

Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
B/E3	N/A	01/05/2018	JAC	N/A
C/E4	N/A	12/20/2018	JAC	N/A

### DEFAULT SWITCH/JUMPER SETTINGS

S3 1..4] ON,ON,ON,OFF (MSP430 IN RESET, TDA2XP I2C MASTER)

S4 [1..4] ON,OFF,OFF,ON(CSI-COAX)

S5[ 1..4] ON,OFF,OFF,ON(CSI-COAX)

J22 1-2 12V CAMERA

J27 1-2 12V RADAR

J40 POWER INPUT FROM TDA2XP EVM

A

A

B

B

C

C

D

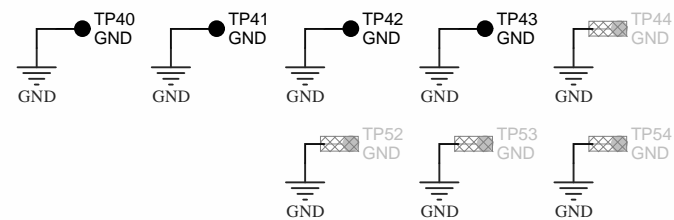
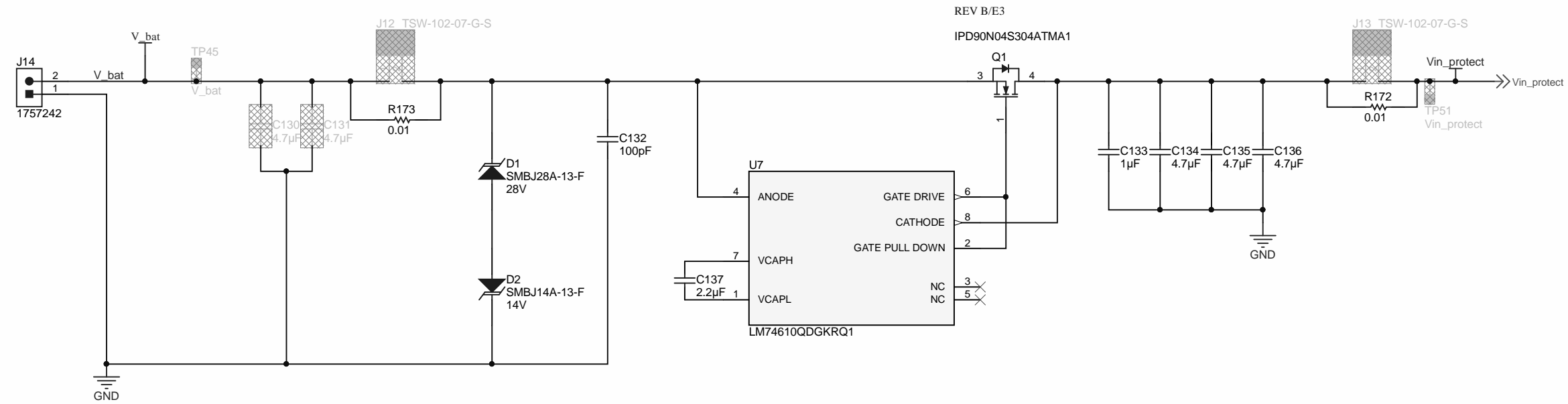
D

Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 12/20/2018
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 1 of 15
Drawn By:	File: ADAS_SF_rev1_CoverSheet.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

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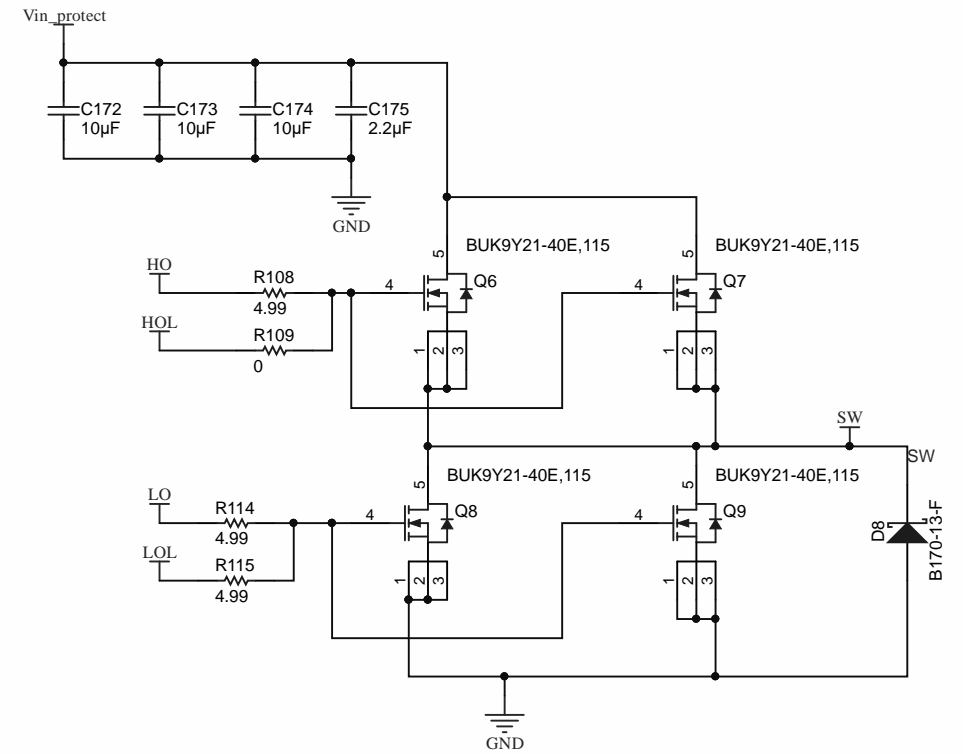
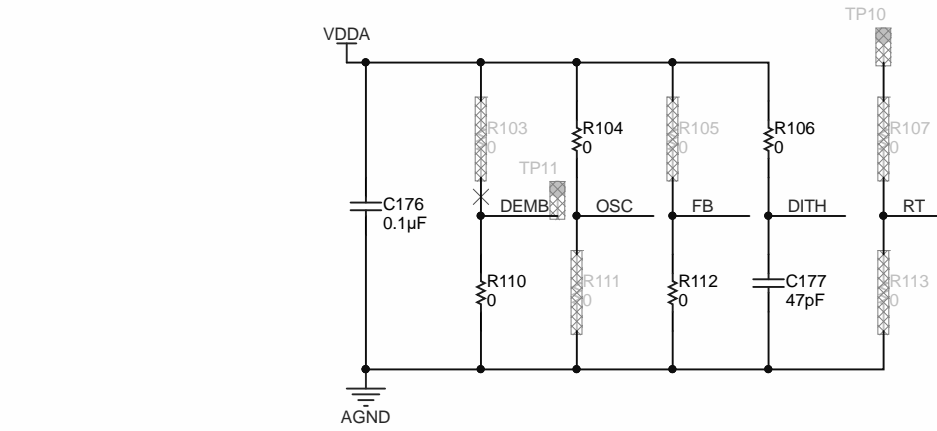


**Car Battery Input**  
**Vin = 4V - 60V**

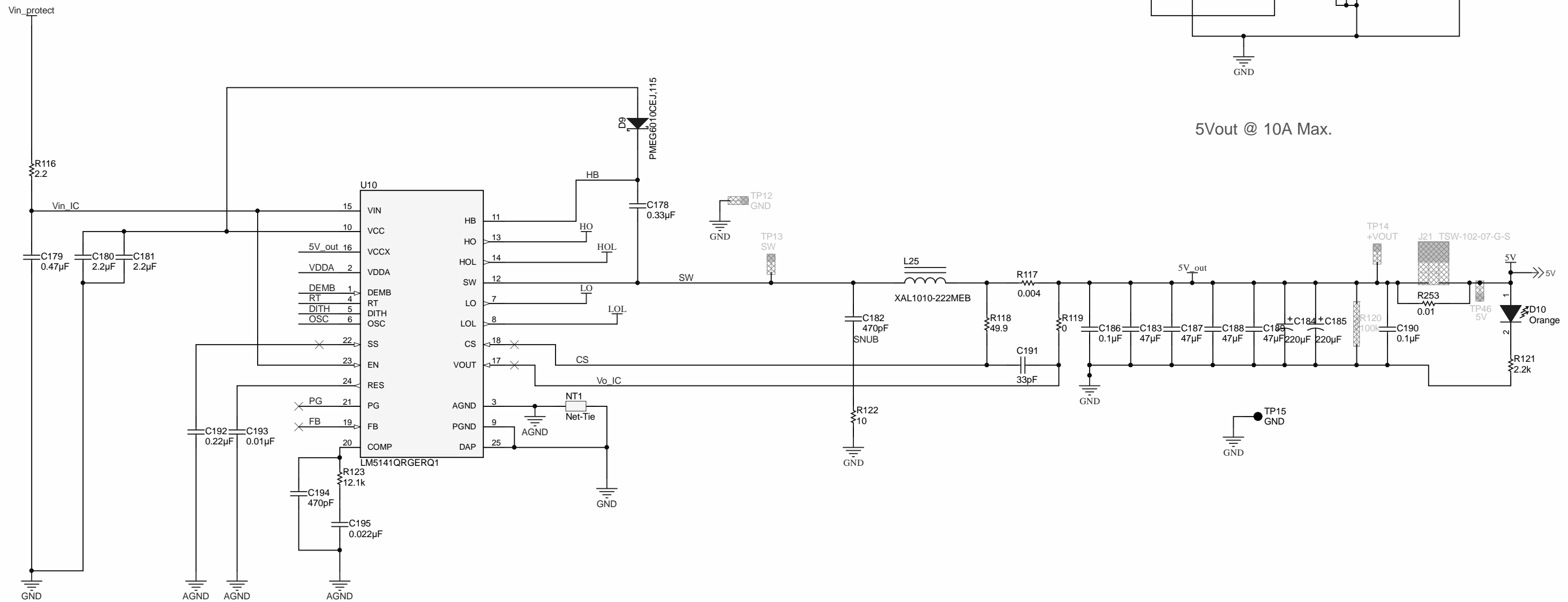


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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 6/15/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 2 of 15
Drawn By:	File: ADAS_SF_Power_Battery_Input.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	



