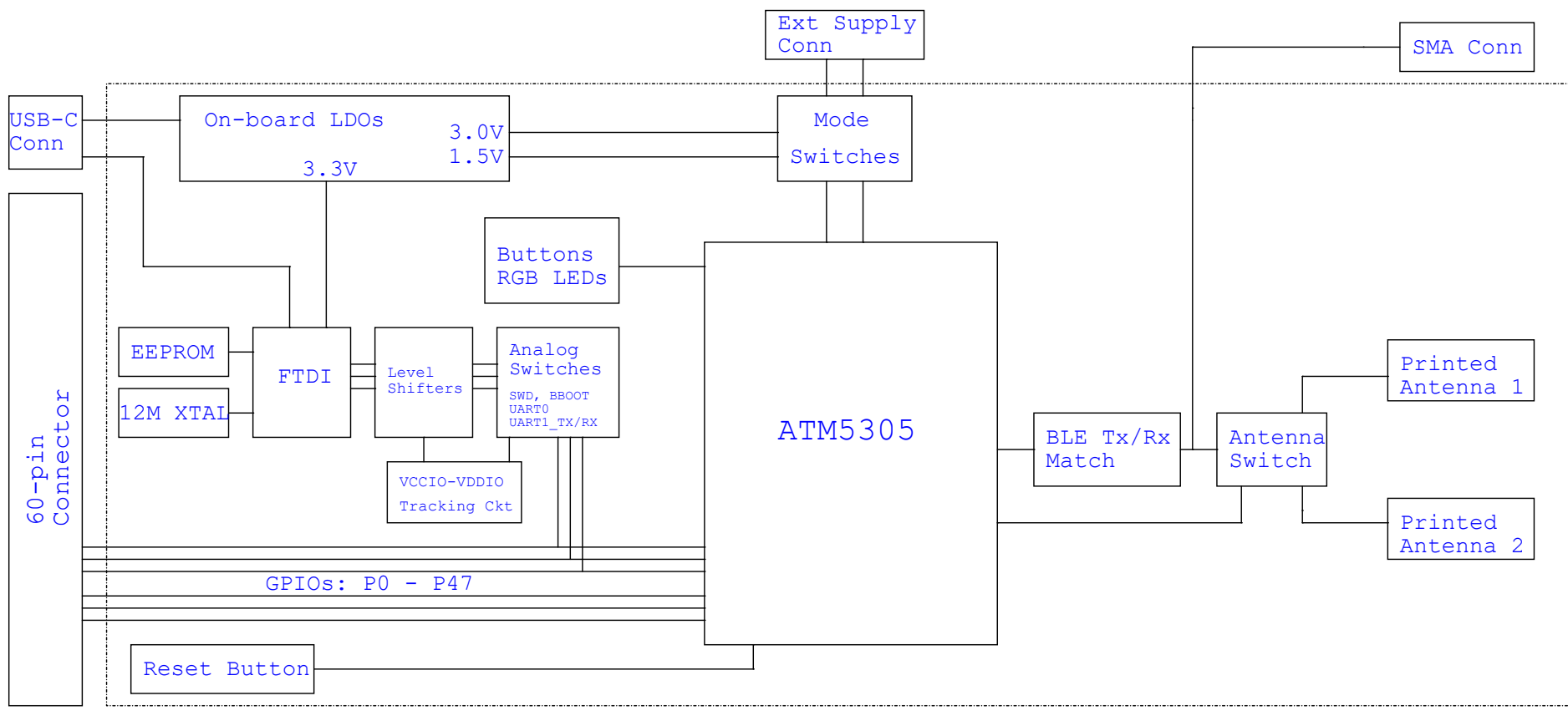


ATM5305/5205 5x5 QFN EVALUATION BOARD

Release Date	Revision	Design Eng.	Design Notes
10/06/25	-00	AD	Initial release
19/03/26	-10	AD	Changed SMA Connector J4 from Molex to TE Swapped VCCA and VCCB on level shifter U12; Added UART_disable to U12 Changed from 3.0V to VBAT3V for Power down switch S1 Changed how FTDI_PWD signal interfaces with Cairo: using analog switch instead of level shifter Changed UART1_TX to P27 and UART0_RTS to P17 Added options to disable level shifters through the OE pin
7/9/26	-20	JOE	Add SB15 / JP28 as a selectable connection option between MON_VSTORE and VBAT3V. Add R177/0402/0ohm between VDDPA and VBAT1V. Add JP29/DNS(HDR1x2) and SB16 for VDDPA current measurement. Replace J4 from vertical-launch SMA to side-launch SMA connector. Add bulk capacitor placeholders at C106, C107, C108 and C109 for BT1. DNS(47µF/0805) by default.

