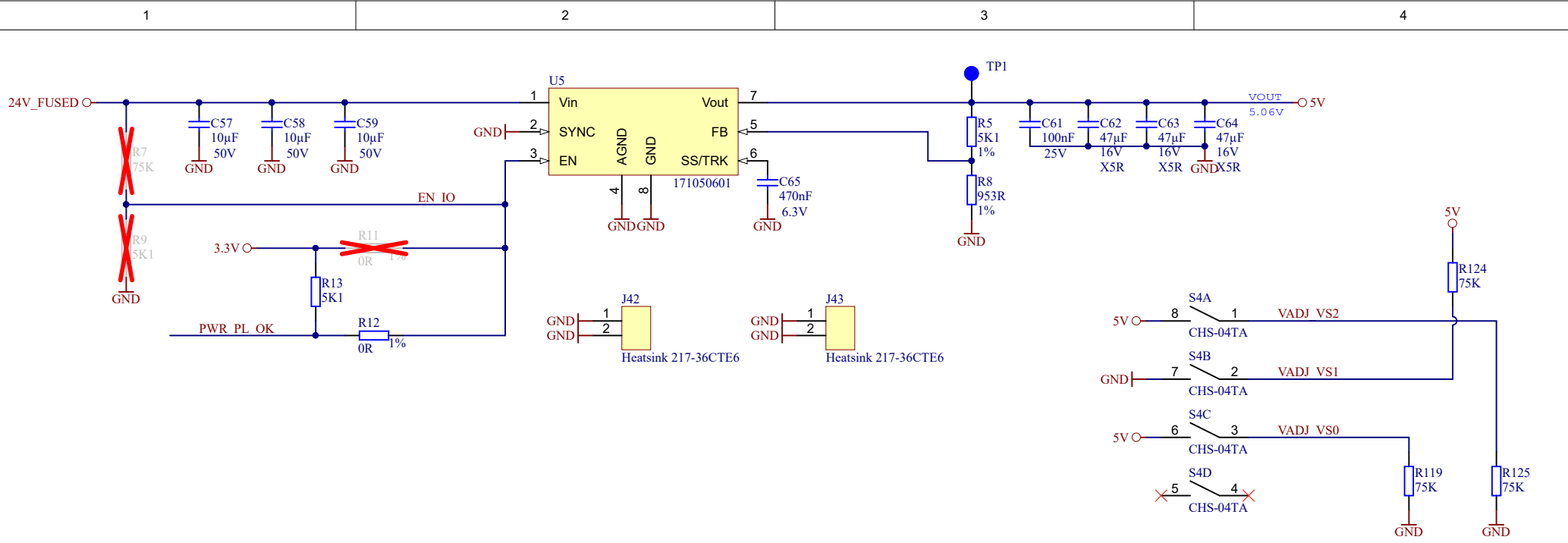
U_POWER_3V3_2
POWER_3V3_2.SchDoc



	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 14 of 27
	Filename: POWER_IN.SchDoc		

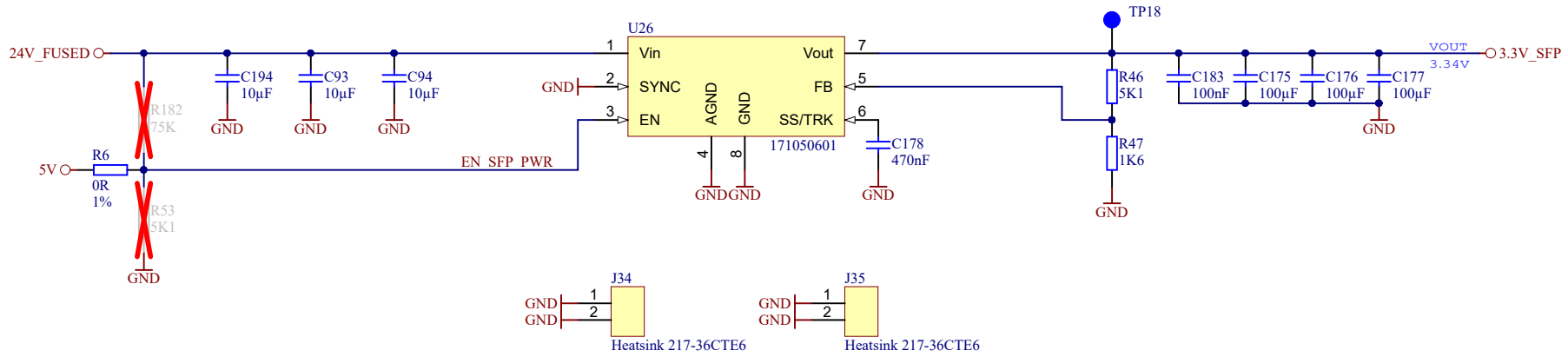



		Title: TEB0745	
		A4 Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Filename: POWER_3V3.SchDoc		Page 15 of 27	



