

S32K142EVB-Q100

C U S T O M E R E V B

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Revisions				
Rev	Description	Designer	Date	Approved
X1	Draft	J.Sanchez		
C		J.Sanchez	11/09/17	
D	Final Release	J.Sanchez	18/09/17	

C A U T I O N :

This schematic is provided for reference purposes only. As such, NXP does not make any warranty, implied or otherwise, as to the suitability of circuit design or component selection (type or value) used in these schematics for hardware design using the NXP S32K family of Microprocessors. Customers using any part of these schematics as a basis for hardware design, do so at their own risk and Freescale does not assume any liability for such a hardware design.

3 Different test points used in design:

TPVx - Through Hole Pad small

TPHx - Through Hile Pad Large (for standard 0.1" header). Also used on IO Matrix (IOMx)

TPX - Surface Mount Wire Loop

TPV?

TPH5

TP?


Notes:

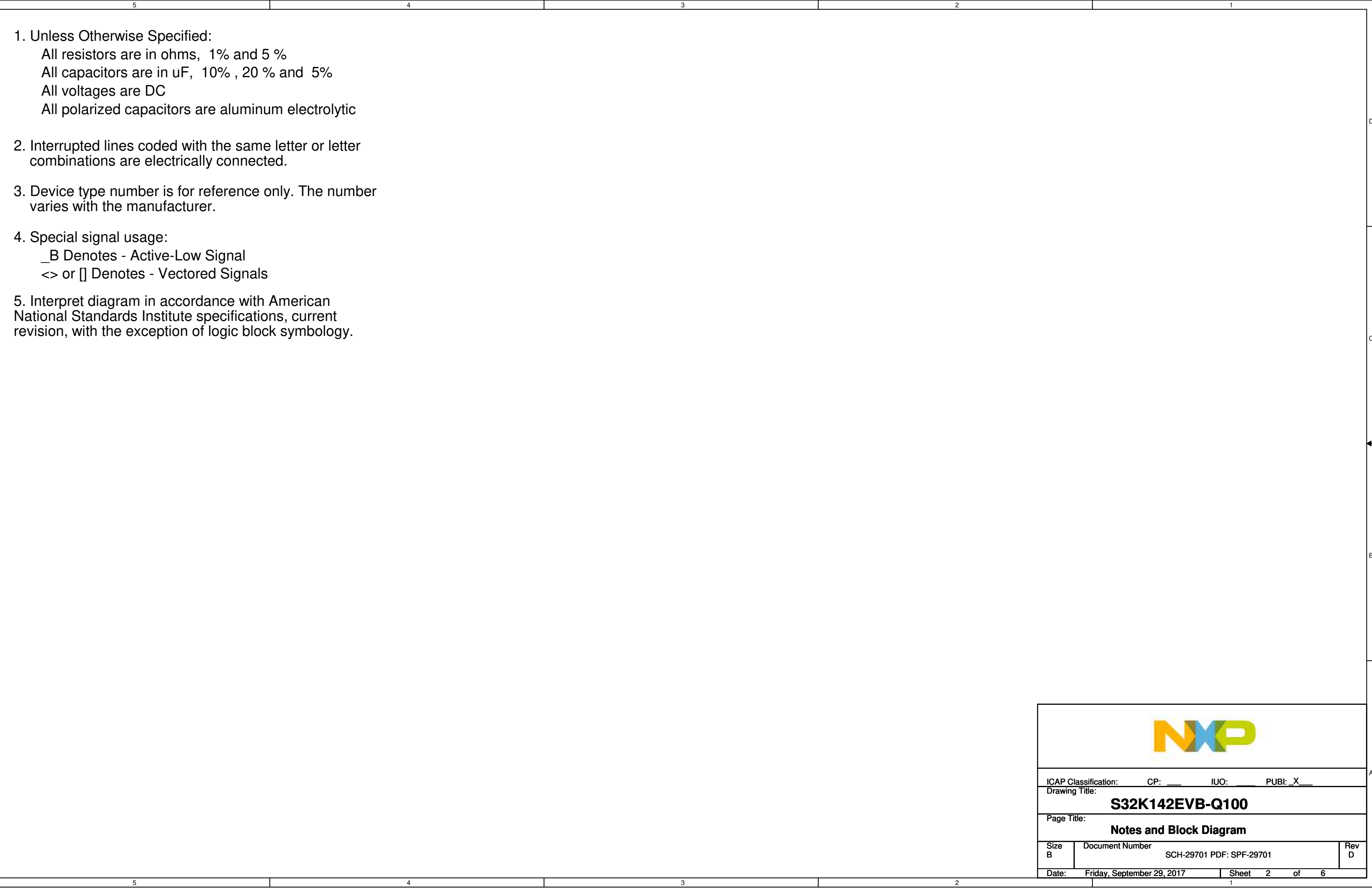
- All components and board processes are to be ROHS compliant
- All connectors and headers are denoted Jx/Px and are 2.54mm pitch unless otherwise stated
- All jumpers are denoted Jx. Jumpers are 2mm pitch
- Jumper default positions are shown in the schematics. For 3 way jumpers, default is always posn 1-2.
- 2 Pin jumpers generally have the "source" on pin 1.
- All switches are denoted SWx
- All test points (SMT wire loop style) are denoted TPx
- Test point Vias (just through hole pads) are denoted TPVx

