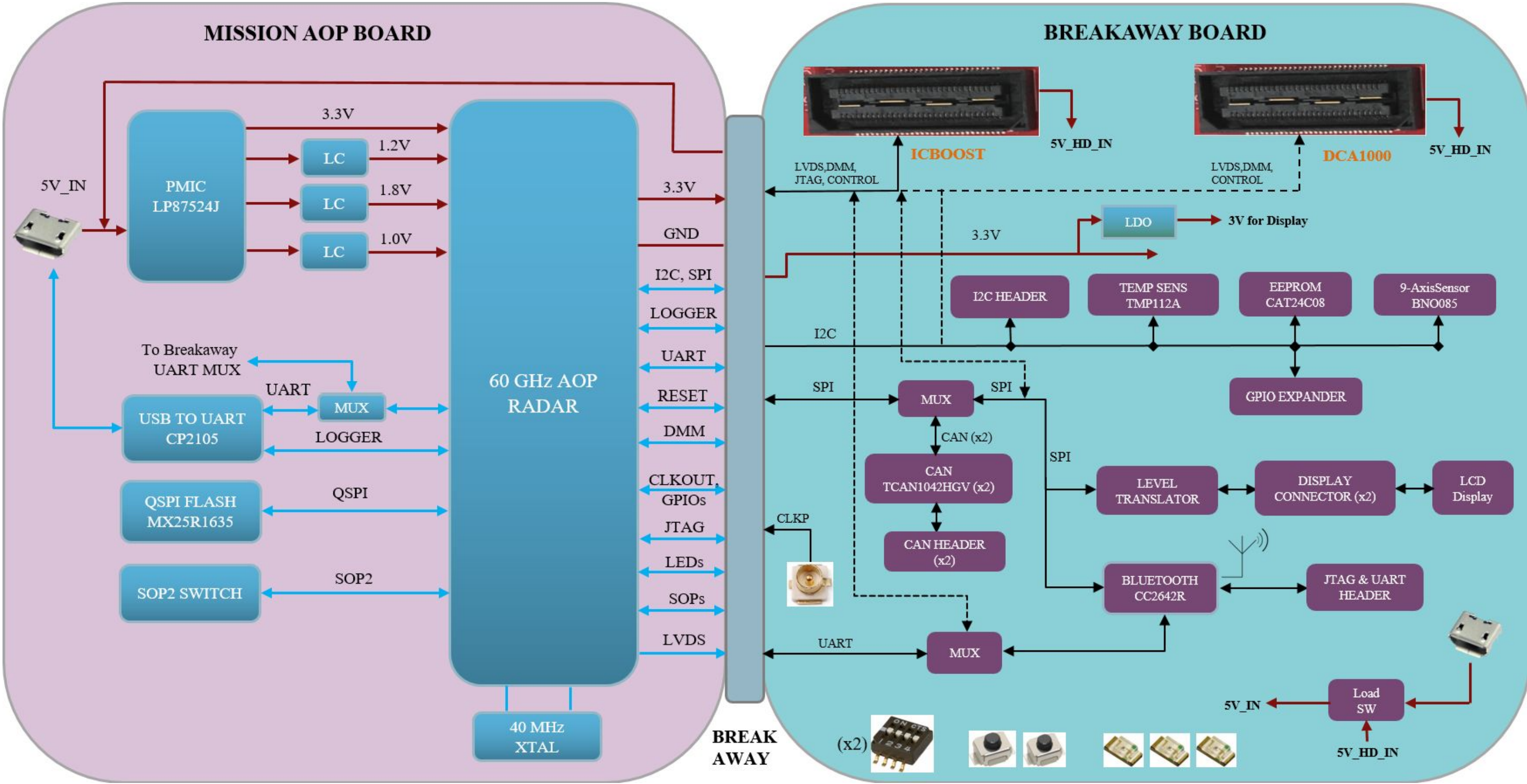


BLOCK DIAGRAM

Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
G	1	31/03/2021	Charles Oladimeji	Updated RF1, RF2, 1.2V & 1.8V supplies LC filers section with BLM18KG121TH1D, 2x CGA4J1X7T0J226M125AC(22uF) , GCM21BR71A106KE22L (10uF).
G	2	15/04/2021	Charles Oladimeji	Updated all 22uF caps on PMIC from 0402 to 0805 low ESL caps(CGA4J1X7T0J226M125AC).



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1	2	3	4	5	6
A					
B					
C					
D					

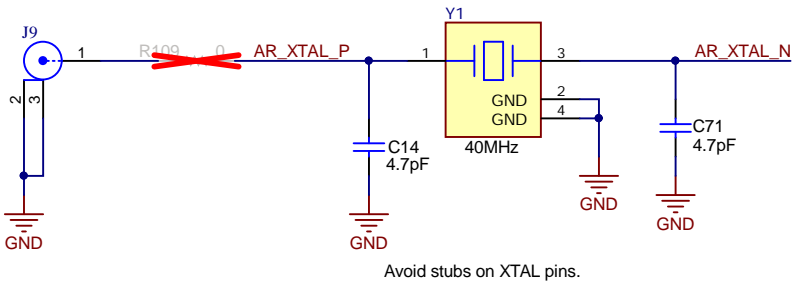
TABLE OF CONTENTS

SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
2	TABLE OF CONTENTS
3	AOP_IO
4	AOP_PWR
5	PMIC
6	QSPI FLASH & USB_TO_UART
7	BREAKAWAY 60PIN HD CONNECTOR
8	BREAKAWAY_SECTION2
9	BREAKAWAY_SECTION3
10	BREAKAWAY_SECTION4
11	BREAKAWAY_SECTION5
12	HARDWARE

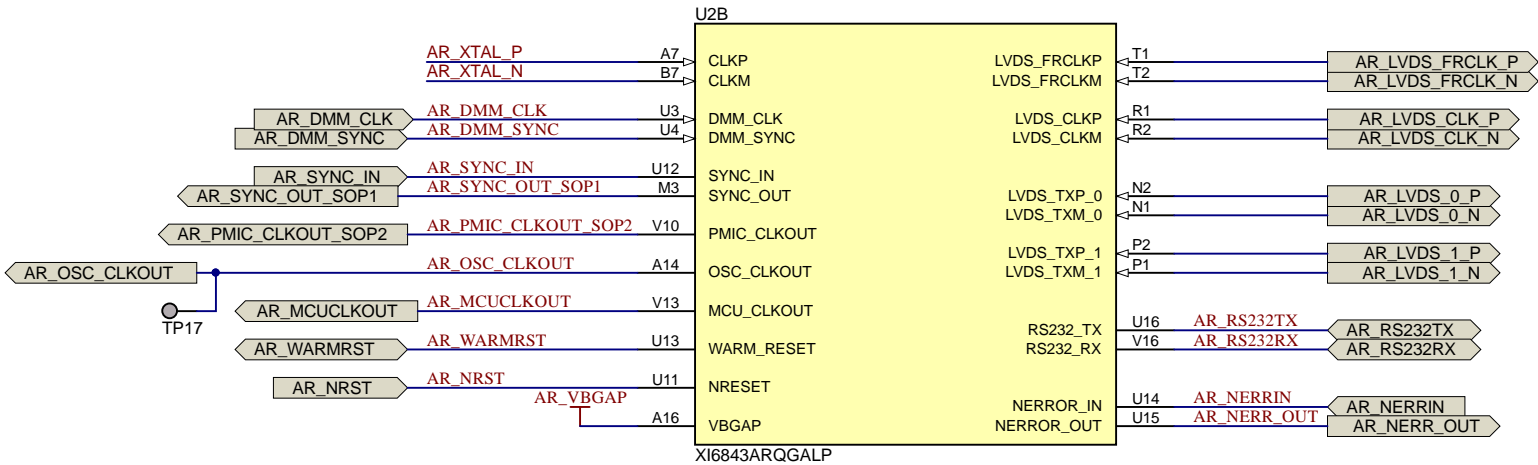
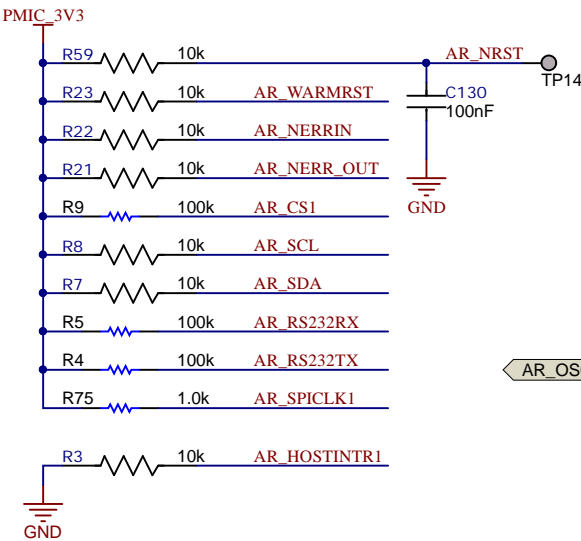
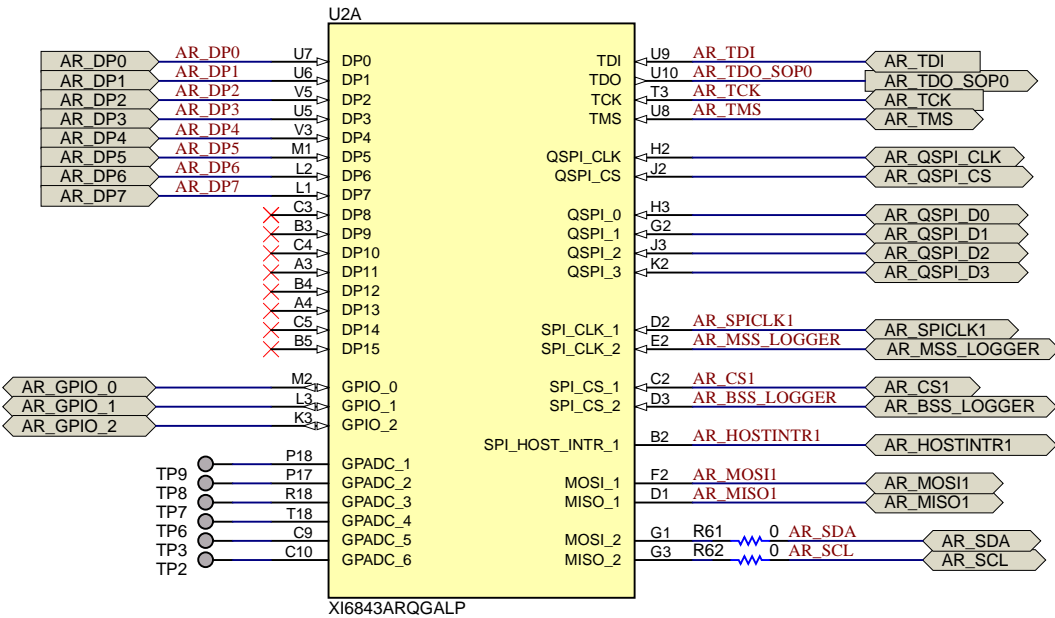
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AOP IO