- GND —● TP5
- GND —● TP6
- GND —● TP7
- GND —● TP8
- GND —● TP9

	Title: TEB0745	
	A4	Number: TEB0745 TEB0745
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH
	Rev. 02	Page 16 of 27
Filename: POWER_5V.SchDoc		



	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 17 of 27
	Filename: POWER_3V3_2.SchDoc		

1

2

3

4

A

A

B

B

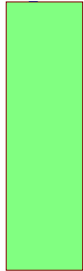
C

C

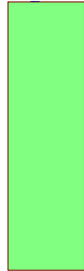
D

D

U_EX_Connectors_0
EX_Connectors_0.SchDoc



U_EX_Connectors_1
EX_Connectors_1.SchDoc



U_EX_Connectors_2
EX_Connectors_2.SchDoc



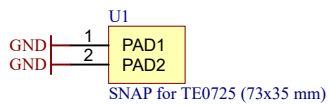
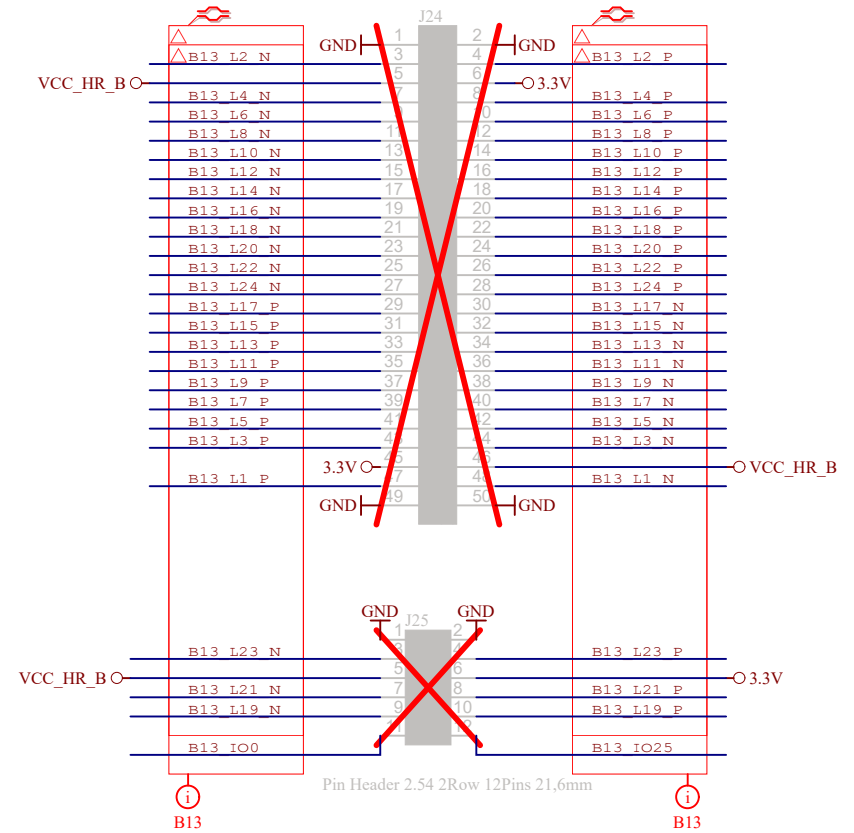
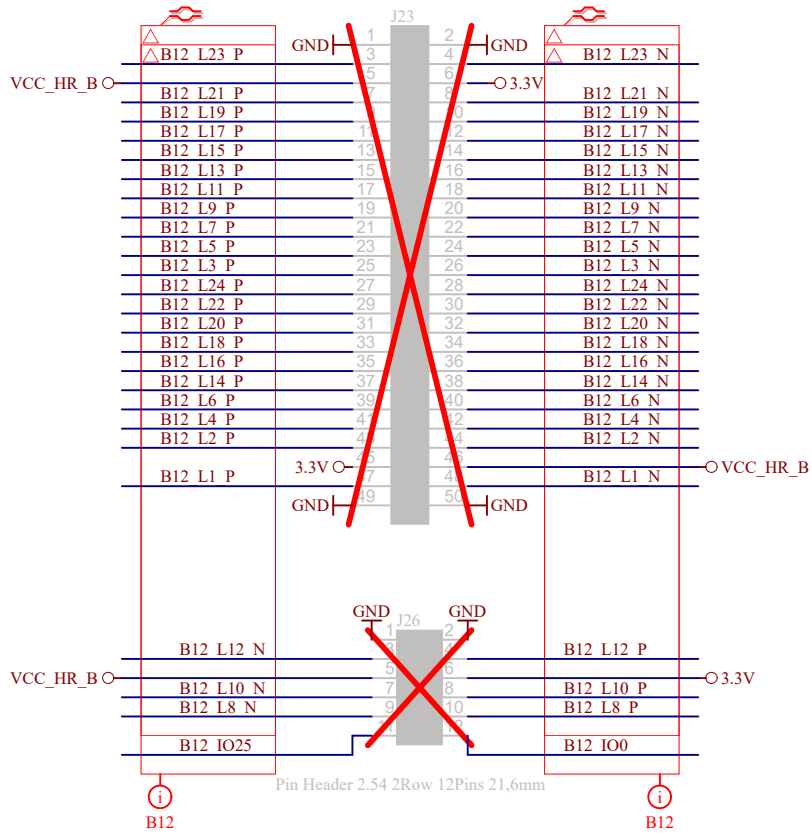
Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 18 of 27
Filename: EX_Connectors.SchDoc		

