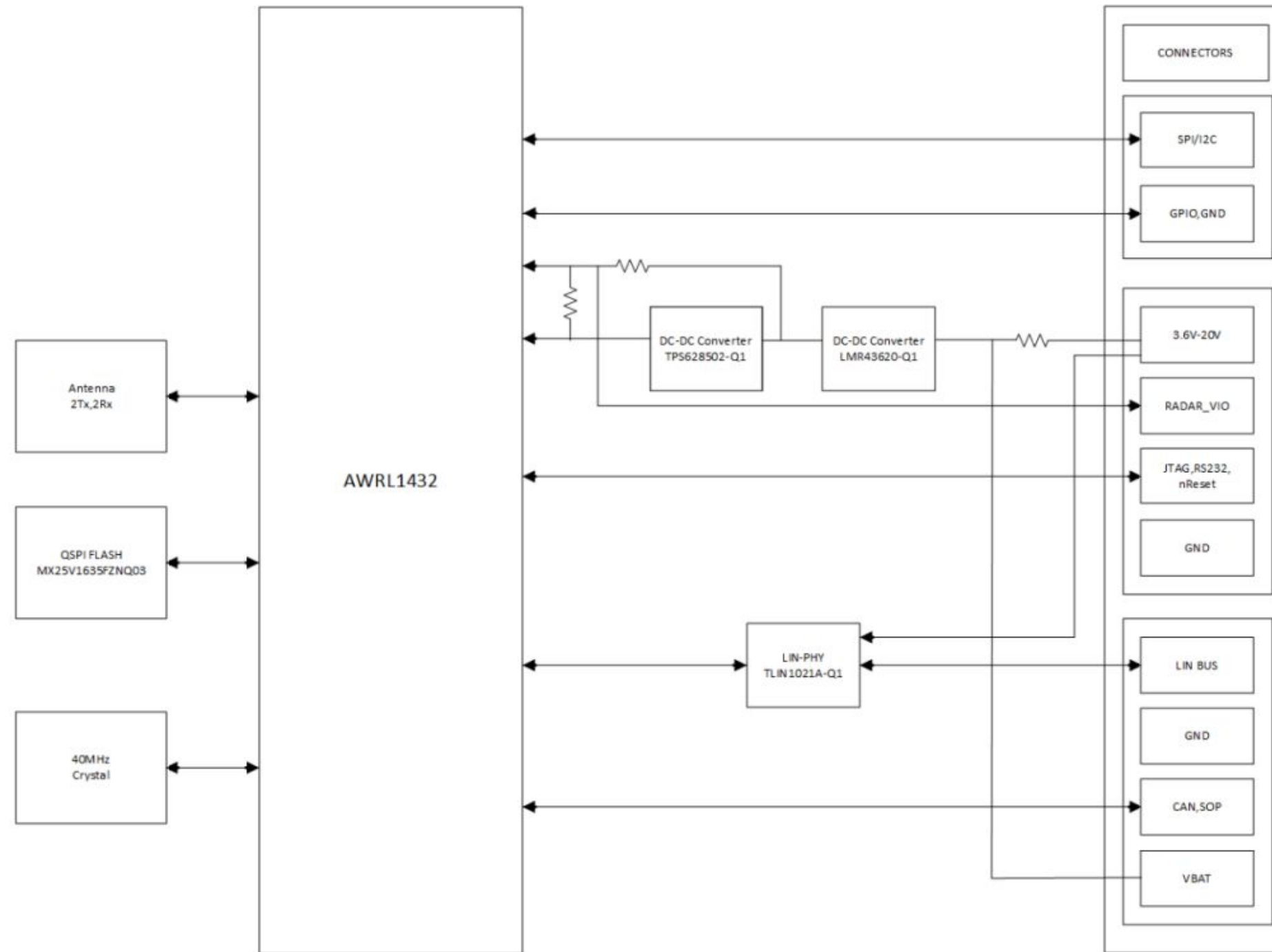


Revision History

Rev	ECN #	Approved Date	Approved by	Notes

BLOCK DIAGRAM



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TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	Sheet Title: BLOCK DIAGRAM	
Number: TIDEP-01036 Rev: A	Assembly Variant: 001_AWR	Sheet: 1 of 7	
SVN Rev: Not in version control	File: AWRL1432KTO_Block_Diagram.SchDoc	Size: B	
Drawn By: Texas Instruments	Contact: http://www.ti.com/support		

