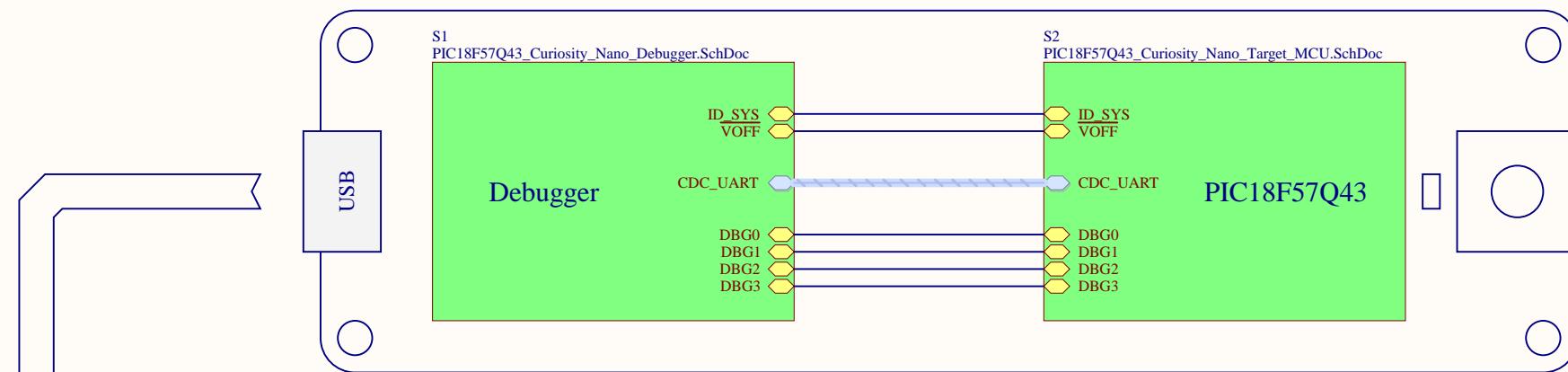
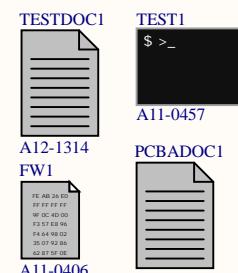
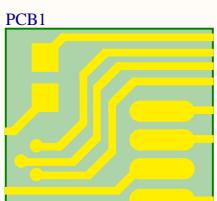
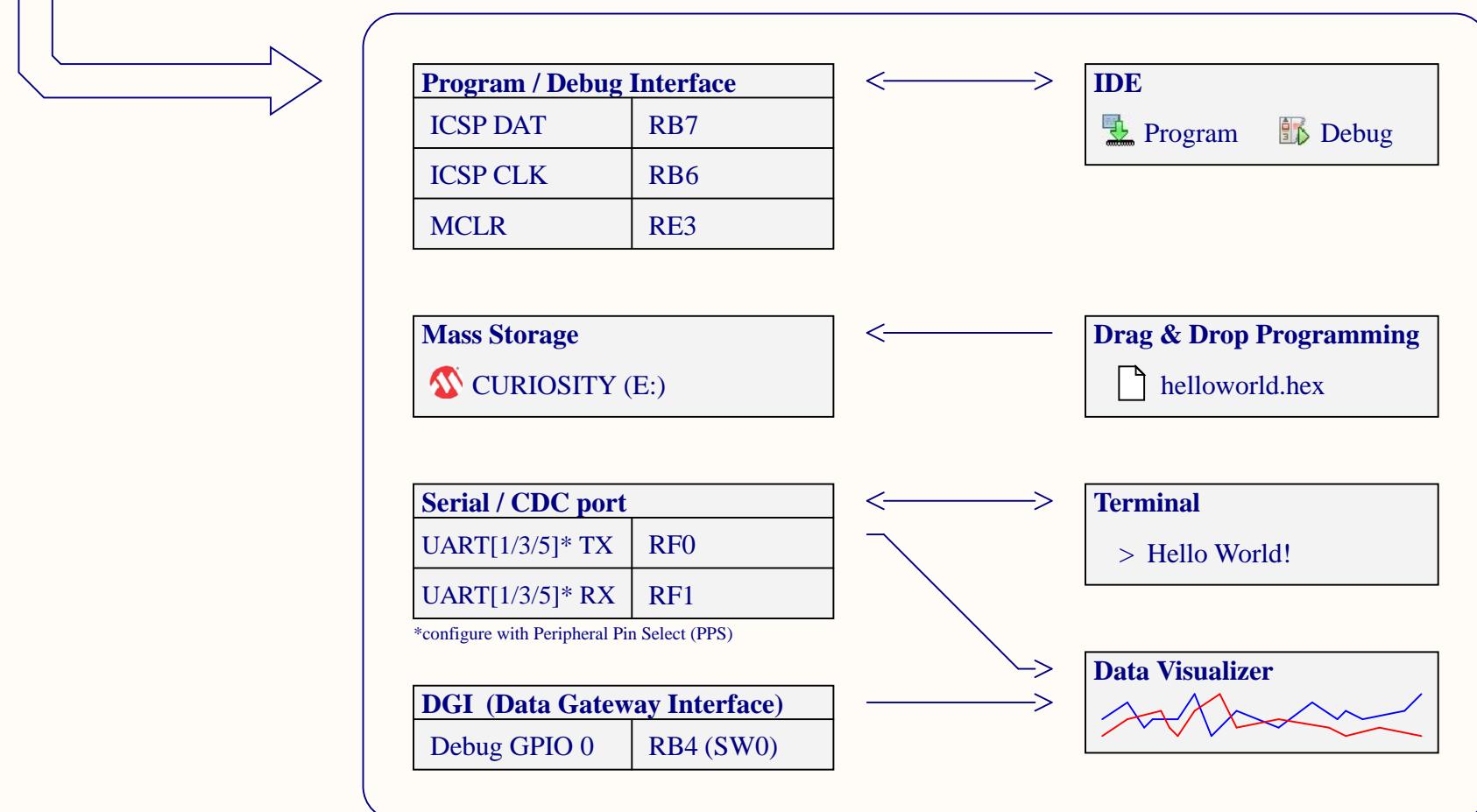