1

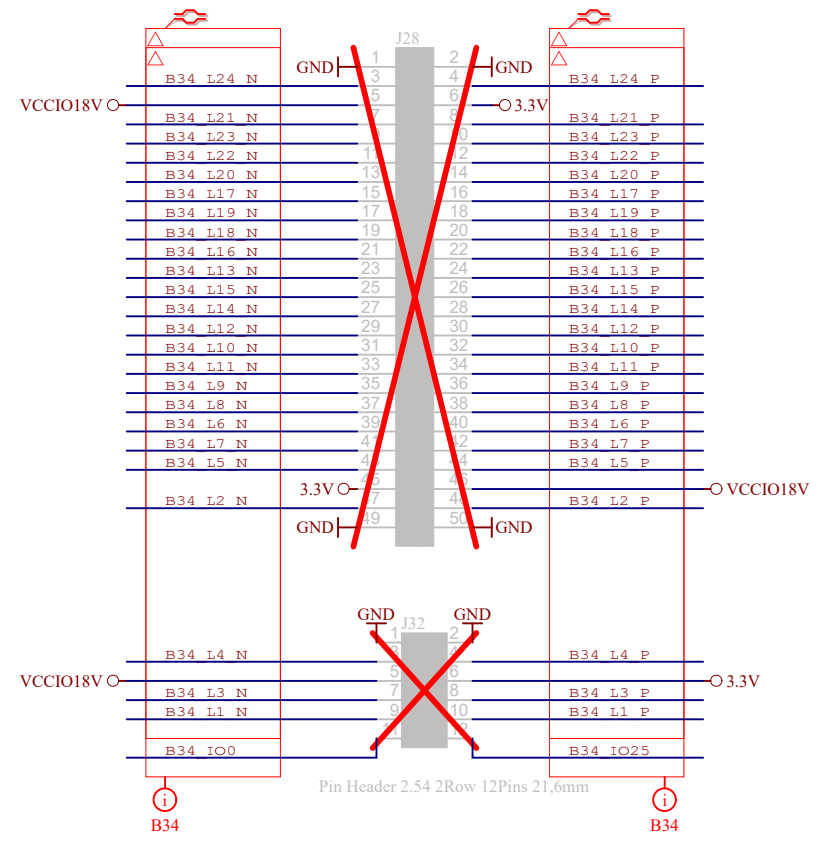
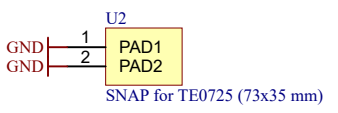
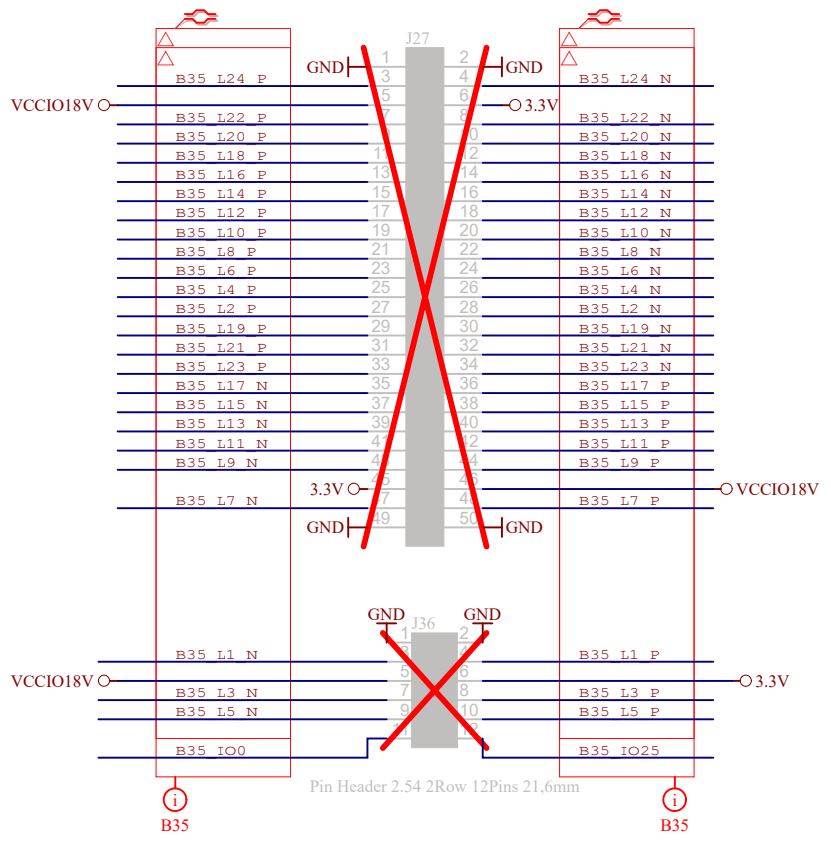
2

