

EVB-USB7216

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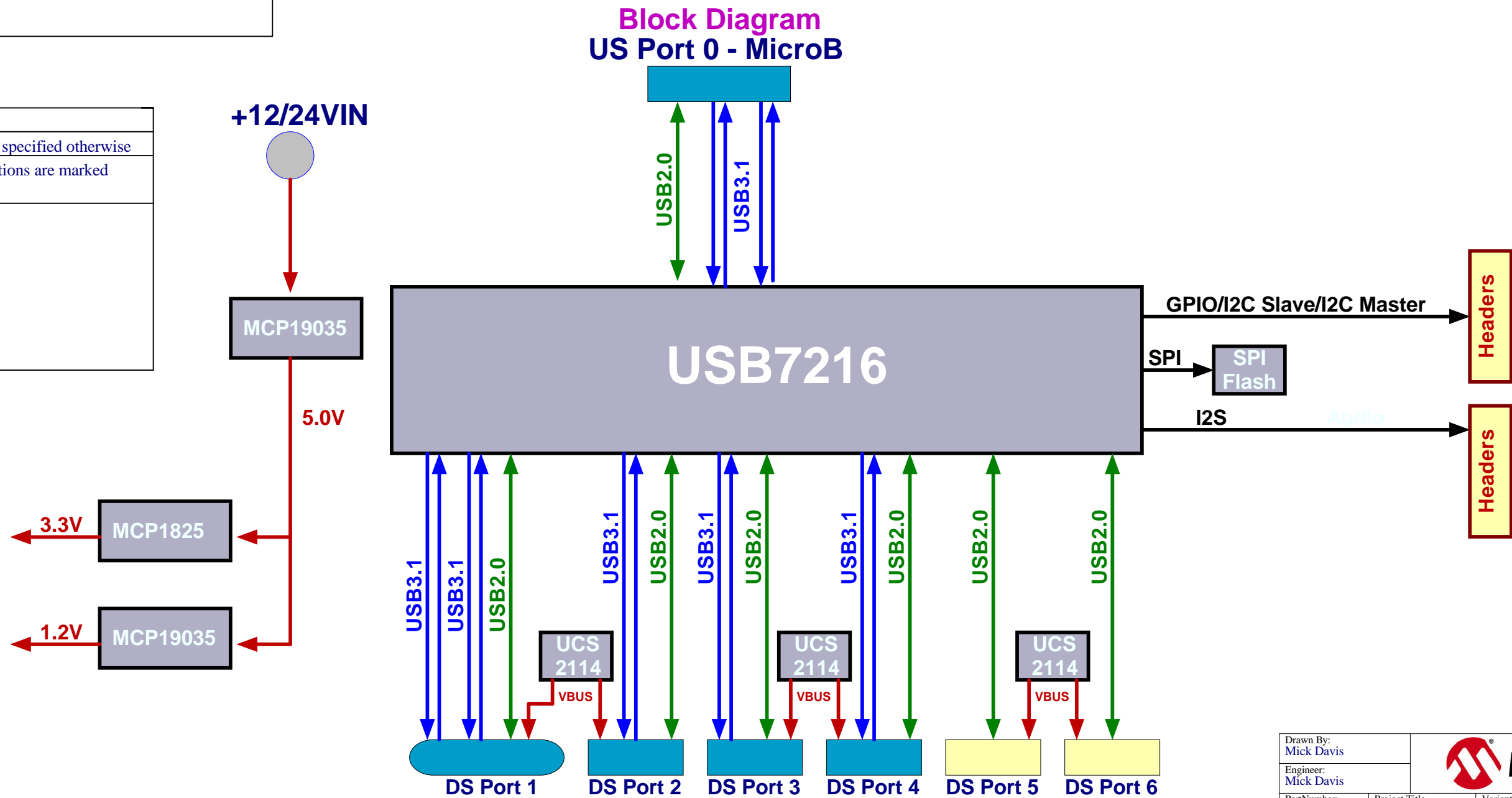
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Revision History

Revision	Date	Revision Summary	Author
A	12/04/2018	Schematic Review Copy	Manikandan
B	04/26/2018	Schematic Review Copy	J. Averyt
C	10/02/2019	Schematic Review Copy	M. Davis

