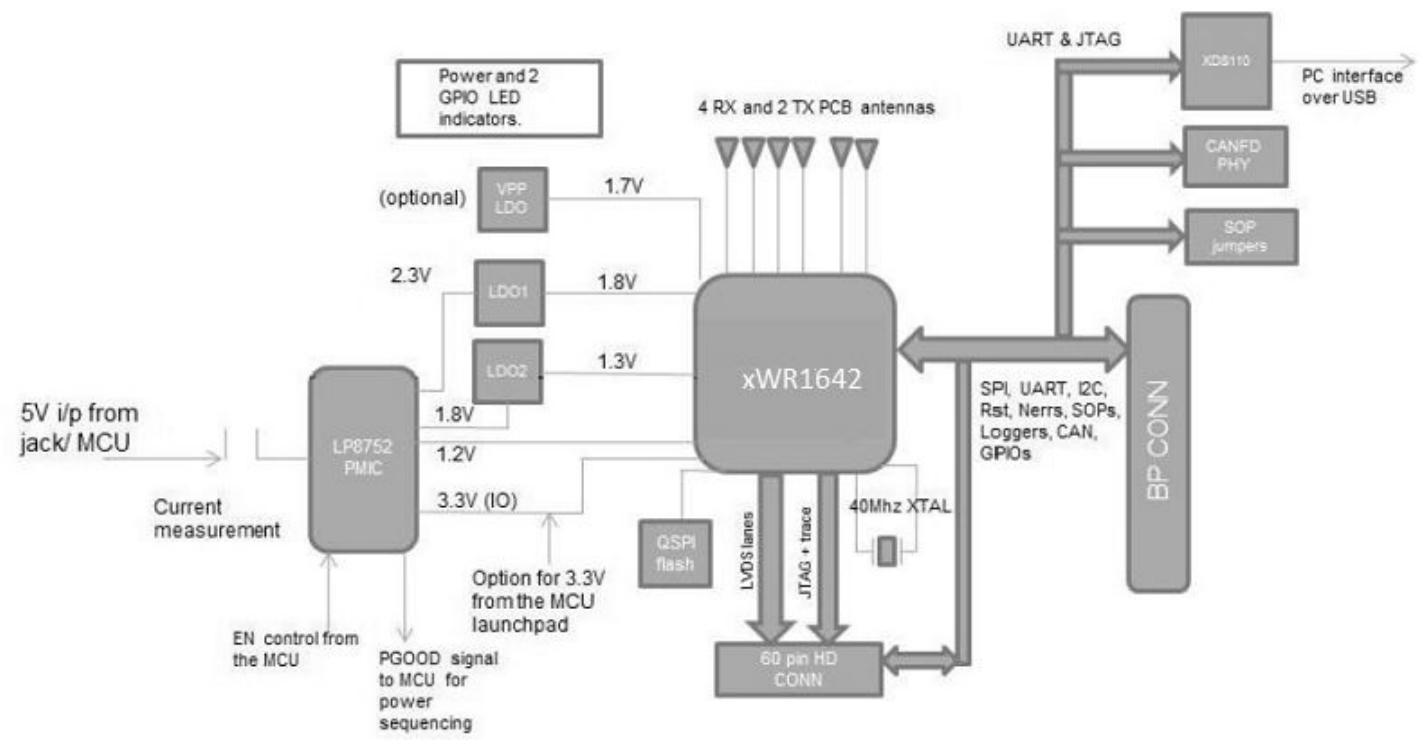


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
B	1	22/01/2018	Vivek dham	ADDED SWITCH CONTROL TO MOVE between SPI and CAN interface
B	2	22/01/2018	Vivek dham	Enabled by default the 5V supply from the 60pin HD connector.
B	3	22/01/2018	Vivek dham	Enabled by default the SYNC_IN signal connection to J6 connector
B	4	22/01/2018	Vivek dham	Serial flash part number updated to MX25V1635FZNQ
B	5	22/01/2018	Vivek dham	Added series resistors on I2C lines.
B	6	13/02/2018	Vivek dham	Removed the series diode on the NRST signal.
B	7	23/02/2018	J Quintal	added Variant 002, U2, PCB Label, revised AWR1642 to xWR1642

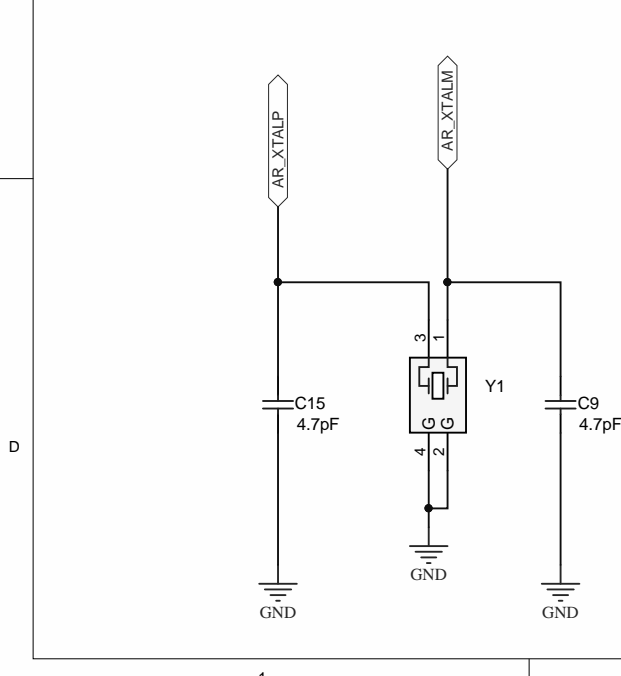
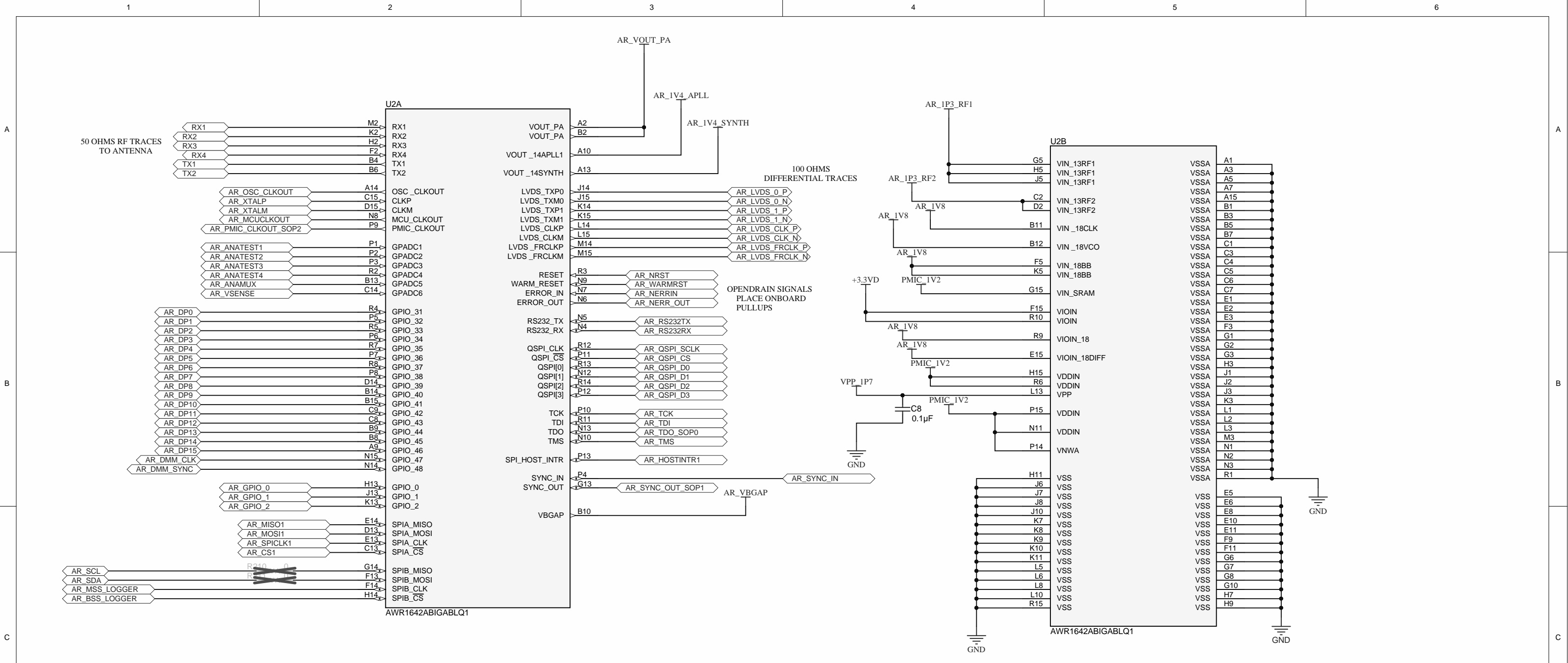
BLOCK DIAGRAM

