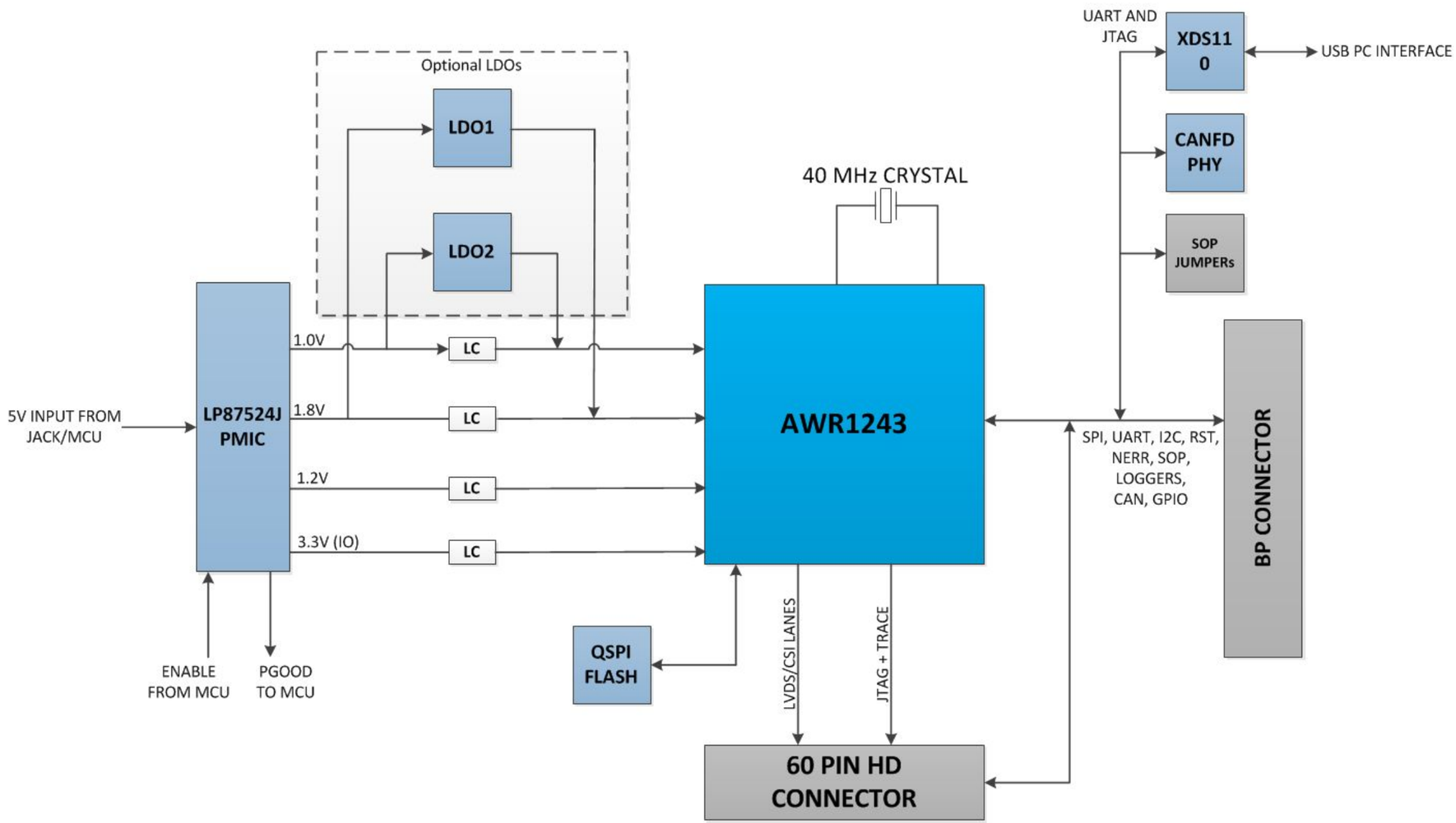
# BLOCK DIAGRAM

| Revision History | | | | |
|---|---|---|---|---|
| Rev | ECN # | Approved Date | Approved by | Notes |
| B | 1 | 27/04/2018 | Adrian Ozer | Added switch control to move between SPI and CAN interface |
| B | 2 | 27/04/2018 | Adrian Ozer | Enabled by default the 5V supply form the 60pin HD connector |
| B | 3 | 27/04/2018 | Adrian Ozer | Enabled by defualt the SYNC_IN signal connection to J6 connector |
| B | 4 | 27/04/2018 | Adrian Ozer | Serial flash part number updated to MX25V1635FZNQ |
| B | 5 | 27/04/2018 | Adrian Ozer | Added series resistors on I2C lines |
| B | 6 | 27/04/2018 | Adrian Ozer | Removed the series diode on the NRST signal |
| B | 7 | 27/04/2018 | Adrian Ozer | Enabled by default the LDO bypass option |
| B | 8 | 27/04/2018 | Adrian Ozer | Added variant 002 for AWR1443 |
| B | 9 | 27/04/2018 | Adrian Ozer | Added vairant 003 for IWR1443 |
| C | 1 | 25/05/2020 | Adrian Ozer | Updated C56 from 0.22uF to 47nF |

TABLE OF CONTENTS





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|---|---|---|
| Orderable: IWR1443BOOST | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | Project Title: PROC010 | |
| Number: PROC010 Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 1 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_CoverSheet.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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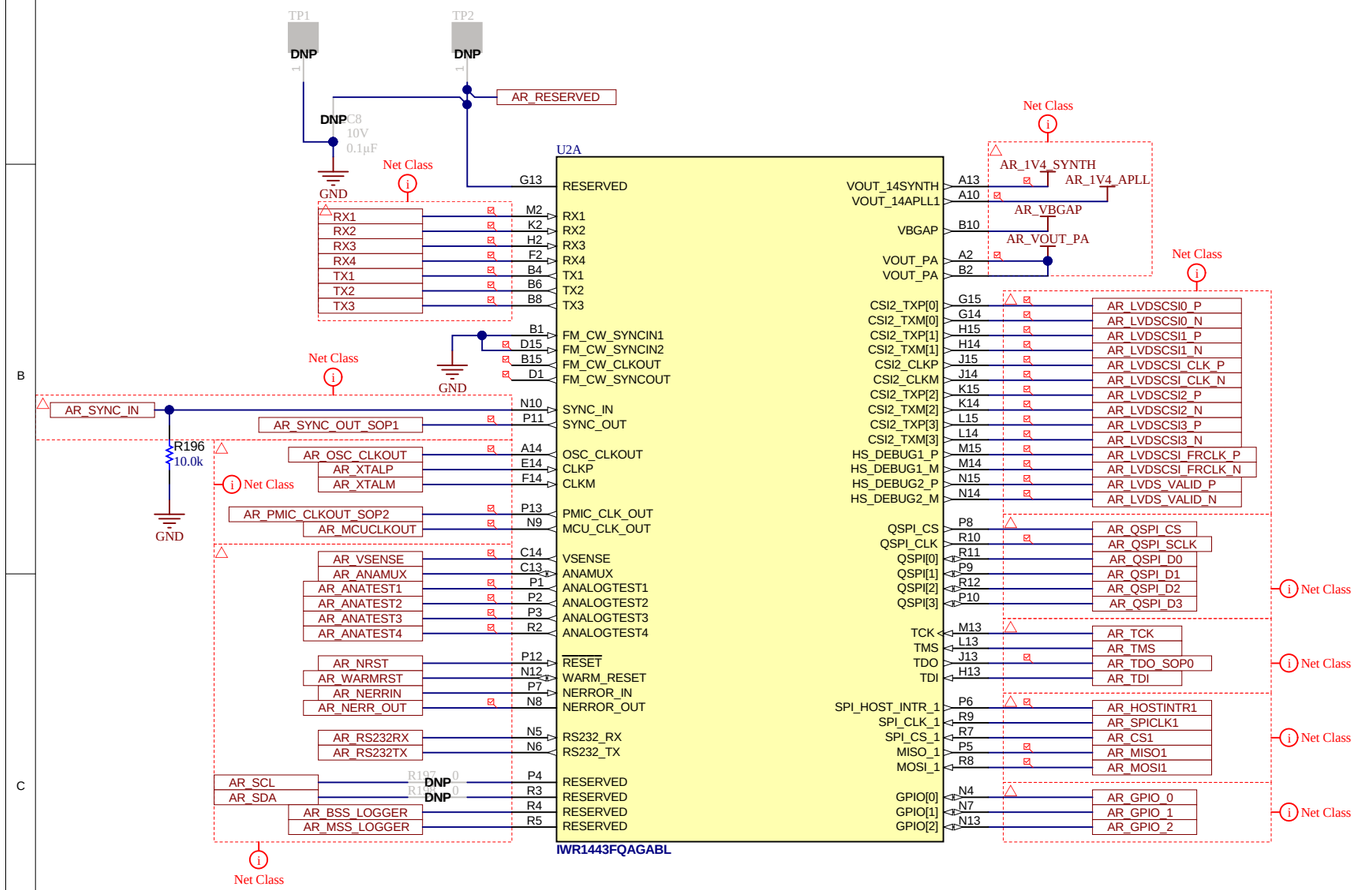
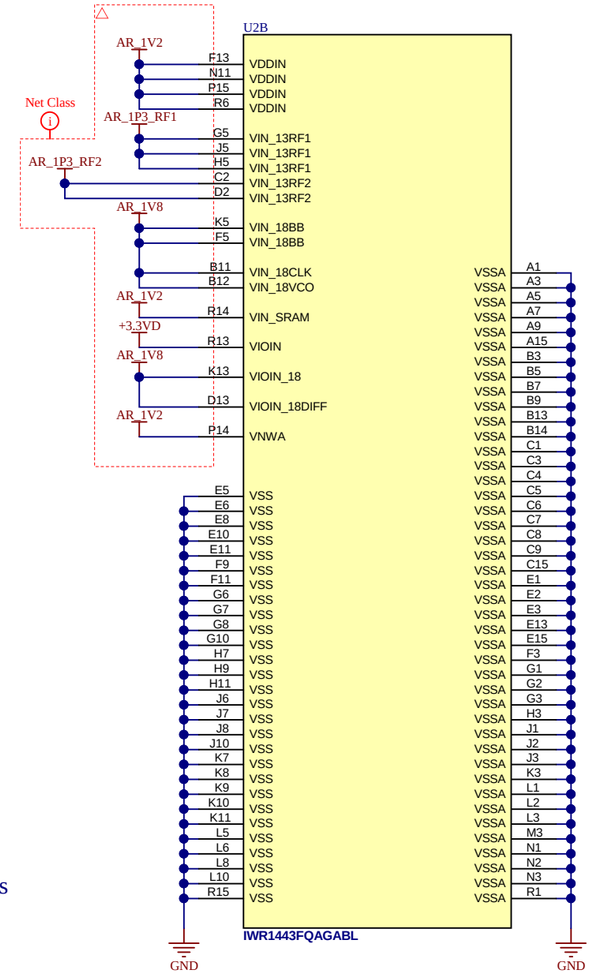
# DUT REFERENCE

