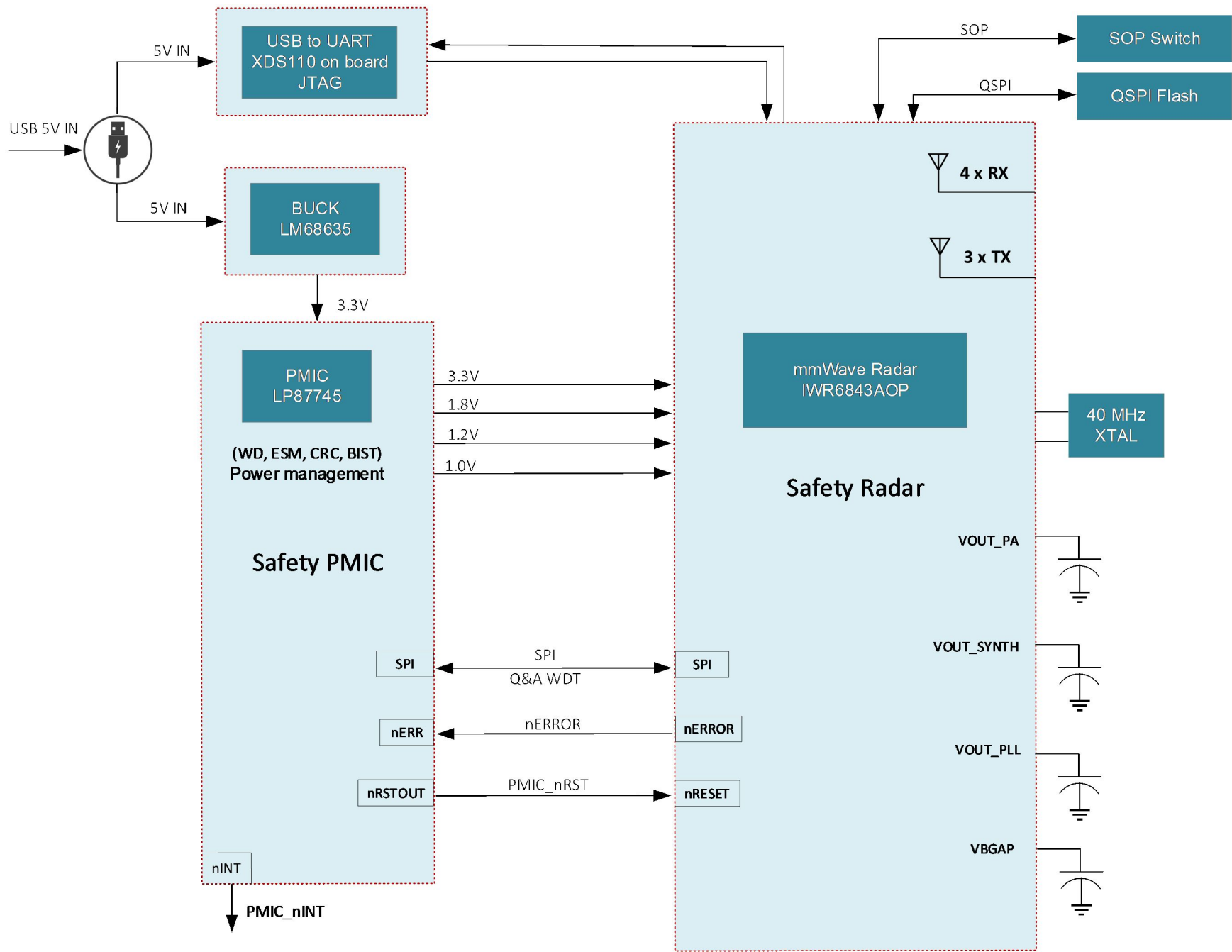


Safety mmWave + Safety PMIC Block Diagram



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TID #: TIDA-010281	Project Title: Safety mmWave radar with safety PMIC design		
Number: N/A	Rev: A	Sheet Title: BLOCK DIAGRAM	
SVN Rev:	Assembly Variant: 001	Sheet: 1 of 10	
Drawn By: Antony/Bala	File: TIDA-010281_BLOCK_DIAGRAM.SchDoc	Size: B	
Engineer: Preeti Udupudi	Contact: http://www.ti.com/support		http://www.ti.com
			© Texas Instruments N/A

