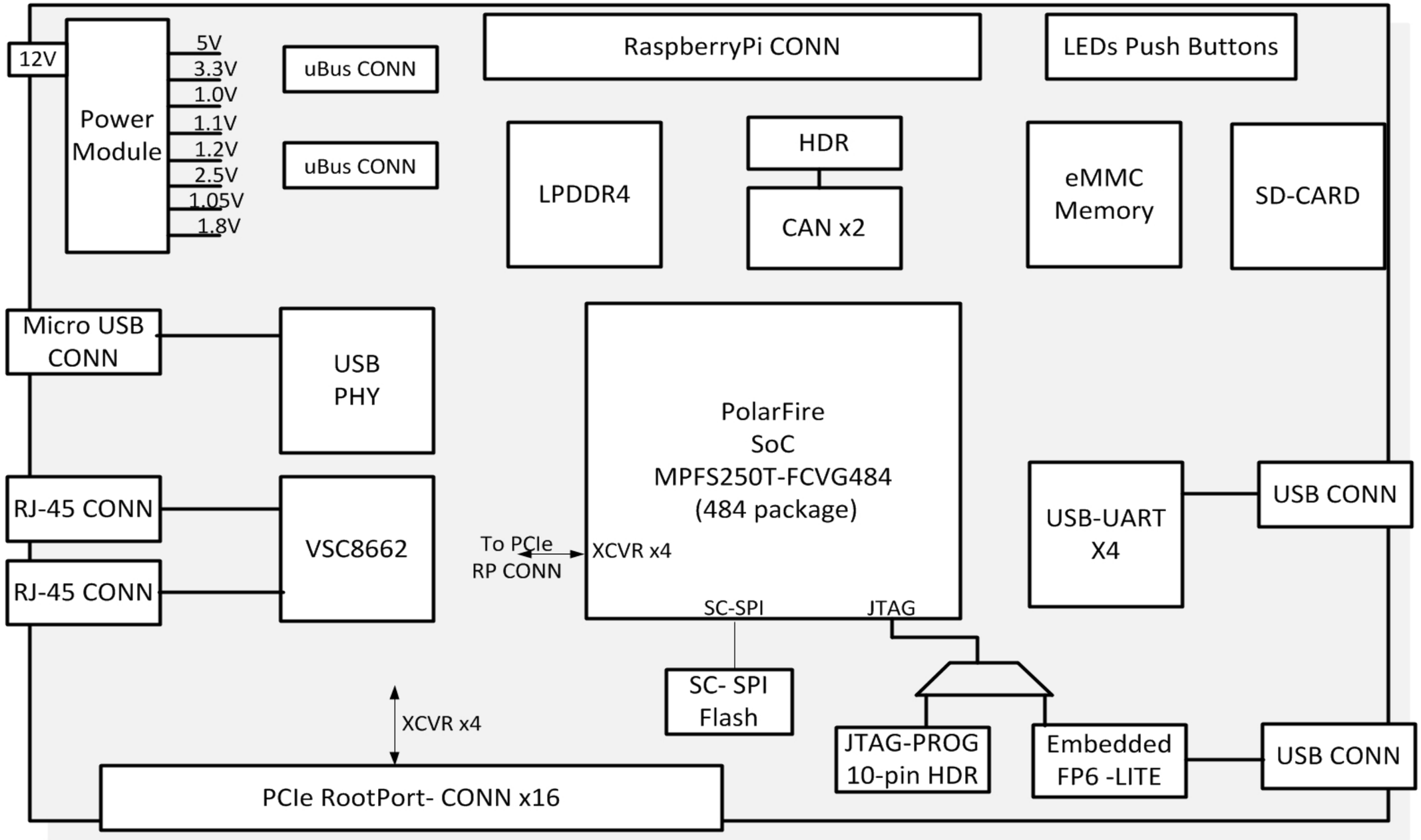
ICICLE Kit Rev1.0

PAGE NO	TITLE	PAGE NO	TITLE
01	TITLE PAGE	18	FP6_DDR3 MEMORY
02	BLOCK DIAGRAM	19	FP6_BANK2,3,4
03	LPDDR4_CONNECTION	20	FP6_BANK-1,5,6,7and MISC
04	VSC8662_MAC	21	FP6_USB3320_IF
05	VSC8662_G5_INTERFACE	22	FP6_POWER &GND
06	VSC8662_POWER & GND	23	POWER BLOCK DIAGRAM
07	PCIE CONNECTORS & MIKROBUS	24	POWER JACK-12V
08	USB-UART INTERFACE	25	POWER-5P0V_1P8V
09	USB INTERFACES-CON1	26	POWER-VDD
10	BANK-3-PROGRAMMING	27	1P1V_LPDDR4 & 1P2V_PHY_VSC
11	eMMC_INTERFACE	28	POWER:3P3V_VDDA
12	CAN & RPI INTERFACE	29	POWER:2P5V, DDR3 & VDDAUX4
13	PolarFire_SoC_Bank_Assign		
14	LEDs & DEBUG CIRCUITRY		
15	G5 SoC POWER		
16	DECOUPLING CAPACITOR		
17	FP6_BANK0-DDR3		

MICROCHIP

Project Name: ICICLE Kit		
Rev: 1.0	Part Number: DVP-102-000536-001	PACTRON:
Originator:		
Size: B	Date: Tuesday, June 23, 2020	Sheet 1 of 29

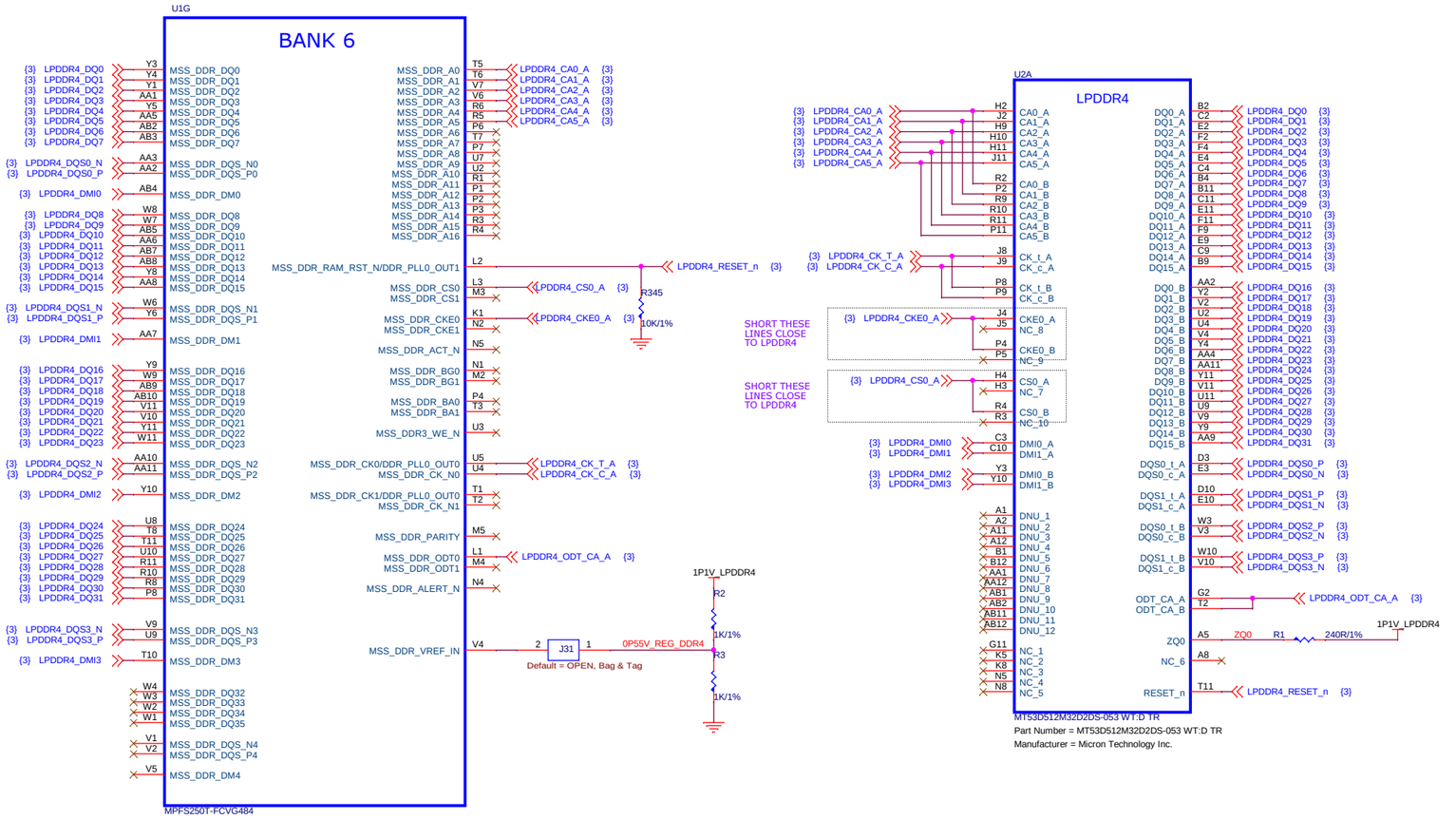
ICICLE KIT

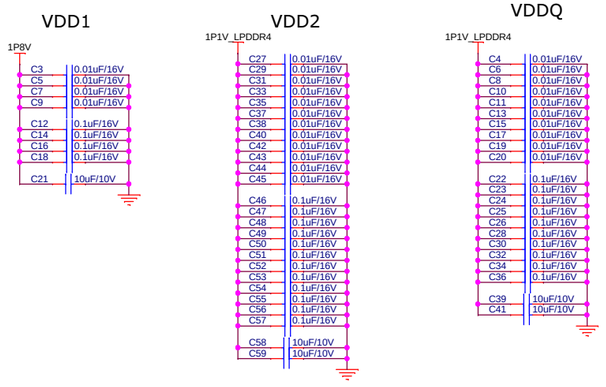


MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 2 OF 29	

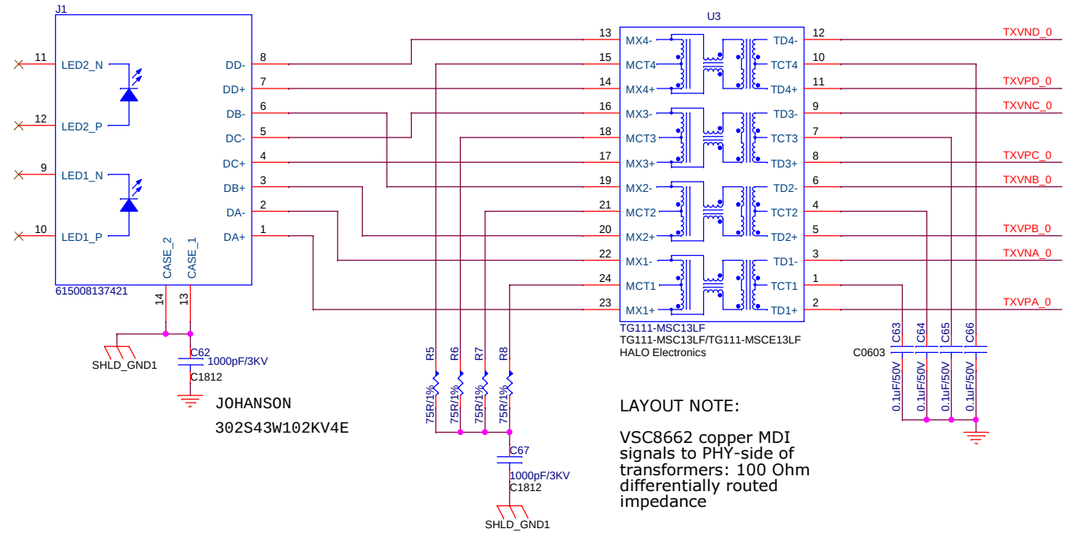
LPDDR4 Connection

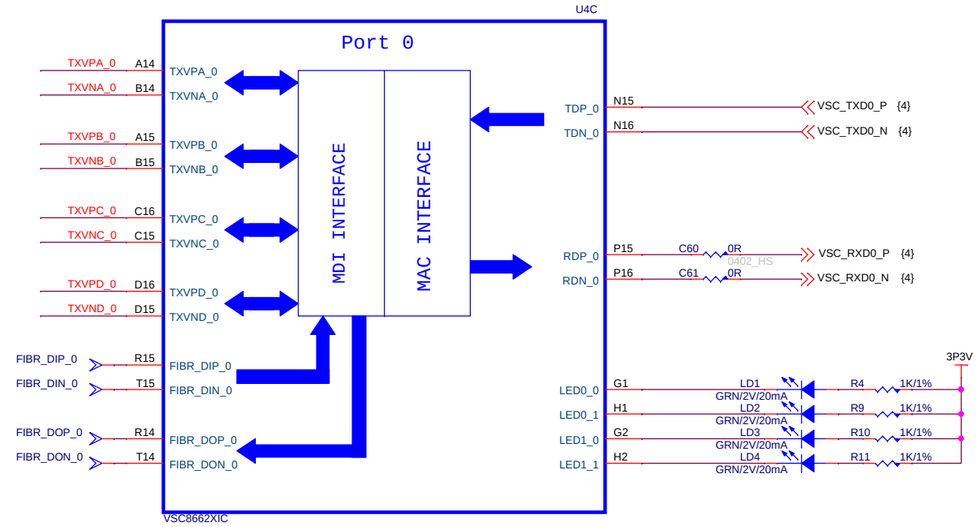




TITLE: ICICLE_KIT		
SIZE: C	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020		SH 3 OF 29

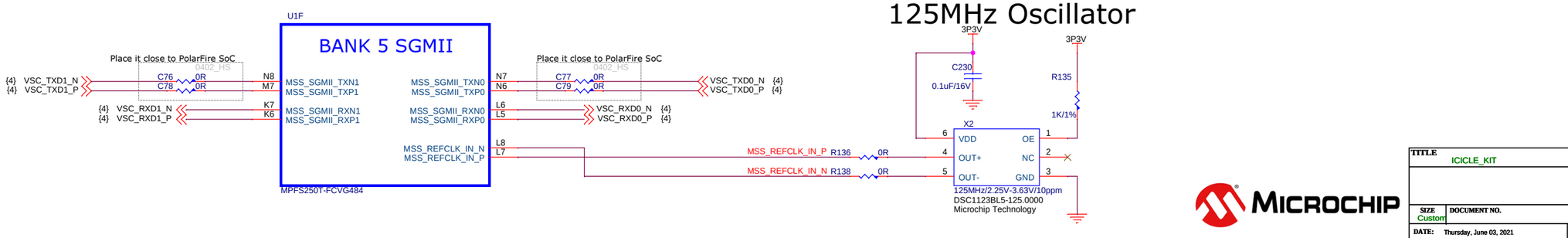
VSC8662 - SGMII Interface





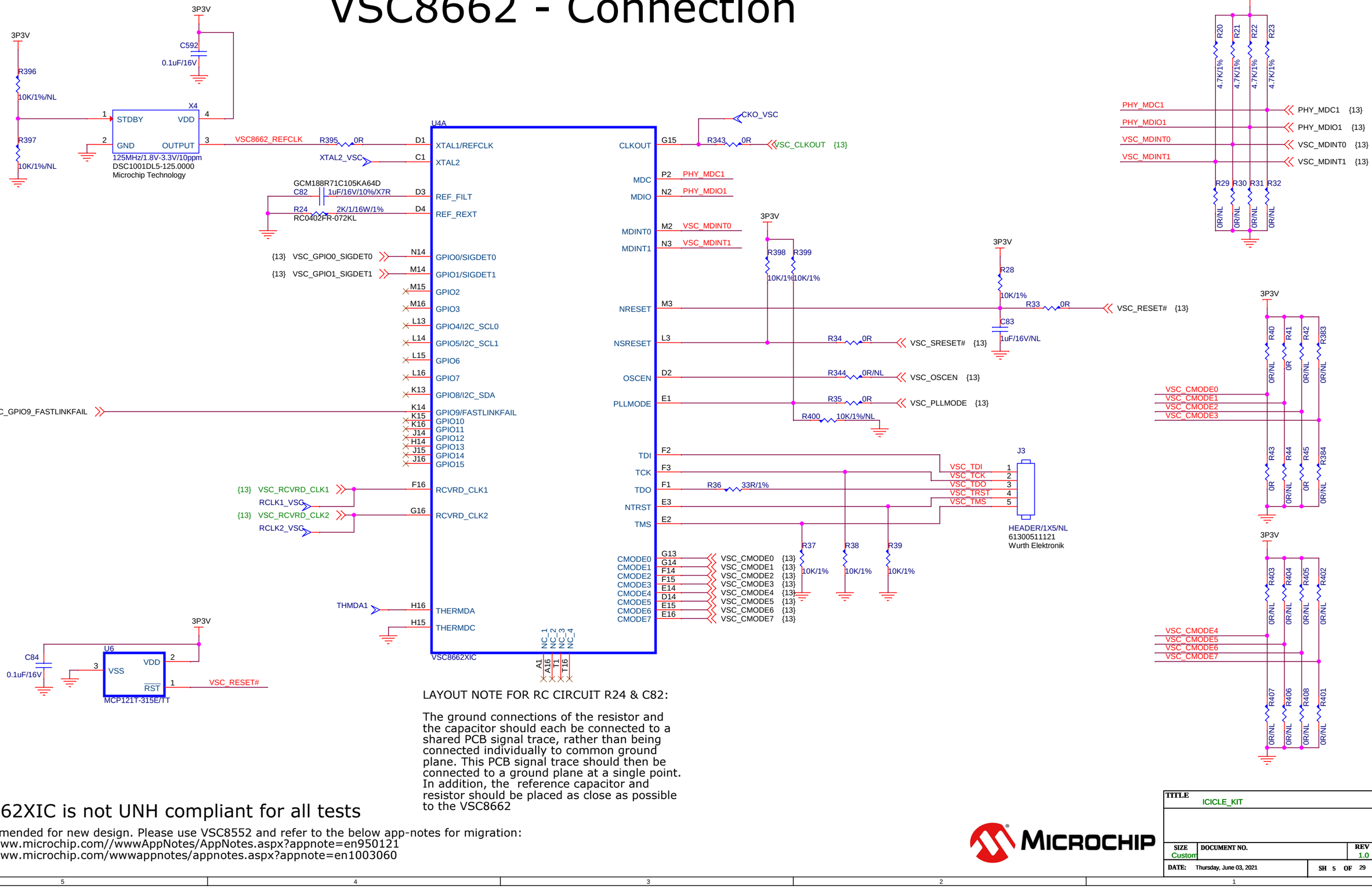
VSC8662XIC is not UNH compliant for all tests

