

Application Notes


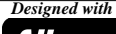
PKoB4 is a Microchip Technology debugger platform that is intended to be integrated into a hardware/firmware application demonstration board.

DGI, CDC Interface of PKoB4 is not used.
MCP2200 is used for providing USB to UART conversion with Hardware Flow Control. MCP2200 can support baud rates from 300k to 1000k.

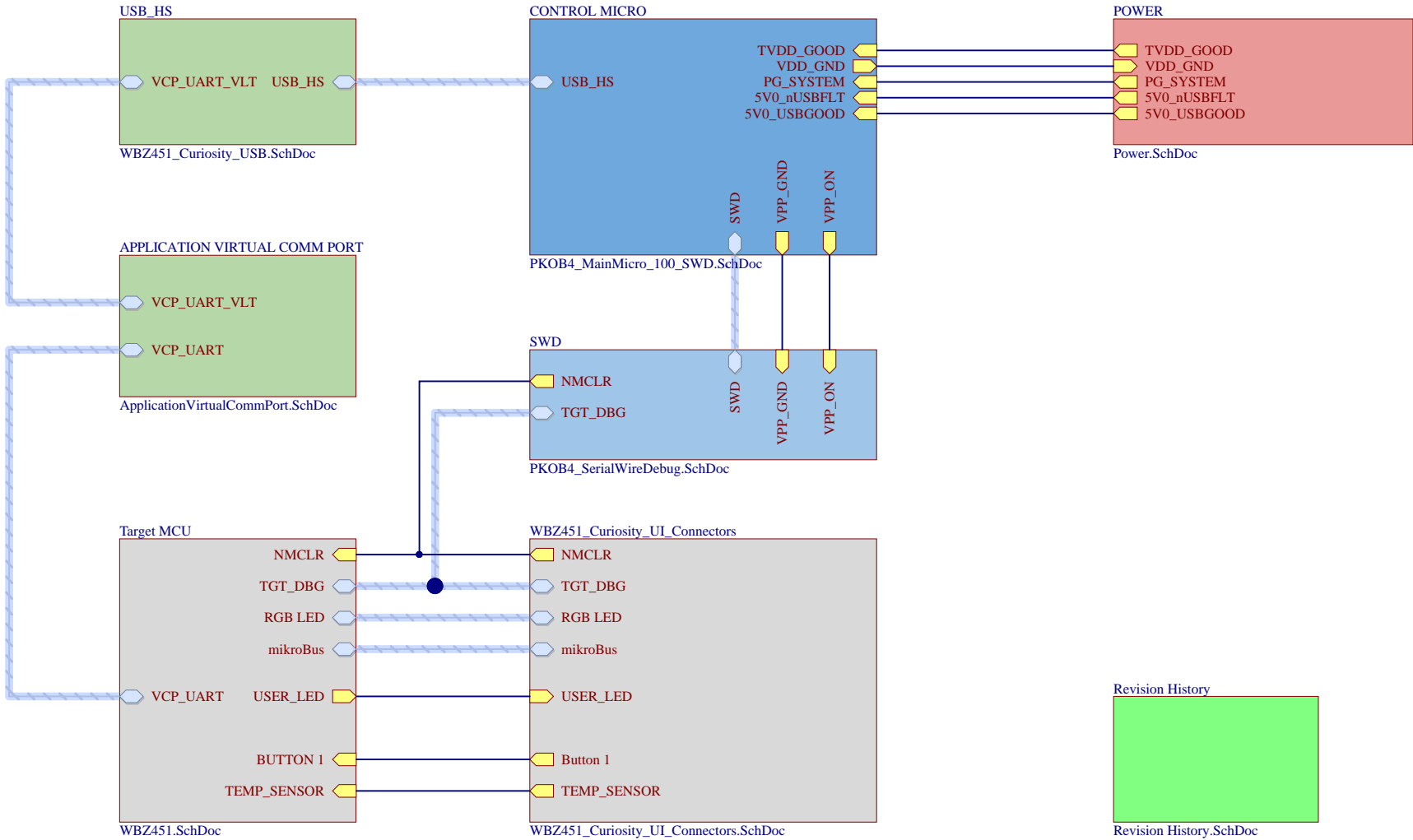
Voltage to WBZ451 is fixed by default to 3.3V derived from the USB connection from the debugger or Battery. It can also be powered by the application external power supply header (1.9V-3.6V)
For application power supply for device to operate with PKOB4 and MCP2200, translators are added for PKOB4 and MCP2200.



