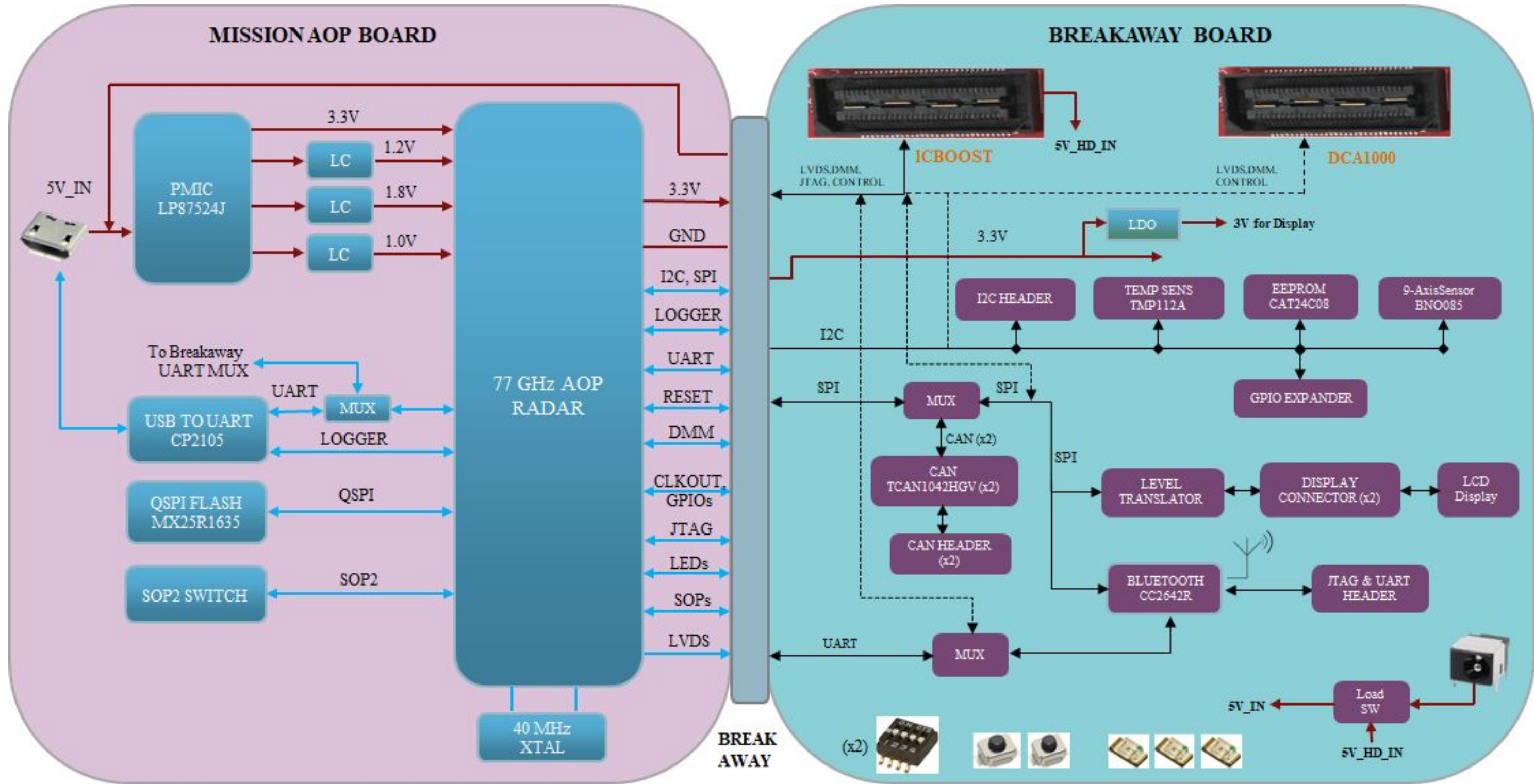


BLOCK DIAGRAM

Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
B	1	09/06/2021	Adrian Ozer	Updated all 22uF caps on PMIC & LC Filters to 0805 low ESL caps CGA4J1X7T0J226M125AC
B	2	09/06/2021	Adrian Ozer	Added additional 22uF cap to 1V supplies
B	3	09/06/2021	Adrian Ozer	Updated L12, L14 to BLM18KG121TH1D ferrite



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TABLE OF CONTENTS

SHEET NO.	SHEET NAME
1	BLOCK DIAGRAM
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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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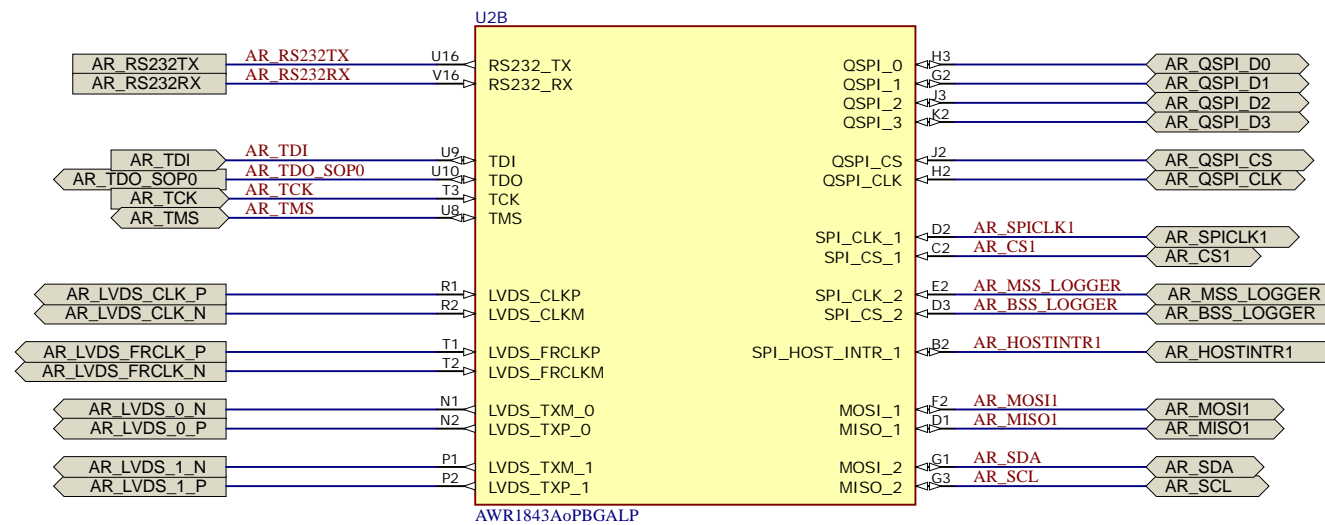
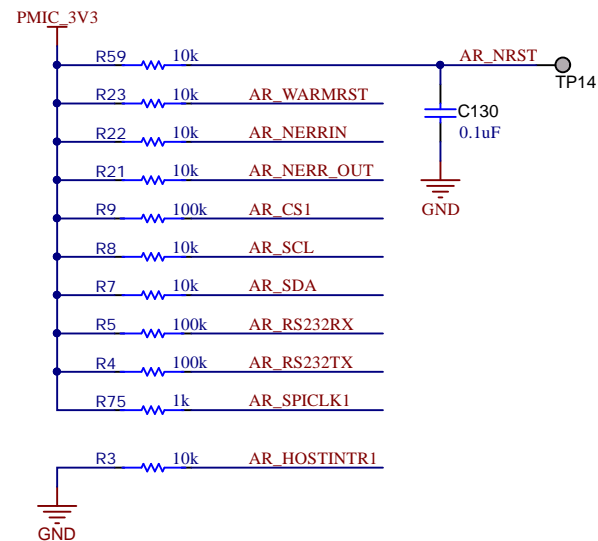
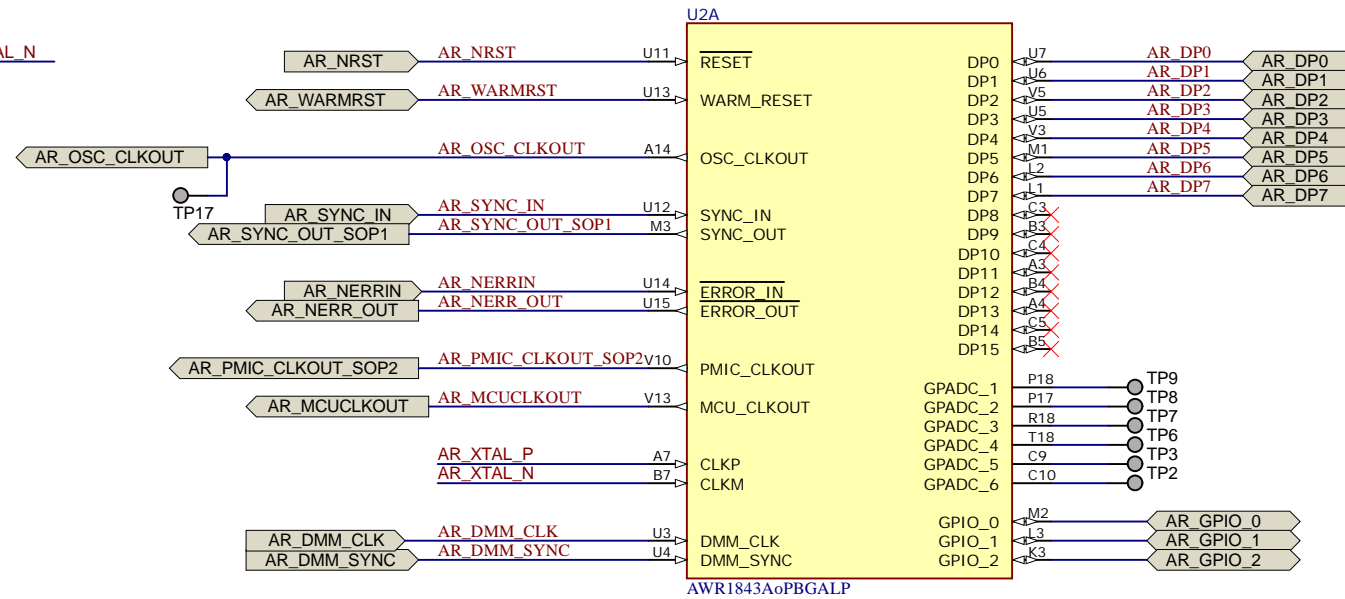
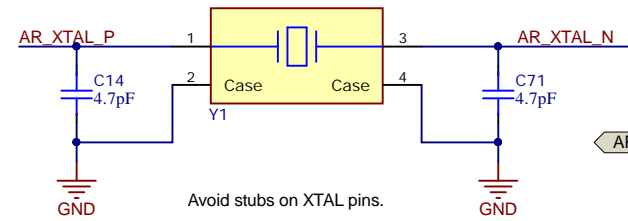
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TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: TABLE_OF_CONTENTS
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 2 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_TABLEOFCONTENTS.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	