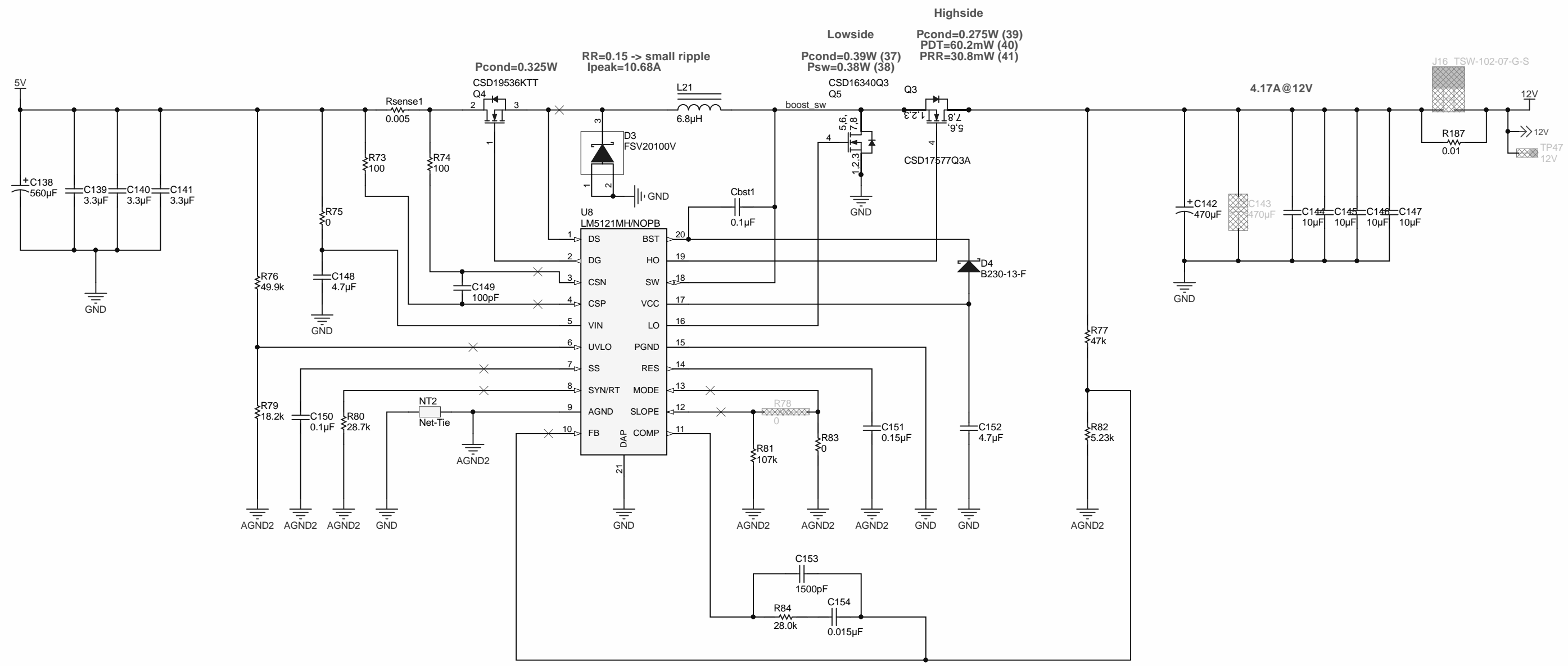
5Vout @ 10A Max.



Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 8/25/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 3 of 15
Drawn By:	File: ADAS_SF_Power_Buck_5V.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	

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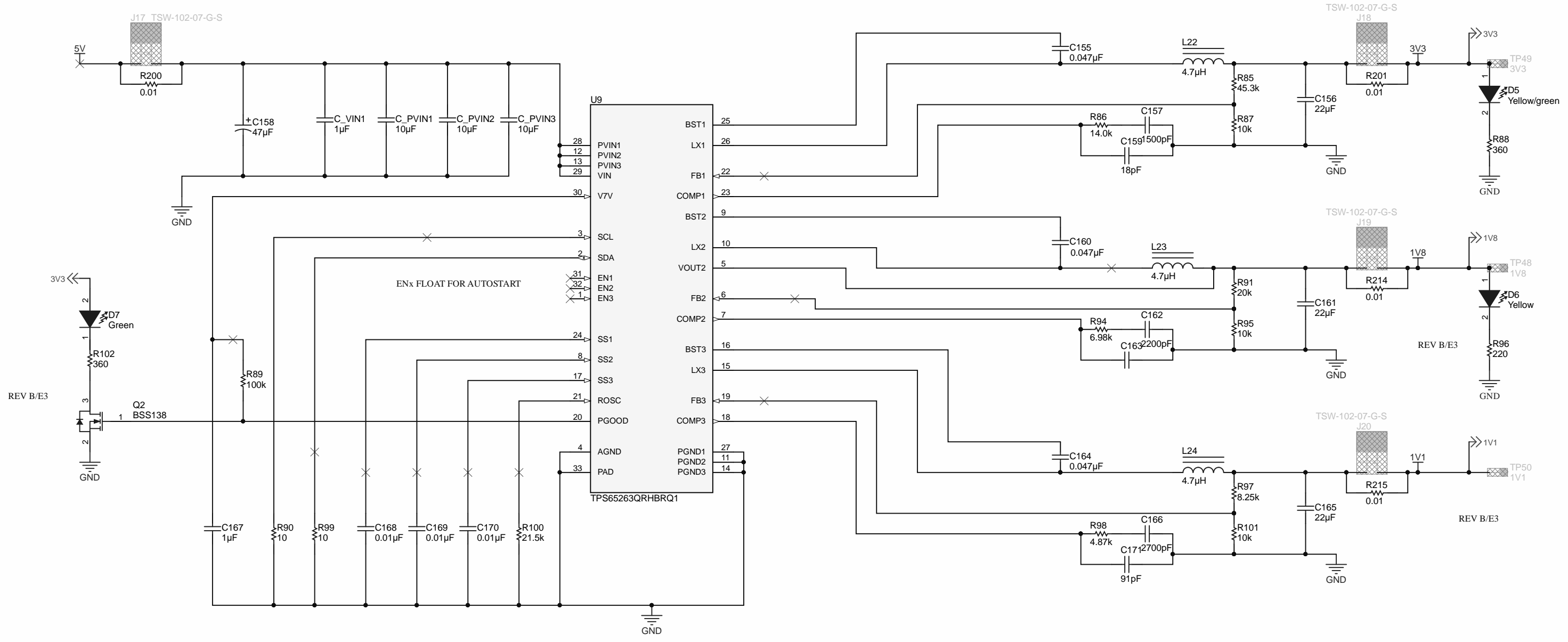




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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 8/25/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 4 of 15
Drawn By:	File: ADAS_SF_Power_Boost_12V.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	





REV B/E3

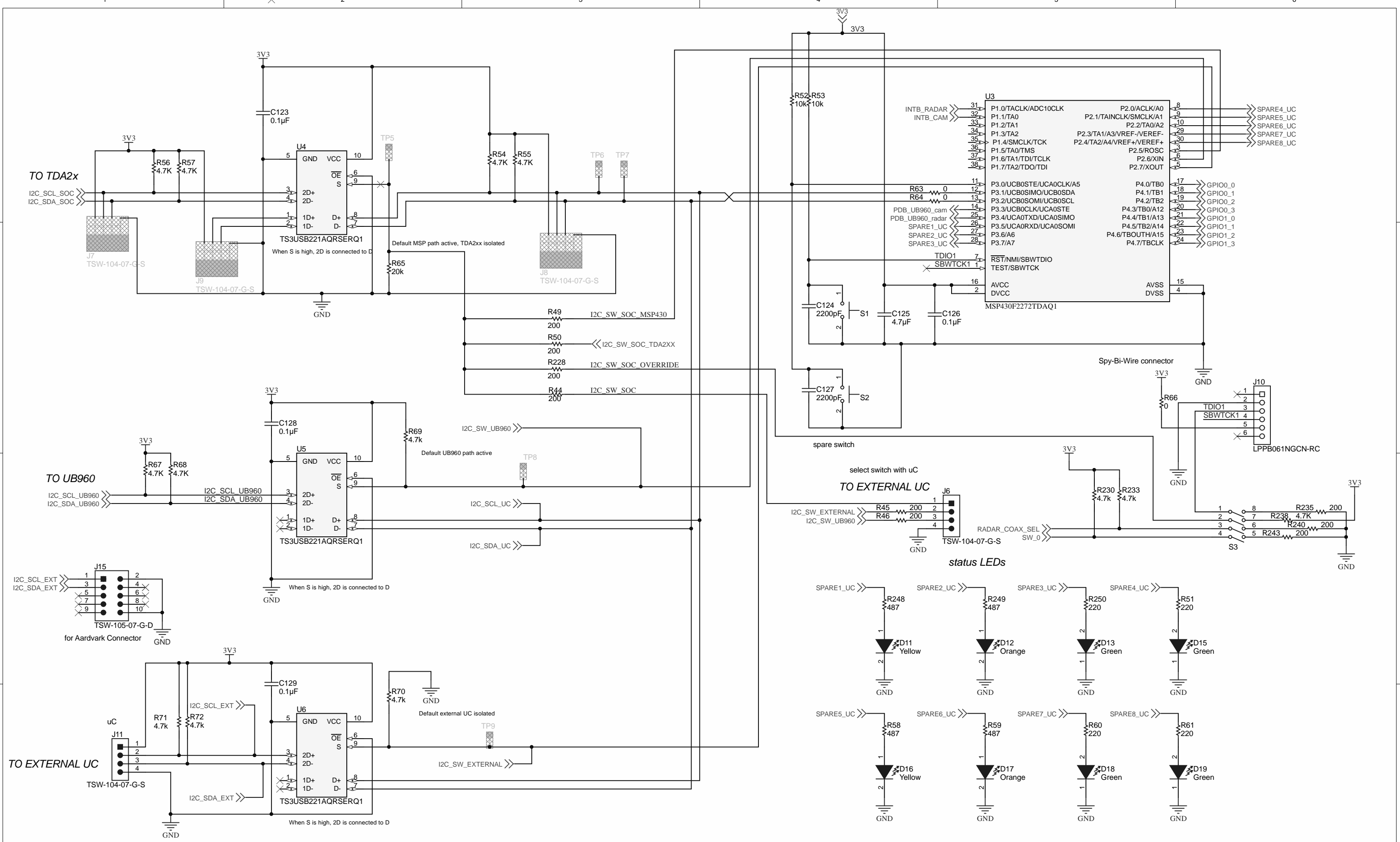
REV B/E3

REV B/E3

Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 9/25/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 5 of 15
Drawn By:	File: ADAS_SF_Power_Buck_3V3_1V8_1V1.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	