# PIC18F57Q43 Curiosity Nano

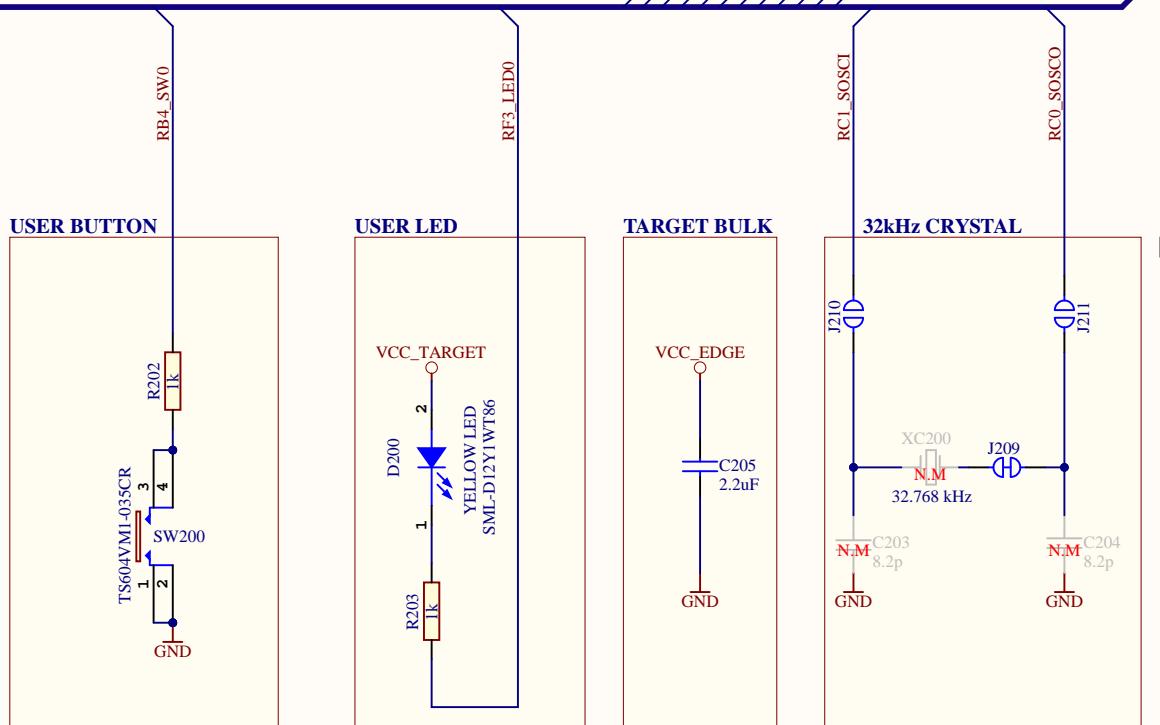
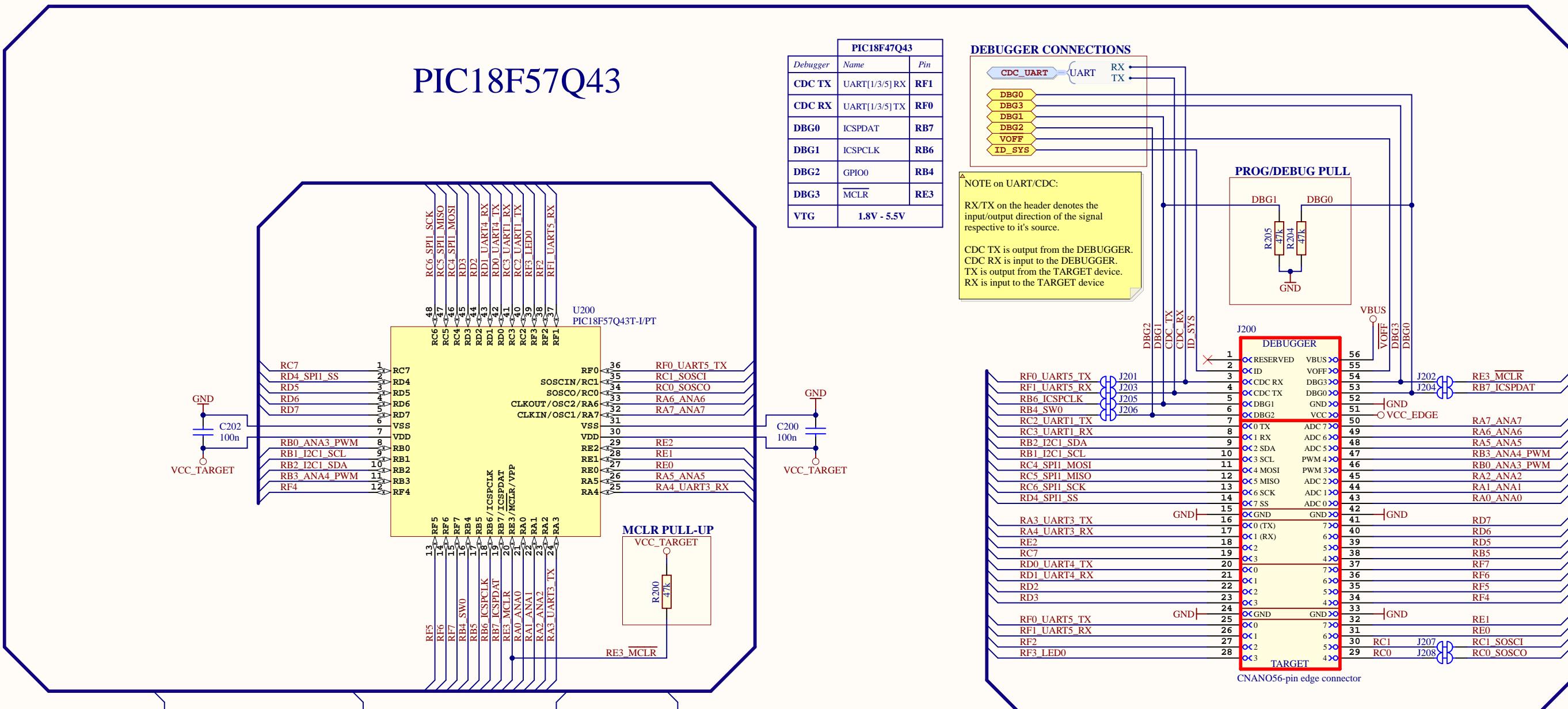


