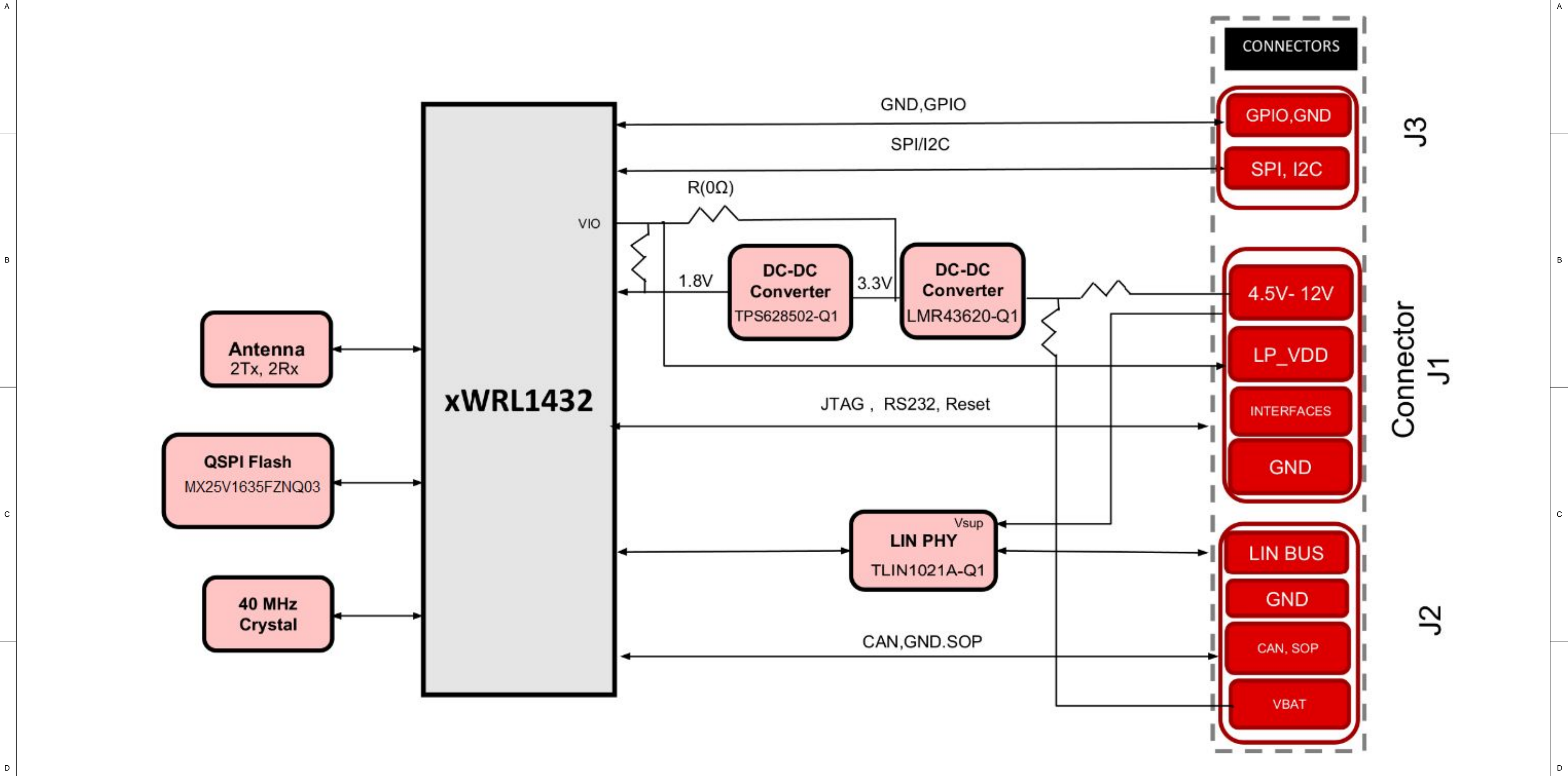


Revision History				
Rev	ECN #	Approved Date	Approved by	Notes