Not recommended for new design. Please use VSC8552 and refer to the below app-notes for migration:
ohttps://www.microchip.com//wwwAppNotes/AppNotes.aspx?appnote=en950121
ohttps://www.microchip.com/wwwappnotes/appnotes.aspx?appnote=en1003060



TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021		SH 4 OF 29

VSC8662 - Connection



LAYOUT NOTE FOR RC CIRCUIT R24 & C82:

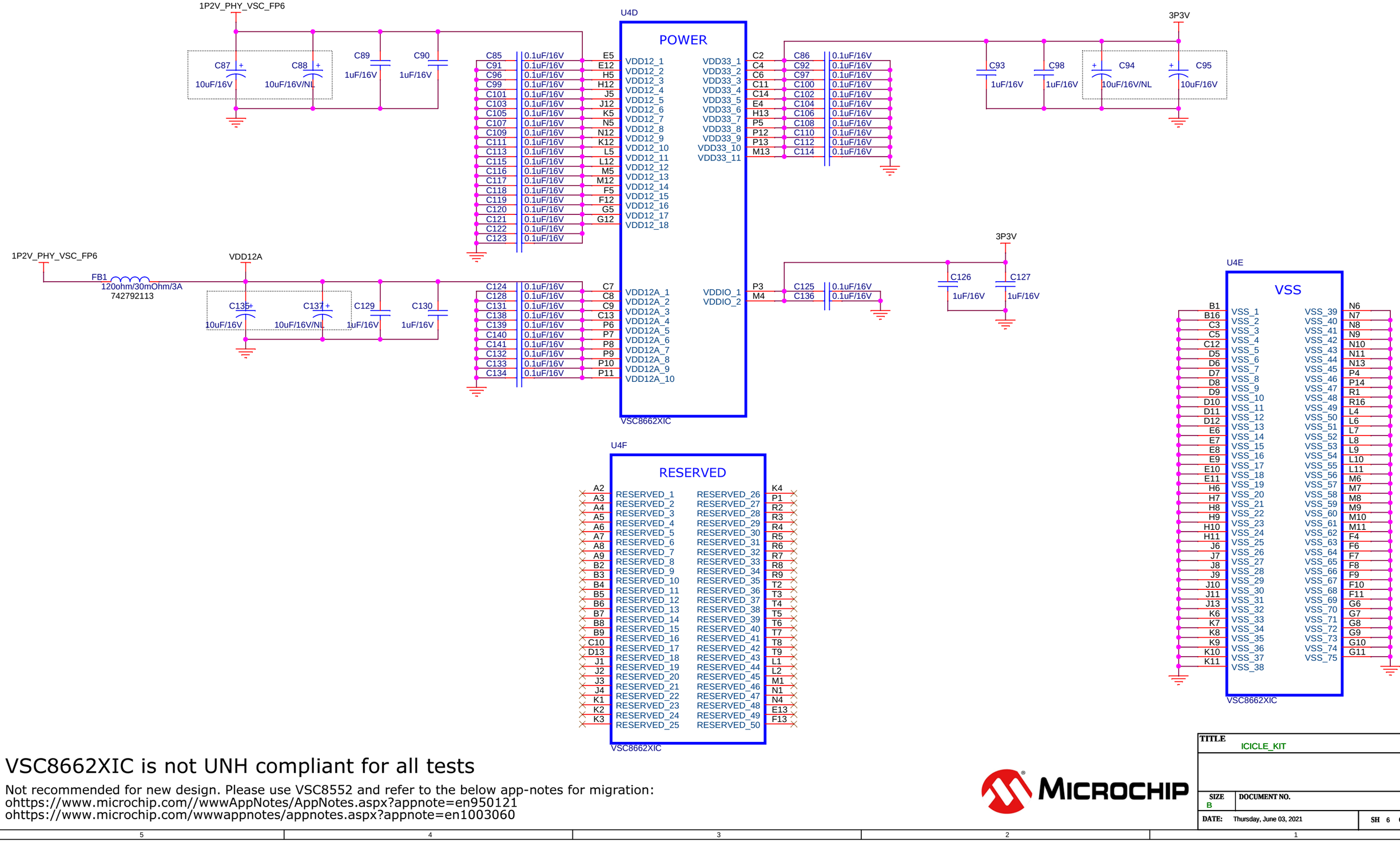
The ground connections of the resistor and the capacitor should each be connected to a shared PCB signal trace, rather than being connected individually to common ground plane. This PCB signal trace should then be connected to a ground plane at a single point. In addition, the reference capacitor and resistor should be placed as close as possible to the VSC8662

VSC8662XIC is not UNH compliant for all tests

Not recommended for new design. Please use VSC8552 and refer to the below app-notes for migration:
ohttps://www.microchip.com//wwwAppNotes/AppNotes.aspx?appnote=en950121
ohttps://www.microchip.com/wwwappnotes/appnotes.aspx?appnote=en1003060

TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 5 OF 29	

VSC8662-Power & Ground



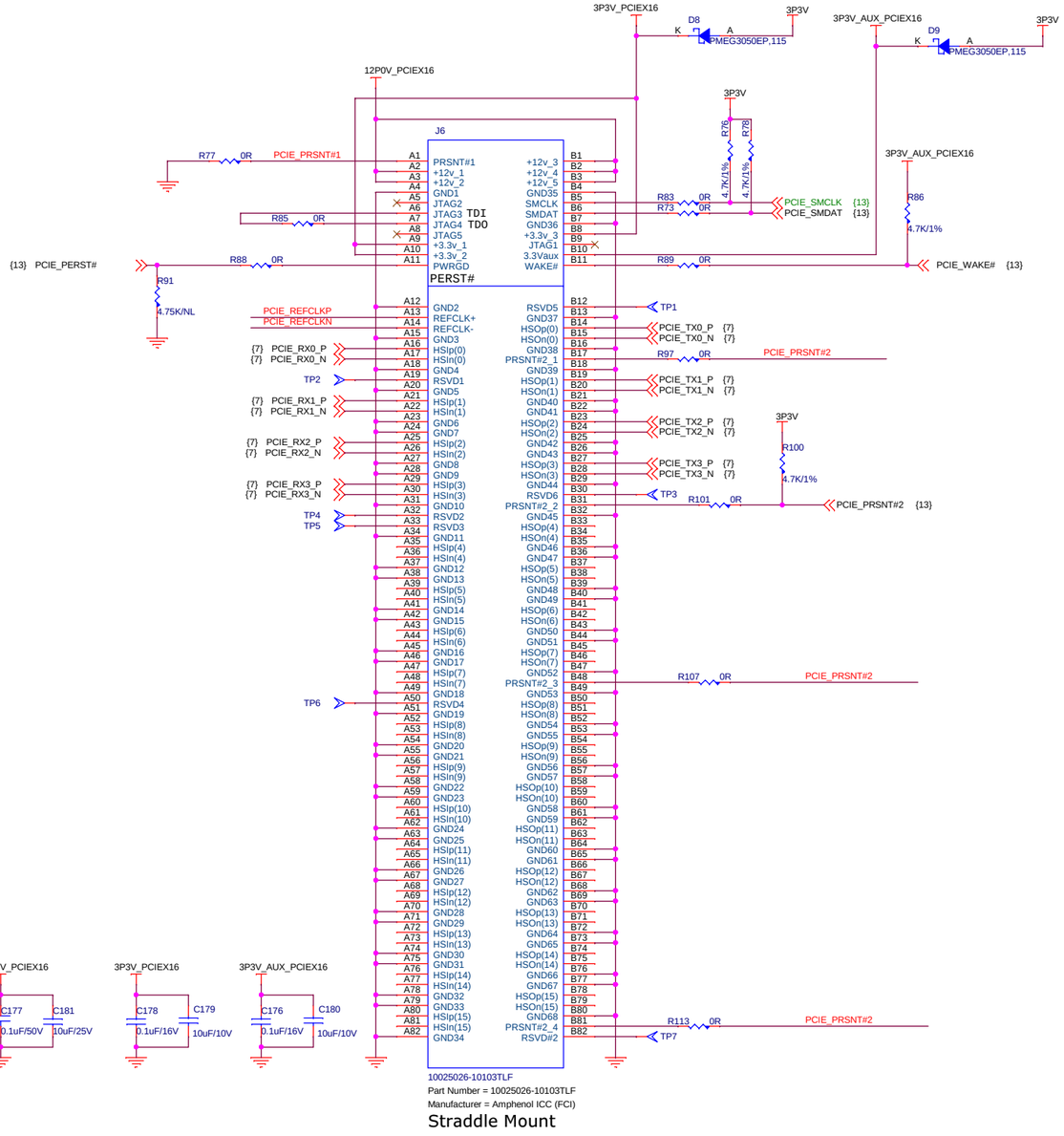
VSC8662XIC is not UNH compliant for all tests

Not recommended for new design. Please use VSC8552 and refer to the below app-notes for migration:
ohttps://www.microchip.com//wwwAppNotes/AppNotes.aspx?appnote=en950121
ohttps://www.microchip.com/wwwappnotes/appnotes.aspx?appnote=en1003060

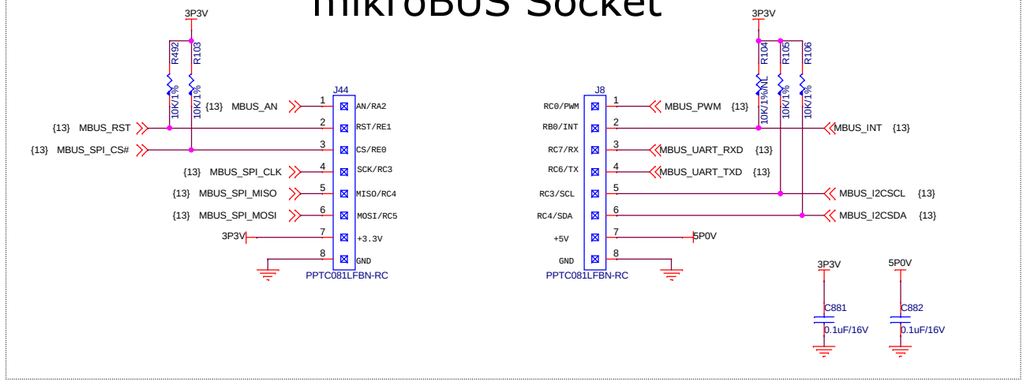
MICROCHIP

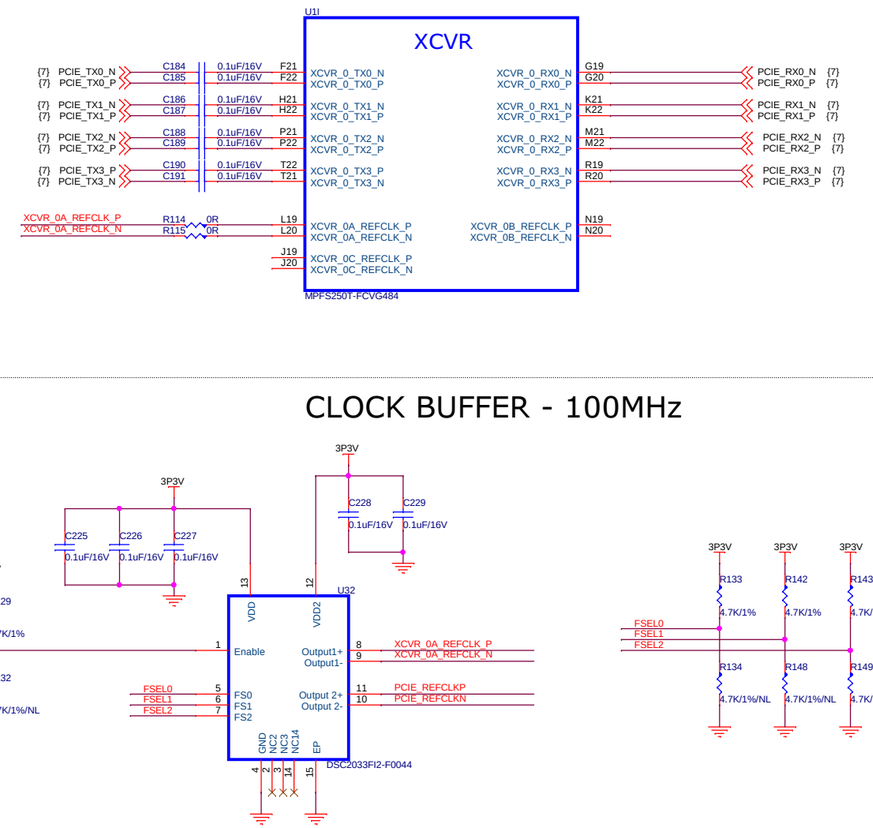
TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 6 OF 29	

PCIEX16 Connection

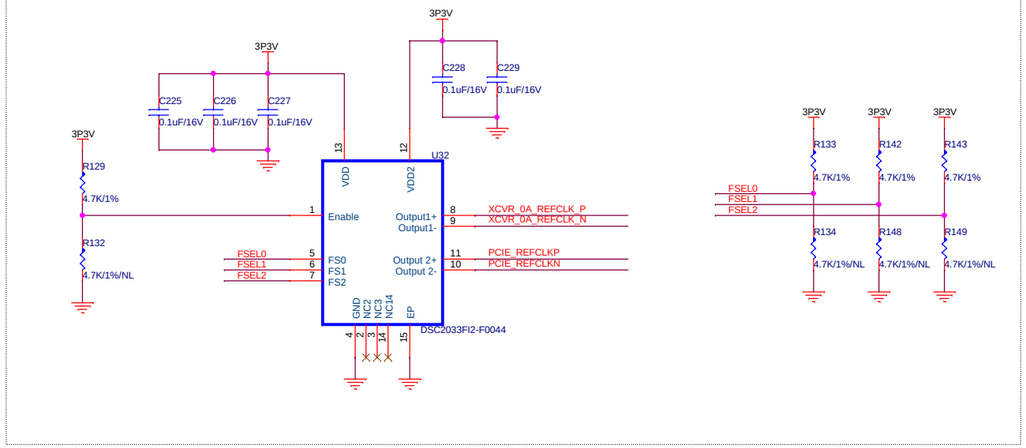


mikroBUS Socket



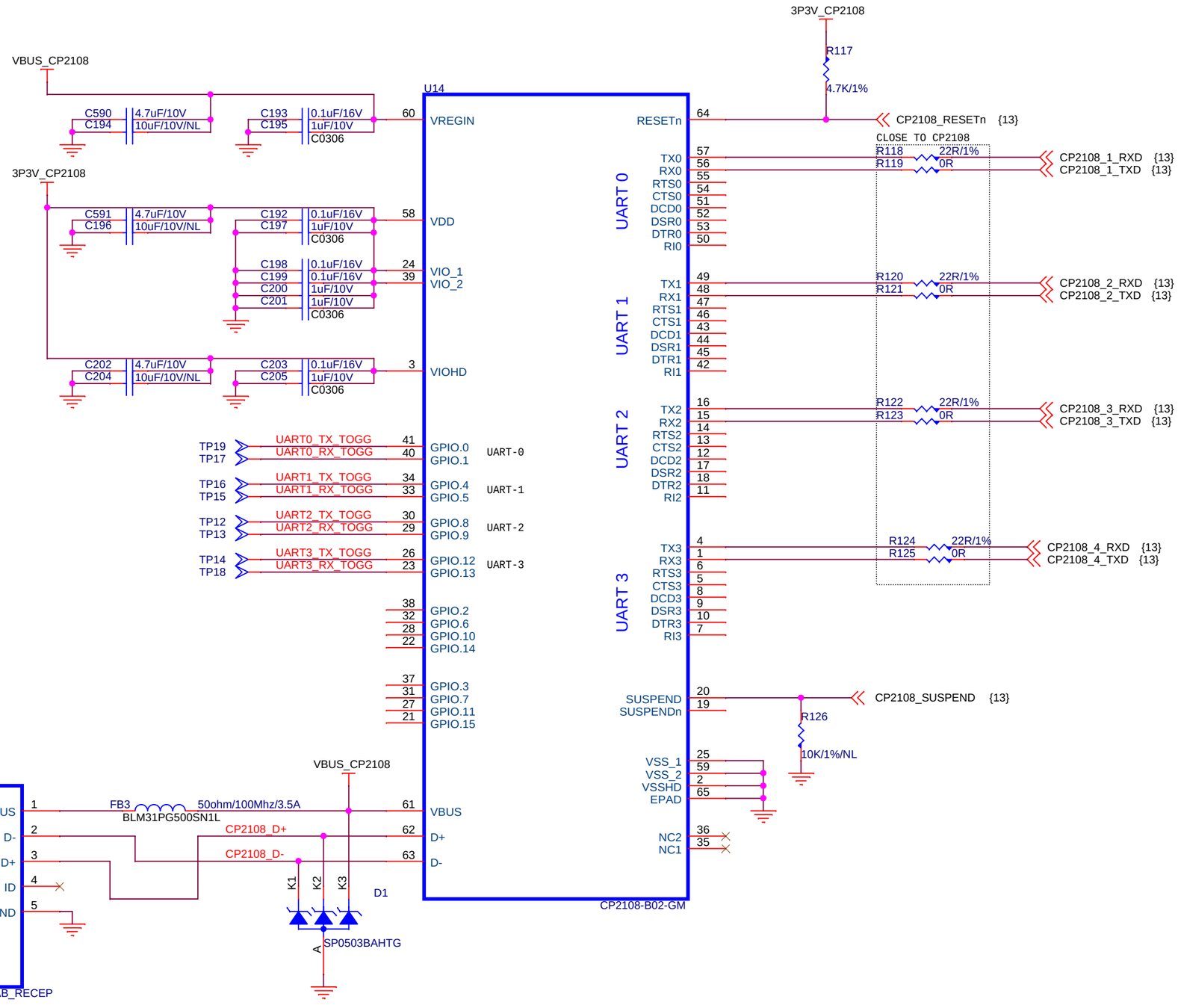


CLOCK BUFFER - 100MHz



TITLE	ICICLE_KIT	
SIZE Custom	DOCUMENT NO.	REV 1.0
DATE: Tuesday, June 30, 2020	SH 7 OF 29	

