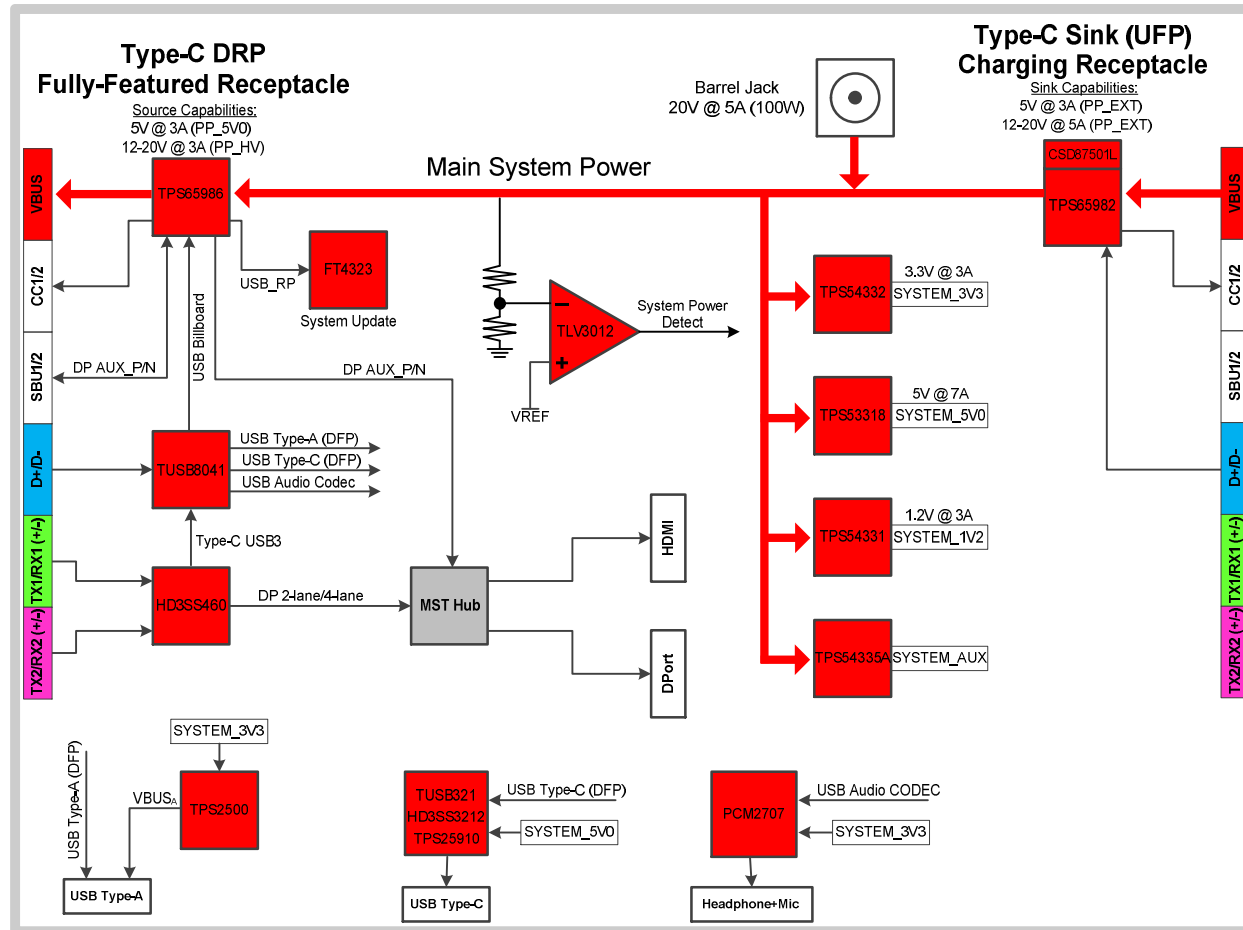
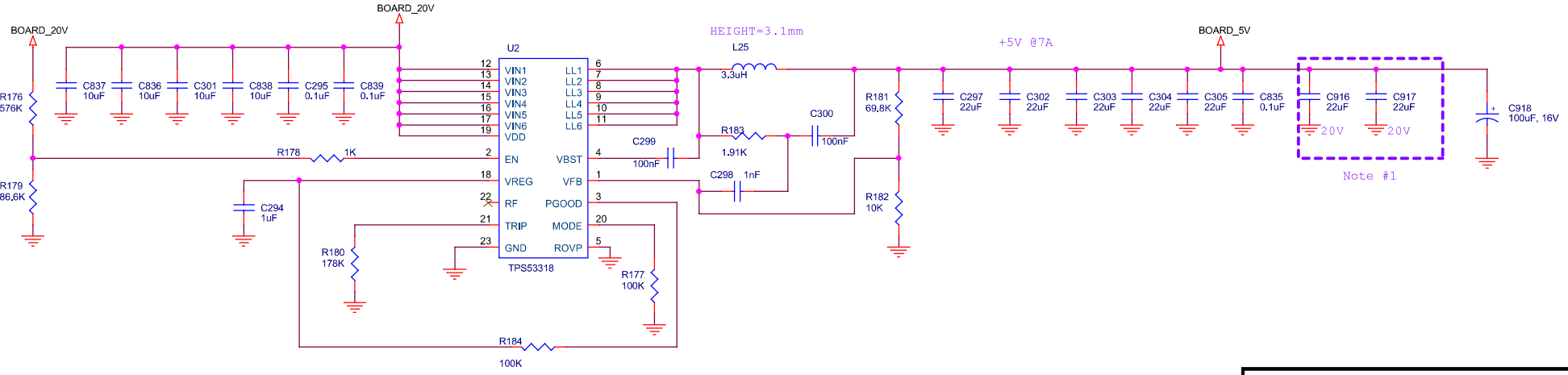
