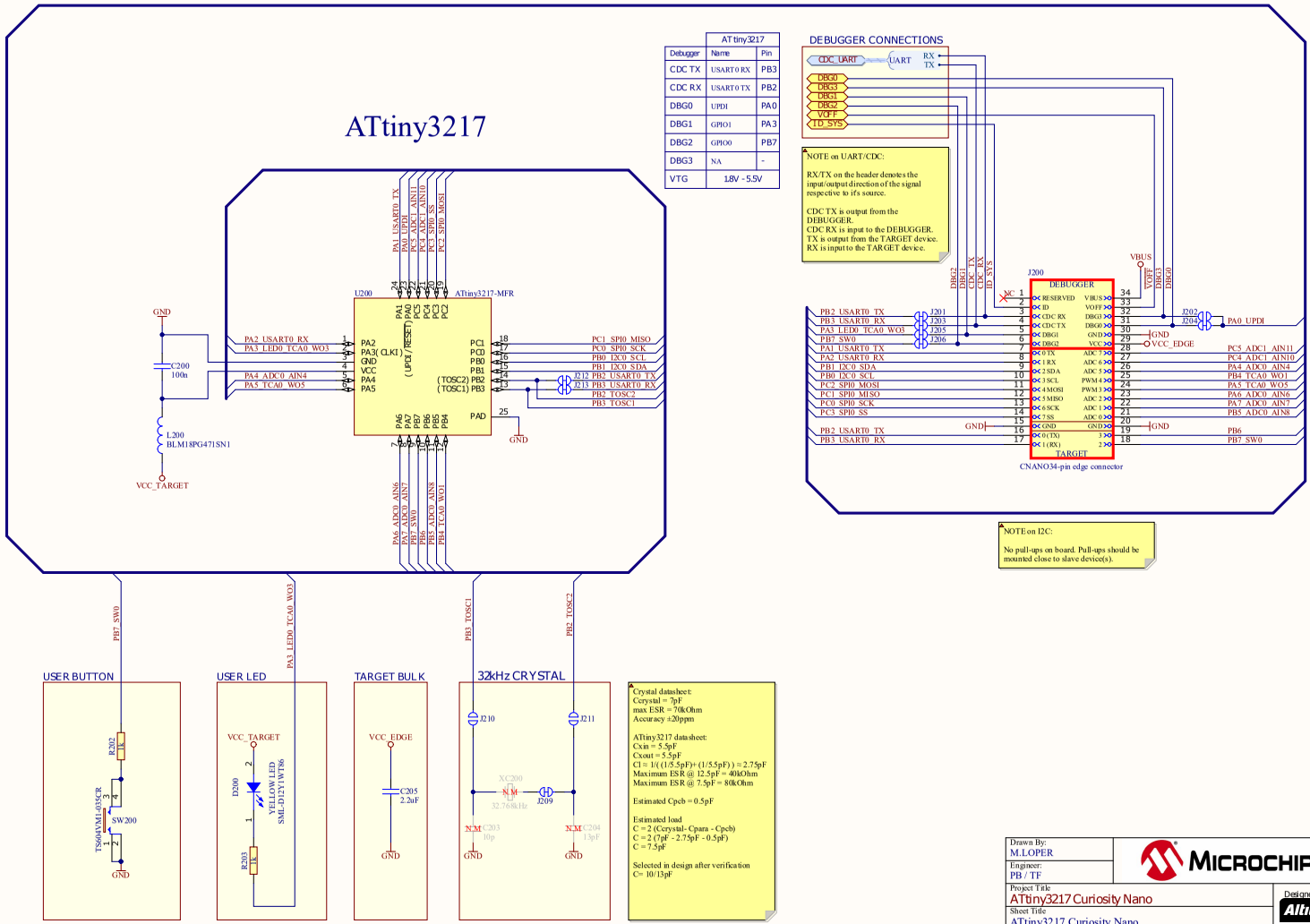
ATtiny3217
ATtiny3217
Debugger
Name
Pin
CDC TX
USART0 RX
PB3
CDC RX
USART0 TX
PB2
DBG0
UPDI
PA0
DBG1
GPIO1
PA3
DBG2
GPIO0
PB7
DBG3
NA
-
VTG
1.8V - 5.5V
DEBUGGER CONNECTIONS
CDC_UART
UART
RX
TX
DBG0
DBG3
DBG1
DBG2
VOFF
ID_SYS
NOTE on UART/CDC:
RX/TX on the header denotes the input/output direction of the signal respective to it's source.