CP2108 CONNECTION



MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 8 OF 29	

USB-ULPI Interface

26.0 MHz Configuration.
REFCLK[2:0] = 110

USB3340-EZK-TR

USB3340_QFN32
Microchip Technology

VBUS SWITCH

MIC2544-1YM
Part Number = MIC2544-1YM
MANUFACTURER = Microchip Technology

Default Jumper = 1&2

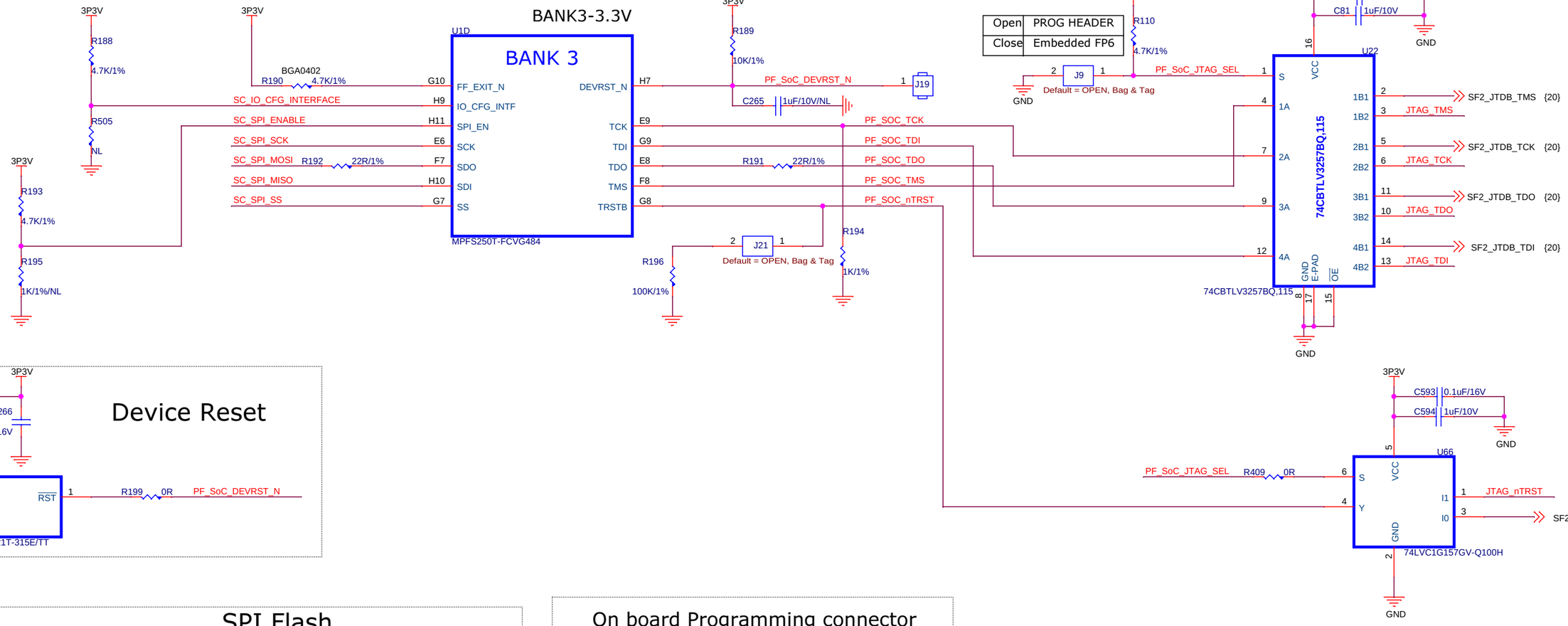
USB_MICRO_AB_RECEP
629105150921
Wurth Elektronik

HEADER/1x2
61300211121
Wurth Elektronik

Default Jumper = 1&2

TITLE	ICICLE_KIT
SIZE	Custom
DOCUMENT NO.	
REV	1.0
DATE:	Tuesday, June 23, 2020
SH	9 OF 29

Programming Section



TITLE	ICICLE_KIT
SIZE	Custom
DOCUMENT NO.	
REV	1.0
DATE:	Tuesday, June 30, 2020
SH	10 OF 29

SDIO INTERFACE

eMMC

U44

{13} SD_DATA0/EM_DATA0
{13} SD_DATA1/EM_DATA1
{13} SD_DATA2/EM_DATA2
{13} SD_DATA3/EM_DATA3
{13} SD_CMD/EM_CMD
{13} SD_CLK/EM_CLK

SD_CLK
SD_CMD
SD_D3
SD_D2
SD_D1
SD_D0

COM1 COM2 COM3 COM4 COM5 COM6
NC1 NC2 NC3 NC4 NC5 NC6
NO1 NO2 NO3 NO4 NO5 NO6
V+
GND
E-PAD
IN1 IN2 EN
N.C.

eMMC_DAT0
eMMC_DAT1
eMMC_DAT2
eMMC_DAT3
eMMC_CMD
eMMC_CLK

SW_SD_DAT0
SW_SD_DAT1
SW_SD_DAT2
SW_SD_DAT3
SW_SD_CMD
SW_SD_CLK

SDIO_SW_SEL0 {13}
SDIO_SW_SEL1 {13}
SDIO_SW_EN# {13}

R217 R218 R219 100K/1%

TS3A27518ETRTWRQ1
Part Number = TS3A27518ETRTWRQ1
MANUFACTURER = Texas Instruments

VDDI4
3P3V
J43
HEADER/3X1
61300311121
Default = 1&2
VCC_SD_EM
C283 C284 0.1uF/16V

U29

{13} SD_POW/EM_DATA4
{13} SD_SEL/EM_DATA5
{13} SD_VLT_EN/EM_DATA6
{13} SD_VLT_CMD_DIR/EM_DATA7
{13} SD_WP/EM_RSTN
{13} SD_CD/EM_STRB

SD_CLK_FB_EM_D4
SD_VSEL_EM_D5
SD_VEN_EM_D6
SD_CMD_DIR_EM_D7
SD_WP#_EM_RSTN
SD_CD#_EM_STB

eMMC_DAT4
eMMC_DAT5
eMMC_DAT6
eMMC_DAT7
eMMC_RST_n
EM_STRB

SW_SD_CLK_FB_SW
R497 0R/NL
SW_SD_CLK_FB

SW_SD_VLT_SEL
SW_SD_VLT_EN
SW_SD_CMD_DIR
SW_SD_WP#
SW_SD_CD#

SDIO_SW_SEL0
SDIO_SW_SEL1
SDIO_SW_EN#

C751 C752 0.1uF/16V

TS3A27518ETRTWRQ1
Part Number = TS3A27518ETRTWRQ1
MANUFACTURER = Texas Instruments

VDDI4
R206 R207 R208 R209 R210 R211 R212 R213 R214 49.9K
R215 10K/1%NL

U45-1
SDINBDG4-8G

DAT0 DAT1 DAT2 DAT3 DAT4 DAT5 DAT6 DAT7
CMD
CLK
RCLK
RST_n

eMMC_DAT4
eMMC_DAT5
eMMC_DAT6
eMMC_DAT7
eMMC_CMD
eMMC_CLK
EM_STRB
eMMC_RST_n

R216 10K/1%

VCC_E6 VCC_F5 VCC_J10 VCC_K9
VCCQ_C6 VCCQ_M4 VCCQ_N4 VCCQ_P3 VCCQ_P5
VDDI
VSF1 VSF2 VSF3 VSF4
VSS_E7 VSS_G5 VSS_H10 VSS_K8 VSS_J5 VSS_A6
VSSQ_C4 VSSQ_N2 VSSQ_N5 VSSQ_P4 VSSQ_P6

3P3V
C272 C273 C276 C274 C277 0.1uF/16V 4.7uF/16V
VDDI4
C275 C278 C279 C280 C281 C282 0.1uF/16V
C2 C285 0.1uF/16V
TP8 TP9 TP10 TP11

eMMC_CLK 1 eMMC_CLK

U45-2
SDINBDG4-8G

Truth Table for U44 & U29

EN#	IN1	IN2	COM-NC	COM-NO
H	X	X	OFF	OFF
L	L	L	ON	OFF
L	H	H	OFF	ON

Default selection is eMMC path (COM-NC)

VDDI4
3P3V
C287 0.1uF/16V
C286 C289 0.1uF/16V
C288 4.7uF/16V
R220 100K/1%
U46
IP4856CX25/CZ
VSUPPLY

SW_SD_VLT_EN
SW_SD_VLT_SEL
{13} SD_DAT0_DIR
{13} SD_DAT1-3_DIR
SW_SD_CMD_DIR
SW_SD_CLK_FB
SW_SD_WP#
SW_SD_CD#

VCCA ENABLE SEL DATA0_H DIR_0 DATA1_H DATA2_H DATA3_H DIR_1_3 CMD_H DIR_CMD CLK_IN CLK_FB WP CD
VSD_REF VLDO DATA0_SD DATA1_SD DATA2_SD DATA3_SD CMD_SD CLK_SD GND