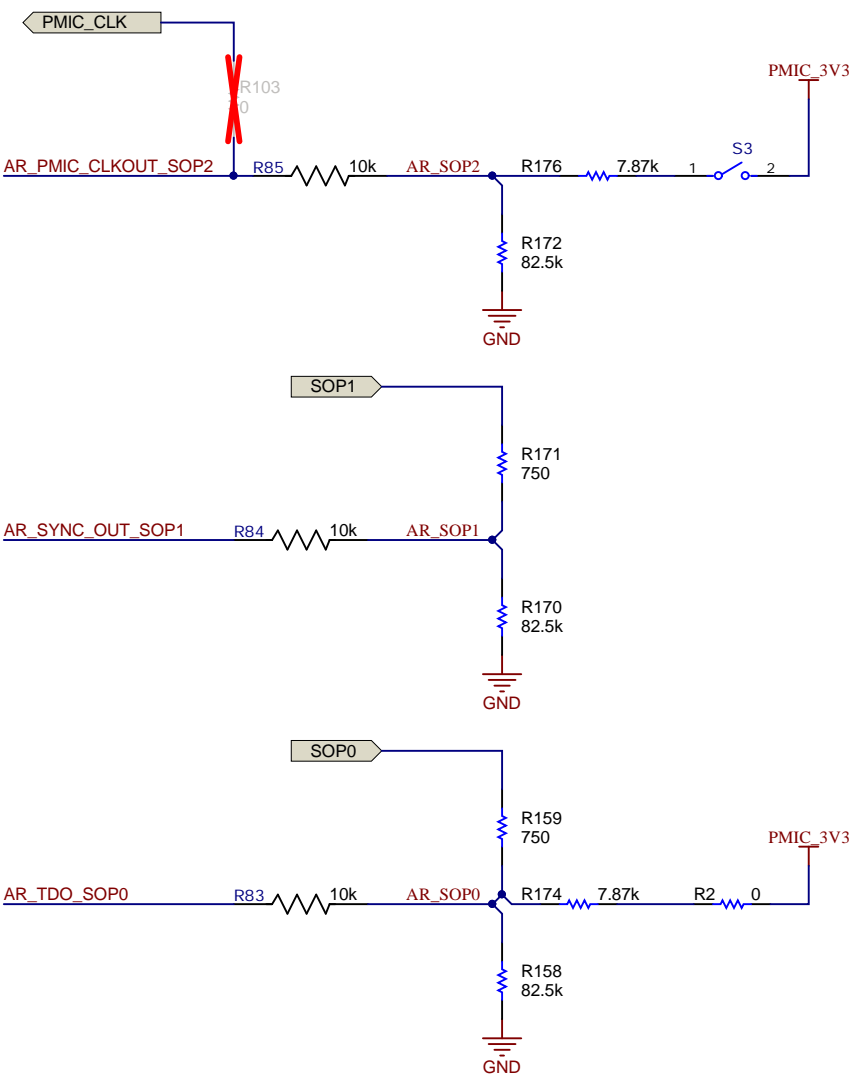
40MHz CRYSTAL



Avoid stubs on XTAL pins.



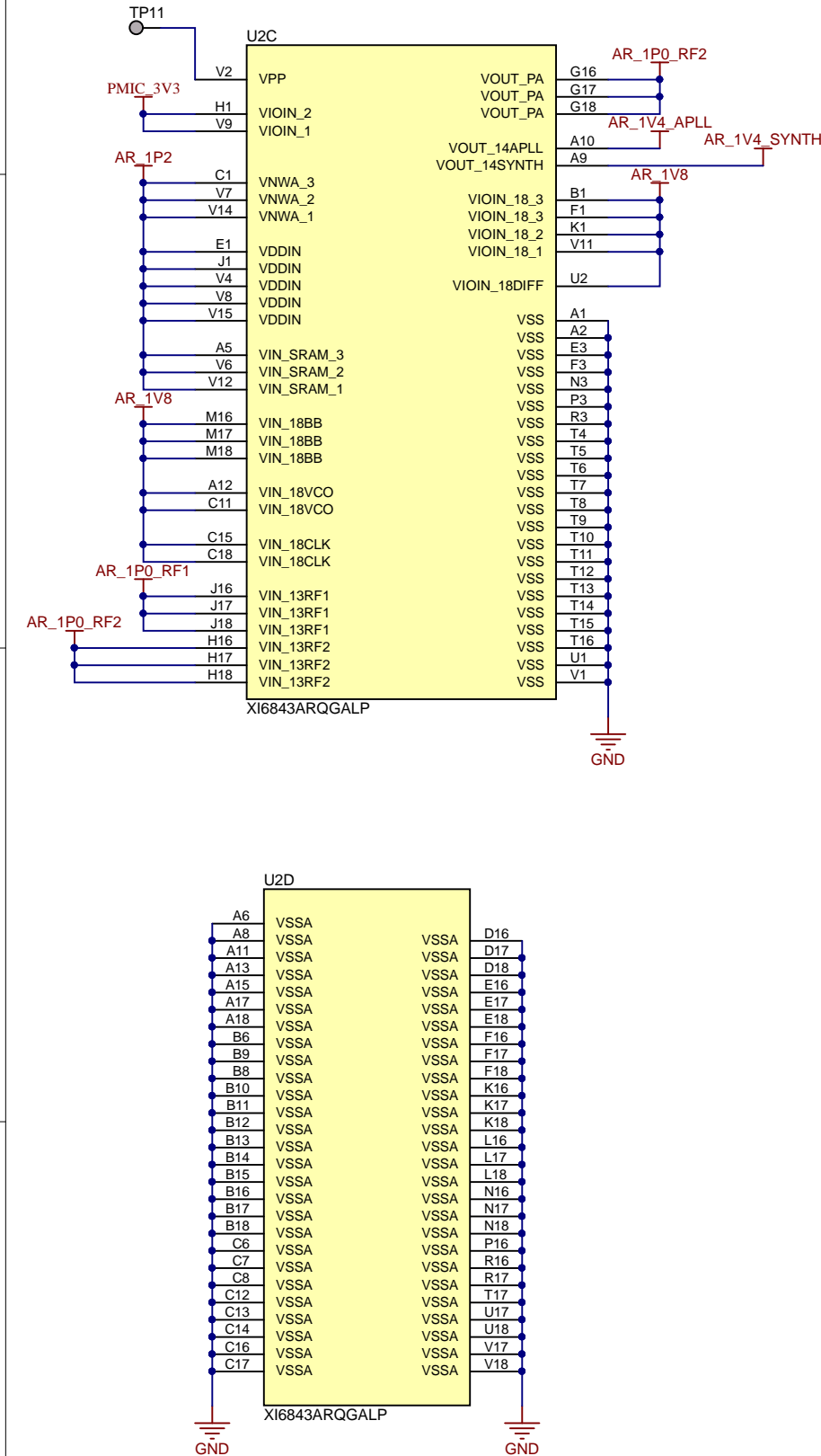
SOP OPTIONS



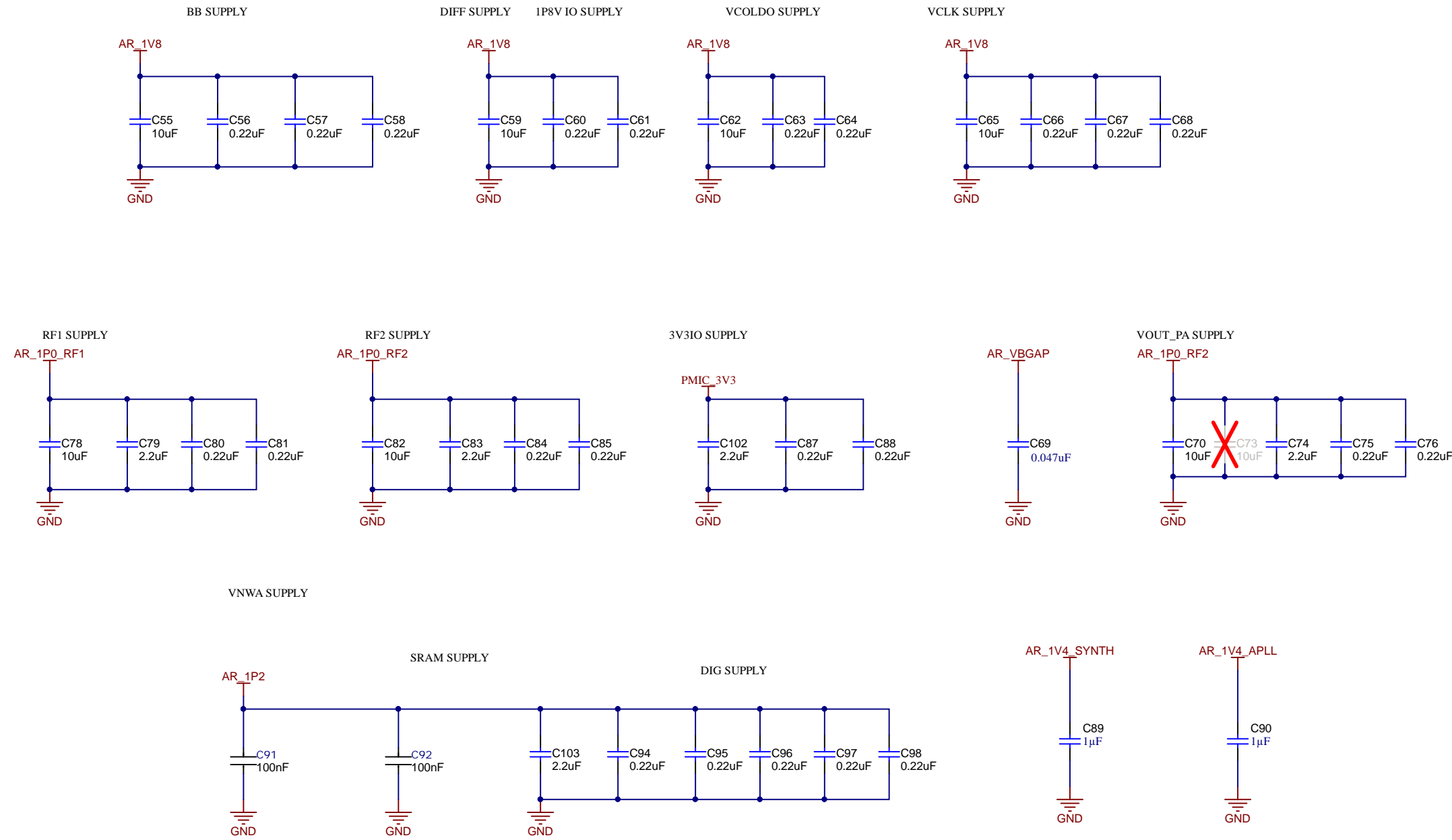
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Orderable: IWR6843AOPEVM	Designed for: Public Release	Mod. Date: 31-08-2021
TID #: N/A	Project Title: xWR6843AOPEVM	
Number: PROC091	Rev: G	Sheet Title: AOP_IO
SVN Rev: 1524	Assembly Variant: 001	Sheet: 3 of 12
Drawn By: Antony/Bala	File: PROC091G_AOP_IO.SchDoc	Size: B
Engineer: Antony/Bala	Contact: http://www.ti.com/support	