Revision History

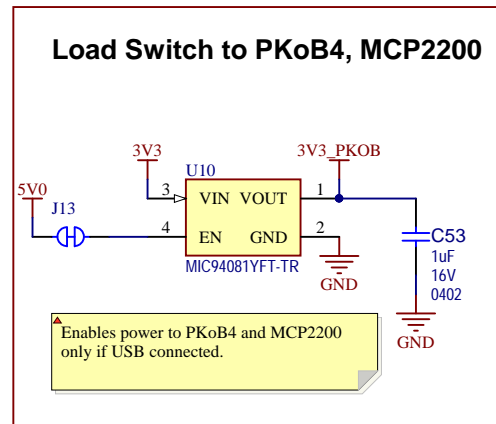
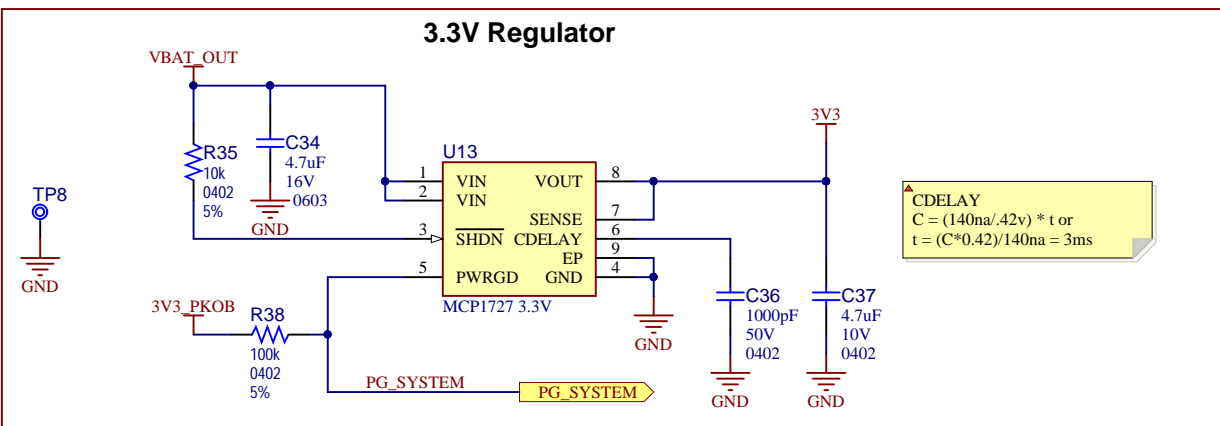
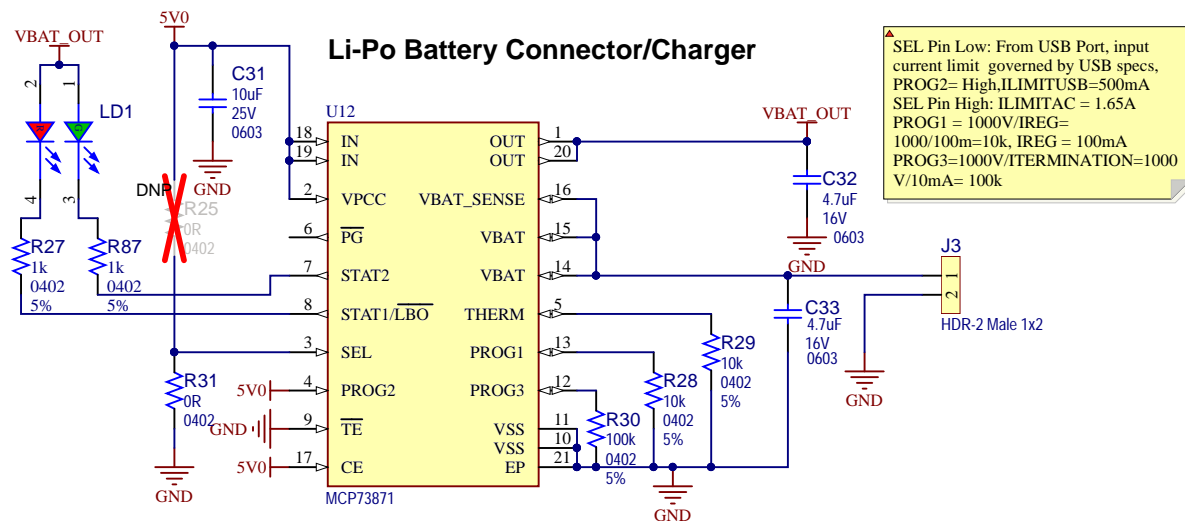