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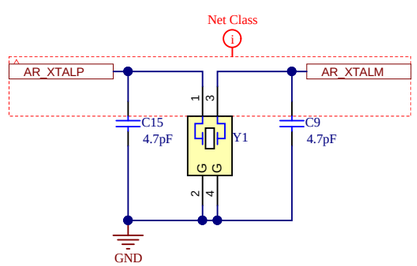
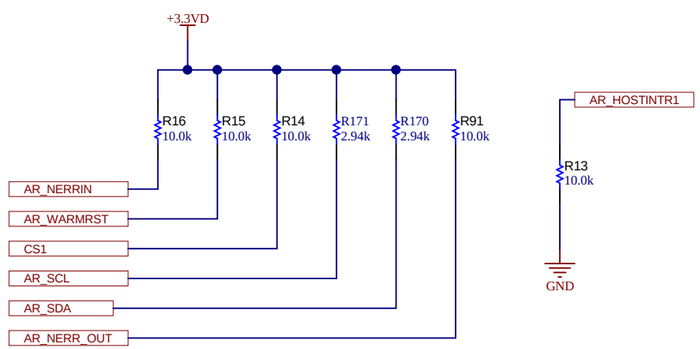



## Mandatory Pullups/Pulldowns

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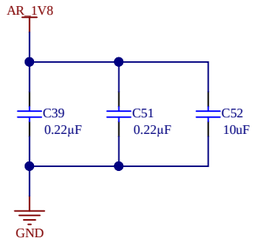
|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 2 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_DUT_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

# DECOUPLING CAPS REFERENCE

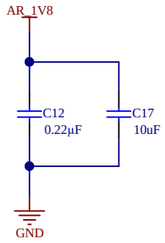
BB SUPPLY

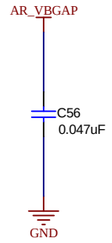


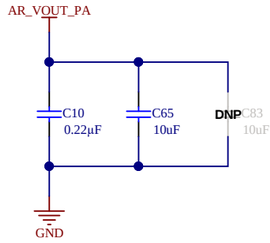

DIFF SUPPLY


1V8 IO SUPPLY

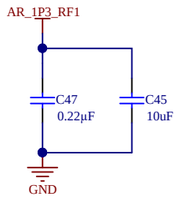

VCOLDO SUPPLY



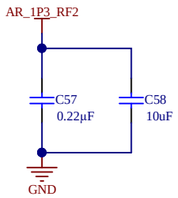



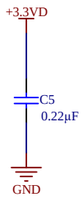

RF1 SUPPLY

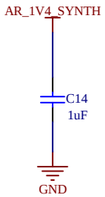


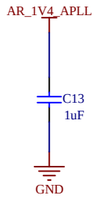

RF2 SUPPLY



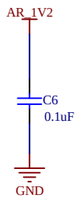

3V3 IO SUPPLY



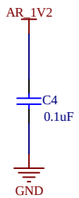



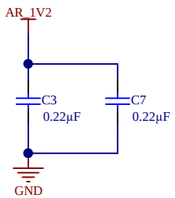

VNWA SUPPLY




SRAM SUPPLY




DIG SUPPLY



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|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/15/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 3 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_Decoupling_Caps_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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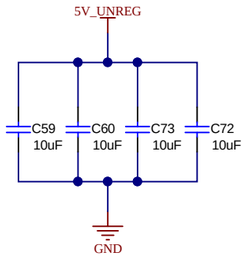
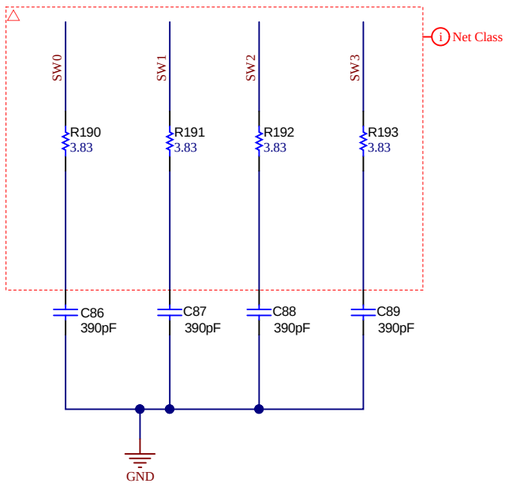
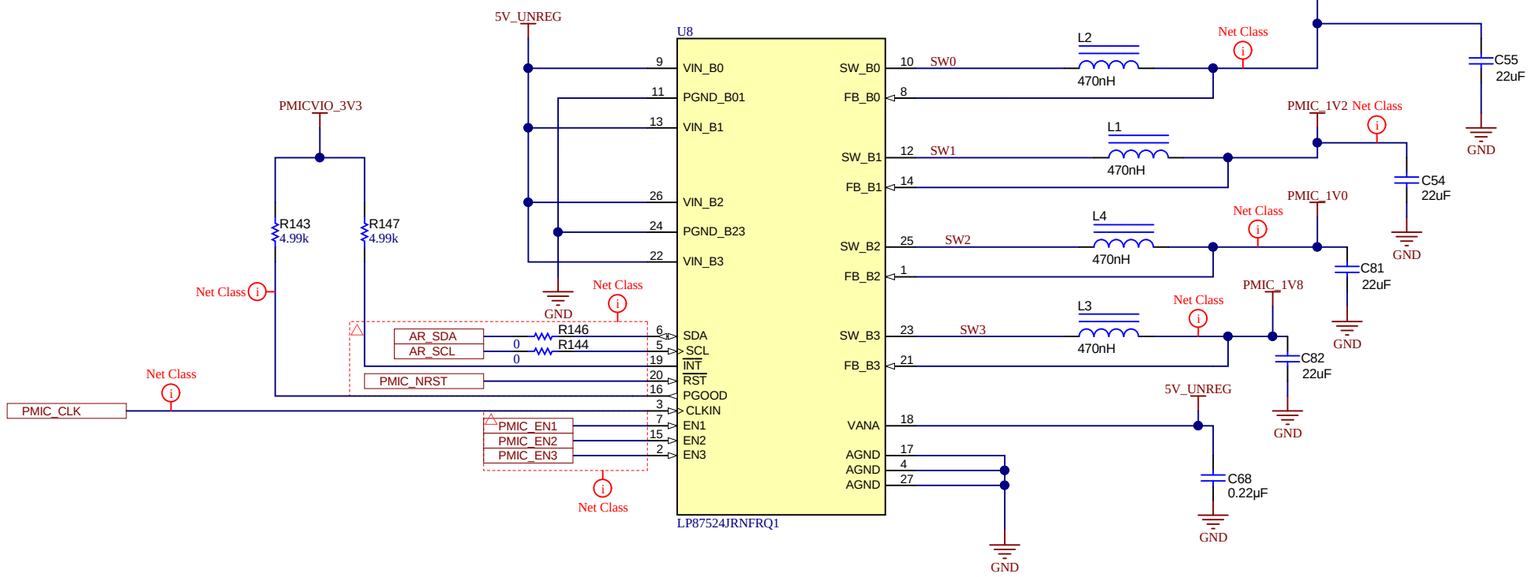
# PMIC (3.3V, 1.2V, 1.8V,2.3V OUTPUTS) REFERENCE