AOP POWER




DECOUPLING CAPS



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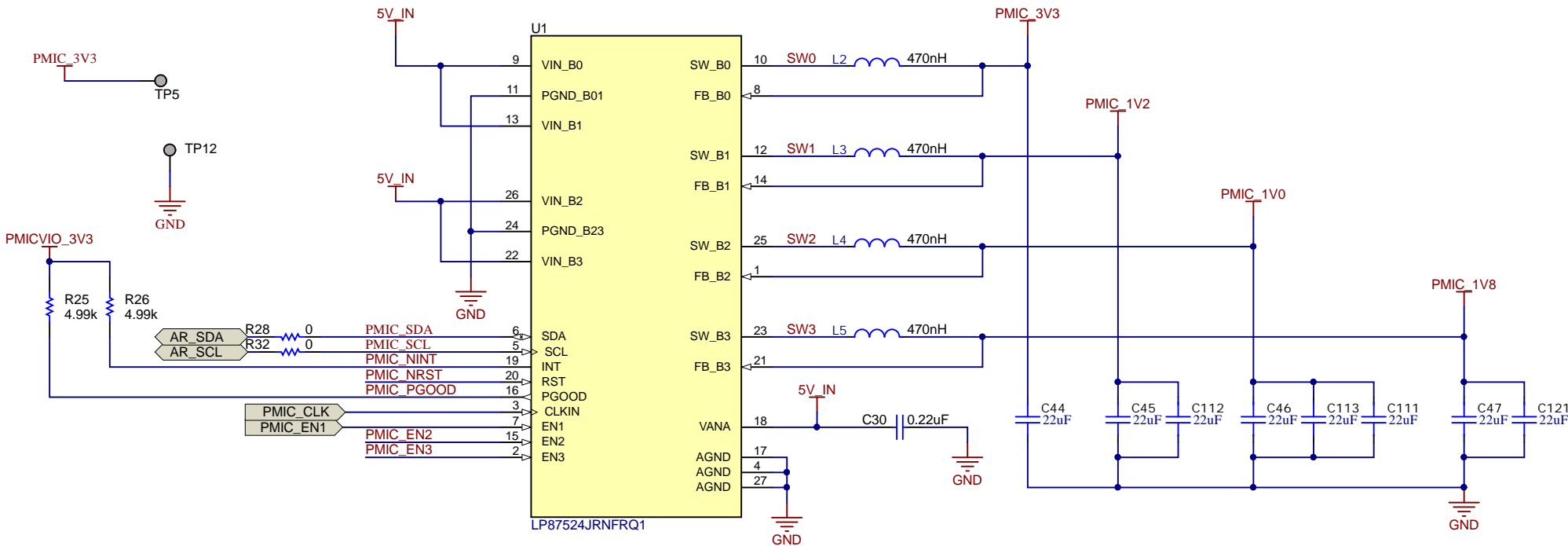
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TID #: N/A	Project Title: xWR6843AOPEVM	
Number: PROC091	Rev: G	Sheet Title: AOP_POWER
SVN Rev: 1494	Assembly Variant: 001	Sheet: 4 of 12
Drawn By: Antony/Bala	File: PROC091G_AOP_PWR.SchDoc	Size: B
Engineer: Antony/Bala	Contact: http://www.ti.com/support	



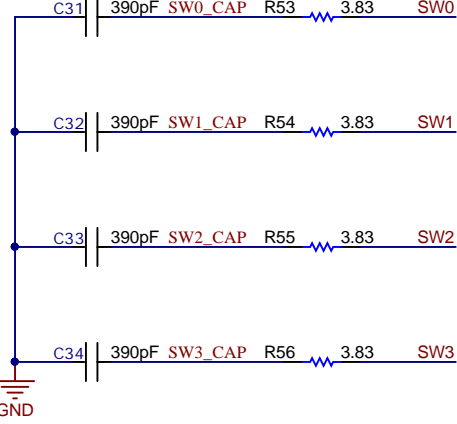
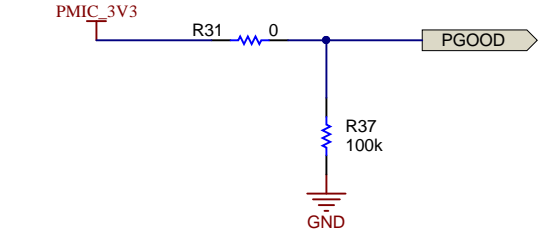
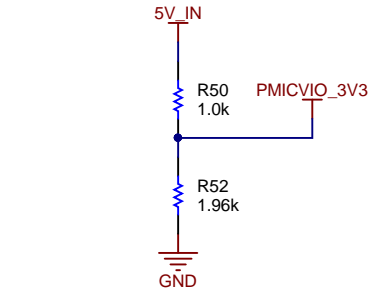
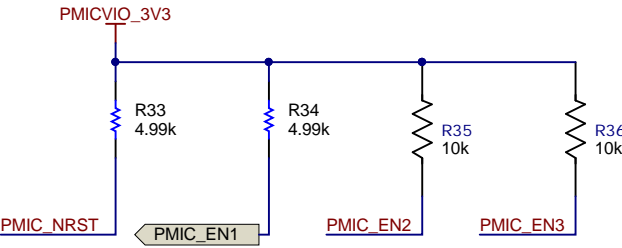
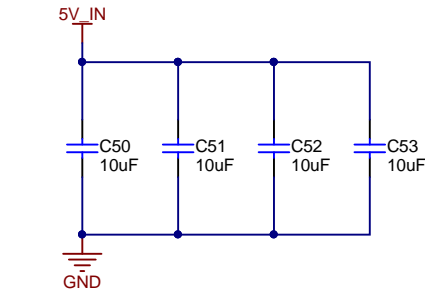
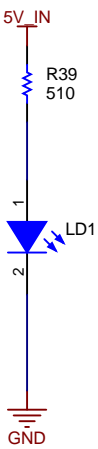
TEXAS
INSTRUMENTS

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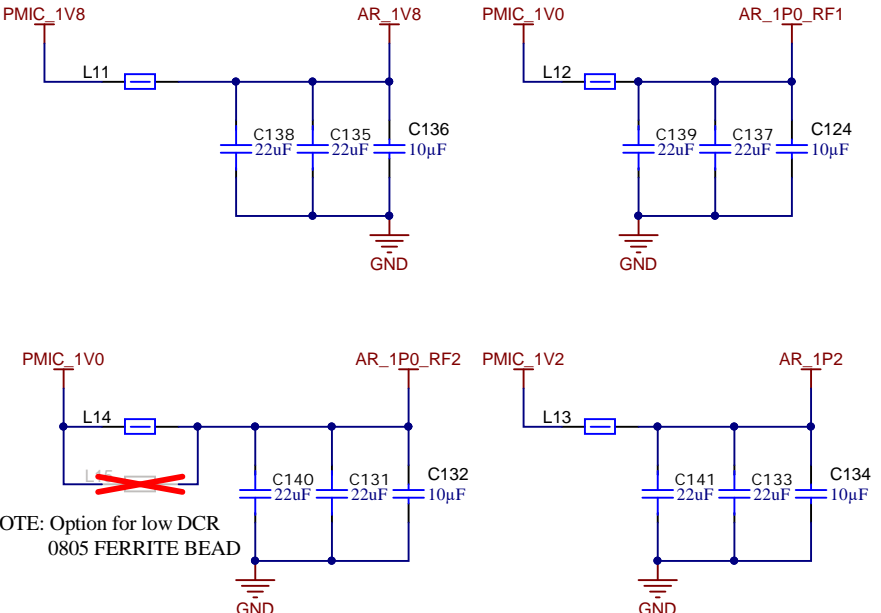
PMIC (3.3V, 1.2V, 1.0V, 1.8V OUTPUTS)