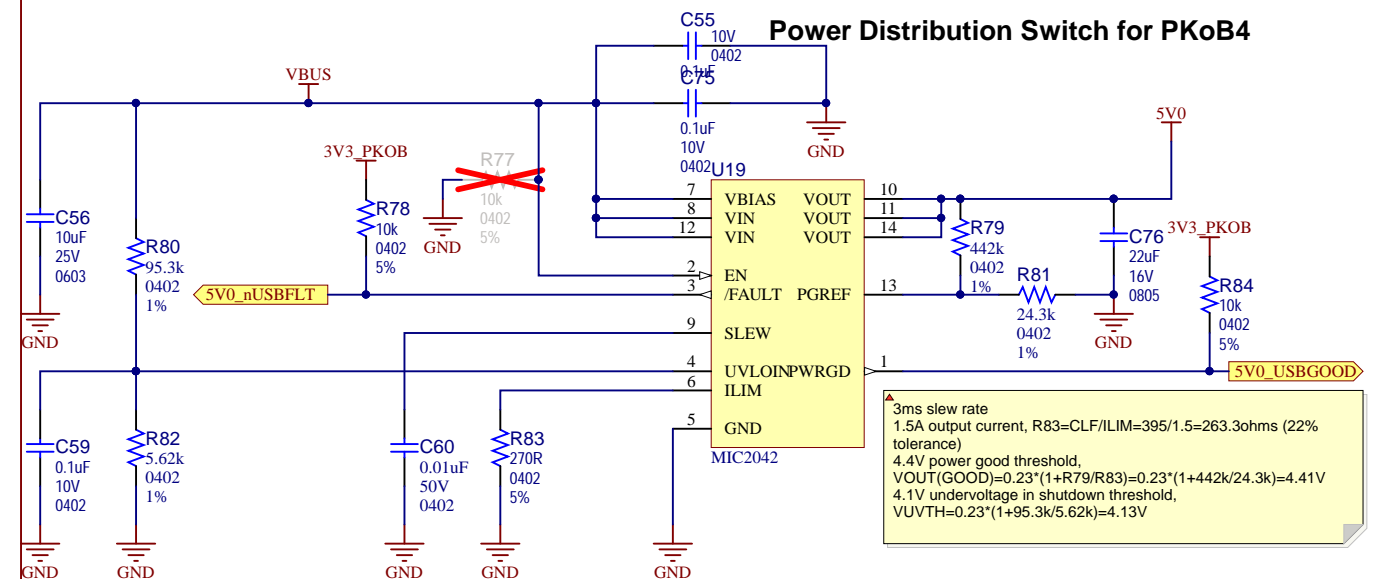
Revision 2:
Fixes and improvements
Revision 1:
PKoB4 Based on MPLAB Snap (03-10381-R1).