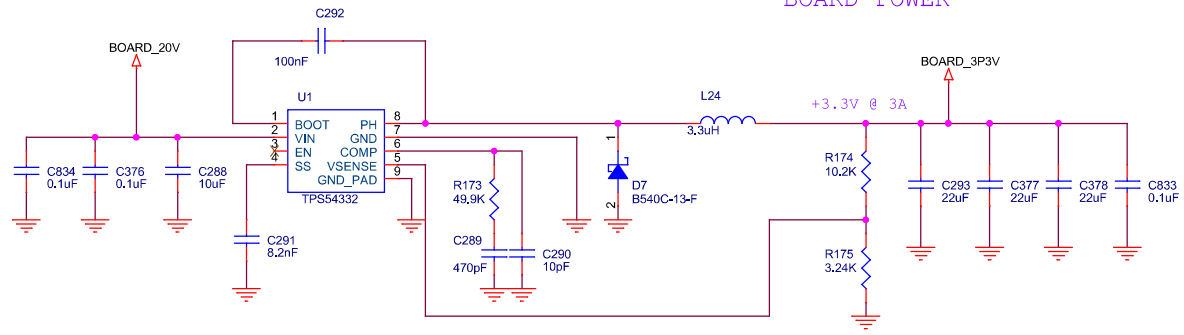