SD_DAT0 SD_DAT1 SD_DAT2 SD_DAT3 SD_CMD SD_CLK

R221 0R/NL
R222 0R
VLDO_SD
C766 0.1uF/16V
C767 1uF/10V

SW_SD_WP#
SW_SD_CD#
SD_CLK
SD_DAT3
SD_DAT2
SD_DAT1
SD_DAT0
SD_CMD

J30
CLK CD/DAT3 DAT2 DAT1 DAT0 CMD
Card Detect WP VDD VSS2 VSS1 SH1 SH2
10067847-001RLF
SD CARD

SDC_CMD SDC_D0 SDC_D1 SDC_D2 SDC_D3 SDC_CLK

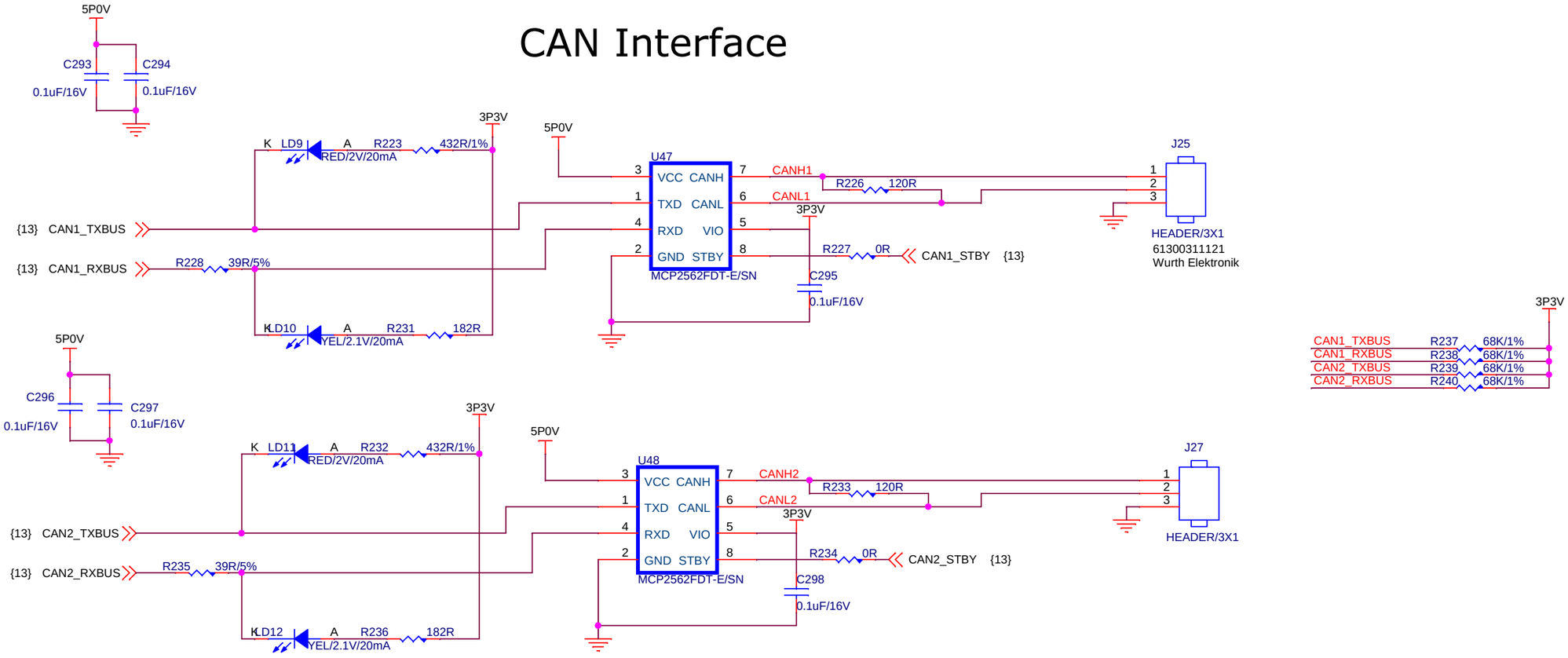
3P3V
C290 C291 0.1uF/16V
C292 4.7uF/16V

SEL-H- 1.8V Operation
SEL-L- 3V Operation

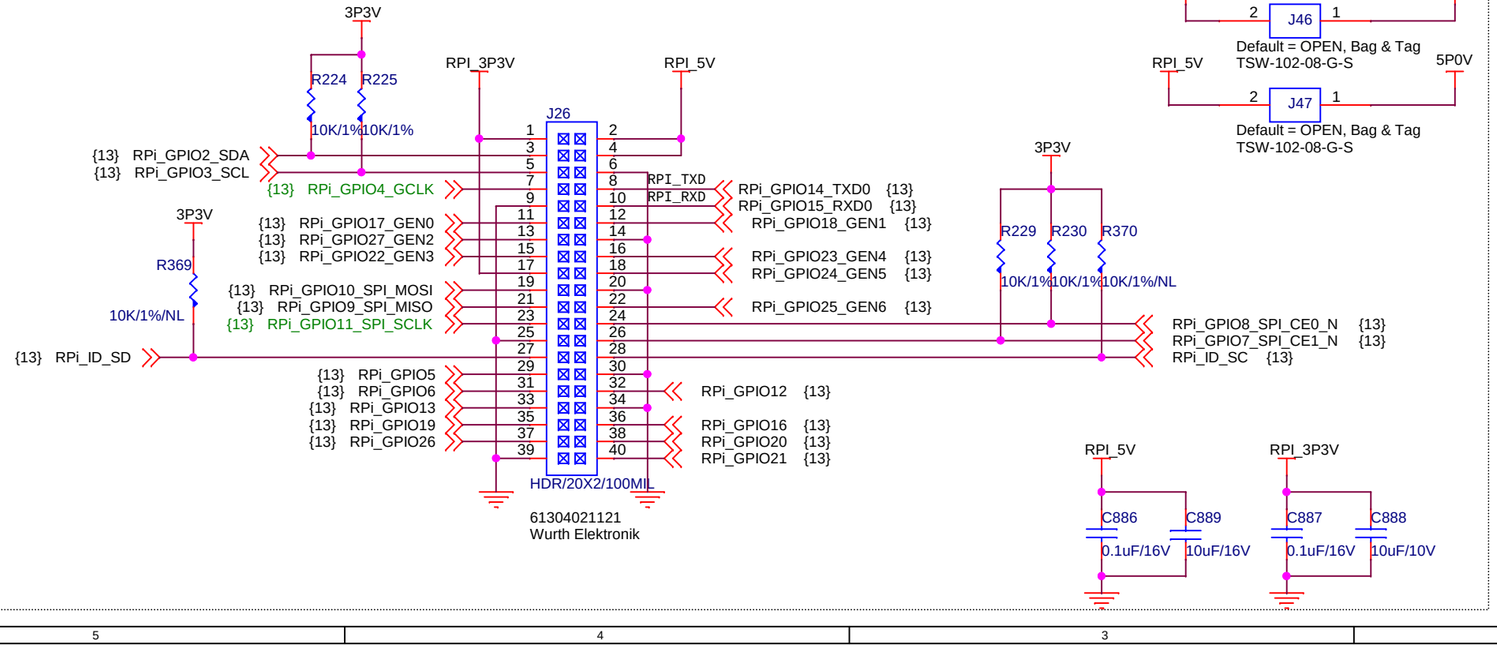
MICROCHIP

TITLE	ICICLE_KIT	
SIZE C	DOCUMENT NO.	REV 1.0
DATE: Tuesday, June 23, 2020	SH 11 OF 29	

CAN Interface

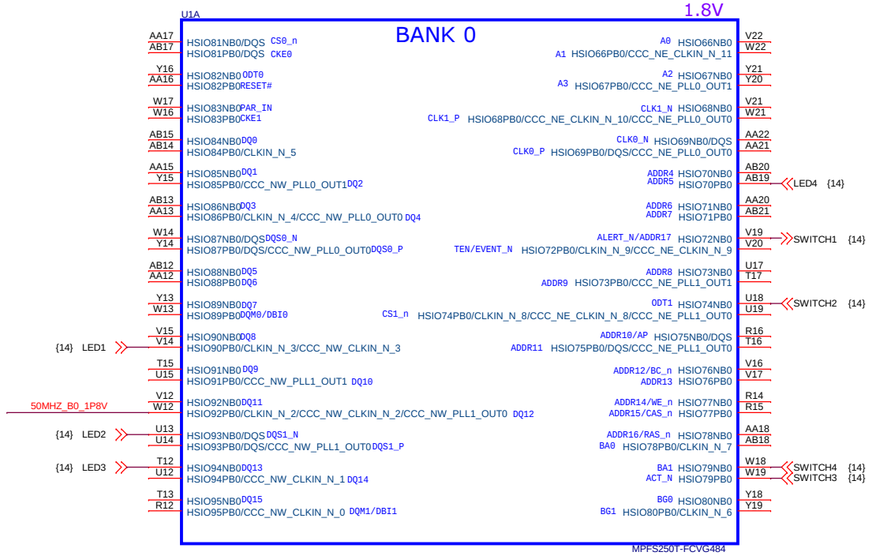


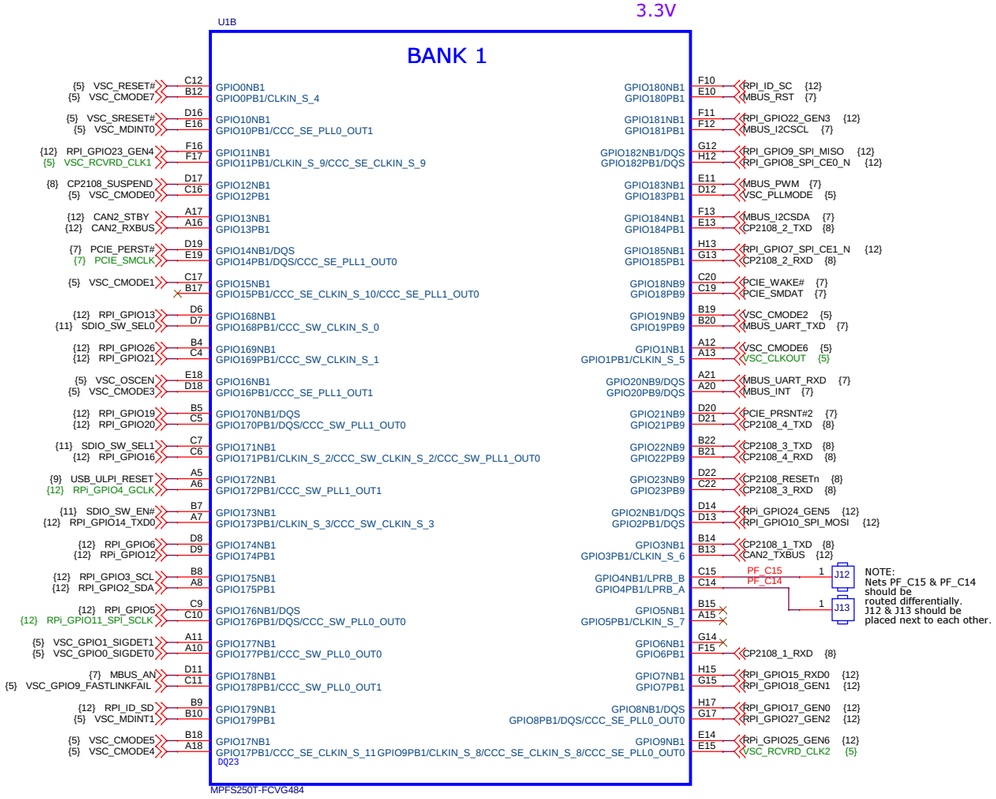
Raspberry Pi 4 Interface

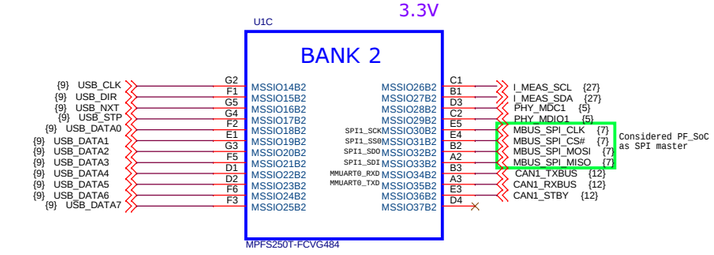


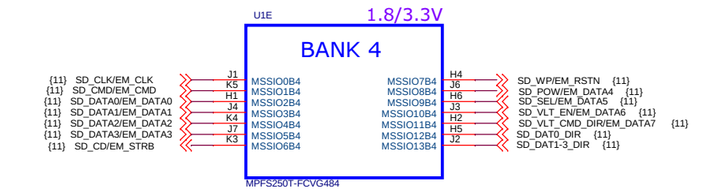
TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 12 OF 29	

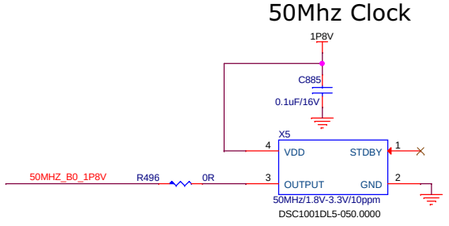
PolarFire SoC Bank Assignment









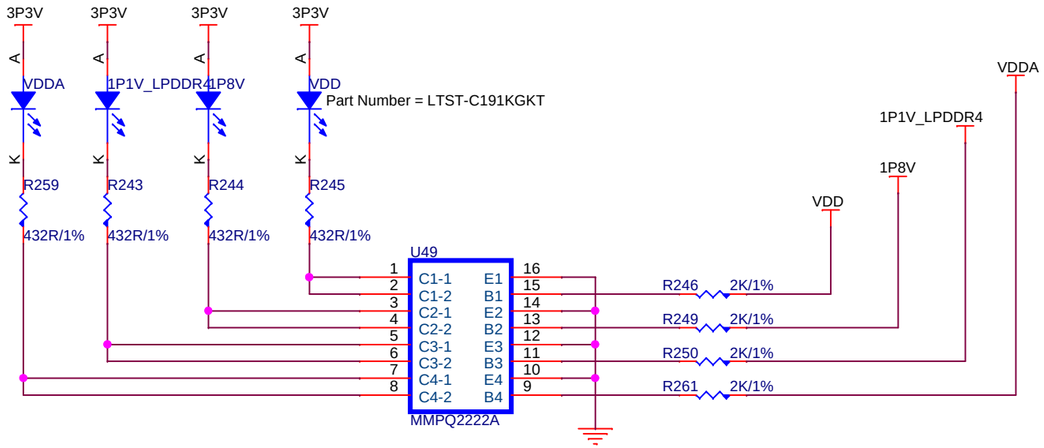


Pin No	Bank	Pin Functionality
J1	MSSIO0B4	SD_CLK/EM_CLK /QSPI_SCK/SPI0_SCK
K5	MSSIO1B4	SD_CMD/EM_CMD/MMUART3_RXD/I2C0_SCL
H1	MSSIO2B4	SD_DATA0/EM_DATA0/MMUART3_TXD/I2C0_SDA
J4	MSSIO3B4	SD_DATA1/EM_DATA1/MMUART4_RXD/CAN0_TXBUS
K4	MSSIO4B4	SD_DATA2/EM_DATA2/MMUART4_TXD/CAN0_RXBUS
J7	MSSIO5B4	SD_DATA3/EM_DATA3/MMUART0_RXD/CAN0_TX_EBL_N
K3	MSSIO6B4	SD_CD/EM_STRB/MMUART0_TXD
H4	MSSIO7B4	SD_WP/EM_RSTN/MMUART2_RXD/I2C1_SCL/MDC1
J6	MSSIO8B4	SD_POW/EM_DATA4/QSPI_SS0/MMUART2_TXD/I2C1_SDA/MDIO1
H6	MSSIO9B4	VLT_SEL/EM_DATA5/QSPI_SDI0/MMUART0_RXD/MDC0
J3	MSSIO10B4	VLT_EN/EM_DATA6/QSPI_SDI1/MMUART0_TXD/MDIO0
H2	MSSIO11B4	VLT_CMD_DIR/EM_DATA7/QSPI_SDI2/SPI0_SDO/MMUART1_RXD/CAN1_TXBUS
H5	MSSIO12B4	VLT_DIR_0/QSPI_SDI3/SPI0_SDI/MMUART1_TXD/CAN1_RXBUS
J2	MSSIO13B4	VLT_DIR_1_3/SPI0_SS0/CAN1_TX_EBL_N/WD_RESETN
G2	MSSIO14B2	QSPI_SCK/SPI1SCK/USB_CLK
F1	MSSIO15B2	SPI1_SDO/USB_DIR/MMUART4_RXD/MDC1
G5	MSSIO16B2	SPI1_SDI/USB_NXT/MMUART4_TXD/MDIO1
G4	MSSIO17B2	SPI1_SS0/USB_STP/MMUART0_RXD
F2	MSSIO18B2	USB_DATA0/MMUART0_TXD/WD_RESETN
E1	MSSIO19B2	USB_DATA1/MMUART1_RXD/H2F_MONITOR
G3	MSSIO20B2	USB_DATA2/MMUART1_TXD/I2C0_SCL
F5	MSSIO21B2	USB_DATA3/MMUART2_RXD/I2C0_SDA/CAN0_TX_EBL_N
D1	MSSIO22B2	USB_DATA4/MMUART2_TXD/CAN0_TXBUS
D2	MSSIO23B2	SPI0_SS0/USB_DATA5/MMUART3_RXD/CAN0_RXBUS
F6	MSSIO24B2	SPI0_SDI0/USB_DATA6/MMUART3_TXD/I2C1_SCL/MDC0
F3	MSSIO25B2	SPI0_SDO/USB_DATA7/I2C1_SDA/MDIO0
C1	MSSIO26B2	SD_LED/I2C1_SCL
B1	MSSIO27B2	SD_VOLT_0/I2C1_SDA/CAN1_TX_EBL_N
D3	MSSIO28B2	SD_VOLT_1/MMUART0_RXD/CAN1_TXBUS/MDC1
C2	MSSIO29B2	SD_VOLT_2/MMUART0_TXD/CAN1_RXBUS/MDIO1
E5	MSSIO30B2	QSPI_SCK/SPI1_SCK
E4	MSSIO31B2	QSPI_SS0/SPI1_SS0/CAN0_TXBUS
B2	MSSIO32B2	SD_CLE/QSPI_SD0/SPI1_SDO/CAN0_RXBUS
A2	MSSIO33B2	SD_LED/QSPI_SD1/SPI1_SDI/CAN0_TX_EBL_N
B3	MSSIO34B2	SD_VOLT_0/QSPI_SD2/CAN1_TXBUS
A3	MSSIO35B2	SD_VOLT_1/QSPI_SD3/MMUART0_RXD/I2C0_SCL/CAN1_RXBUS/MDC0
E3	MSSIO36B2	SD_VOLT_2/MMUART0_TXD/I2C0_SDA/CAN1_TX_EBL_N/MDIO0
D4	MSSIO37B2	QSPI_SCK/SPI0_SCK

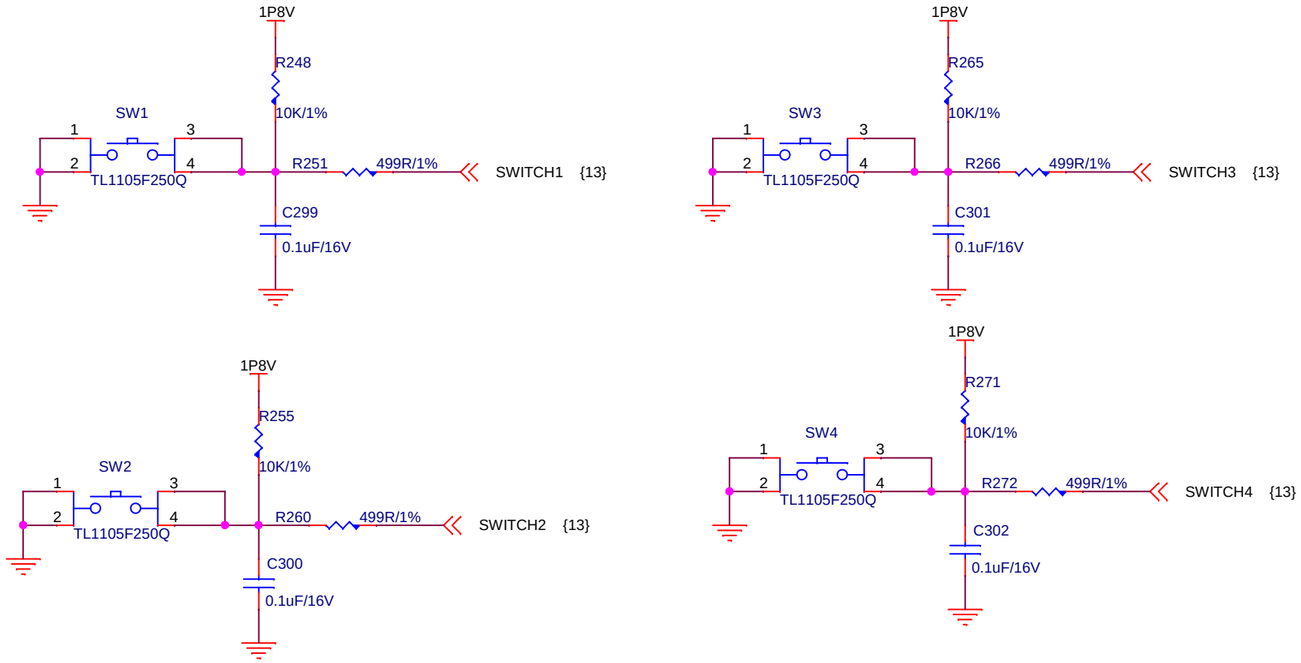
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: C	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 13 OF 29	