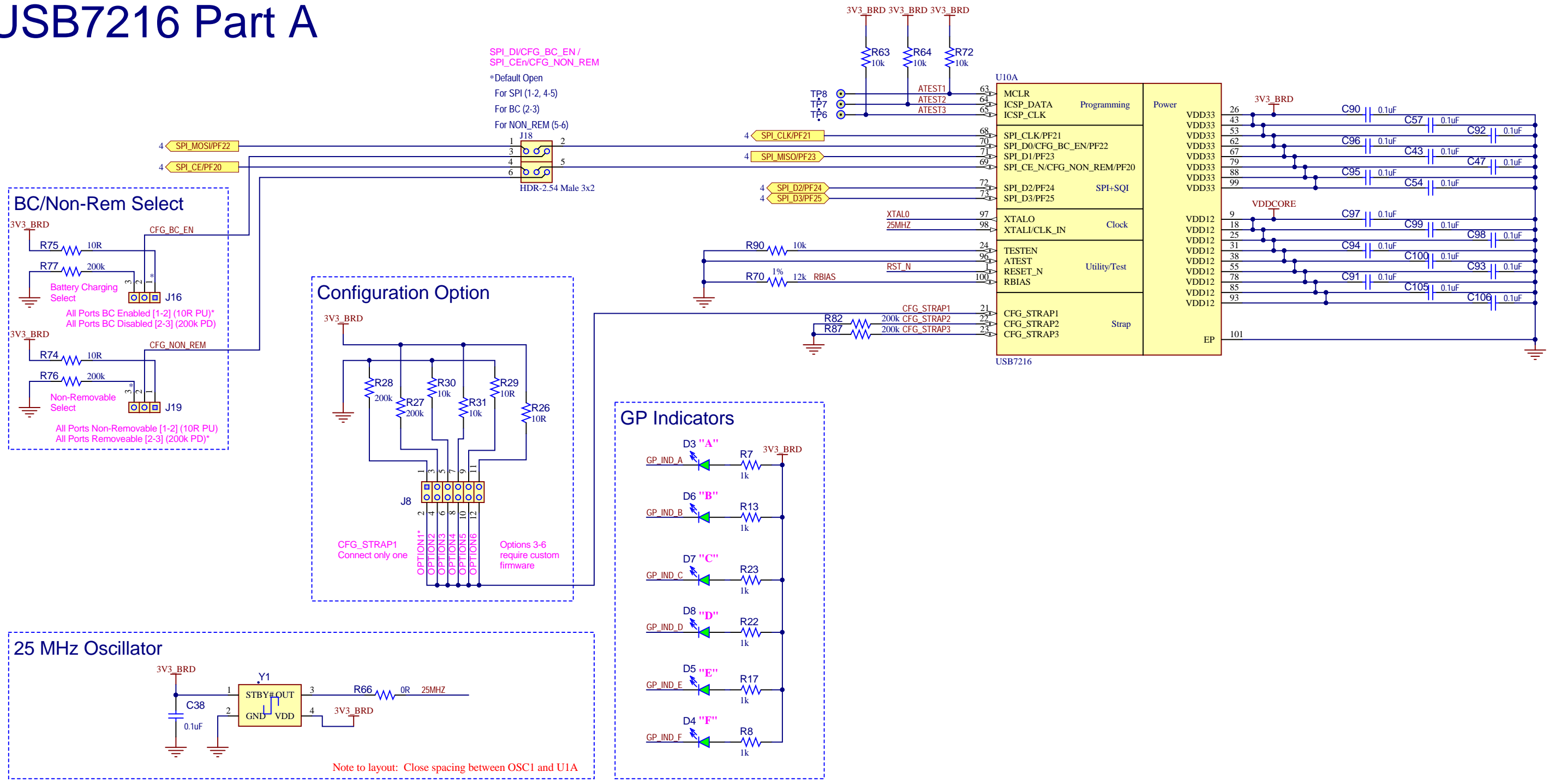
Notes

1	All resistors are 1% unless specified otherwise
2	Shunt jumper default selections are marked with an asterisk [*].



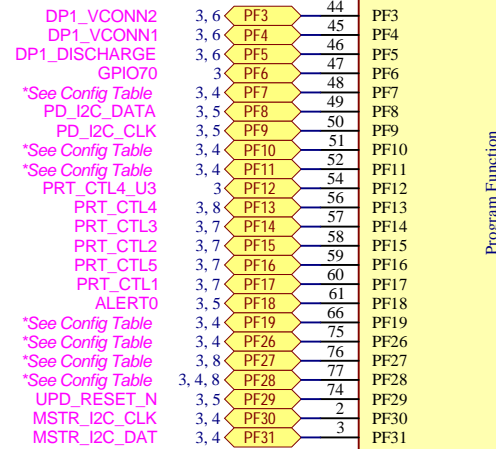
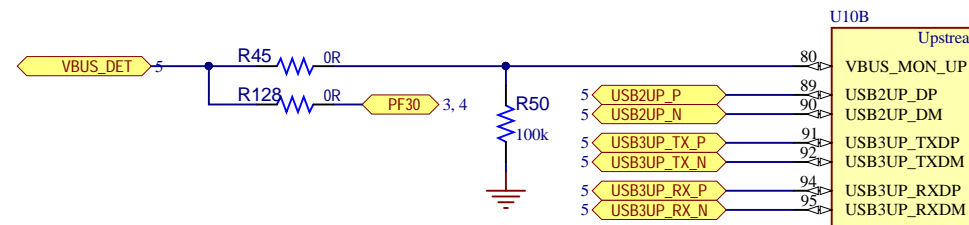
Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title EVB-USB7216		
Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:02 AM Sheet 1 of 9
File: 11049-TOC.SchDoc		Altium.com

USB7216 Part A



Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title USB7216 Part A		
Size Tabloid	Sch #:03-11049	Date: 10/23/2019 10:38:03 AM
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File: 11049-USB7056-PartA.SchDoc		Designed with Altium.com

USB7216 Part B

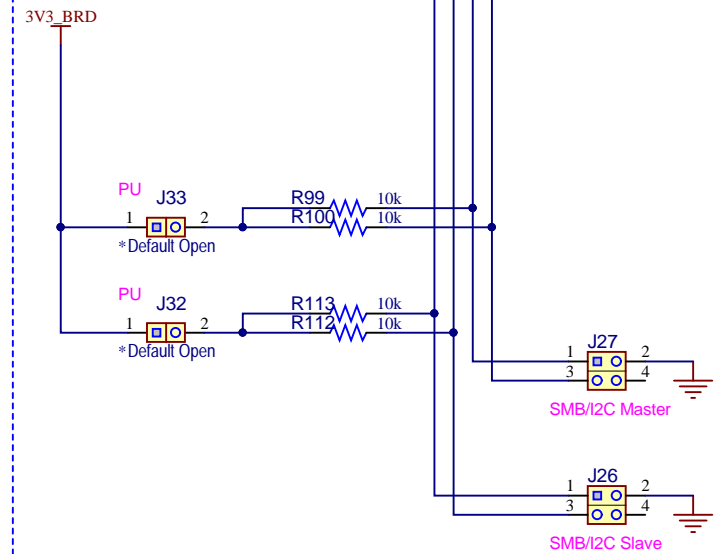
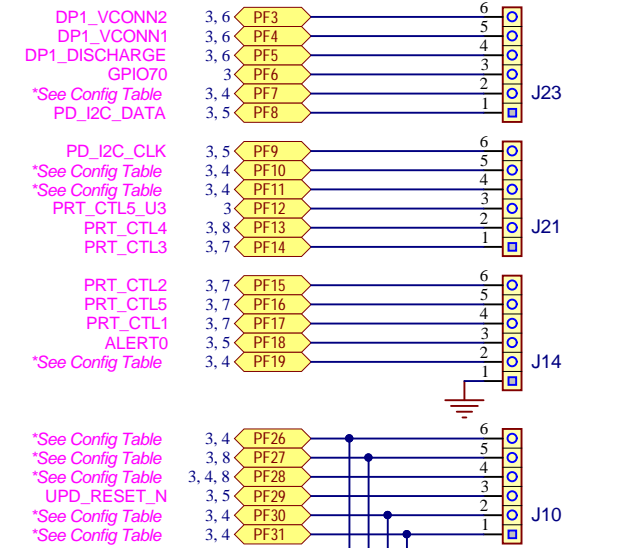