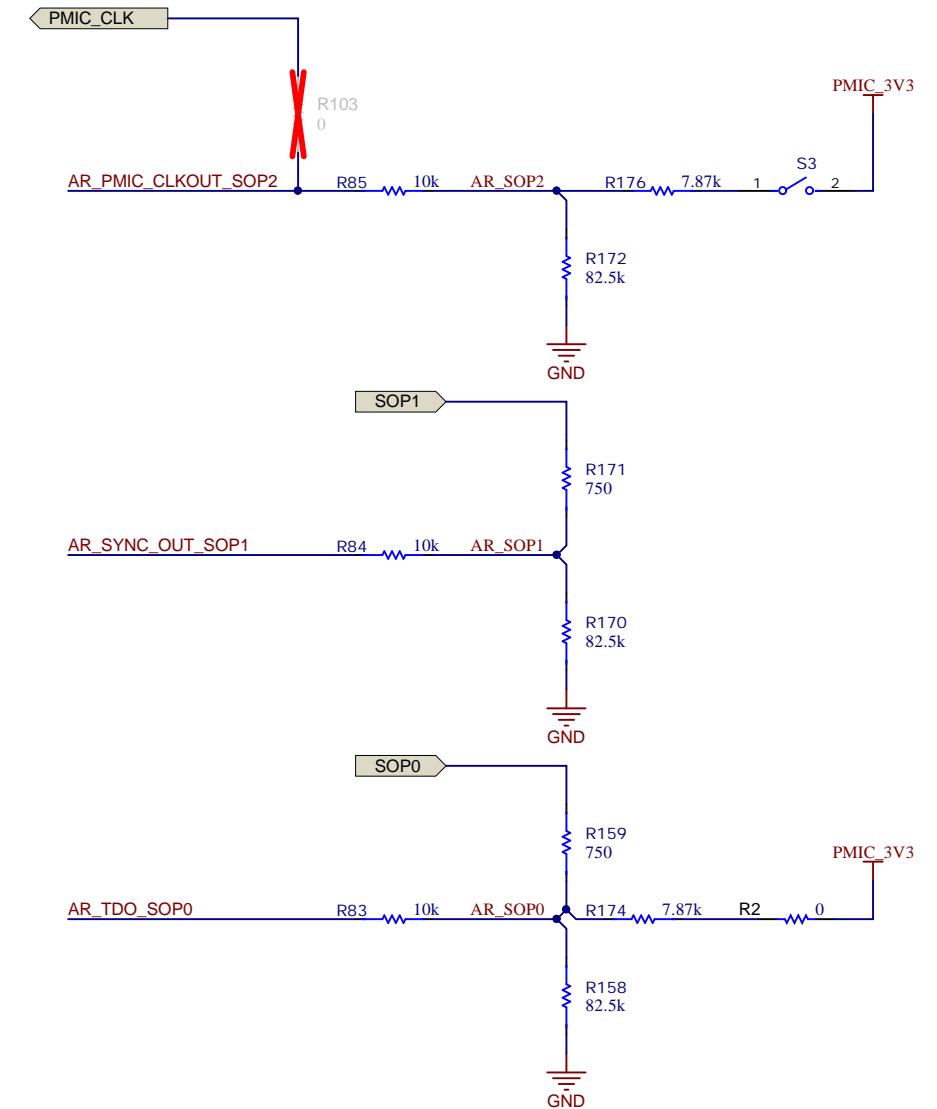
AOP IO

SOP_MODE2 - '011' - DEV/DEBUG
 SOP_MODE4 - '001' - FUNCTIONAL MODE
 SOP_MODE5 - '101' - FLASH MODE

40MHz CRYSTAL

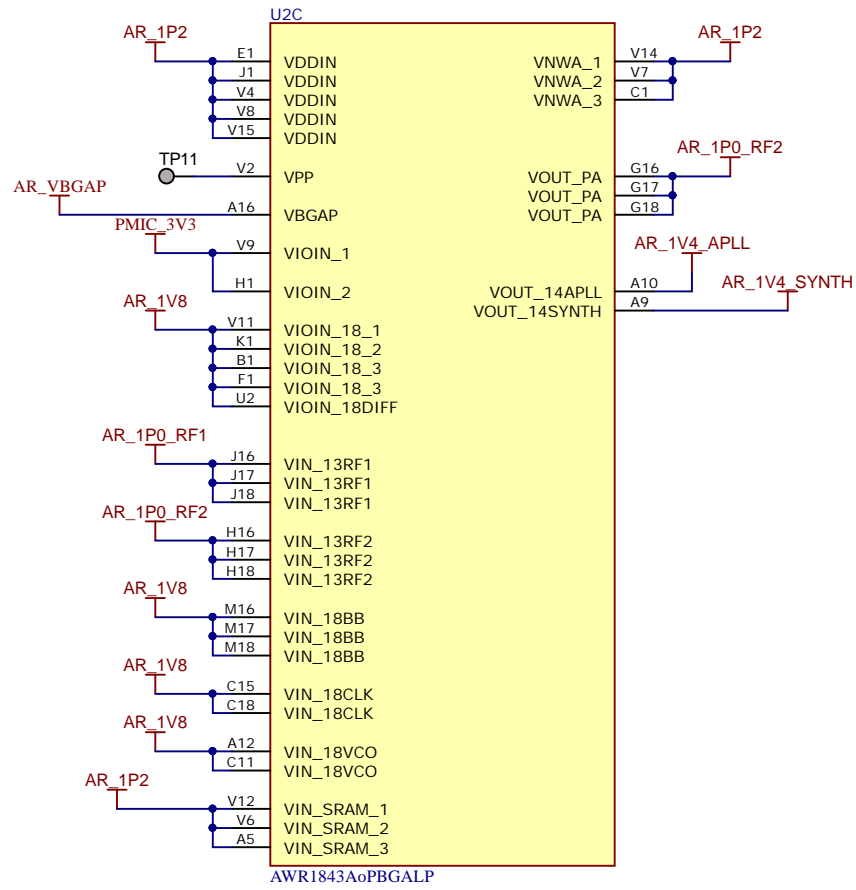


SOP OPTIONS



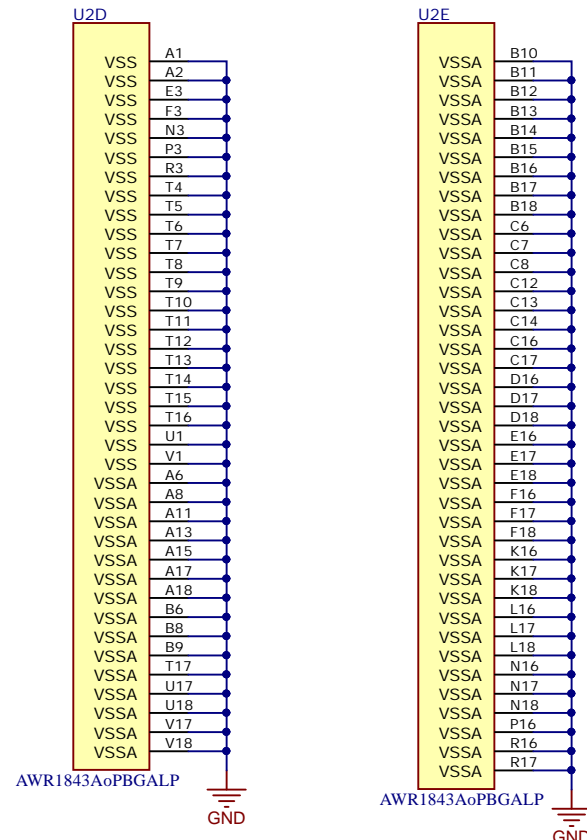
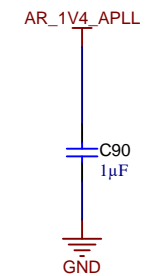
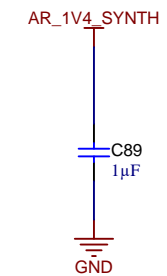
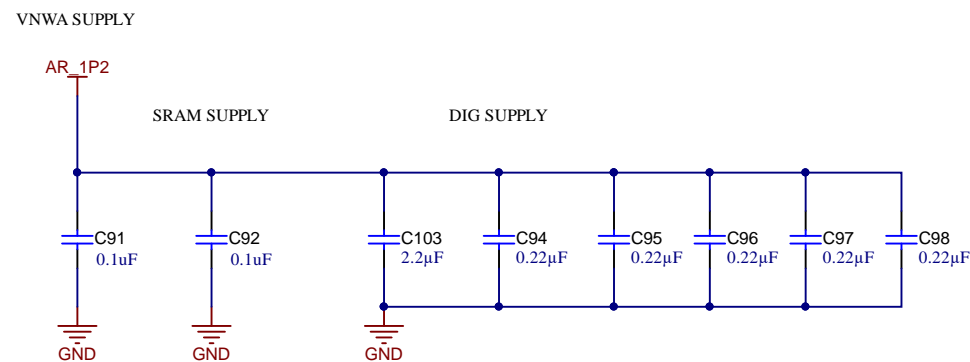
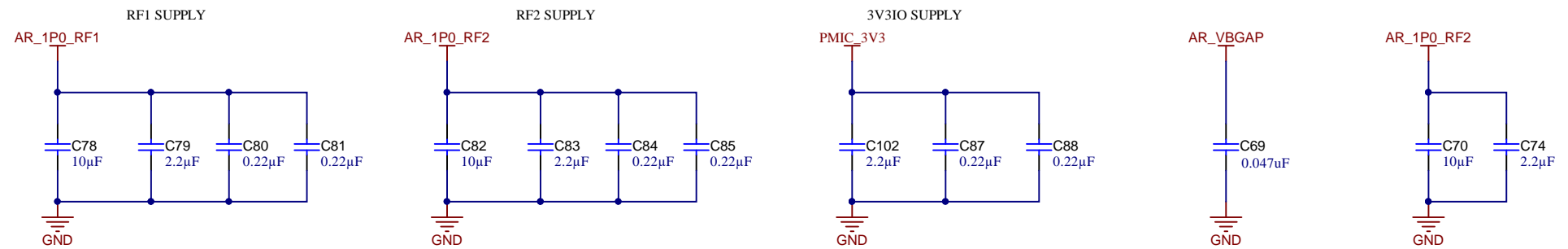
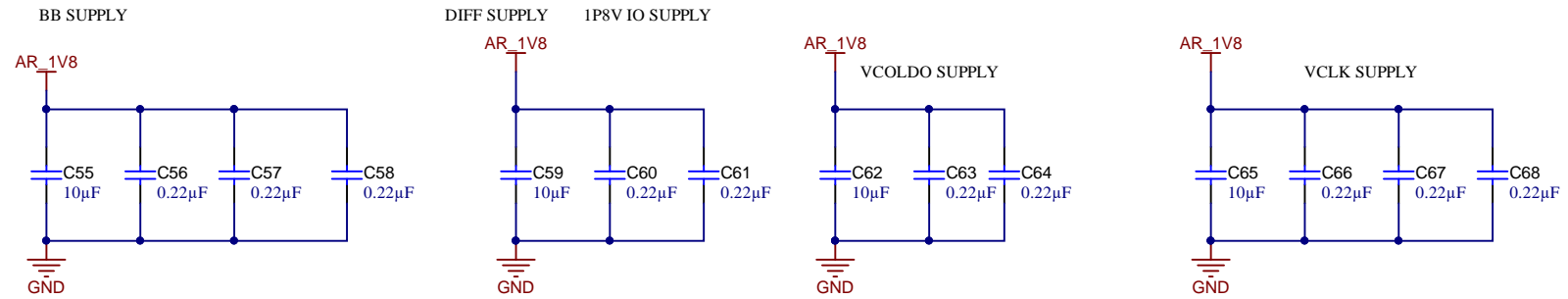
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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: AOP_IO
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 3 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_AOP_IO.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	