xWR1642BOOST-ODS TABLE OF CONTENTS

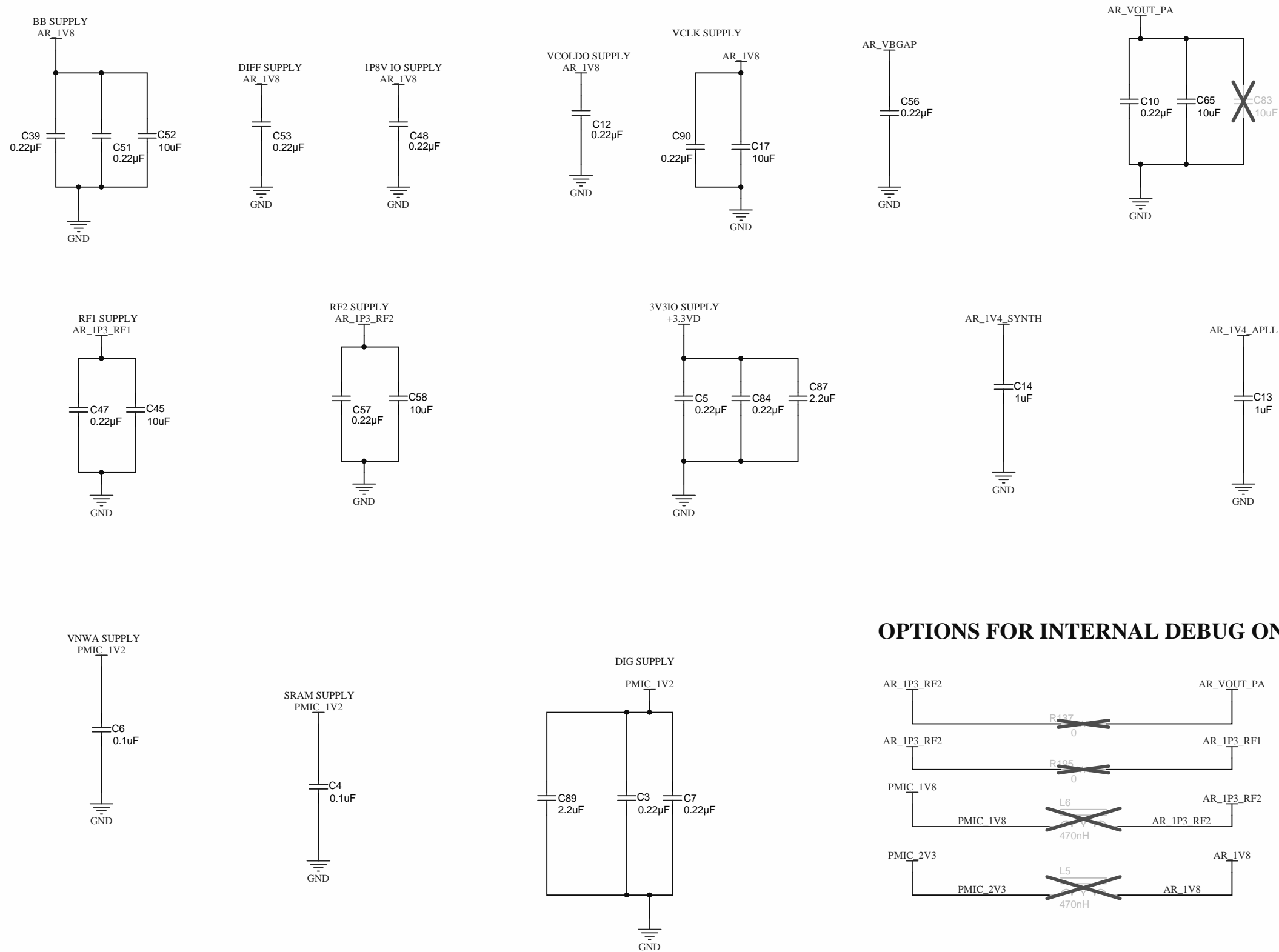
SHEET NO.	SHEET NAME
1	PROC049B_COVERSHEET
2	PROC049B_DUT
3	PROC049B_Decoupling caps
4	PROC049B_LDO_01 (1.8V Output)
5	PROC049B_LDO_02 (1.3V Output)
6	PROC049B_VPP_Supply
7	PROC049B_Pwr_RST_LEDs
8	PROC049B_PMIC
9	PROC049B_QSPI flash section
10	PROC049B_LP Connector
11	PROC049B_HD Connector
12	PROC049B_XDS110 Interface_1A
13	PROC049B_XDS110 Interface_1B
14	PROC049B_CAN Interface
15	PROC049B_SOP selection
16	PROC049B_Tempsensor
17	PROC049B_Hardware



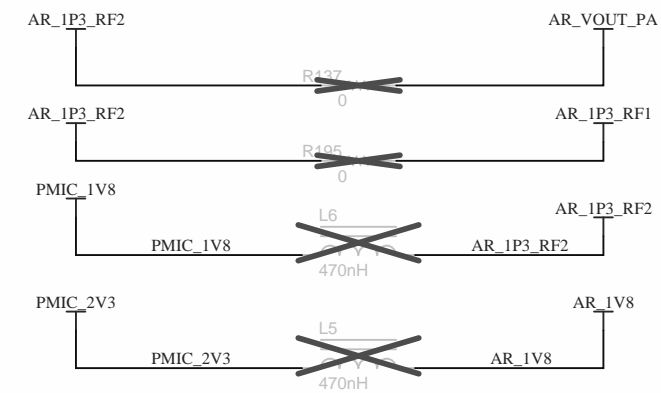
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SUPPLY_DECOUPLING_CAPS



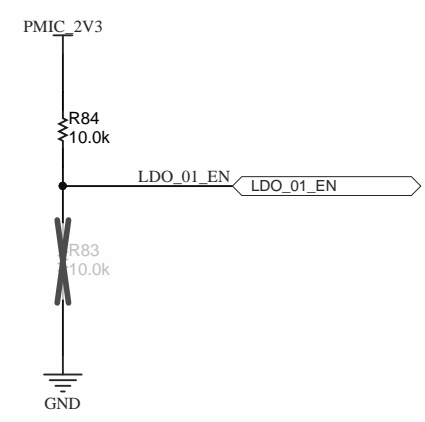
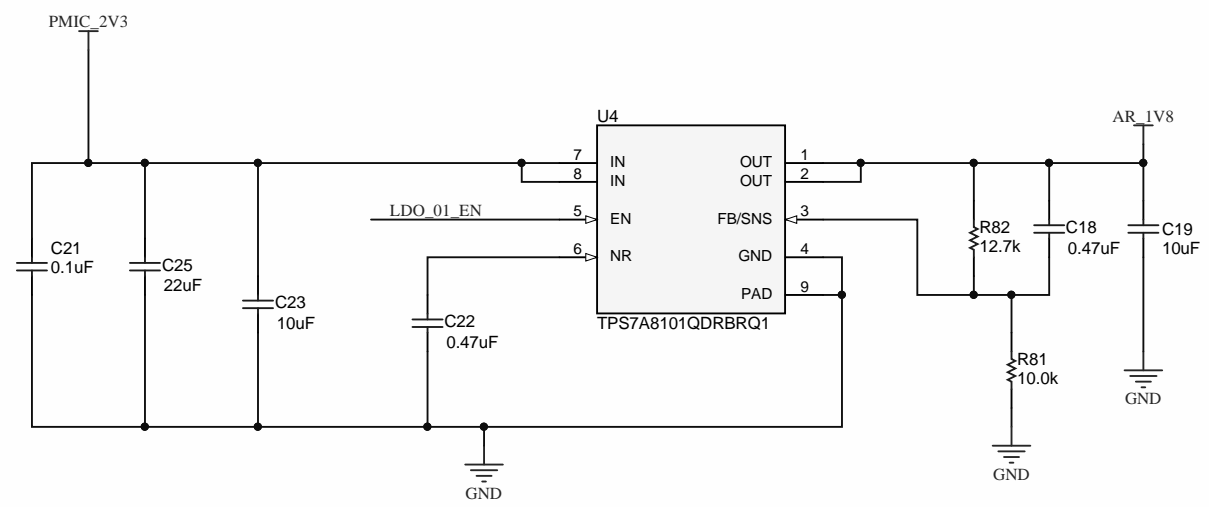
OPTIONS FOR INTERNAL DEBUG ONLY



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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: Decoupling caps
SVN Rev: Not in version control	Assembly Variant: 001	Sheet 3 of 17
Drawn By:	File: PROC049B_Dcoupling caps.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

LDO_01 (1.8V OUTPUT)