5V LED INDICATION



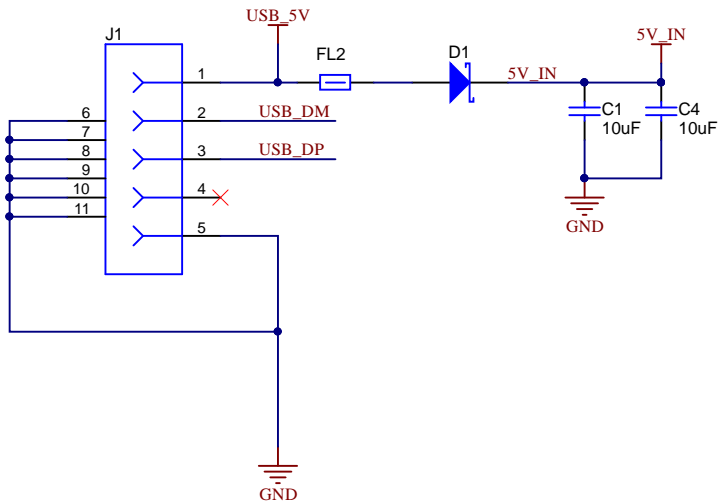
LDO BYPASS



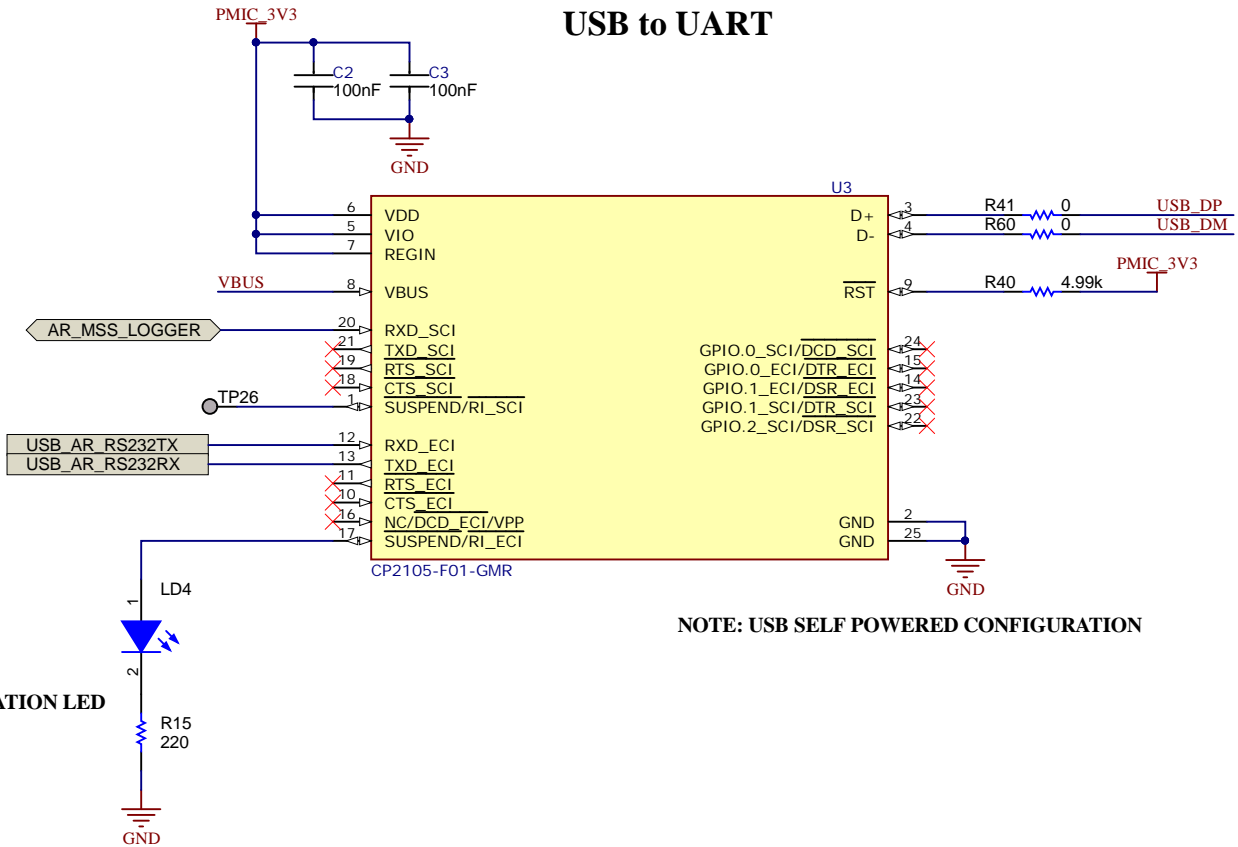
DESIGN NOTE: Option for low DCR 0805 FERRITE BEAD