AOP POWER

DECOUPLING CAPS

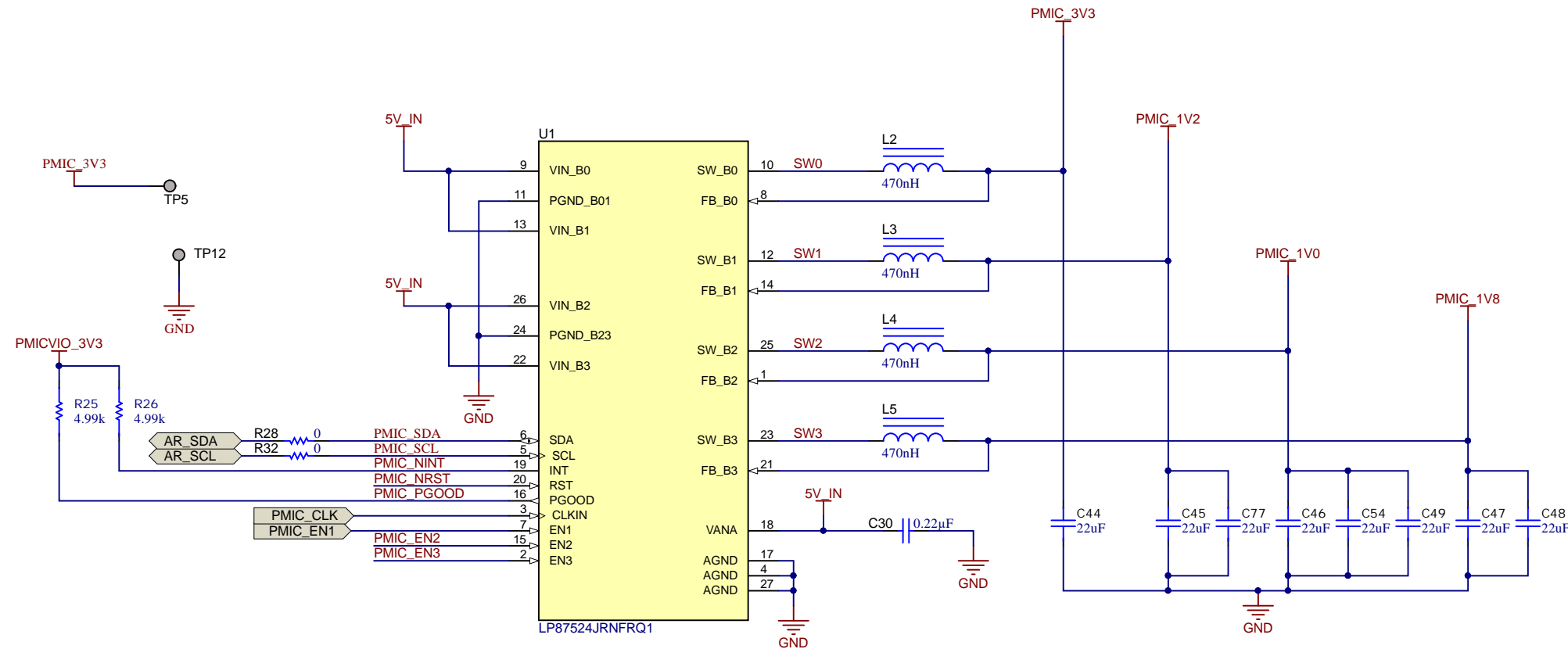


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TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: AOP_POWER
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_AOP_PWR.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

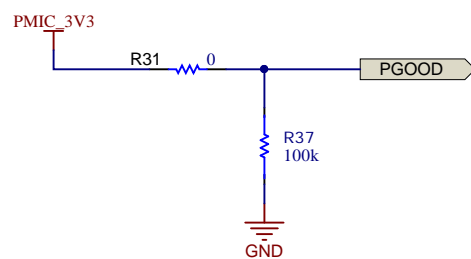
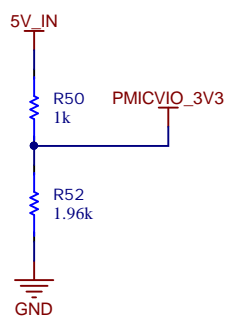
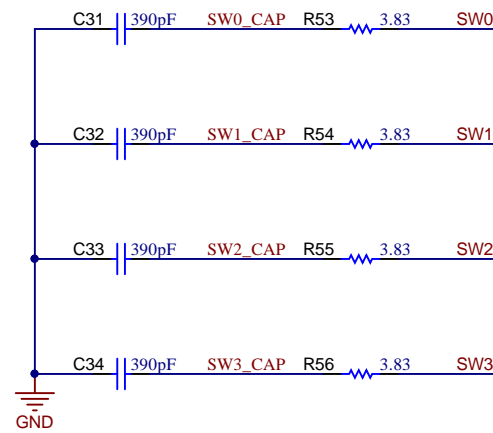
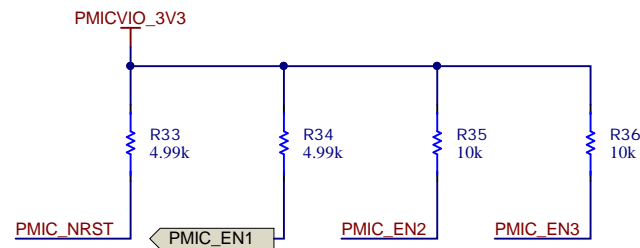
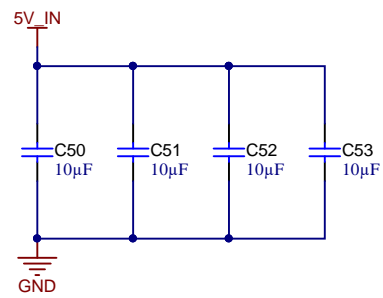
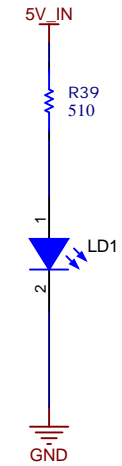


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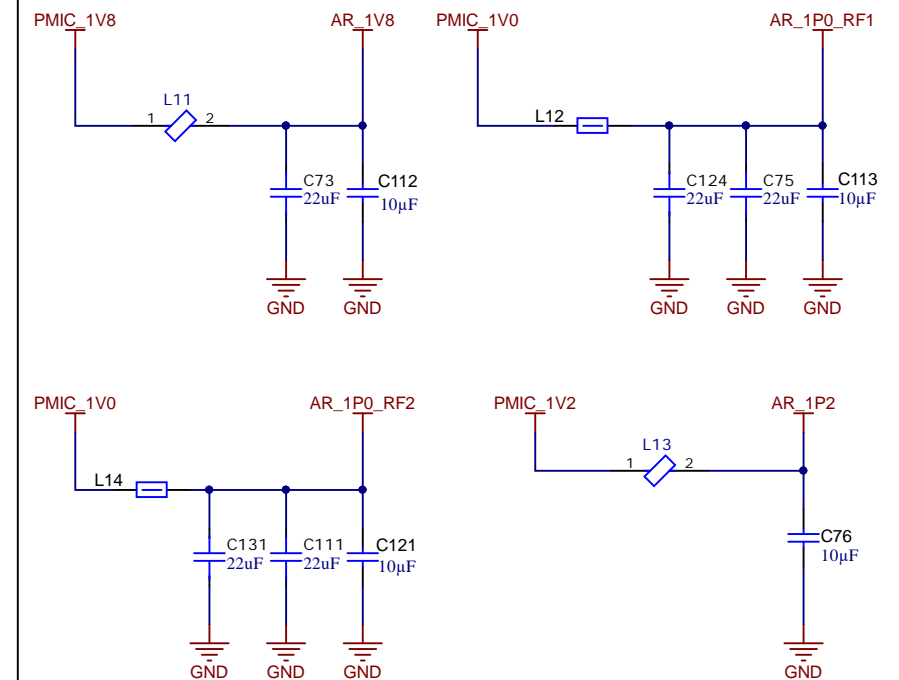
PMIC (3.3V, 1.2V, 1.0V, 1.8V OUTPUTS)