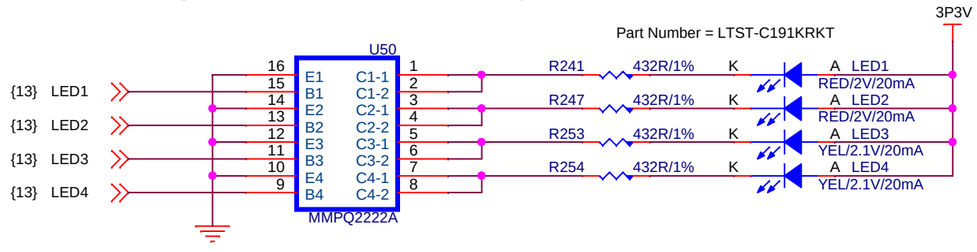
Power LEDs

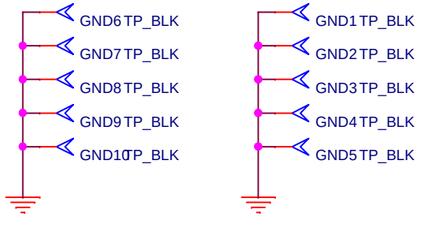


Debug Circuitry



User Defined LEDs

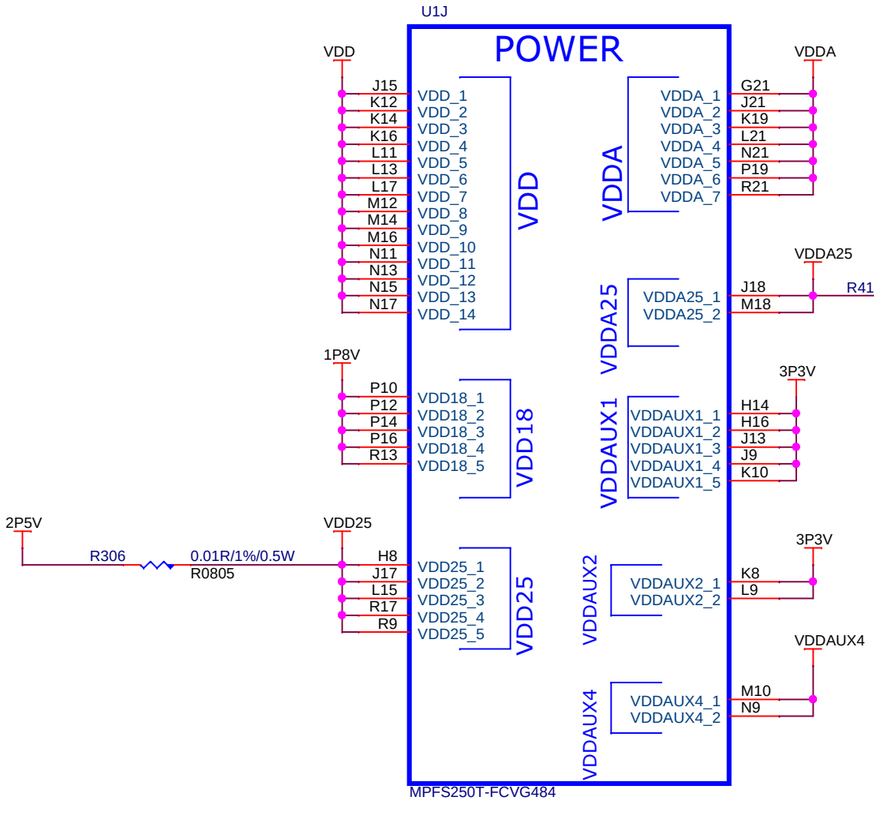


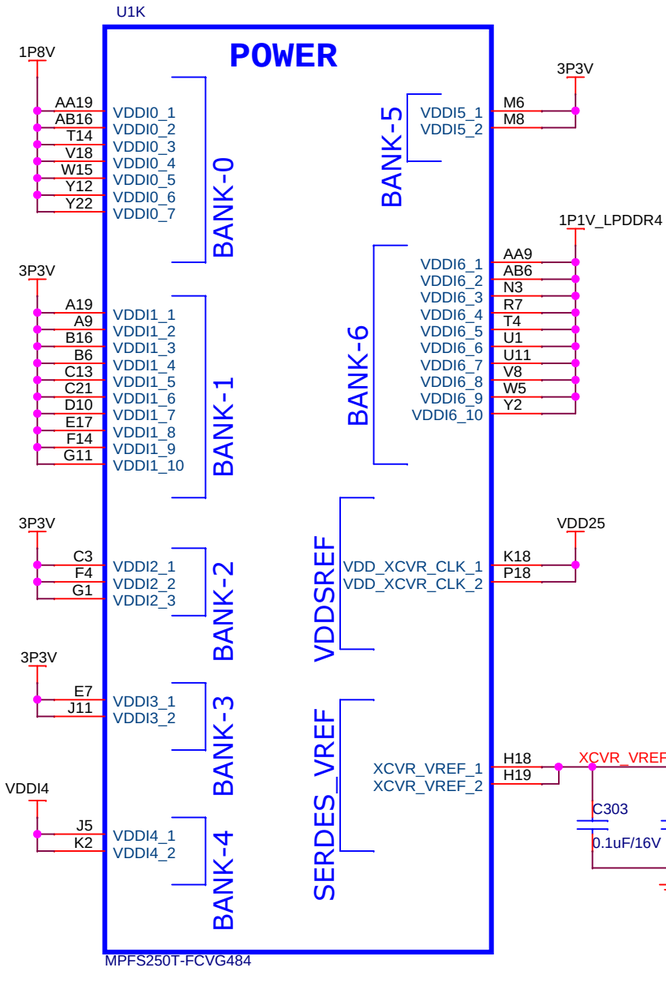


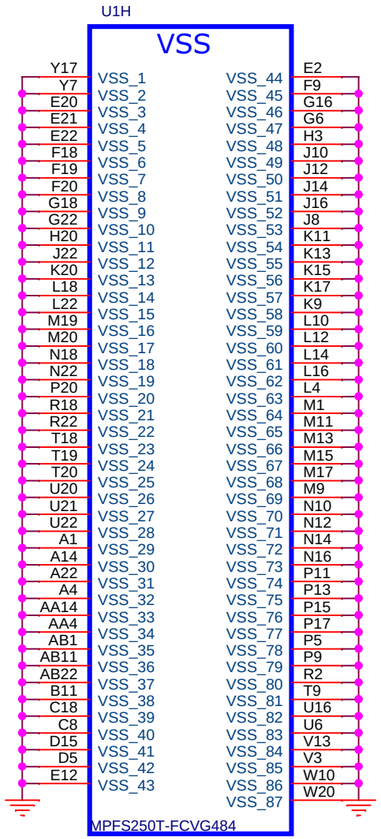
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 14 OF 29	

Power Connection





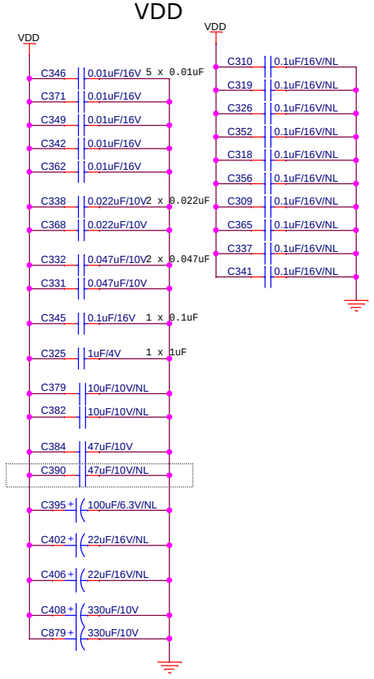


TITLE: ICICLE_KIT		
<OrgName>		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 15 OF 29	

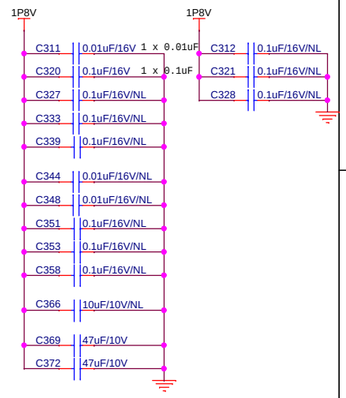
DECAPS VALUE TO BE UPDATED

Decoupling Capacitors

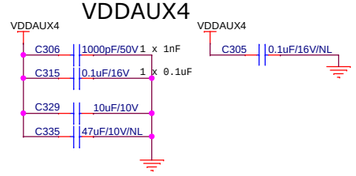
VDD



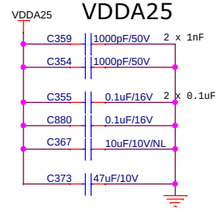
VDD18



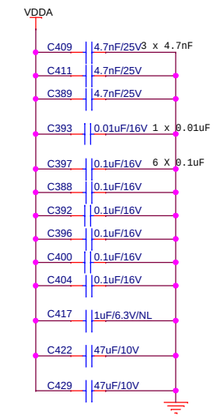
VDDAUX4



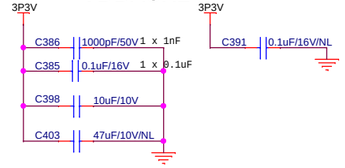
VDDA25



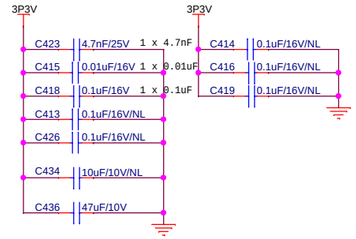
VDDA



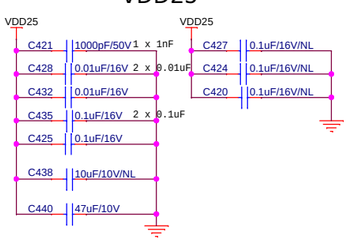
VDDAUX2



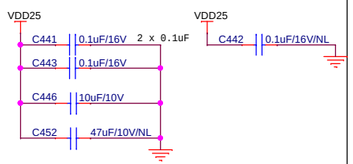
VDDAUX1



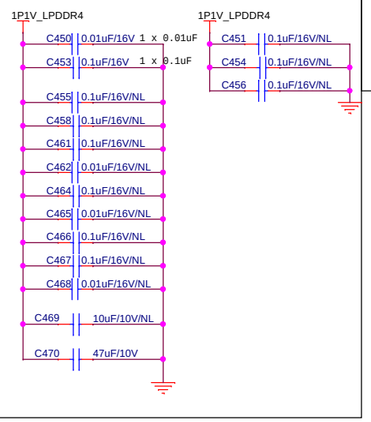
VDD25



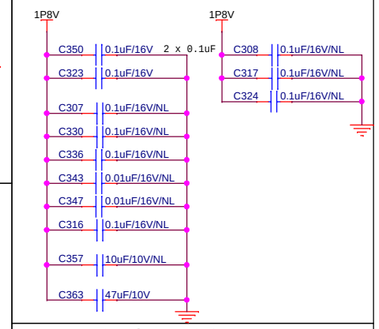
VDD_XCVR_CLK



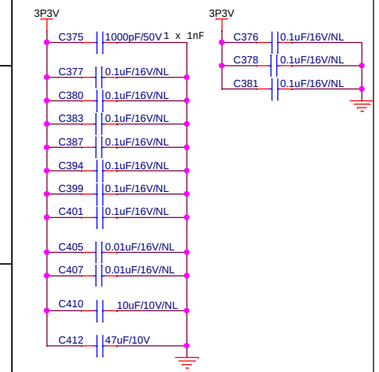
Bank6 VDDI6



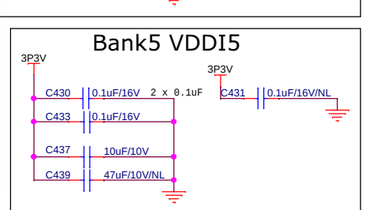
Bank0 VDDI0



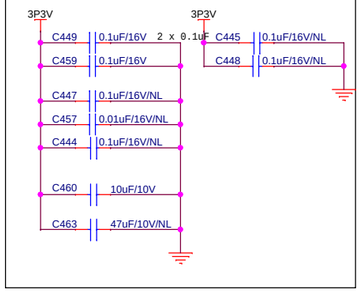
Bank1 VDDI1



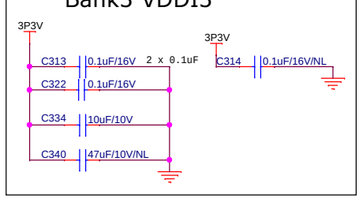
Bank5 VDDI5



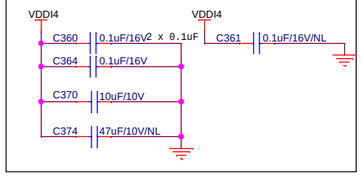
Bank2 VDDI2



Bank3 VDDI3



Bank4 VDDI4



MICROCHIP

TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 16 OF 29	

BANK0 - DDR3

U26-1

BANK-0

{18} DDR3_ADDR0	C14	DDRIO43NB0/MDDR_ADDR0		DDRIO60PB0/MDDR_DQ0	B2	DDR3_DQ3	{18}
{18} DDR3_ADDR1	E11	DDRIO42PB0/MDDR_ADDR1		DDRIO60NB0/MDDR_DQ1	A2	DDR3_DQ1	{18}
{18} DDR3_ADDR2	E12	DDRIO42NB0/MDDR_ADDR2		DDRIO59PB0/MDDR_DQ2	B6	DDR3_DQ0	{18}
{18} DDR3_ADDR3	B16	DDRIO41PB0/MDDR_ADDR3		DDRIO59NB0/MDDR_DQ3	B5	DDR3_DQ2	{18}
{18} DDR3_ADDR4	C16	DDRIO41NB0/MDDR_ADDR4		DDRIO57NB0/MDDR_DQ4	B3	DDR3_DQ5	{18}
{18} DDR3_ADDR5	D16	DDRIO40PB0/MDDR_ADDR5		DDRIO56PB0/MDDR_DQ5	B7	DDR3_DQ4	{18}
{18} DDR3_ADDR6	E16	DDRIO40NB0/MDDR_ADDR6		DDRIO56NB0/MDDR_DQ6	C6	DDR3_DQ7	{18}
{18} DDR3_ADDR7	F15	DDRIO39NB0/MDDR_ADDR7		DDRIO55PB0/MDDR_DQ7	A7	DDR3_DQ6	{18}
{18} DDR3_ADDR8	F14	DDRIO38PB0/MDDR_ADDR8		DDRIO54PB0/MDDR_DQ8	C8	DDR3_DQ8	{18}
{18} DDR3_ADDR9	E15	DDRIO38NB0/MDDR_ADDR9		DDRIO54NB0/MDDR_DQ9	C9	DDR3_DQ9	{18}
{18} DDR3_ADDR10	E14	DDRIO37PB0/MDDR_ADDR10		DDRIO53PB0/MDDR_DQ10/CCC_NE0_CLKI2	D7	DDR3_DQ10	{18}
{18} DDR3_ADDR11	F13	DDRIO37NB0/MDDR_ADDR11		DDRIO53NB0/MDDR_DQ11	D8	DDR3_DQ11	{18}
{18} DDR3_ADDR12	D14	DDRIO36PB0/MDDR_ADDR12		DDRIO50PB0/MDDR_DQ12/GB12/CCC_NE1_CLKI2	B11	DDR3_DQ15	{18}
{18} DDR3_ADDR13	D13	DDRIO36NB0/MDDR_ADDR13		DDRIO50NB0/MDDR_DQ13	B10	DDR3_DQ13	{18}
{18} DDR3_ADDR14	C15	DDRIO35PB0/MDDR_ADDR14		DDRIO49PB0/MDDR_DQ14/CCC_NE1_CLKI3	D9	DDR3_DQ12	{18}
	B15	DDRIO35NB0/MDDR_ADDR15		DDRIO49NB0/MDDR_DQ15	E8	DDR3_DQ14	{18}
{18} DDR3_DQS0_P	A5	DDRIO58PB0/MDDR_DQS0		DDRIO52PB0/MDDR_DQS1/GB8/CCC_NE0_CLKI3	A9	DDR3_DQS1_P	{18}
{18} DDR3_DQS0_N	A4	DDRIO58NB0/MDDR_DQS0_N		DDRIO52NB0/MDDR_DQS1_N	A10	DDR3_DQS1_N	{18}
{18} DDR3_WE#	C11	DDRIO48NB0/MDDR_WE_N		DDRIO44PB0/MDDR_BA0	C12	DDR3_BA0	{18}
{18} DDR3_RAS#	B12	DDRIO48PB0/MDDR_RAS_N		DDRIO44NB0/MDDR_BA1	D12	DDR3_BA1	{18}
{18} DDR3_CAS#	A12	DDRIO46NB0/MDDR_CAS_N		DDRIO43PB0/MDDR_BA2	B13	DDR3_BA2	{18}
{18} DDR3_CKE0	E10	DDRIO47PB0/MDDR_CKE					
{18} DDR3_CS0	D11	DDRIO47NB0/MDDR_CS_N					
{18} DDR3_RESET#	A13	DDRIO46PB0/MDDR_RESET_N		DDRIO45PB0/MDDR_CLK	A14	DDR3_CLK0_P	{18}
{18} DDR3_ODT0	F16	DDRIO39PB0/MDDR_ODT		DDRIO45NB0/MDDR_CLK_N	A15	DDR3_CLK0_N	{18}
DDR3_TMATCH_0_IO	B8	DDRIO51PB0/MDDR_TMATCH_0_IN		DDRIO63PB0/MDDR_TMATCH_ECC_IN	C4	DDR3_TMATCH_ECC_IO	
	A8	DDRIO55NB0/MDDR_TMATCH_0_OUT		DDRIO66PB0/MDDR_TMATCH_ECC_OUT	D3		
{18} DDR3_DQM0	A3	DDRIO57PB0/MDDR_DM_RDQS0					
{18} DDR3_DQM1	C10	DDRIO51NB0/MDDR_DM_RDQS1		DDRIO61NB0	D2		
	D6	DDRIO62NB0/MDDR_DQ_ECC2		DDRIO65PB0/GB0/CCC_NW0_CLKI3	D4		
	C5	DDRIO62PB0/MDDR_DQ_ECC3		DDRIO65NB0/GB4/CCC_NW1_CLKI2	E4		
				DDRIO63NB0/MDDR_DM_RDQS_ECC	C3		
	C1	DDRIO64PB0/MDDR_DQS_ECC					
	B1	DDRIO64NB0/MDDR_DQS_ECC_N					
	D1	DDRIO61PB0/CCC_NW1_CLKI3					
	E2	DDRIO66NB0/CCC_NW0_CLKI2					

R256

10K/1%

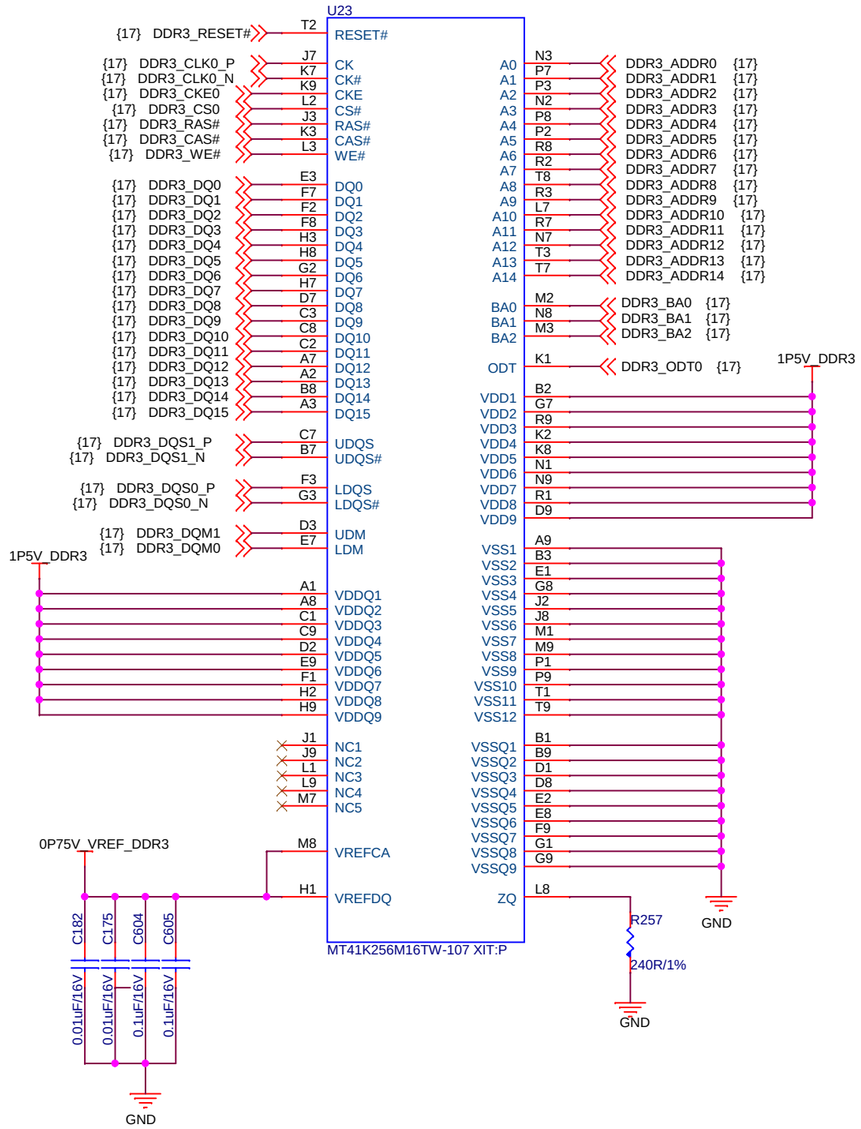
GND

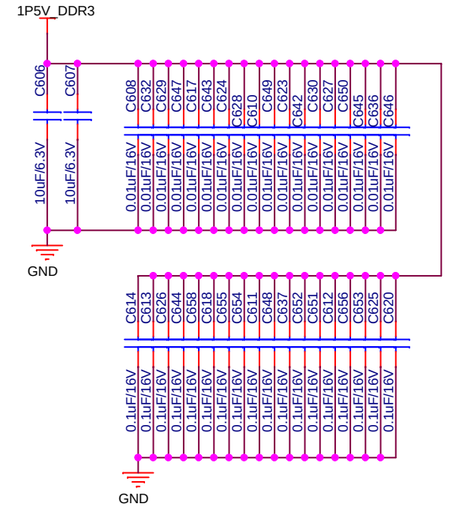
M2S025-VFG256Q309

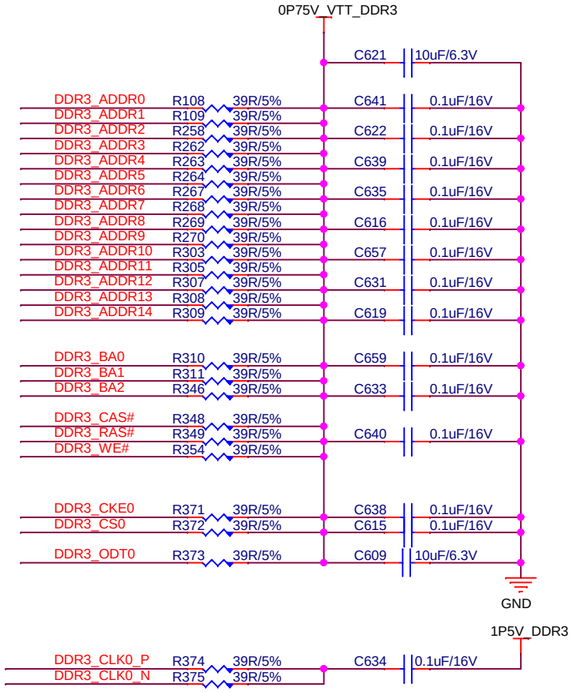
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: A	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 17 OF 29	