CDC TX is output from the DEBUGGER.
CDC RX is input to the DEBUGGER.
TX is output from the TARGET device.
RX is input to the TARGET device.
J200
DEBUGGER
TARGET
CNANO34-pin edge connector
VBUS
VOFF
ID_SYS
DBG3
DBG0
DBG2
DBG1
CDC_TX
CDC_RX
ID_SYS
NC
RESERVED
ID
CDC RX
CDC TX
DBG1
DBG2
TX
RX
(TX)
(RX)
GND
VCC
VBUS
VOFF
DBG3
DBG0
GND
VCC_EDGE
J201
J203
J205
J206
J202
J204
PB2 USART0 TX
PB3 USART0 RX
PA3 LED0 TCA0 WO3
PB7 SW0
PA1 USART0 TX
PA2 USART0 RX
PB1 I2C0 SDA
PB0 I2C0 SCL
PC2 SPI0 MOSI
PC1 SPI0 MISO
PC0 SPI0 SCK
PC3 SPI0 SS
PA0 UPDI
PC5 ADC1 AIN11
PC4 ADC1 AIN10
PA4 ADC0 AIN4
PB4 TCA0 WO1
PA5 TCA0 WO5
PA6 ADC0 AIN6
PA7 ADC0 AIN7
PB5 ADC0 AIN8
PB6
PB7 SW0
NOTE on I2C:
No pull-ups on board. Pull-ups should be mounted close to slave device(s).
U200
ATtiny3217-MFR
PA1 USART0 TX
PA0 UPDI
PC5 ADC1 AIN11
PC4 ADC1 AIN10
PC3 SPI0 SS
PC2 SPI0 MOSI
PA2 USART0 RX
PA3 LED0 TCA0 WO3
PA4 ADC0 AIN4
PA5 TCA0 WO5
PA6 ADC0 AIN6
PA7 ADC0 AIN7
PB7 SW0
PB6
PB5 ADC0 AIN8
PB4 TCA0 WO1
PC1 SPI0 MISO
PC0 SPI0 SCK
PB0 I2C0 SCL
PB1 I2C0 SDA
(TOSC2) PB2
(TOSC1) PB3
PB2 TOSC2
PB3 TOSC1
PB2 USART0 TX
PB3 USART0 RX
PAD
C200
100n
L200
BLM18PG471SN1
VCC_TARGET
GND
USER BUTTON
R202
1K
SW200
TS04AVM14035CR
USER LED
D200
YELLOW LED
SML-D12TWT86
R203
1K
VCC_TARGET
TARGET BULK
C205
2.2uF
VCC_EDGE
32kHz CRYSTAL
J210
J211
J209
XC200
NM
32.768kHz
NM C203
10p
NM C204
13pF
Crystal datasheet:
Ccrystal = 7pF
max ESR = 70kOhm
Accuracy ±20ppm
ATtiny3217 datasheet:
Cxin = 5.5pF
Cxout = 5.5pF
Cl = 1/((1/5.5pF)+ (1/5.5pF)) = 2.75pF
Maximum ESR @ 12.5pF = 40kOhm
Maximum ESR @ 7.5pF = 80kOhm
Estimated Cpcb = 0.5pF
Estimated load
C = 2 (Ccrystal- Cpara - Cpcb)
C = 2 (7pF - 2.75pF - 0.5pF)
C = 7.5pF
Selected in design after verification
C= 10/13pF
Drawn By:
M.LOPER
Engineer:
PB / TF
Project Title
ATtiny3217 Curiosity Nano
Sheet Title
ATtiny3217 Curiosity Nano
Size
A3
PCB Assembly Number: A09-3333
PCB Number: A08-3055
PCBA Revision: 2
PCB Revision: 2
Date: 27/11/2019
Page: 2 of 4
File: ATtiny3217_Curiosity_Nano_Target_MCU.SchDoc
MICROCHIP
Designed with Altium
Altium.com