3

4



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 19 of 27
Filename: EX_Connectors_0.SchDoc		



Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 20 of 27
Filename: EX_Connectors_1.SchDoc		

1

2

3

4

A

A

B

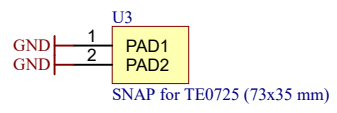
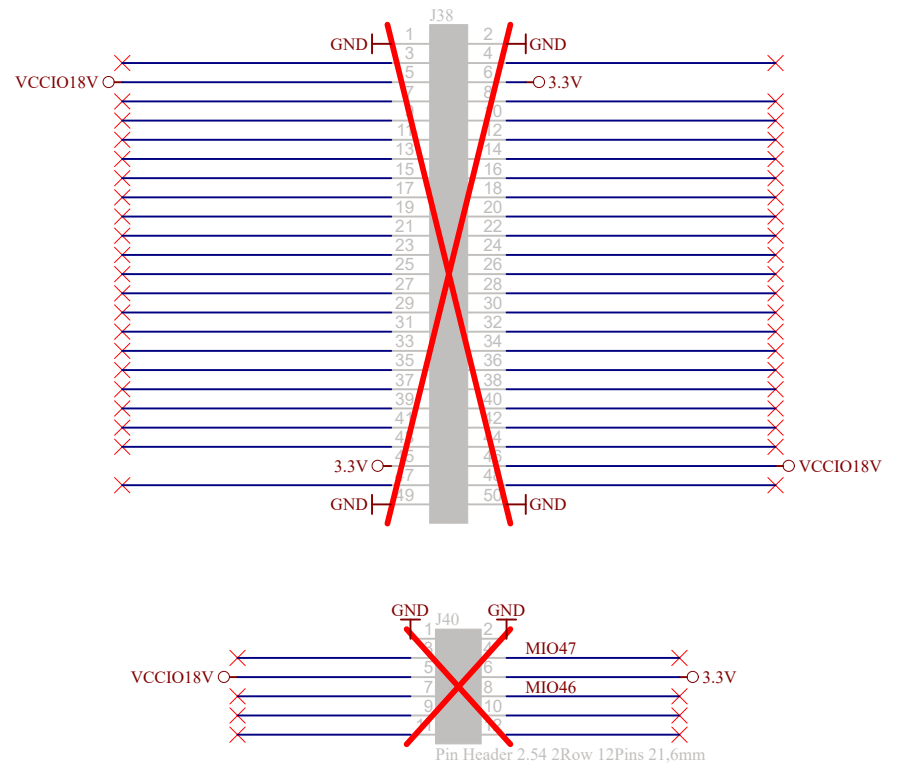
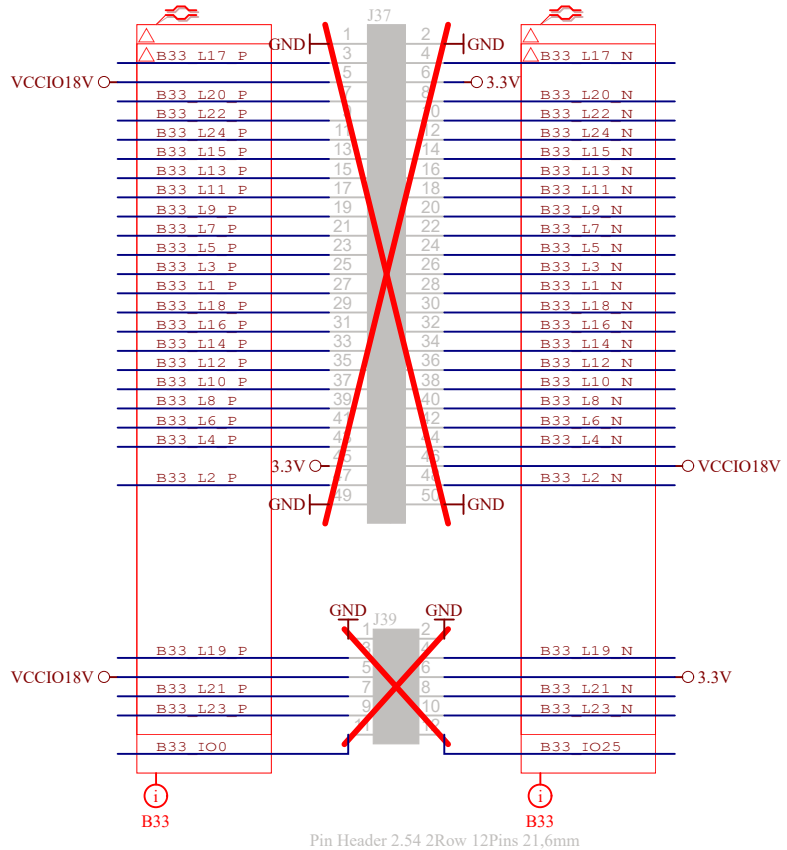
B