DDR3 MEMORY -BANK0

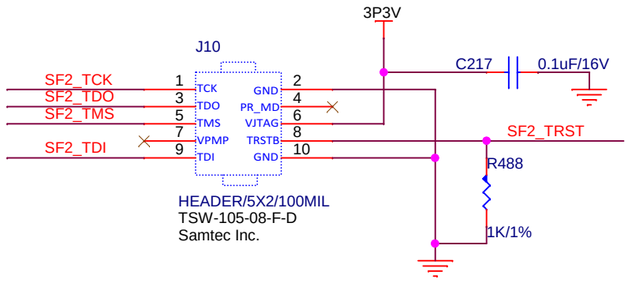


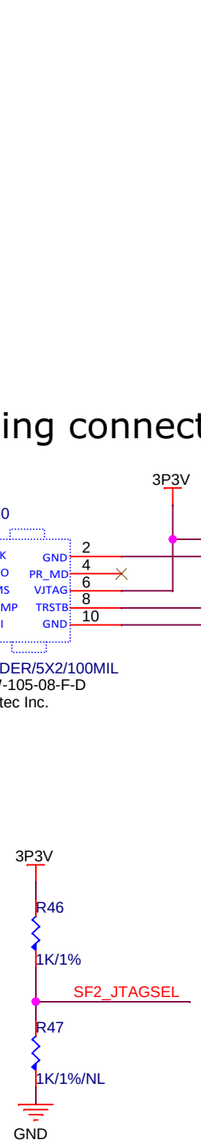


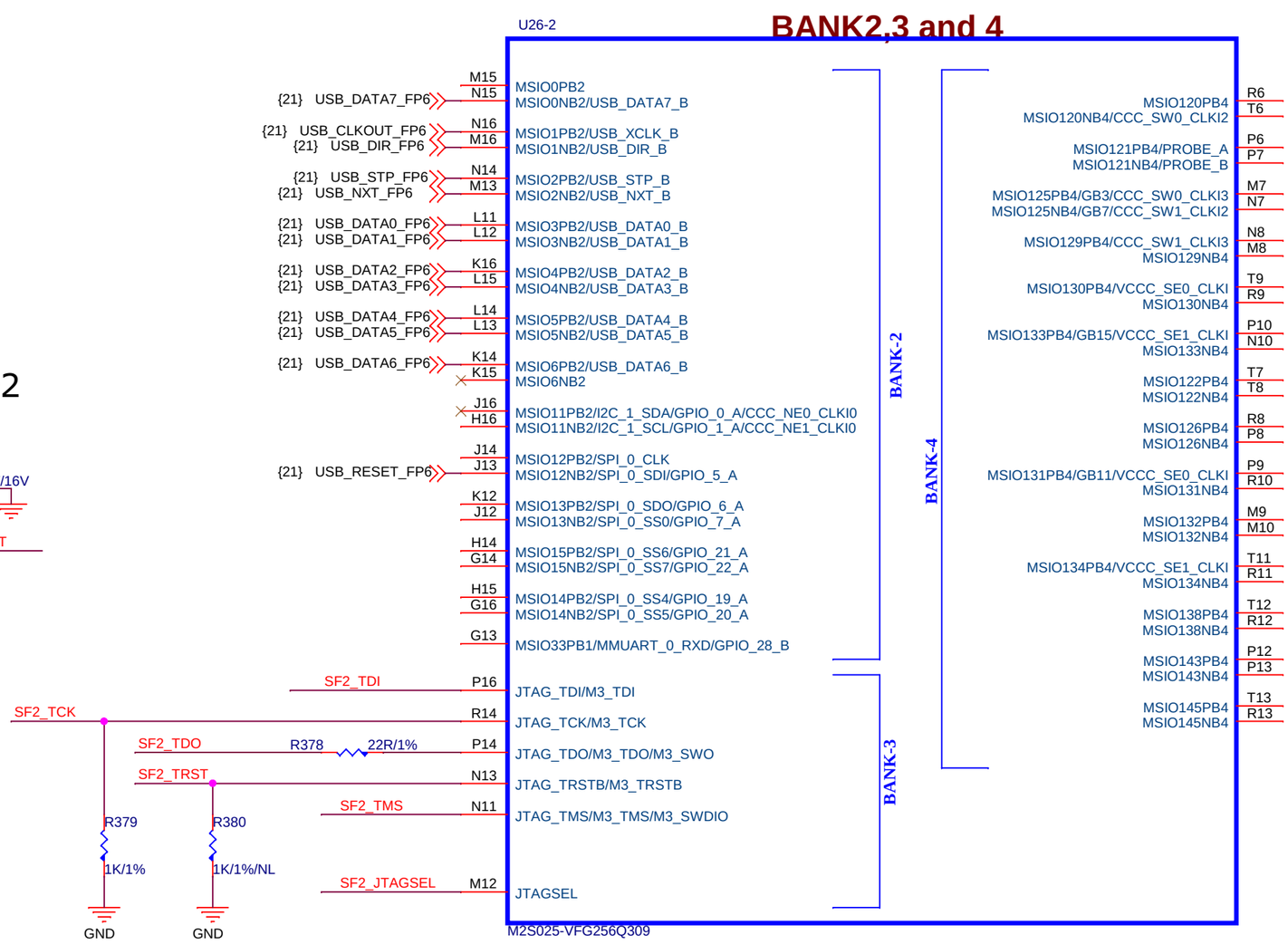


TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 18 OF 29	

Programming connector for SF2



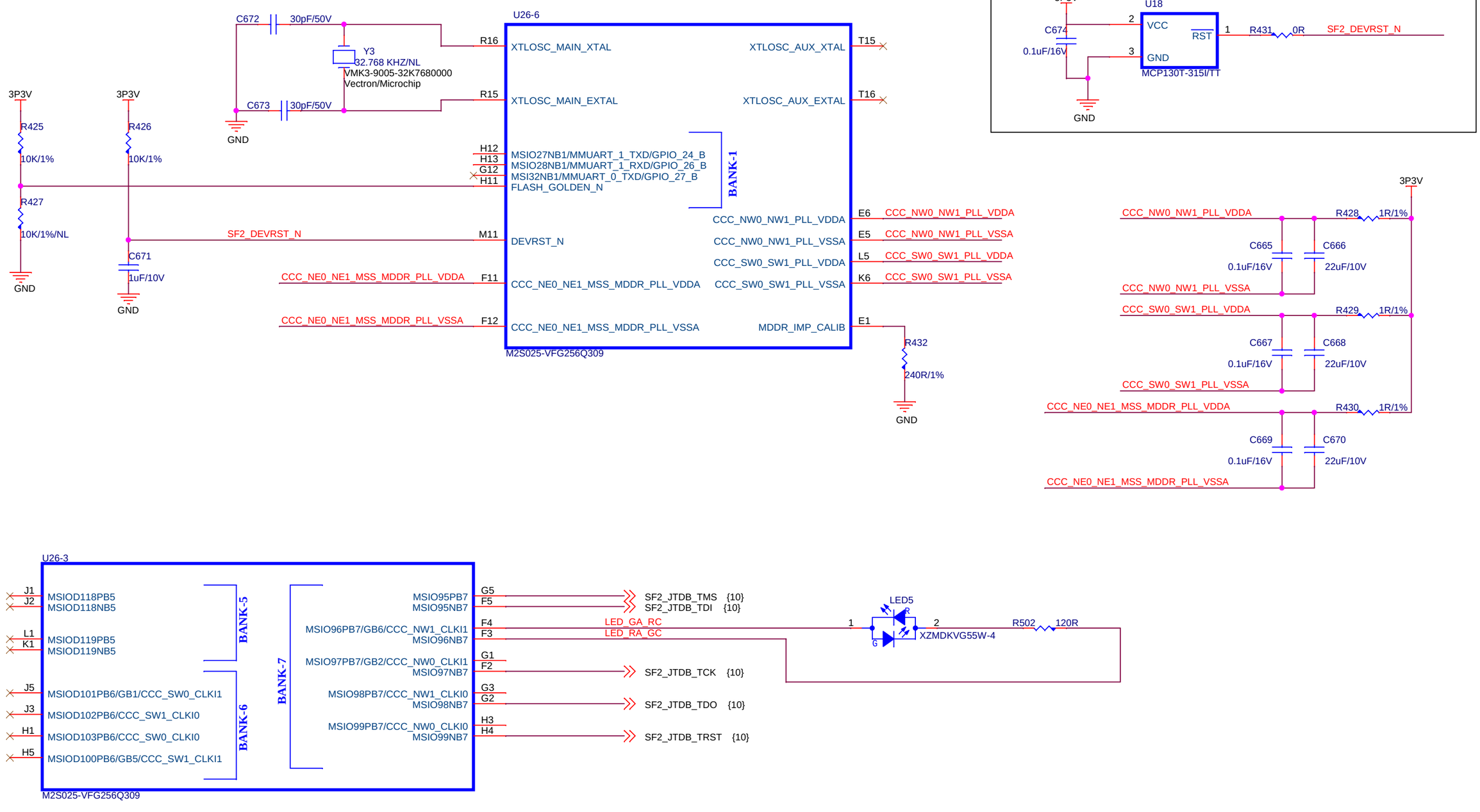




TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 19 OF 29	

BANK-1,5,6,7 and MISC

DEVICE_RESET



MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 20 OF 29	

FP6 - USB Interface

Schematic shows 26.0 MHz Configuration.
REFCLK[2:0] = 110

USB3320_QFN32

<MANUFACTURER P/N>
Microchip Technology

VBUS SWITCH

MIC2544-1YM
MIC2544-1YM
Microchip Technology

USB_MICRO_AB_RECEP
629105150921
Wurth Elektronik

HEADER_1x2
Default Jumper = 1&2

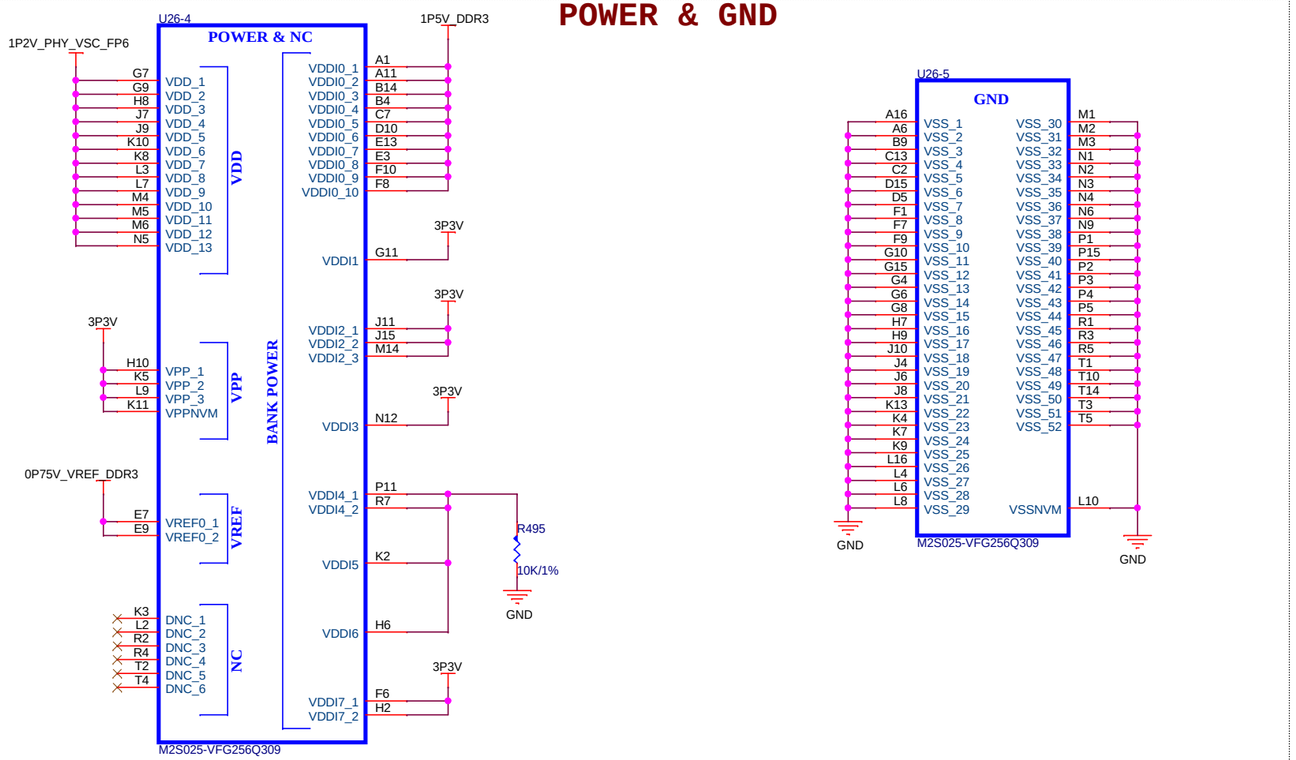
CRY_26
VXM7-9029-26M0000000
Vectron/Microchip

PGB1010603MR
PGB1010603MR

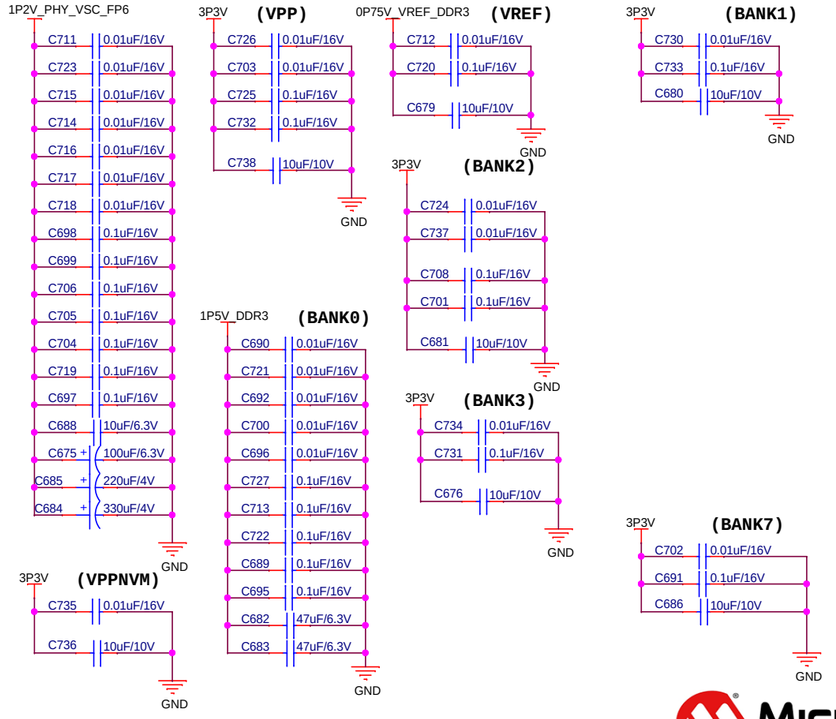
74LVC1G04

TITLE	ICICLE_KIT
SIZE	Custom
DOCUMENT NO.	
REV	1.0
DATE:	Tuesday, June 23, 2020
SH	21 OF 29