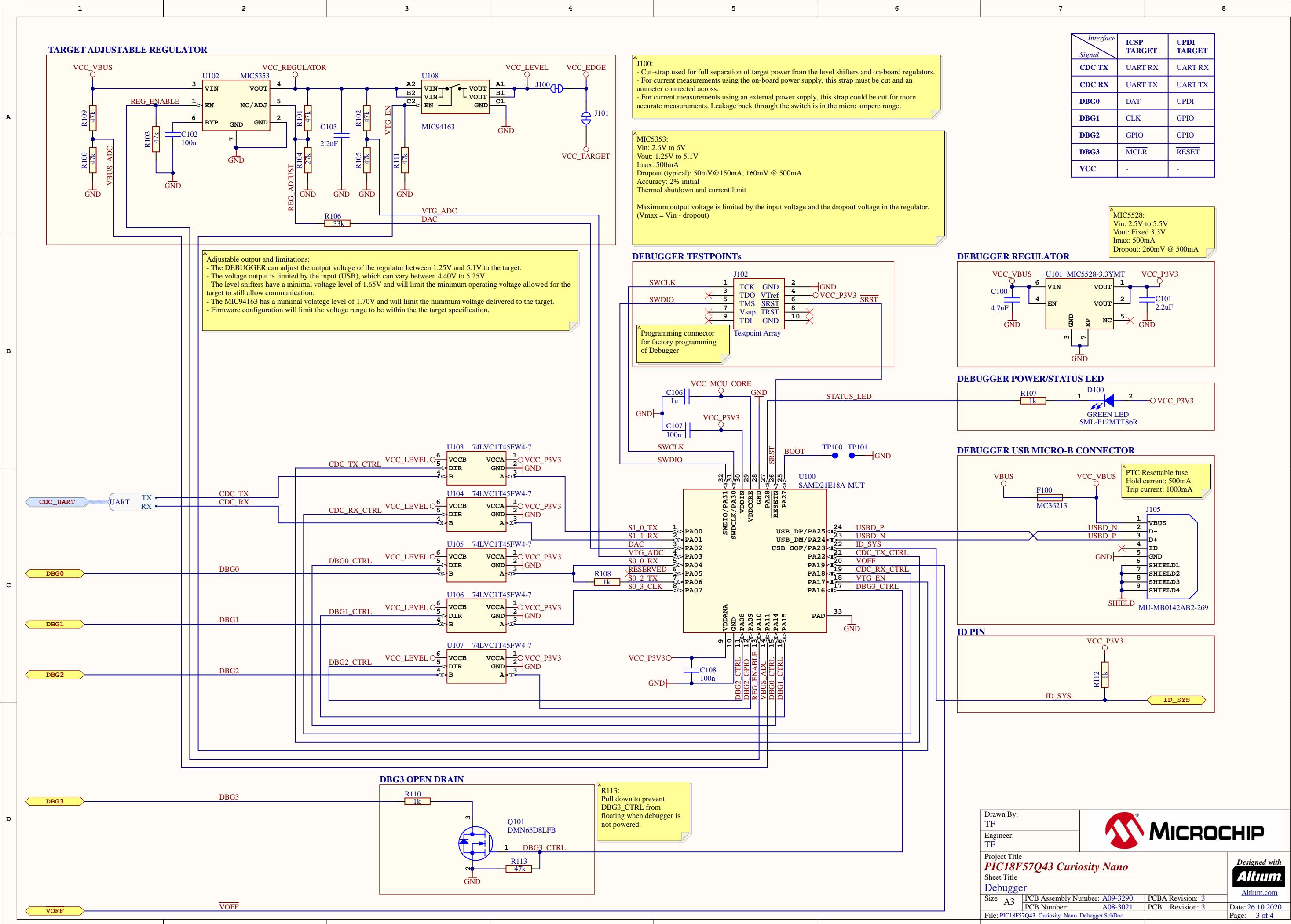
| On-Board Peripherals |     |            |
|----------------------|-----|------------|
| LED0                 | RF3 | Active Low |
| SW0                  | RB4 | Active Low |



|  |  |
|--|--|
| Drawn By:<br>TF, PB                                | Designed with<br><b>Altium</b><br>Altium.com     |
| Project Title<br><b>PIC18F57Q43 Curiosity Nano</b> |  |
| Sheet Title<br><b>Top Level</b>                    |  |
| Size A3  | PCB Assembly Number: A09-3290                    |
|  | PCB Number: A08-3021                             |
|  | PCB Revision: 3                                  |
|  | Date: 26.10.2020                                 |
|  | File: PIC18F57Q43_Curiosity_Nano_TopLevel.SchDoc |
|  | Page: 1 of 4                                     |

# PIC18F57Q43





# Revision History

## PCB Assembly Rev 1:

|                 |  |
|-----------------|--|
| Design Changes: |  |
| Initial Design  |  |
| PCB:            |  |
| PCB revision 1  |  |