5V LED INDICATION



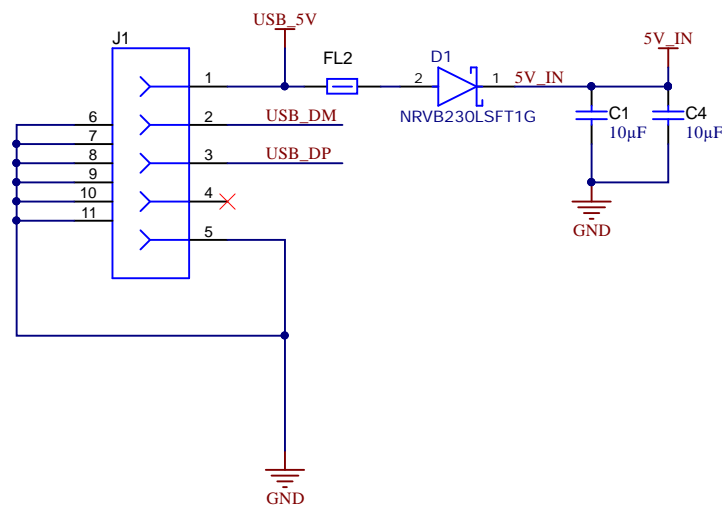
LDO BYPASS



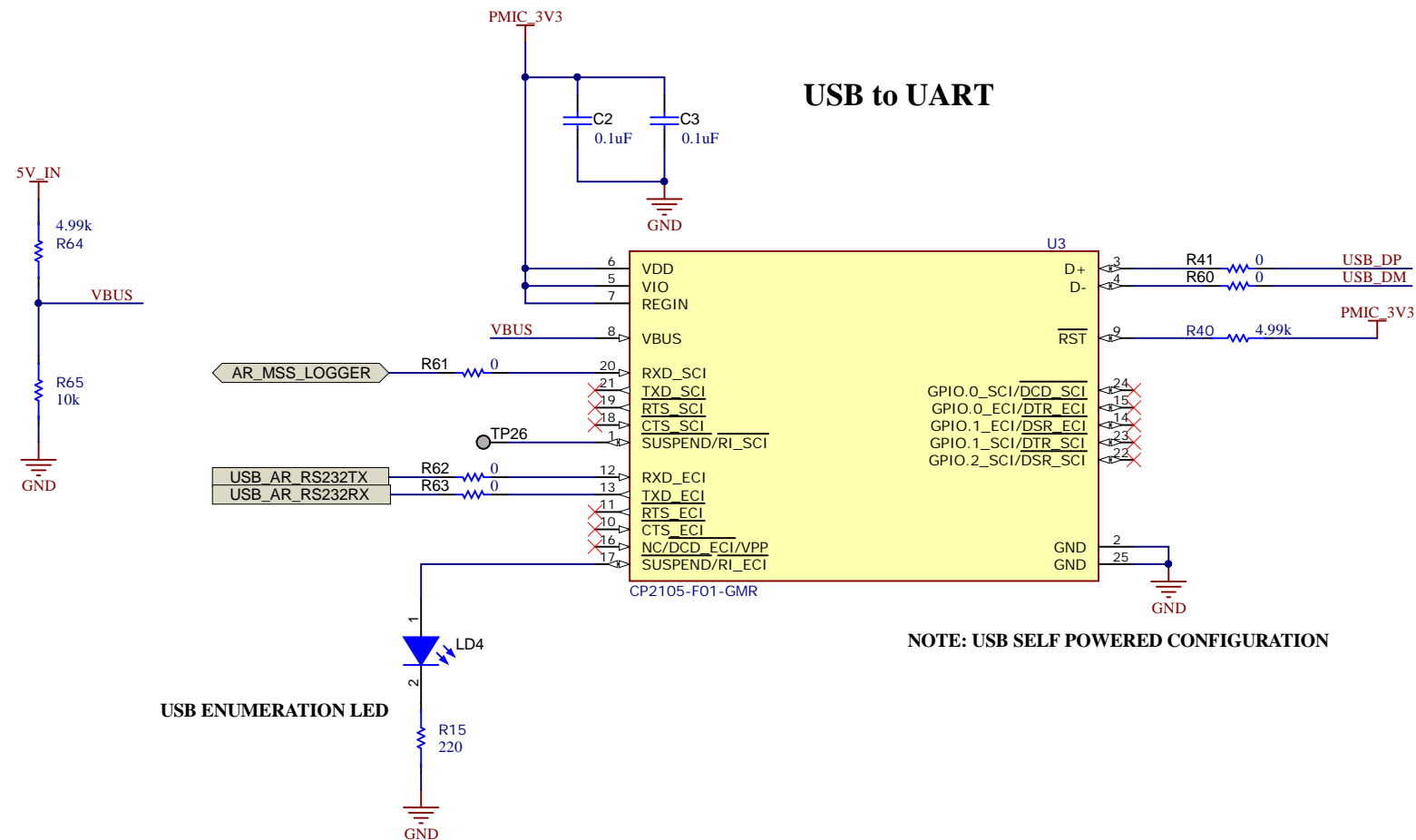
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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet: 5 of 12
SVN Rev: Not in version control	Assembly Variant: 001	Size: B
Drawn By: Antony/Anand Ram	File: PROC106B_PMIC.SchDoc	
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

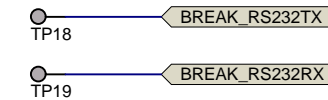
USB CONNECTOR



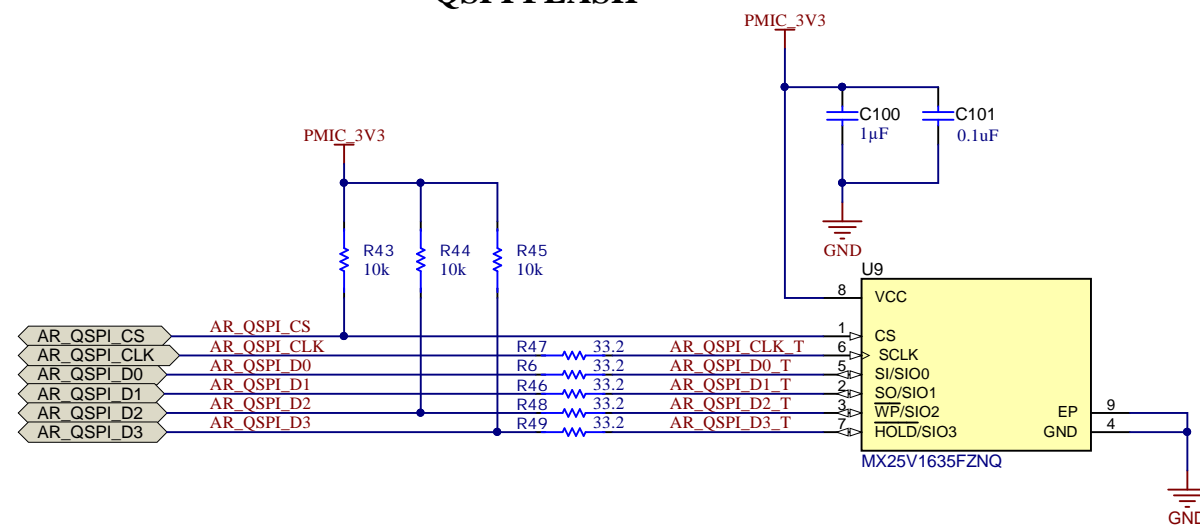
USB to UART



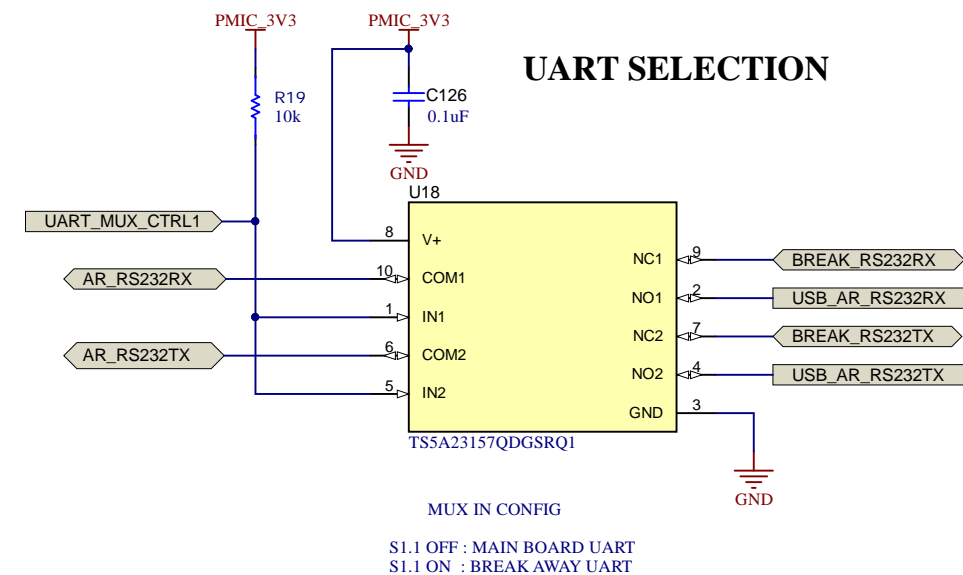
NOTE: USB SELF POWERED CONFIGURATION



QSPI FLASH



UART SELECTION



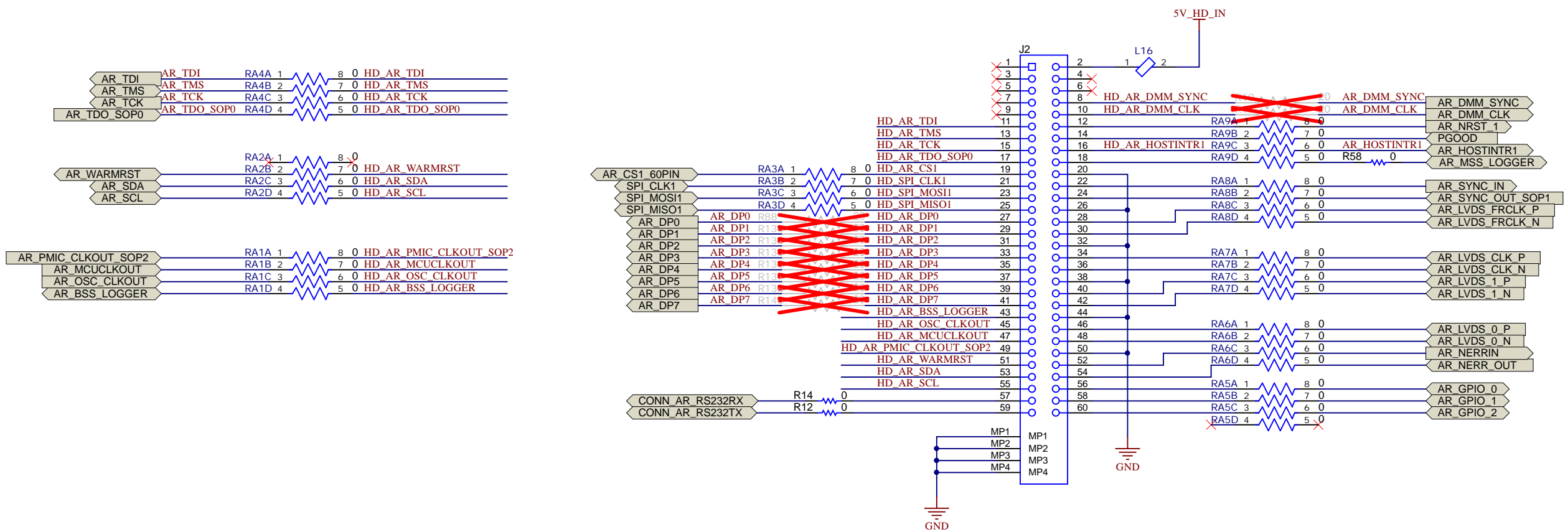
MUX IN CONFIG
S1.1 OFF : MAIN BOARD UART
S1.1 ON : BREAK AWAY UART

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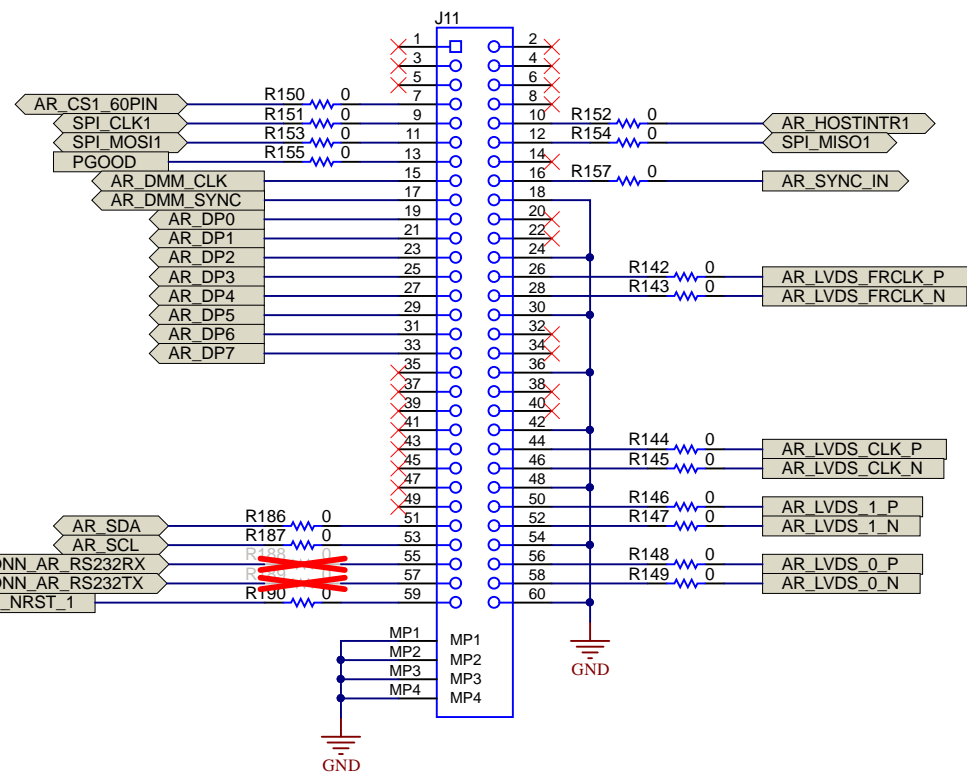
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Number: PROC106	Rev: B	Sheet: 6 of 12
SVN Rev: Not in version control	Assembly Variant: 001	File: PROC106B_FLASH_USB_TO_UART.SchDoc
Drawn By: Antony/Anand Ram	Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support