BLOCK DIAGRAM



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

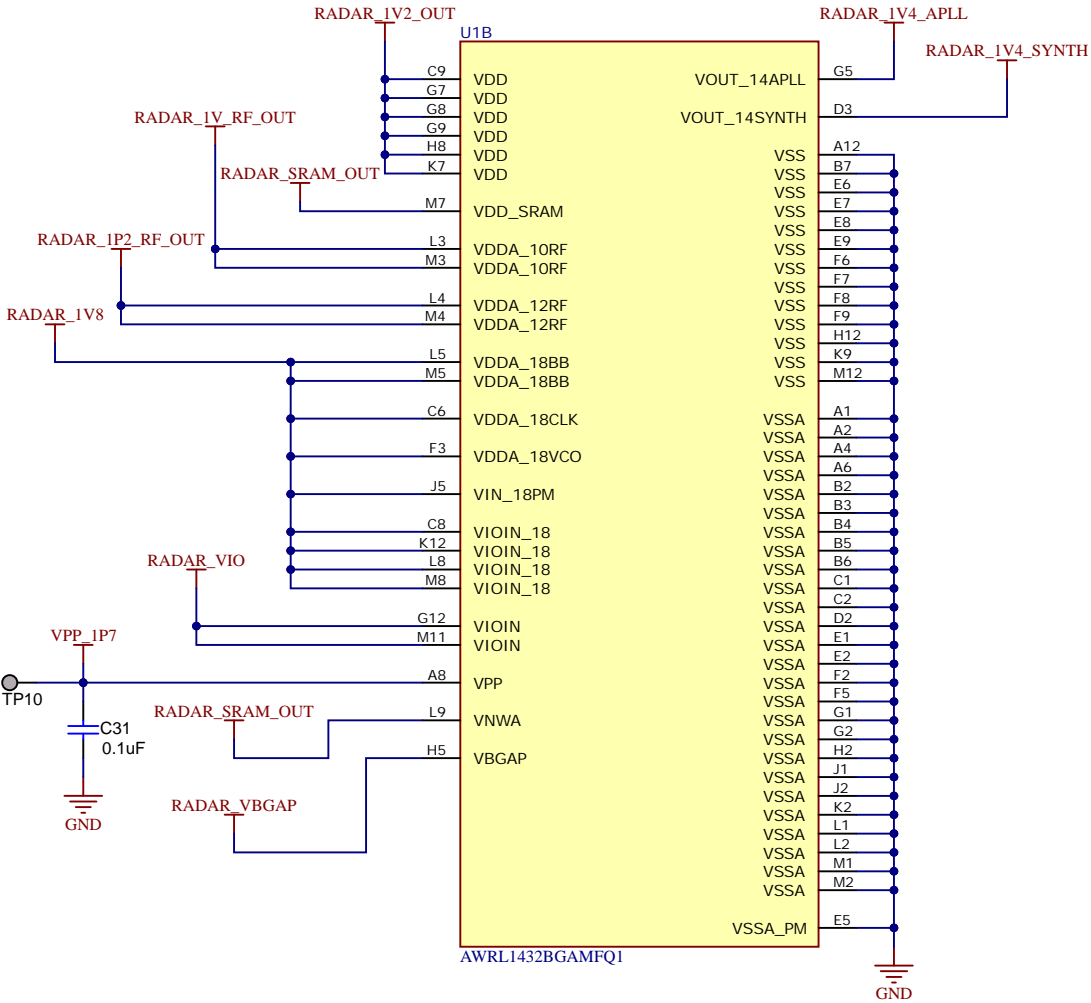