C

C

D

D



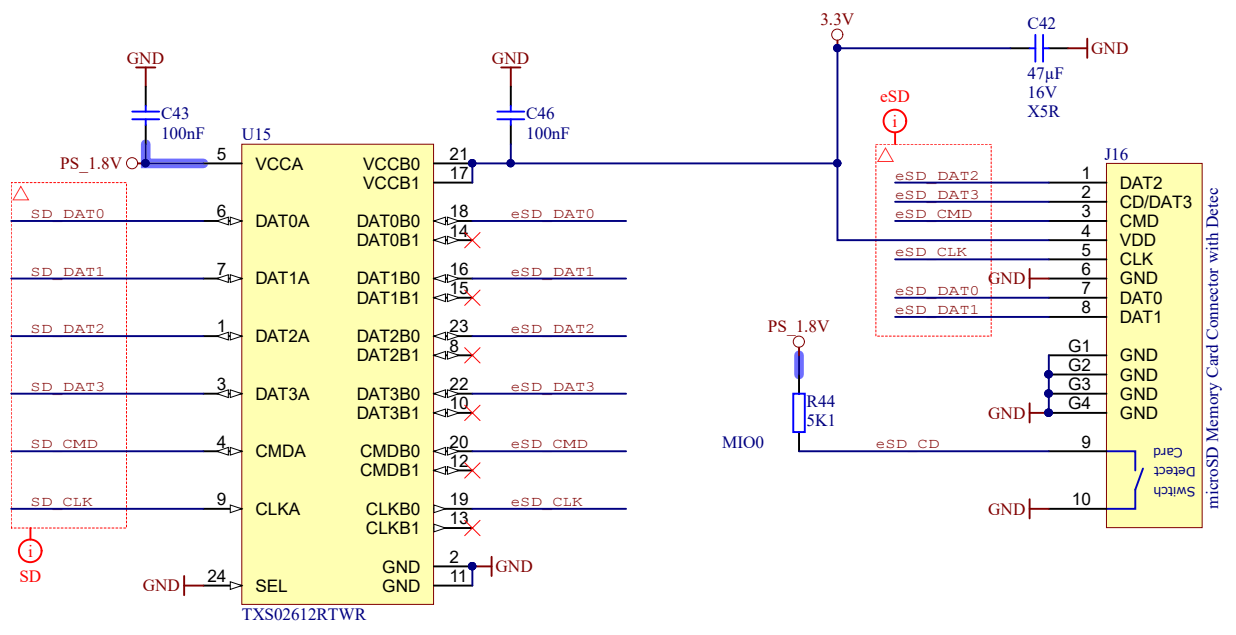
	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 21 of 27
	Filename: EX_Connectors_2.SchDoc		


1

2

3

4



	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page22 of 27
	Filename: SD.schdoc		