POWER & GND



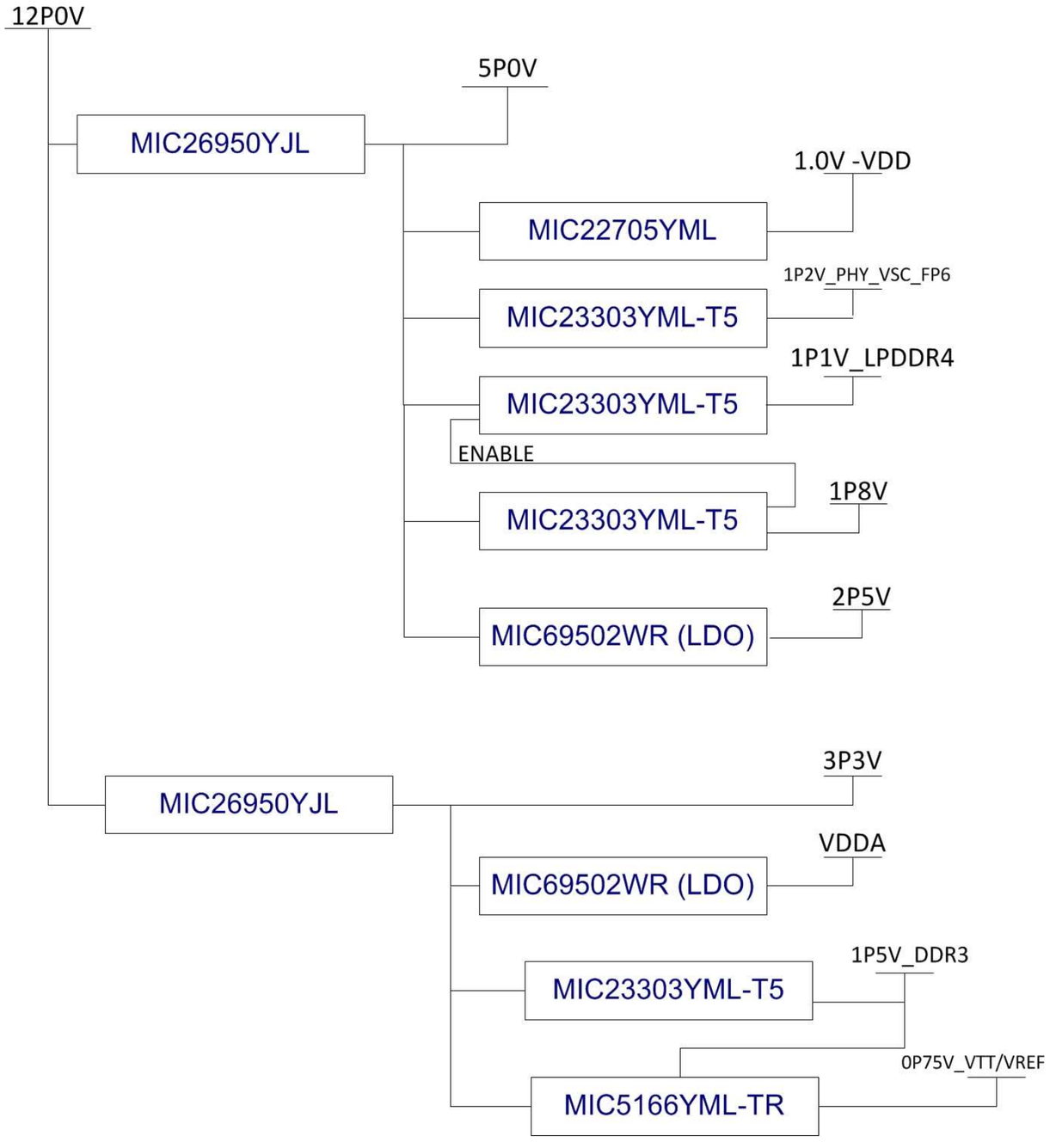
DECOUPLING CAPACITORS



MICROCHIP

TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Thursday, June 03, 2021	SH 22 OF 29	

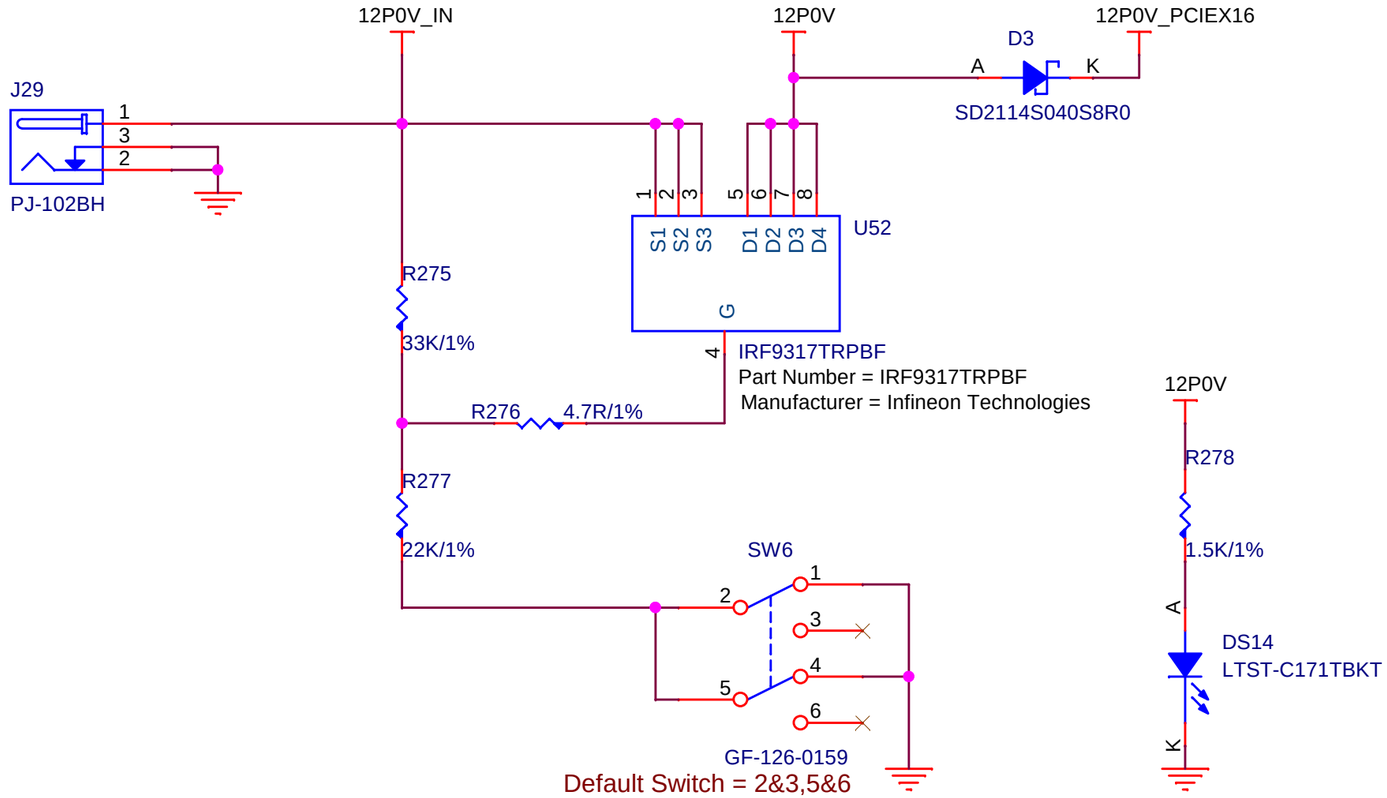
POWER BLOCK DIAGRAM



MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 23 OF 29	

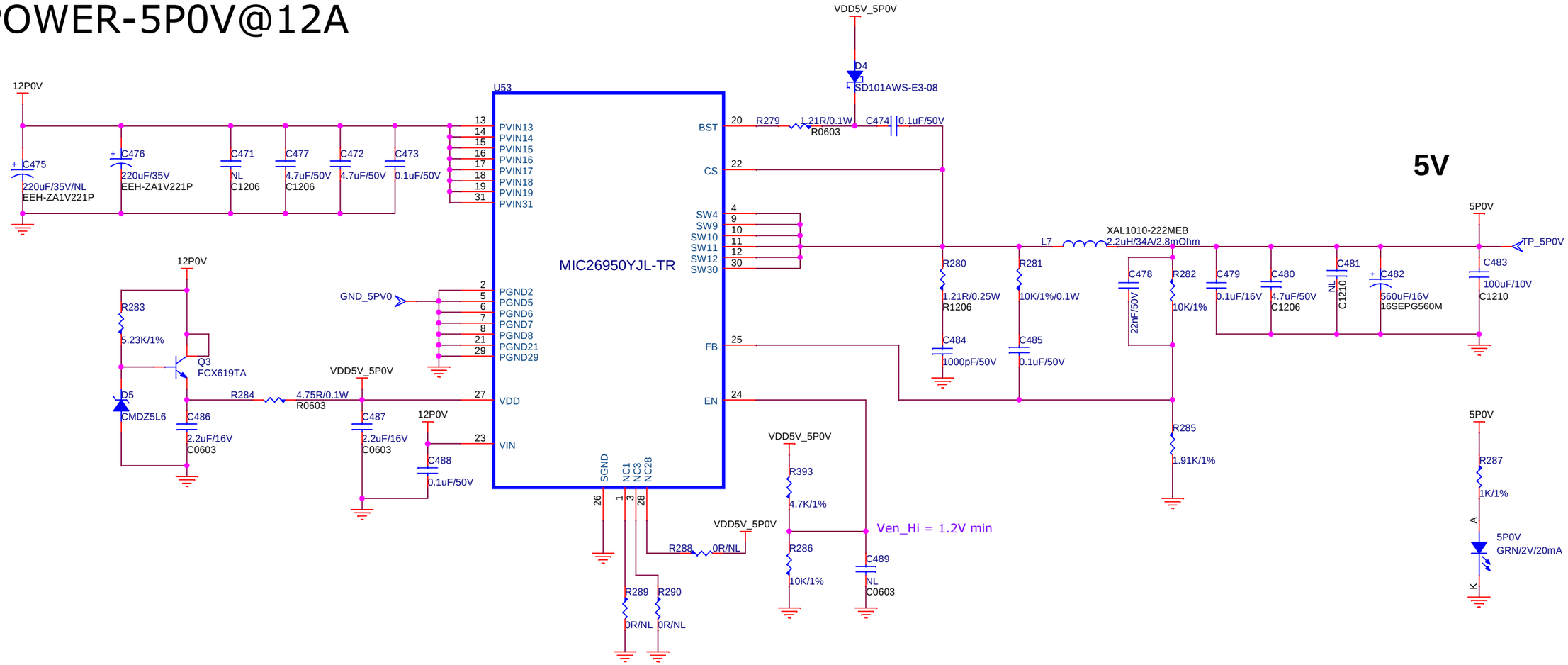
12V External Supply @ 5A



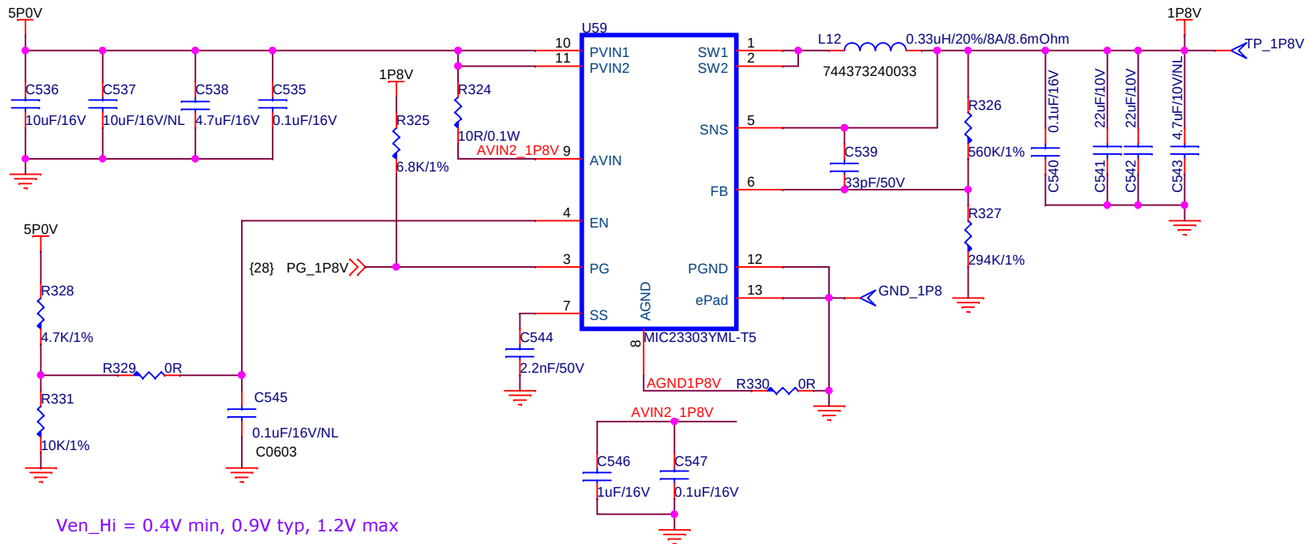
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: A	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 24 OF 29	