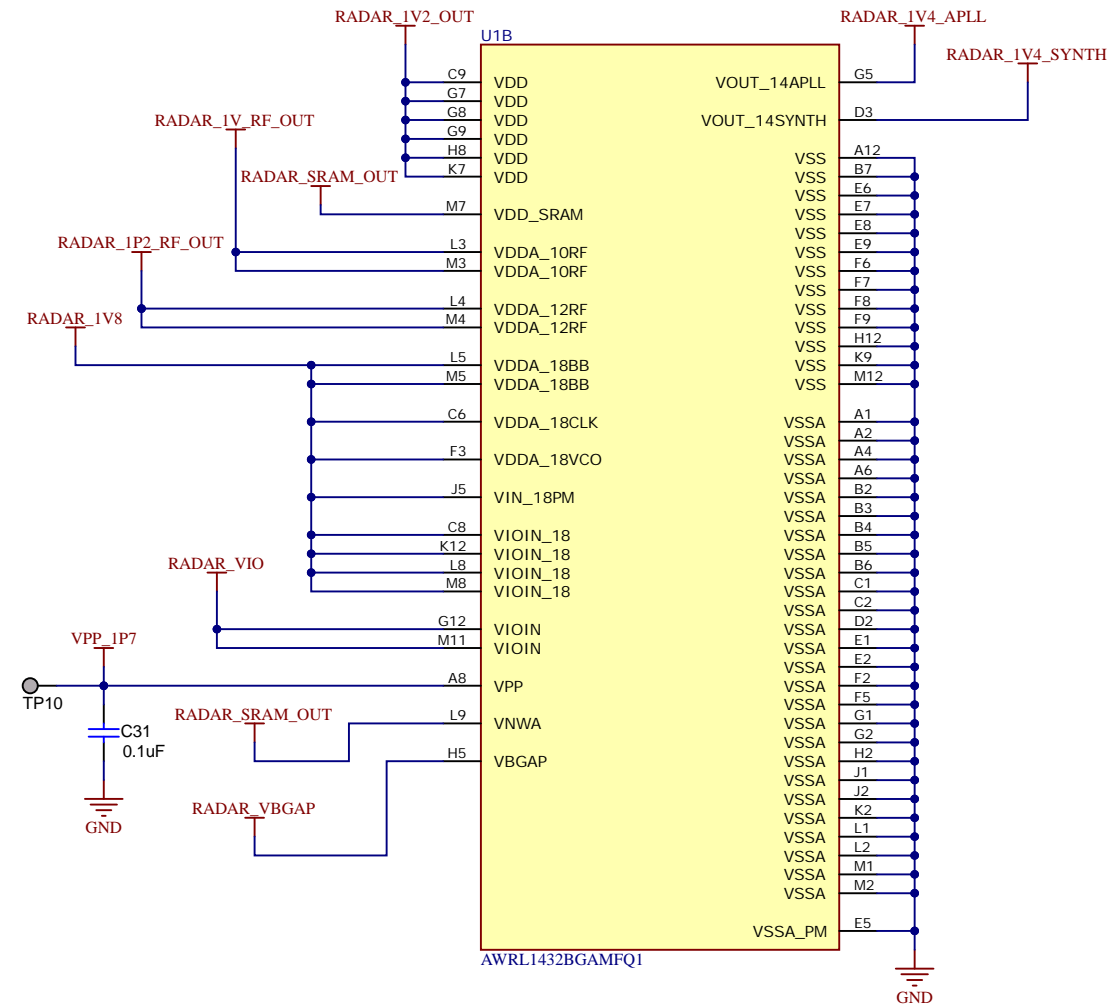