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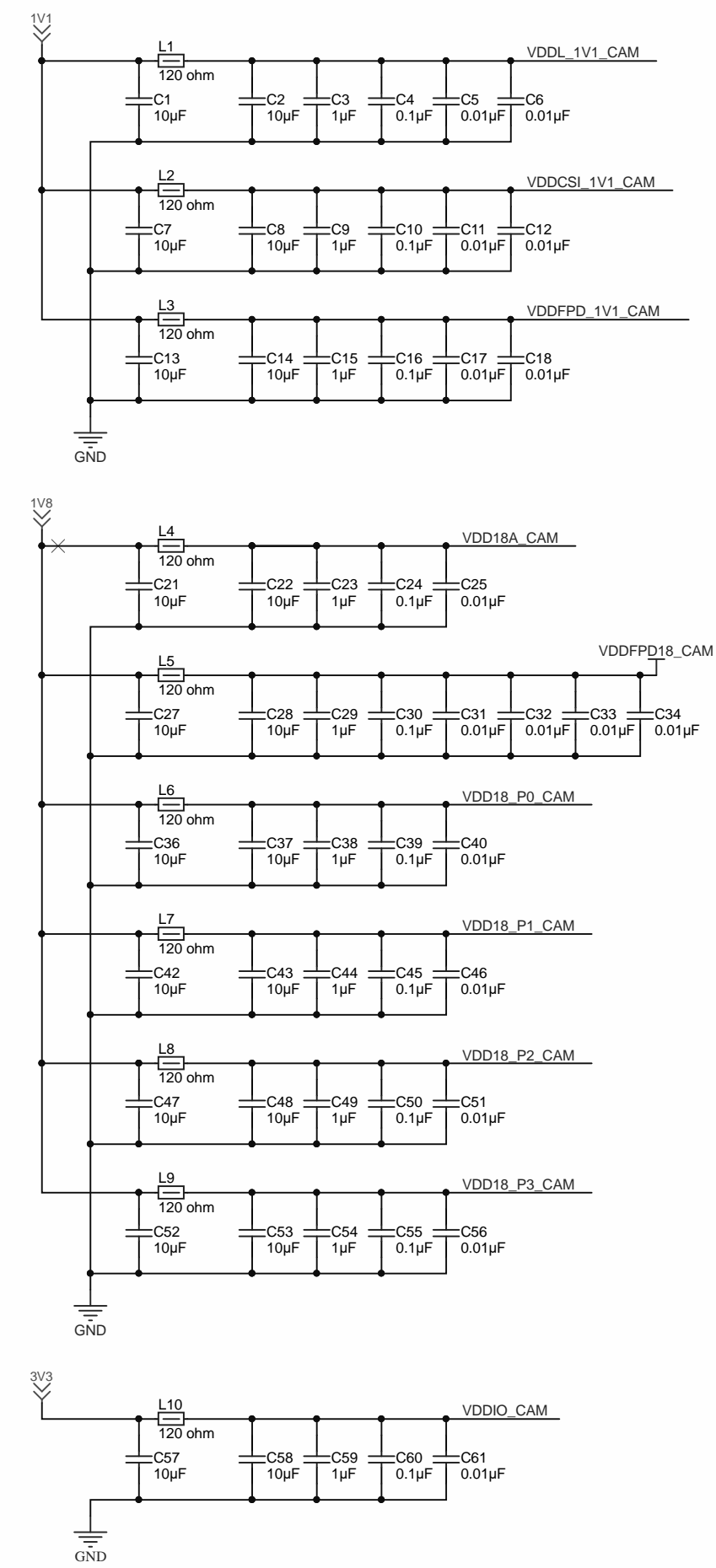
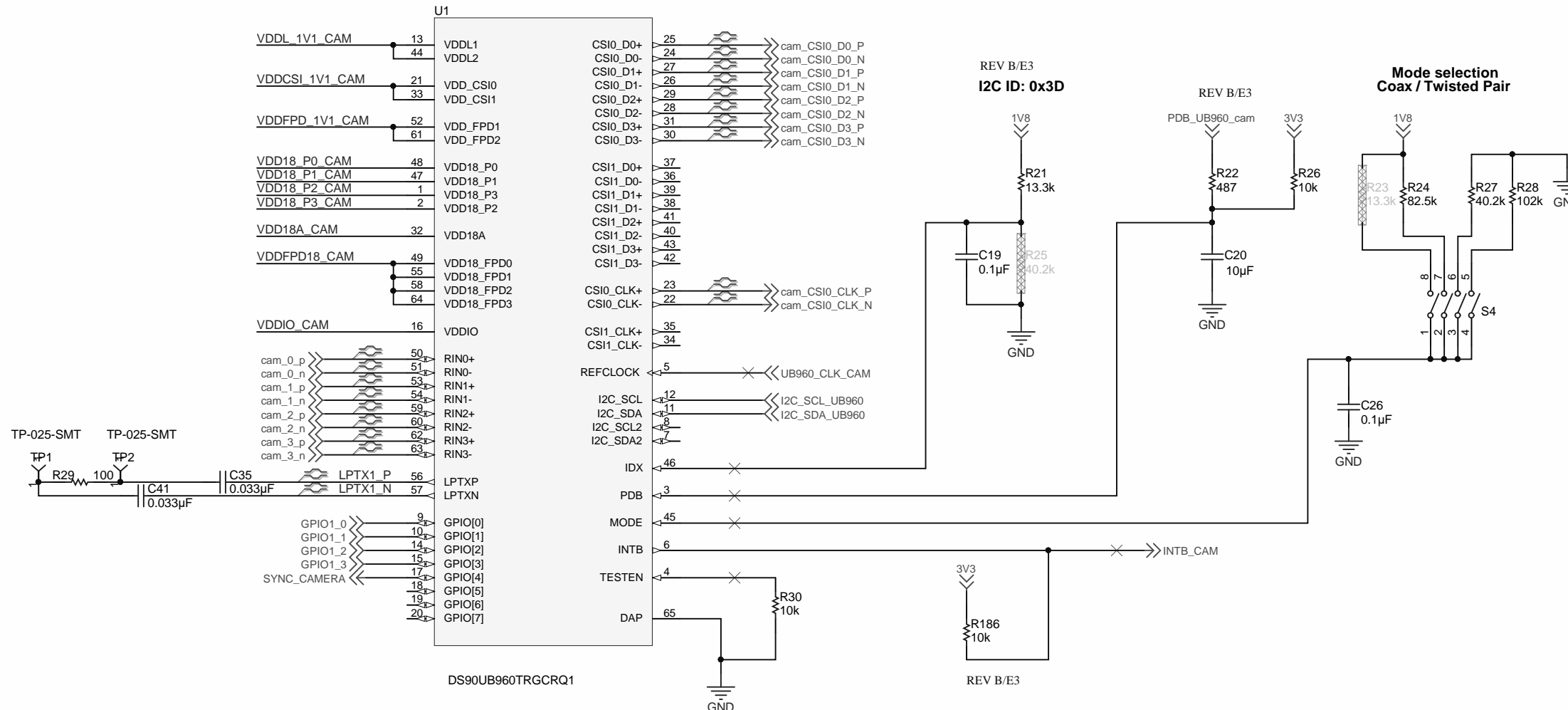




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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 6/15/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 6 of 15
Drawn By:	File: ADAS_SF_Data_MSP430.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	

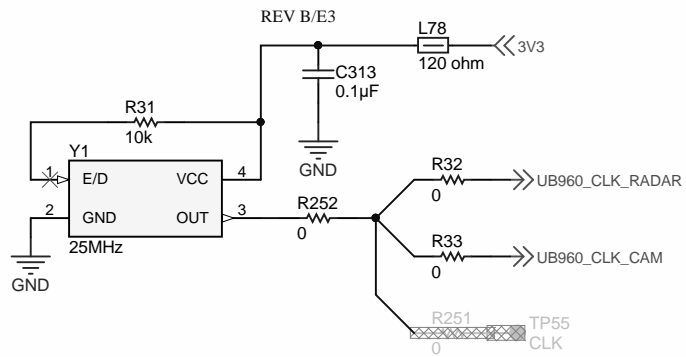




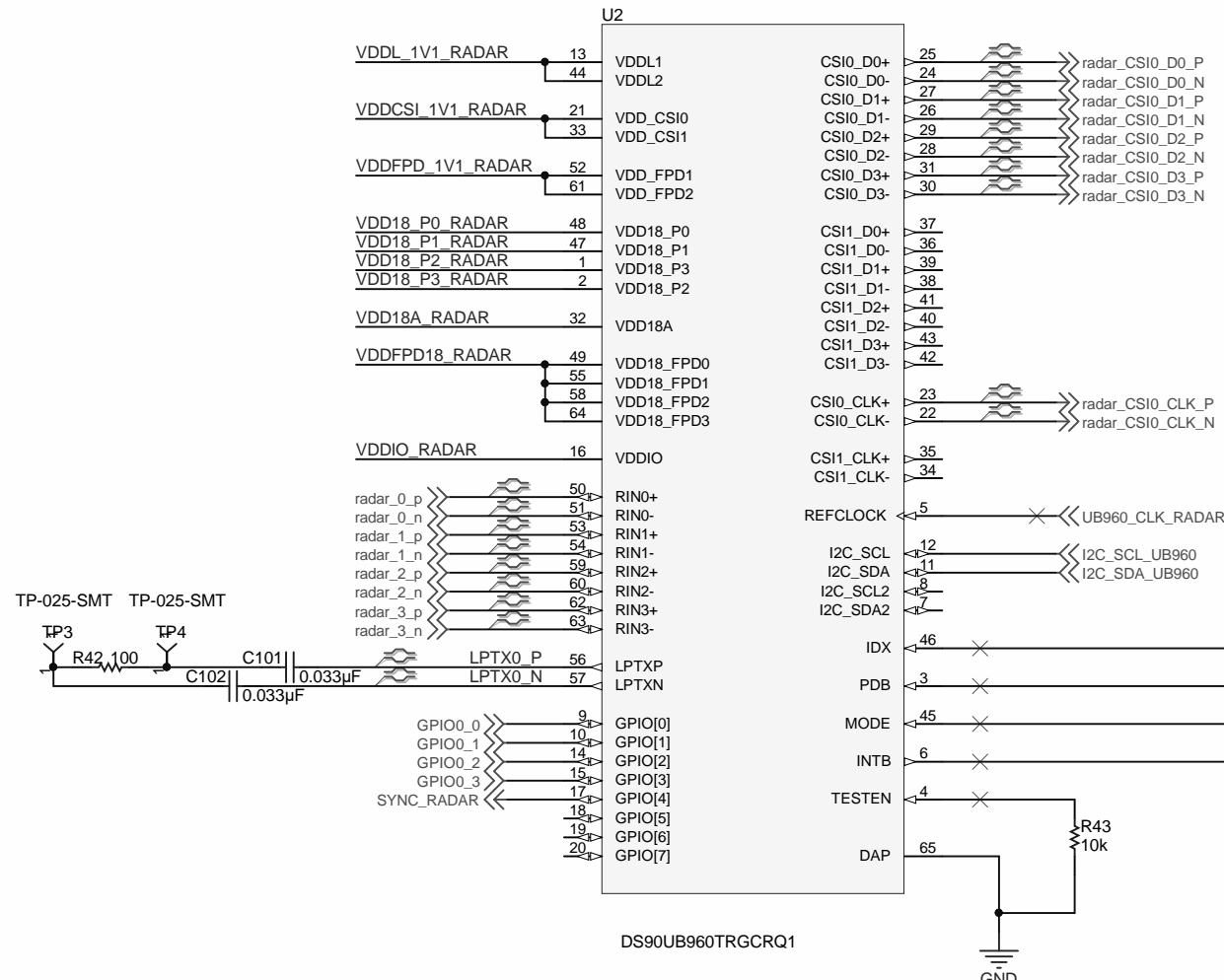
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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 10/18/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 7 of 15
Drawn By:	File: ADAS_SF_Data_Deserializer_Camera.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	