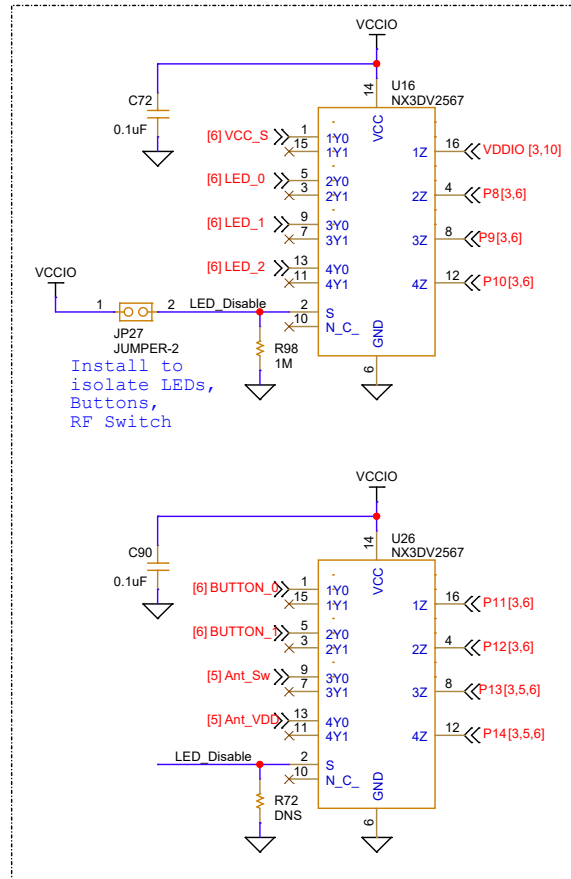
Page 1 - Revision notes
Page 2 - Block diagram
Page 3 - ATM5305, decoupling
Page 4 - GPIO Mapping, Analog switches
Page 5 - RF matching circuits
Page 6 - LEDs, Buttons, I/O Interface Connector
Page 7 - FTDI
Page 8 - Level Shifters
Page 9 - Power supplies and configurations
Page 10 - VDDIO-VCCIO tracking circuit