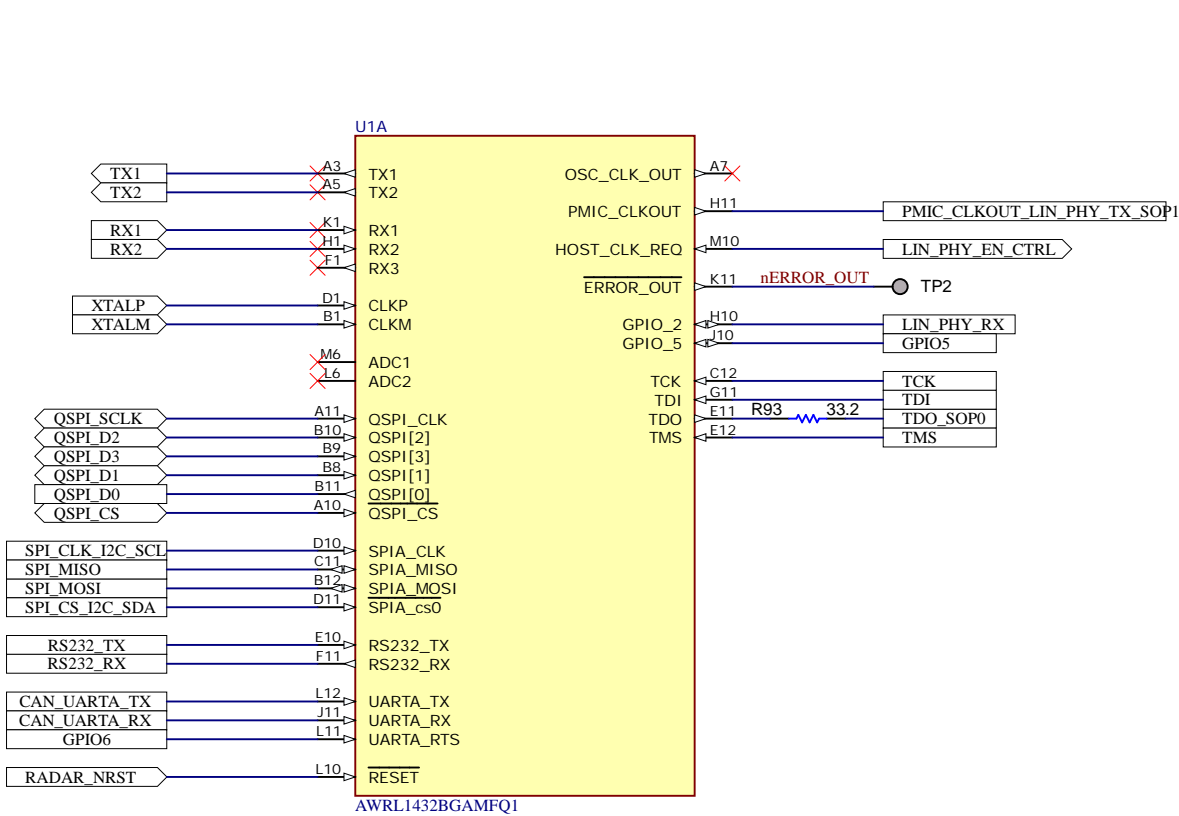
1	2	3	4	5	6
A					A
B					B
C					C
D					D