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USB CONNECTOR



USB to UART

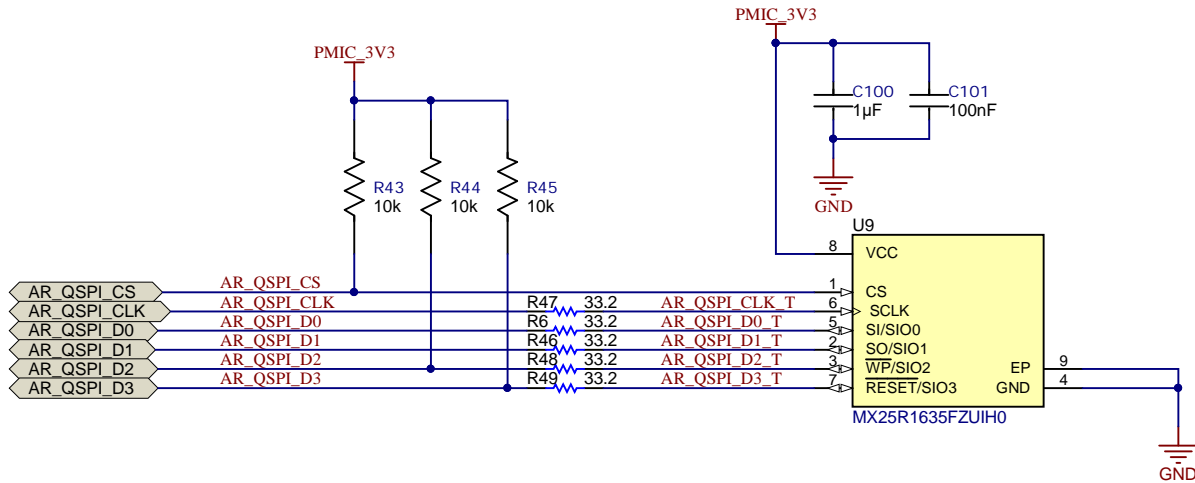


NOTE: USB SELF POWERED CONFIGURATION

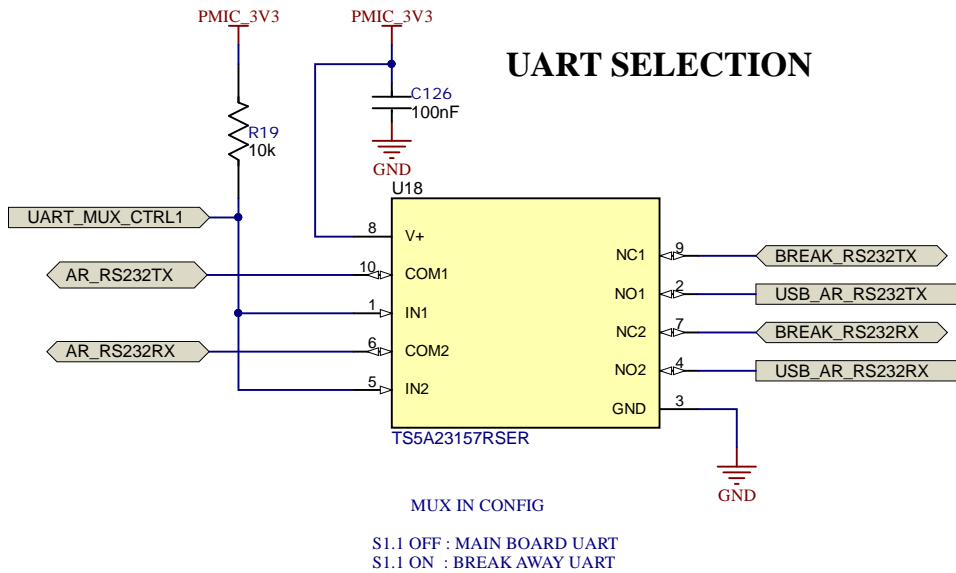
USB ENUMERATION LED



QSPI FLASH



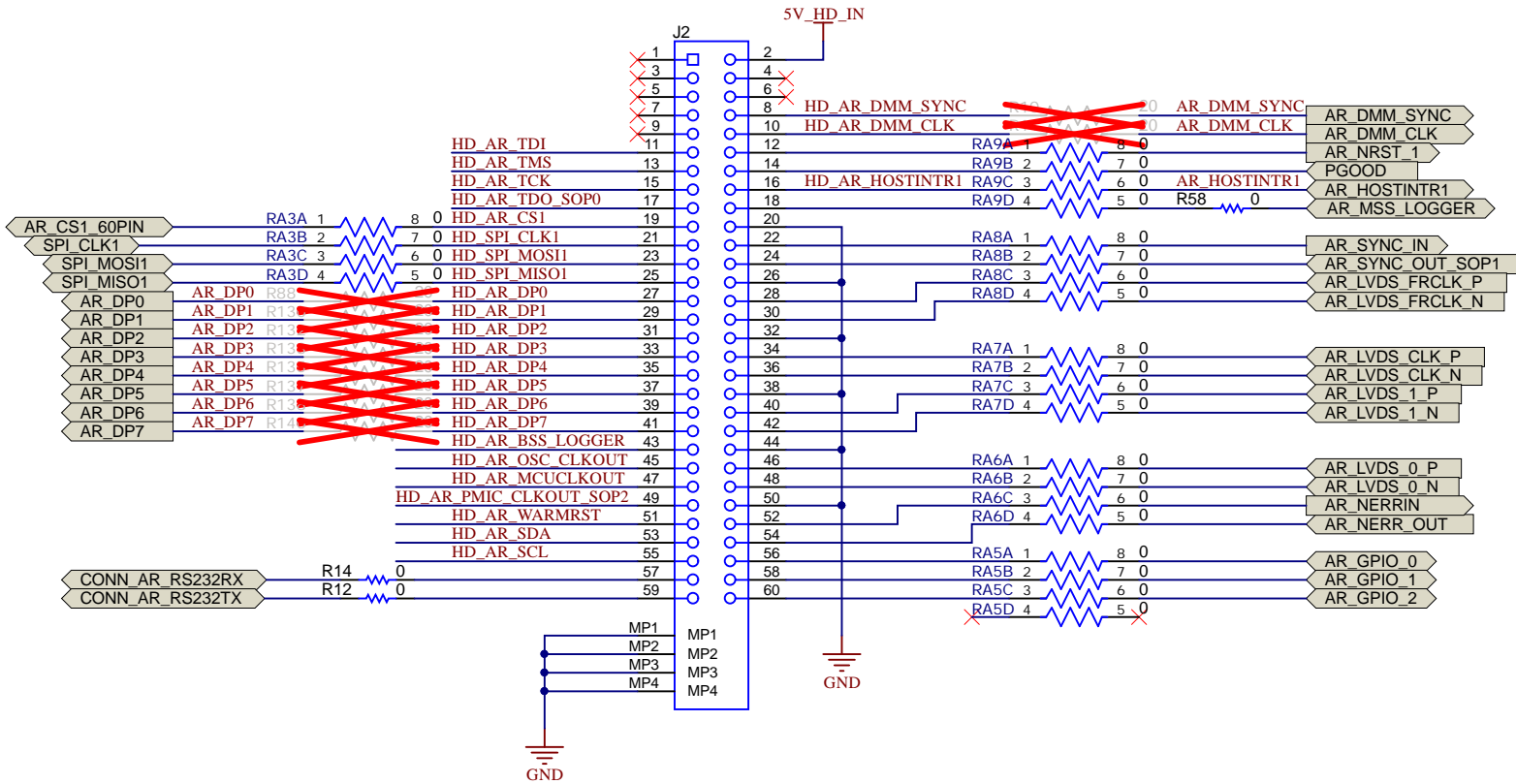
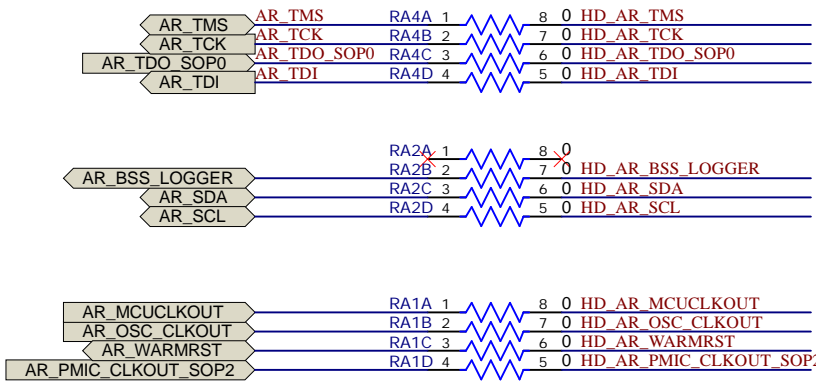
UART SELECTION