1	2	3	4	5	6
A					A
B					B
C					C
D					D

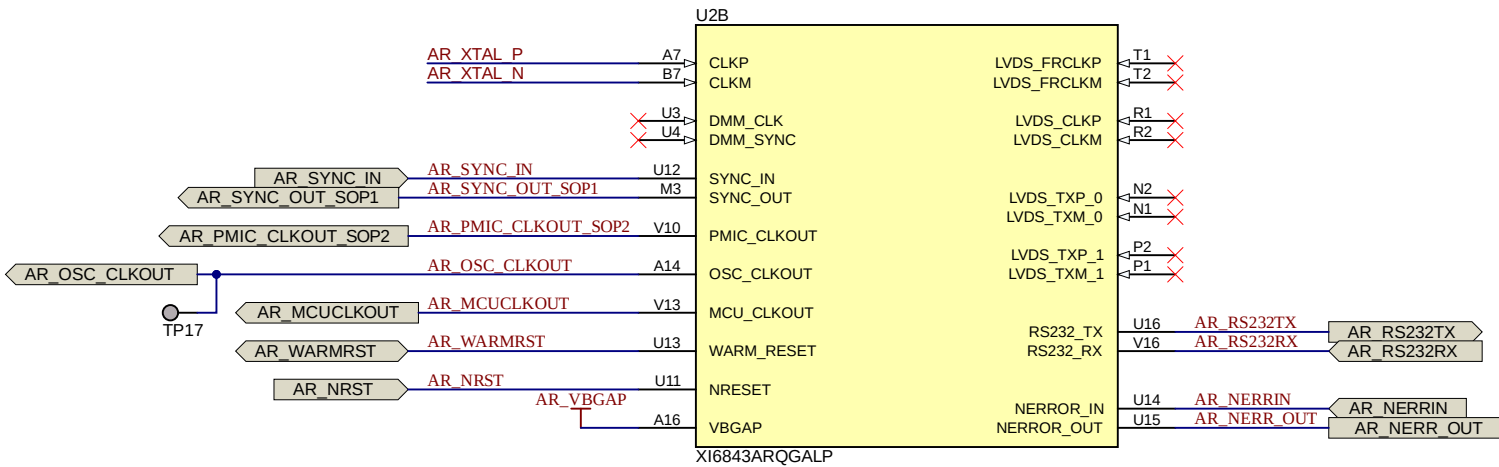
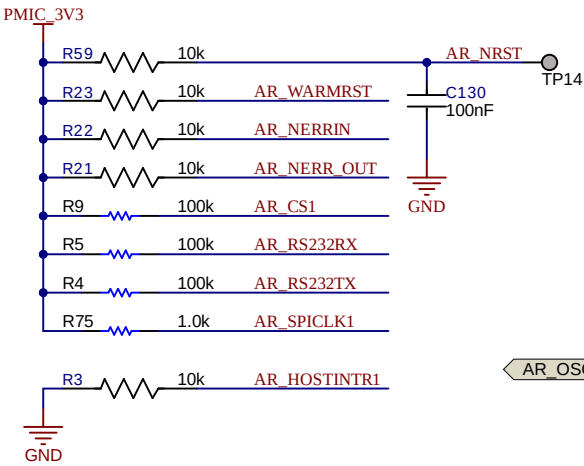
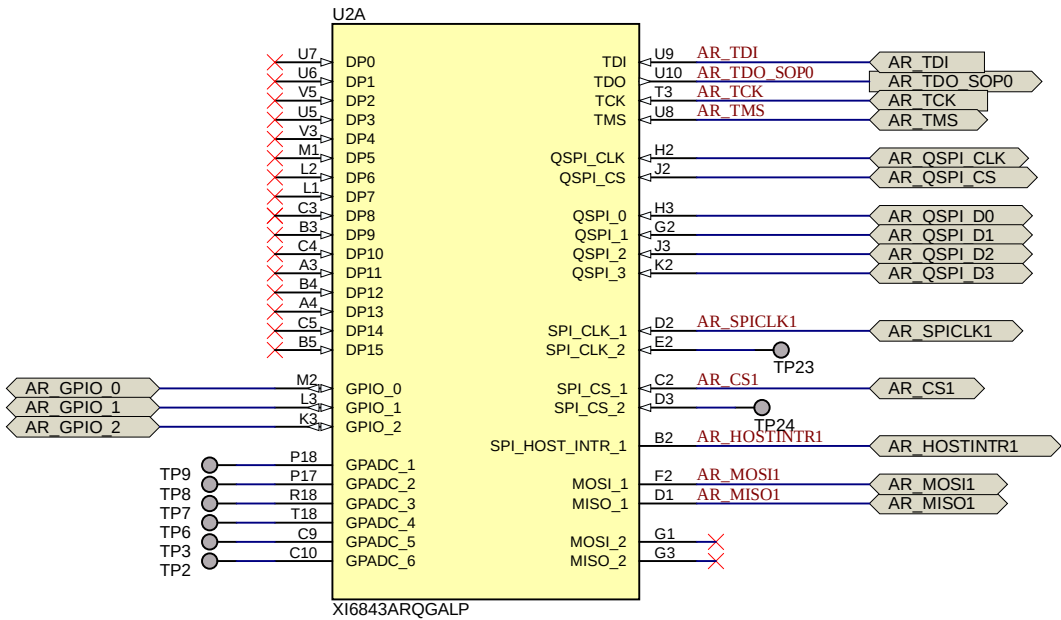
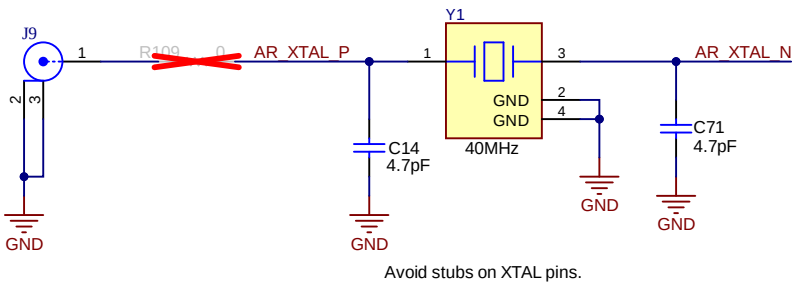
TABLE OF CONTENTS

SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
2	TABLE OF CONTENTS
3	AOP_IO
4	AOP_PWR
5	PMIC_BUCK
6	QSPI FLASH & USB & SOP
7	RESET SWITCH
8	XDS110 INTERFACE 1A
9	XDS110 INTERFACE 1B
10	HARDWARE