TABLE OF CONTENTS

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

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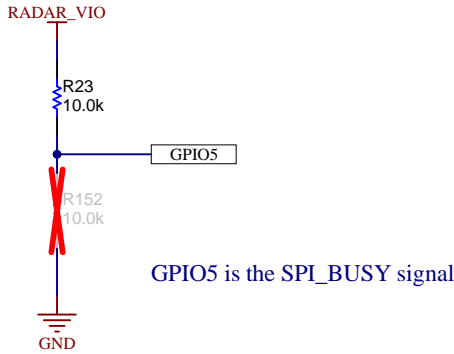
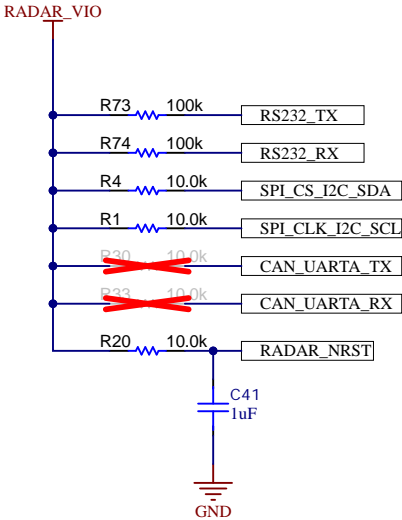
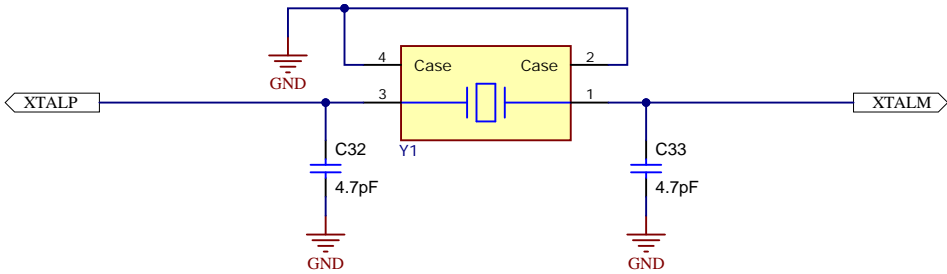
xWRL1432 CHIP



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



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TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	Sheet Title: xWRL1432_CHIP	
Number: TIDEP-01036   Rev: A	Assembly Variant: 001_AWR	Sheet: 3 of 7	
Drawn By: Texas Instruments	File: AWRL1432KTO_xWRL1432_Chip.SchDoc	Size: B	
Engineer: Texas Instruments	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>		