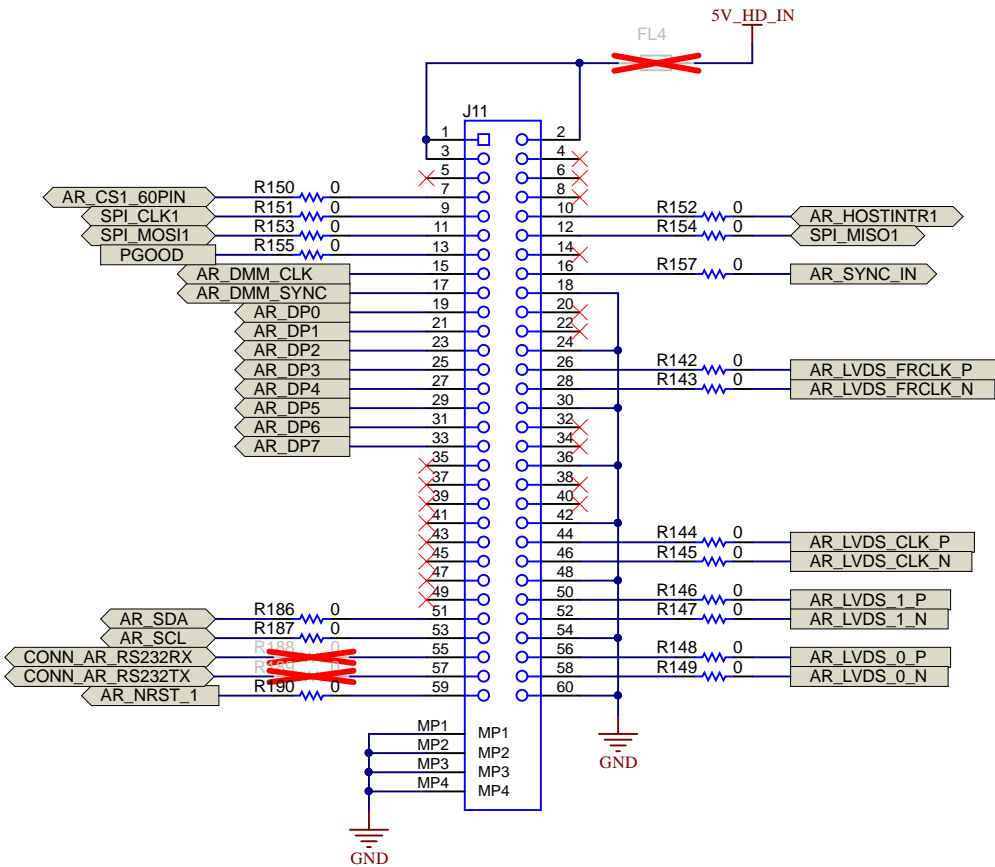
MUX IN CONFIG

S1.1 OFF : MAIN BOARD UART
S1.1 ON : BREAK AWAY UART

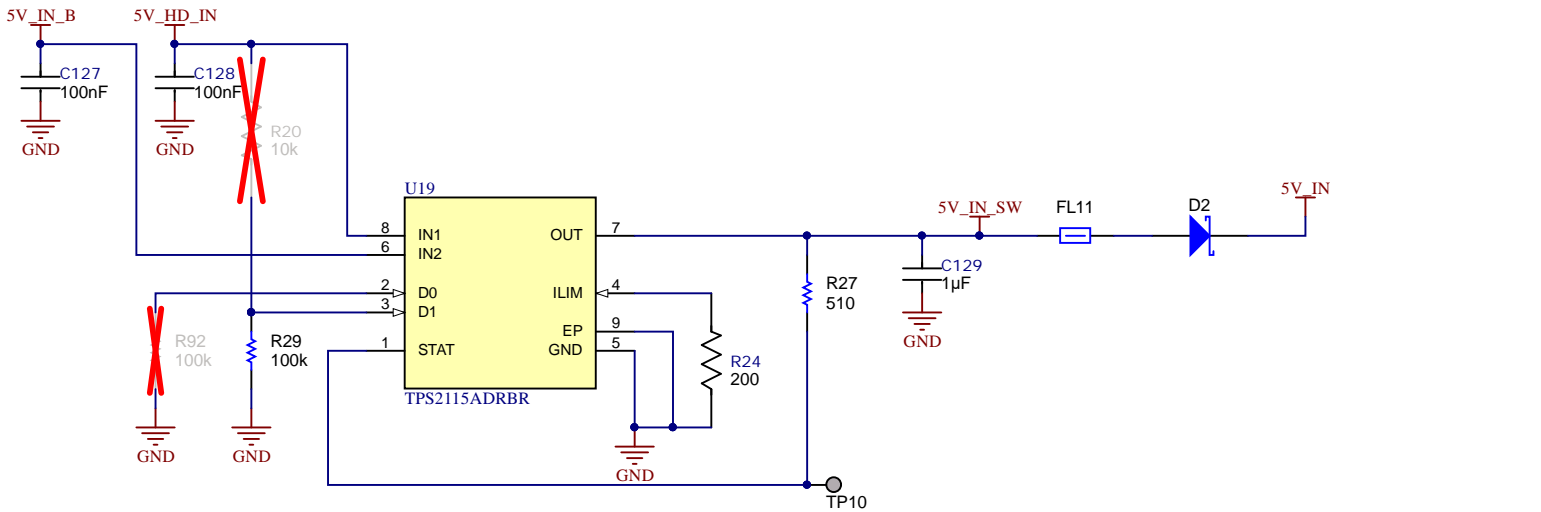
60PIN HD CONNECTOR FOR MMWAVEICBOOST



60PIN HD CONNECTOR FOR DCA1000



CONNECTOR PWR / USB PWR LOAD SWITCH



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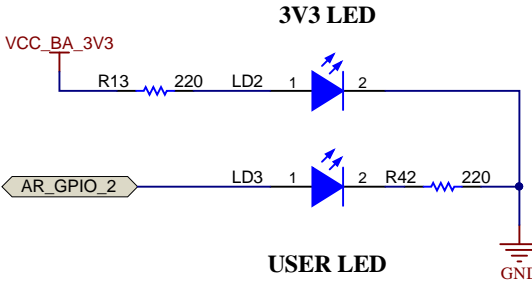
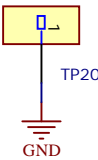
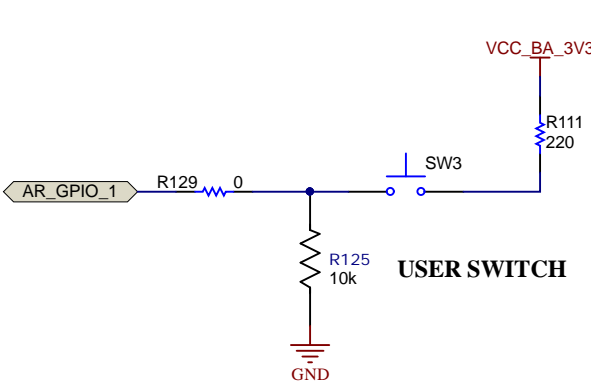
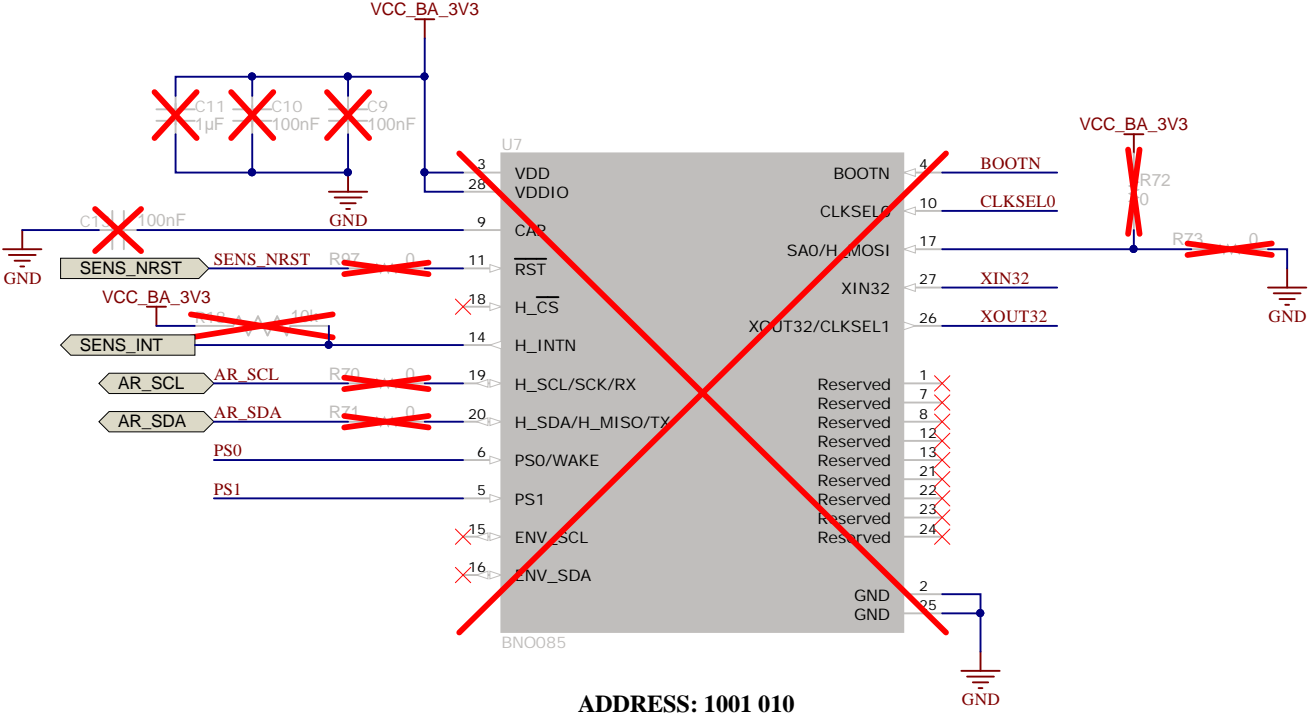
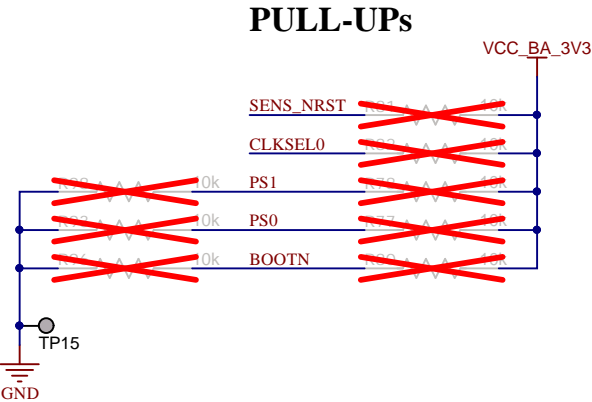
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TID #: N/A	Project Title: xWR6843AOPEVM	
Number: PROC091	Rev: G	Sheet: 7 of 12
SVN Rev: 1494	Assembly Variant: 001	Size: B
Drawn By: Antony/Bala	File: PROC091G_HD_CONN_PWR_SW.SchDoc	
Engineer: Antony/Bala	Contact: http://www.ti.com/support	