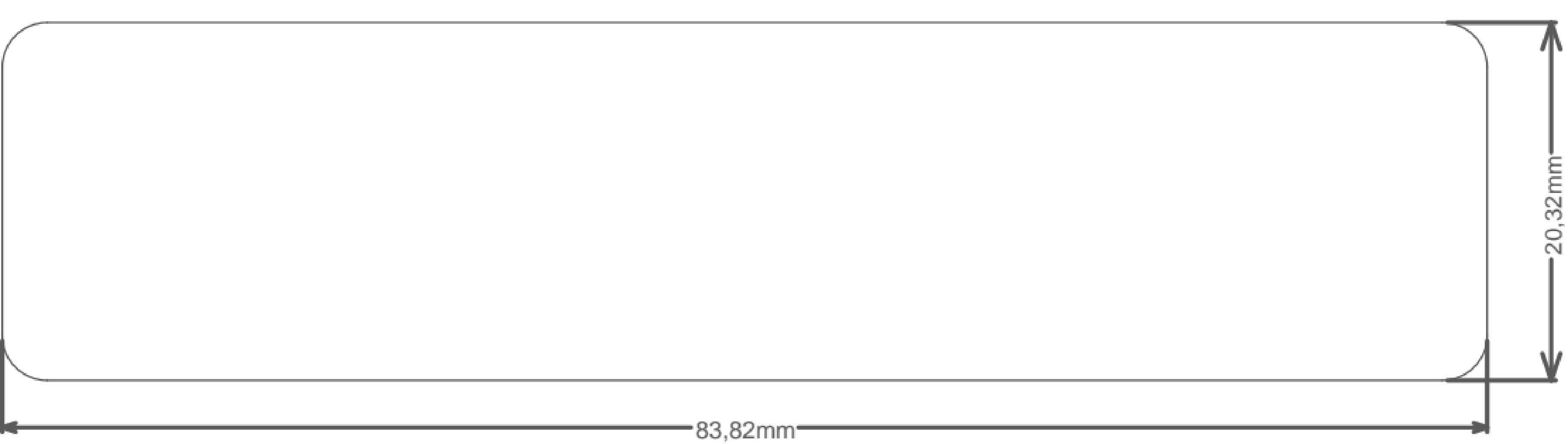
## PCB Assembly Rev 2:

|                 |   |
|-----------------|---|
| Design Changes: | Board edge connector updated to staggered and current measurement footprint added. Added pull-down on gate of reset MOSFET (Q100), and removed decoupling from SAMD21 reset line. Changed Target reset pull-up value from 100k to 47k to ease production. |
| PCB:            |   |
| PCB revision 2  |   |

## PCB Assembly Rev 3:

|                 |  |
|-----------------|--|
| Design Changes: | Changed pinout of the edge connector<br>Changed default crystal (XC200) to available type. |
| PCB:            |  |
| PCB revision 3  |  |

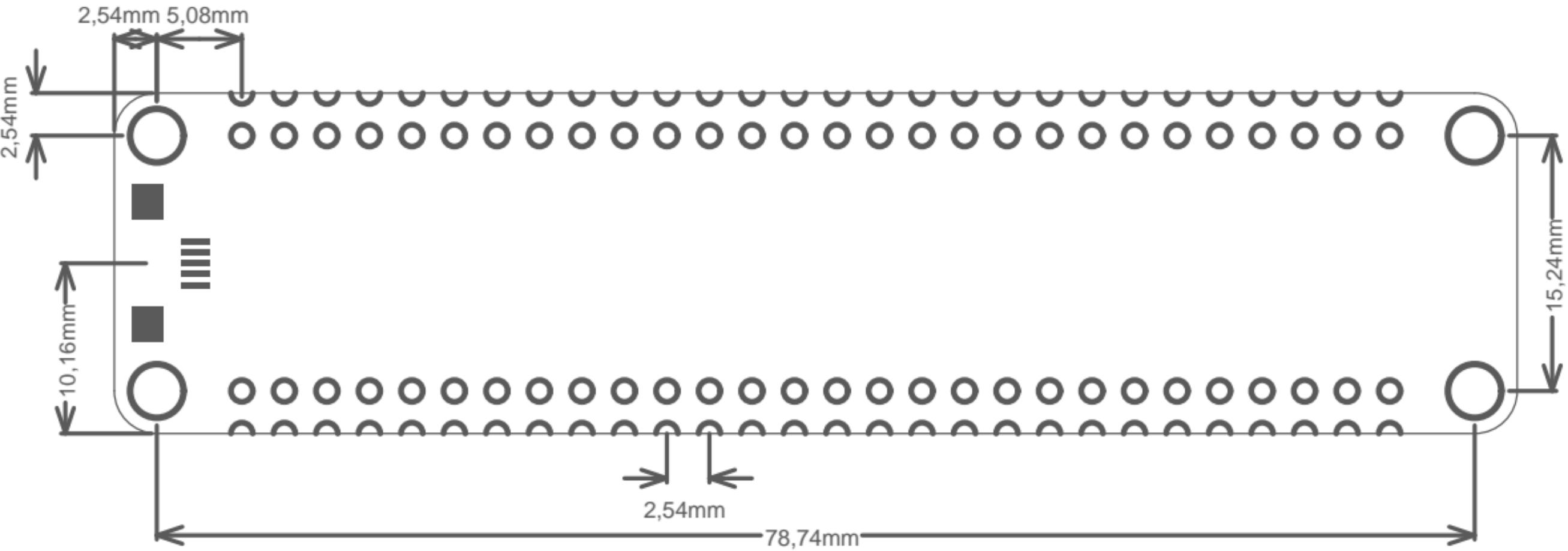
|  |  |
|--|--|
| Drawn By:<br><b>TF</b>                             |  <b>MICROCHIP</b> |
| Engineer:<br><b>TF</b>                             |  |
| Project Title<br><b>PIC18F57Q43 Curiosity Nano</b> | Designed with<br><b>Altium</b><br><a href="http://Altium.com">Altium.com</a>                           |
| Sheet Title<br><b>Revision History</b>             |  |
| Size A3  | PCB Assembly Number: <b>A09-3290</b>   |
|  | PCB Number: <b>A08-3021</b>  |
|  | PCB Revision: <b>3</b>   |
|  | Date: <b>26.10.2020</b>  |
|  | File: <b>PIC18F57Q43_Curiosity_Nano_Revision_History.SchDoc</b>  |
|  | Page: <b>4 of 4</b>  |