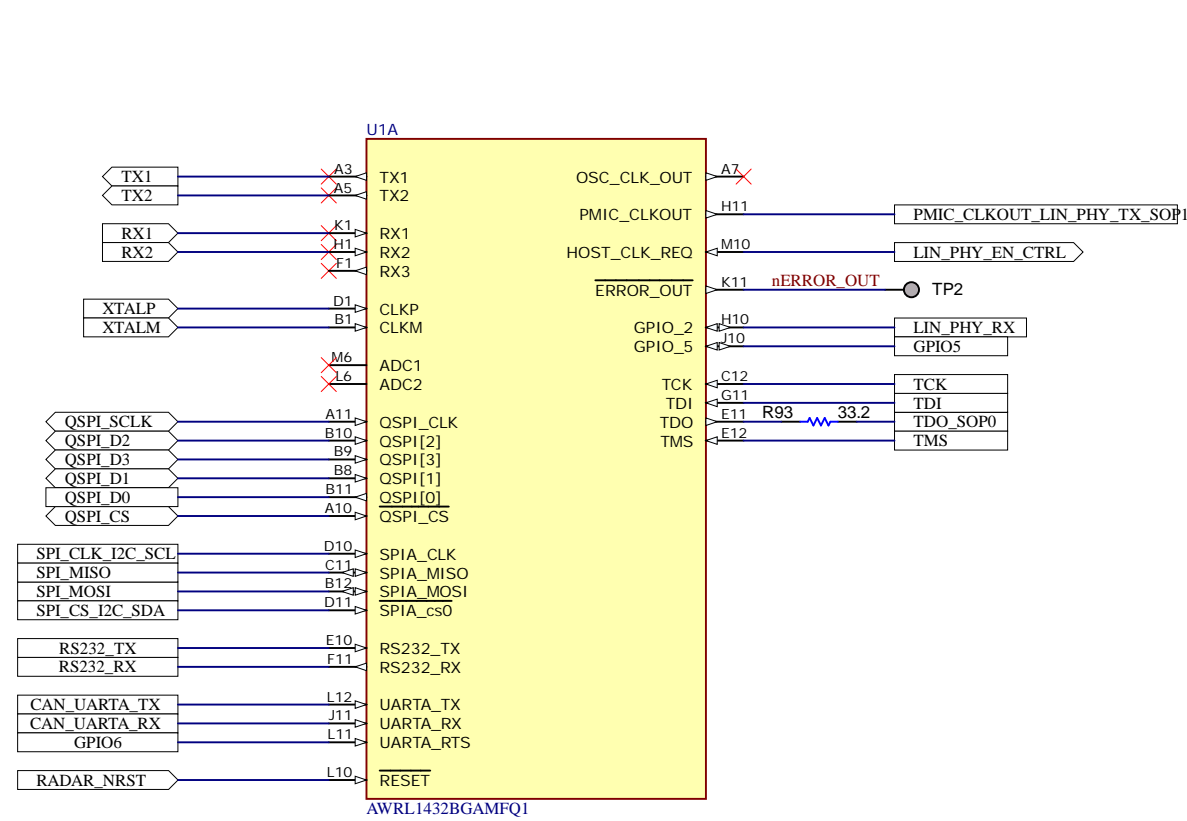
TABLE OF CONTENTS

SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
2	TABLE OF CONTENTS
3	xWRL1432_CHIP
4	DECOUPLING_CAPS_QSPI
5	BUCK_REGULATORS_SOP_CTRL
6	LIN_PHY_CONNECTORS
7	EVM_HARDWARE

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TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design		
Number: TIDEP-01036 Rev: A	Sheet Title: TABLE OF CONTENTS		
SVN Rev: Not in version control	Assembly Variant: 001_AWR	Sheet: 2 of 7	
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Engineer: Texas Instruments	Contact: http://www.ti.com/support		

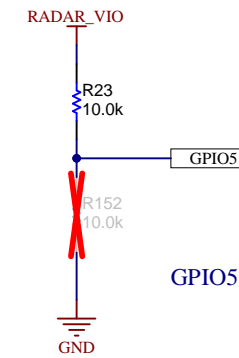
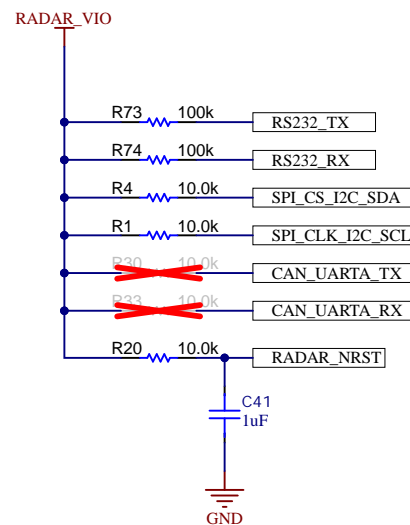
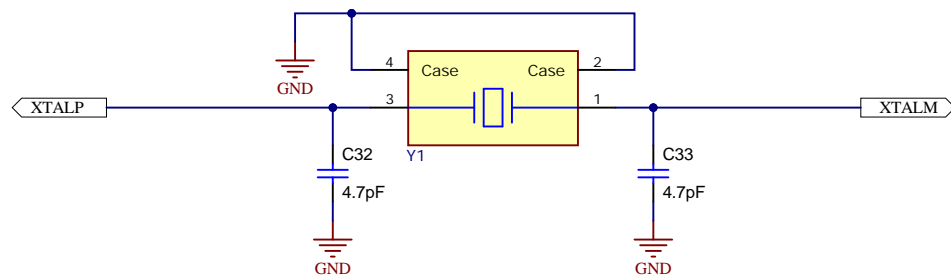
xWRL1432 CHIP