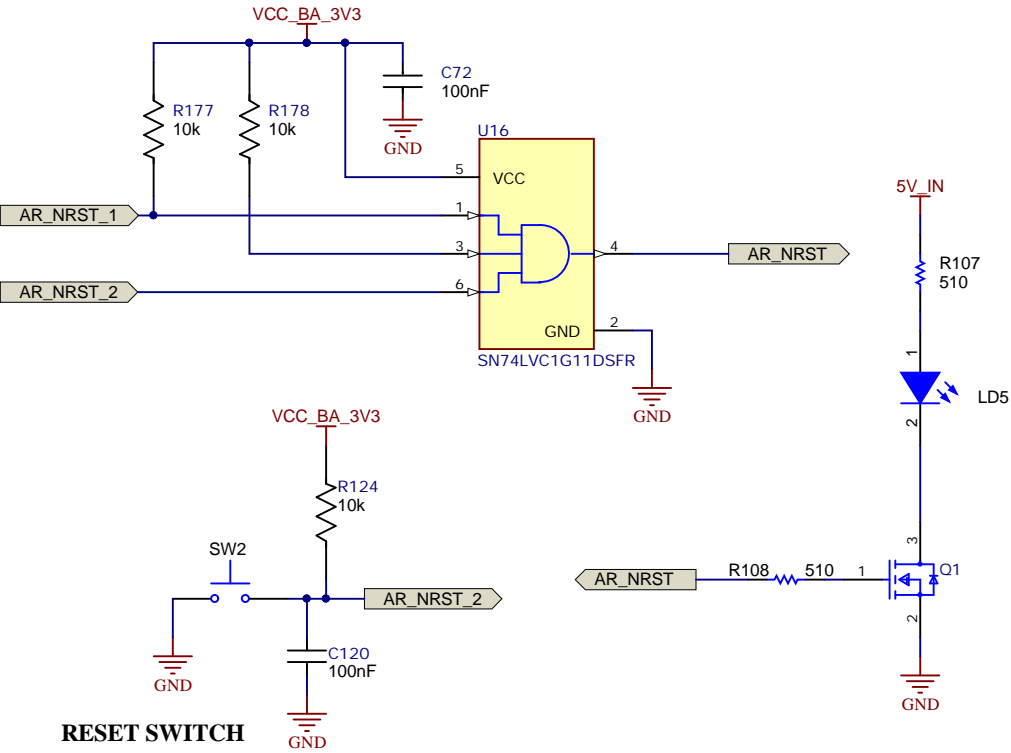
BREAKAWAY_SECTION_2

9 - AXIS SENSOR

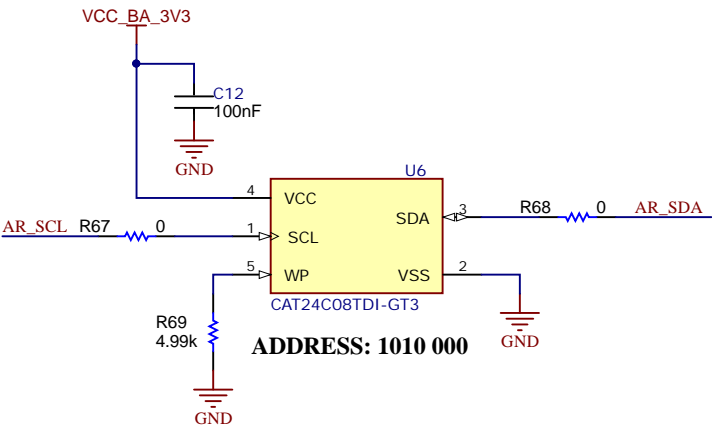
PULL-UPS



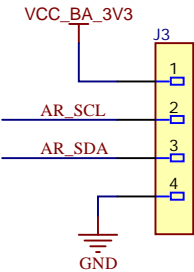
AOP RESET



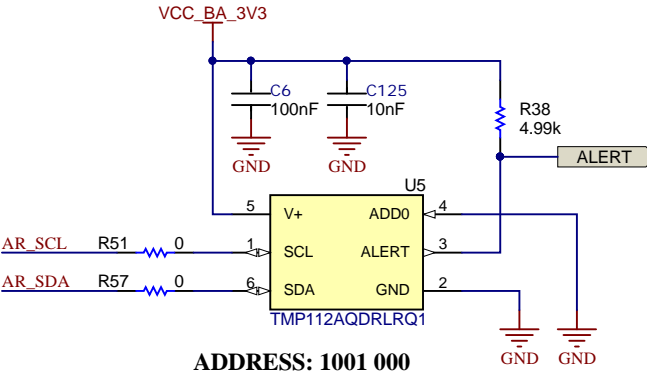
EEPROM



I2C HEADER

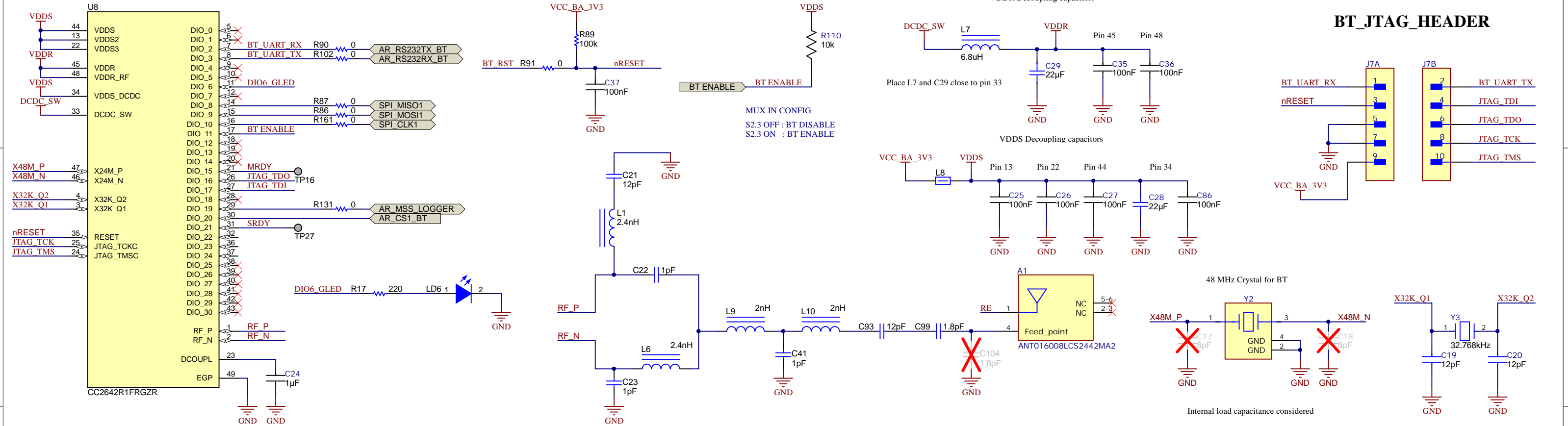


TEMPERATURE SENSOR

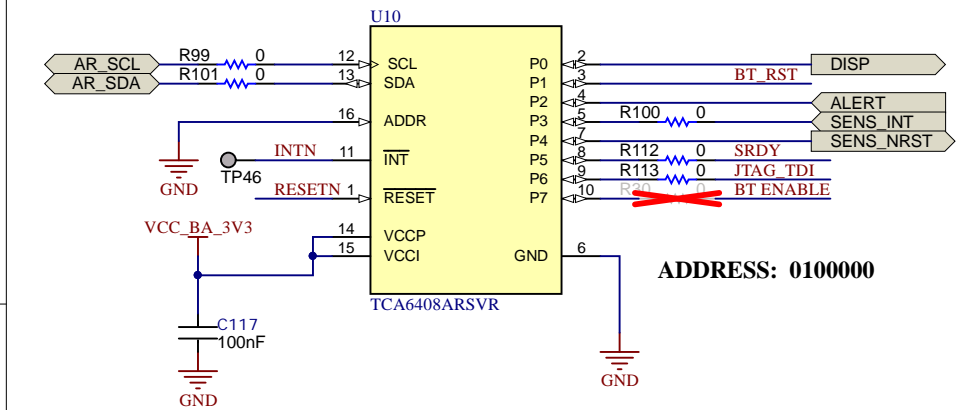


BREAKAWAY_SECTION_3

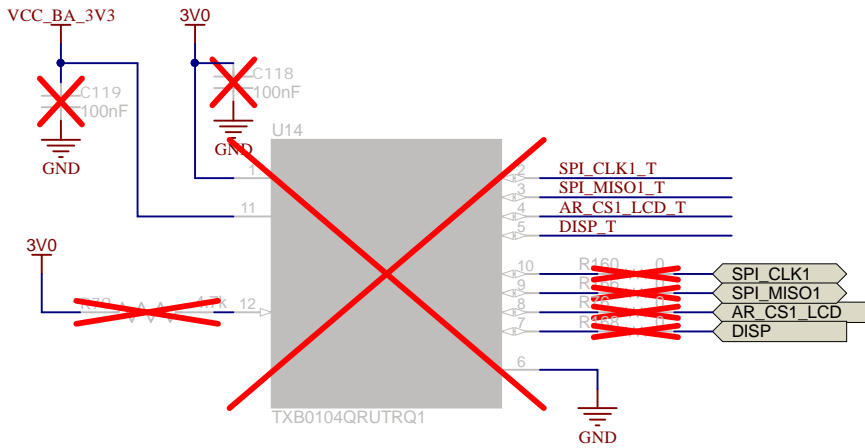
BLUETOOTH



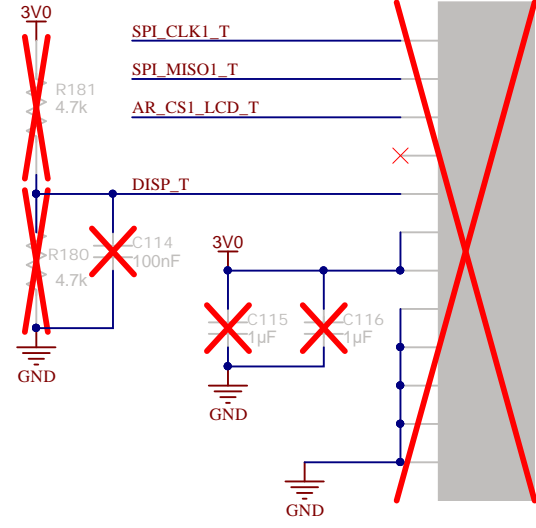
GPIO EXPANDER



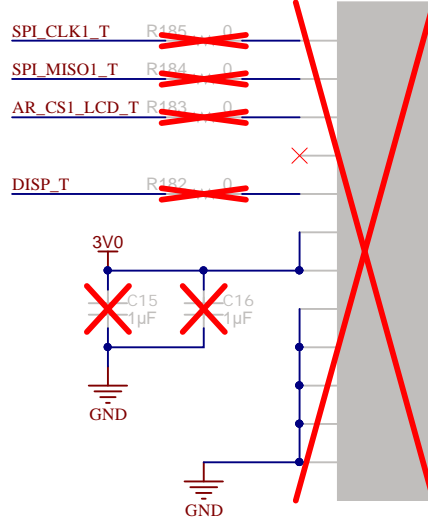
LEVEL TRANSLATOR FOR DISPLAY



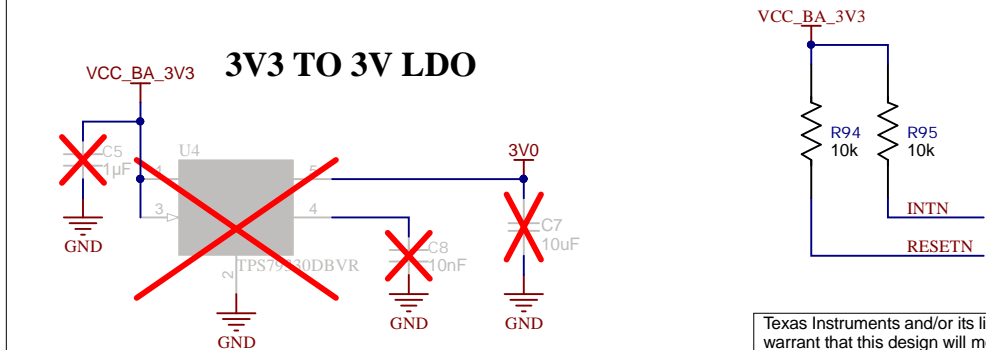
LCD DISPLAY CONNECTOR-1



LCD DISPLAY CONNECTOR-2



3V3 TO 3V LDO

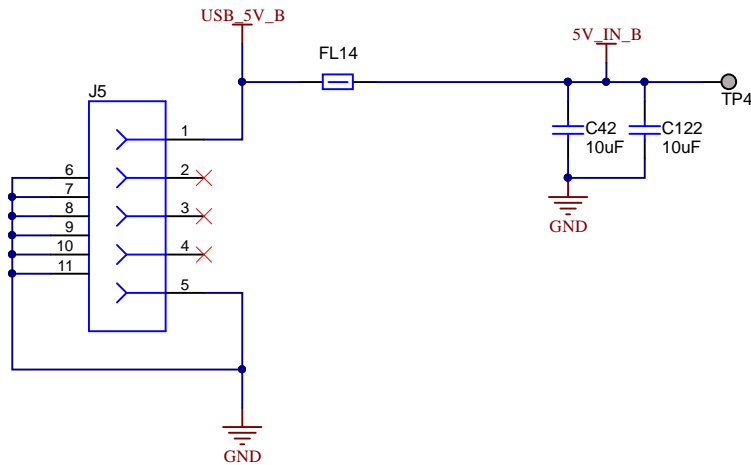


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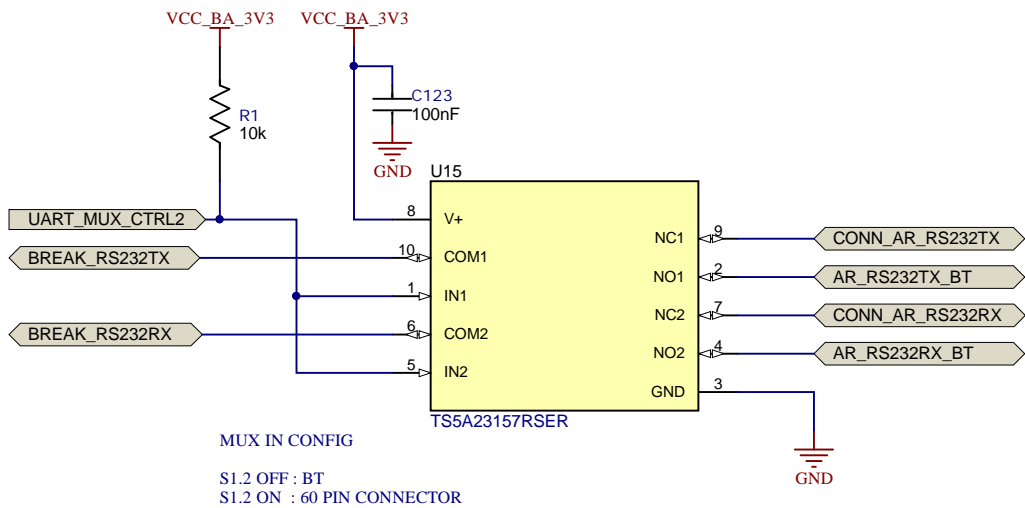
Orderable: IWR6843AOPEVM	Designed for: Public Release	Mod. Date: 31-08-2021
TID #: N/A	Project Title: xWR6843AOPEVM	
Number: PROC091	Rev: G	Sheet: 9 of 12
SVN Rev: 1494	Assembly Variant: 001	Size: B
Drawn By: Antony/Bala	File: PROC091G_BT_DISPLAY.SchDoc	Contact: http://www.ti.com/support
Engineer: Antony/Bala		