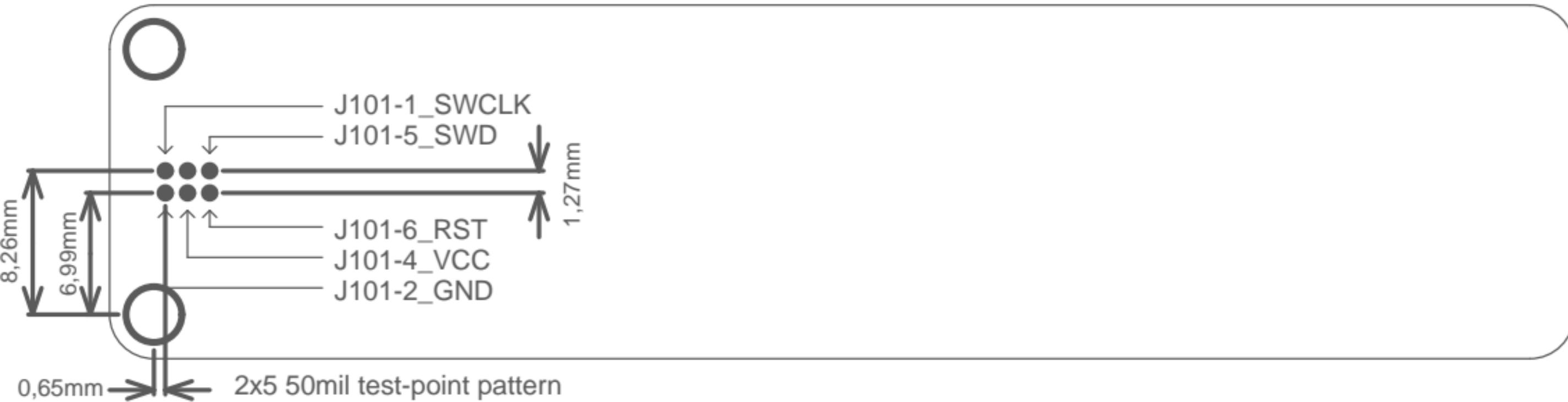
83,82mm

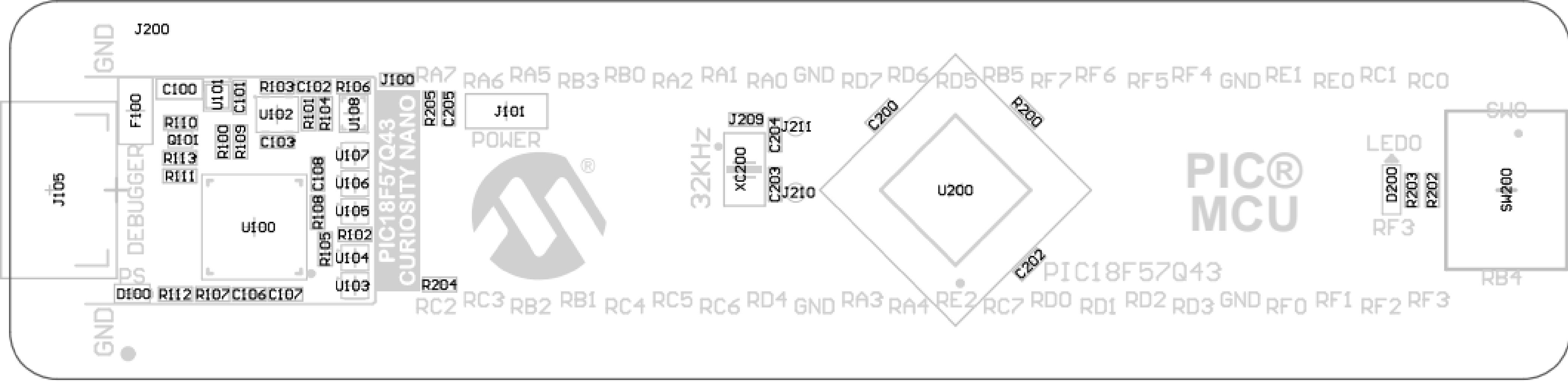
20,32mm

# Connector Placement



# Test Point Placement





RC0 RC1 RE0 RE1 GND RF4 RF5 RF6 RF7 RB5 RD5 RD6 RD7 GND RA0 RA1 RA2 RB0 RB3 RA5 RA6 RA7 UTG GND DO D3 VOFF UBUS

RC0  
RC1



LABEL1

A08-3021 Rev3  
Microchip © 2019

RF3 RF2 RF1 RF0 GND RD3 RD2 RD1 RD0 RC7 RE2 RA4 RA3 GND RD4 RC6 RC5 RC4 RB1 RB2 RC3 RC2 D2 D1 TX RX ID NC

CONNECTIONS

|     |      |        |
|-----|------|--------|
| RE3 | J202 | D3     |
| RB4 | J206 | D2     |
| RB6 | J205 | D1     |
| RB7 | J204 | DO     |
| RF0 | J201 | RX CDC |
| RF1 | J203 | TX CDC |