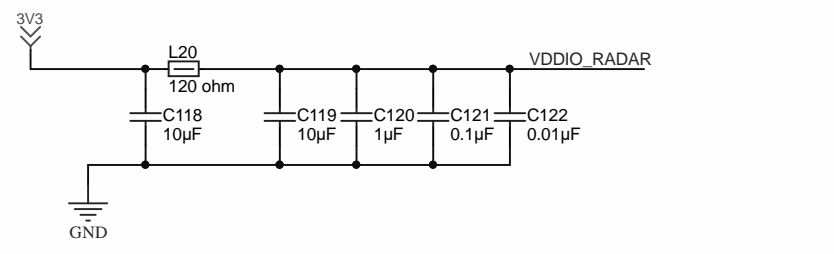
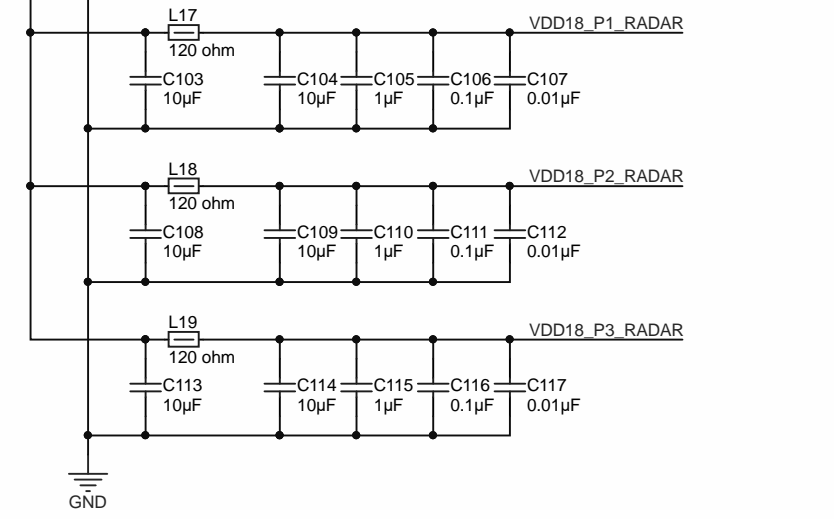
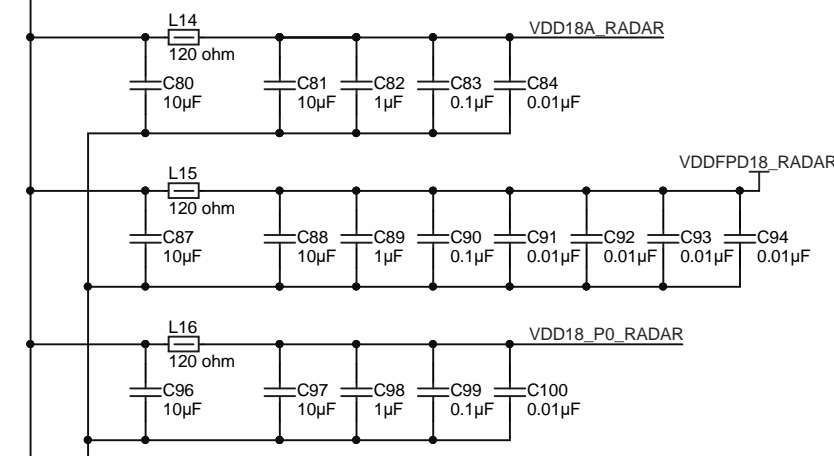
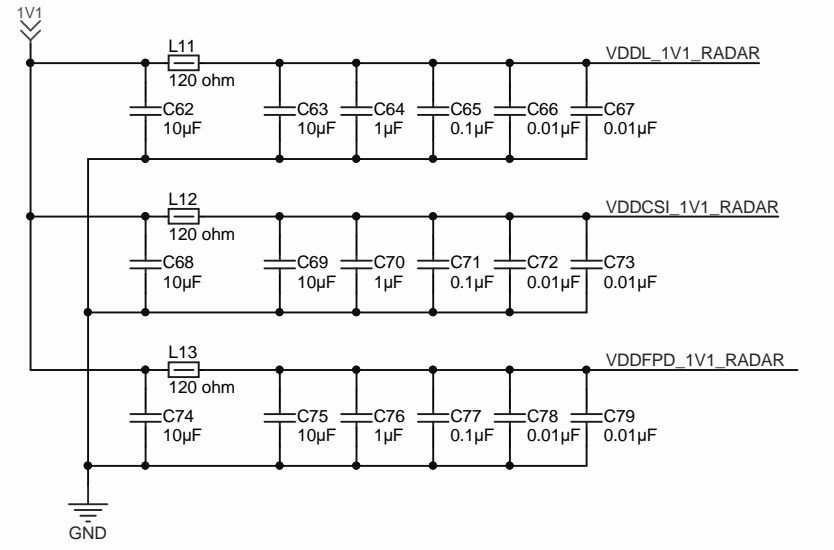
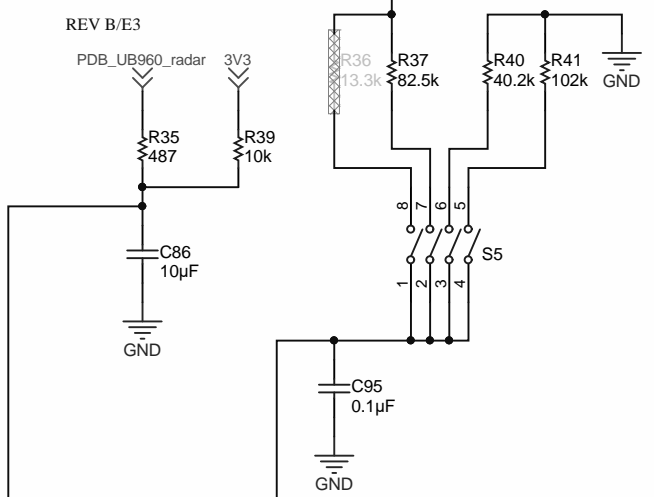




Place 10µF, 1µF, 0.1µF and 0.01µF bypass caps on bottom of board, close to U1 VDD pins



REV B/E3  
I2C ID: 0x36

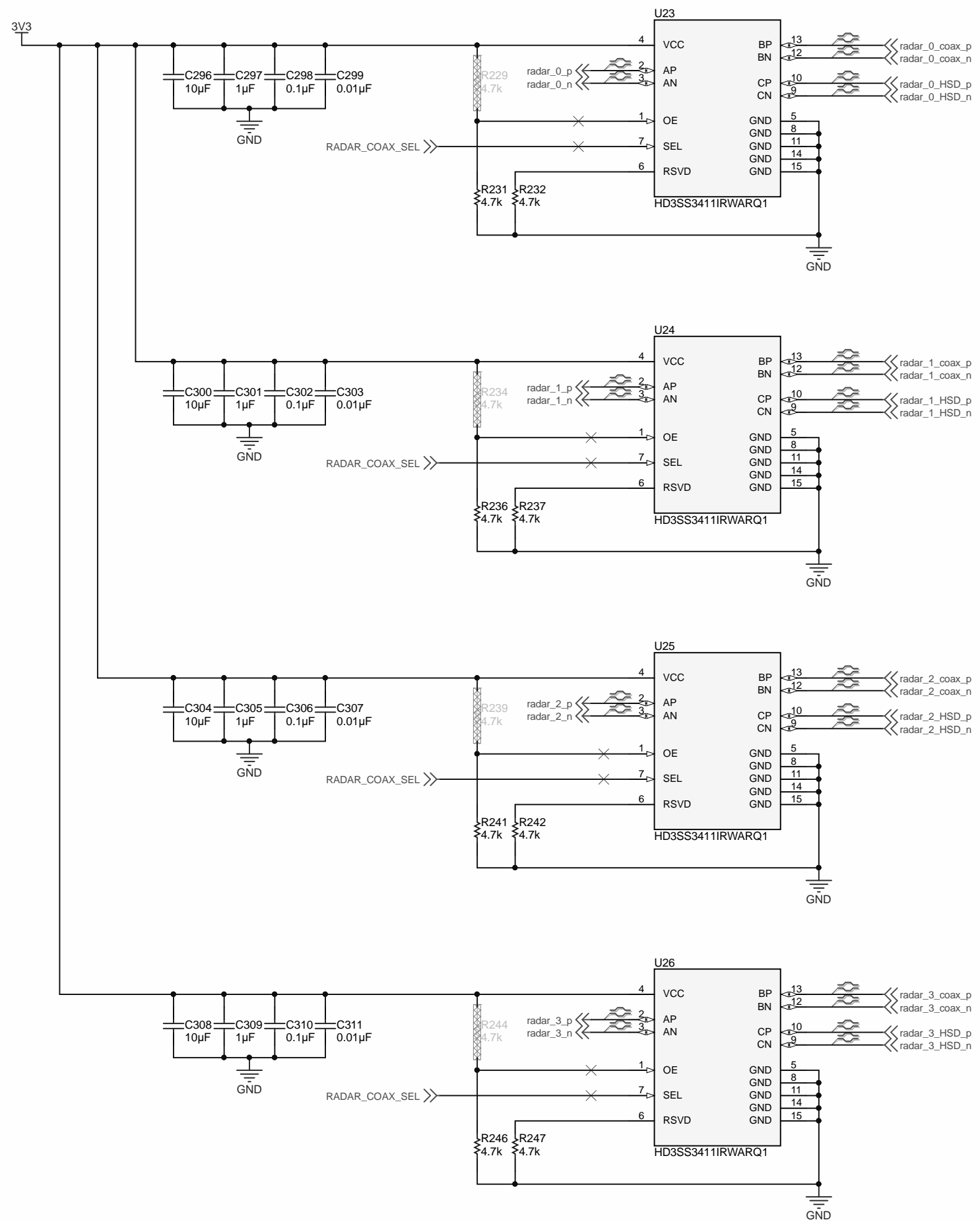


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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 9/26/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 8 of 15
Drawn By:	File: ADAS_SF_Data_Deserializer_Radar.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	







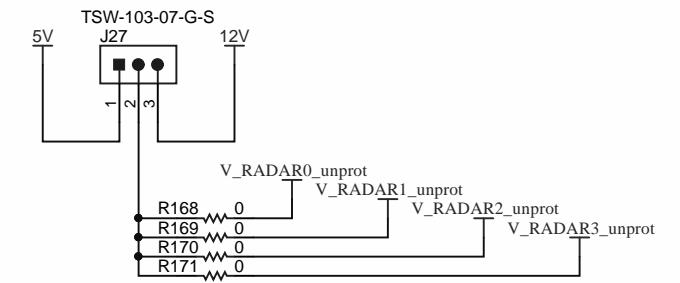
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TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 9 of 15
Drawn By:	File: ADAS_SF_Data_Radar_Mux.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	

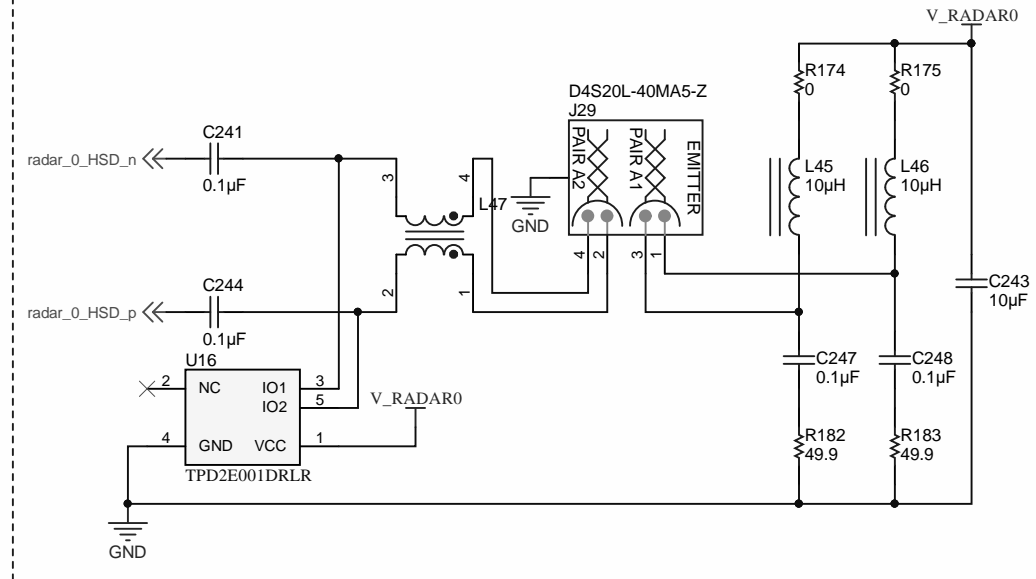


$R_{lim} = 89/R_{lim}(kohm)$   
 88.7k for ~1Amp  
 139k for .64Amp  
 1500pf for inrush