# TIDA-01243 USB-C™ Mini Dock EVM

## Block Diagram



BOARD POWER

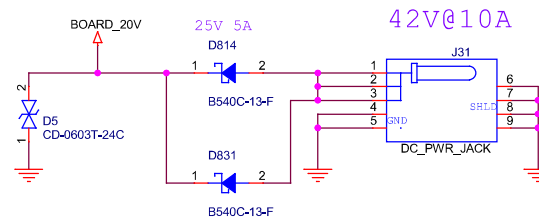
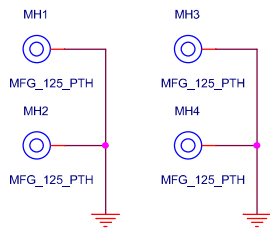
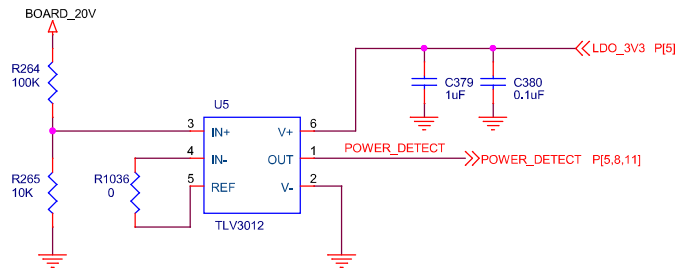
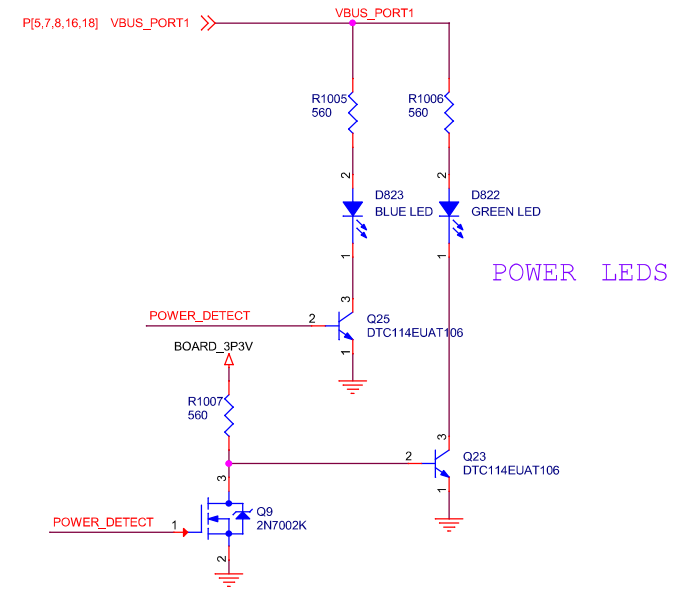
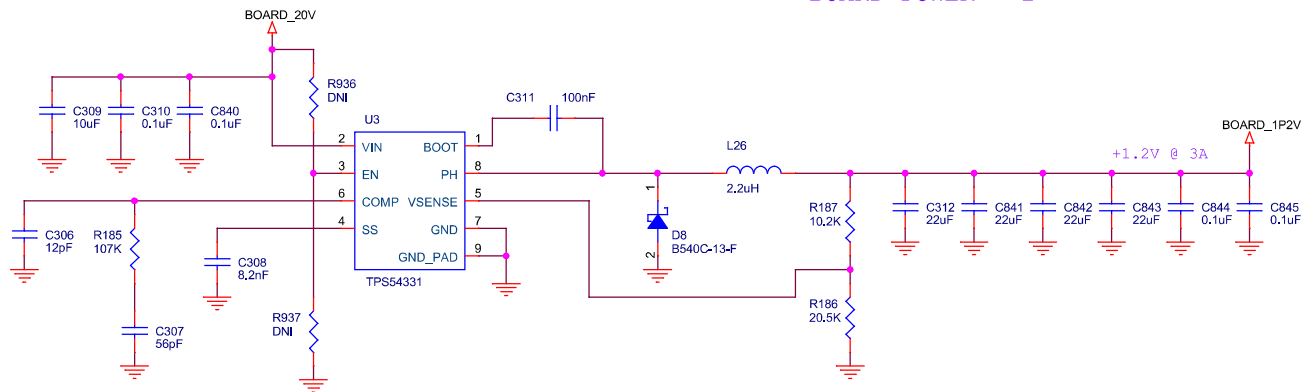


**TEXAS INSTRUMENTS**

TIDA-01243: POWER  
RevCode = B

SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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BOARD POWER - 2