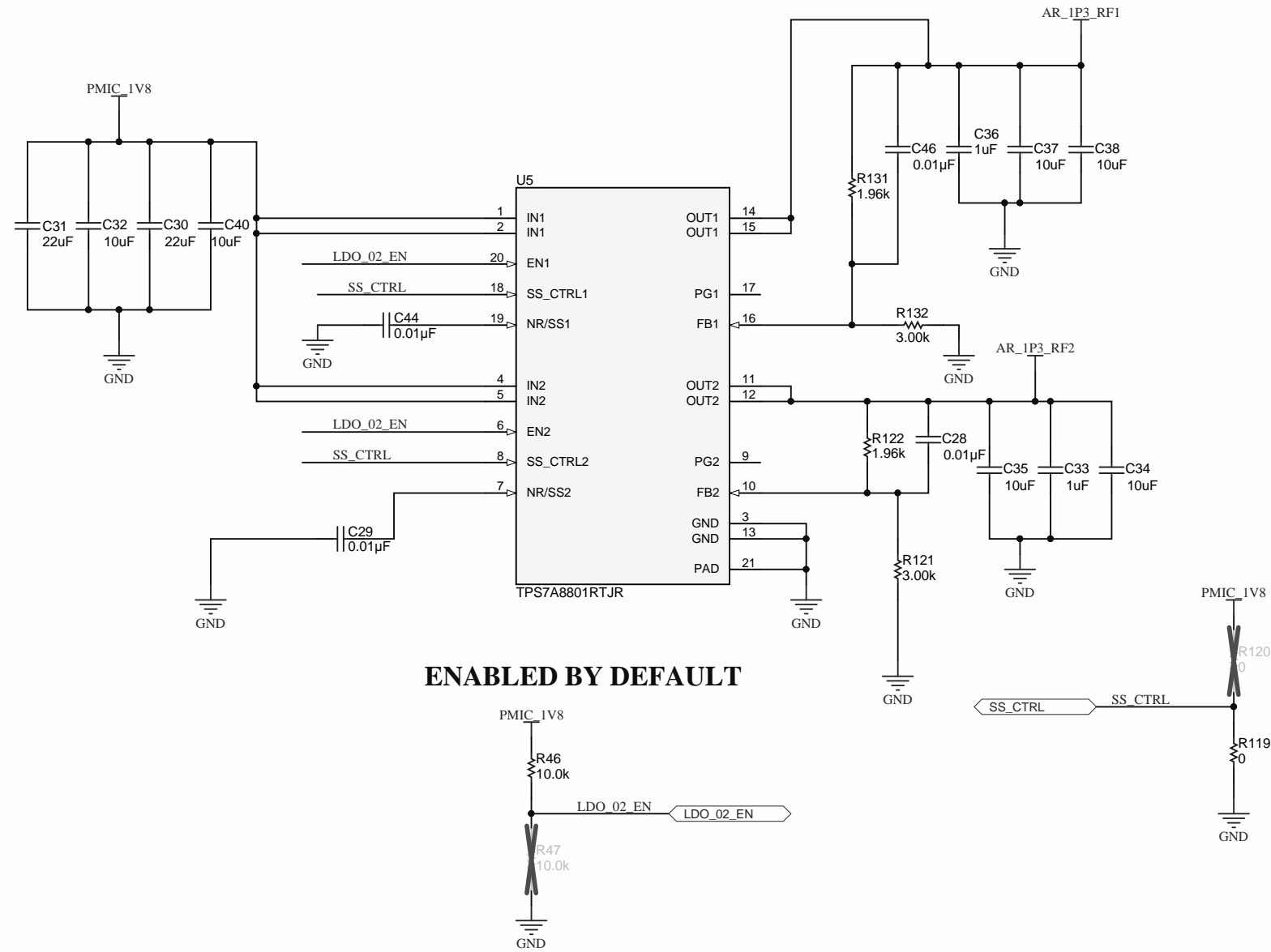


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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: LDO_01 (1.8V Output)
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 17
Drawn By:	File: PROC049B_LDO_01 (1.8V Output).SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	



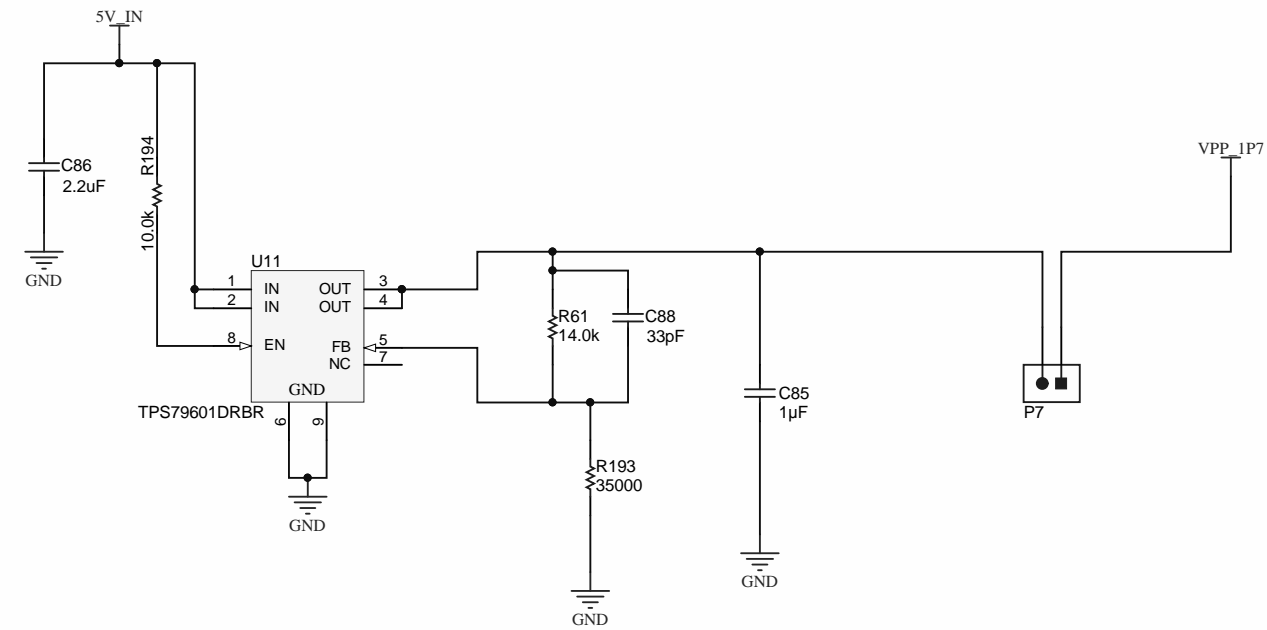
LDO_02 (1.3V LDO)



Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: LDO_02 (1.3V Output)
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 5 of 17
Drawn By:	File: PROC049B_LDO_02 (1.3V Output).SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

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VPP SUPPLY LDO

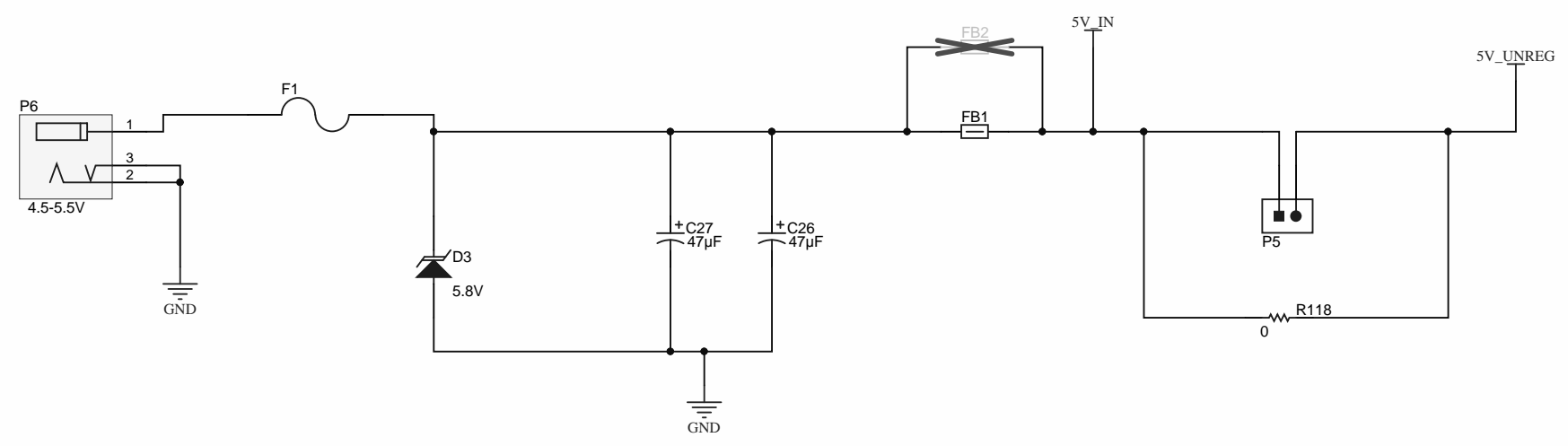


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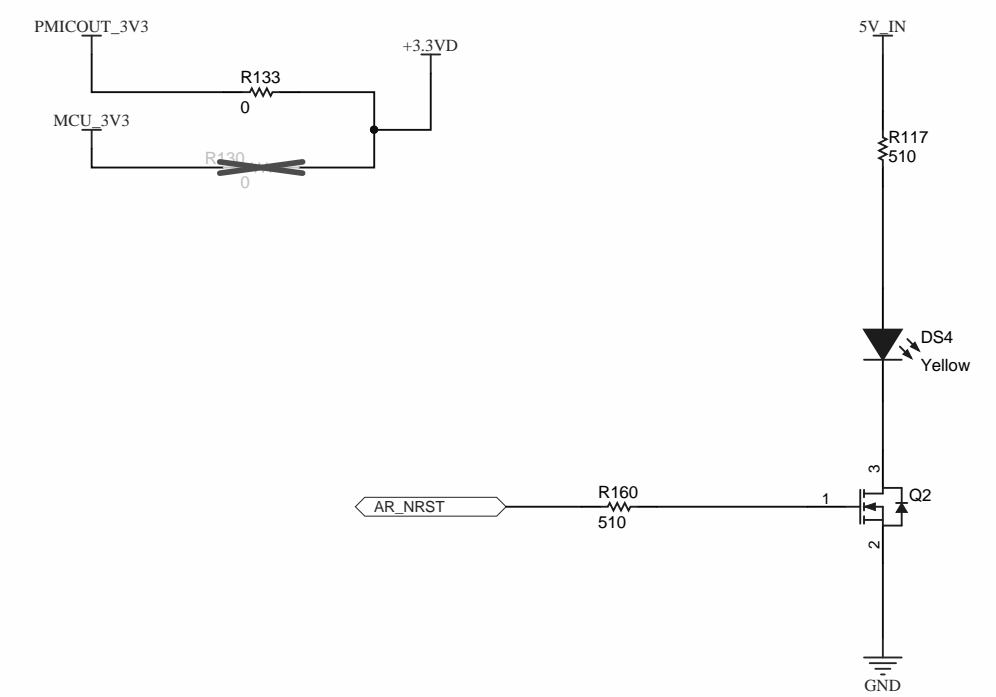
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Number: PROC049	Rev: B	Sheet Title: VPP_Supply
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 6 of 17
Drawn By:	File: PROC049B_VPP_Supply.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	