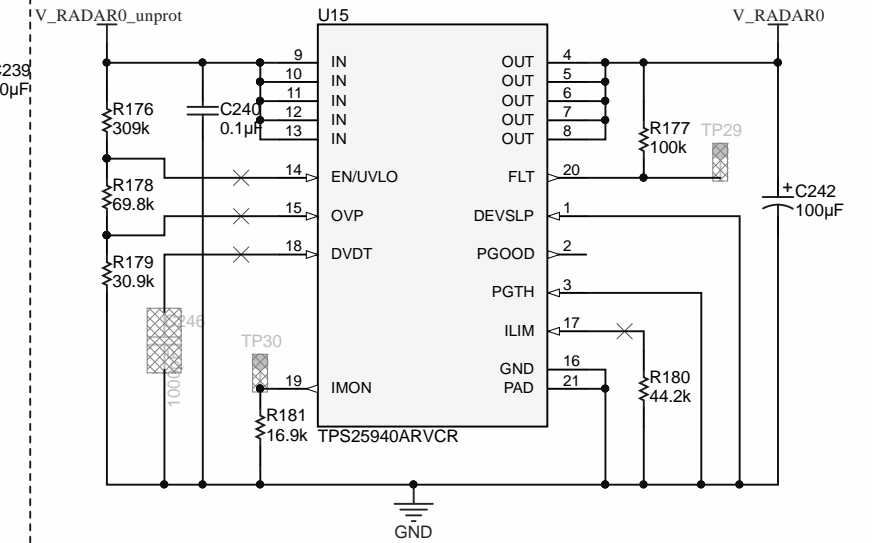
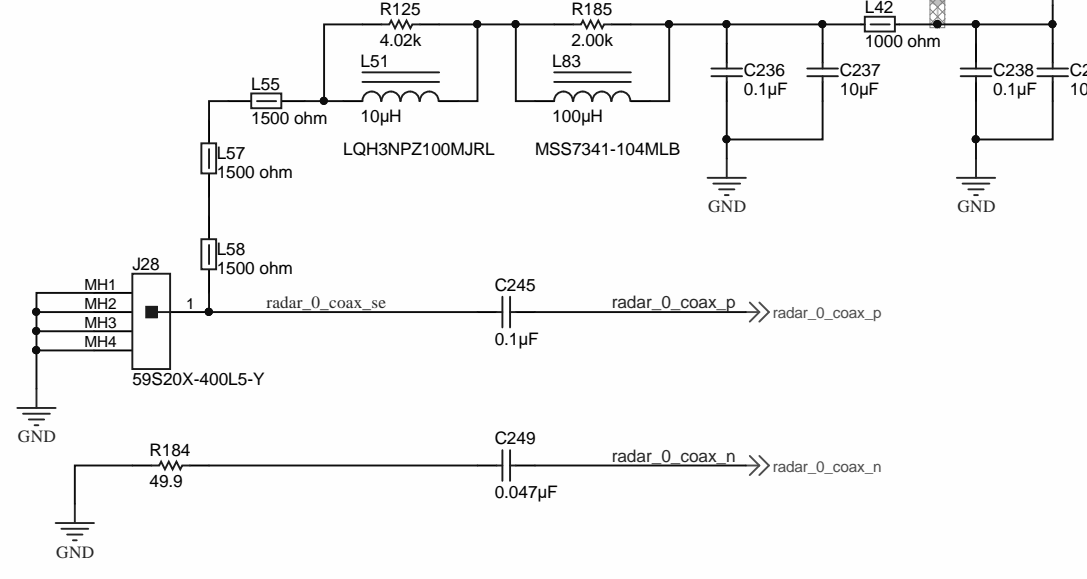
### Power Selection



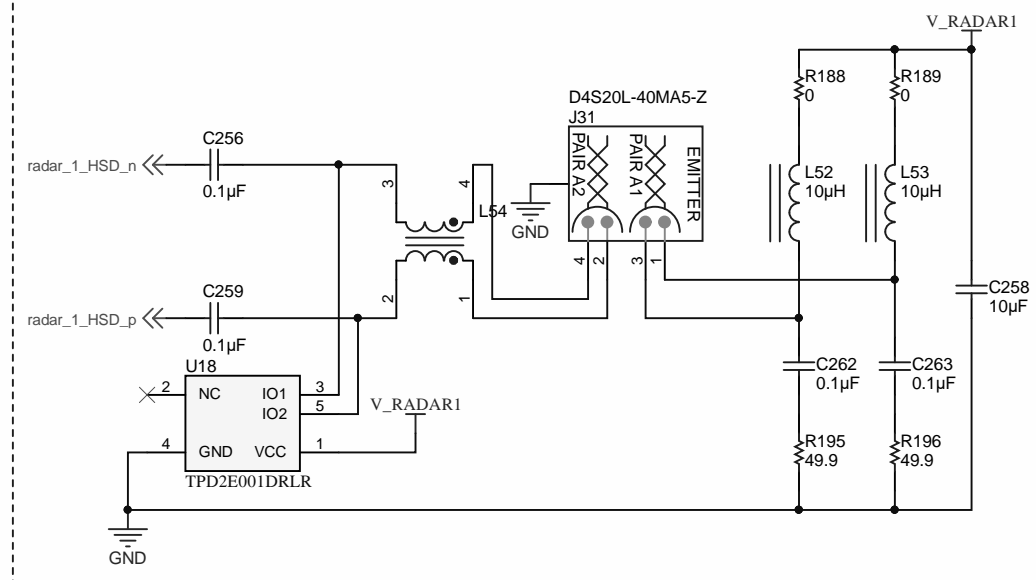
### Radar 0 - mount option 1: HSD



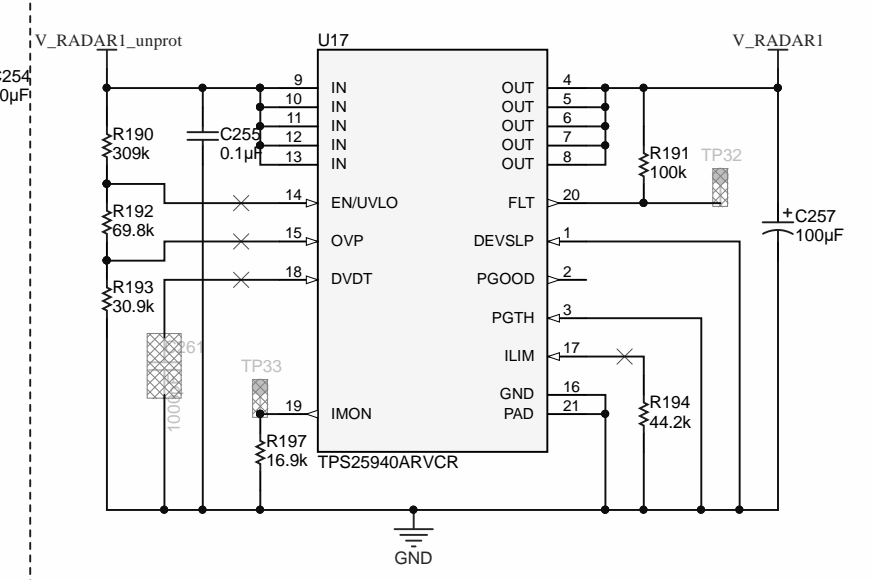
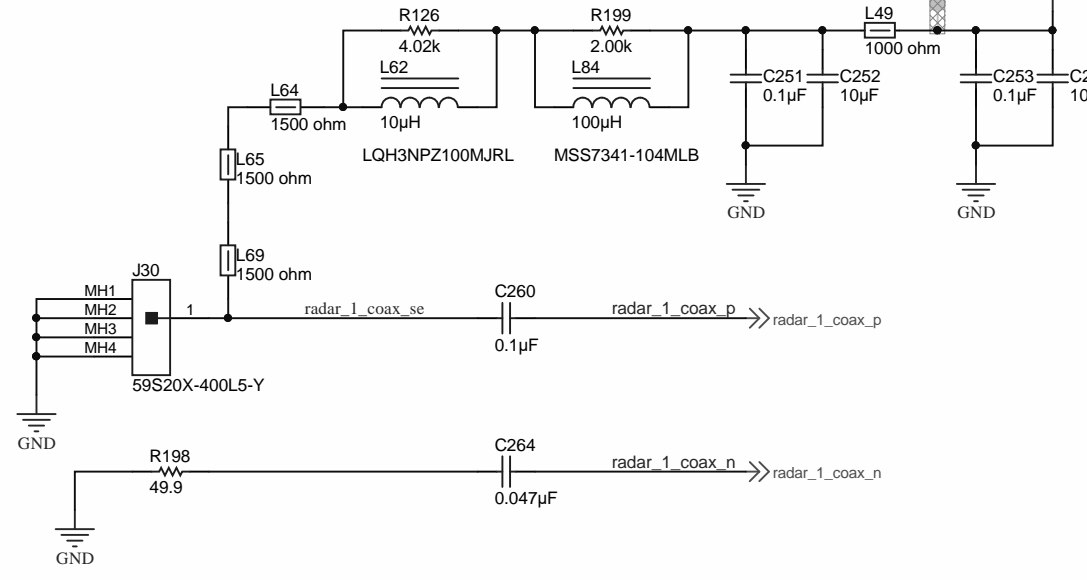
### Radar 0 - mount option 2: Coax