A

A

B

B

C

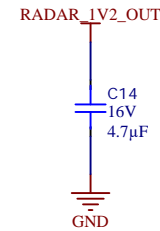
C

D

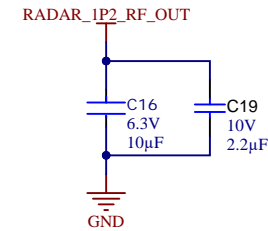
D

SUPPLY\_DECOUPLING\_CAPS

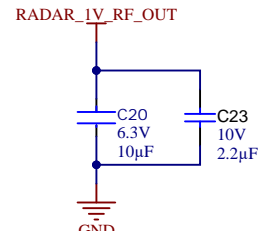
1V2\_OUT DIG SUPPLY



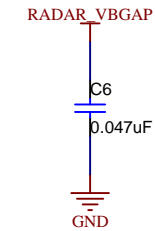
1V2\_RF\_OUT SUPPLY



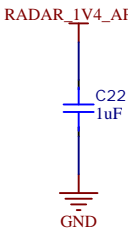
1V\_RF\_OUT SUPPLY



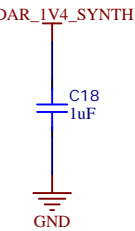
VBGAP SUPPLY



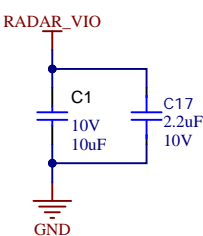
VOUT\_PLL SUPPLY



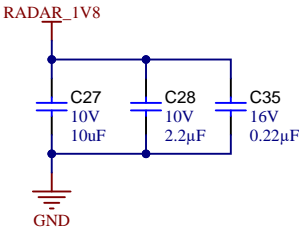
VOUT\_SYNTH SUPPLY



RADAR 3V3 VIO SUPPLY

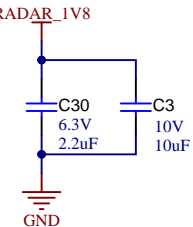


RADAR 1V8 SUPPLY

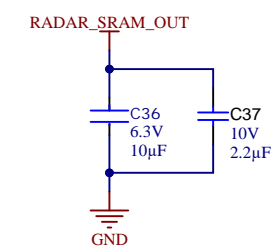


Common 10µF+2.2µF+0.22µF for PM, VCO\_LDO, BB, VCLK supply

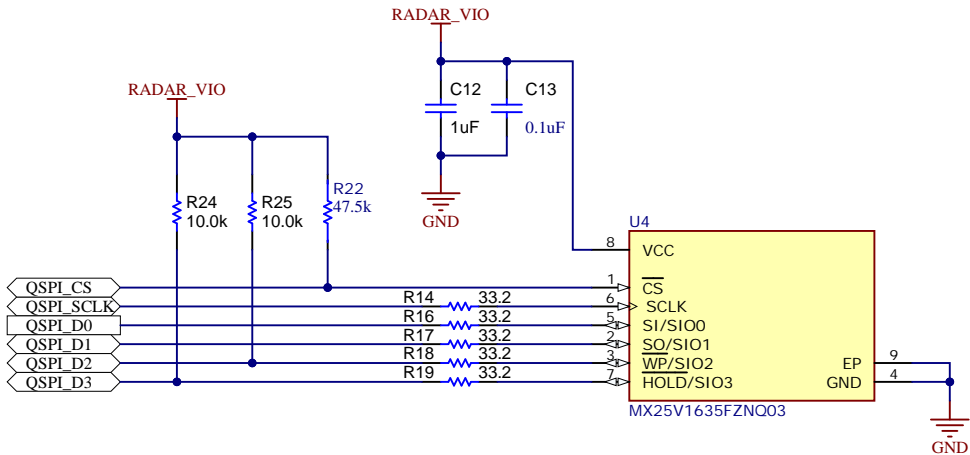
1V8\_IO SUPPLY



SRAM\_OUT 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: 18-09-2024
TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	
Number: TIDEP-01036   Rev: A	Sheet Title: DECOUPLING_CAPS_QSPI	
SVN Rev: Not in version control	Assembly Variant: 001_AWR	Sheet: 4 of 7
Drawn By: Texas Instruments	File: AWRL1432KTO_Decoupling_caps_QSPI.SchDoc	Size: B
Engineer: Texas Instruments	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