Design Note:

1. Antenna traces are GCPW traces
2. 'Generic No ERCs' were placed intentionally on Single Port RF Tx, Rx lines

40 MHz CRYSTAL OSCILLATOR

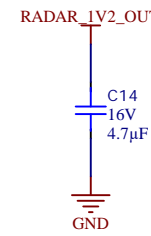


GPIO5 is the SPI_BUSY signal

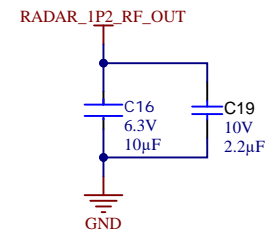
Orderable: N/A	Designed for: Public Release	Mod. Date: 9/18/2024
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Number: TIDEP-01036 Rev: A	Sheet Title: xWRL1432_CHIP	
SVN Rev: Not in version control	Assembly Variant: 001_AWR	Sheet: 3 of 7
Drawn By: Texas Instruments	File: AWRL1432KTO_xWRL1432_Chip.SchDoc	Size: B
Engineer: Texas Instruments	Contact: http://www.ti.com/support	

SUPPLY_DECOUPLING_CAPS

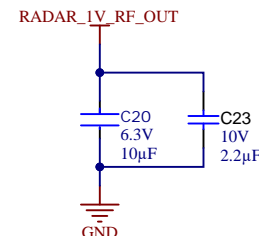
1V2_OUT DIG SUPPLY



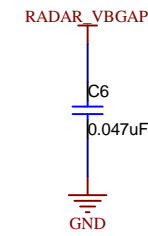
1V2_RF_OUT SUPPLY



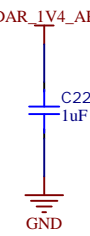
1V_RF_OUT SUPPLY



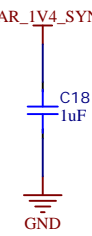
VBGAP SUPPLY



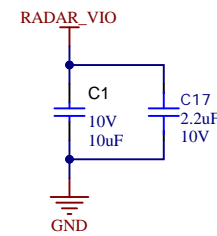
VOUT_PLL SUPPLY



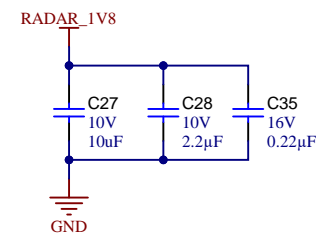
VOUT_SYNTH SUPPLY



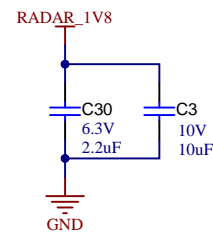
RADAR 3V3 VIO SUPPLY



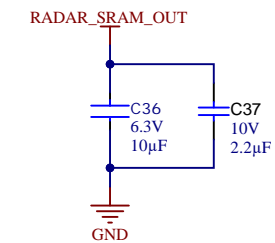
RADAR 1V8 SUPPLY



1V8_IO SUPPLY

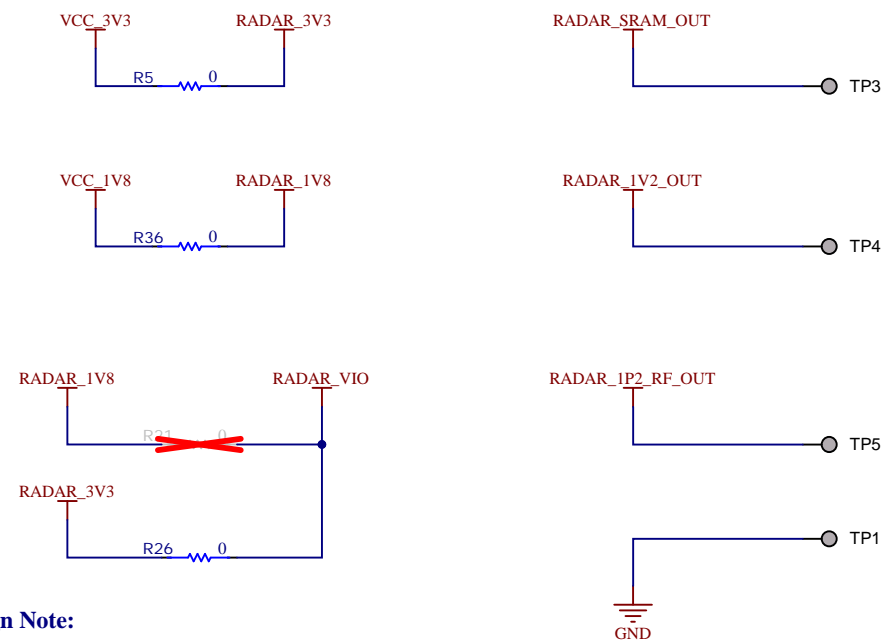
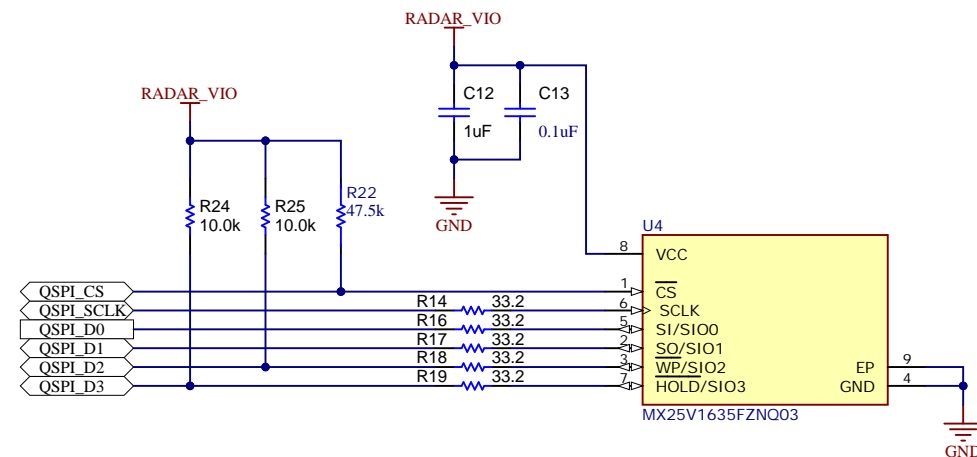