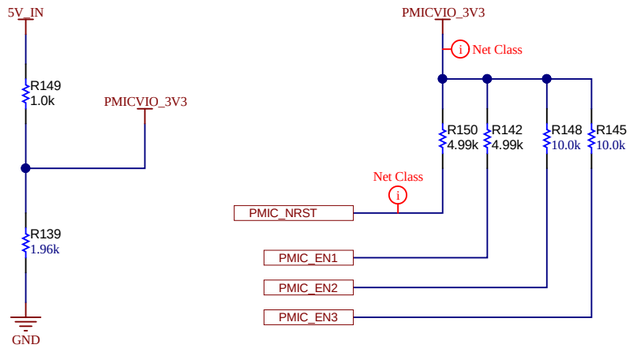



## SNUBBER ON SWITCHING NODES

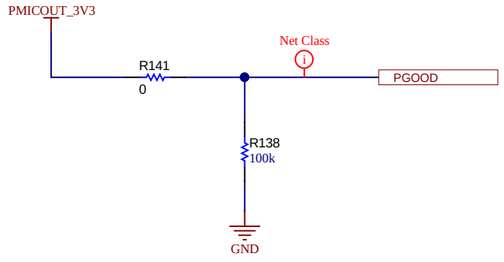



## CONTROLS FOR THE PMIC




## THE 3V3 OUTPUT FROM PMIC IS USED AS PGOOD.



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|---|---|---|
| Orderable: IWR1443BOOST | Designed for: Public Release | Mod. Date: 5/28/2020 |
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| Number: PROC010 Rev: C | Sheet Title: PMIC | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 4 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_PMIC_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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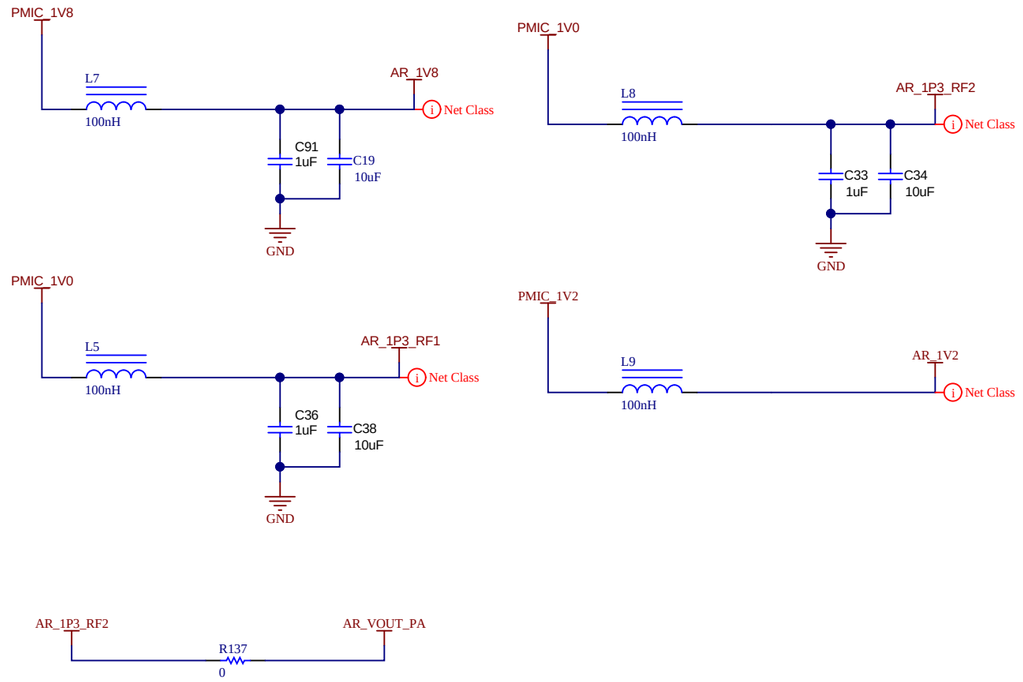
# LC FILTERING REFERENCE



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| Orderable: IWR1443BOOST | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | Project Title: PROC010 | |
| Number: PROC010 Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 5 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_LC_Filtering_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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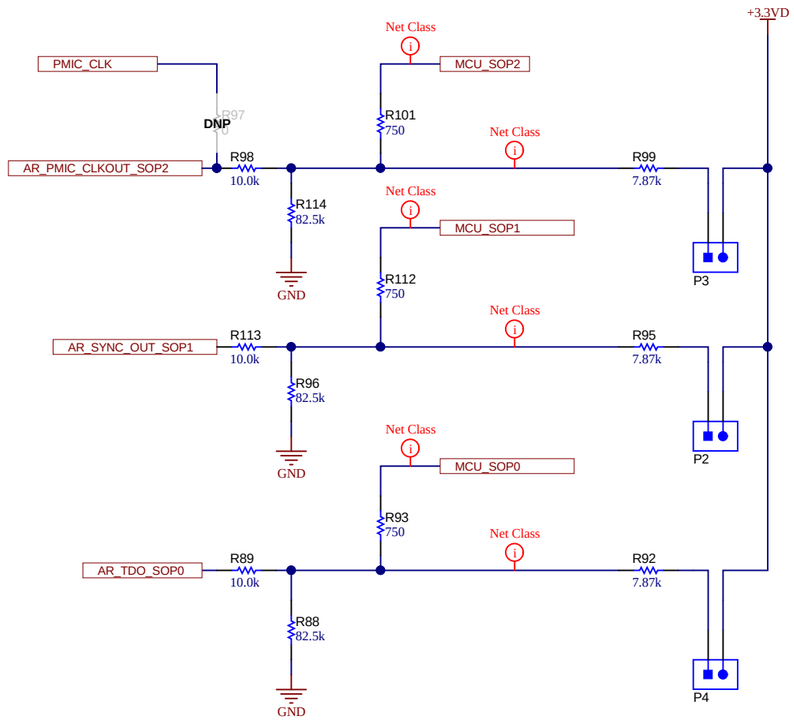
# SOP HEADERS REFERENCE

| | | |
|---|---|---|
| SOP_MODE1 | "010" | SCAN/ATPG |
| SOP_MODE2 | "011" | DEV/FLED/ORBIT |
| SOP_MODE3 | "000" | TBD |
| SOP_MODE4 | "001" | FUNC - > DEFAULT VALUE FOR OUTPUTS |
| SOP_MODE5 | "101" | DEV MANAGEMENT -> FOR FLASHING |