Default PF Functions by Configuration Option

	OPTION1	OPTION2	Via OTP/ Pseudo-OTP Config
PF3	DP1_VCONN2	DP1_VCONN2	GPIO67 ¹
PF4	DP1_VCONN1	DP1_VCONN1	GPIO68 ¹
PF5	DP1_DISCHARGE	DP1_DISCHARGE	GPIO69 ¹
PF6	GPIO70	GPIO70	GPIO70
PF7	GPIO71	MIC_DET	GPIO71
PF8	PD_I2C_DATA	PD_I2C_DATA	GPIO72 ²
PF9	PD_I2C_CLK	PD_I2C_CLK	GPIO73 ²
PF10	PRT_CTL2_U3	I2S_SDI	GPIO74
PF11	PRT_CTL3_U3	I2S_MCLK	GPIO75
PF12	PRT_CTL4_U3	PRT_CTL4_U3	GPIO76
PF13	PRT_CTL4	PRT_CTL4	GPIO77
PF14	PRT_CTL3	PRT_CTL3	GPIO78
PF15	PRT_CTL2	PRT_CTL2	GPIO79
PF16	PRT_CTL5	PRT_CTL5	GPIO80
PF17	PRT_CTL1	PRT_CTL1	GPIO81
PF18	ALERT0	ALERT0	GPIO82 ²
PF19		I2S_SDO	GPIO83
PF20	SPI_CE_N	SPI_CE_N	GPIO84 ³
PF21	SPI_CLK	SPI_CLK	GPIO85 ³
PF22	SPI_D0	SPI_D0	GPIO86 ³
PF23	SPI_D1	SPI_D1	GPIO87 ³
PF24	SPI_D2	SPI_D2	GPIO88 ³
PF25	SPI_D3	SPI_D3	GPIO89 ³
PF26	SLV_I2C_CLK	I2S_SCK	GPIO90
PF27	SLV_I2C_DATA	PRT_CTL6	GPIO91
PF28	PRT_CTL6	I2S_LRCK	GPIO92
PF29	UPD_RESET_N	UPD_RESET_N	GPIO93 ²
PF30	MSTR_I2C_CLK	MSTR_I2C_CLK	GPIO94
PF31	MSTR_I2C_DATA	MSTR_I2C_DATA	GPIO95

- ¹ These pins may not be used as GPIOs on this design. They may be used only if Downstream Port 1 is connected to a legacy port(Type-A)
- ² These pins may not be used as GPIOs on this design. They may only be used in special applications where USB Power Delivery is not implemented
- ³ These pins may not be used as GPIOs on this design. Can be used only in special applications where SPI Flash is not utilized

GPIO and SMBUS options

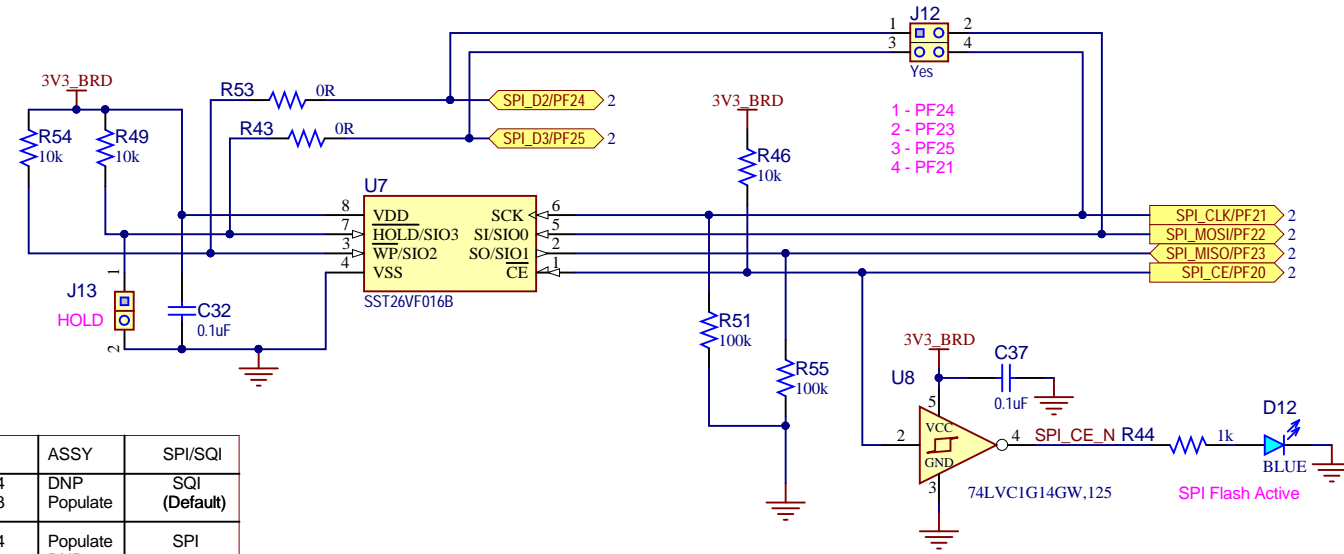


Drawn By: Mick Davis			
Engineer: Mick Davis			
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]	
Sheet Title USB7216 Part B			
Size Tabloid	Sch #:03-11049	Date: 10/23/2019 10:38:03 AM	Designed with
Revision: 3.0		Sheet 3 of 9	Altium.com
File: 11049-USB7056-PartB.SchDoc			

Memory

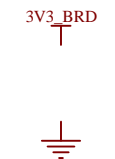
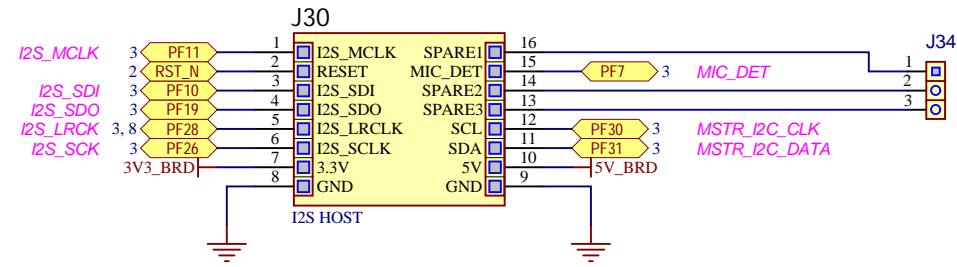
SPI Flash