POWER SUPPLY CONNECTOR

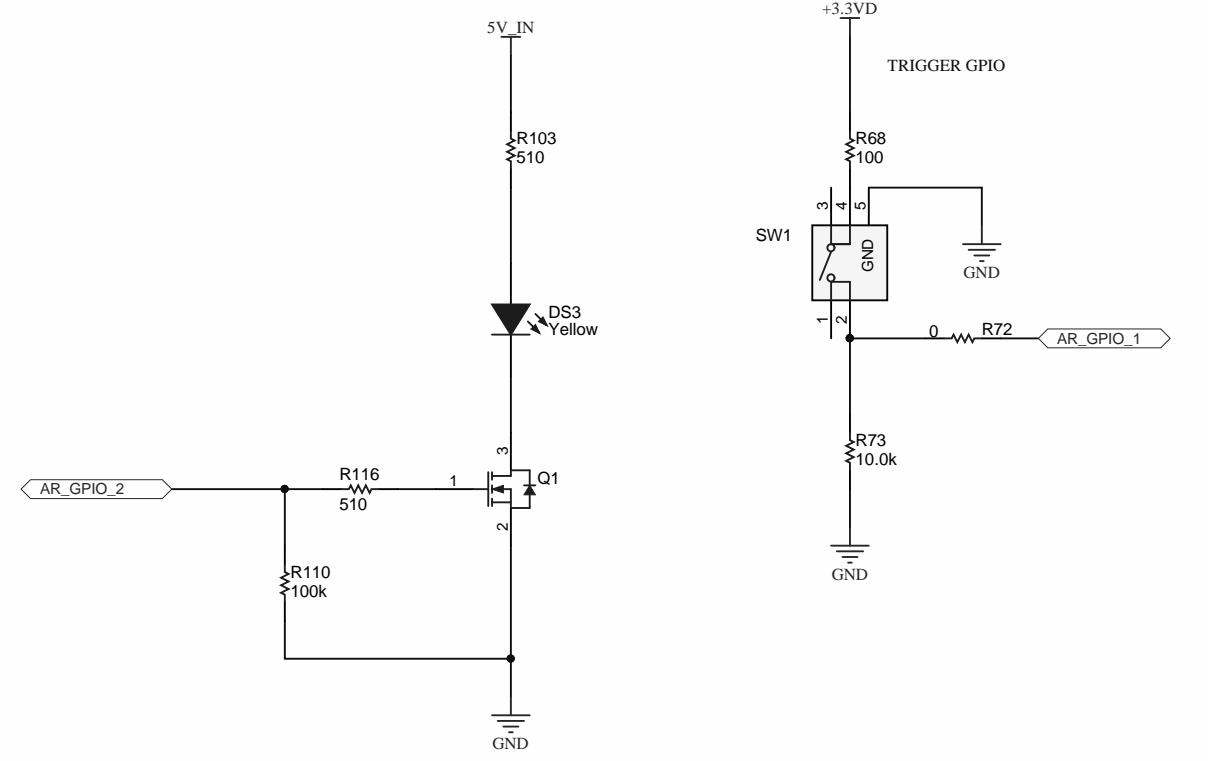
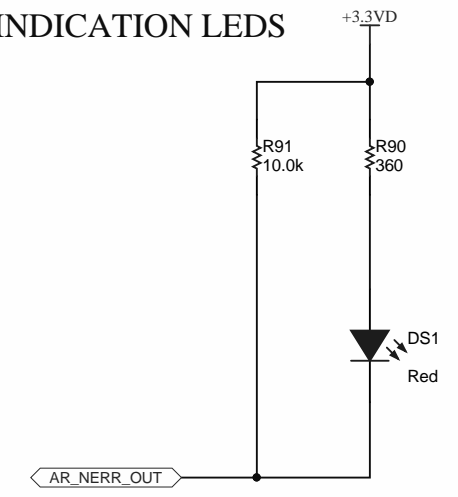
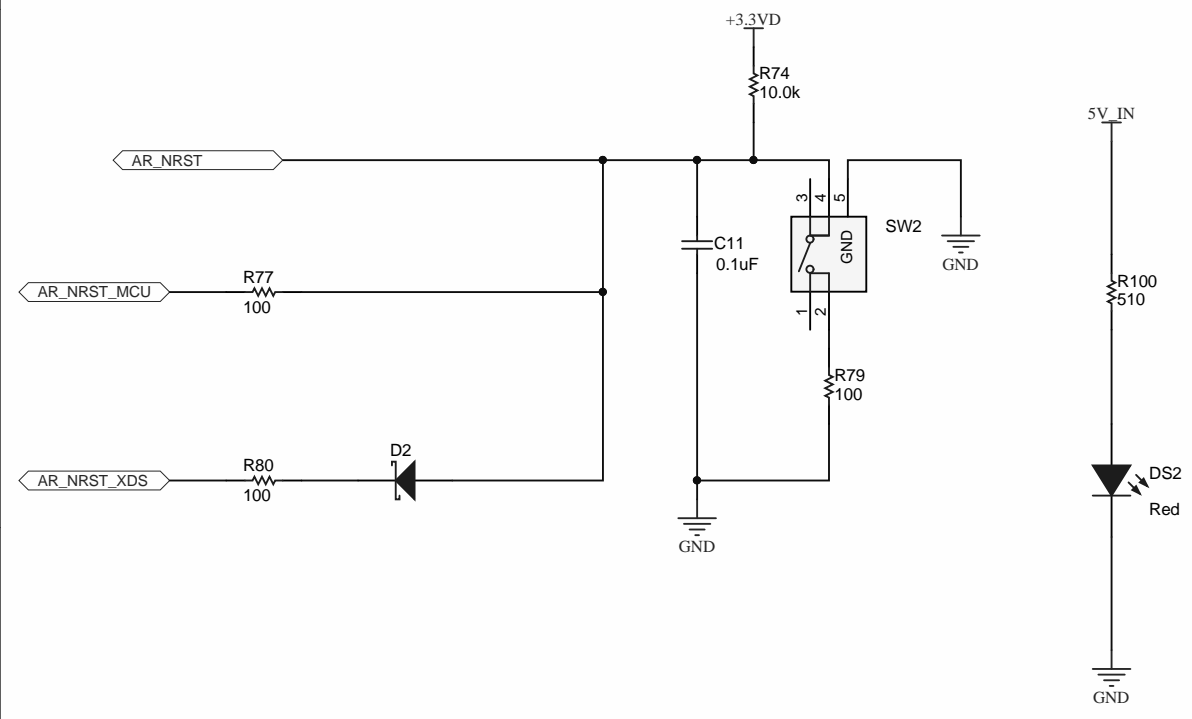


3P3 SUPPLY FROM PMIC OR FROM THE MCU



RESET AND LEDS

INDICATION LEDS

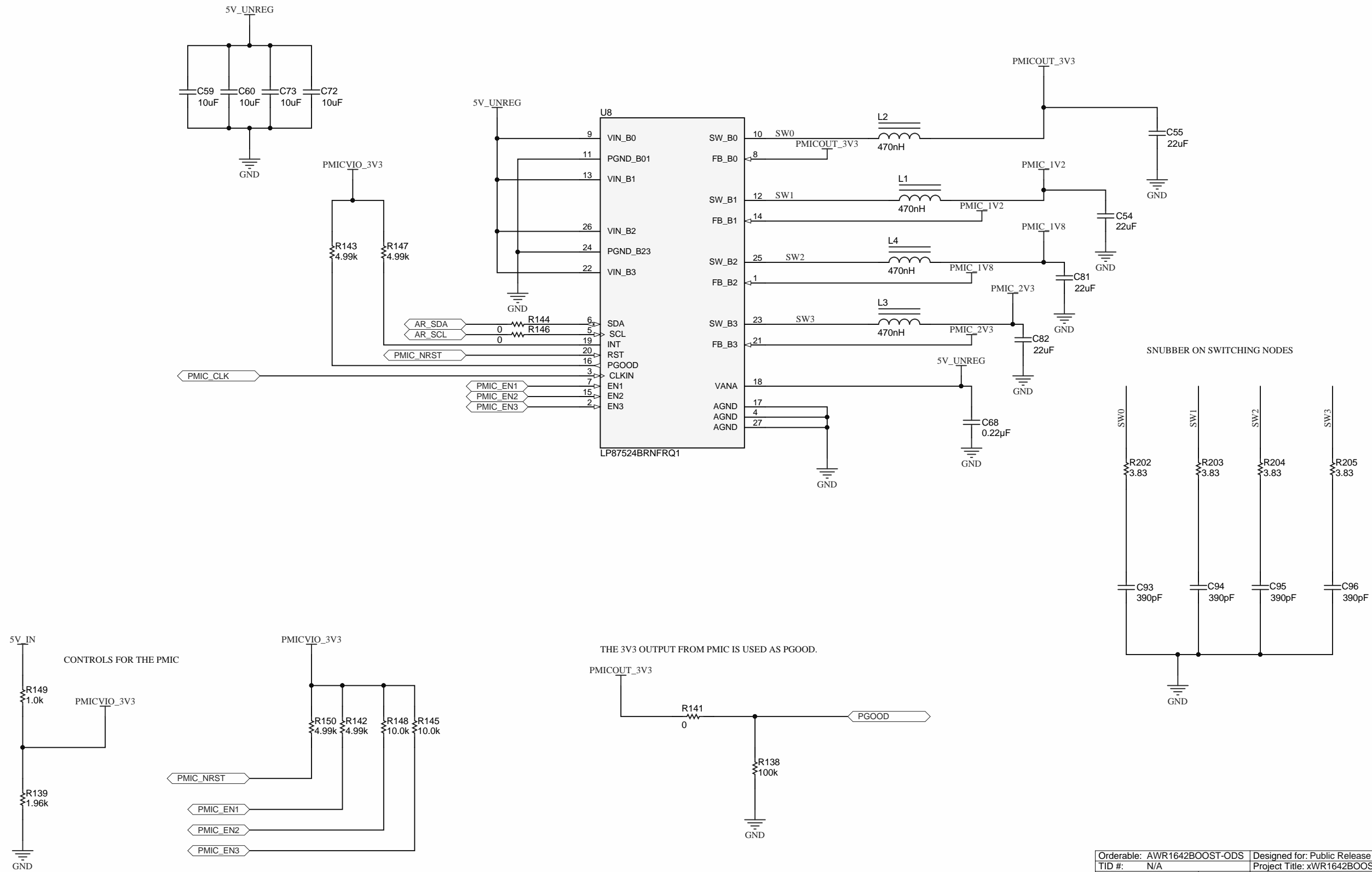


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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: Pwr_RST_LEDs
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 7 of 17
Drawn By:	File: PROC049B_Pwr_RST_LEDs.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	