SRAM_OUT SUPPLY



Common 10µF+2.2µF+0.22µF for PM, VCO_LDO, BB, VCLK supply

QSPI FLASH

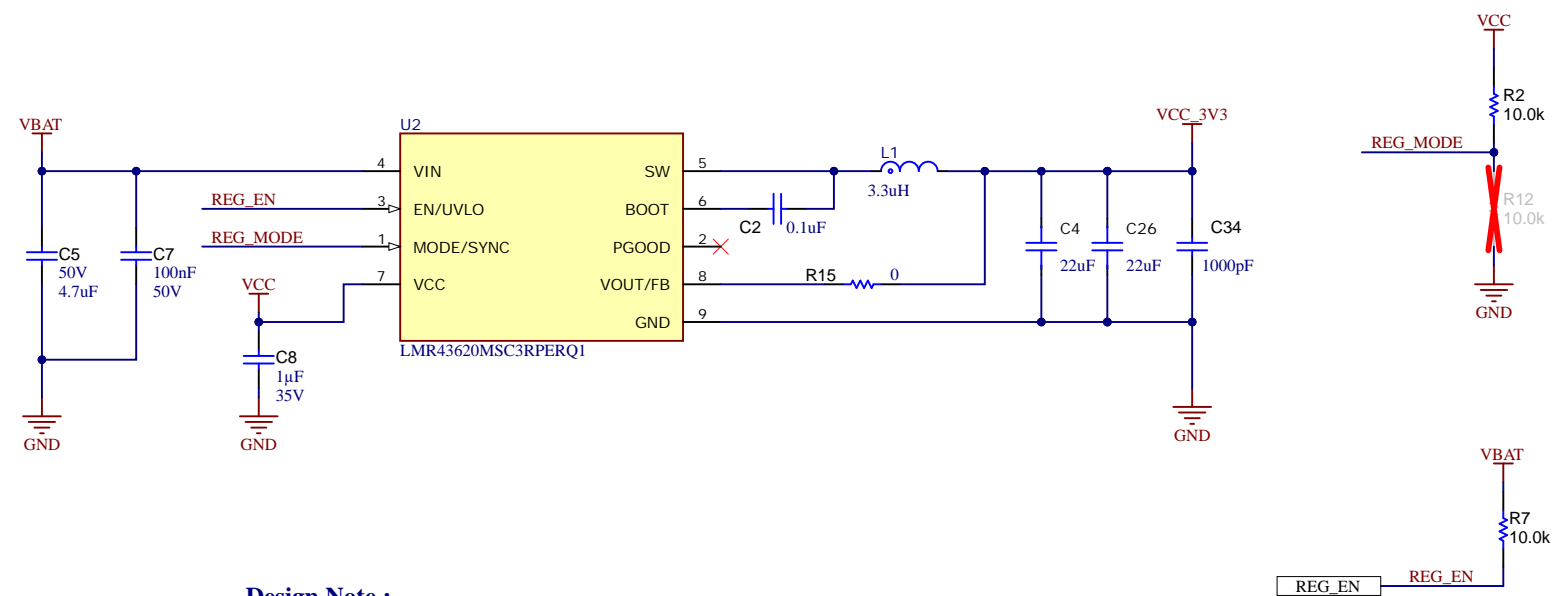


Design Note:
Default VIO is 3.3V, Mount R21 and DNP R26 for 1.8V VIO

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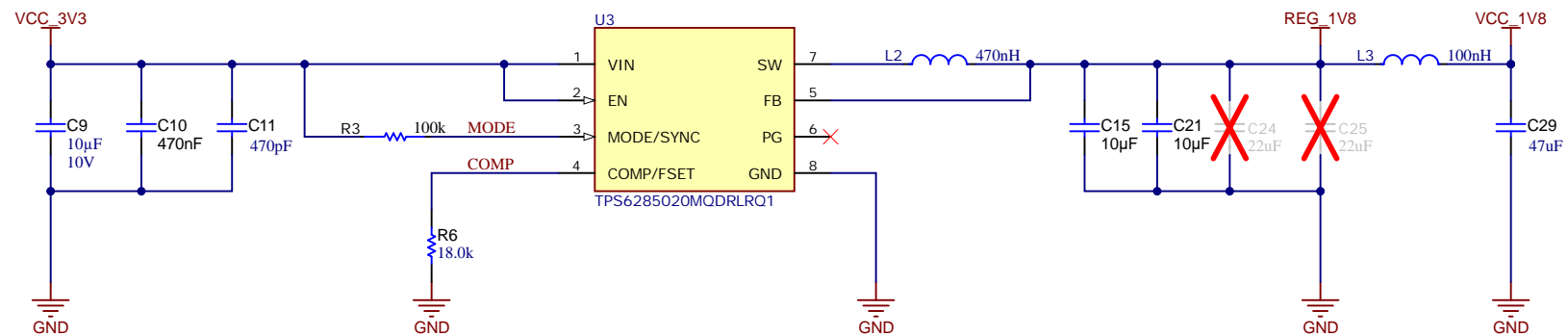
Orderable: N/A	Designed for: Public Release	Mod. Date: 9/18/2024	
TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	Sheet Title: DECOUPLING_CAPS_QSPI	
Number: TIDEP-01036 Rev: A	Assembly Variant: 001_AWR	Sheet: 4 of 7	http://www.ti.com
SVN Rev: Not in version control	File: AWRL1432KTO_Dcoupling_caps_QSPI.SchDoc	Size: B	
Drawn By: Texas Instruments	Contact: http://www.ti.com/support	© Texas Instruments 2022	