Layout: Arrange all signals in this block with minimal stubs



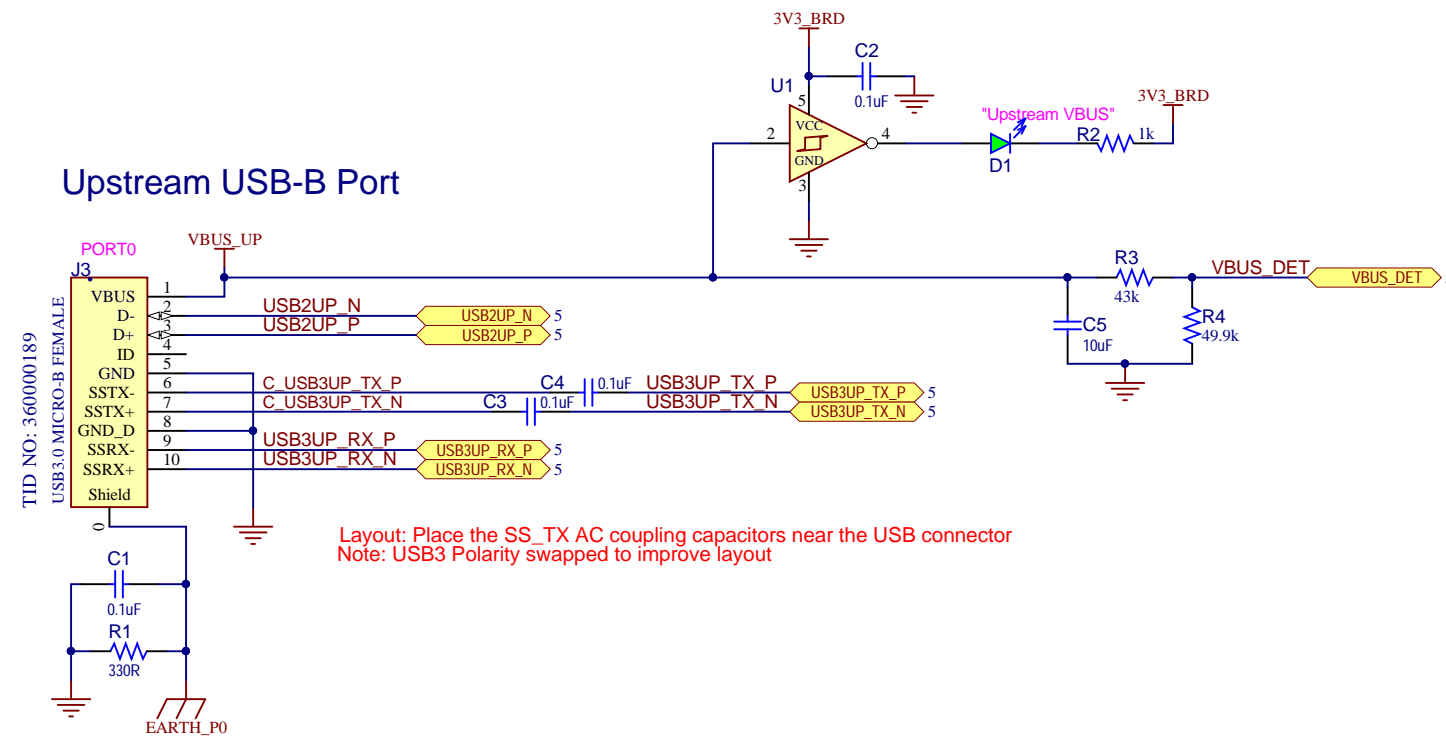
Resistor	ASSY	SPI/SQI
R49 & R54 R43 & R53	DNP Populate	SQI (Default)
R49 & R54 R43 & R53	Populate DNP	SPI

I2S Codec



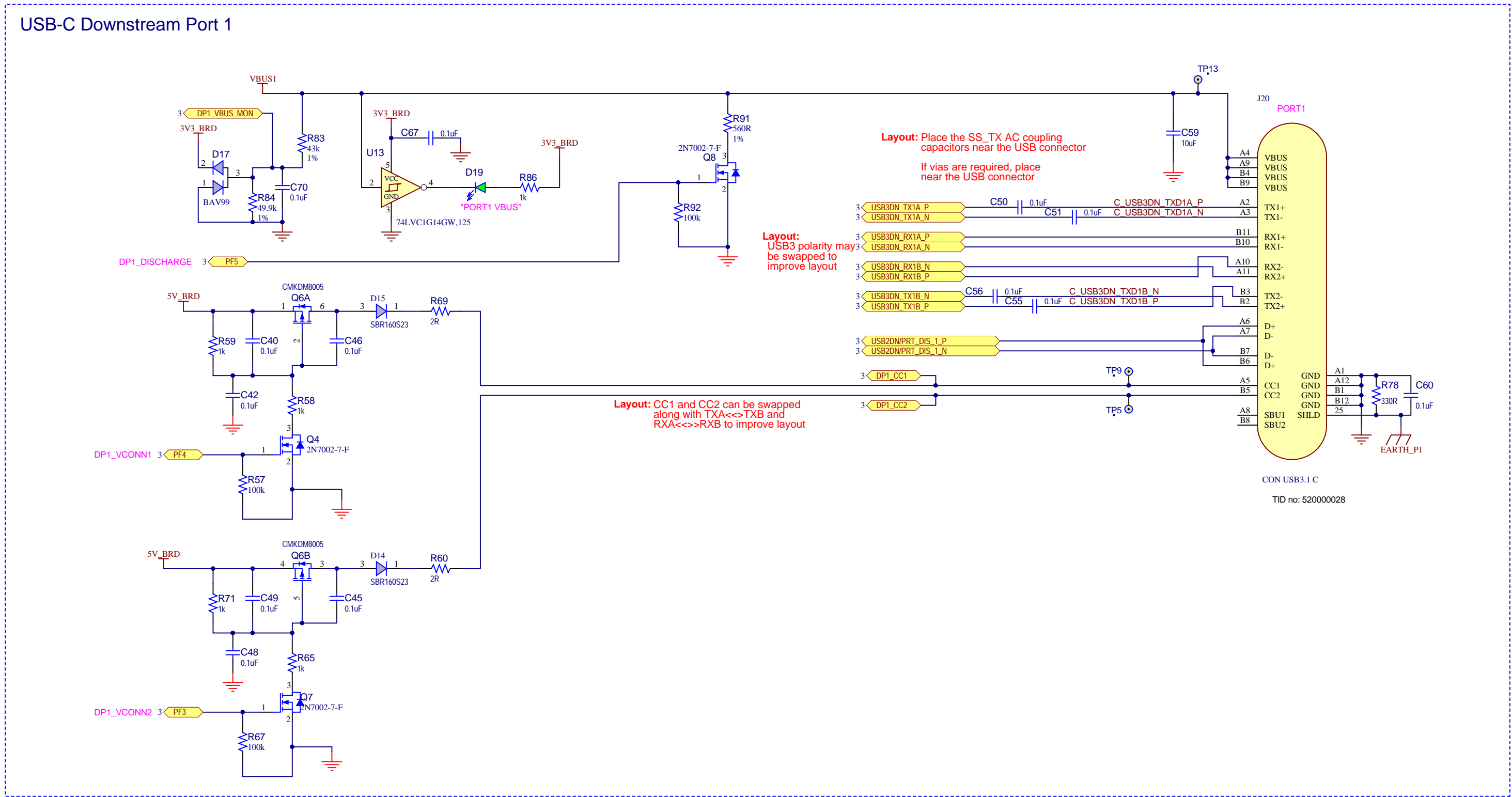
Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title Memory		
Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:03 AM Sheet 4 of 9
File: 11049-Memory.SchDoc		Designed with Altium.com