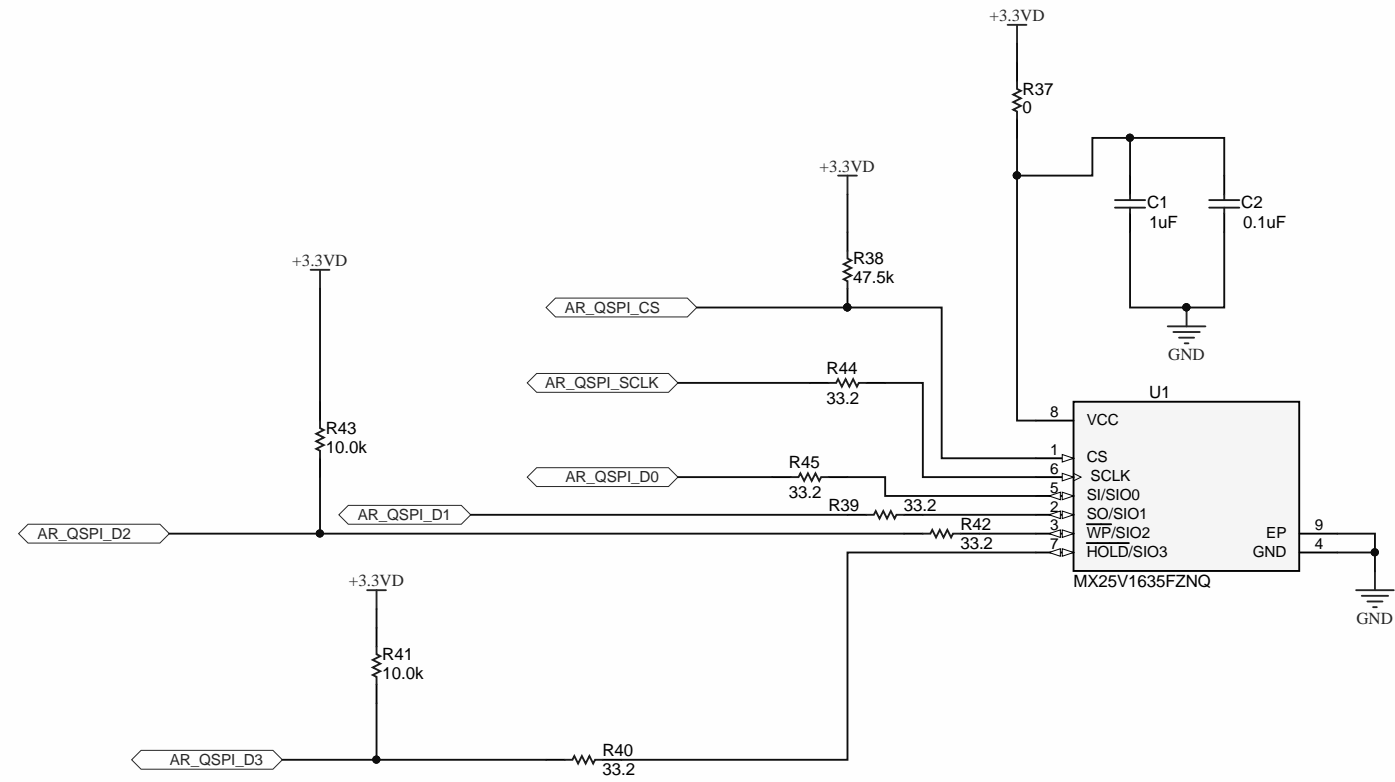
PMIC (3.3V, 1.2V, 1.8V, 2.3V OUTPUTS)




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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: PMIC
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 8 of 17
Drawn By:	File: PROC049B_PMIC.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

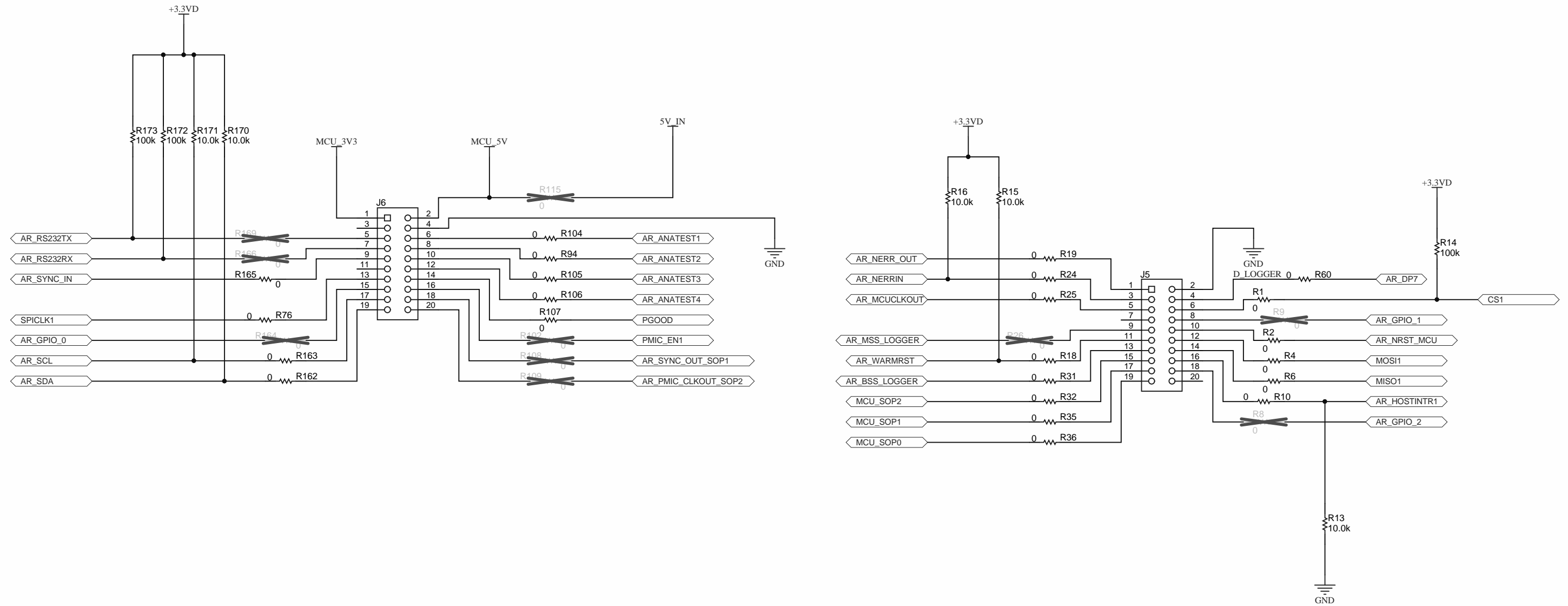
QSPI FLASH



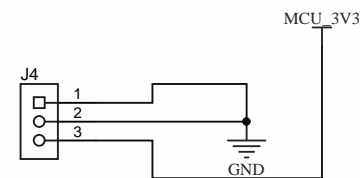
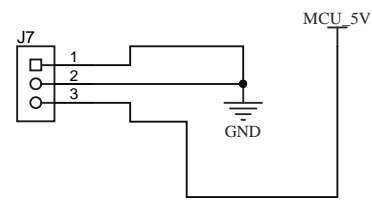
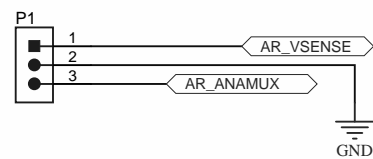
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TID #: N/A	Project Title: xWR1642BOOST-ODS		
Number: PROC049	Rev: B	Sheet Title: QSPI flash section	
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 9 of 17	
Drawn By:	File: PROC049B_QSPI flash section.SchDoc	Size: B	
Engineer: Vivek Dham	Contact: http://www.ti.com/support		