1

2

3

4

A

A

B

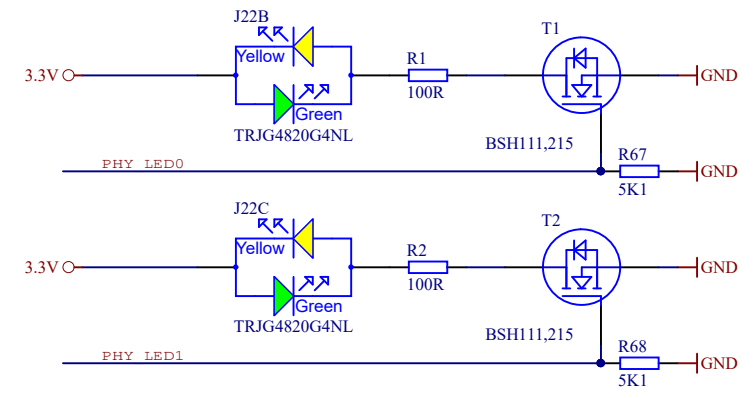
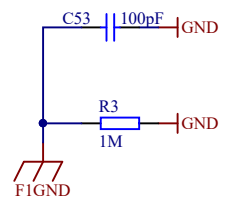
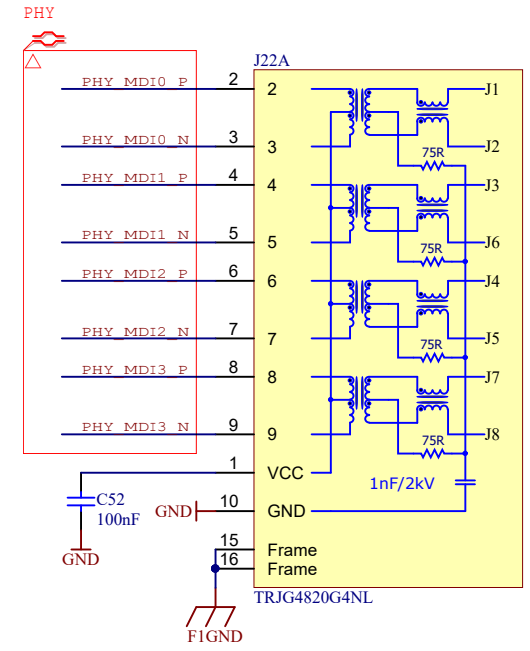
B


C

C

D

D



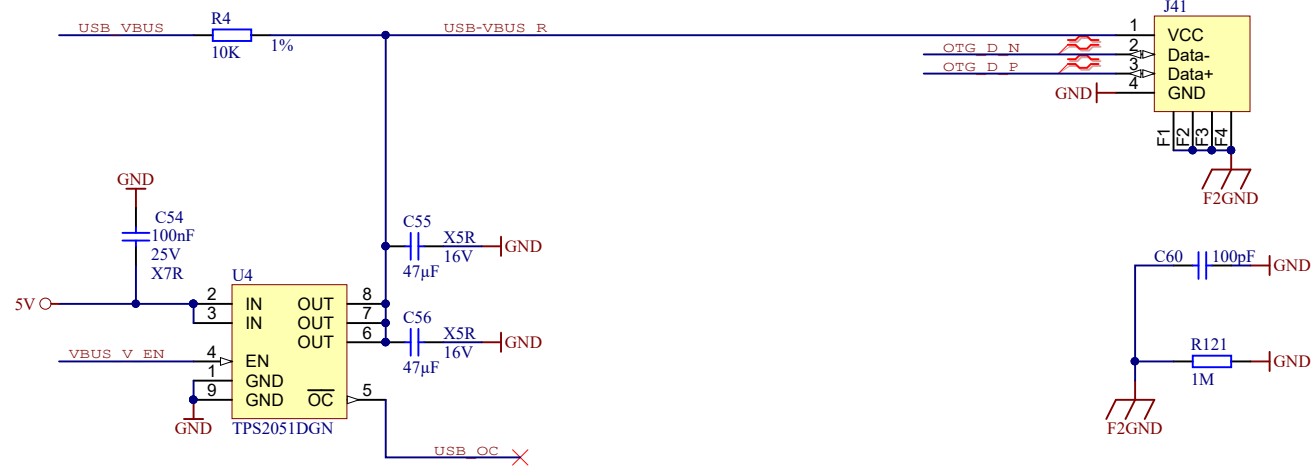
		Title: TEB0745	
		A4	Number: TEB0745 TEB0745
Date: 2016-10-11		Copyright: Trenz Electronic GmbH	
Filename: ETH.SchDoc		Page23 of 27	