USB Type-B Upstream Port



Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title USB Type-B Upstream Port		Designed with
Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:04 AM Sheet 5 of 9
File: 11049-USB MicroB UFP.SchDoc		

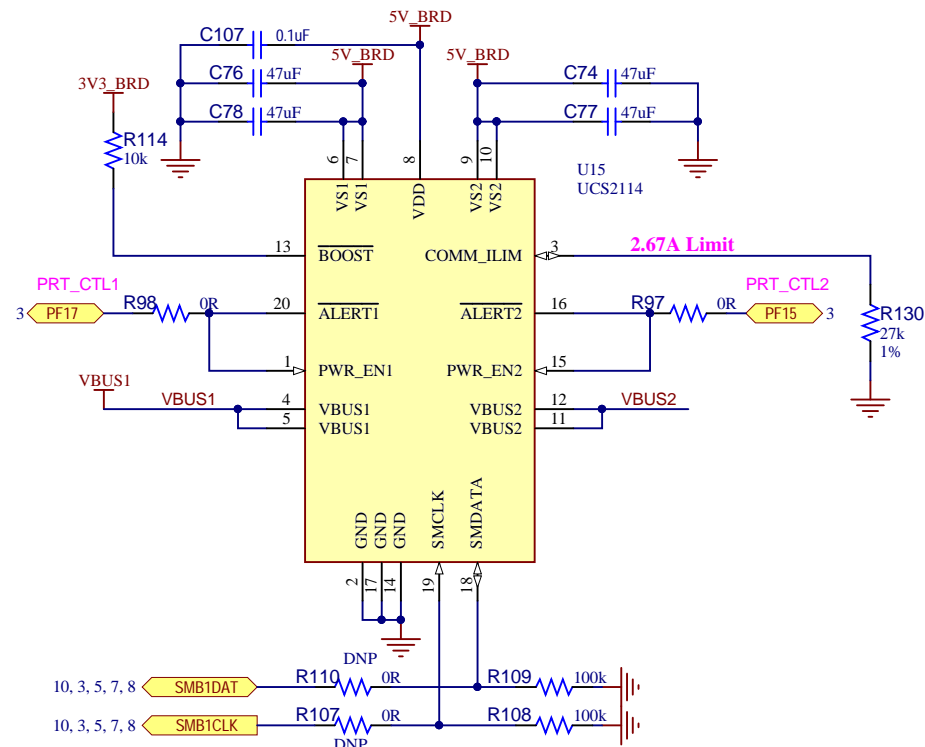
USB3.1 (Type-C) Downstream Port 1



Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
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Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:04 AM Sheet 6 of 9
File: 11049-USB-C Downstream 1.SchDoc		Designed with