TARGET

DEBUGGER



J102



TP101 GND

TP100 GND

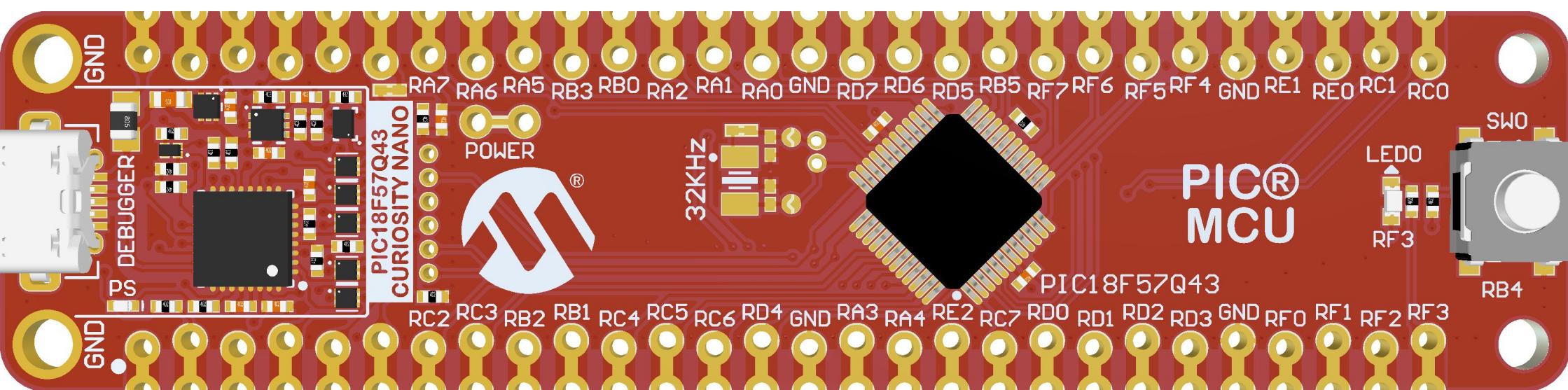
TP100 GND

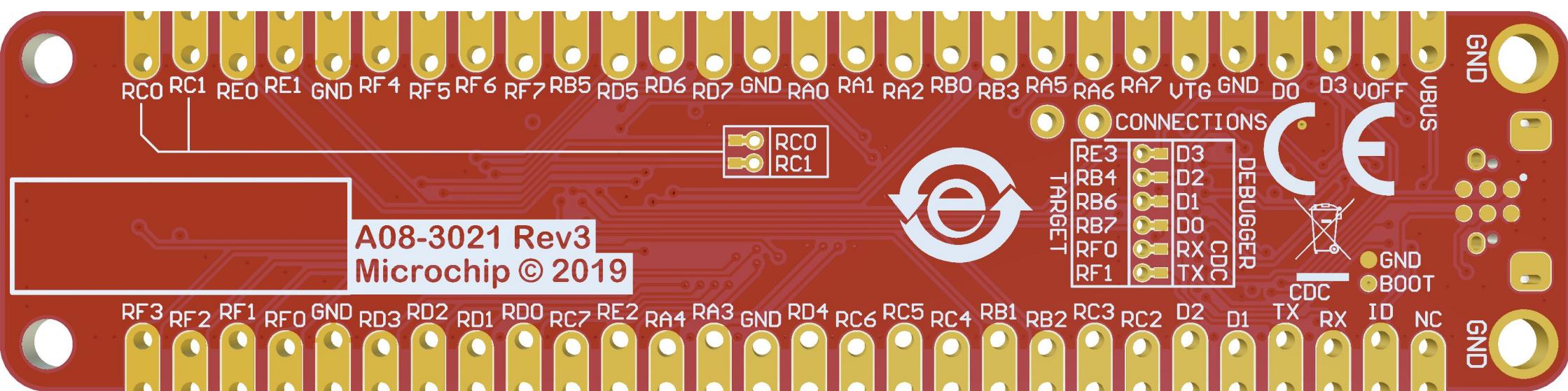
CDC

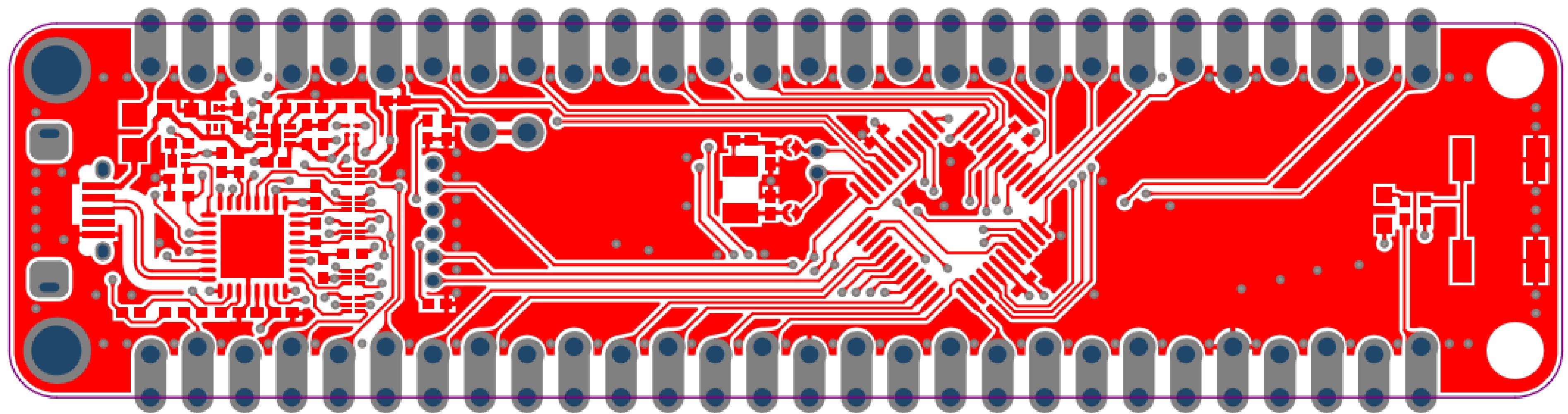
GND

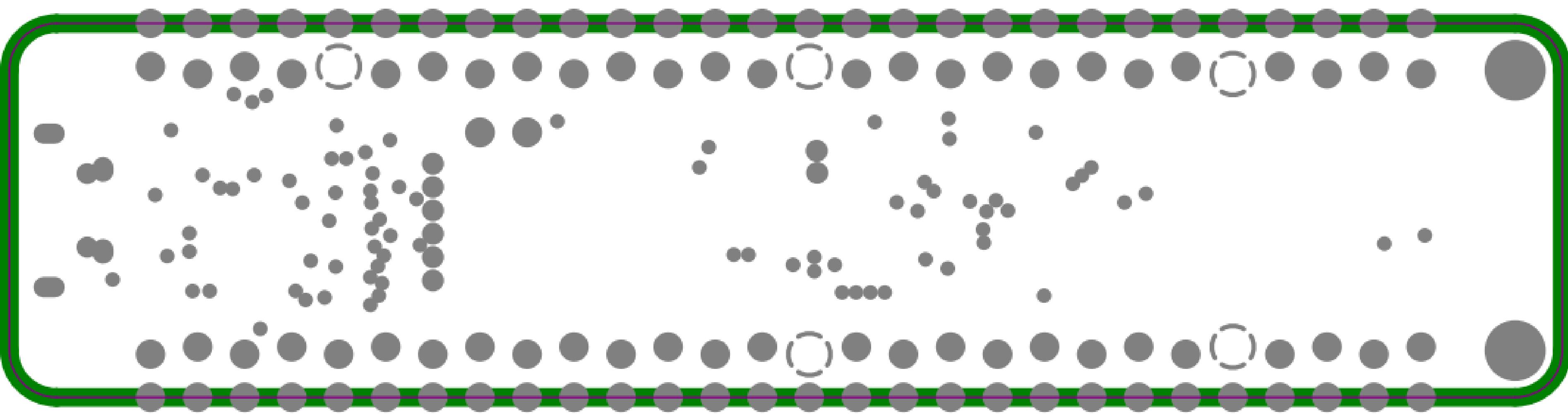
J102

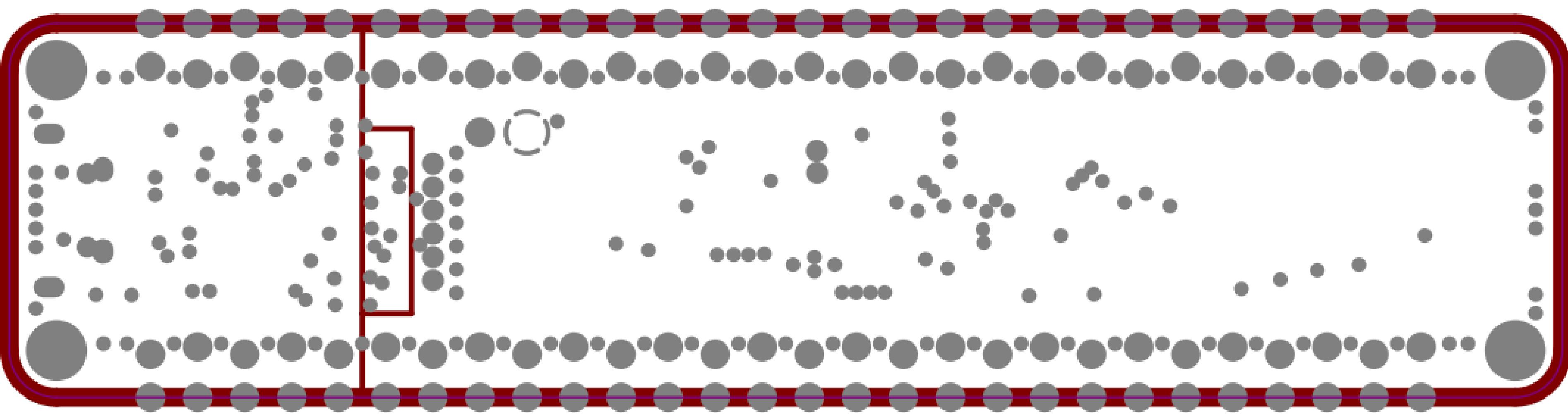
GND