Drawn By: BALAJI NARAYANA		 MICROCHIP	
Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title **		 Altium Altium.com	
Size B	SCH #: 03- PCB #: 04-		
File: Revision History.SchDoc			

Main System Interconnect



Drawn By: BALAJI NARAYANA		 MICROCHIP	
Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title **		 Altium Altium.com	
Size B	SCH #: 03- PCB #: 04-		
File: WBZ451_Curiosity_TopLevel.SchDoc			



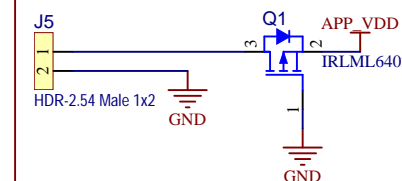
Power

Application Note:

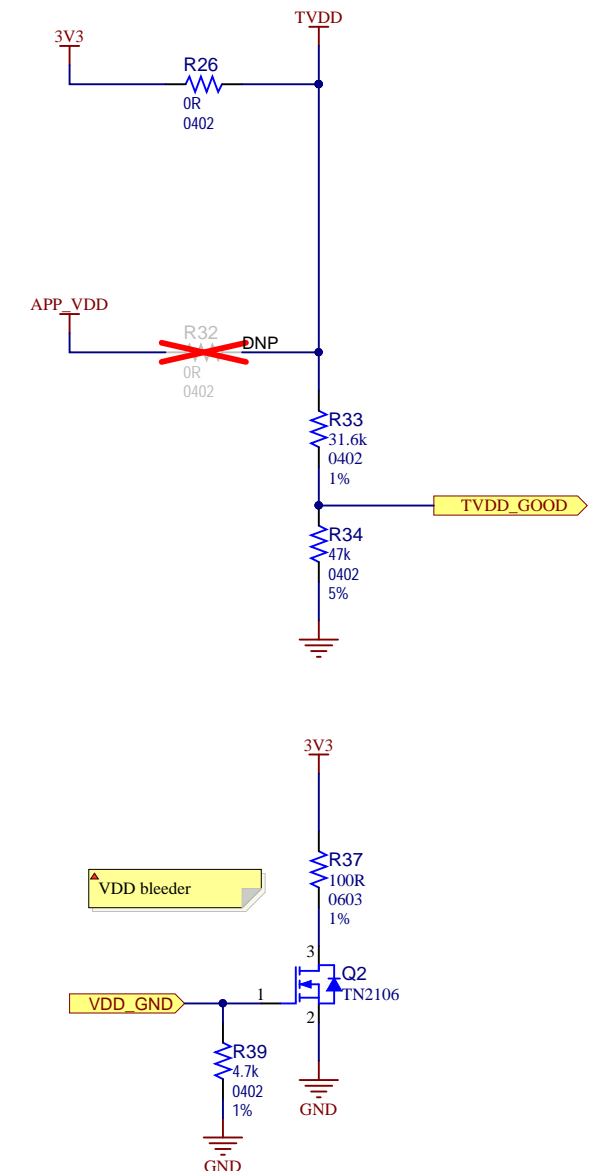
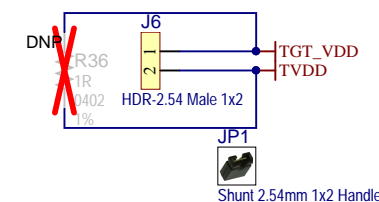
Default, R26 is populated. Application will be using system supplied 3.3V. Remove R26, populate R32 for using External Supply from J5



Connect application voltage here if not using system supplied power. (DO NOT POPULATE R26)