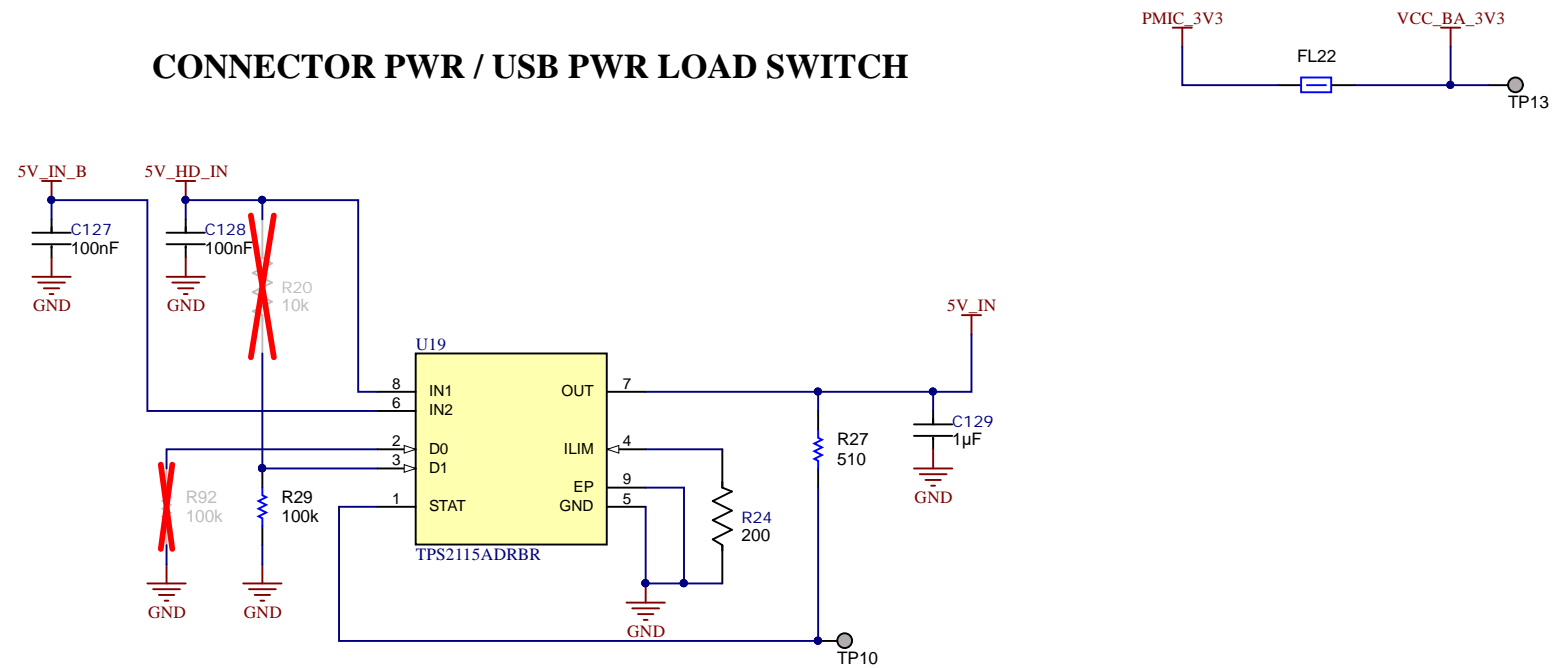
60PIN HD CONNECTOR FOR MMWAVEICBOOST



60PIN HD CONNECTOR FOR DCA1000



CONNECTOR PWR / USB PWR LOAD SWITCH

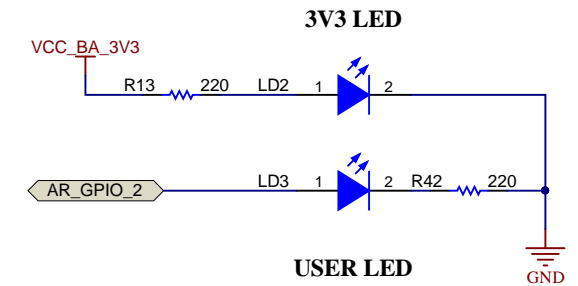
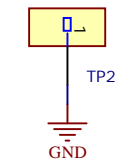
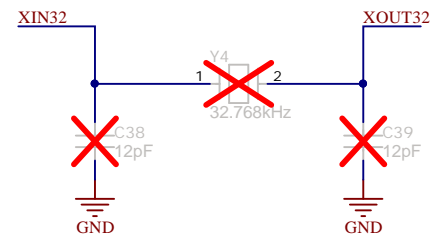
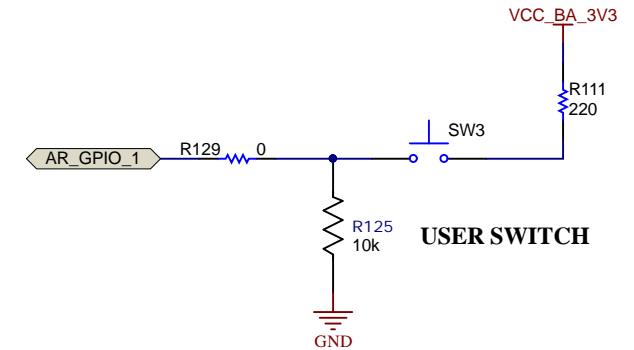
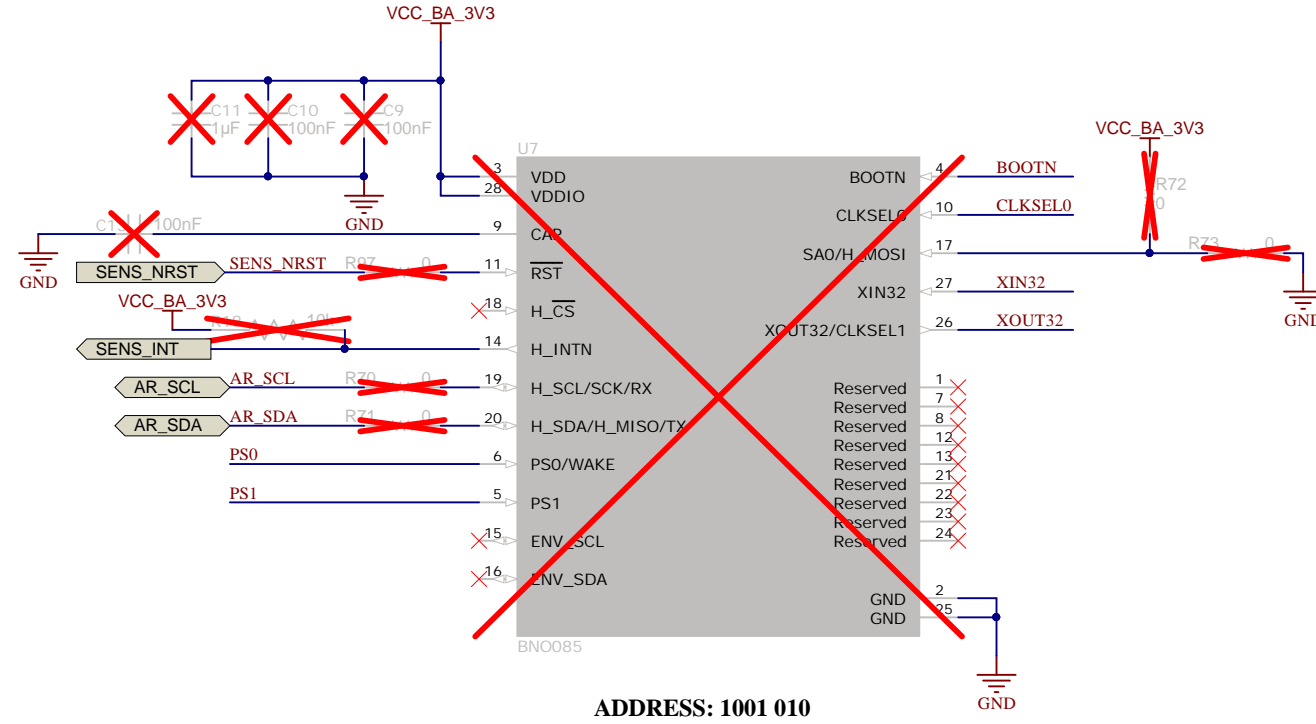
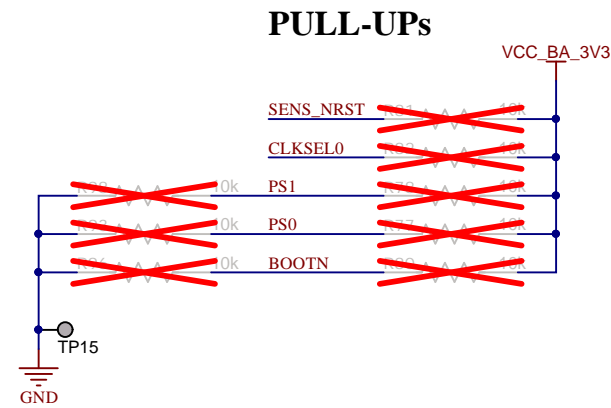