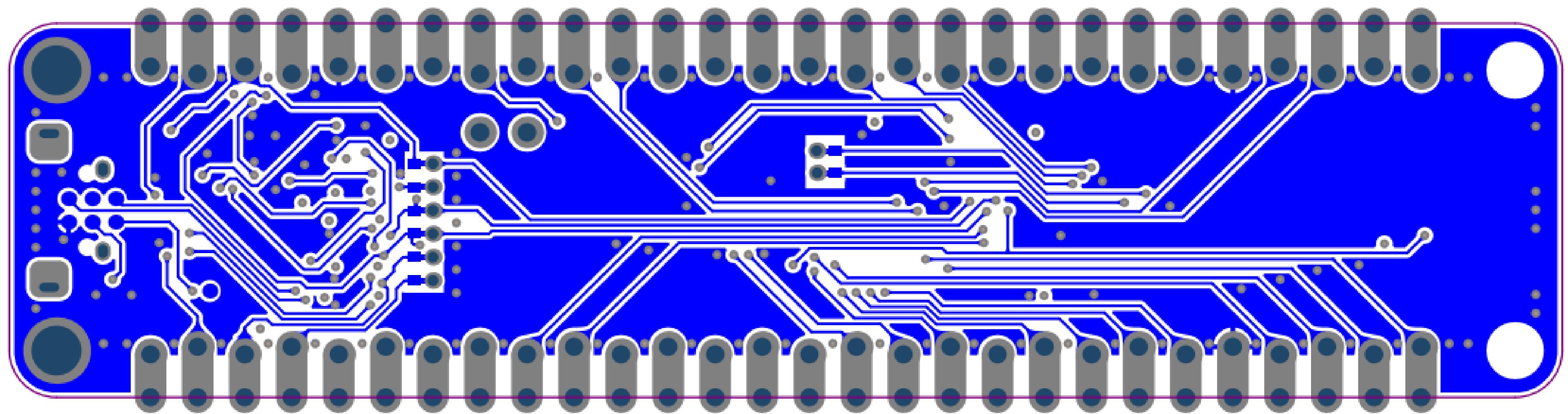












# Component list

Bill of Materials Fitted for Variant [Default Assembly] of Project [PIC18F57Q43\_Curiosity\_Nano.PrjPcb] (No PCB Document Selected)



**MICROCHIP**

Source Data From:

PIC18F57Q43\_Curiosity\_Nano.PrjPcb

Project:

PIC18F57Q43\_Curiosity\_Nano.PrjPcb

Variant:

Default Assembly

Report Date: 26.10.2020 08:17

Print Date: 26.10.2020 08:17:07

| Fitted     | Designator   | Quantity | Value  | Manufacturer                  | MPN                 | Description   |
|------------|--|----------|--|-------------------------------|---------------------|---|
| Fitted     | C100   | 1        | 4.7uF  | WALSIN Technology Corporation | 0603X475K100CT      | Ceramic capacitor, SMD 0603, X5R, 10V, 10% (de31036)                        |
| Fitted     | C101   | 1        | 2.2uF  | Kemet                         | C0402C225MPAC       | Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-20%                              |
| Fitted     | C102, C107, C108, C200, C202                                     | 5        | 100n   | Kemet                         | C0402C104K4RACTU    | Ceramic capacitor, SMD 0402, X7R, 16V, +/-10%                               |
| Fitted     | C103, C205   | 2        | 2.2uF  | TDK                           | C1005X5R1A225K      | CAP CER 2.2uF 10V 10% X5R 0402  |
| Fitted     | C106   | 1        | 1u   | Kemet                         | C0402C105K9PAC      | Ceramic capacitor, SMD 0402, X5R, 6.3V, +/-10% (de26942)                    |
| Fitted     | D100   | 1        | GREEN LED                                    | ROHM                          | SML-P12MTT86R       | LED, SMD 0402, Green, Wave length=569nm, 2.1mcd @ (1mA, 1.9Vf) rohm         |
| Fitted     | D200   | 1        | YELLOW LED                                   | ROHM                          | SML-D12Y1WT86       | LED, SMD 0603, Yellow, Wave length=590nm, 100mcd @ (20mA, 2.2Vf) rohm       |
| Fitted     | F100   | 1        | MC36213                                      | Multicomp                     | MC36213             | Resetable PTC fuse, Ith = 0.5A, It = 1.0A, 0805 package                     |
| Fitted     | FW1  | 1        | nEDBG firmw are                              |                               |                     | nEDBG firmw are   |
| Fitted     | J105   | 1        | MU-MB0142AB2-269                             | Allen Creations Corp.         | MU-MB0142AB2-269    | USB micro AB, Surface mount signals and DIP shield                          |
| Fitted     | LABEL1   | 1        | Label PCBA                                   | ACT Logimark AS               | 505462              | PCBA identification label PP Top White Gloss                                |
| Fitted     | PCB1   | 1        | PIC18F57Q43 Curiosity Nano PCB documentation |                               |                     | PIC18F57Q43 Curiosity Nano PCB documentation                                |
| Fitted     | PCBADOC1   | 1        | A09-3290 PCBA files                          |                               |                     | PIC18F57Q43 Curiosity Nano PCBA documentation                               |
| Fitted     | Q101   | 1        | DMN65D8LFB                                   | Diodes Incorporated           | DMN65D8LFB-7        | N-channel MOSFET, DFN1006-3 (SOT883), 60V, 330mA, 4Ohm                      |
| Fitted     | R100, R101, R102, R103, R105, R109, R111, R113, R200, R204, R205 | 11       | 47k  | KOA                           | RK73H1ETTP4702F     | Thick film resistor, SMD 0402, 1/16W, 1%                                    |
| Fitted     | R104   | 1        | 27k  | Yageo                         | RC0402FR-0727KL     | Thick film resistor, SMD 0402, 1/16W, 1%                                    |
| Fitted     | R106   | 1        | 33k  | ASJ Holdings                  | CR10-3302-FK        | Thick film resistor, SMD 0402, 1/16W, 1%                                    |
| Fitted     | R107, R108, R110, R112, R202, R203                               | 6        | 1k   | ASJ Holdings                  | CR10-1001-FK        | Thick film resistor, SMD 0402, 1/16W, 1%                                    |
| Fitted     | SW200  | 1        | TS604VM1-035CR                               | Dailywell Electronics Co.LTD  | TS604VM1-035CR-R    | SWITCH, SMD, 260gf, 6.4mm X 6.2mm   |
| Fitted     | TEST1  | 1        | PIC18F57Q43 Curiosity Nano test              |                               |                     | Fixture test for PIC18F57Q43 Curiosity Nano                                 |
| Fitted     | TESTDOC1   | 1        | Curiosity Nano Test Instructions             |                               |                     | Generic Test Instructions for Curiosity Nano                                |
| Fitted     | U100   | 1        | SAMD21E18A-MUT                               | Microchip                     | ATSAMD21E18A-MUT    | 32-bit RISC MCU 32pin   |
| Fitted     | U101   | 1        | MIC5528-3.3YMT                               | Microchip                     | MIC5528-3.3YMT-T5   | LDO 3.3V 0.5A 6TDFN   |
| Fitted     | U102   | 1        | MIC5353                                      | Microchip                     | MIC5353YMT-TR       | 500mA Ultra Low Dropout LDO regulator, 2% accuracy, 1.6x1.6mm MLF           |
| Fitted     | U103, U104, U105, U106, U107                                     | 5        | 74LVC1T45FW4-7                               | Diodes Incorporated           | 74LVC1T45FW4-7      | Single-Bit Dual-Supply Transceive, 1.65-5.5 Translation and 3-State Outputs |
| Fitted     | U108   | 1        | MIC94163                                     | Microchip                     | MIC94163YCS-TR      | Loadswitch, Rds(on) = 14.5mohm, 1.0mm x 1.5mm WLCSP, reverse blocking       |
| Fitted     | U200   | 1        | PIC18F57Q43T-IPT                             | Microchip                     | PIC18F57Q43T-IPT    | PIC18F57Q43 microcontroller, 48-pin TQFP 7mm x 7mm x 1.0mm                  |
| Not Fitted | C203, C204   | 0        | 8.2p   | Yageo                         | CC0402CRNPO9BN8R2   | Ceramic capacitor, SMD 0402, NP0, 50V, +/-5%                                |
| Not Fitted | XC200  | 0        | 32.768kHz                                    | Abracan                       | ABS07-32.768kHz-7-T | Crystal, 32.768kHz, CL=7.0pF, ESR=70kOhm, SMD LxW=3.2 x 1.5mm, 20ppm        |

51

Approved

Notes