**TEXAS INSTRUMENTS**

TIDA-01243: POWER2  
RevCode = B

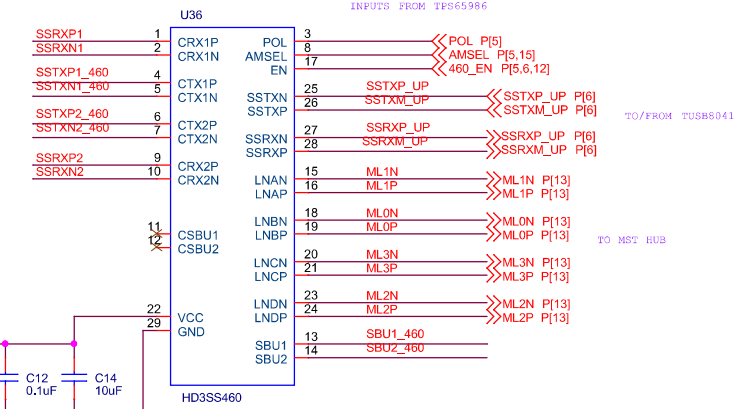
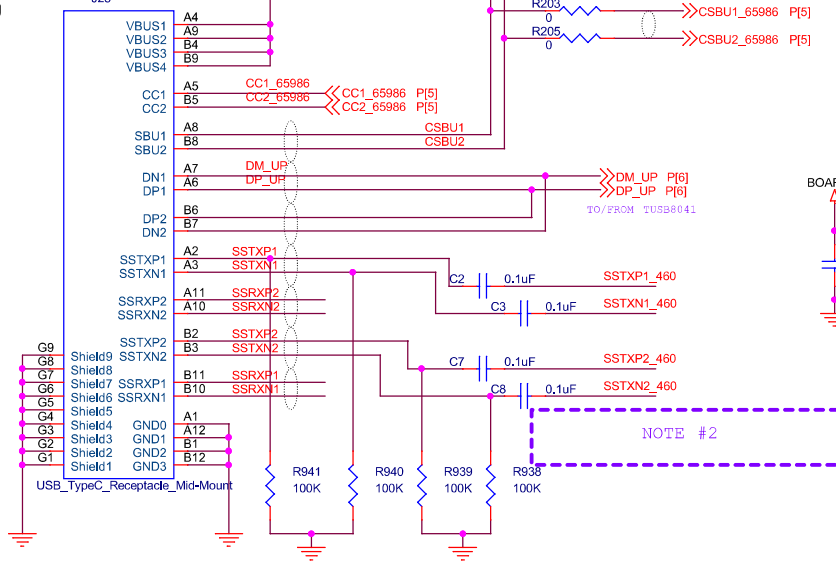
SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# USB TYPE C FRONT END

## TypeC Connector Pin Mapping

GND	A1	B12	GND
SSTXP1	A2	B11	SSRXP2
SSTXP2	A2	B11	SSRXP1
SSTXN1	A3	B10	SSRXN1
SSTXN2	A3	B10	SSRXN2
VBUS	A4	B9	VBUS
CC1	A5	B8	SBU2
DP1	A6	B7	DN2
DN1	A7	B6	DP2
SBU1	A8	B5	CC2
VBUS	A9	B4	VBUS
SSRXN2	A10	B3	SSTXN2
SSRXN1	A10	B3	SSTXN1
SSRXP2	A11	B2	SSTXP2
SSRXP1	A11	B2	SSTXP1
GND	A12	B1	GND

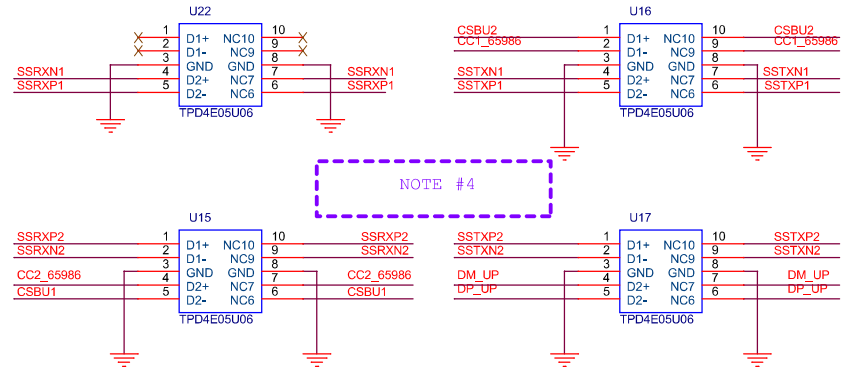
## Type C Connector



NOTE: ALL DIFF PAIRS ARE ROUTED 85 TO 90 OHMS DIFFERENTIAL AND 59 OHMS COMMON MODE. ALL OTHER TRACES ARE 50 OHM.