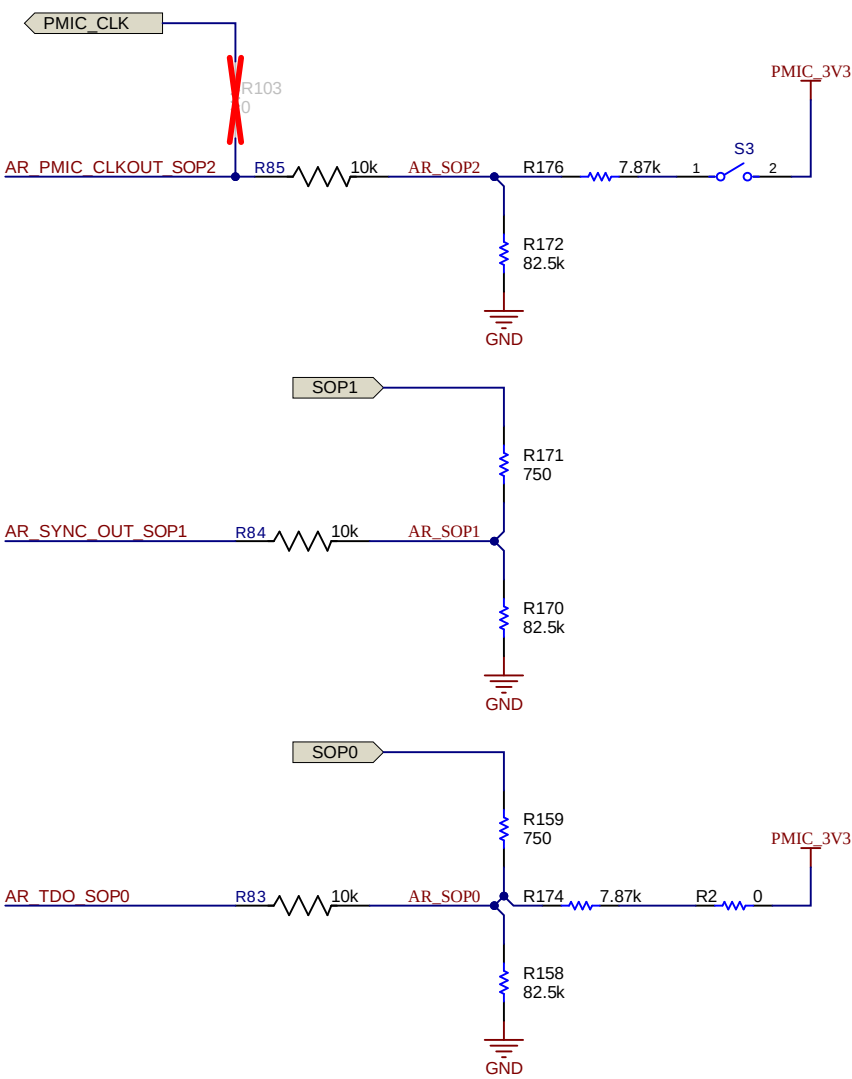
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AOP IO

40MHz CRYSTAL

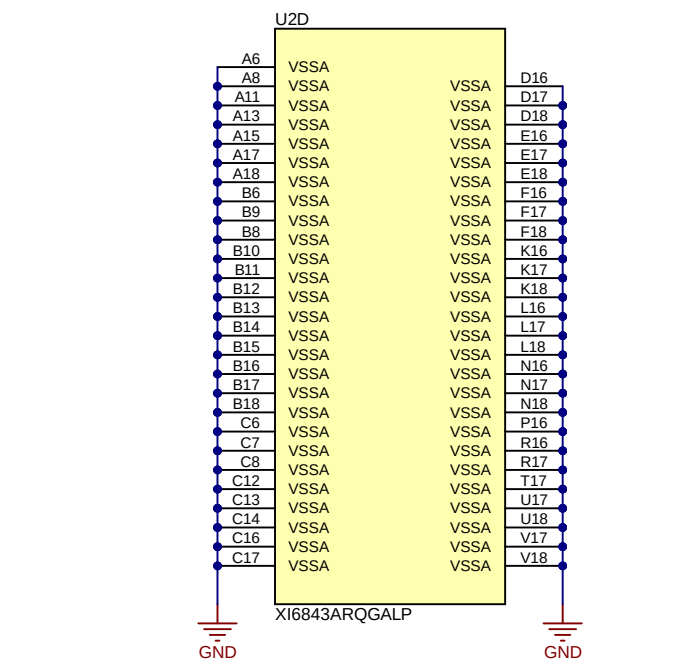
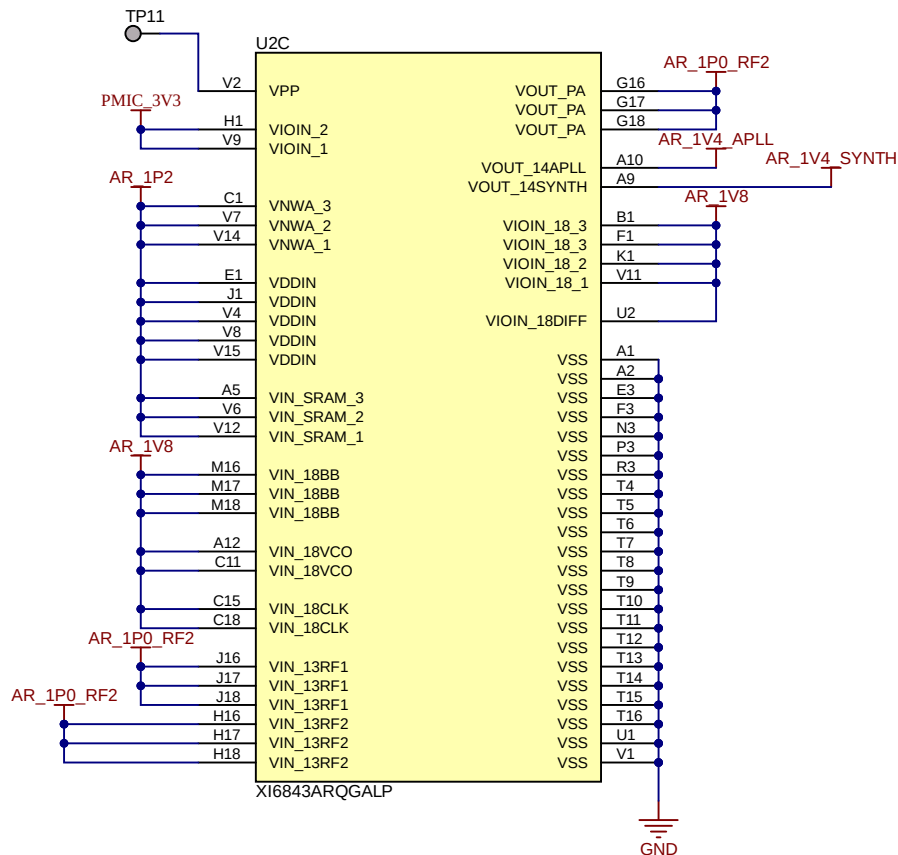