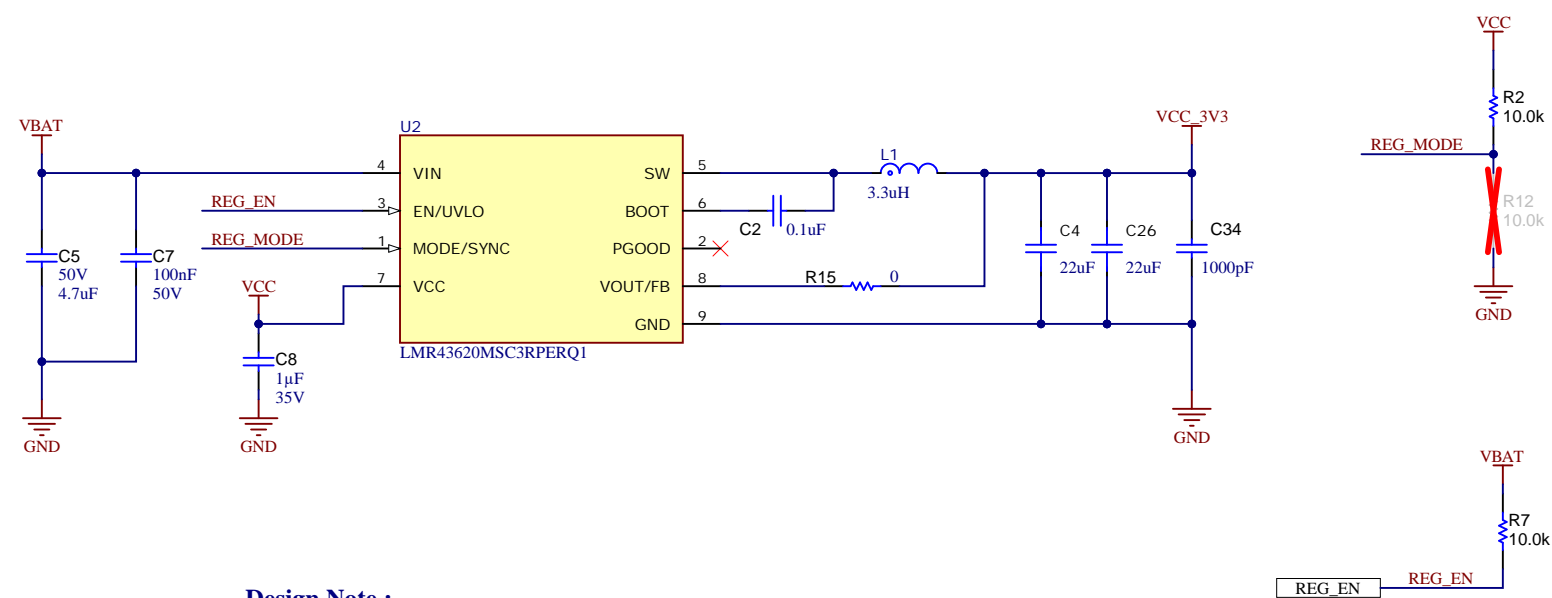
A

B

A

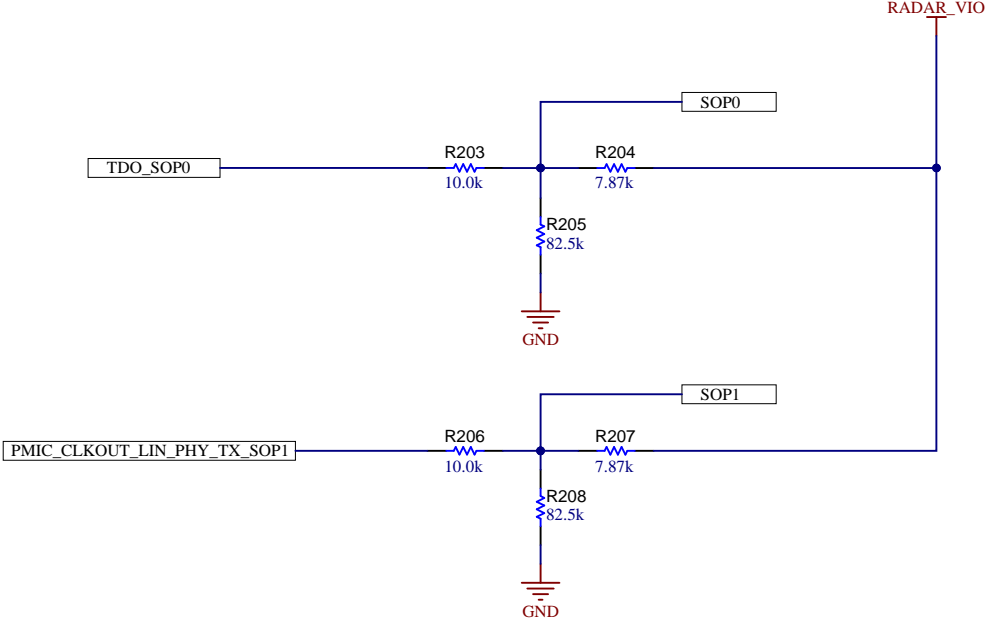
B

12V TO 3.3V BUCK CONVERTER



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

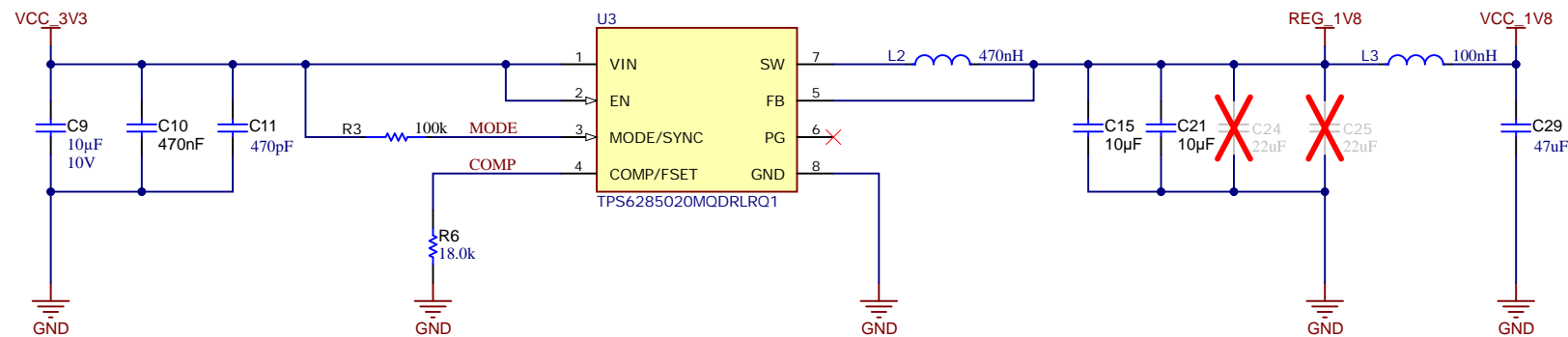
SOP CONTROL



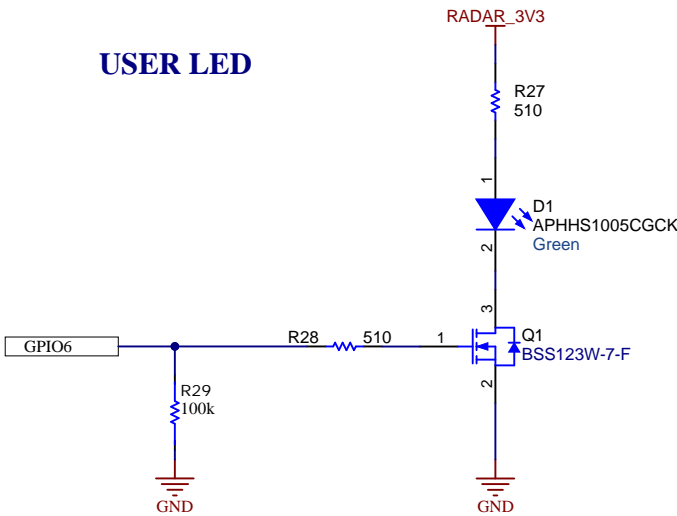
SOP CONFIGURATION

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

3.3V TO 1.8V BUCK CONVERTER



USER LED



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Orderable: N / A	Designed for: Public Release	Mod. Date: 18-09-2024
TID #: TIDEP-01036	Project Title: AWRL 1432 KTO Reference Design	
Number: TIDEP-01036   Rev: A	Sheet Title: BUCK REGULATORS SOP_CTRL	
SVN Rev: Not in version control	Assembly Variant: 001_AWR	Sheet: 5 of 7
Drawn By: Texas Instruments	File: AWRL1432KTO Buck_Regulators_SOP_Ctrl.SchDoc	
Engineer: Texas Instruments	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