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| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 6 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_SOP_Headers_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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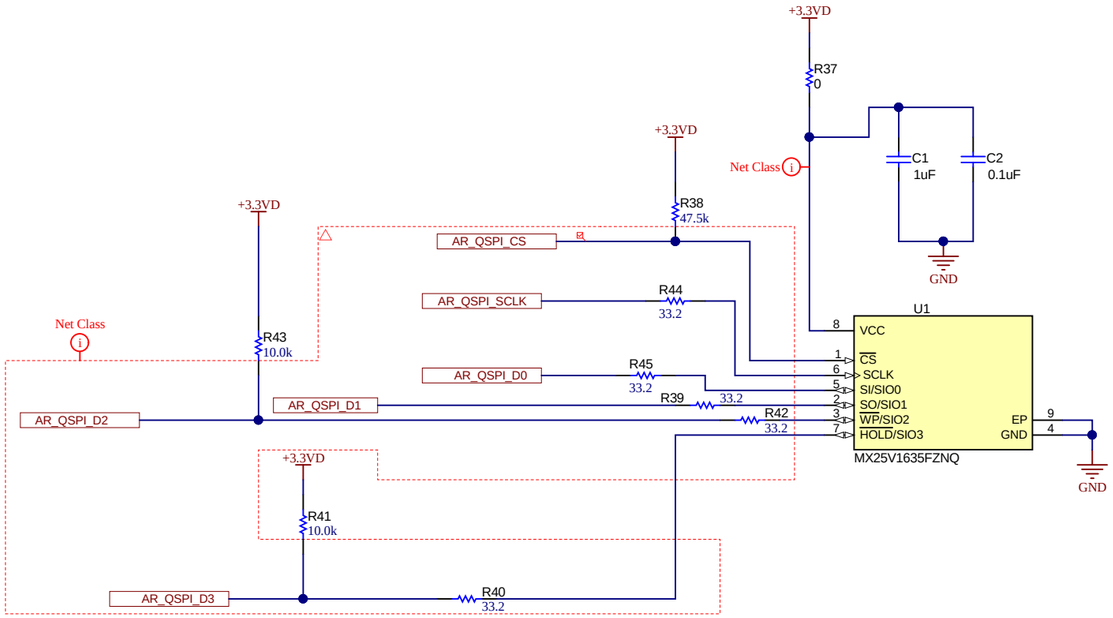
# QSPI FLASH REFERENCE



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| Number: PROC010 Rev: C | Sheet Title: QSPI flash section | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 7 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_QSPI_Flash_Reference.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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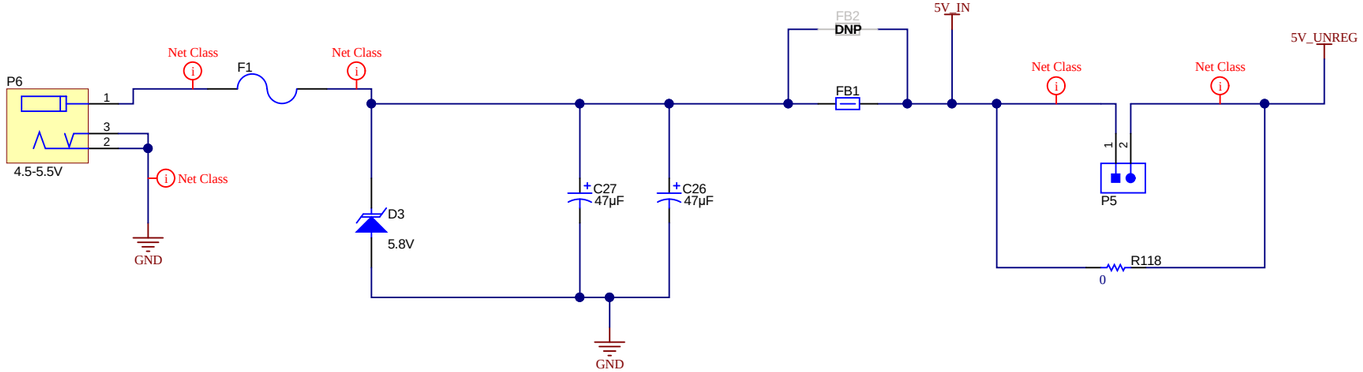
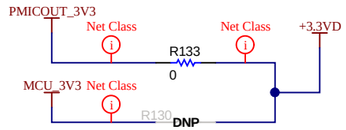
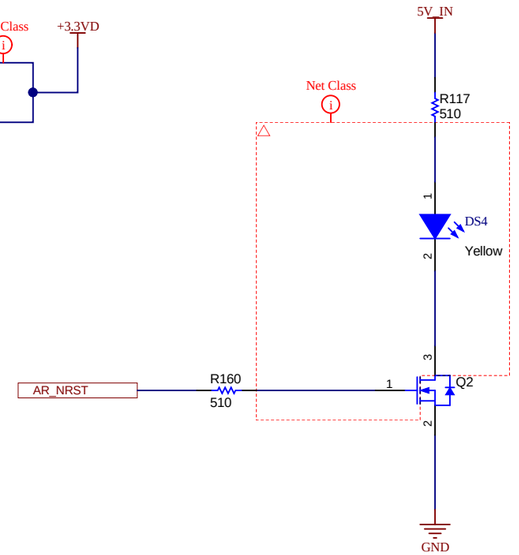
# POWER SUPPLY CONNECTOR