### Radar 1 - mount option 1: HSD



### Radar 1 - mount option 2: Coax

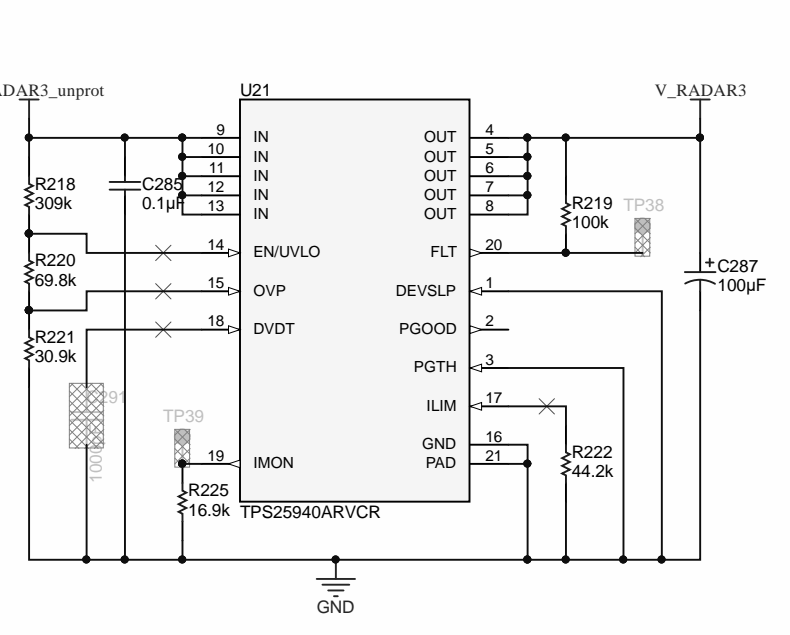
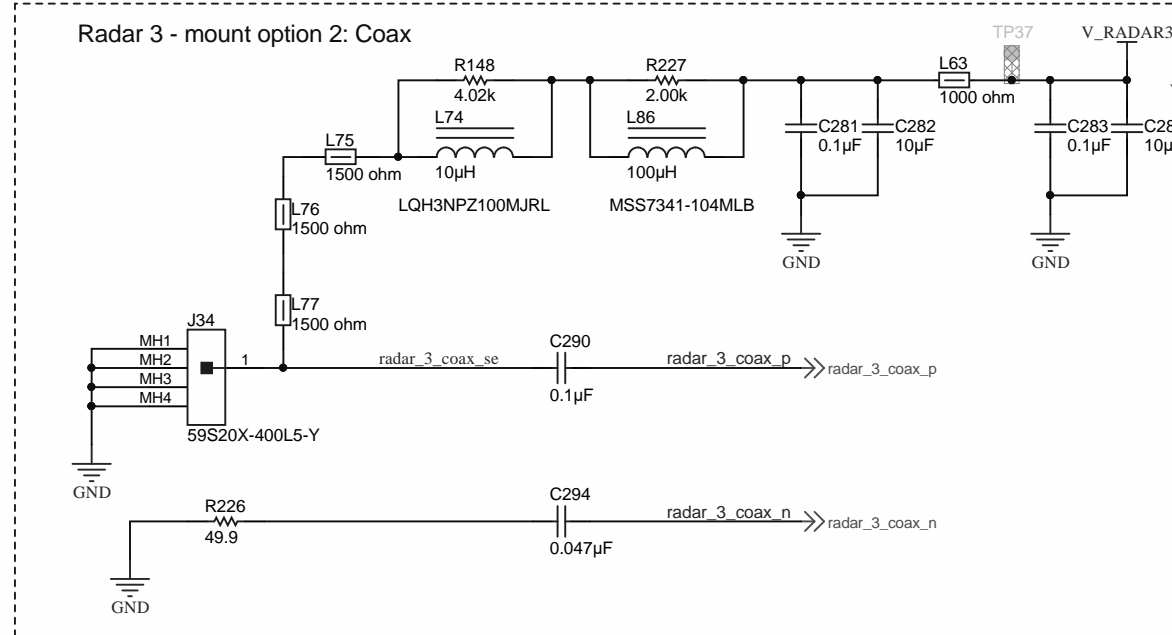
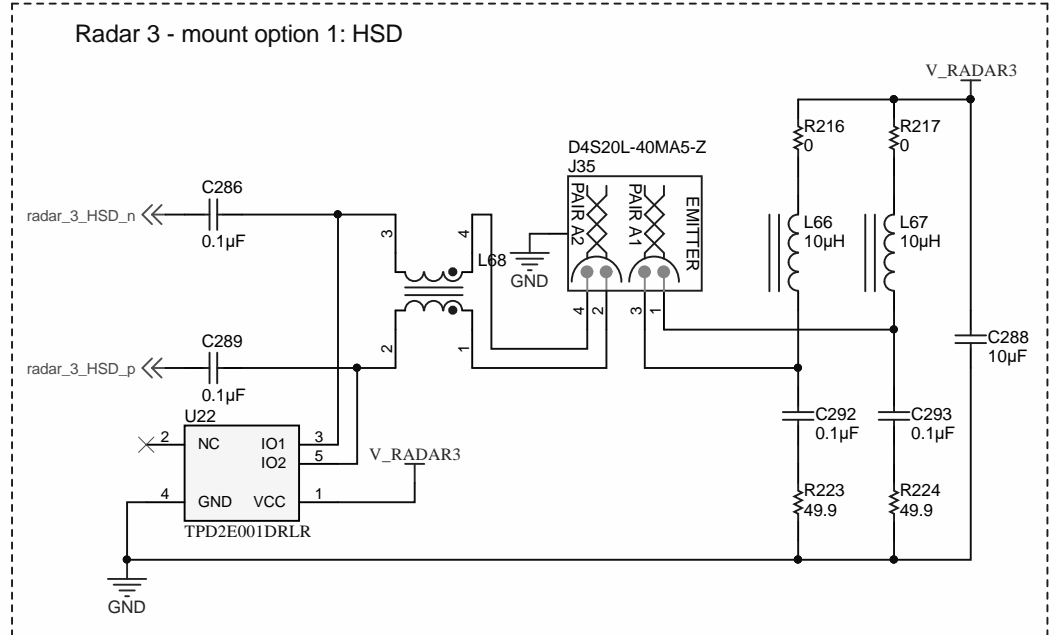
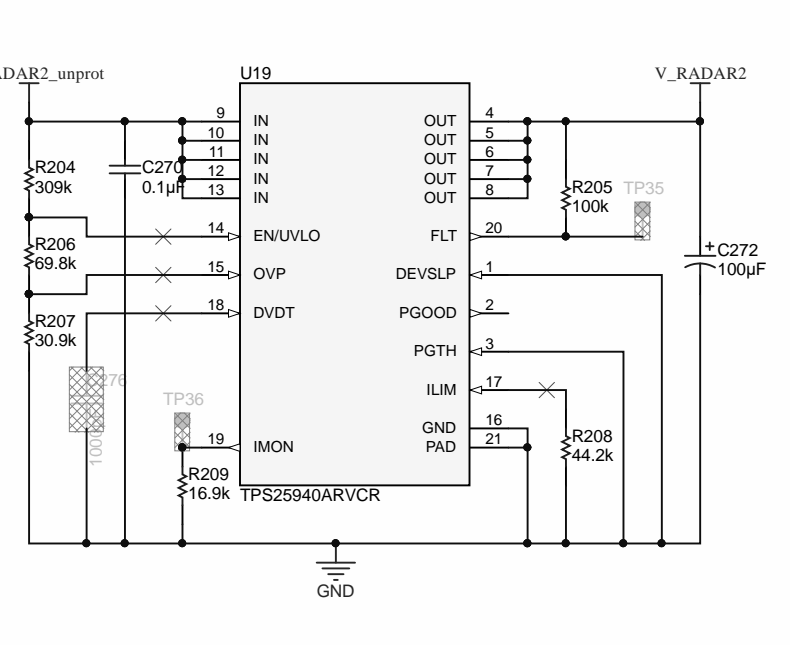
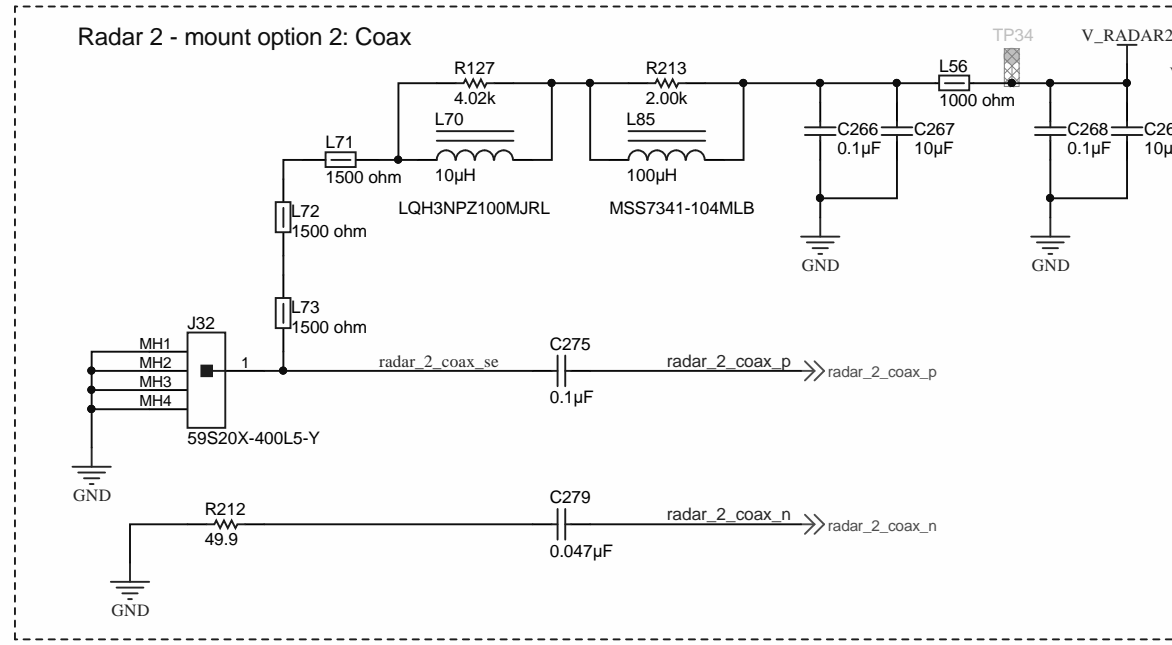
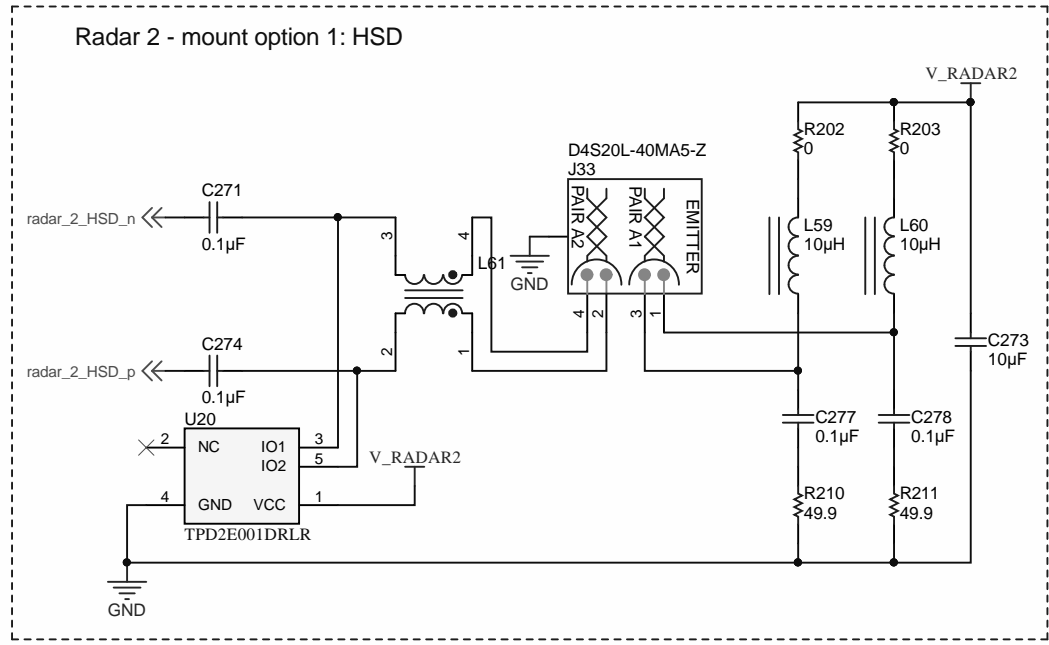


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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 1/3/2019
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 10 of 15
Drawn By:	File: ADAS_SF_Data_Connection_Radar_01.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	