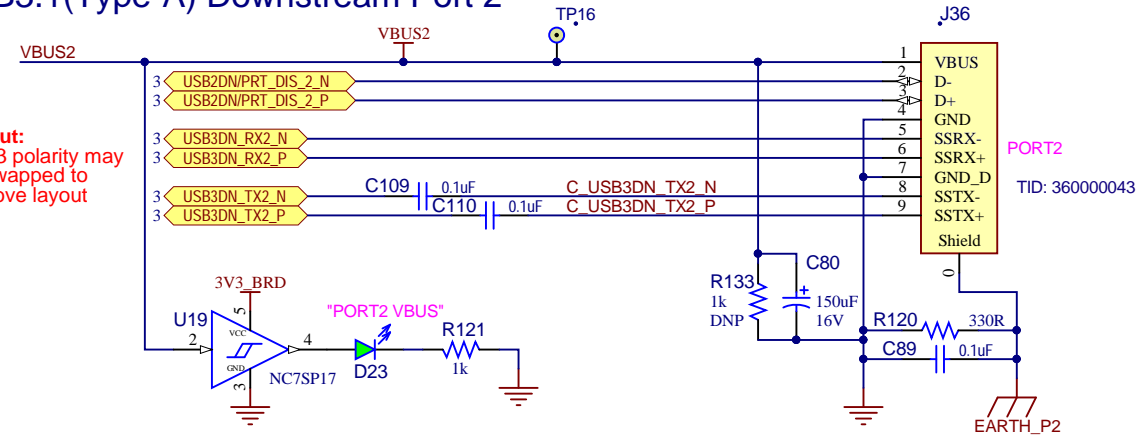
USB3.1 (Type-A) Downstream Ports 2-4

UCS2114 Power Switch For Port1 and Port2



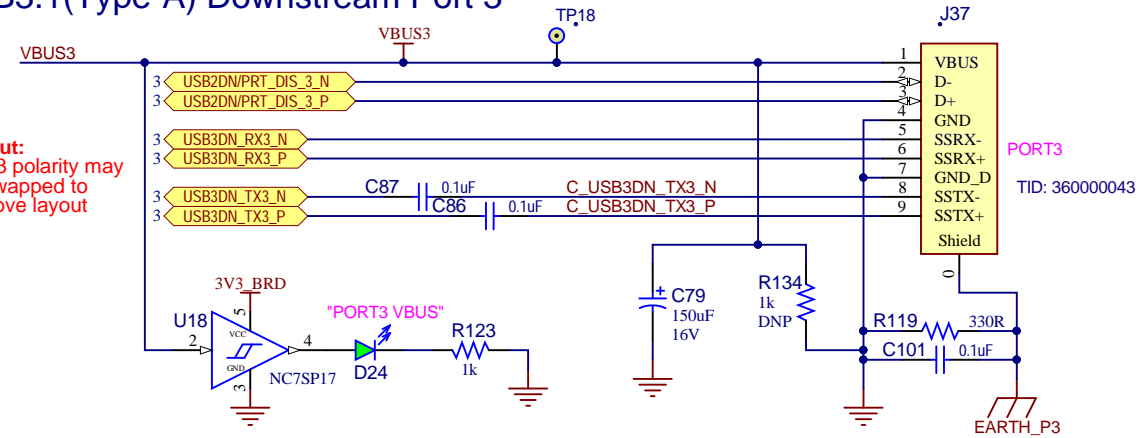
USB3.1(Type-A) Downstream Port 2

Layout:
USB3 polarity may be swapped to improve layout

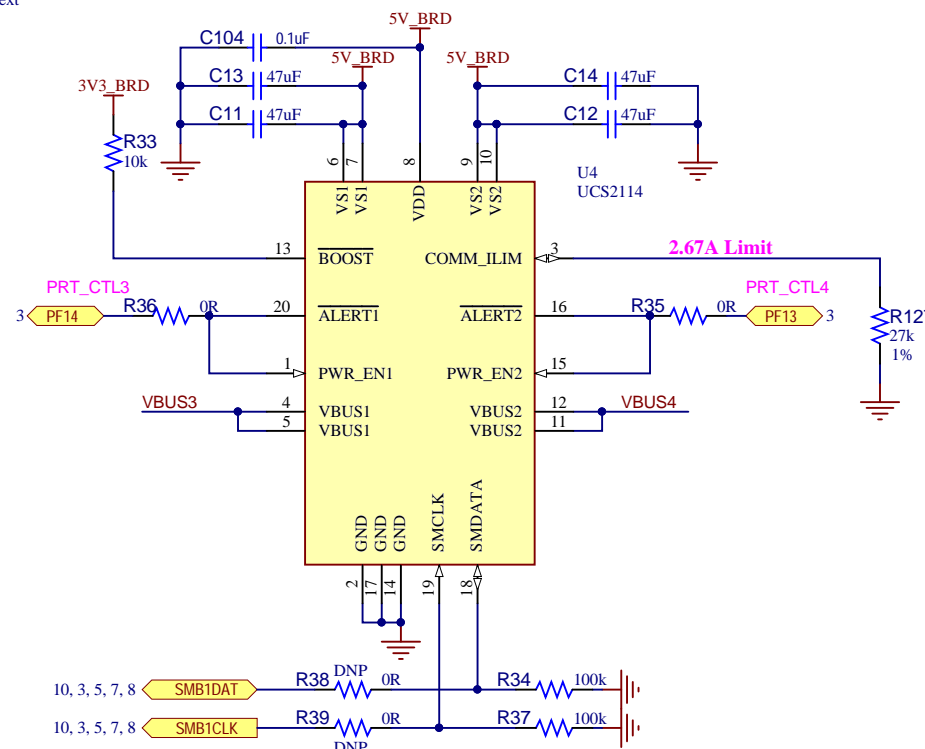


USB3.1(Type-A) Downstream Port 3

Layout:
USB3 polarity may be swapped to improve layout

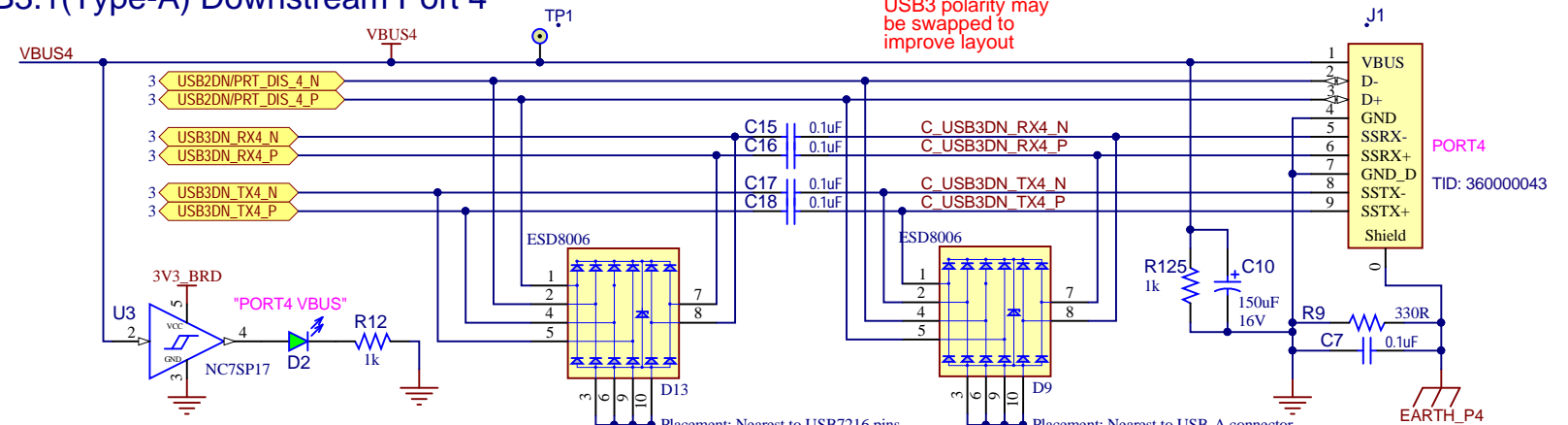


UCS2114 Power Switch For Port3 and Port4



USB3.1(Type-A) Downstream Port 4