1

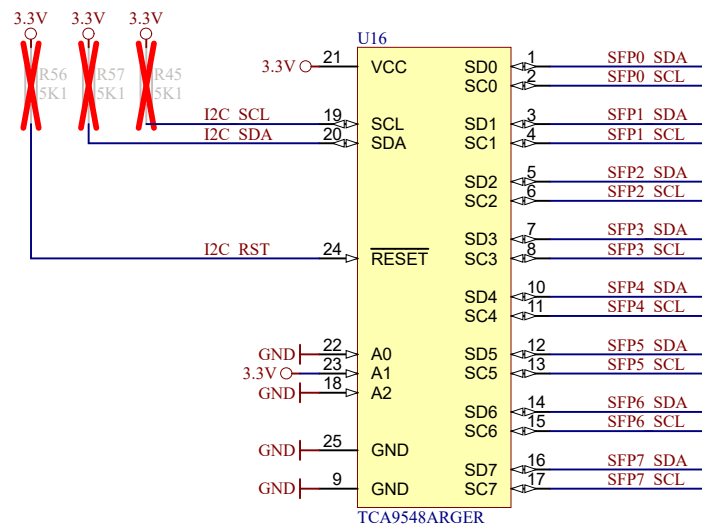
2

3

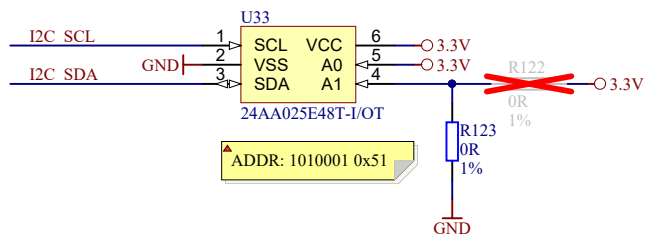
4



	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page24 of 27
	Filename: USB.SchDoc		



▲ ADDR: 1110010 0x72



▲ ADDR: 1010001 0x51

I2C:

TEB0745

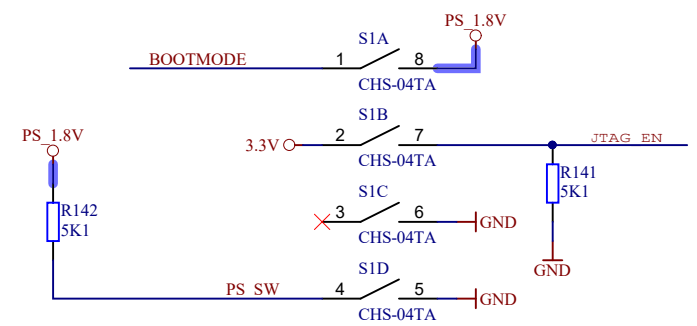
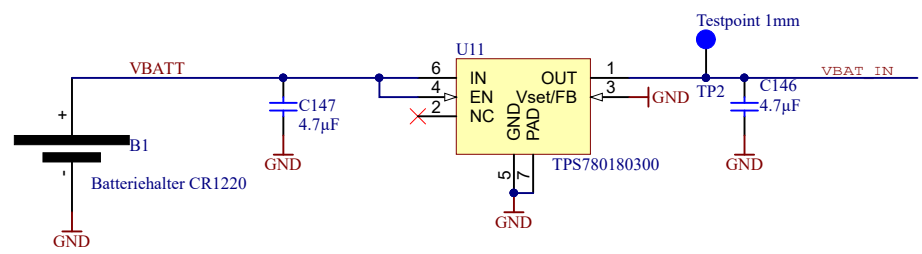
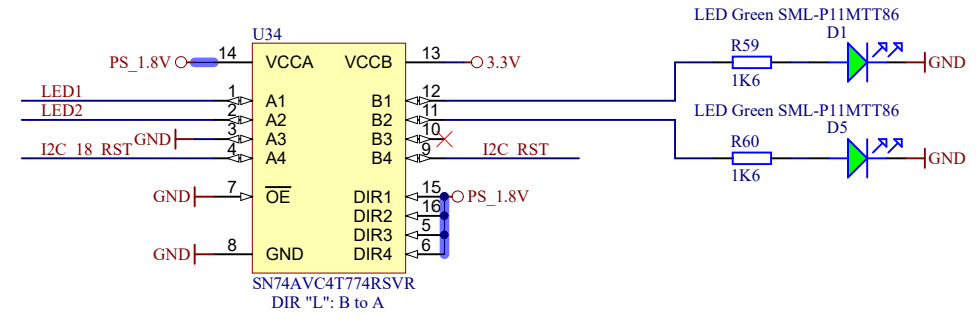
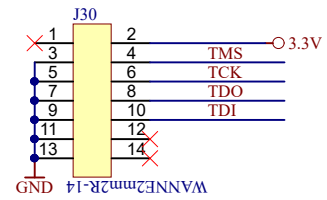
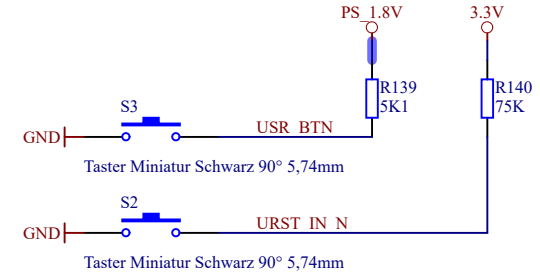
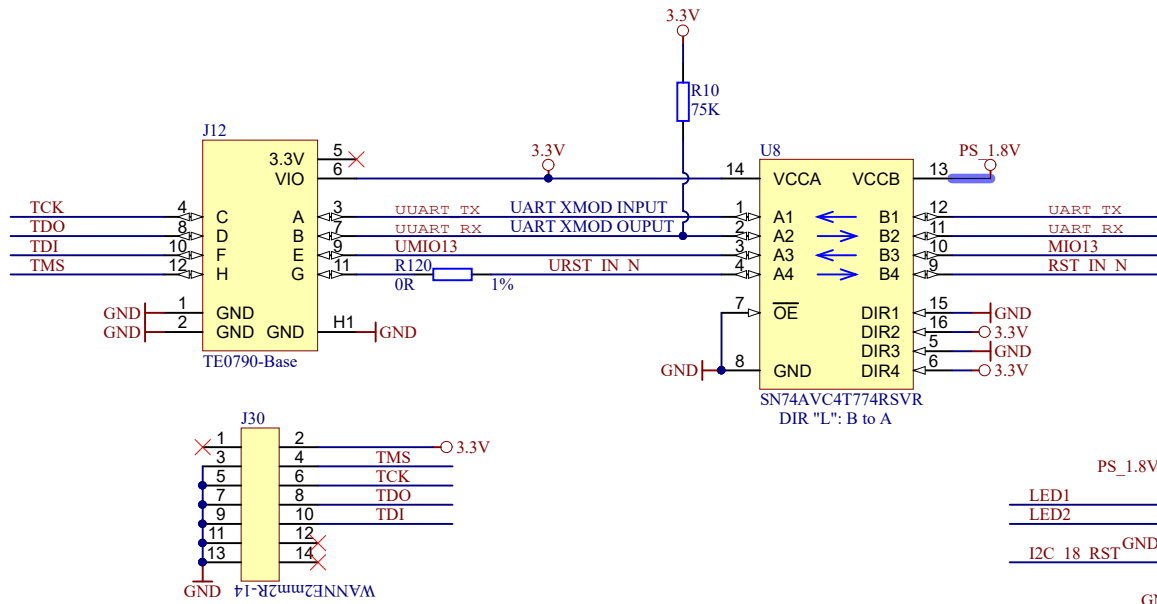
I2C_SCL	CLK	0x70
I2C_SDA	EEPROM	0x53
	RTC	0x6F
	SRAM	0x57
	CPLD	xx