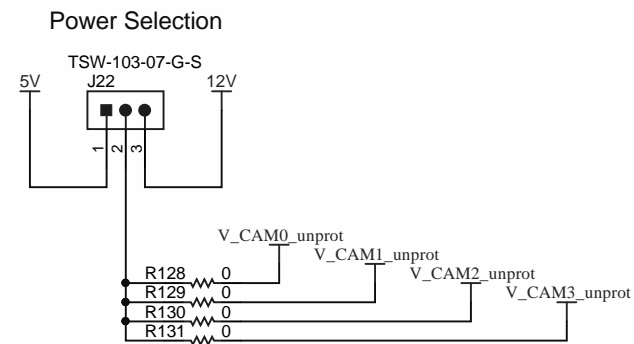
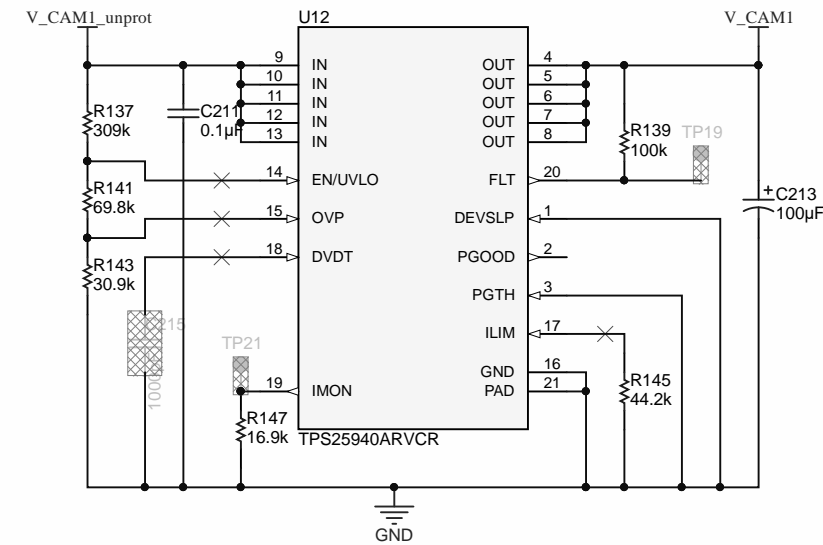
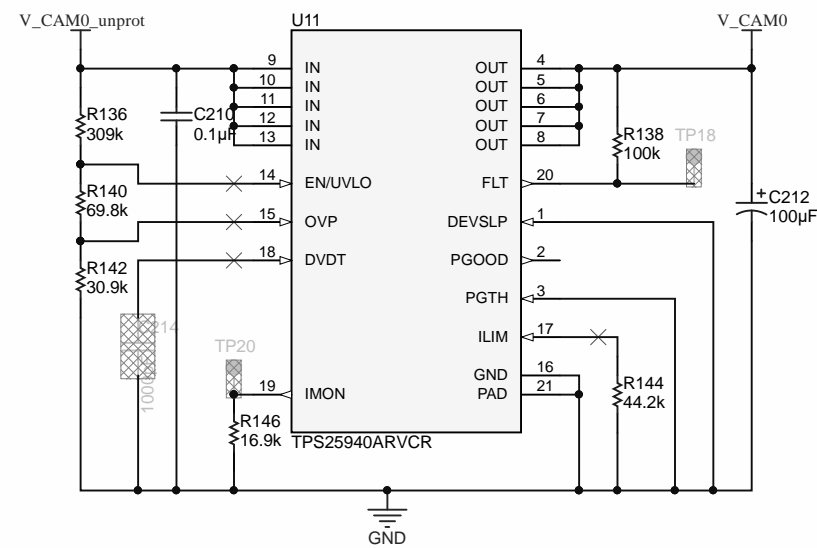
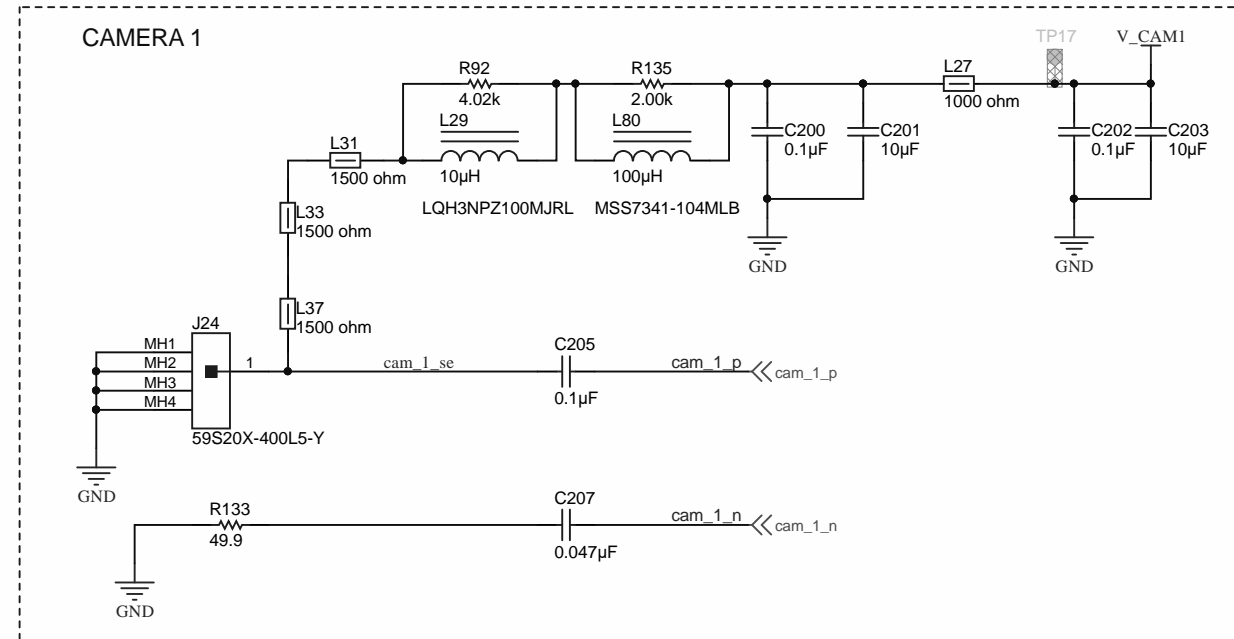
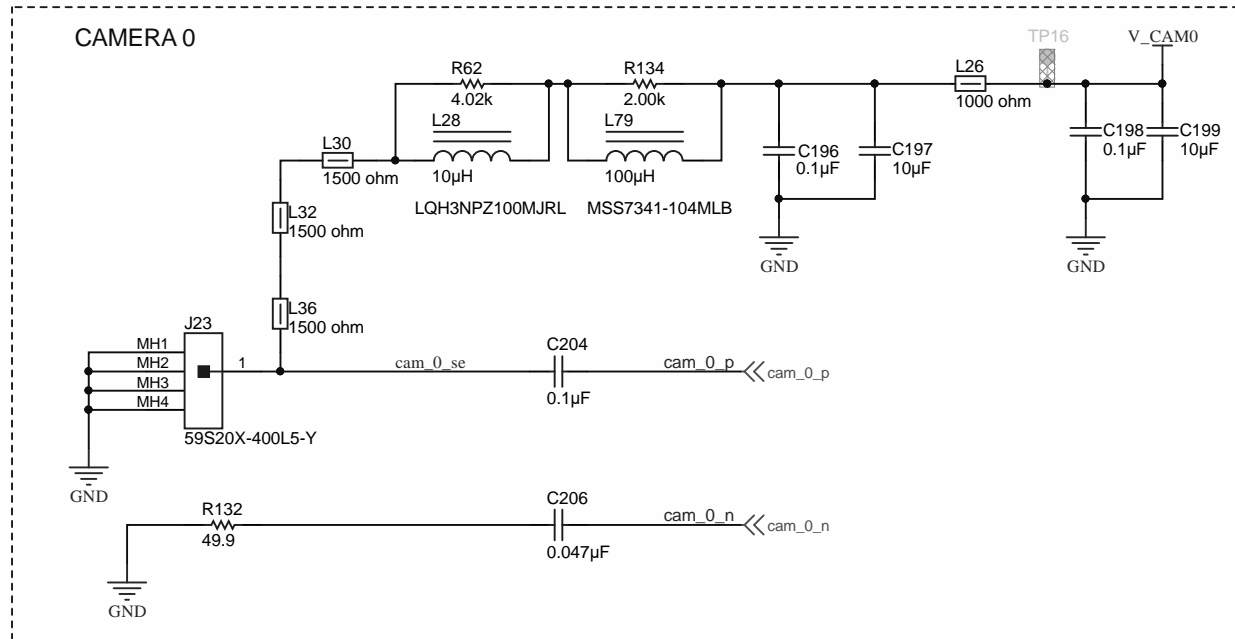
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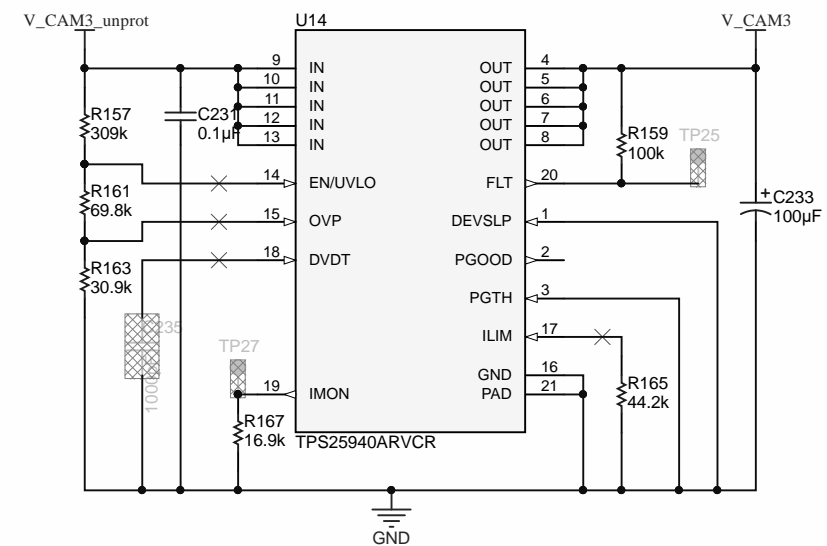
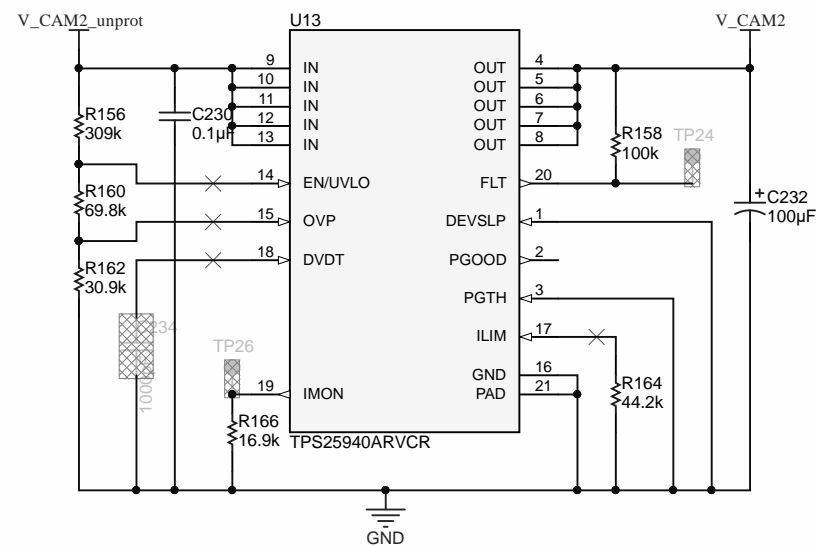
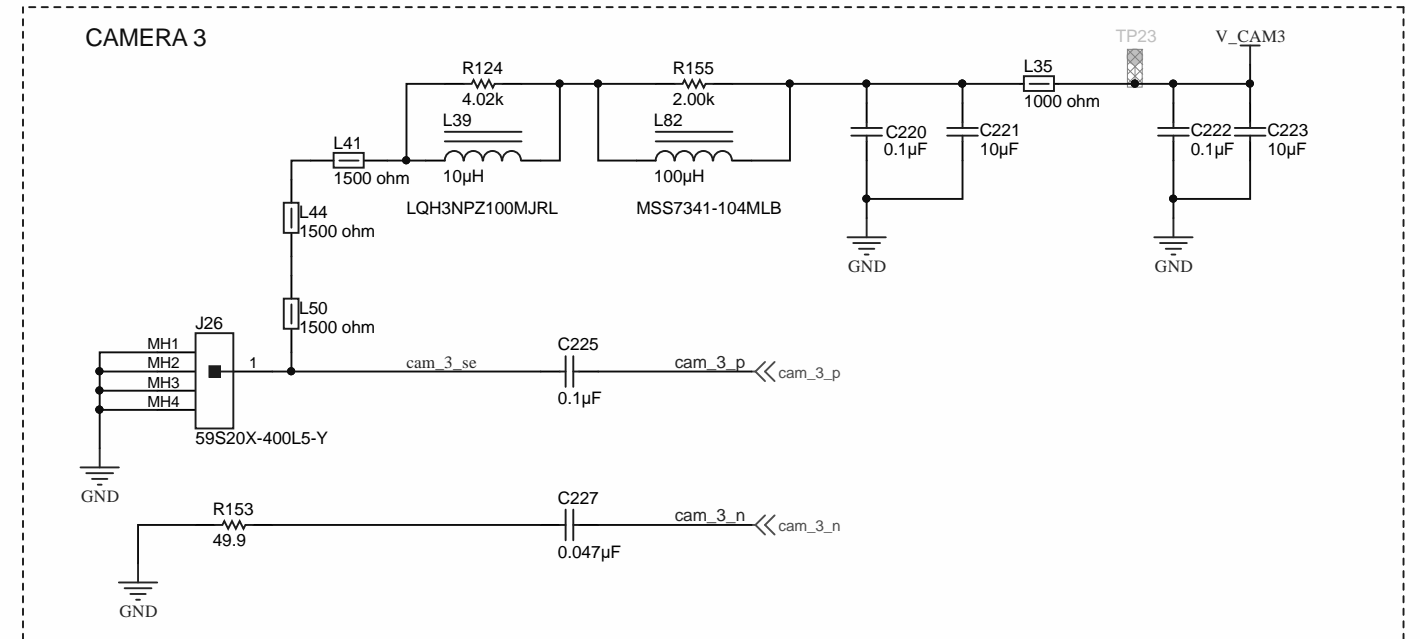
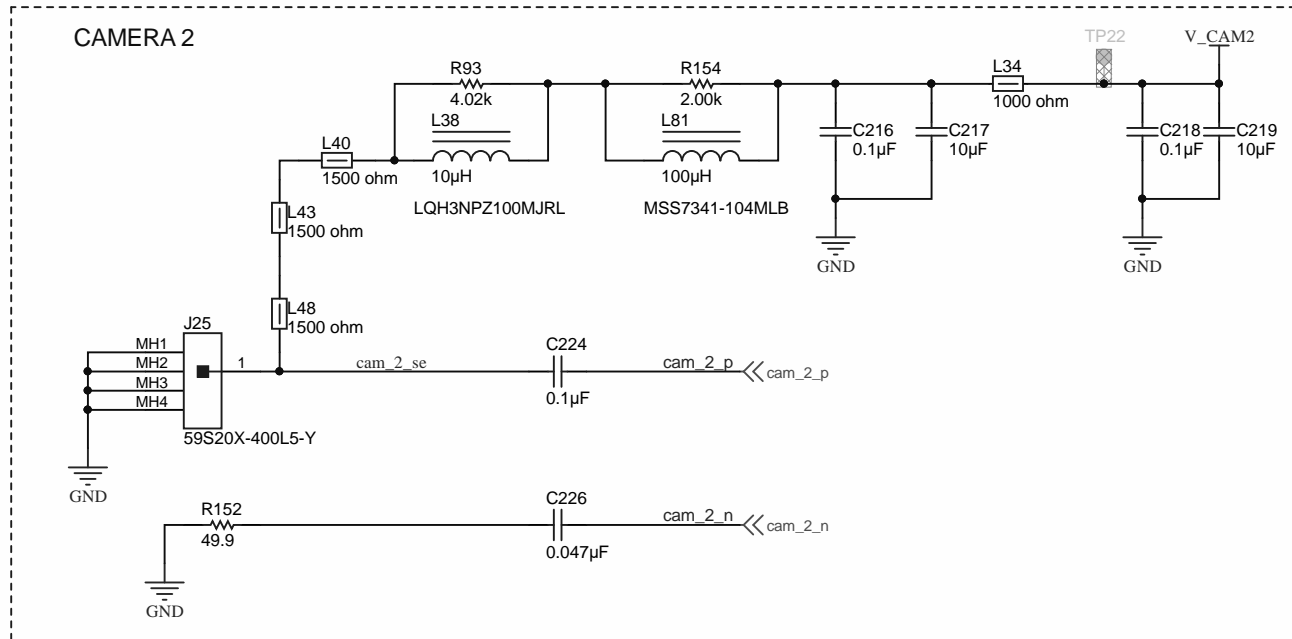
Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 1/3/2019
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 11 of 15
Drawn By:	File: ADAS_SF_Data_Connection_Radar_02.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	