External Power Supply

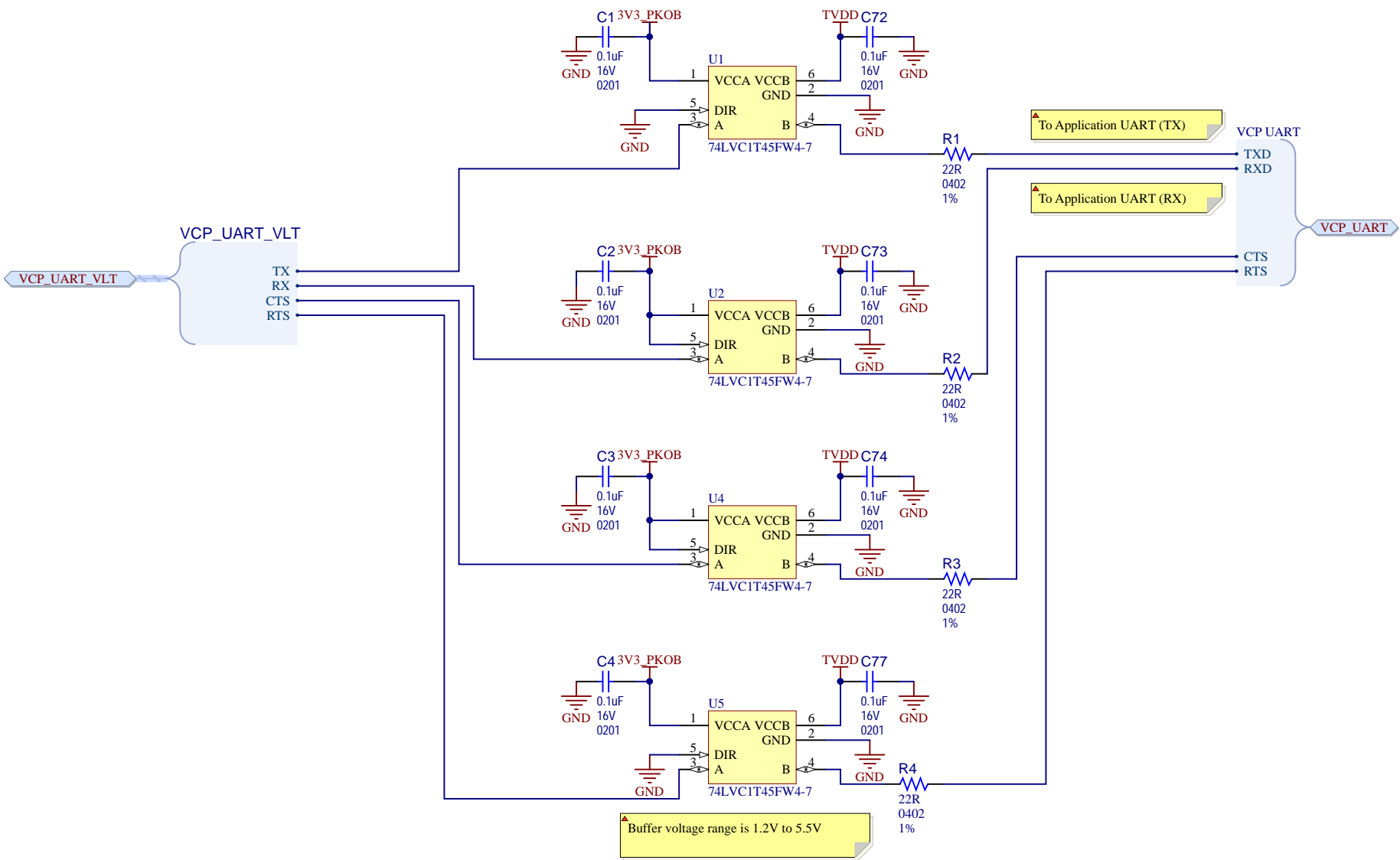




TGT Current Measurement Header



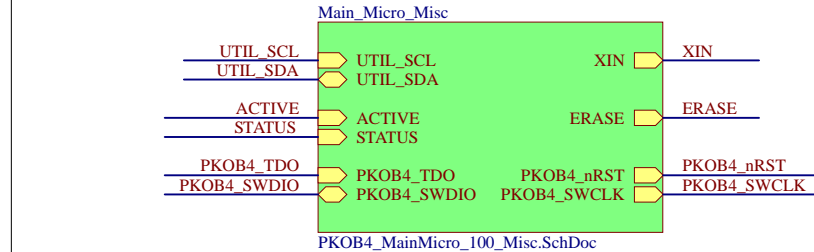
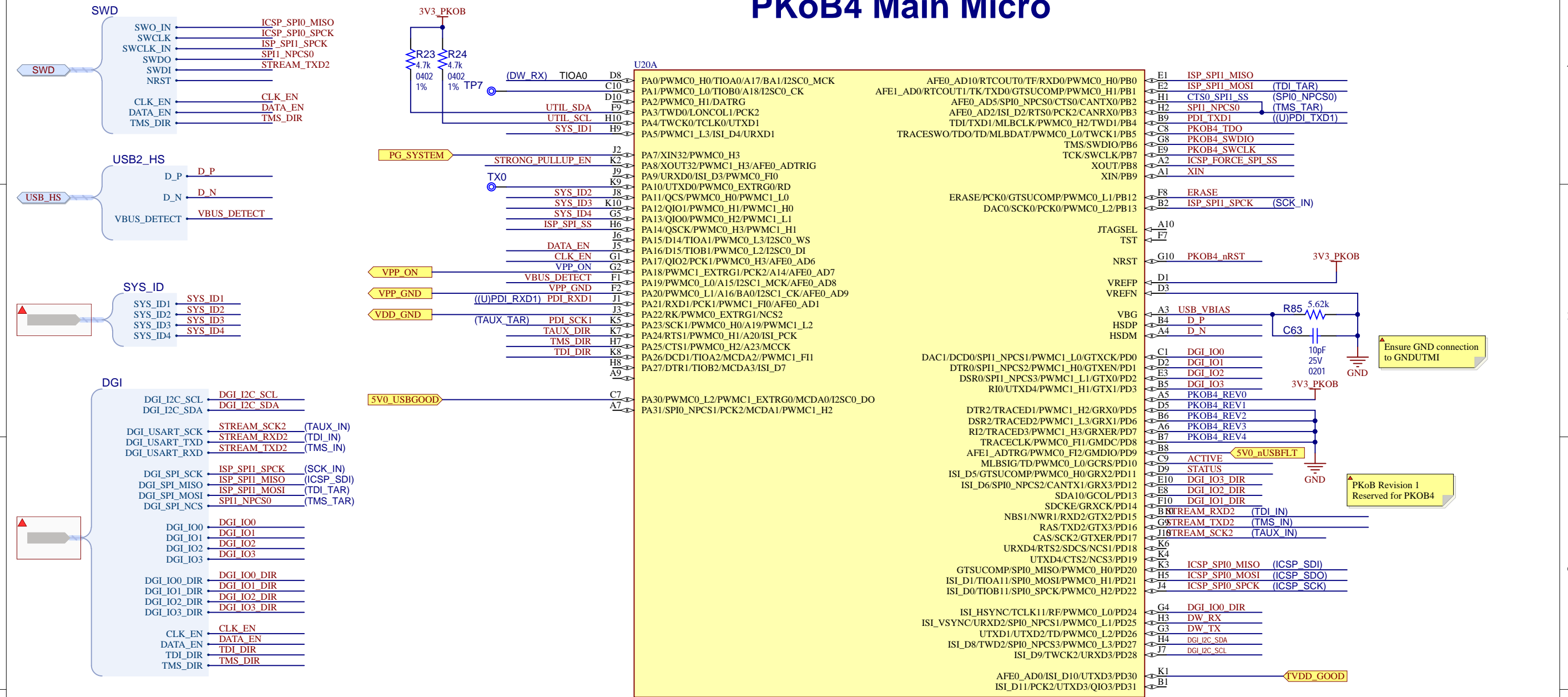
Drawn By: BALAJI NARAYANA		 MICROCHIP	
Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title **		<div>Designed with</div>  Altium.com	
Size B	SCH #:03- PCB #:04-		
File: Power.SchDoc			

Application Virtual Comm Port



Drawn By: BALAJI NARAYANA		 MICROCHIP	
Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title Application Virtual Comm Port		 Altium Altium.com	
Size B	SCH #: 03- PCB #: 04-		
File: ApplicationVirtualCommPort.SchDoc			