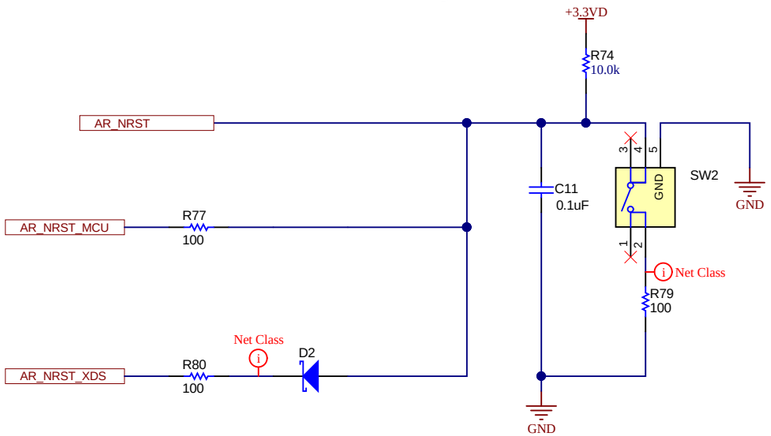

## 3P3 SUPPLY FROM PMIC OR FROM THE MCU



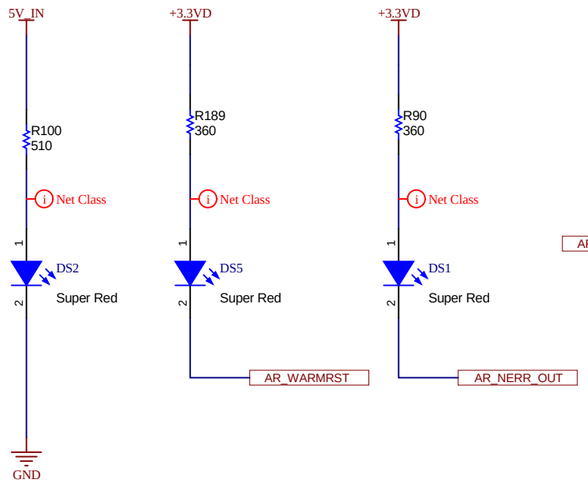



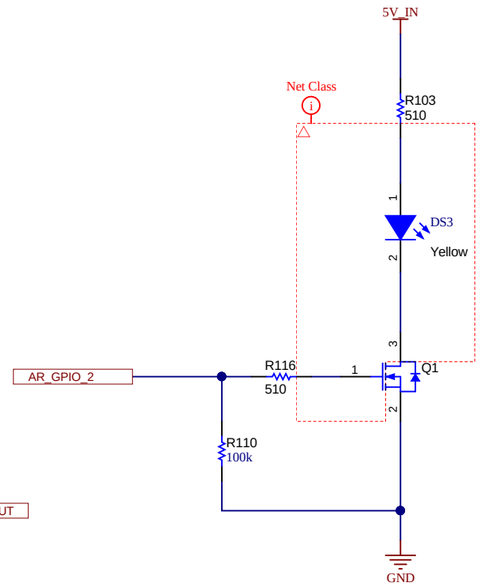

# RESET AND LEDS

## RESET

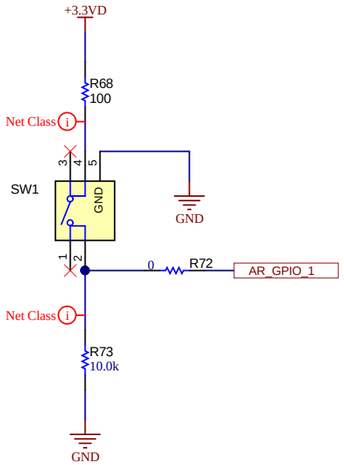



## INDICATION LEDS




## TRIGGER GPIO



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|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: Pwr_RST_LEDs | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 8 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_Pwr_RST_LEDs.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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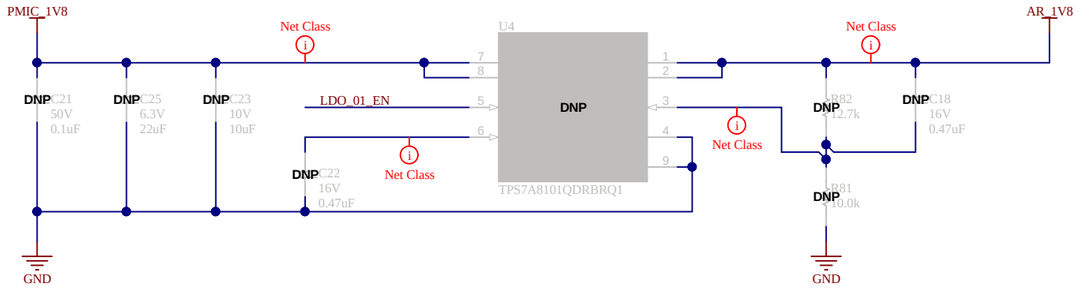
# LDO

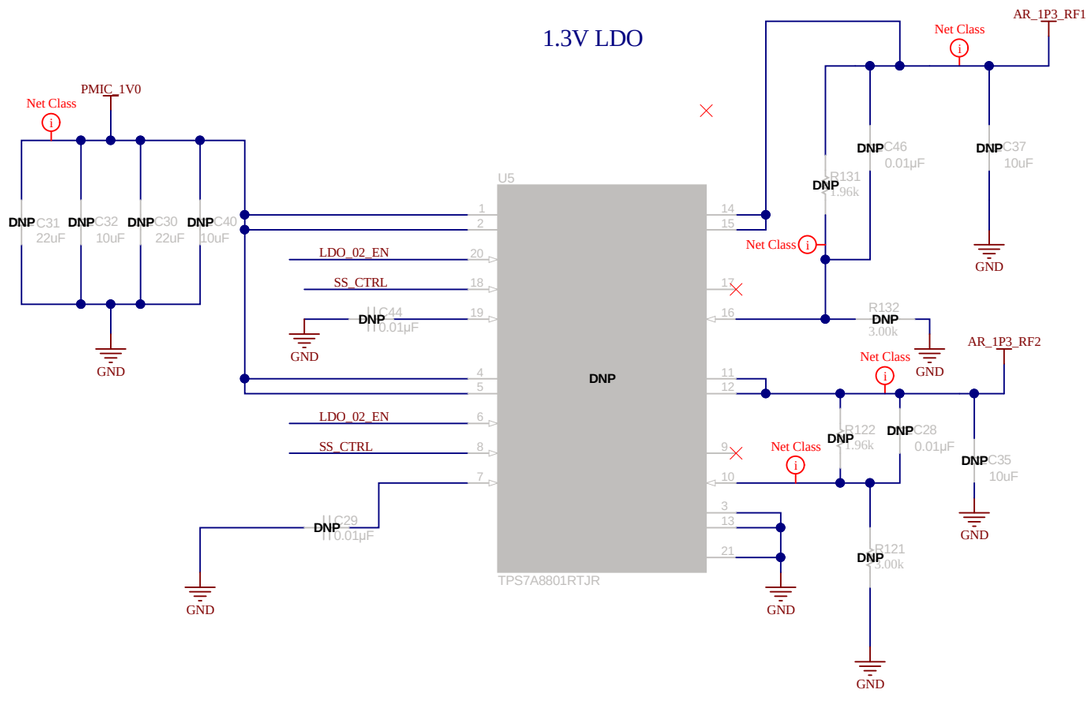
## 1.8V LDO




LDOs ARE FOR DEBUG PURPOSES ONLY

DURING LDO OPERATION PMIC_1V8 IS 2.3V AND PMIC_1V0 IS 1.8V

## 1.3V LDO

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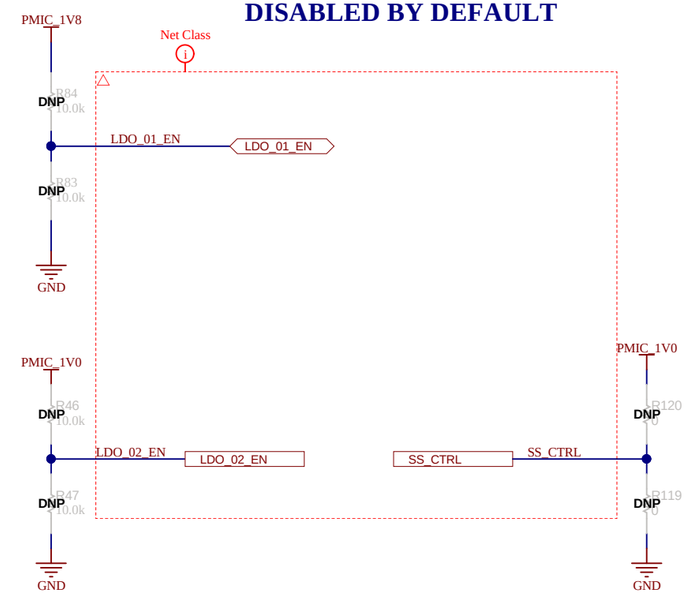




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|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 9 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_LDO.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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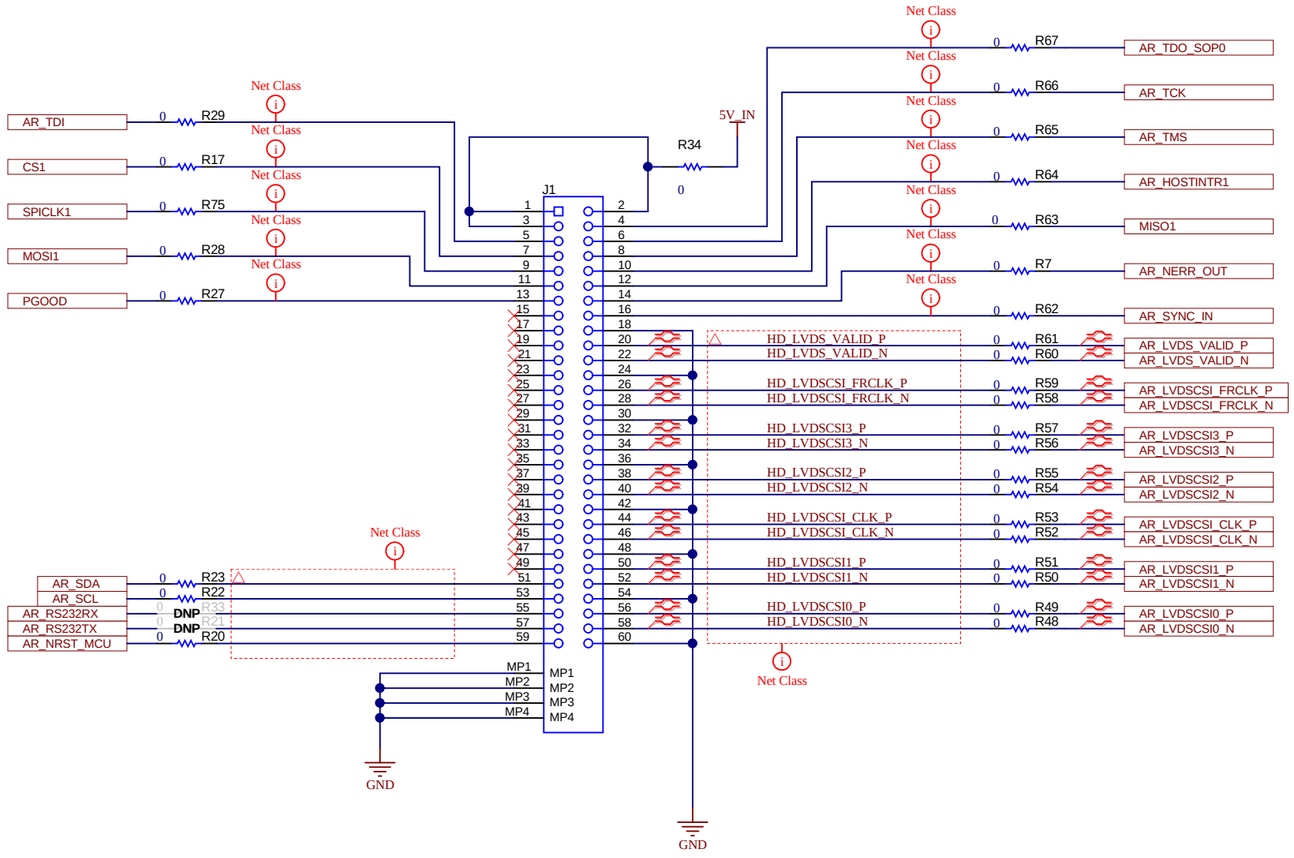
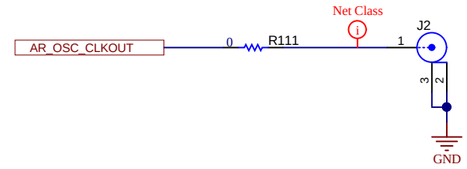
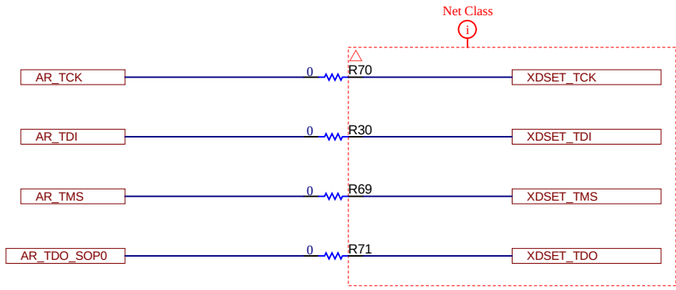
# HD CONNECTOR FOR LVDS/CSI AND JTAG