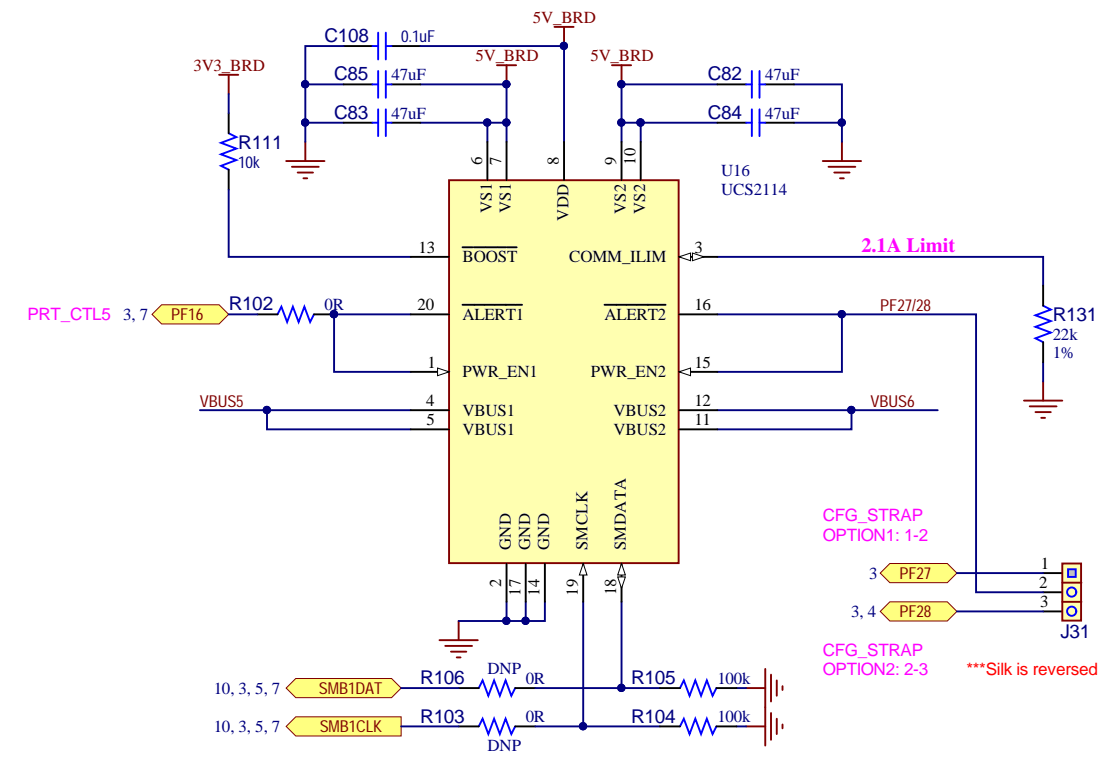
Layout:
USB3 polarity may be swapped to improve layout



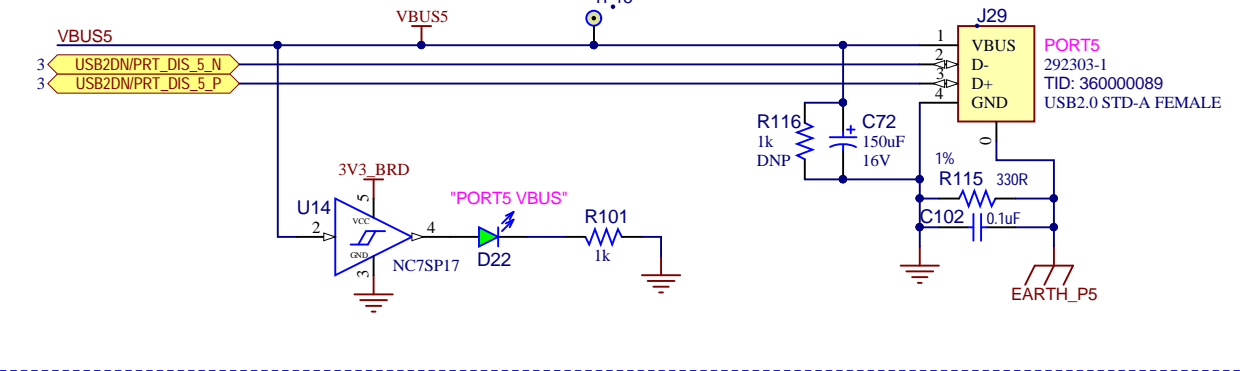
Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
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Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:04 AM Sheet 7 of 9
File: 11049-USB-A Downstream 2-4.SchDoc		Designed with

USB2.0 (Type-A) Downstream Ports 5-6

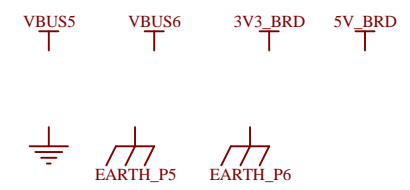
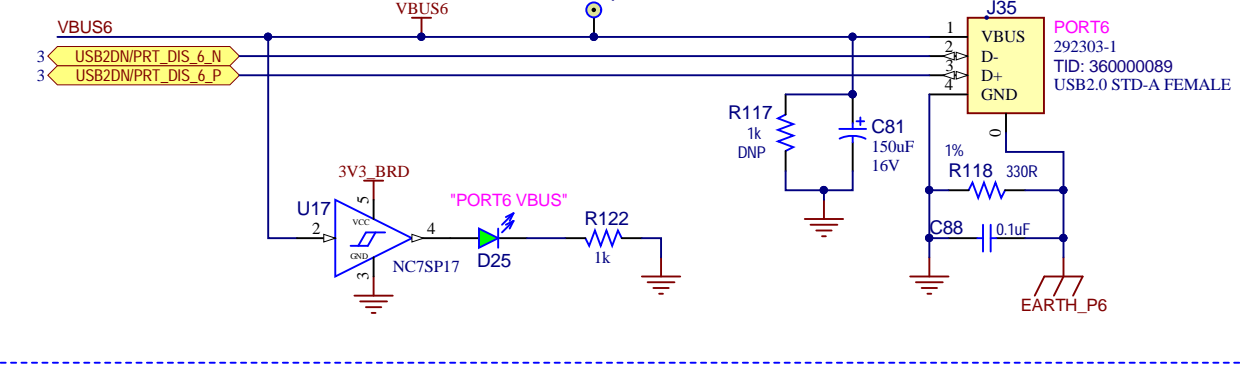
UCS2114 Power Switch For Port5 and Port6