12V TO 3.3V BUCK CONVERTER

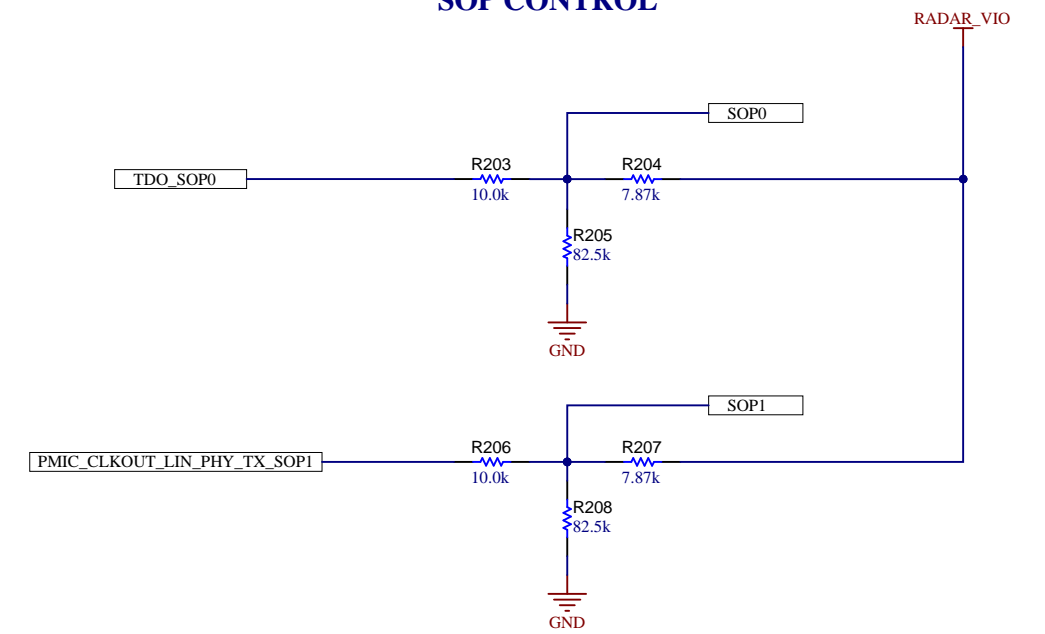


Design Note :
Default set to FPWM mode, for setting to AUTO mode, mount R12 and DNP R2

3.3V TO 1.8V BUCK CONVERTER



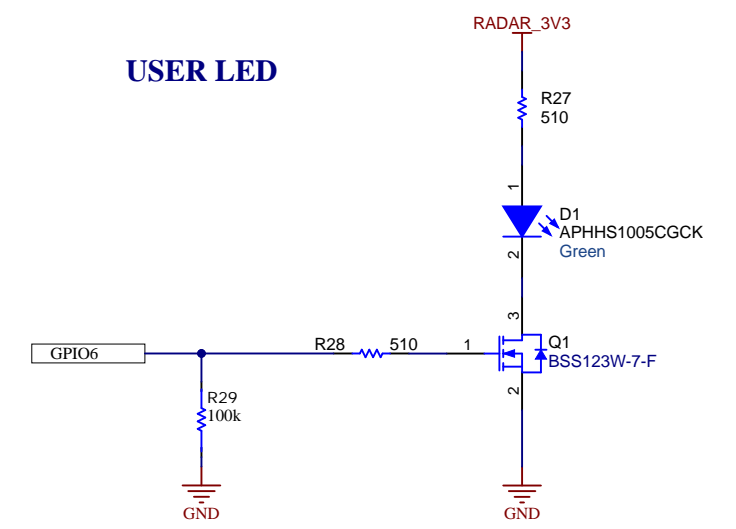
SOP CONTROL



SOP CONFIGURATION

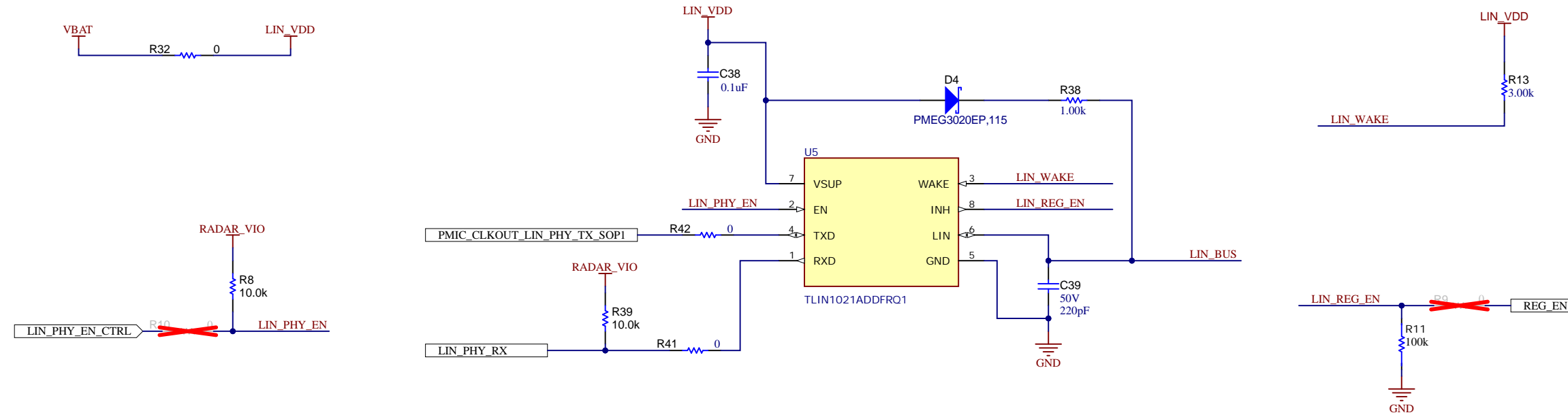
SOP Mode	PMIC_CLK_OUT, TDO	Combination
SOP_MODE1	Device Management Mode / QSPI flashing mode	0 0
SOP_MODE2	Application Mode / Functional Mode	0 1
SOP_MODE4	Debug Mode / mmWave Studio connectivity mode	1 1