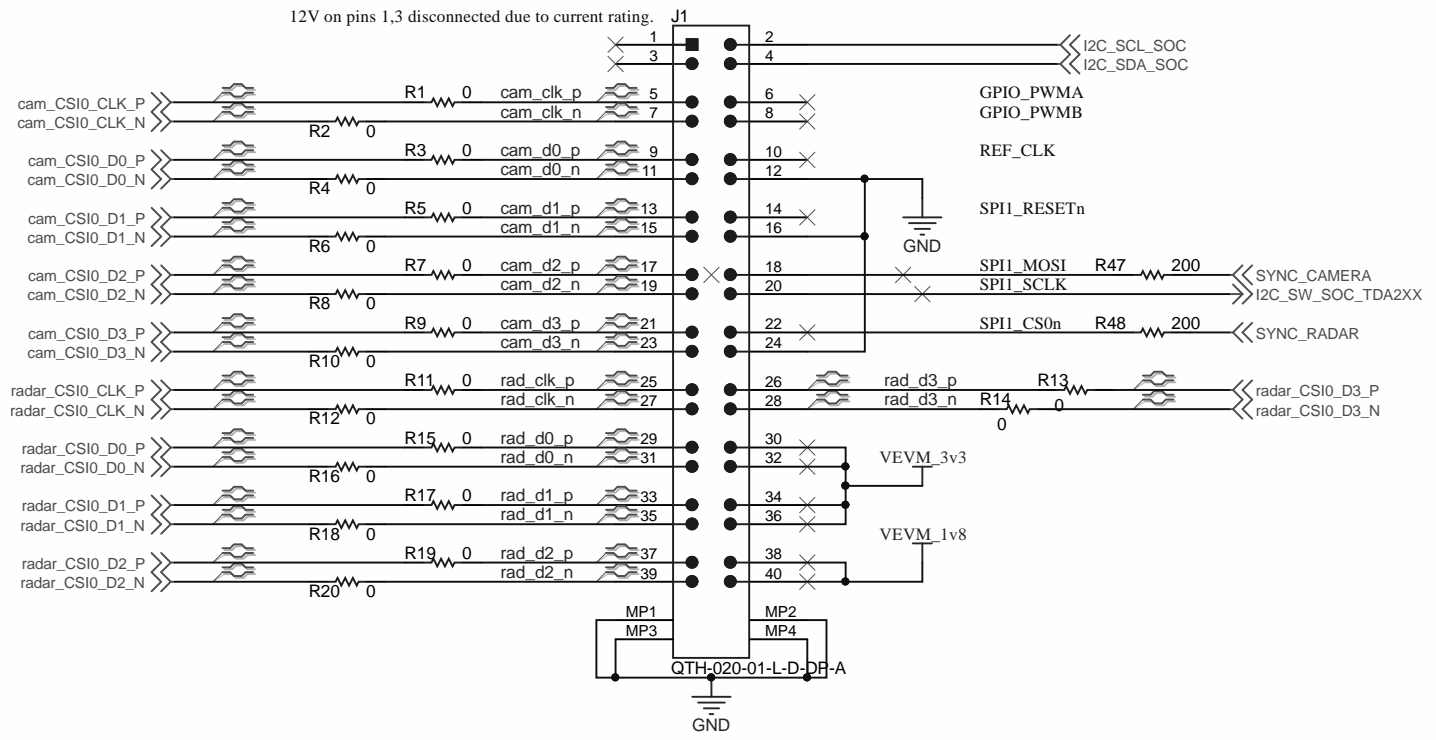
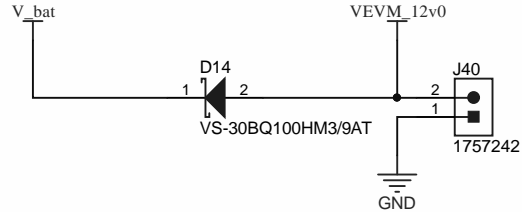
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Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	
Drawn By:	File: ADAS_SF_Data_Connection_Cam_01.SchDoc	
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	



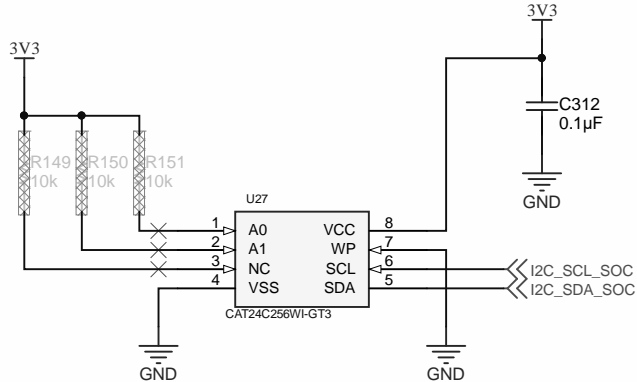
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SVN Rev: Not in version control	Assembly Variant: Populated_variant	
Drawn By:	File: ADAS_SF_Data_Connection_Cam_02.SchDoc	
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	



These signals are outputs on J6 ECO/Entry. On J6 Plus, they are bidirectional except for SCLK. PWM signals are only present on J6 Entry.

SPI1\_CS0n - GPIO7\_10  
 SPI1\_SCLK - GPIO7\_7 (OUTPUT ONLY)  
 SPI1\_MOSI - GPIO7\_9  
 SPI1\_MISO - GPIO7\_8

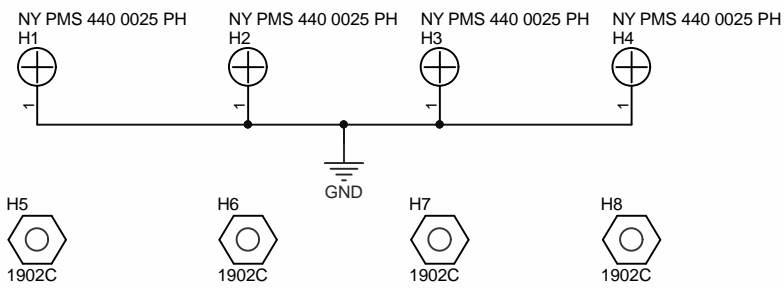


DEFAULT I2C 7-BIT ADDRESS 0x50

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Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 8/25/2017
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 14 of 15
Drawn By:	File: ADAS_SF_Data_CSI2_Connector.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: <a href="http://www.ti.com/support">http://www.ti.com/support</a>	





PCB Number: 518520C  
PCB Rev: C

PCB LOGO  
Texas Instruments

PCB LOGO  
RoHS Exempt

PCB LOGO  
FCC disclaimer

You should delete the nylon screws/standoffs and/or the bumpers as needed for your design (or substitute other parts from Hardware.IntLib). Bumpers are cheaper, but provide less clearance.

Deleting anything else from this page may result in your EVM submission being rejected (until you add them back).

Update the Label Text in the Label Table as needed for each Assembly Variant.

You should delete this note too.

Variant/Label Table	
Variant	Label Text
001	ChangeMe!
002	ChangeMe!

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.

Orderable: EVM_orderable	Designed for: Public Release	Mod. Date: 12/20/2018
TID #: N/A	Project Title: ADAS Sensor Fusion Board	
Number: 518520C	Rev: E4	Sheet Title:
SVN Rev: Not in version control	Assembly Variant: Populated_variant	Sheet: 15 of 15
Drawn By:	File: ADAS_SF_rev1_Hardware.SchDoc	Size: B
Engineer: Spectrum Digital	Contact: http://www.ti.com/support	

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