NOTE #3

NOTE #4



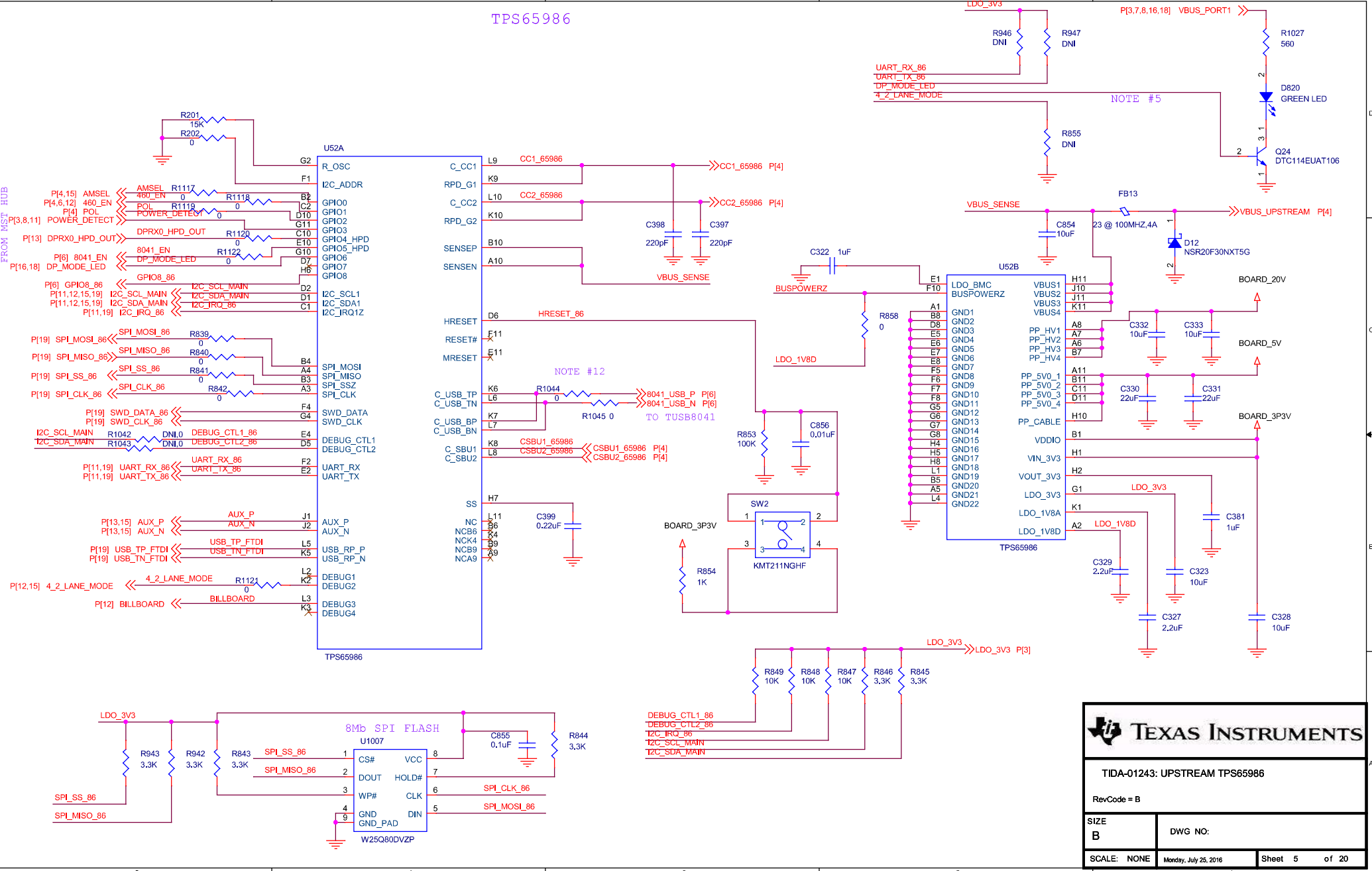
## TEXAS INSTRUMENTS

TIDA-01243: USB TYPE-C

RevCode = B

SIZE <b>B</b>	DWG NO:
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TPS65986