BP/LP CONNECTOR



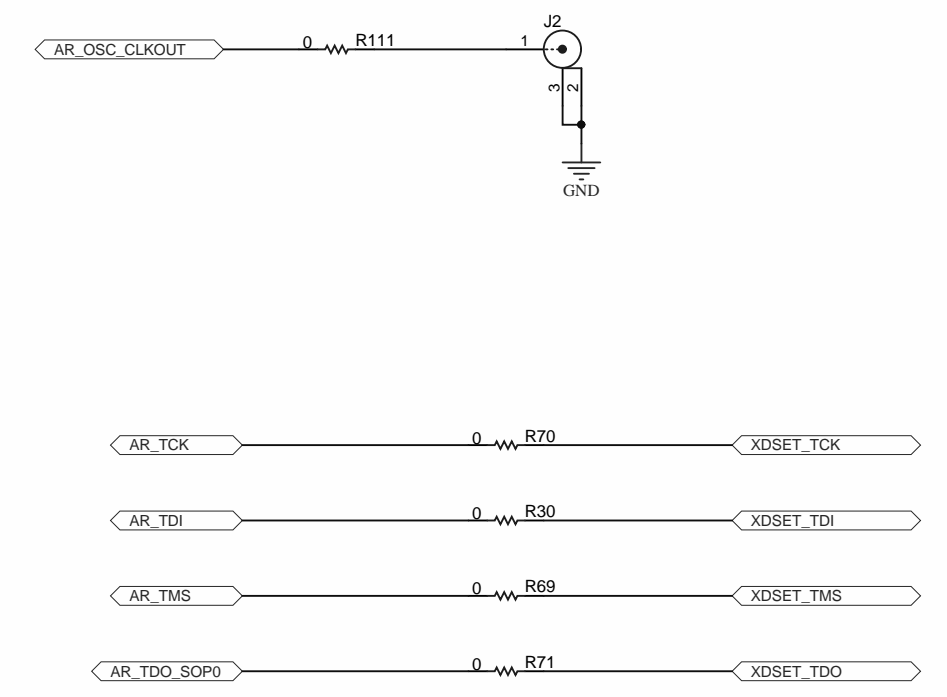
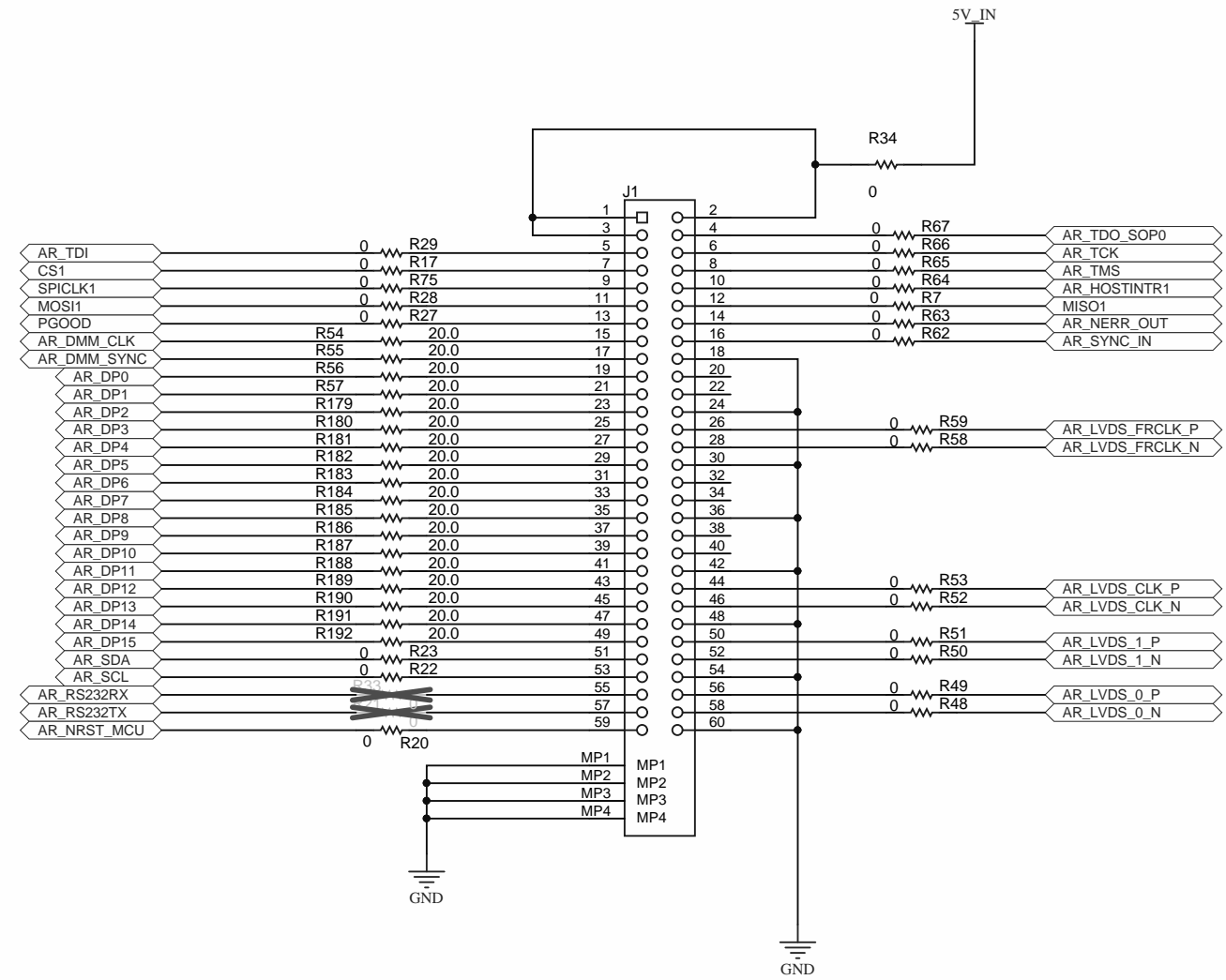
ANALOG SIGNALS



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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: LP Connector
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 10 of 17
Drawn By:	File: PROC049B_LP Connector.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

HD CONNECTOR FOR LVDS/CSI AND JTAG



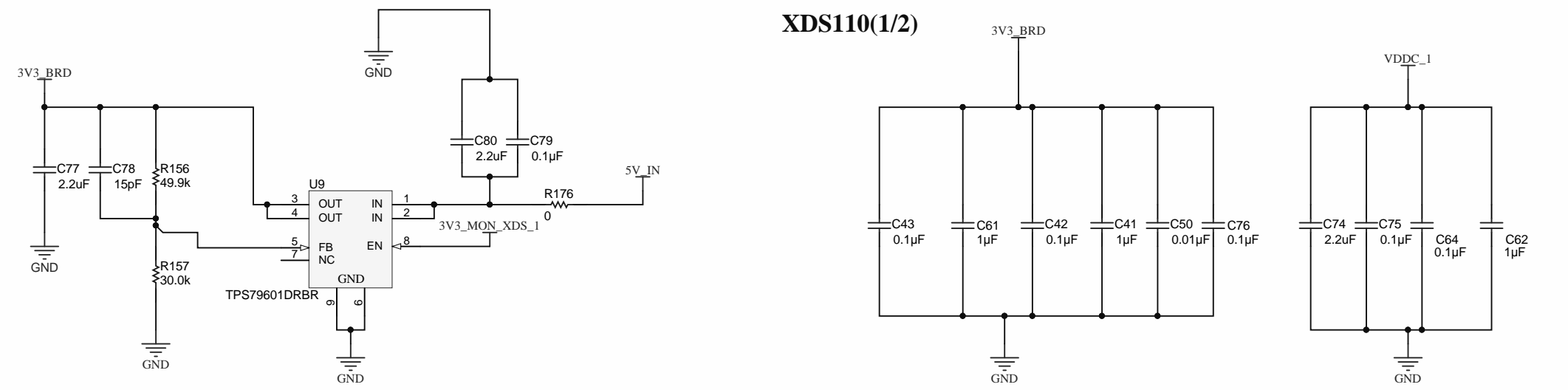
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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: HD Connector
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 11 of 17
Drawn By:	File: PROC049B_HD Connector.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	