Block Diagram

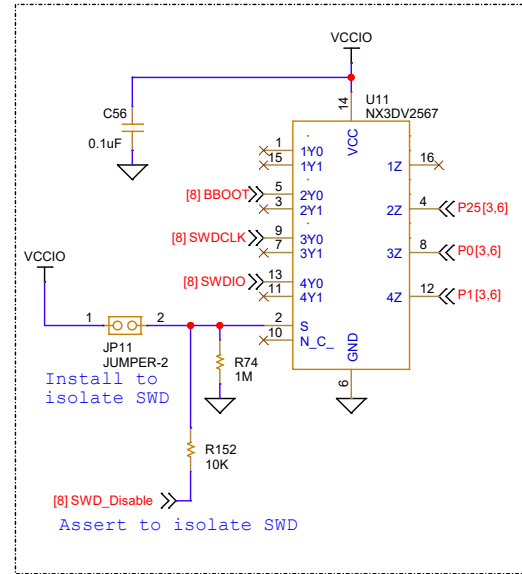




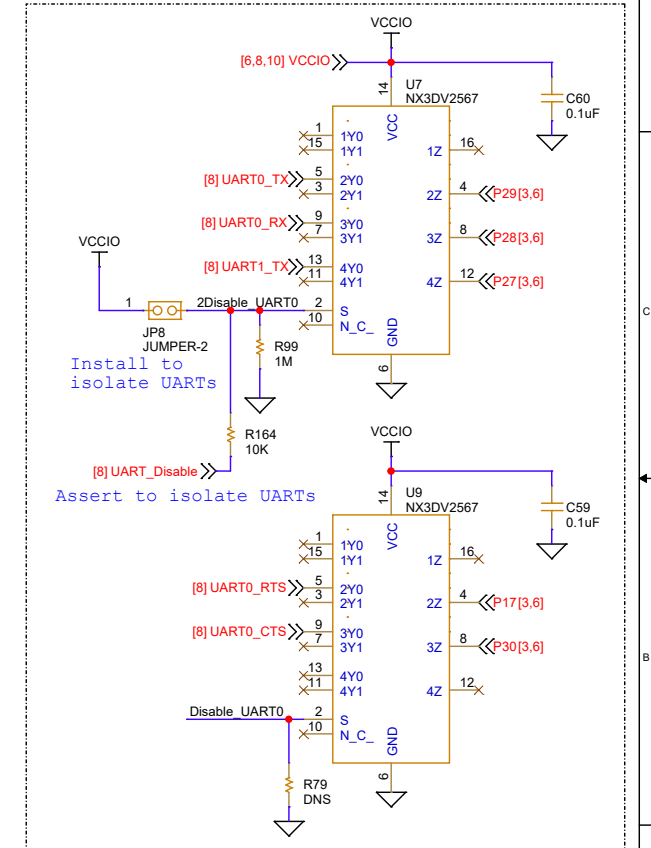
CONNECT ATM5305 to LEDS/BUTTONS/RF switch