SOP OPTIONS

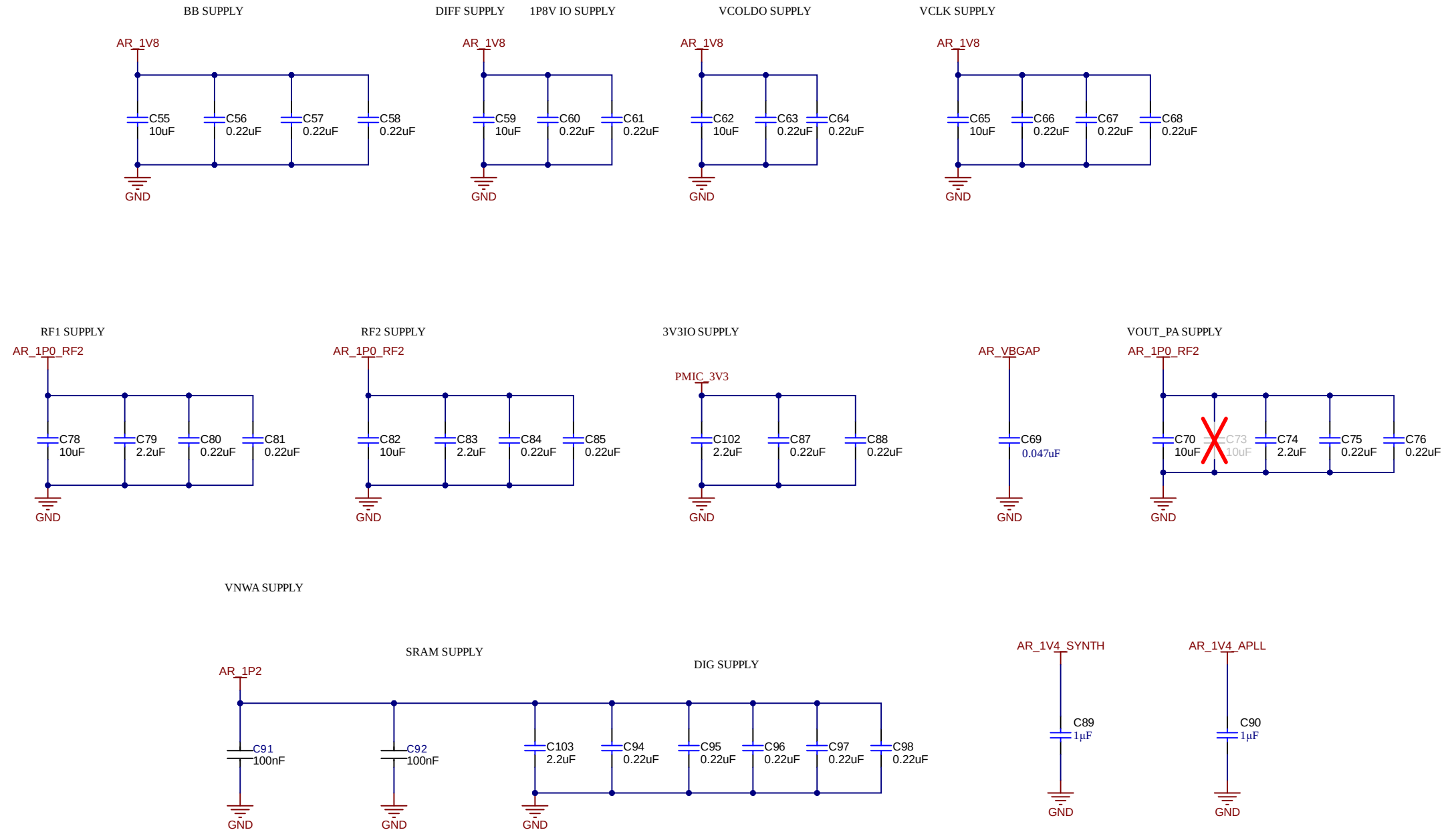


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AOP POWER

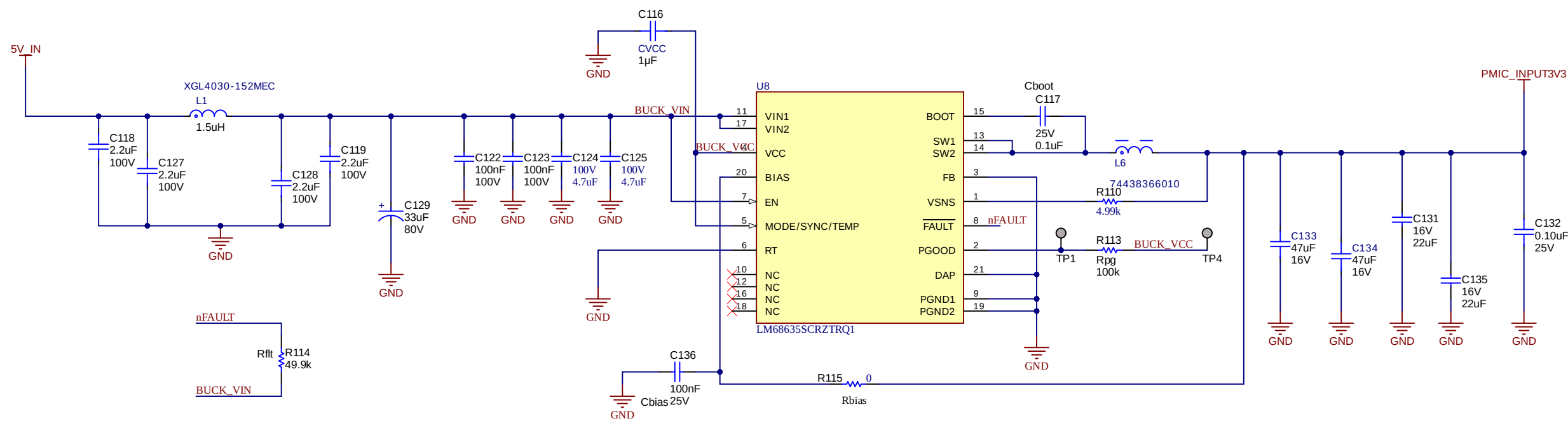


DECOUPLING CAPS

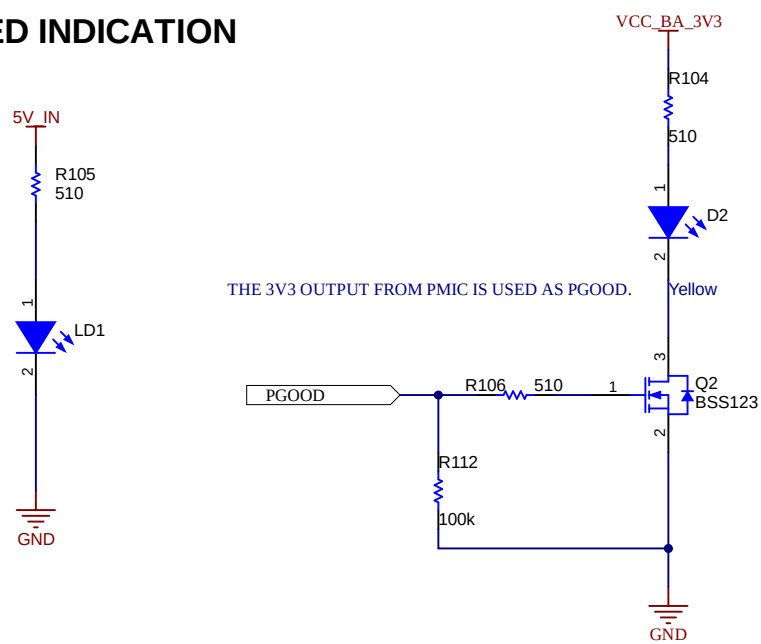


Orderable: IWR6843AOP EVM	Designed for: Public Release	Mod. Date: 8/22/2025	 TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments N/A