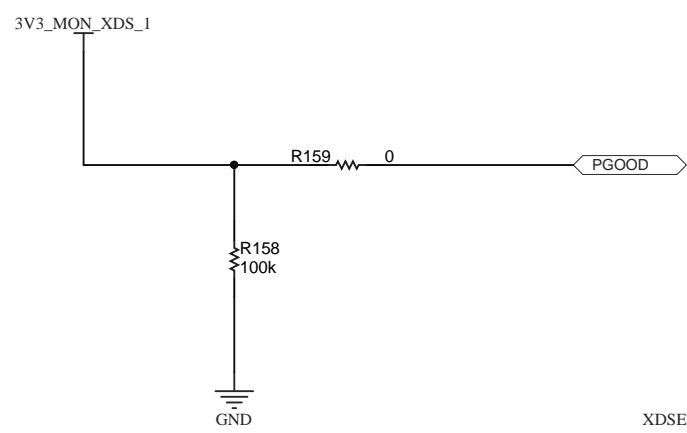
A

A



B

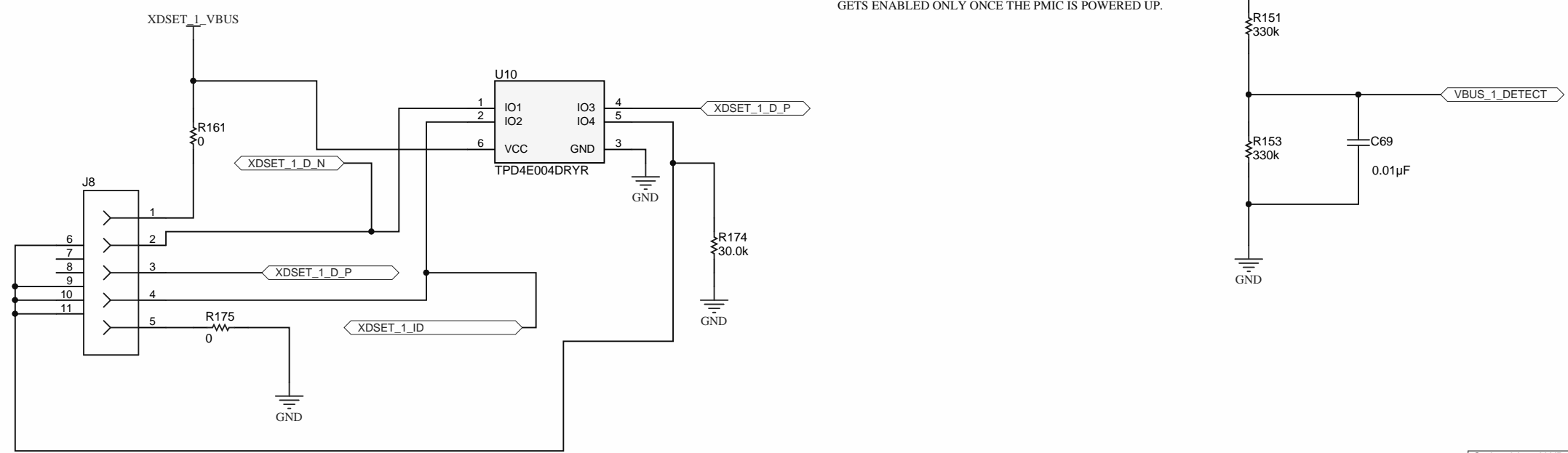
B



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

C

C



D

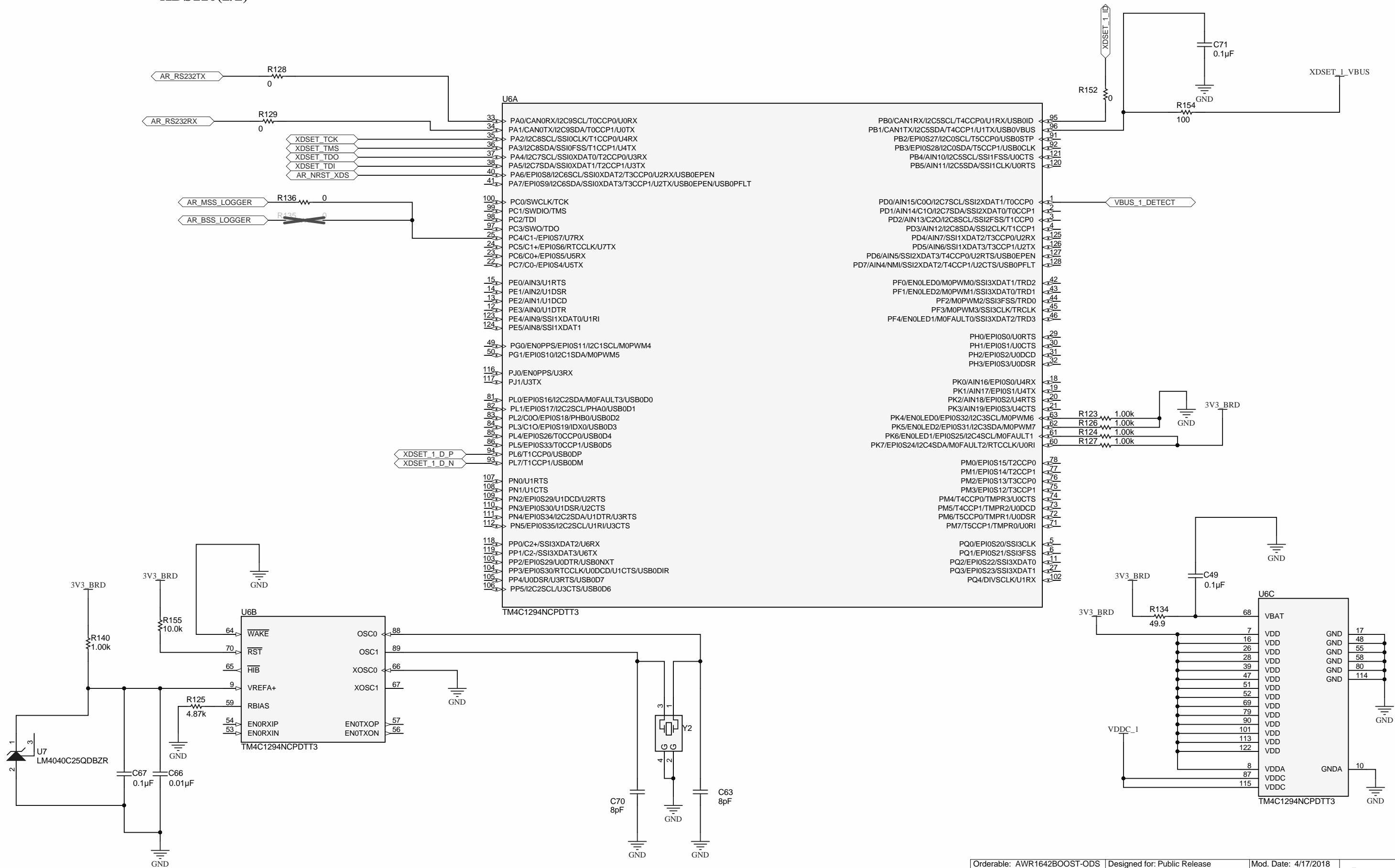
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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: XDS110 Interface_1A
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 12 of 17
Drawn By:	File: PROC049B_XDS110 Interface_1A.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

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XDS110(2/2)

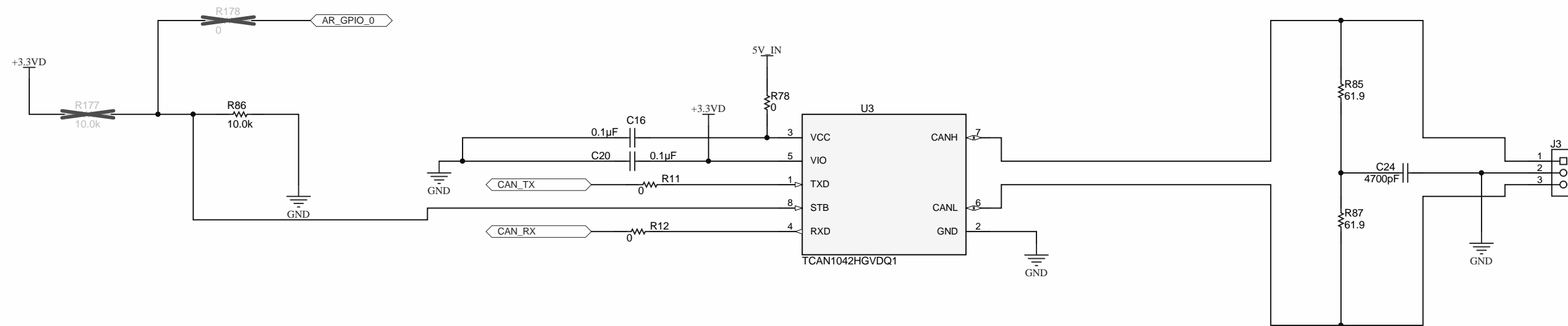


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TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: XDS110 Interface_1B
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 13 of 17
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Engineer: Vivek Dham	Contact: http://www.ti.com/support	

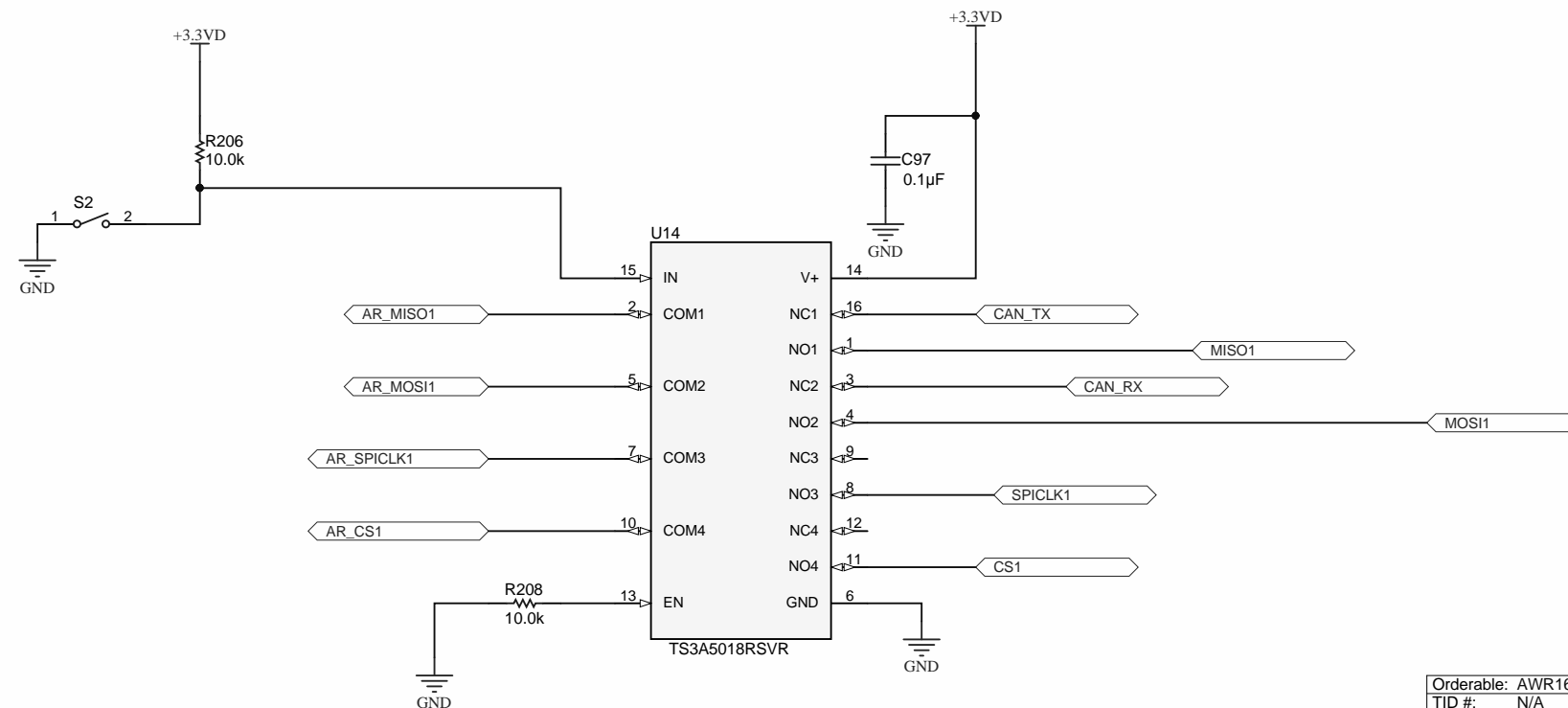
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CAN INTERFACE