ISOLATE ATM5305 SWD from FTDI



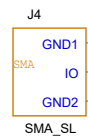
CONNECT ATM5305 UARTs to FTDI



PIFA_2400MHz
ANT2

PIFA_2400MHz
ANT1

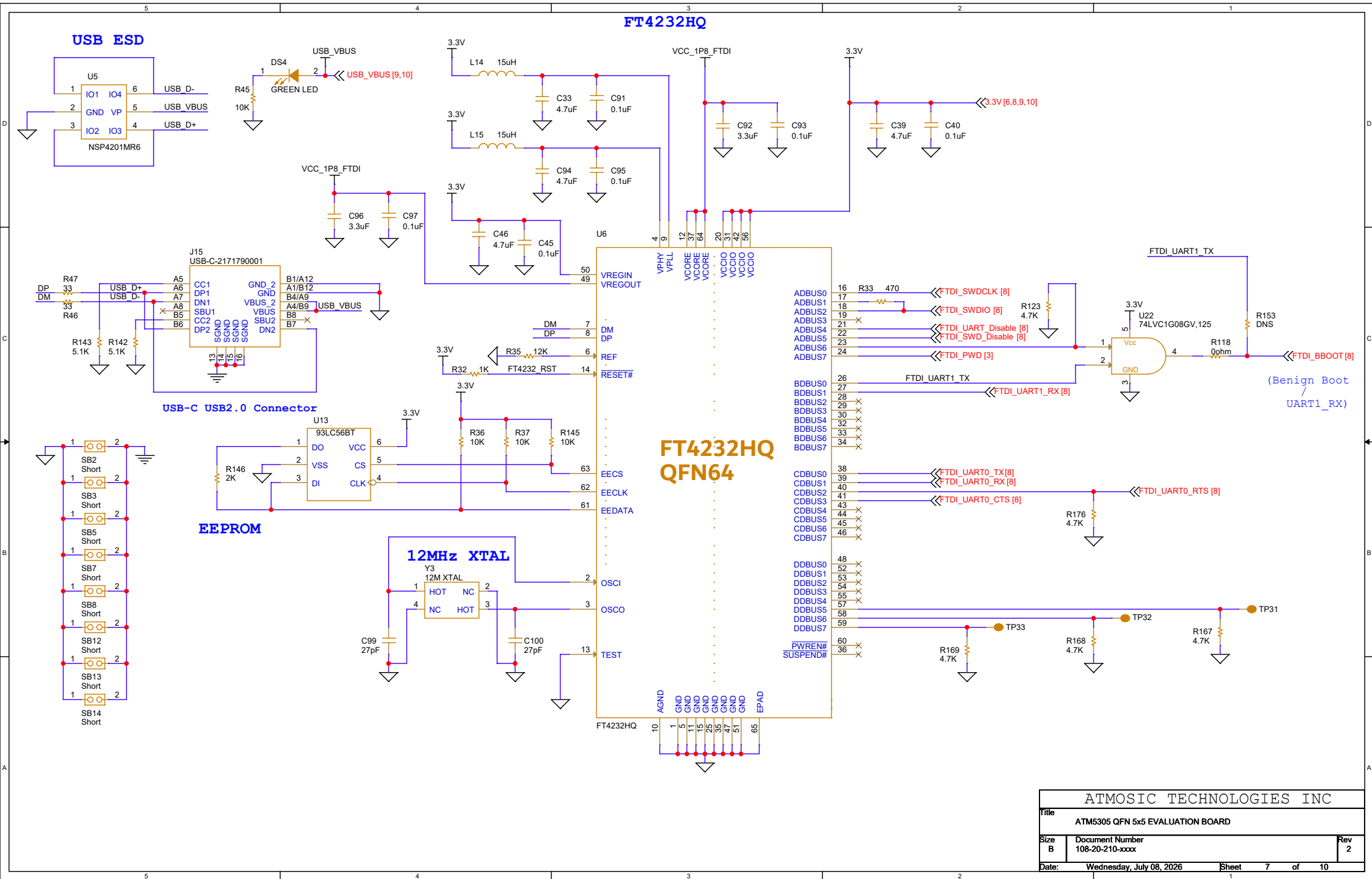
Ext SMA



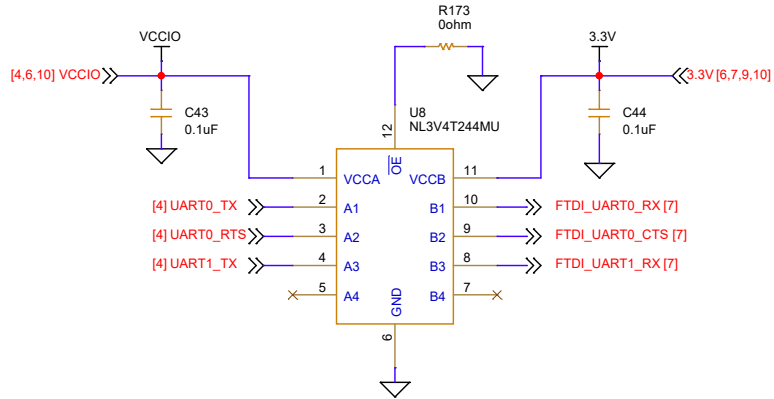
BLE front-end match

Note:
For inductors, use MHQ series from TDK.
For capacitors, use Johanson

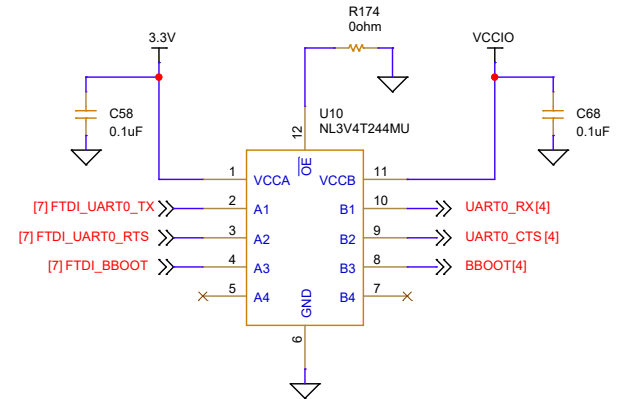
RFIO [3]