TID #: TIDA-010281	Project Title: Safety mmWave radar with safety PMIC design		
Number: N/A	Rev: A	Sheet Title: AOP_POWER	
SVN Rev:	Assembly Variant: 001	Sheet: 4 of 10	
Drawn By: Antony/Bala	File: TIDA-010281_AOP_PWR_SchDoc	Size: B	
Engineer: Preeti Udapudi	Contact: http://www.ti.com/support		

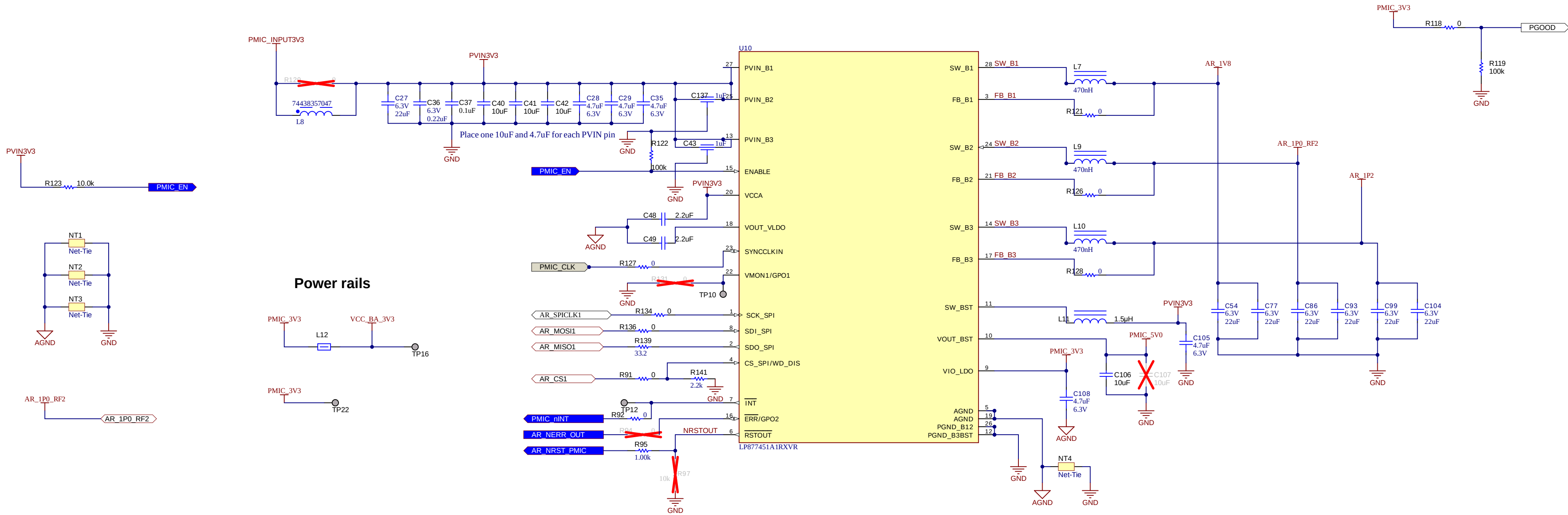
Buck converter (3.3V output)