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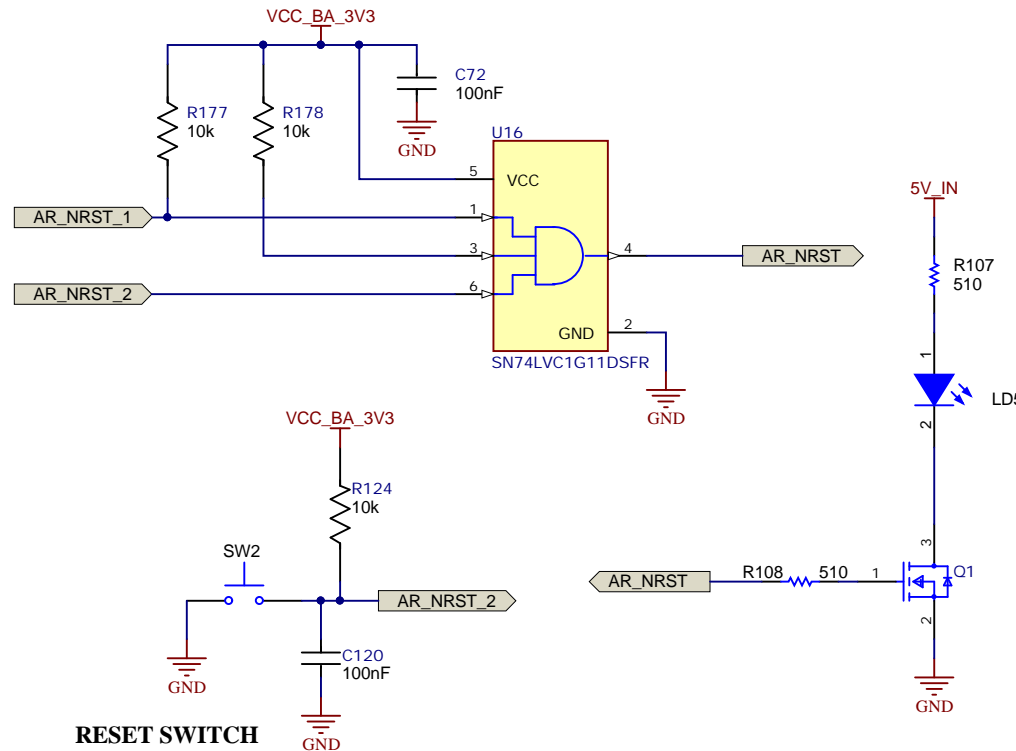
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TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet: 7 of 12
SVN Rev: Not in version control	Assembly Variant: 001	Size: B
Drawn By: Antony/Anand Ram	File: PROC106B_HD_CONN_PWR_SW.SchDoc	Contact: http://www.ti.com/support
Engineer: Antony/Anand Ram		

BREAKAWAY_SECTION_2

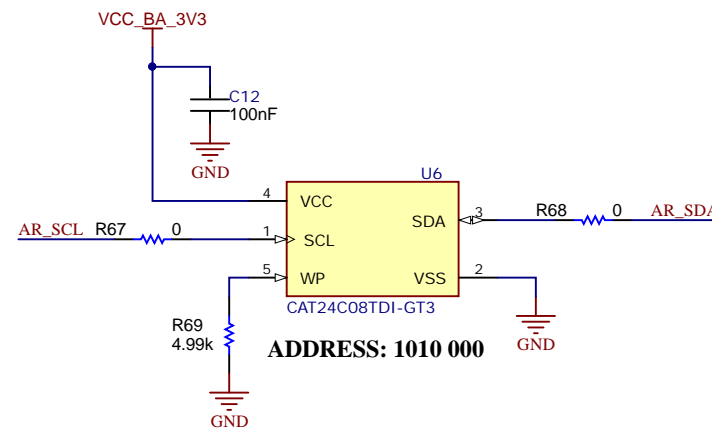
9 - AXIS SENSOR



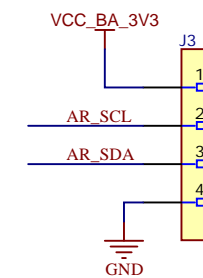
AOP RESET



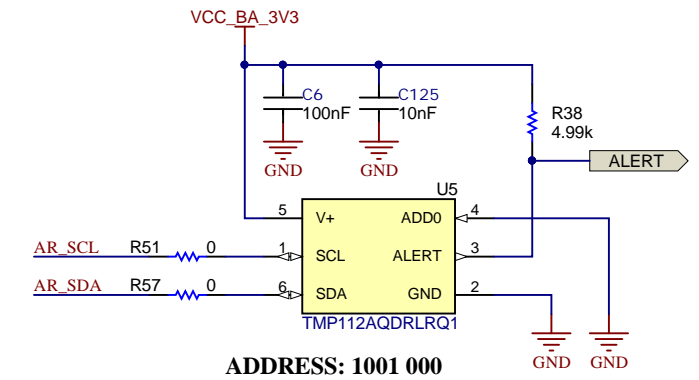
EEPROM



I2C HEADER



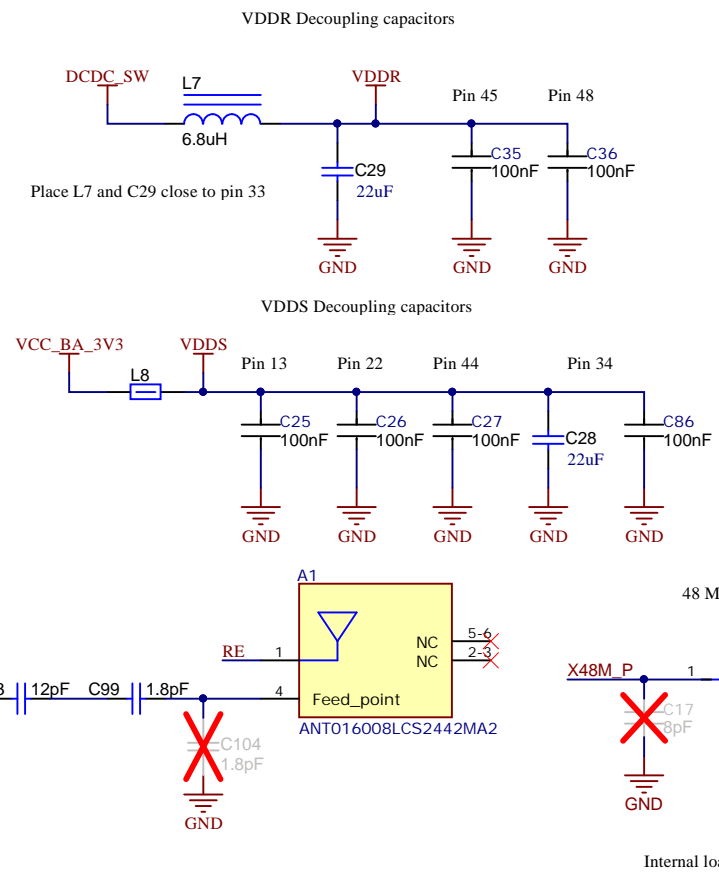
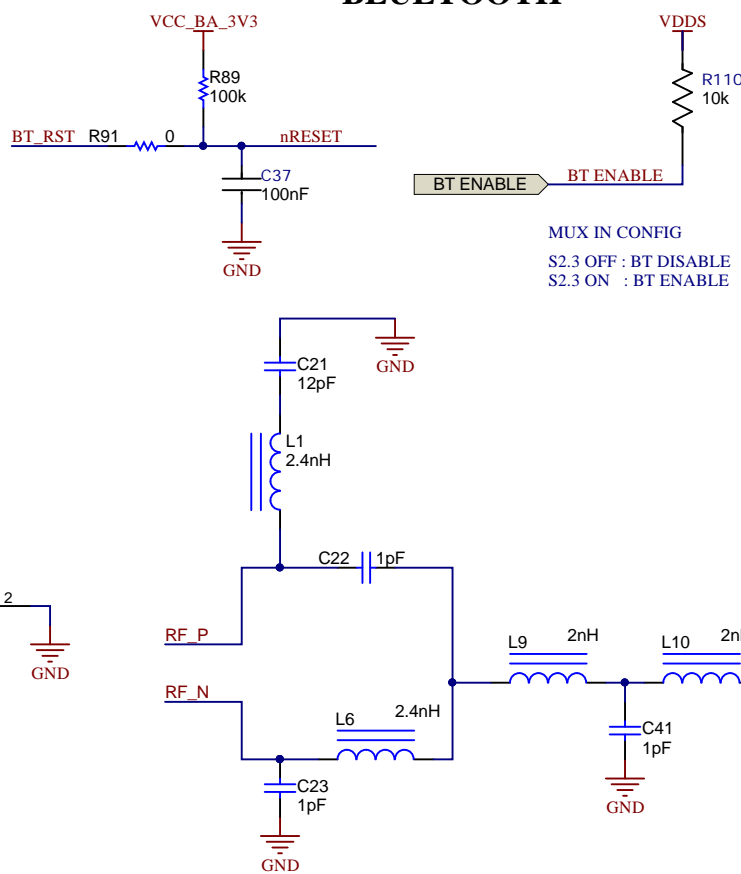
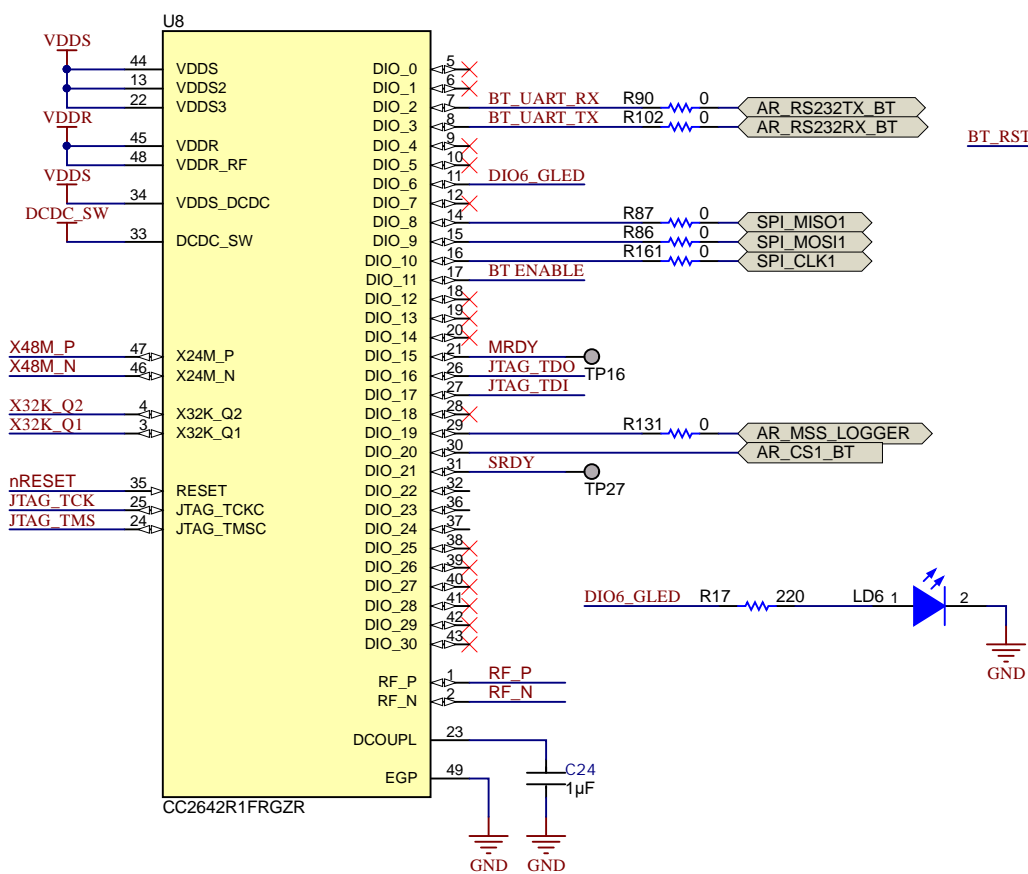
TEMPERATURE SENSOR