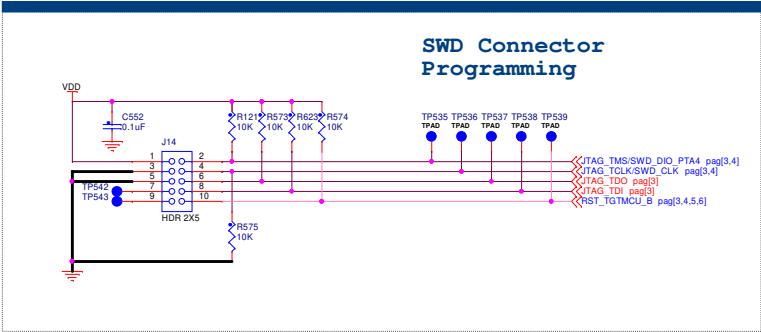
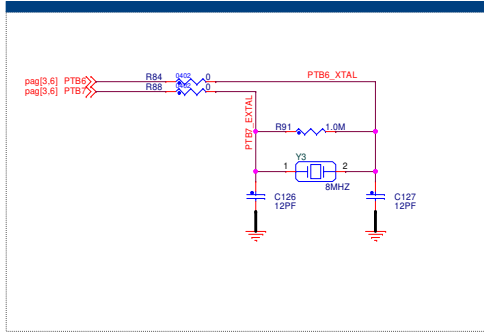
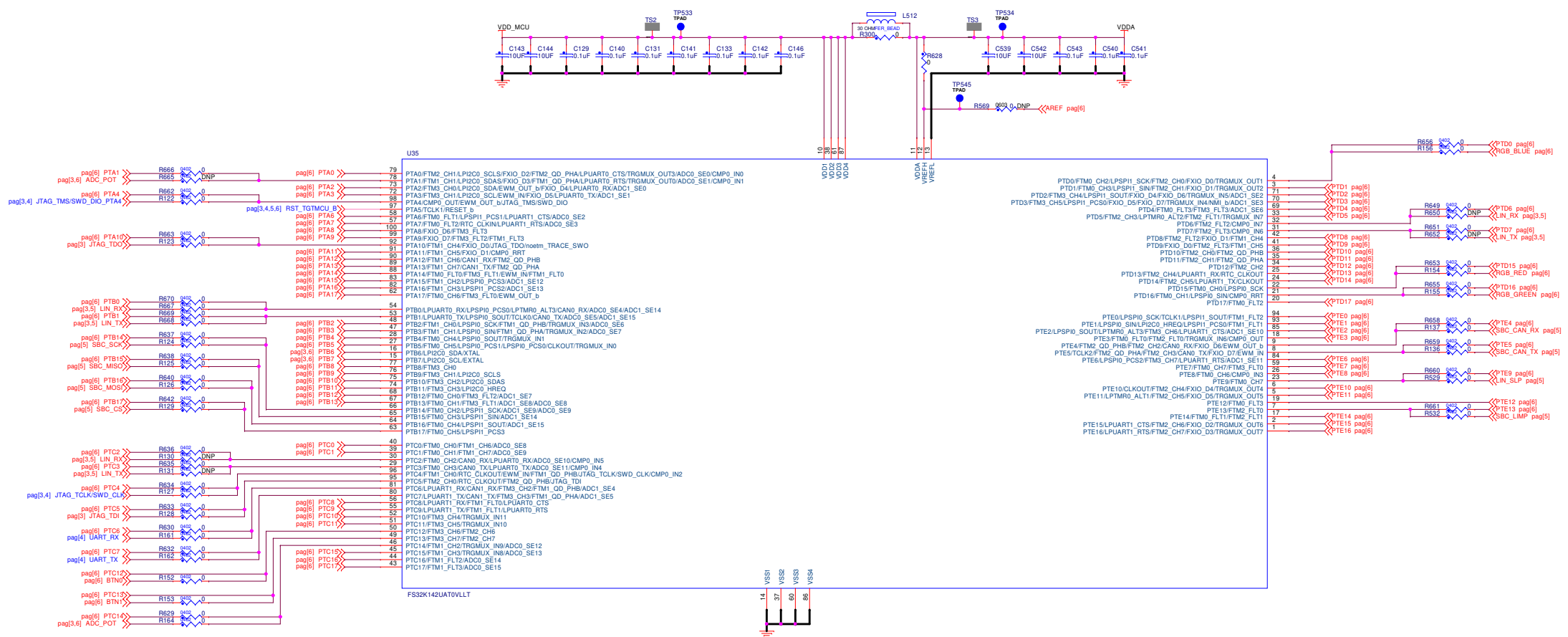
Signals (ports) have not been routed via busses as this makes it harder to determine where each signal goes.