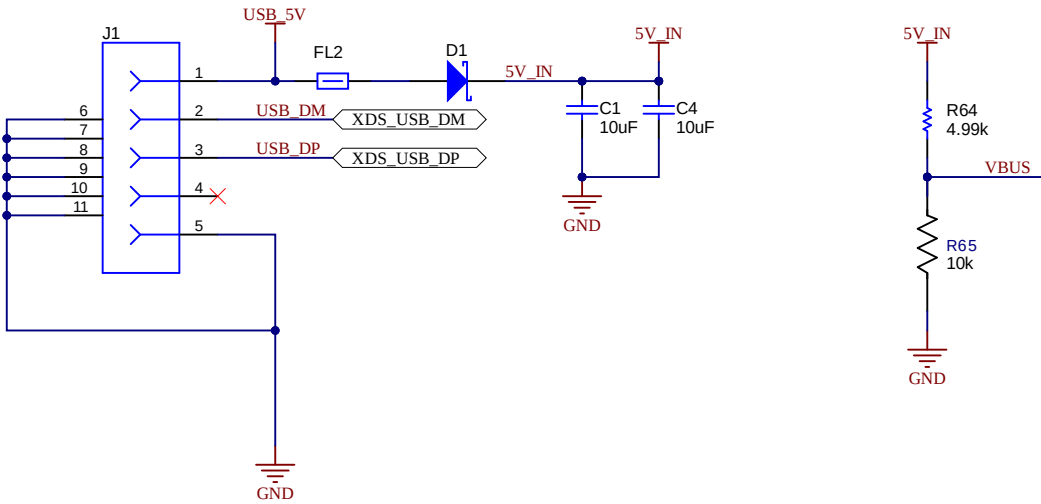
5V LED INDICATION



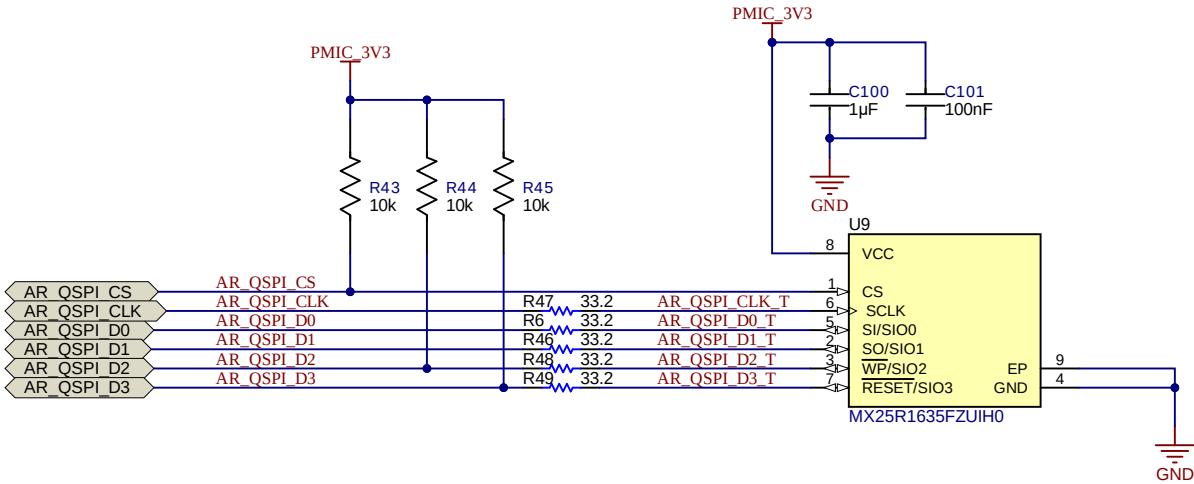
PMIC (5V, 3.3V, 1.2V, 1.0V, 1.8V OUTPUTS)



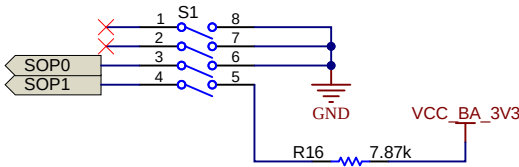
USB CONNECTOR



QSPI FLASH



SWITCH CONTROL MUX SELECTION, SOPs, BT CONTROL



SOP CONFIGURATION

Mode	SOP0 (S1.3)	SOP1 (S1.4)	SOP2 (S3)
Functional Mode	OFF	OFF	OFF
Flash Mode	OFF	OFF	ON
MMWAVEICEBOOST mode (DCA1000, JTAG, and so forth)	OFF	ON	OFF