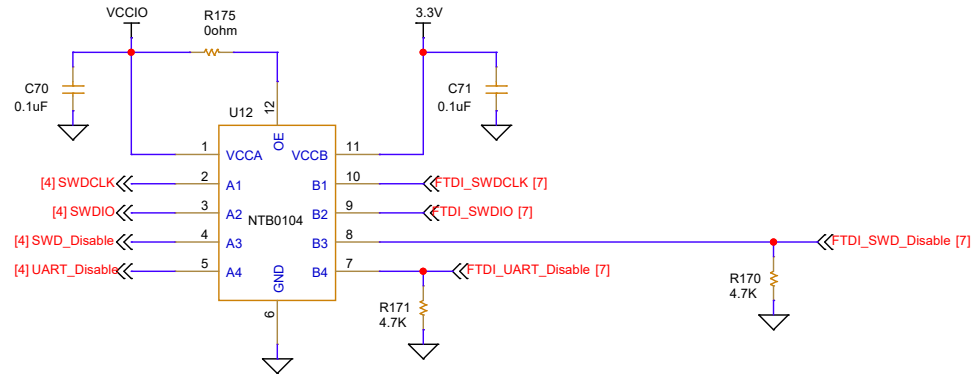
ATM53xx --> FTDI



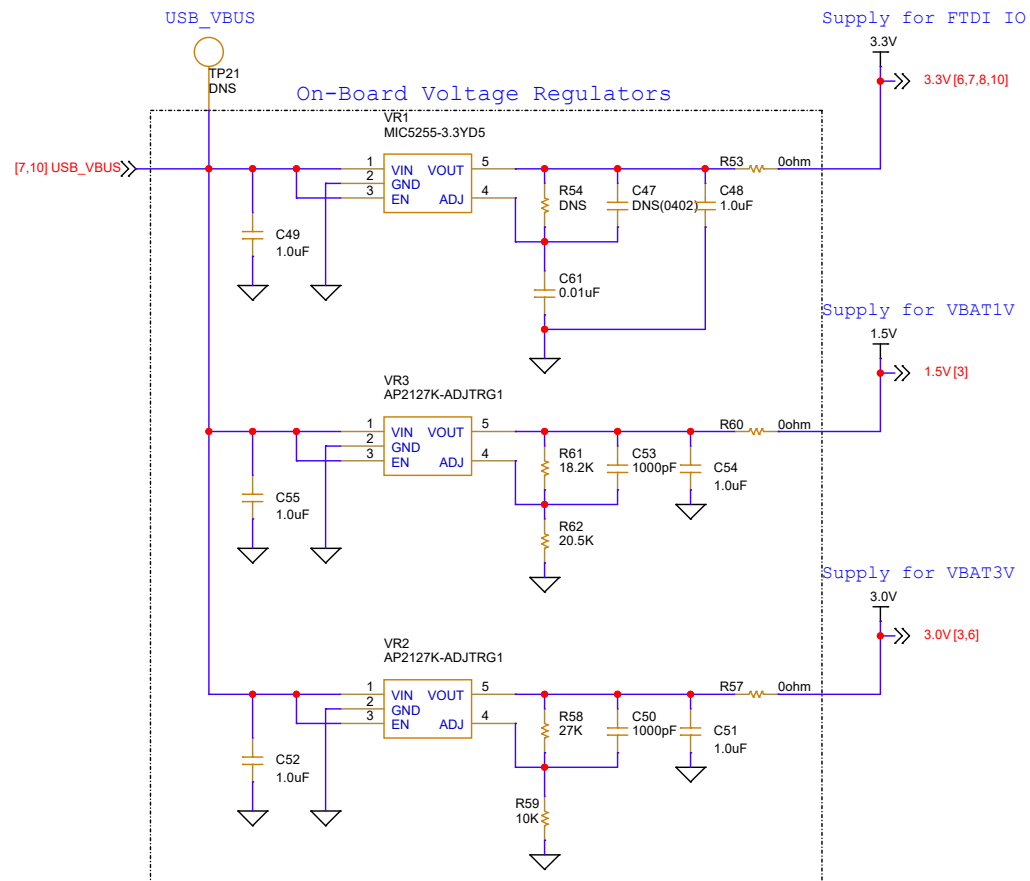
FTDI --> ATM53xx



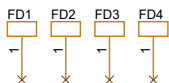
ATM53xx <--> FTDI



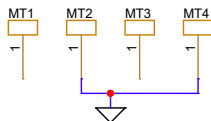
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BOARD FIDUCIALS