User notes are given throughtout the schematics.

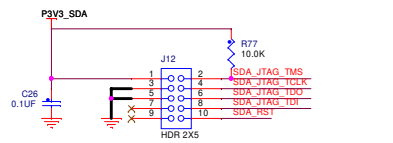
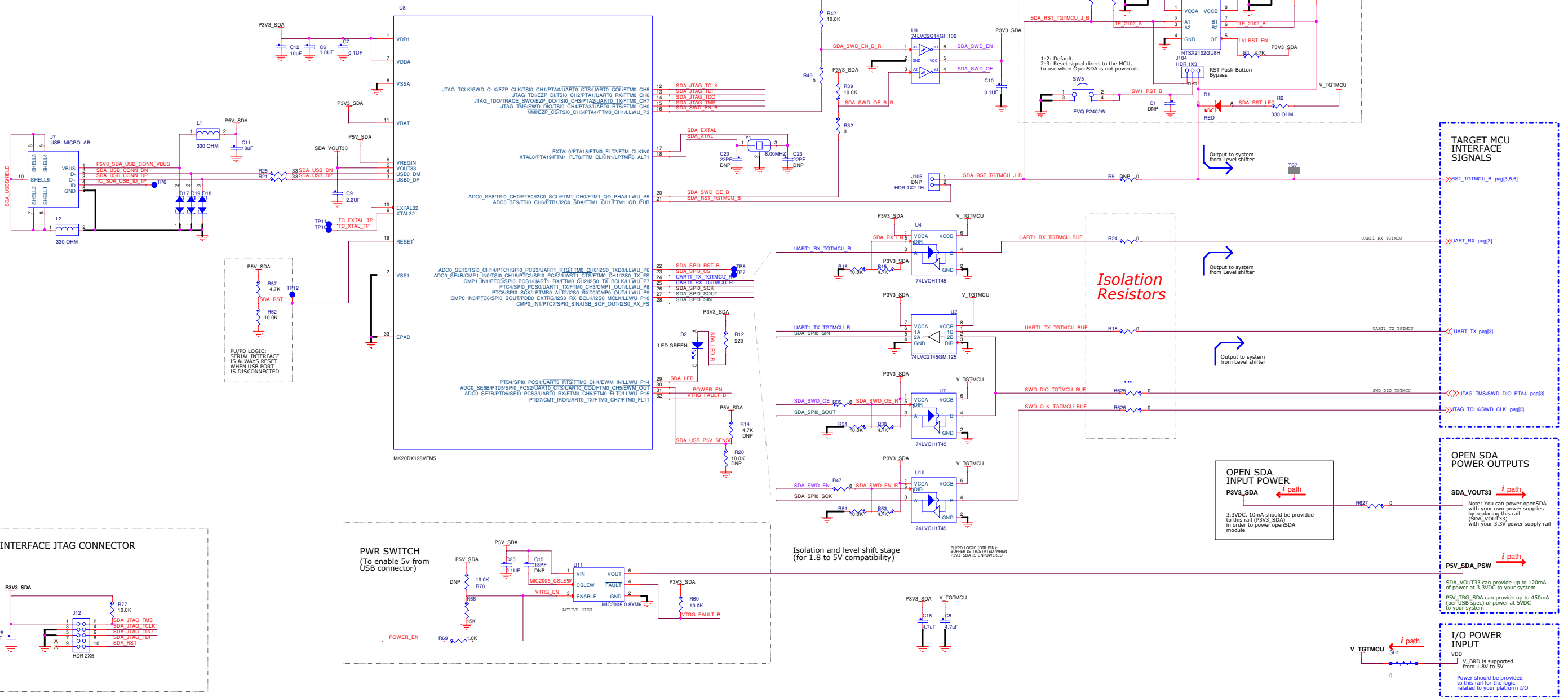
Specific PCB LAYOUT notes are detailed in ITALICS