USER LED



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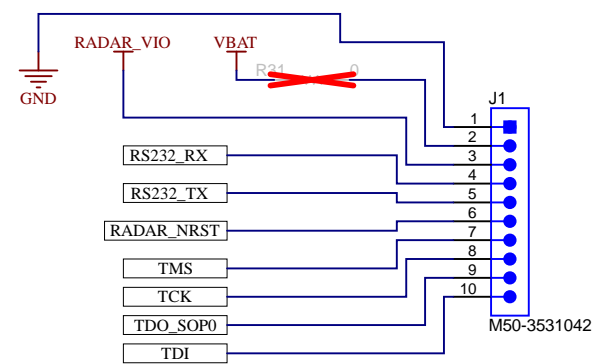
LIN TRANSCEIVER



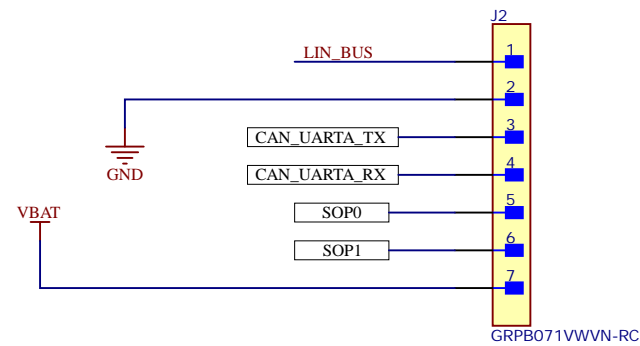
Design Note :
To control 3.3V regulator enable through LIN, DNP R7 and mount R9

CONNECTORS

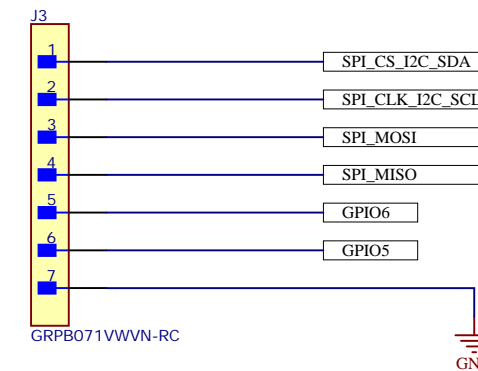
JTAG



LIN



SPI



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TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	
Number: TIDEP-01036 Rev: A	Sheet Title: LIN_PHY_CONNECTORS	
SVN Rev: Not in version control	Assembly Variant: 001_AWR	Sheet: 6 of 7
Drawn By: Texas Instruments	File: AWRL1432KTO_LIN_PHY_Connectors.SchDoc	Size: B
Engineer: Texas Instruments	Contact: http://www.ti.com/support	



PCB Number: TIDEP-01036
PCB Rev: A

PCB LOGO
Texas Instruments



PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo

CAUTION HOT SURFACE1



CAUTION HOT SURFACE

Variant/Label Table	
Variant	Label Text
001_AWR	AWRL1432KTO

LBL1

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

Assembly Note

INDICATION FOR COMPONENTS D* ARE GIVEN AT THEIR CATHODE SIDE.

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TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	Sheet: 7 of 7	
Number: TIDEP-01036 Rev: A	Sheet Title: HARDWARE	Size: B	
SVN Rev: Not in version control	Assembly Variant: 001_AWR	File: AWRL1432KTO_EVM_Hardware.SchDoc	
Drawn By: Texas Instruments	Engineer: Texas Instruments	Contact: http://www.ti.com/support	

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