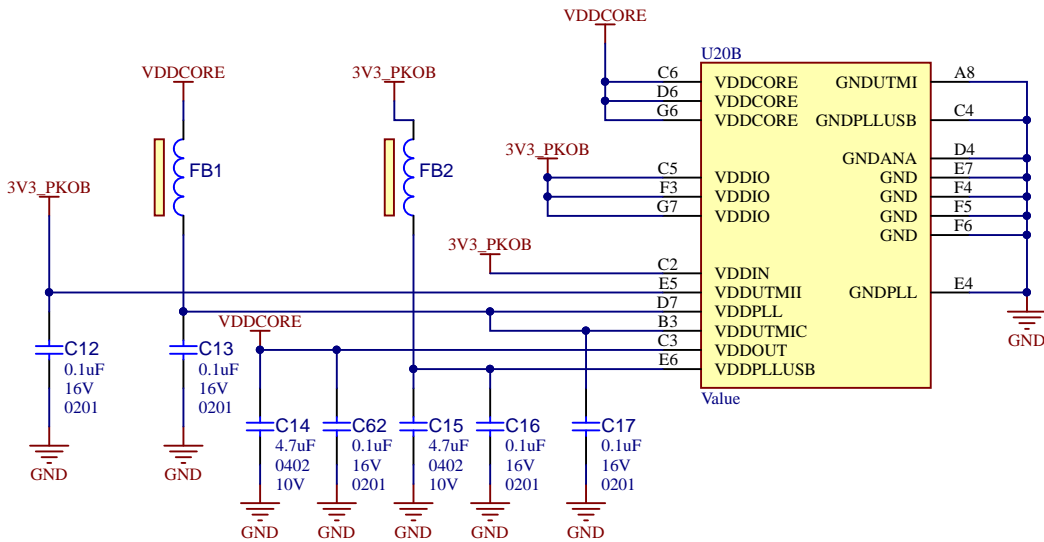
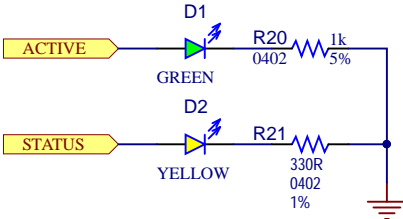
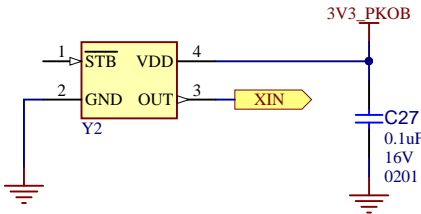
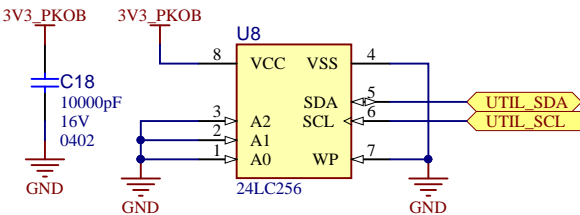
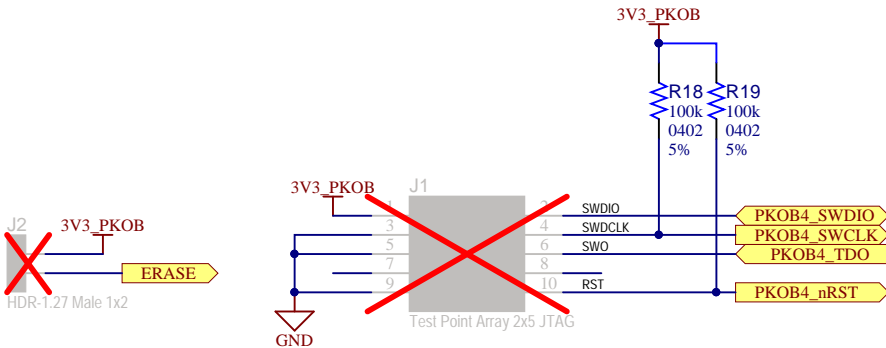
PKoB4 Main Micro



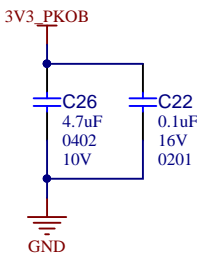
Drawn By: BALAJI NARAYANA			
Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title PKoB4 Main Micro		Designed with 	
Size B	SCH #: 03- PCB #: 04-	Rev: 2.0 Rev: 2.0	Date: 1/21/2021 Sheet 6 of 10
File: PKoB4_MainMicro_100_SWD.SchDoc			