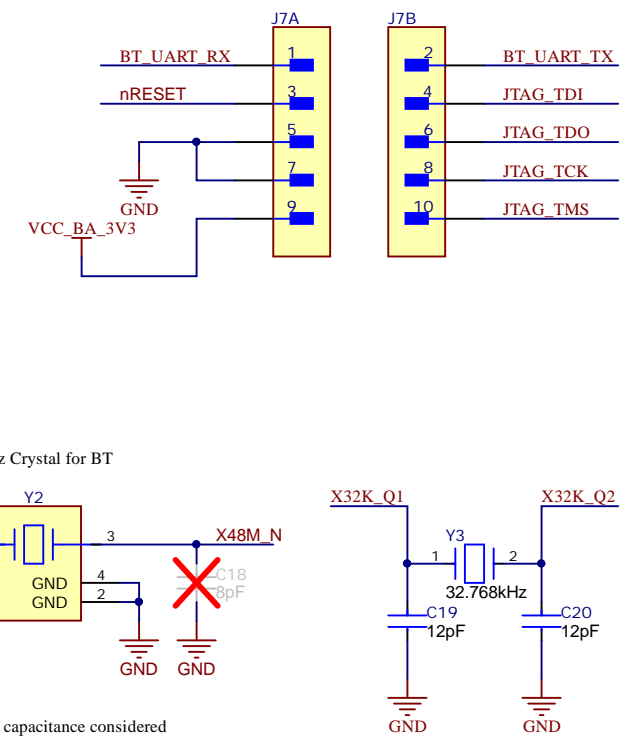
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Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_SECTION2
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 8 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_RST_GPIOs_I2C.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

BREAKAWAY_SECTION_3

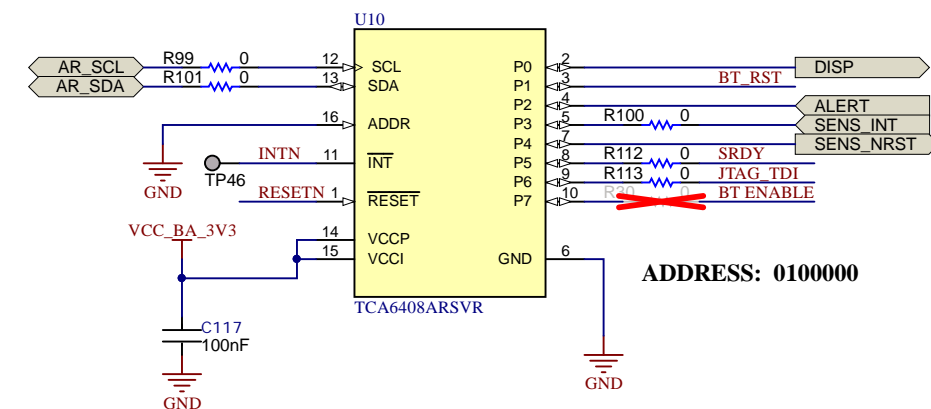
BLUETOOTH



BT_JTAG_HEADER

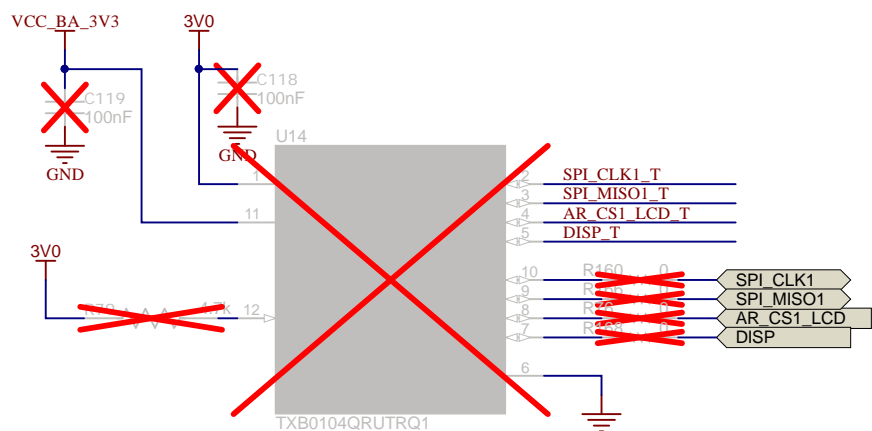


GPIO EXPANDER

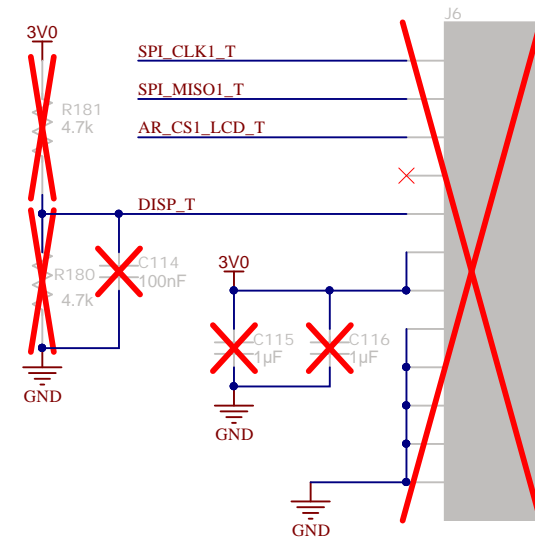


ADDRESS: 0100000

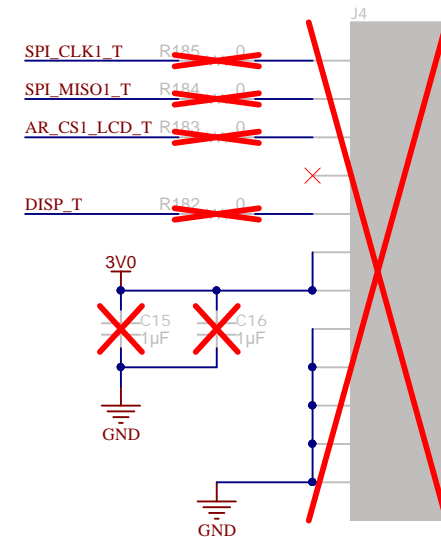
LEVEL TRANSLATOR FOR DISPLAY



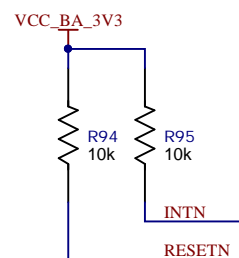
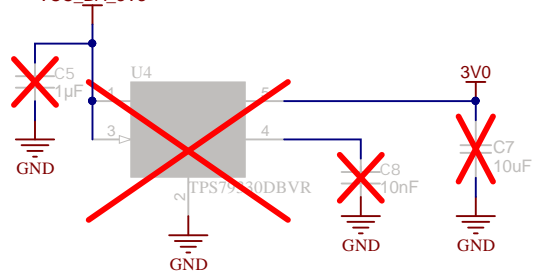
LCD DISPLAY CONNECTOR-1



LCD DISPLAY CONNECTOR-2



3V3 TO 3V LDO



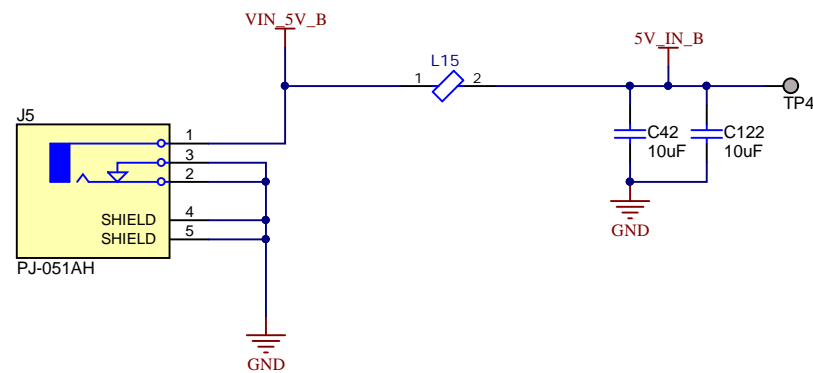
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Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_SECTION3
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 9 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_BT_DISPLAY.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