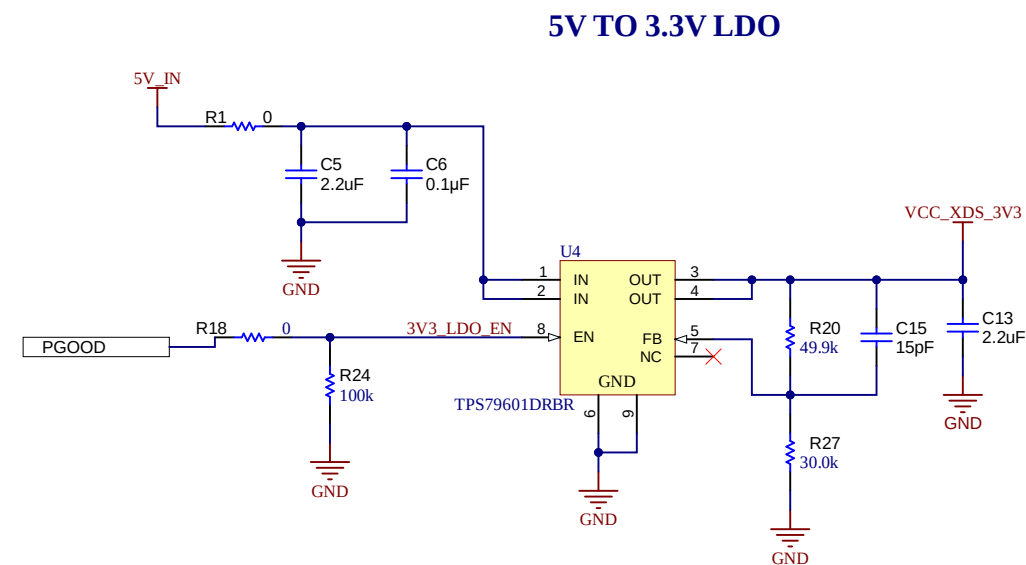
PIN MUX SETTINGS

Designator	Switch ON	Switch OFF
S1.1	Breakaway UART	CP2105UART
S1.2	60 Pin UART	BT UART
S2.1	CAN	SPI
S2.2	60 Pin CS	BT/LCD CS
S2.3	BT Enable	BT Disable

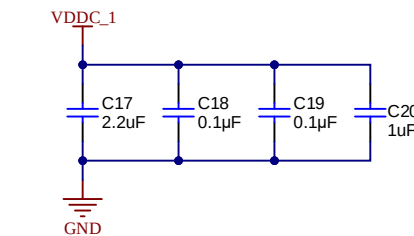
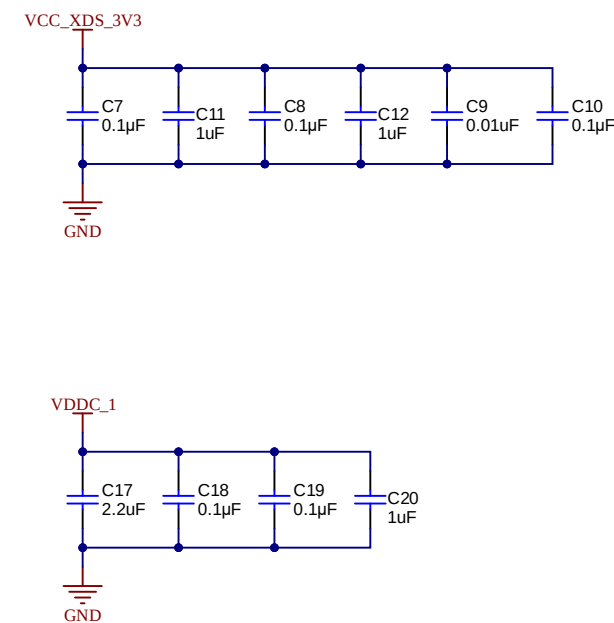
PIN MUX SETTINGS

	S1.1	S1.2	S2.1	S2.2	S2.3
Stand alone Mode	OFF	N/A	N/A	N/A	N/A
MMWAVEICEBOOST	ON	ON	OFF	OFF	N/A

XDS110(1/2)



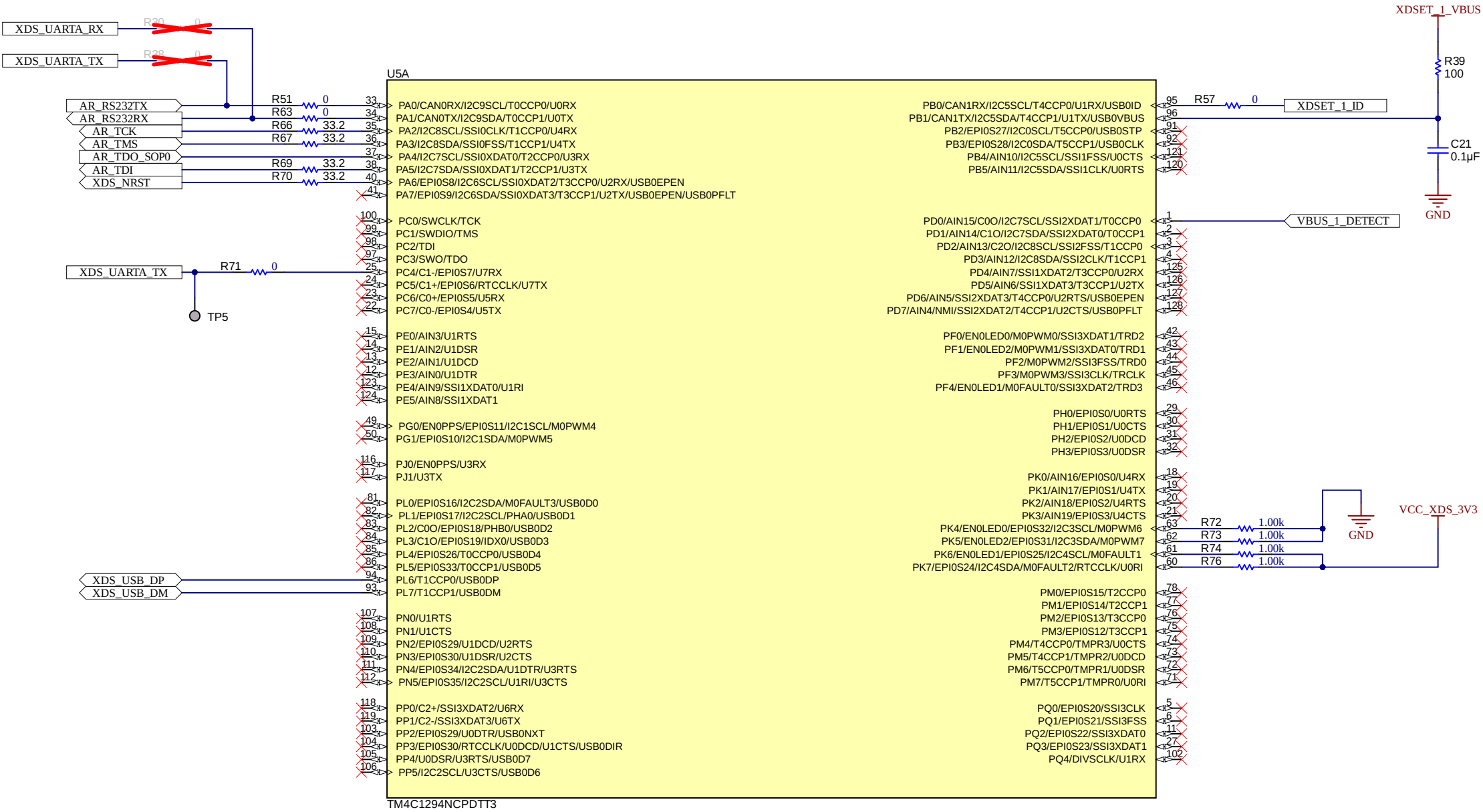
By Default LDO is disabled
When 3V3 DC-DC regulator is powered up, then it gets enabled