PKOB4 MISC

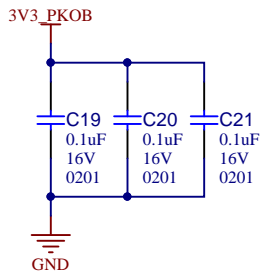
PKoB4 Debug Header



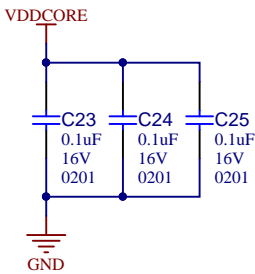
VDDIN Cap





VDDIO Bypass Caps



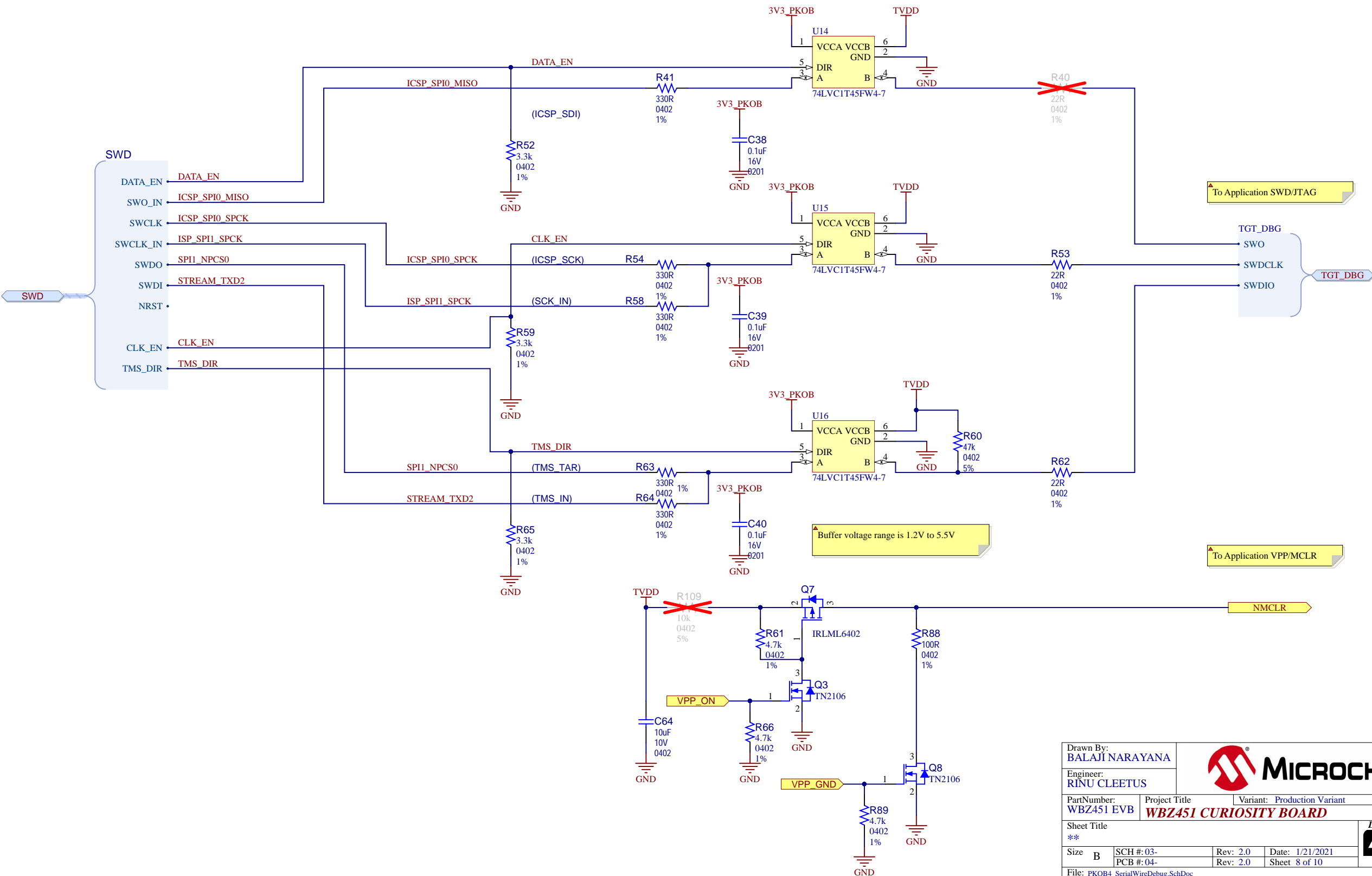
VDDCORE Bypass Caps





ATSAME70N21B-CNT

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Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title PKoB4 Main Micro Misc.		Designed with  Altium Altium.com	
Size B	SCH #: 03- PCB #: 04-	Rev: 2.0 Rev: 2.0	Date: 1/21/2021 Sheet 7 of 10
File: PKOB4_MainMicro_100_Misc.SchDoc			

Serial Wire Debug



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Engineer: RINU CLEETUS			
PartNumber: WBZ451 EVB	Project Title WBZ451 CURIOSITY BOARD	Variant: Production Variant	
Sheet Title **		 Altium Altium.com	
Size B	SCH #: 03- PCB #: 04-		
File: PKOB4_SerialWireDebug.SchDoc			

WBZ451