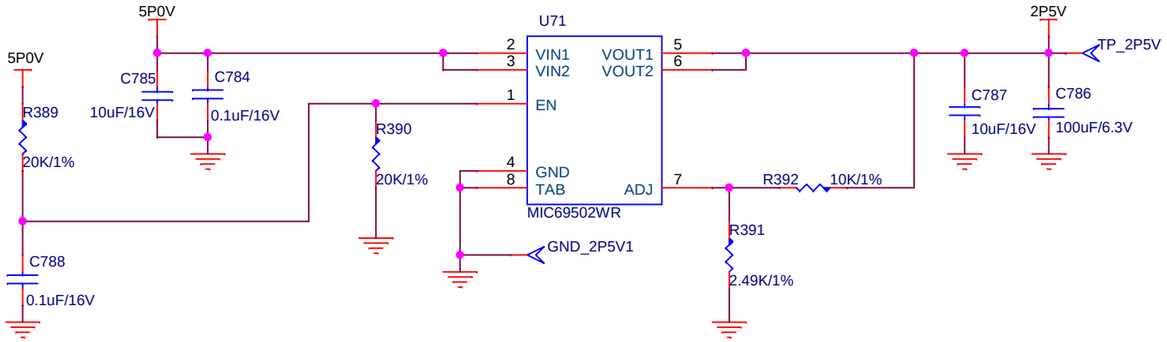
POWER-5P0V@12A

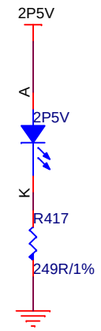


POWER:1P8V(1.8V)@3A

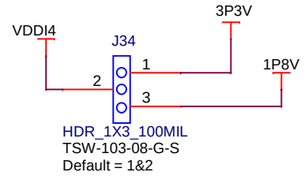


POWER:VDD25, VDDA25, VDD_XCVR_CLK (2.5V)@5A



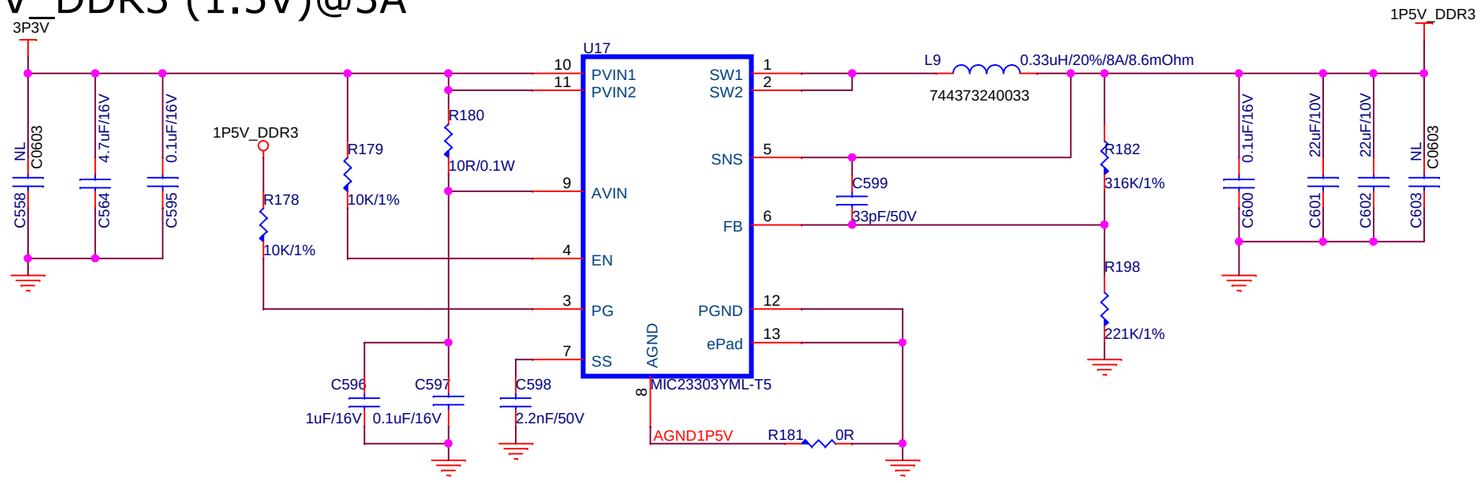


VDDI4

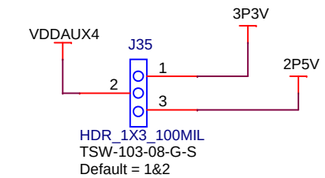


6A Capable header

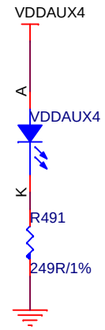
POWER:1P5V_DDR3 (1.5V)@3A



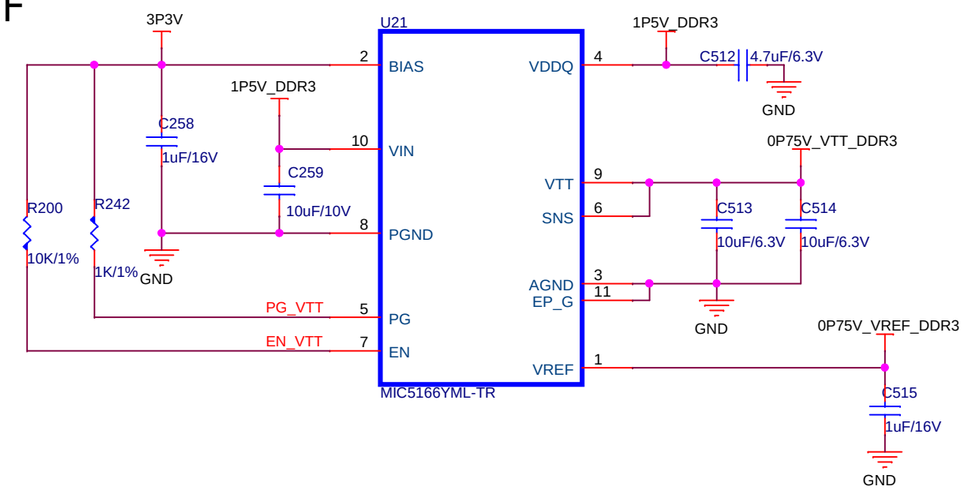
VDDAUX4



6A Capable header



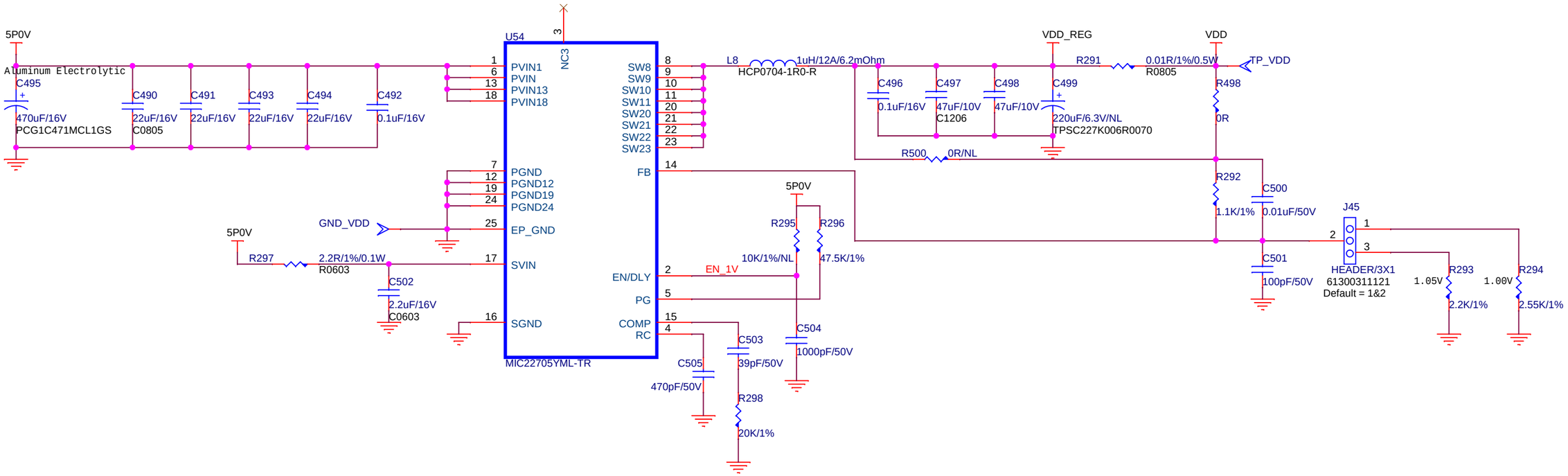
POWER:DDR3 VTT & VREF



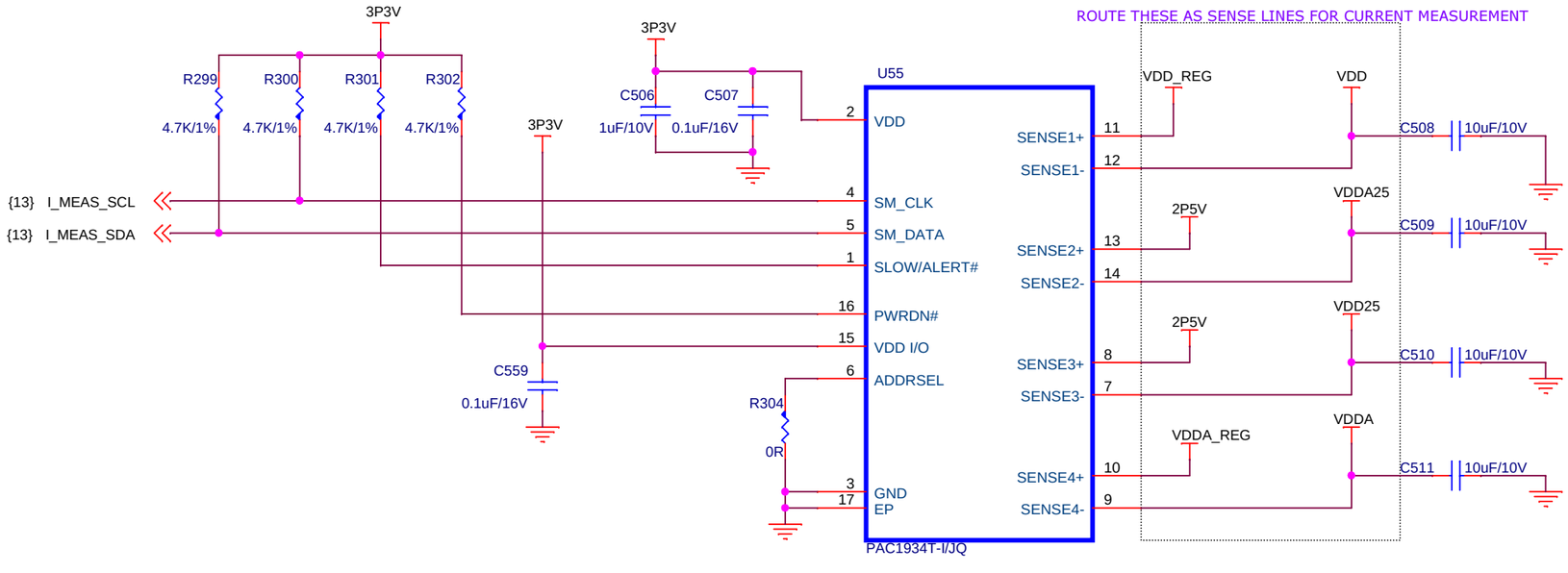
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 26 OF 29	

POWER:VDD(1.0/1.05V)@7A



Current Measurement 1

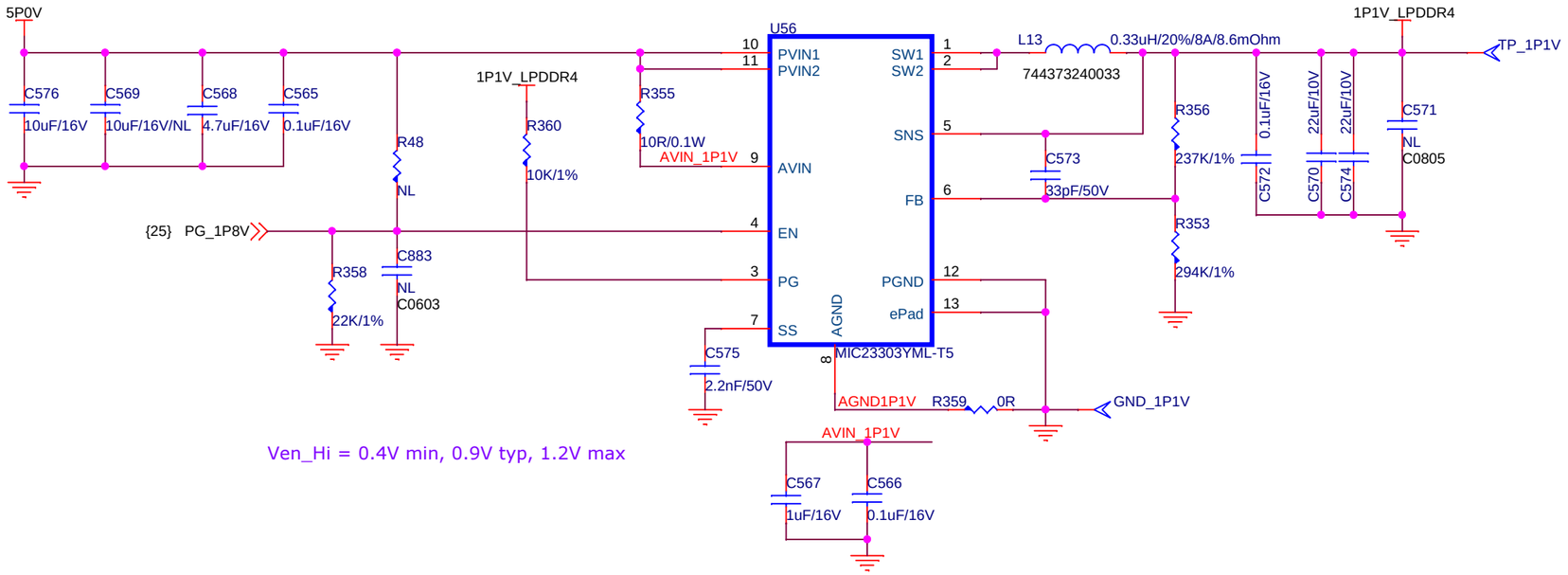


I2C Address - 0010_000(R/W)

MICROCHIP

TITLE: ICICLE_KIT		
SIZE: B	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 27 OF 29	

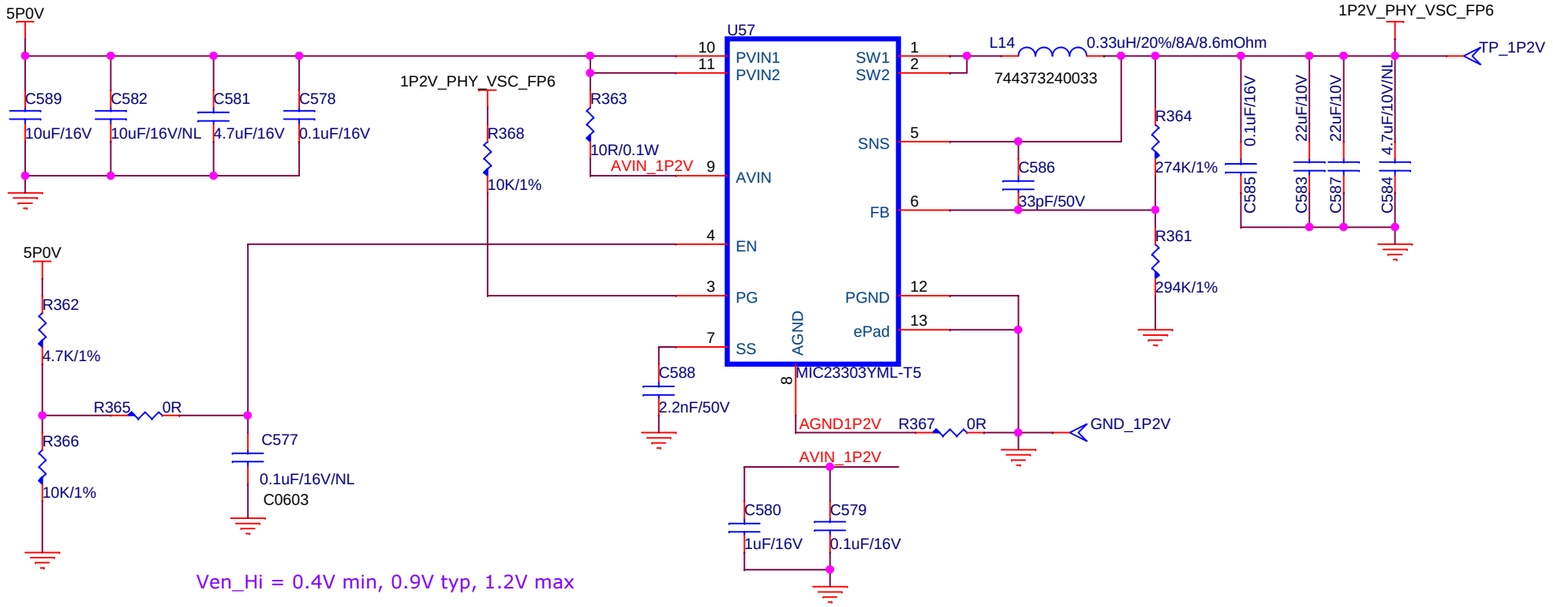
POWER:1P1V_LPDDR4(1.1V)@3A



Ven_Hi = 0.4V min, 0.9V typ, 1.2V max

POWER:1P2V_PHY_VSC,FP6(1.2V)@3A

1.2V/3A

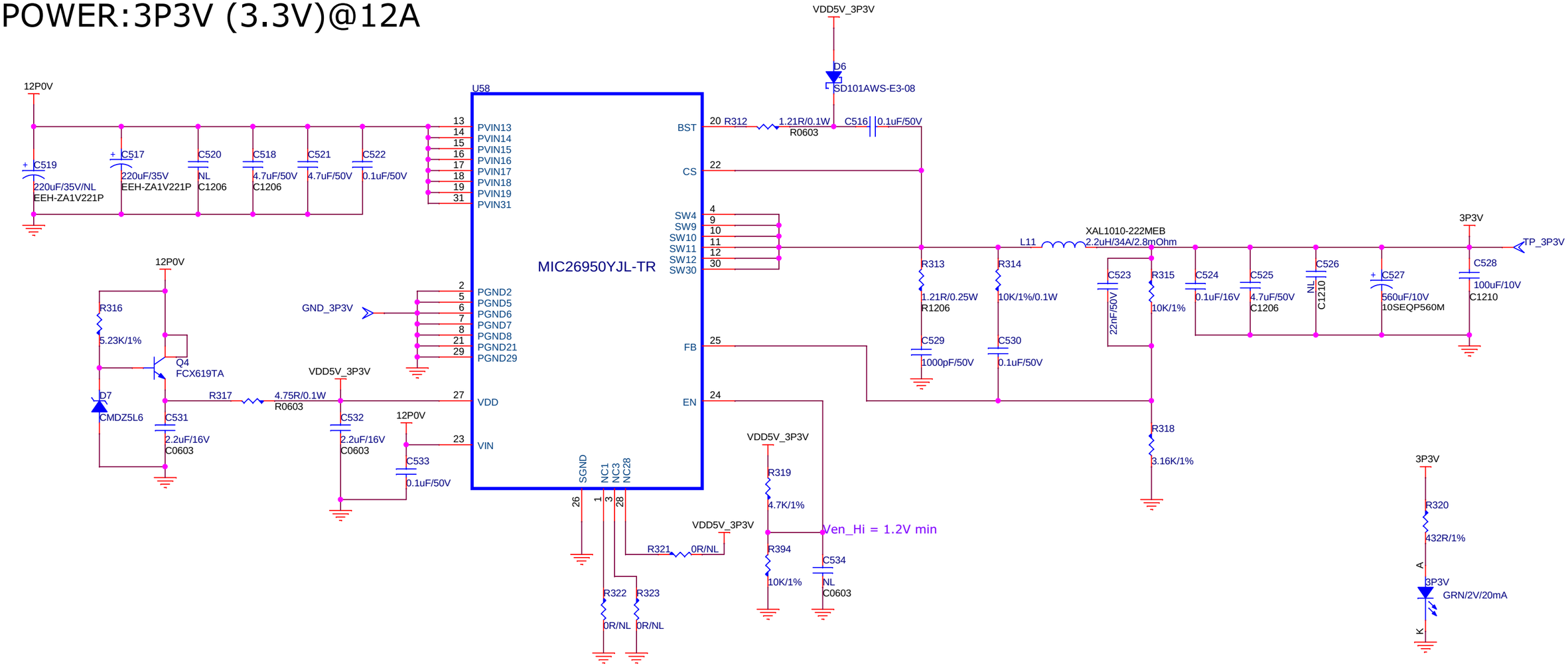


Ven_Hi = 0.4V min, 0.9V typ, 1.2V max

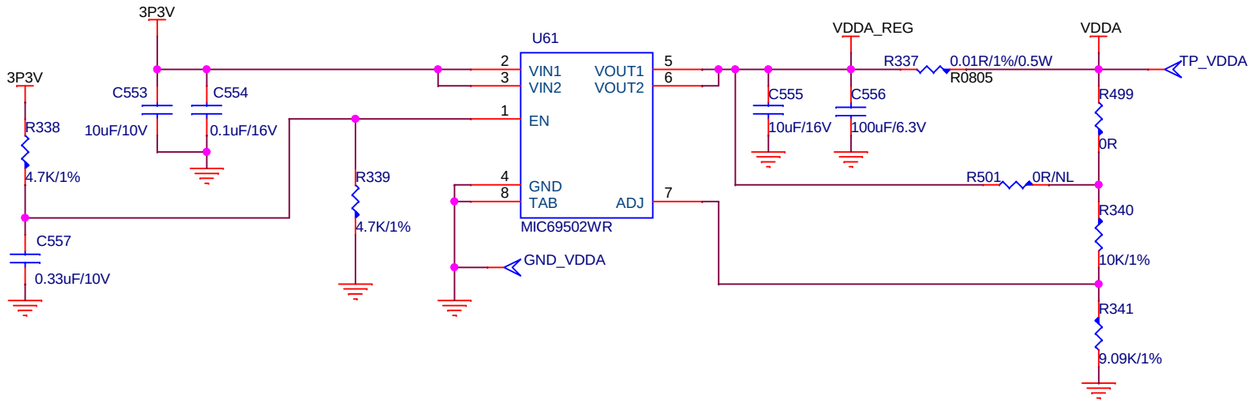
MICROCHIP

TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 28 OF 29	

POWER:3P3V (3.3V)@12A



POWER:VDDA 1.05V@5A



TITLE: ICICLE_KIT		
SIZE: Custom	DOCUMENT NO.	REV: 1.0
DATE: Tuesday, June 23, 2020	SH 29 OF 29	