TEB0745

I2C_SCL	I2C_EXP (U16)	0x72
I2C_SDA	EEPROM (U33)	0x51
	I/O_EXP (U18)	0x20
	I/O_EXP (U19)	0x21
	I/O_EXP (U20)	0x22
	I/O_EXP (U21)	0x23
	I/O_EXP (U22)	0x24
	I/O_EXP (U23)	0x25
	I/O_EXP (U24)	0x26
	I/O_EXP (U25)	0x27

U16	SFP 0-9	0x50
-----	---------	------

Title: TEB0745		
A4	Number: TEB0745 TEB0745	Rev. 02
Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page25 of 27
Filename: I2C_system.schdoc		



	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 26 of 27
	Filename: MISC.schdoc		

1

2

3


4

REV02:

- 1) U16 I2C expander: address set to 0x72
- 2) U33 EEPROM: address set to 0x51. Added variant to set address 0x52.
- 3) Changed power up sequence: 24V_FUSED -> 3.3V (Module power up) -> 5V -> VCCIO18, VCC_HR_B, 3.3V_SFP
- 4) Fixed PCB patch: U6 pin 18 connected to 5V, pin 19 connected to GND.
- 5) JTAG connector J30 VREF (pin2) and XMOD VIO (pin 6) connected to 3.3V. XMOD IO A, B, E, G connected to module MIO via level translator U8.
- 6) Pull-ups for BOOTMODE and PS_SW (DIP switch S1), RST_IN_N and USR_BTN (front panel buttons S2, S3) changed from VCCIO18 to PS_1.8V; JTAG_EN connected to 3.3V via DIP switch (S1).
- 7) Added switch S4 for selecting of output voltage of DCDC U7 (VCC_HR_B, HR banks VCCO)

REV02a (06.12.2018):

- 1) Resistors R14 and R15 was replaced by 953R (was 5K1)
- 2) Resistor R5 was replaced by 5K1, R8 by 953R (was 9K09 and 1K69 respectively)

	Title: TEB0745		
	A4	Number: TEB0745 TEB0745	Rev. 02
	Date: 2016-10-11	Copyright: Trenz Electronic GmbH	Page 27 of 27
	Filename: Revision_Changes.SchDoc		

1

2

3

4