A

B

C

D

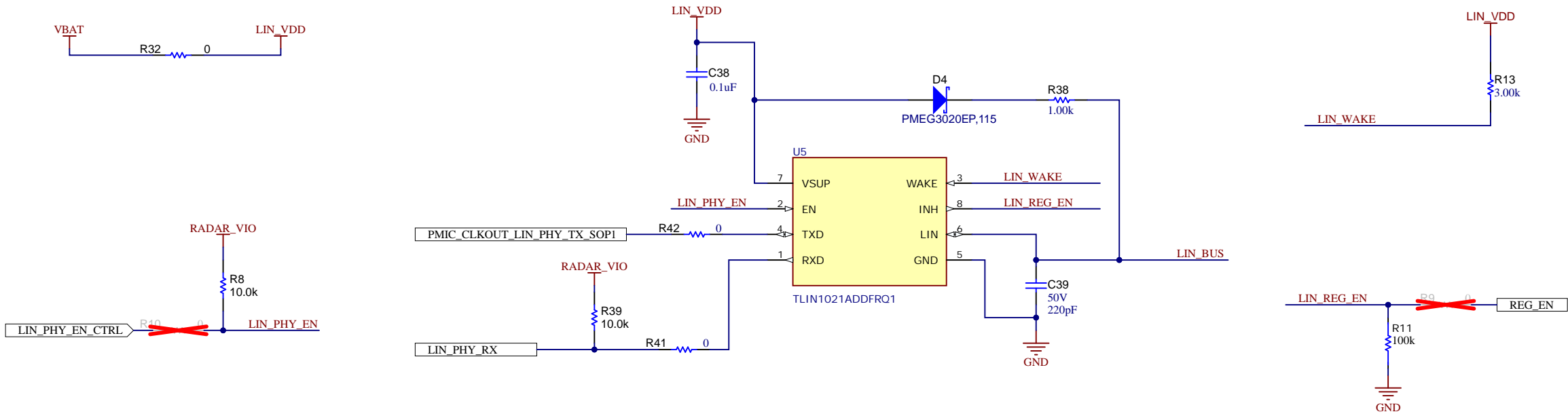
A

B

C

D

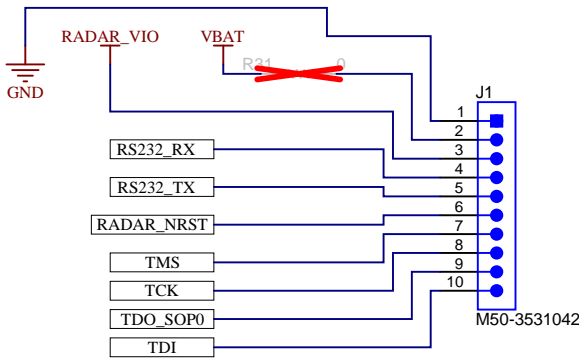
## LIN TRANSCEIVER



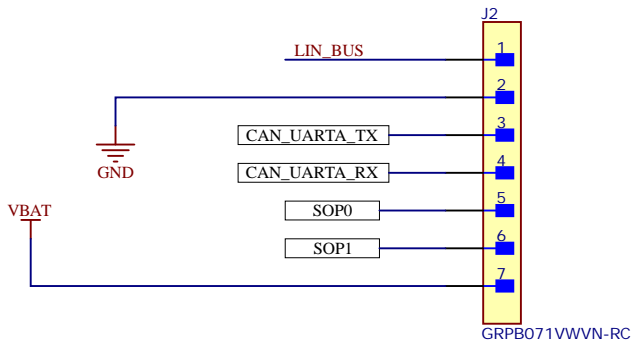
**Design Note :**  
To control 3.3V regulator enable through LIN, DNP R7 and mount R9

## CONNECTORS

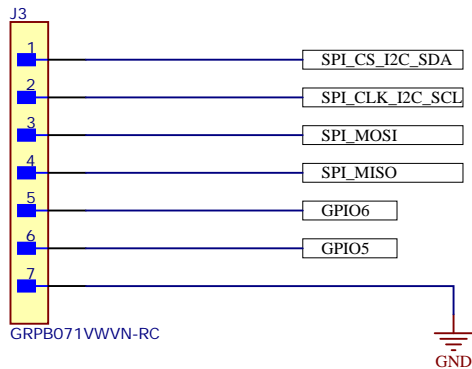
### JTAG



### LIN



### SPI





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