MUX BETWEEN SPI AND CAN INTERFACE

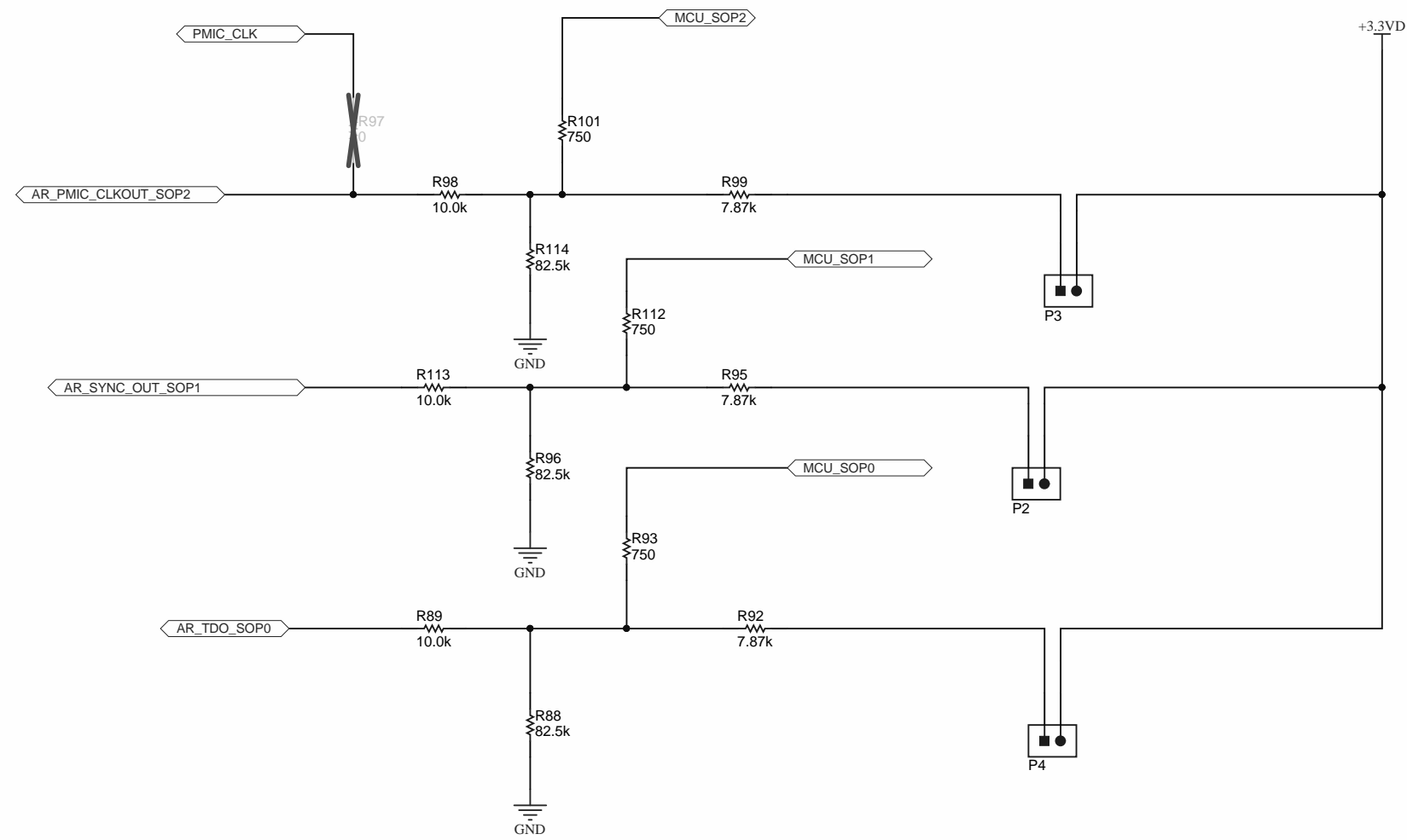


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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: CAN Interface
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 14 of 17
Drawn By:	File: PROC049B_CAN Interface.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

SOP HEADERS

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: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: SOP selection
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 15 of 17
Drawn By:	File: PROC049B_SOP selection.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

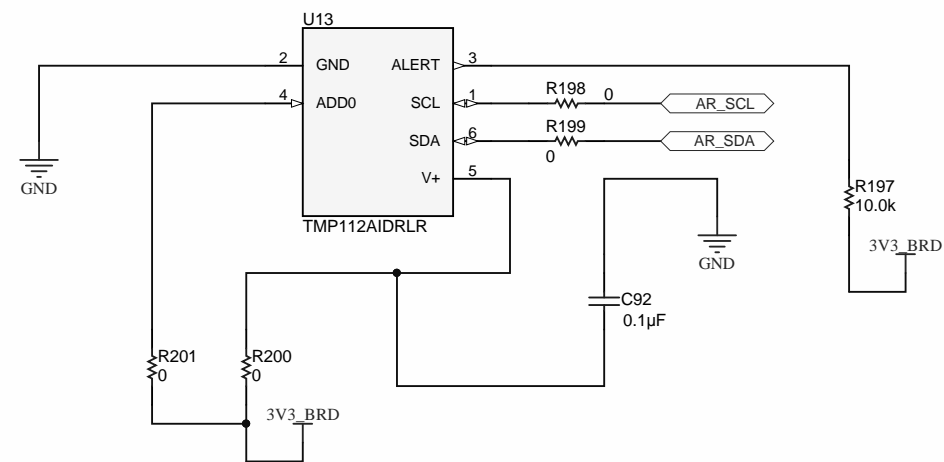


<http://www.ti.com>

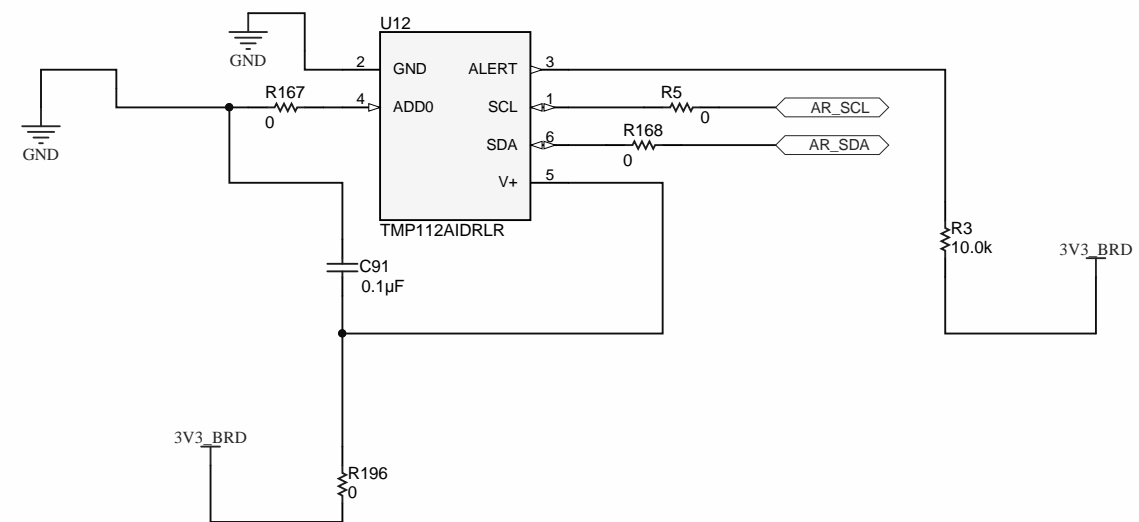
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ONBOARD TEMP SENSORS

DEFAULT I2C ADDRESS 0X49 AND MMWAVE DEVICE TEMP SENSOR AWAY FROM PMIC

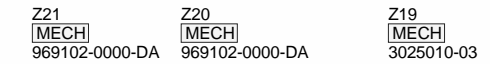
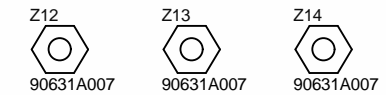
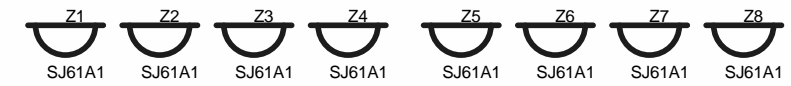
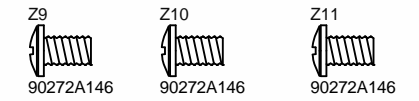


DEFAULT I2C ADDRESS 0X48 TEMP SENSOR CLOSE TO PMIC



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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: Tempsensor
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 16 of 17
Drawn By:	File: PROC049B_Tempsensor.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	



PCB LOGO
Texas Instruments

PCB LOGO
ESD Susceptible

PCB LOGO
FCC disclaimer

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

Logo2
PCB LOGO
WEEE logo



LBL1
PCB Label
Size: 0.65" x 0.20"

Variant/Label Table	
Variant	Label Text
001	AWR1642BOOST-ODS
002	IWR1642BOOST-ODS

PCB Number: PROC049
PCB Rev: B

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 place in a plastic bag

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Orderable: AWR1642BOOST-ODS	Designed for: Public Release	Mod. Date: 4/17/2018
TID #: N/A	Project Title: xWR1642BOOST-ODS	
Number: PROC049	Rev: B	Sheet Title: Hardware
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 17 of 17
Drawn By:	File: PROC049B_Hardware.SchDoc	Size: B
Engineer: Vivek Dham	Contact: http://www.ti.com/support	

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