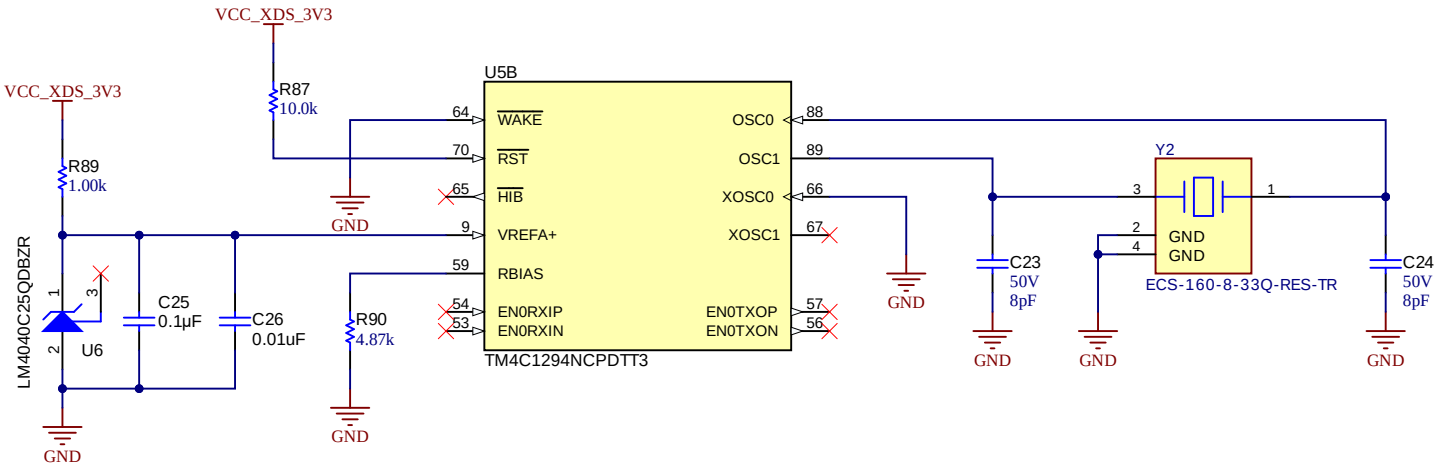
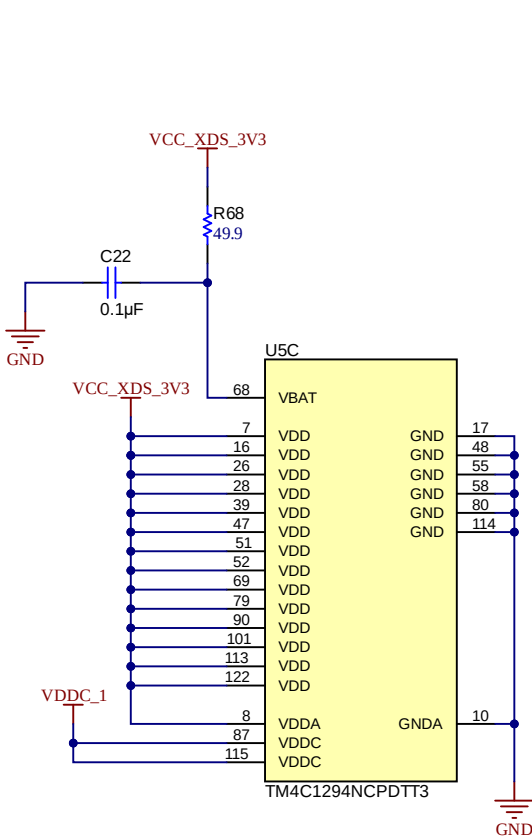
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TID #: TIDA-010281	Project Title: Safety mmWave radar with safety PMIC design		
Number: N/A	Rev: A	Sheet Title:	
SVN Rev:	Assembly Variant: 001	Sheet: 8 of 10	
Drawn By:	File: TIDA-010281_XDS110_interface_1A.SchDoc	Size: B	
Engineer: Preeti Udupudi	Contact: http://ti.com/support	http://www.ti.com © Texas Instruments N/A	

XDS110 - INTERFACE



XDS110 - POWER



HARDWARE



PCB Number: N/A
PCB Rev: A



H1
MECH

H2
MECH

H3
MECH

LBL1
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

LBL2
PCB Label
THT-14-423-10
Size: 0.65" x 0.20 "

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.

ZZ5.1
Assembly Note
Cut the thermal pad(Part Number#GPVOUS-0.125-AC-0816) for the shape and size of the inner surface of the heatsink(Part Number#MCH054) and paste it on the inner surface of the heatsink;

ZZ5.2
Assembly Note
Bring the heatsink onto the PCB bottom side (Opposite side of AOP device). Match the teeth in the heatsink with break-away area in the PCB and press the heatsink onto the PCB slightly so as thermal pad is spread all over the area

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