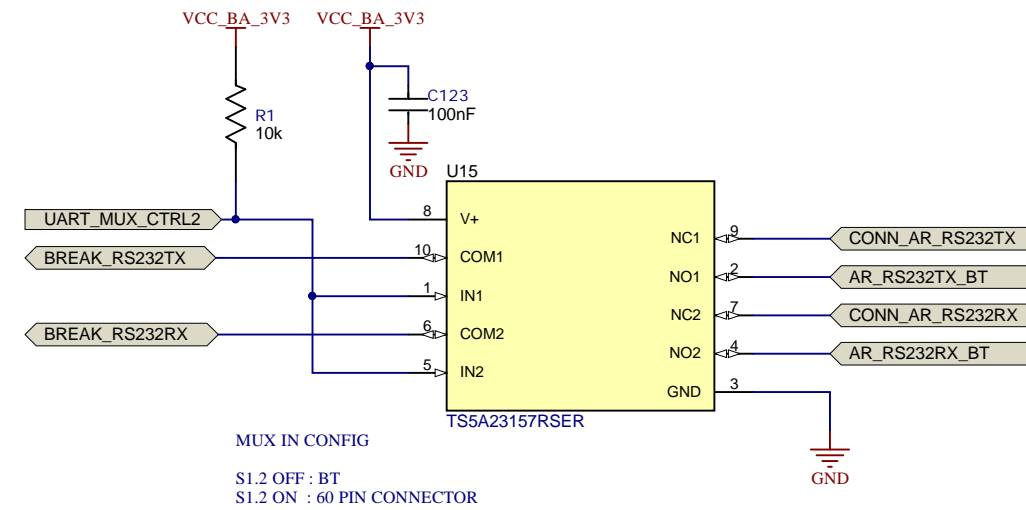


BREAKAWAY_SECTION_4

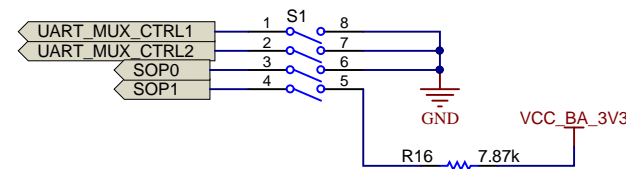
DC JACK



ANALOG MUX SELECTION FOR UART

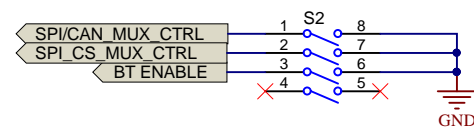


SWITCH CONTROL MUX SELECTION, SOPs, BT CONTROL



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

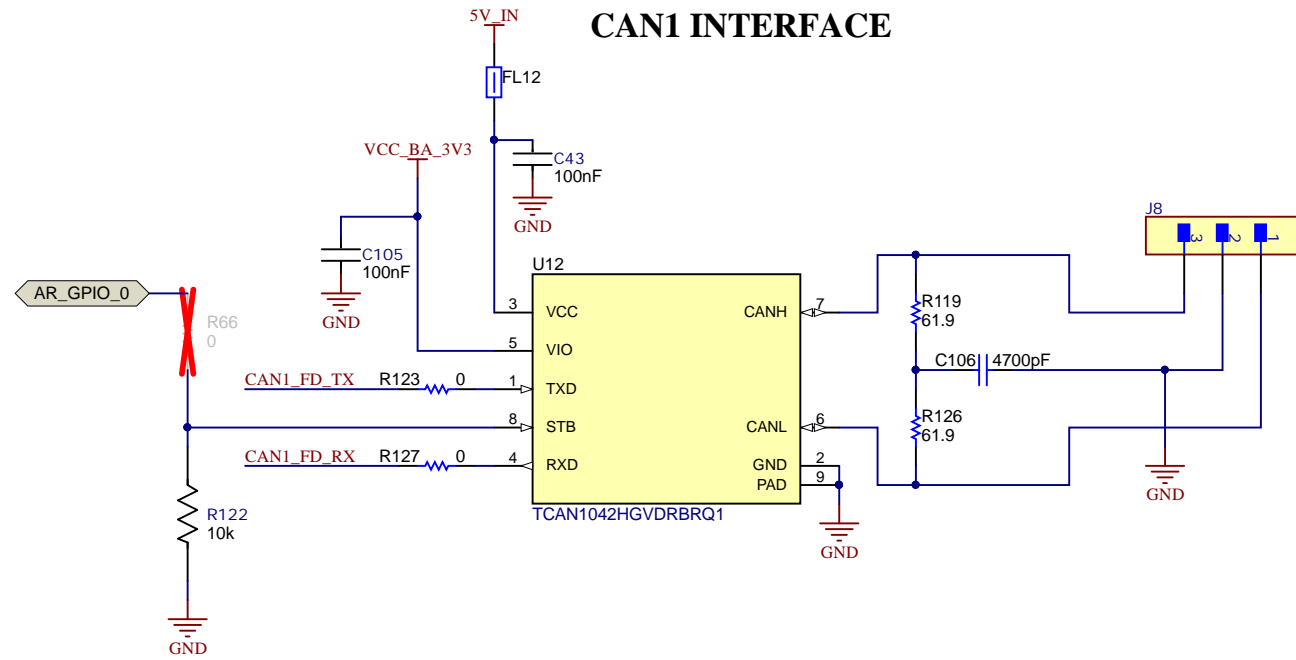
Designator	Switch ON	Switch OFF
S1.1	Breakaway UART	CP2105UART
S1.2	60 Pin UART	BT UART
S2.1	CAN	SPI
S2.2	60 Pin CS	BT/LCD CS
S2.3	BT Enable	BT Disable

PIN MUX SETTINGS

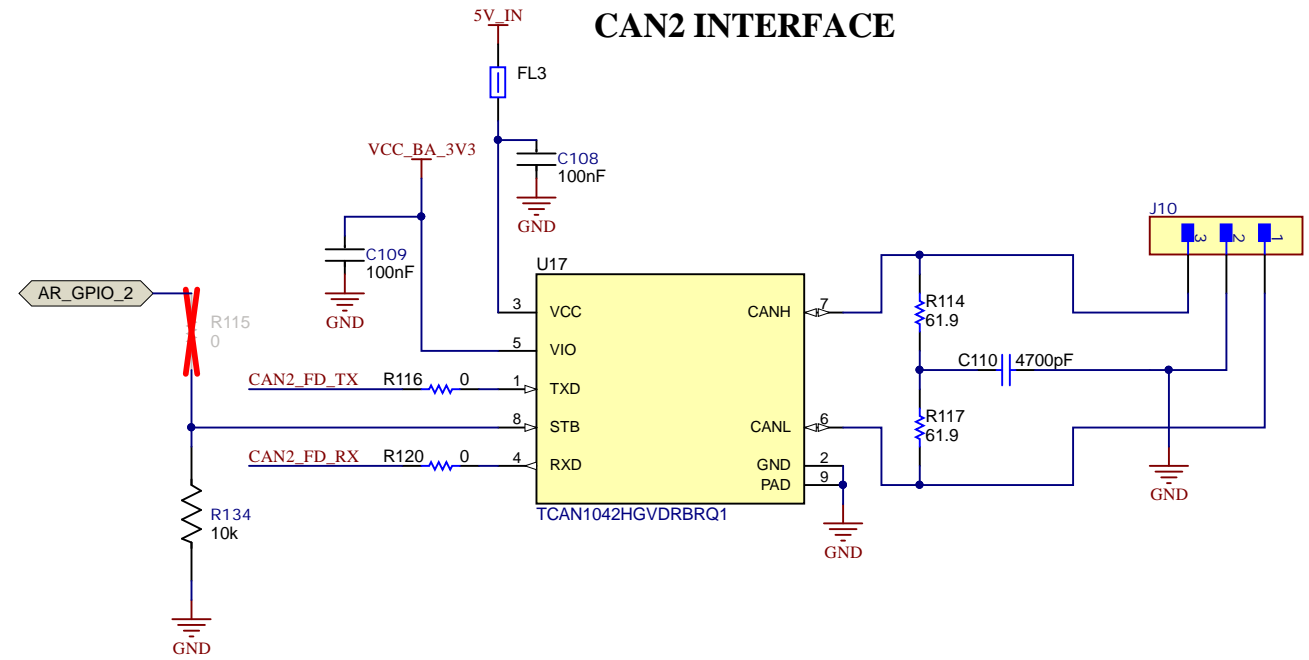
	S1.1	S1.2	S2.1	S2.2	S2.3
Stand alone Mode	OFF	N/A	N/A	N/A	N/A
MMWAVEICEBOOST	ON	ON	OFF	OFF	N/A

BREAKAWAY_SECTION_5

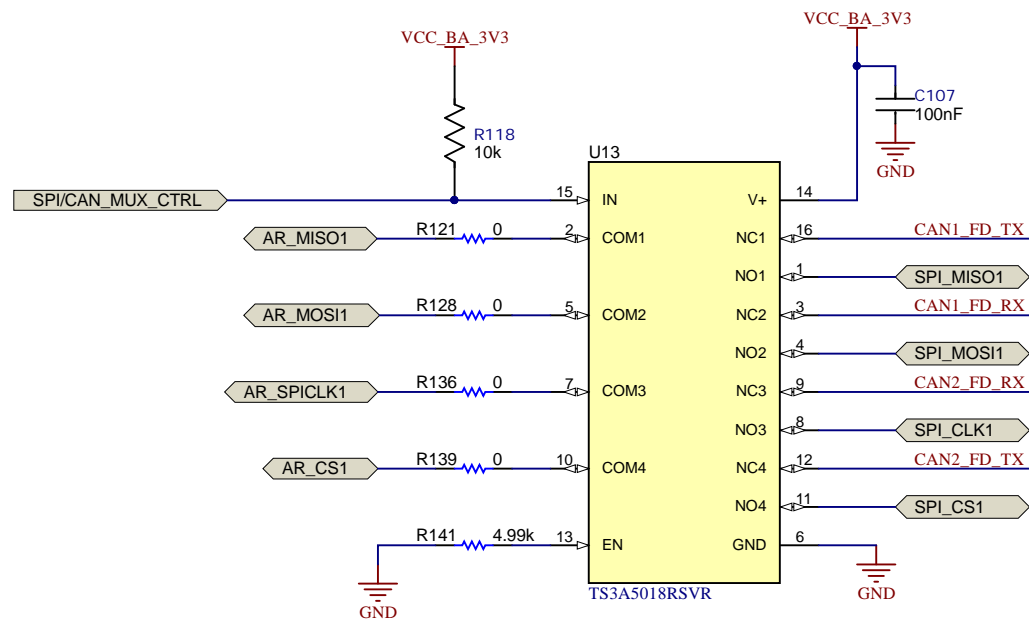
CAN1 INTERFACE



CAN2 INTERFACE

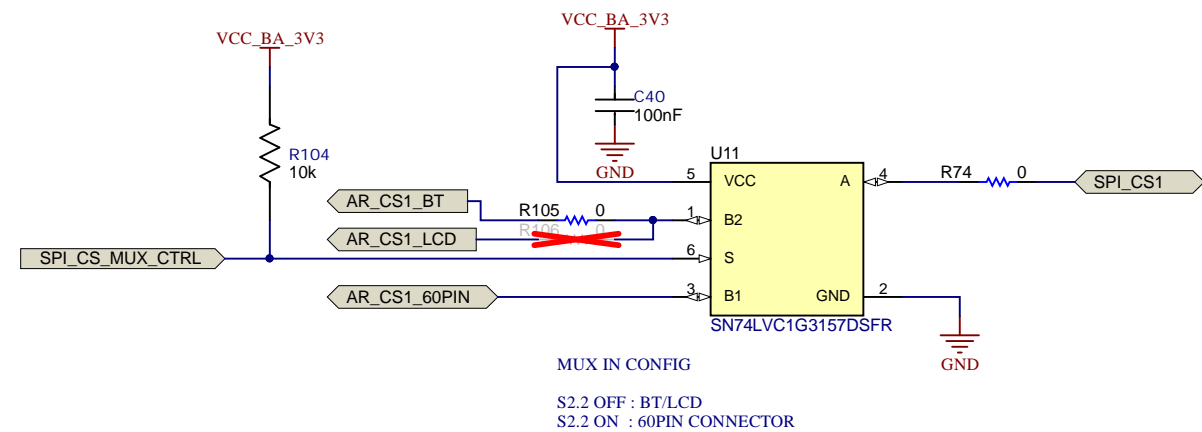


ANALOG MUX SELECTION FOR SPI/CAN



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

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Number: PROC106	Rev: B	Sheet Title: BREAKAWAY_SECTION5
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 11 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_CAN_INTERFACE.SchDoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

HARDWARE



PCB Number: PROC106
PCB Rev: B

PCB LOGO
Texas Instruments



PCB LOGO
FCC disclaimer

PCB LOGO
WEEE logo

PCB LOGO
ESD Susceptible



CAUTION HOT SURFACE

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#MCH065) 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

Variant/Label Table	
Variant	Label Text
001	AWR1843AOPEVM

H1 MECH H2 MECH H3 MECH

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Orderable: AWR1843AOPEVM	Designed for: Public Release	Mod. Date: 09-06-2021
TID #: N/A	Project Title: xWR1843AOPEVM	
Number: PROC106	Rev: B	Sheet Title: HARDWARE
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 12 of 12
Drawn By: Antony/Anand Ram	File: PROC106B_Hardware.schdoc	Size: B
Engineer: Antony/Anand Ram	Contact: http://www.ti.com/support	

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