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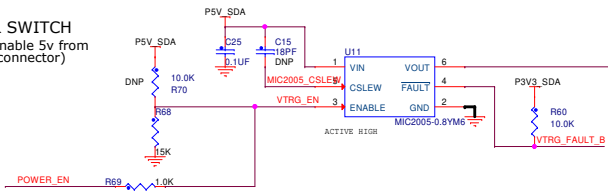


OpenSDA Interface

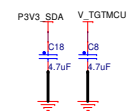


SDA_SPI0_RST_B R41 DNP 0 SDA_SWD_EN
SDA_SPI0_CS R38 DNP 0 SDA_SWD_OE

{For enablement purposes only}



Isolation and level shift stage
(for 1.8 to 5V compatibility)



OPEN SDA
INPUT POWER

P3V3_SDA $\leftarrow i$ path

3.3VDC, 10mA should be provided to this rail (P3V3_SDA) in order to power openSDA module

OPEN SDA POWER OUTPUTS

SDA_VOUT33 $\xrightarrow{i \text{ path}}$

Note: You can power openSDA with your own power supplies by replacing this rail (SDA_VOUT33) with your 3.3V power supply rail

V_SDA_PSW $\xrightarrow{i \text{ path}}$

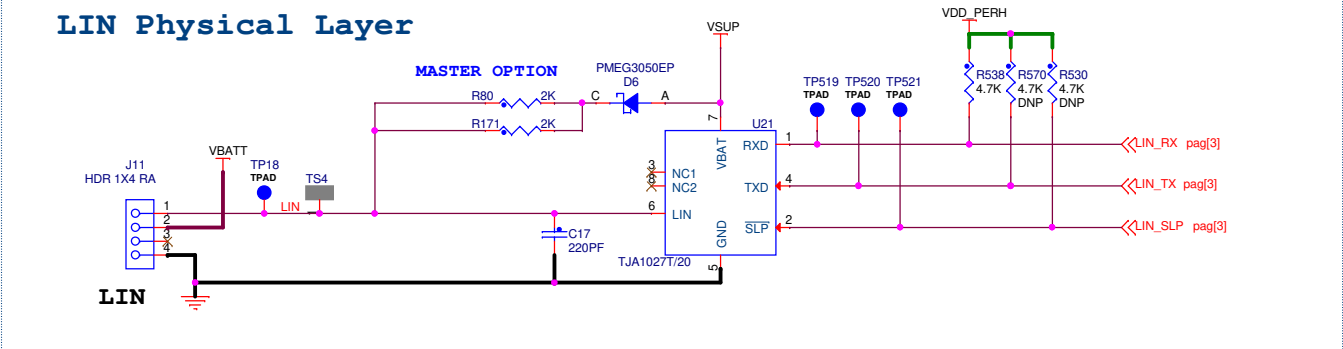
• **PA_VOUT33** can provide up to 120mA power at 3.3VDC to your system

• **PA_VTRG_SDA** can provide up to 450mA (per USB spec) of power at 5VDC to your system

I/O POWER
INPUT

V_{BRD} is supported from 1.8V to 5V

Power should be provided to this rail for the logic related to your platform I/O



The schematic diagram illustrates the power supply network for the TP541. It shows a VDD supply connected to a network of resistors (R117, R593) and capacitors (C1, C2) leading to the MCU VDD and PER VDD pins. A J15 DNP component is also shown.