BREAKAWAY_SECTION_4

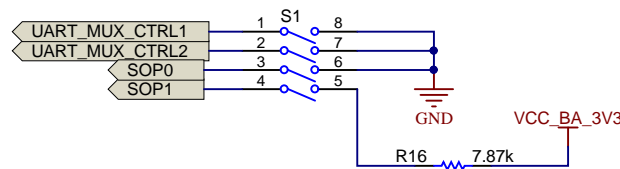
USB CONNECTOR



ANALOG MUX SELECTION FOR UART



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

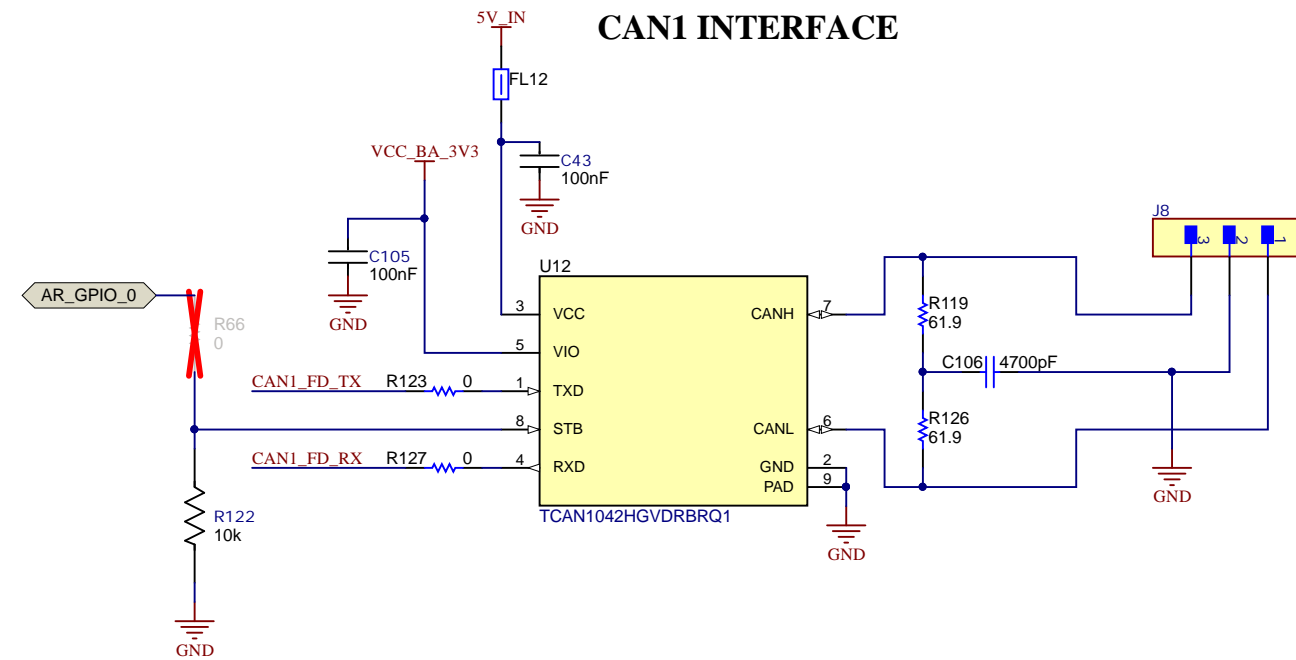
PIN MUX SETTINGS

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

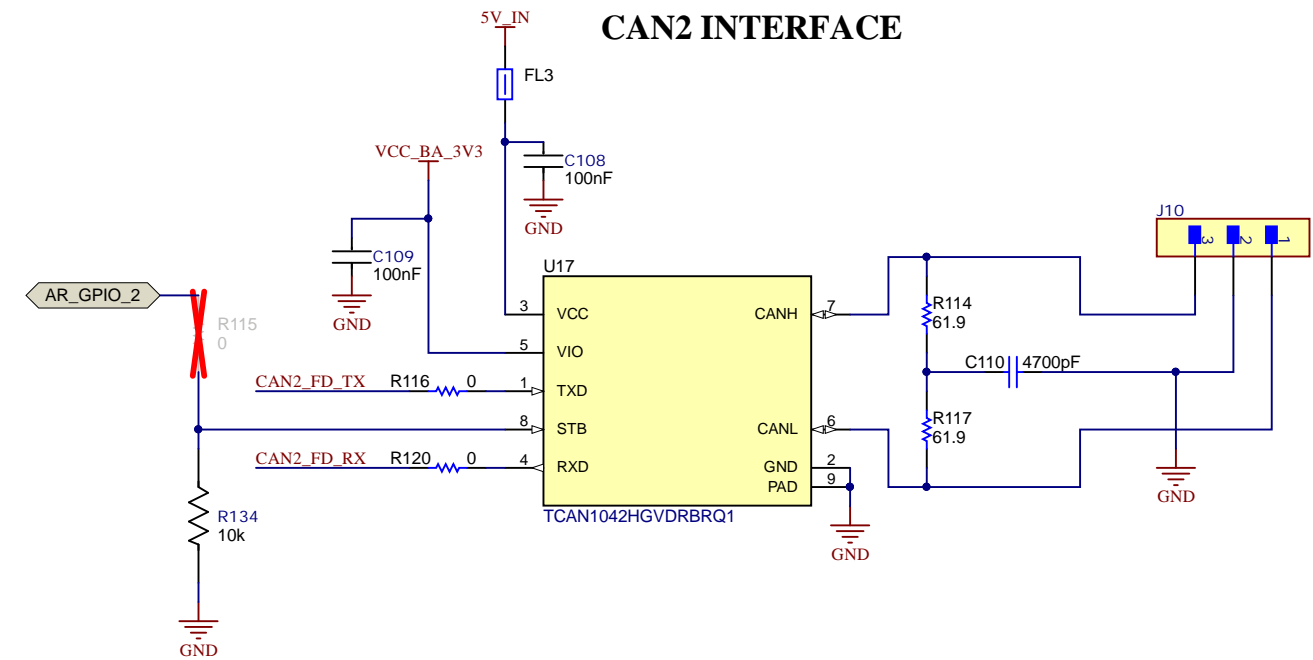
PIN MUX SETTINGS

	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

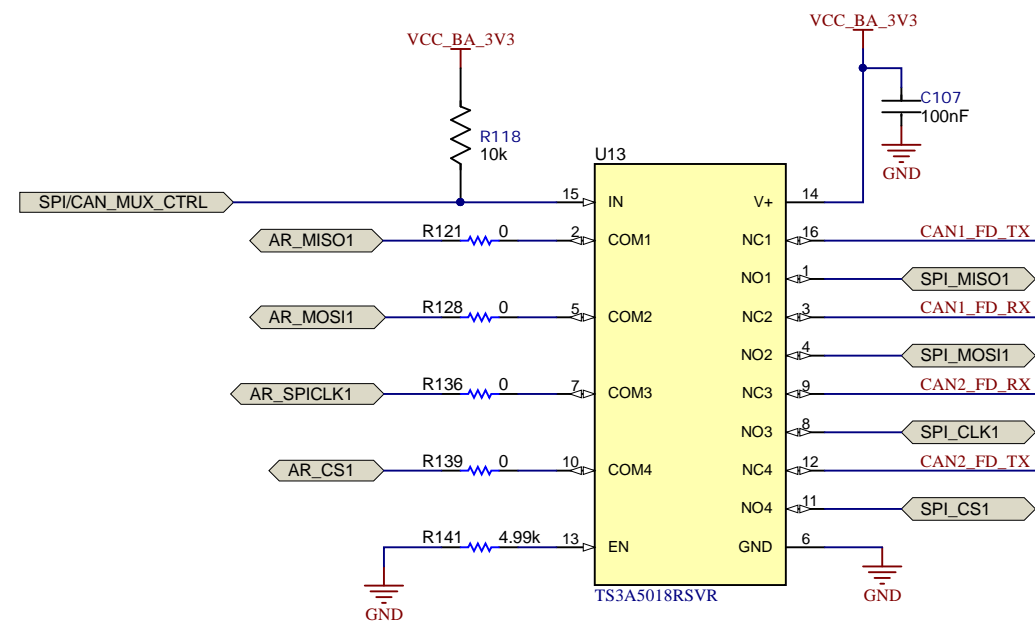
BREAKAWAY_SECTION_5



CAN2 INTERFACE



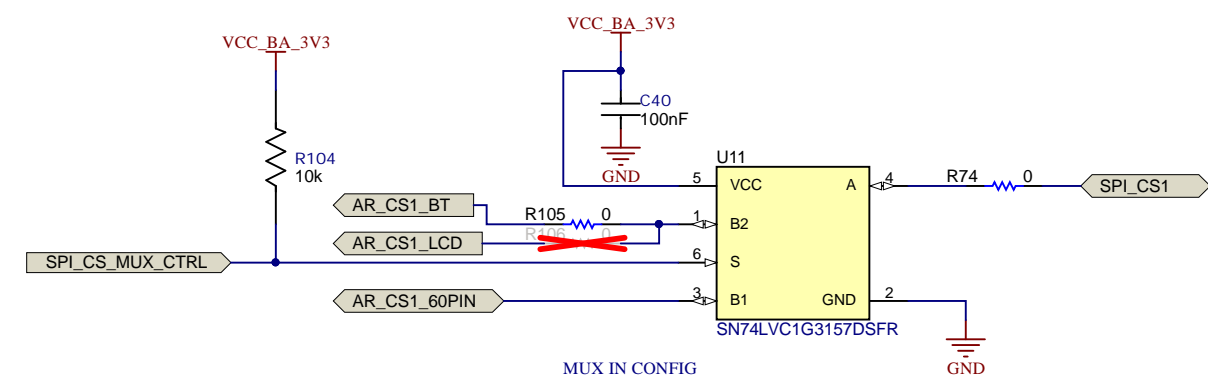
ANALOG MUX SELECTION FOR SPI/CAN



MUX IN CONFIG

S2.1 OFF : SPI
S2.1 ON : CAN

ANALOG MUX SELECTION FOR SPI CHIP SELECT



MUX IN CONFIG

S2.2 OFF : BT/LCD
S2.2 ON : 60PIN CONNECTOR

HARDWARE



PCB Number: PROC091
PCB Rev: G

PCB
LOGO
Texas Instruments



PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo

PCB
LOGO
ESD Susceptible



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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Orderable: IWR6843AOPEVM		Designed for: Public Release		Mod. Date: 31-08-2021	
TID #: N/A		Project Title: xWR6843AOPEVM			
Number: PROC091		Rev: G	Sheet Title: HARDWARE		
SVN Rev: 1607		Assembly Variant: 001			Sheet: 12 of 12
Drawn By: Antony/Bala		File: PROC091G_Hardware.schdoc			Size: B
Engineer: Antony/Bala		Contact: http://www.ti.com/support			