## JTAG



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|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: HD Connector | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 10 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_HD Connector.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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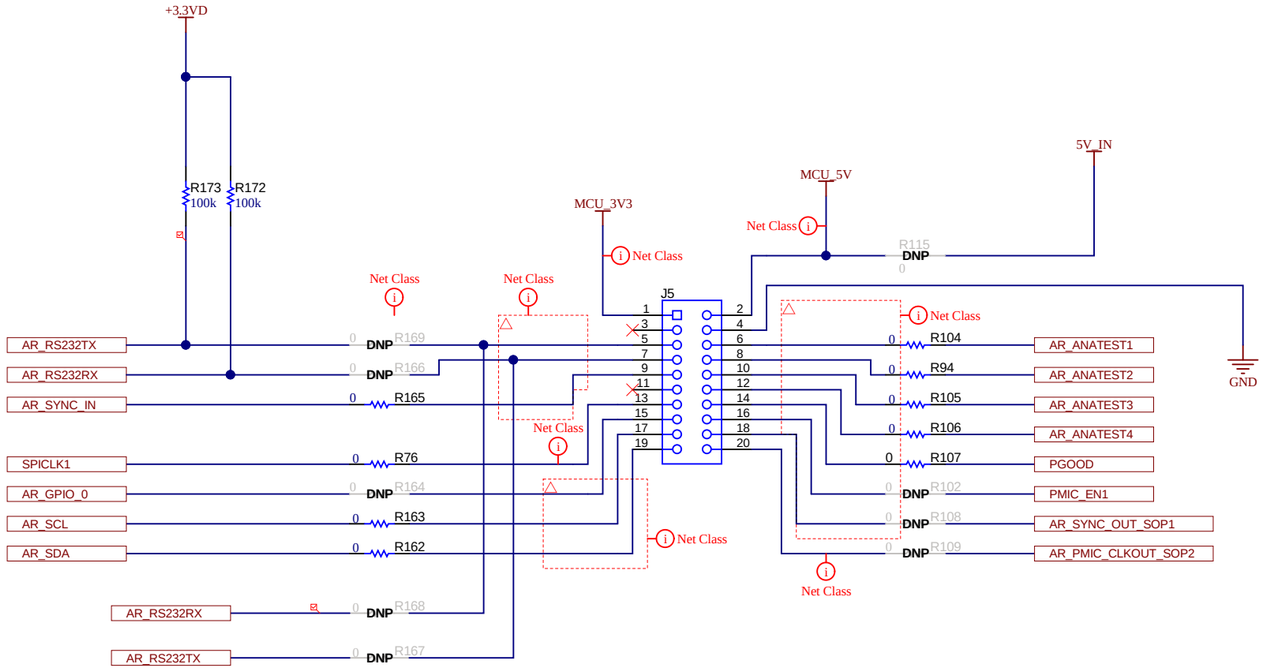
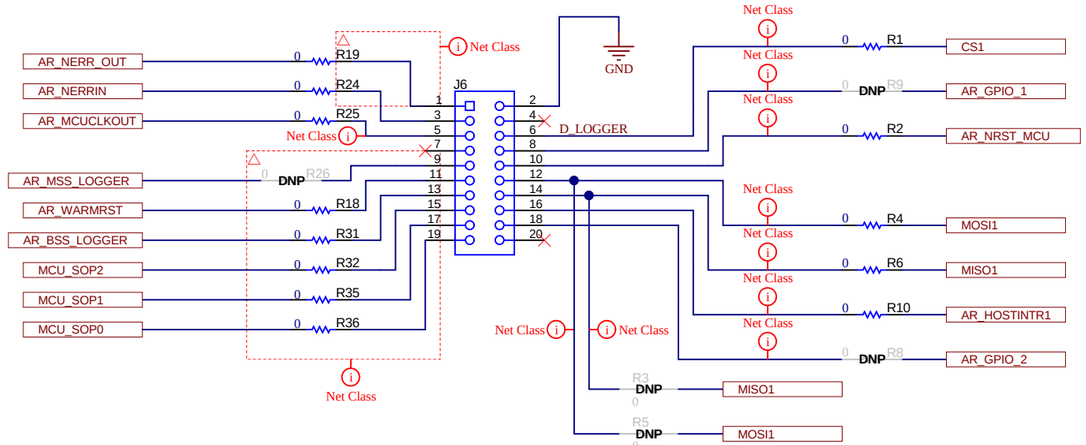
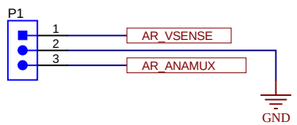
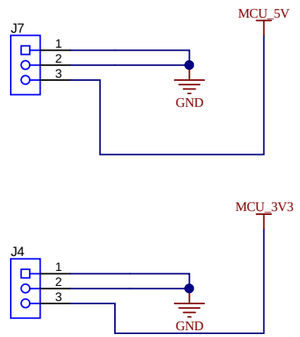
# BP/LP CONNECTOR




## ANALOG SIGNALS



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| Number: PROC010 Rev: C | Sheet Title: LP Connector | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 11 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_LP Connector.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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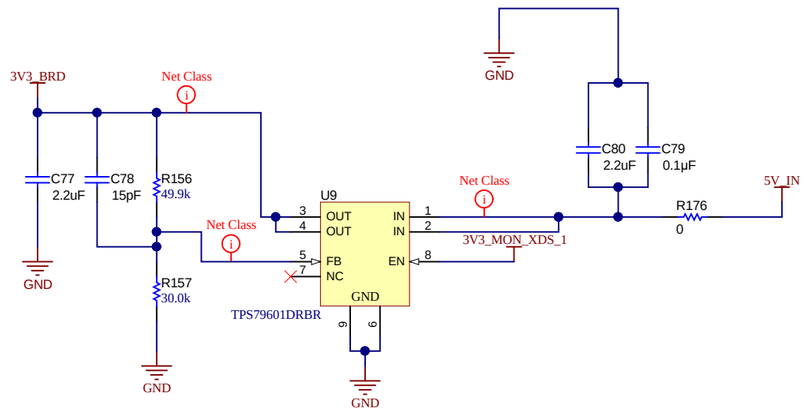
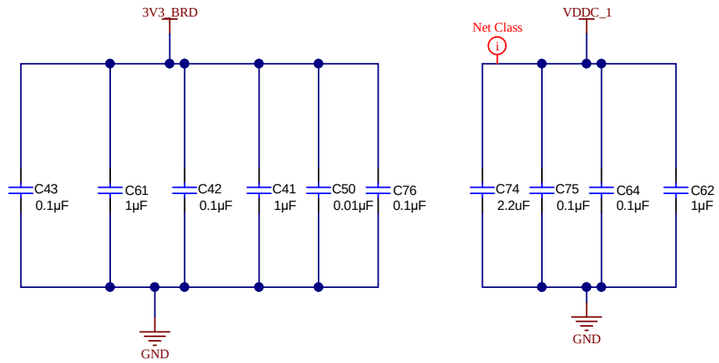
# XDS110(1/2)