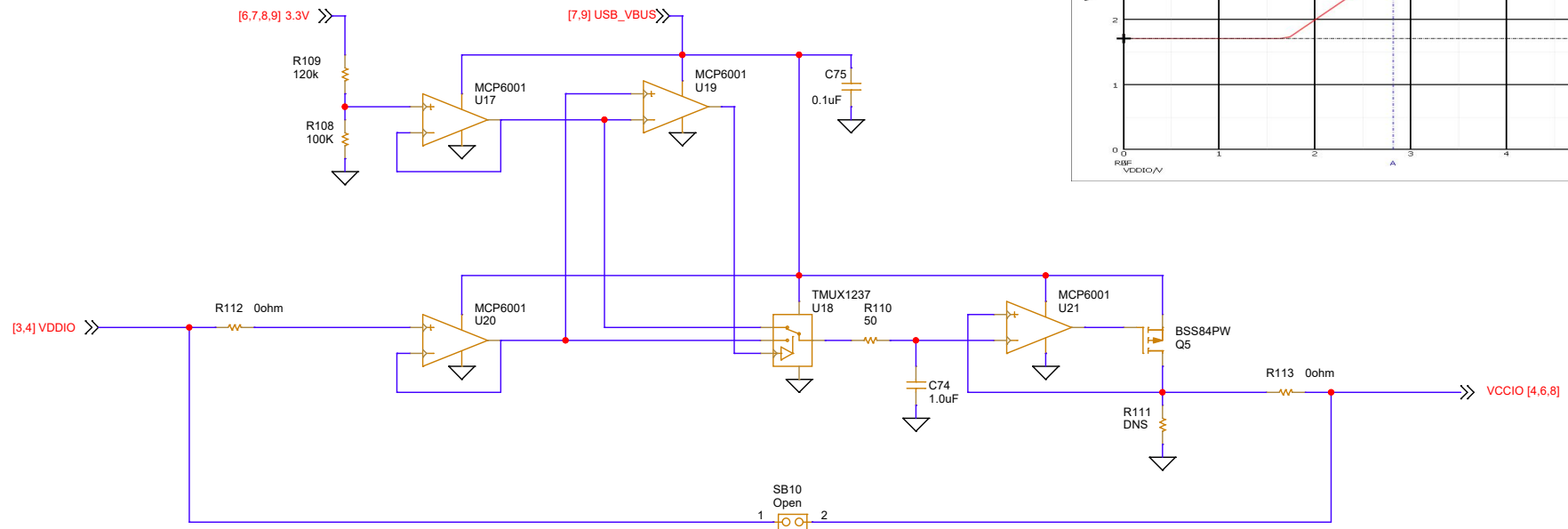
MOUNTING HOLES



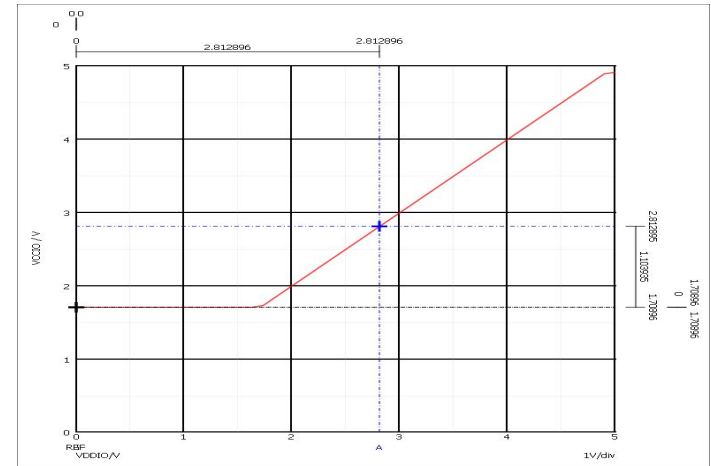
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VDDIO < 1.5V: VCCIO = 1.5V
VDDIO >=1.5V: VCCIO = VDDIO



Short this SB10 for Battery Operation



Title		
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