USB-A Downstream Port 5

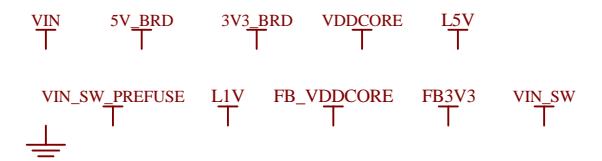
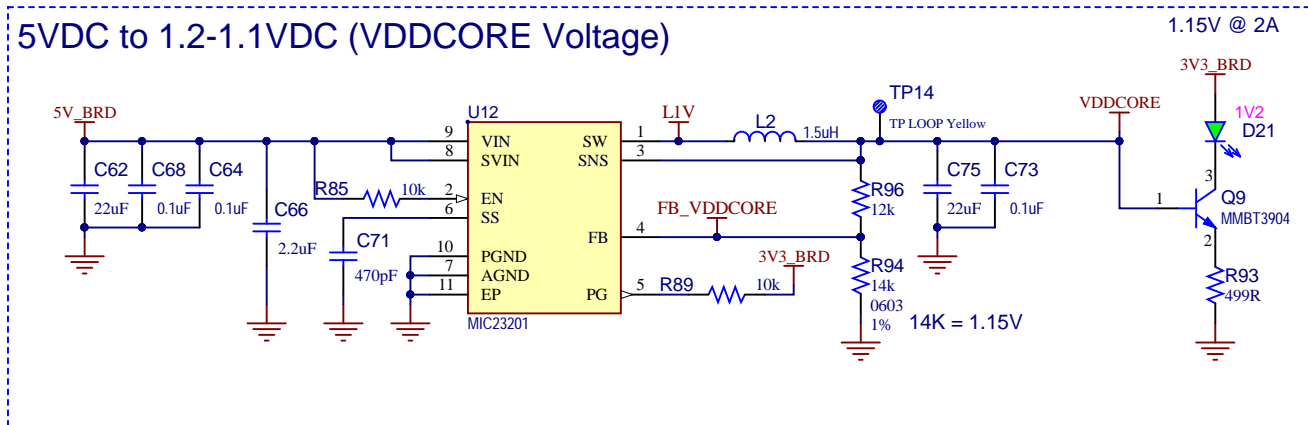
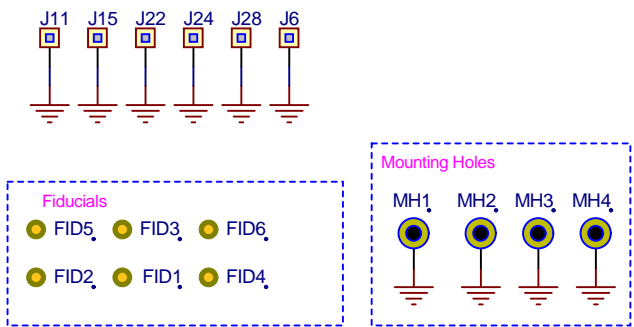
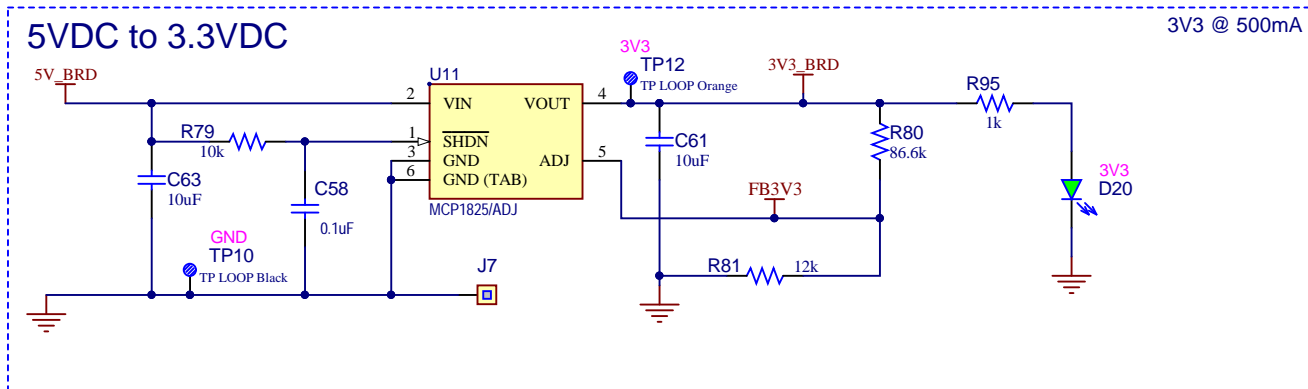
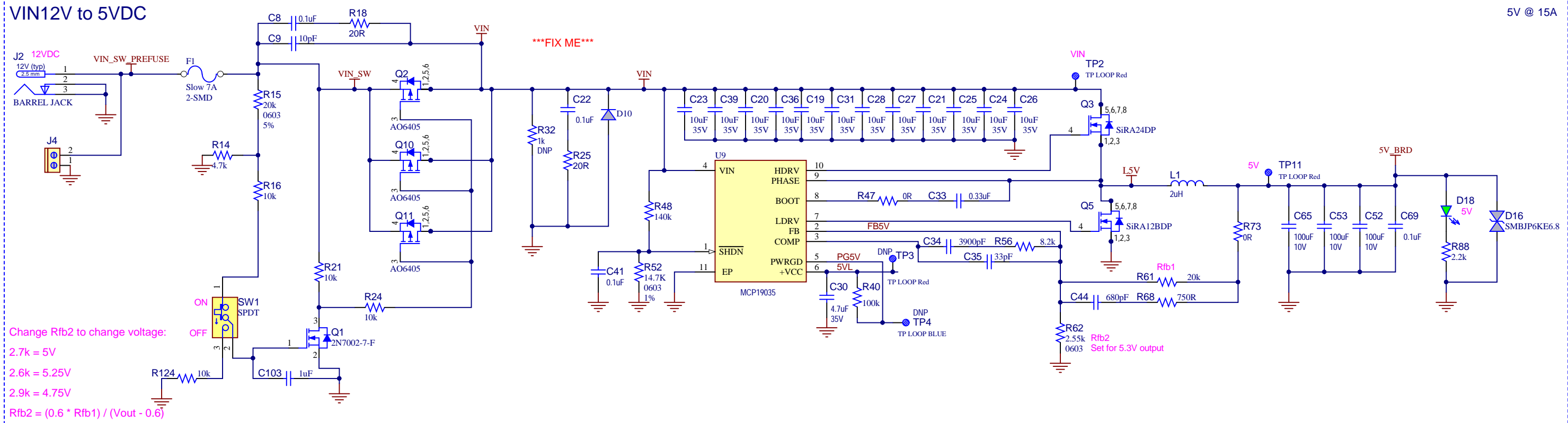


USB-A Downstream Port 6



Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title USB2.0 (Type-A) Downstream Ports 5-6		
Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:05 AM Sheet 8 of 9
File: 11049-USB-A Downstream 5-6.SchDoc		Designed with

Voltage Regulators



Drawn By: Mick Davis		
Engineer: Mick Davis		
PartNumber: 11049	Project Title EVB-USB7216	Variant: [No Variations]
Sheet Title Voltage Regulators		
Size Tabloid	Sch #:03-11049 Revision: 3.0	Date: 10/23/2019 10:38:05 AM Sheet 9 of 9
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