## 3.3V LDO FOR PERIPHERALS

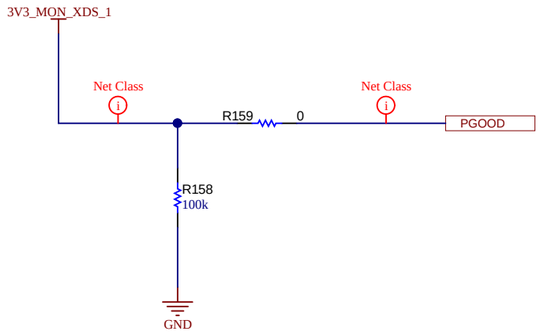


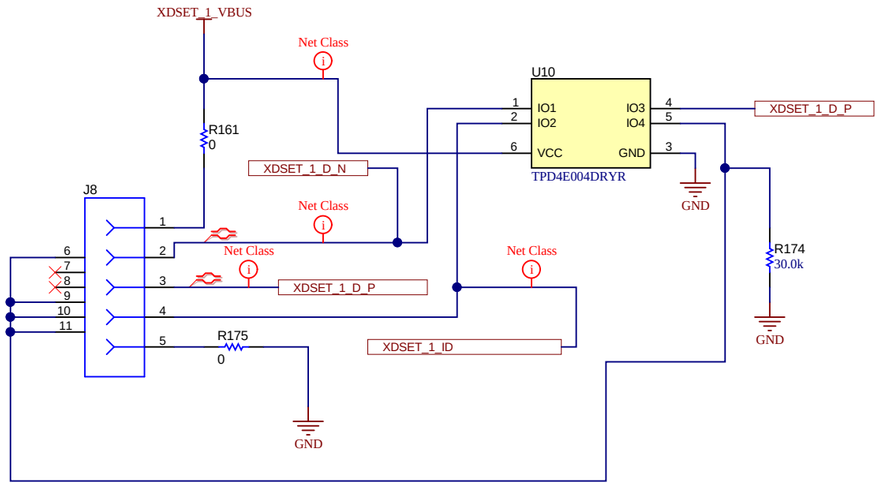


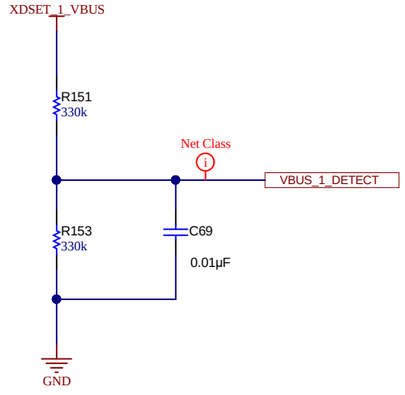


BY DEFAULT THE XDS SUPPLY IS DISABLED..
GETS ENABLED ONLY ONCE THE PMIC IS POWERED UP.




## USB PORT AND ESD






| | | | |
|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: XDS110 Interface_1A | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 12 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_XDS110 Interface_1A.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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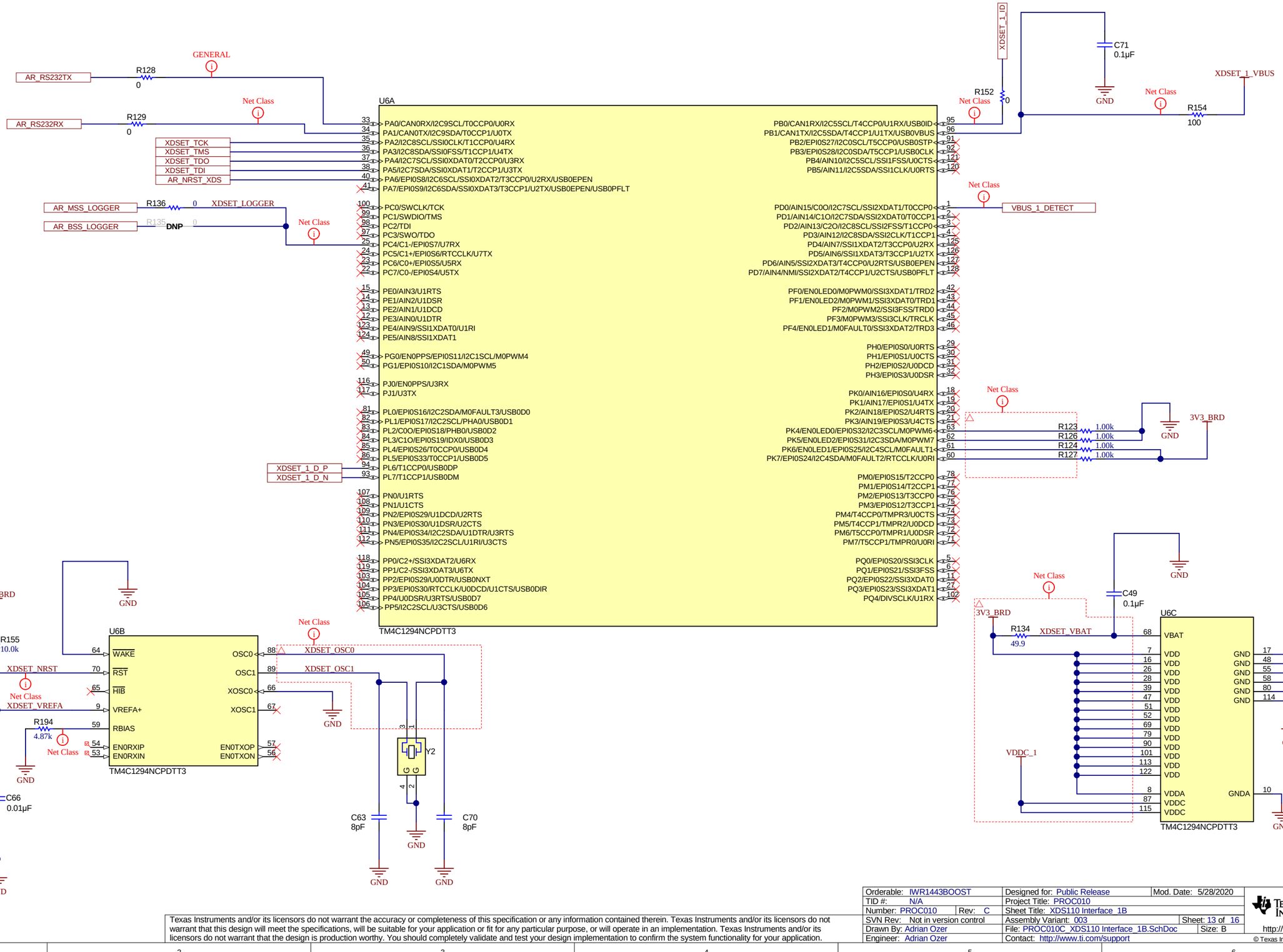
# XDS110(2/2)

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| | | | |
|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: XDS110 Interface_1B | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 13 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_XDS110 Interface_1B.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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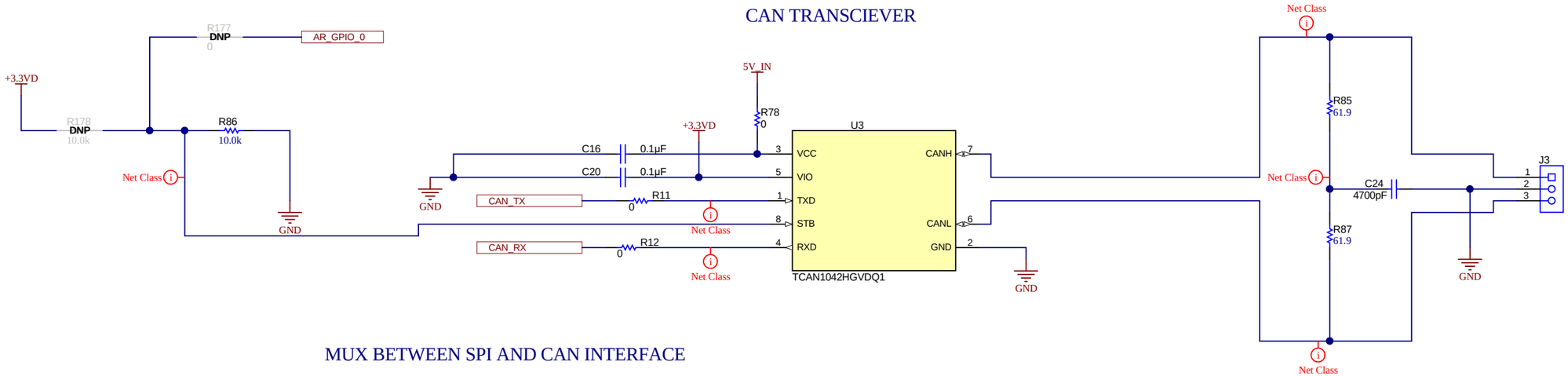
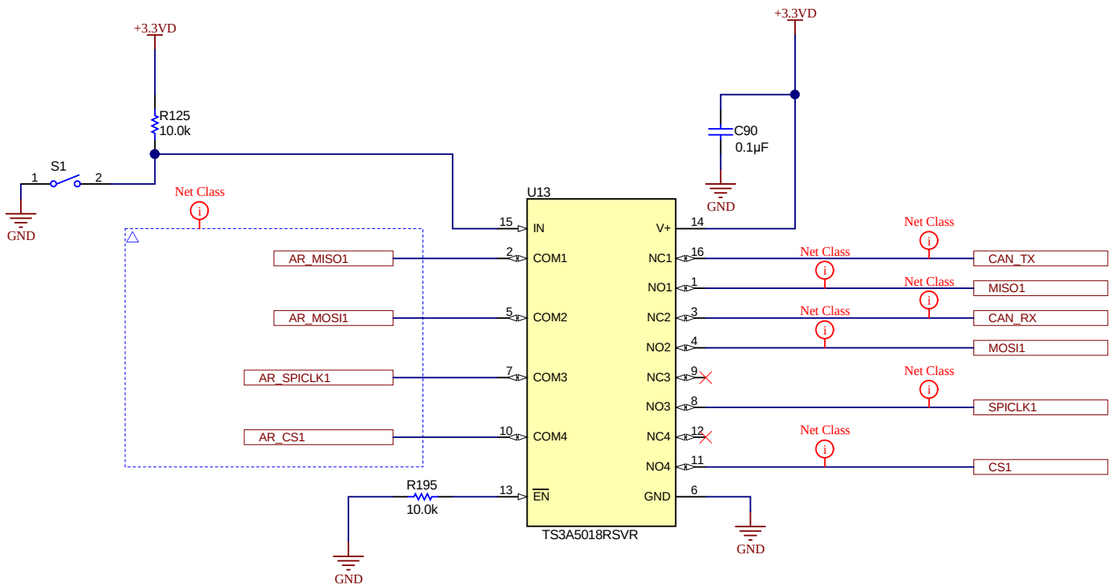
# CAN INTERFACE

## CAN TRANSCIEVER




## MUX BETWEEN SPI AND CAN INTERFACE






| | | | |
|---|---|---|---|
| Orderable: IWR1443BOOST | | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | | Project Title: PROC010 | |
| Number: PROC010 | Rev: C | Sheet Title: CAN Interface | |
| SVN Rev: Not in version control | | Assembly Variant: 003 | Sheet: 14 of 16 |
| Drawn By: Adrian Ozer | | File: PROC010C_CAN Interface.SchDoc | Size: B |
| Engineer: Adrian Ozer | | Contact: http://www.ti.com/support | |

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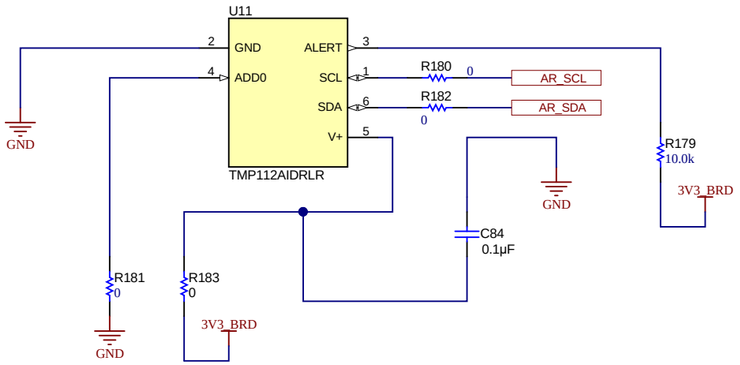
# ONBOARD TEMP SENSORS

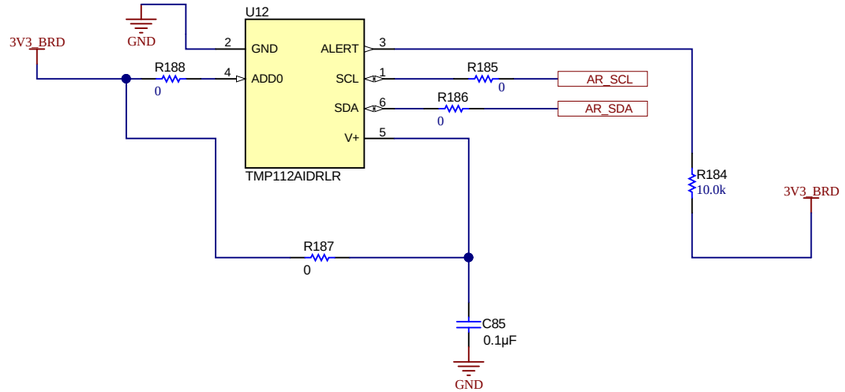
DEFAULT I2C ADDRESS 0X48

TEMP SENSOR CLOSE TO PMIC




DEFAULT I2C ADDRESS 0X49

TEMP SENSOR AWAY FROM PMIC






| | | |
|---|---|---|
| Orderable: IWR1443BOOST | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | Project Title: PROC010 | |
| Number: PROC010 Rev: C | Sheet Title: Tempsensor | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 15 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_Tempsensor.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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DNP FID1

DNP FID2

DNP FID3

DNP FID4

DNP FID5

DNP FID6

DNP FID7

CAUTION HOT SURFACE

PCB
LOGO
Texas Instruments

PCB
LOGO
ESD Susceptible

PCB
LOGO
FCC disclaimer

Works With TI LaunchPad Logo1
PCB
LOGO
Works With TI LaunchPad Logo

Logo3
PCB
LOGO
WEEE logo

LOGO4

LBL1
PCB Label
Label

Z4 SJ61A1
Z5 SJ61A1
Z6 SJ61A1
Z7 SJ61A1
Z8 SJ61A1
Z9 SJ61A1
Z10 SJ61A1
Z11 SJ61A1

Z1 90272A146

Z2 90272A146

Z3 90272A146

Z12 90631A007

Z13 90631A007

Z14 90631A007

Z15 625

Z16 625

Z17 625

Z18 625

Z19 MECH SPC02SYAN

Z21 MECH SPC02SYAN

Z20 MECH 3025010-03

PCB Number: PROC010
PCB Rev: B

| Variant/Label Table | |
|---|---|
| Variant | Label Text |
| 001 | AWR1243BOOST |
| 002 | AWR1443BOOST |
| 003 | IWR1443BOOST |
| 004 | AWR2243BOOST |
| | |
| | |
| | |

ZZ1
Label Assembly Note
This Assembly Note is for PCB labels only

ZZ2
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ3
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ4
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

ZZ5
Assembly Note
Micro USB cable, Brackets, Screws, Nuts, Jumpers and Bump on need to be placed in a plastic bag



| | | |
|---|---|---|
| Orderable: IWR1443BOOST | Designed for: Public Release | Mod. Date: 5/28/2020 |
| TID #: N/A | Project Title: PROC010 | |
| Number: PROC010 Rev: C | Sheet Title: Hardware | |
| SVN Rev: Not in version control | Assembly Variant: 003 | Sheet: 16 of 16 |
| Drawn By: Adrian Ozer | File: PROC010C_Hardware.SchDoc | Size: B |
| Engineer: Adrian Ozer | Contact: http://www.ti.com/support | |

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