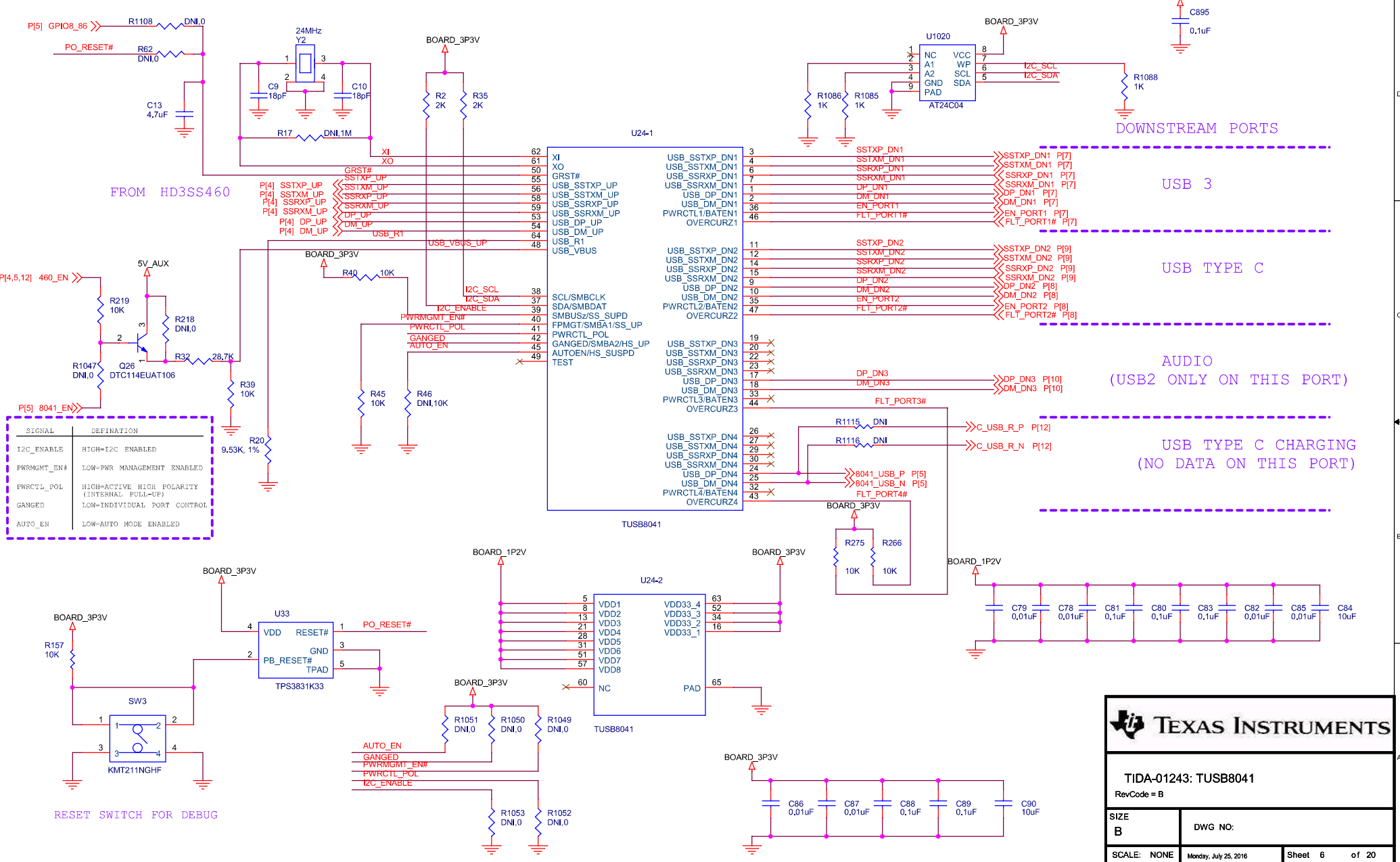
**TEXAS INSTRUMENTS**


TIDA-01243: UPSTREAM TPS65986

RevCode = B

SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# TUSB 4 PORT USB3.0 HUB





## TEXAS INSTRUMENTS

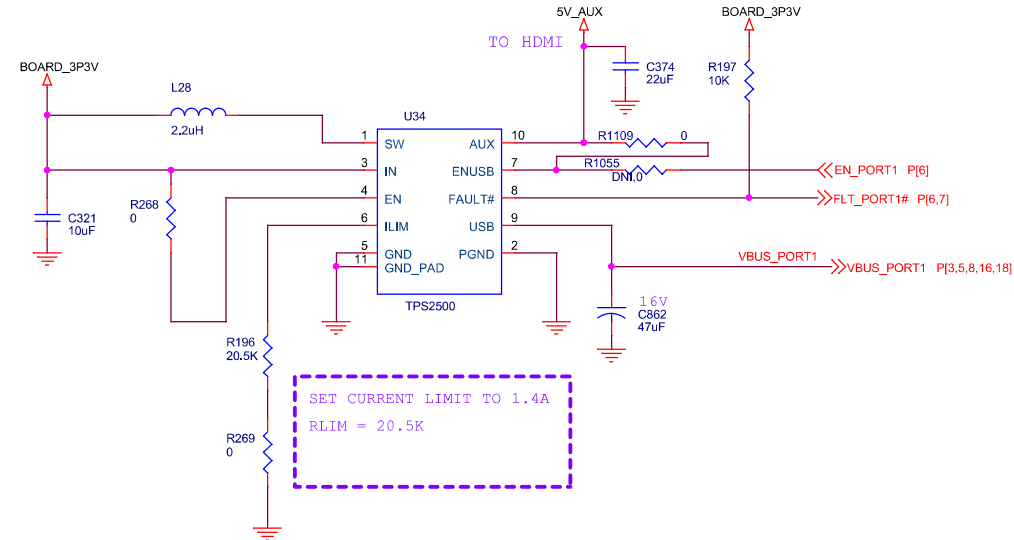
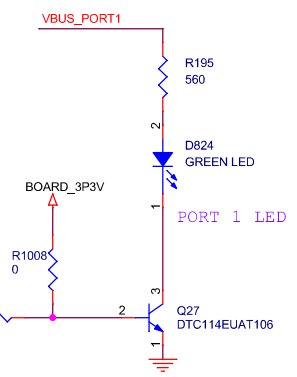
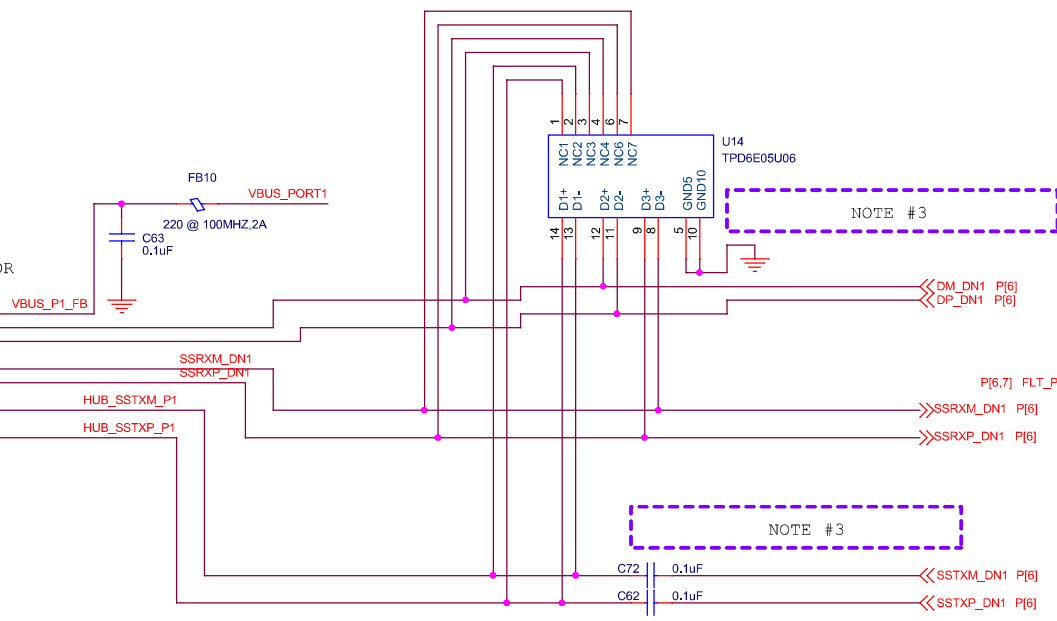
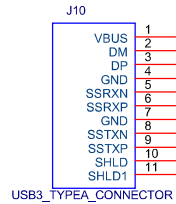
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**TIDA-01243: TUSB8041**  
RevCode = B

<b>SIZE</b> B	<b>DWG NO:</b>
<b>SCALE:</b> NONE	<b>Monday, July 25, 2016</b>
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DOWNSTREAM USB PORT 1 USB3

PORT 1  
SINGLE USB 3.0 CONNECTOR



TEXAS INSTRUMENTS

TIDA-01243: PORT1 USB3  
RevCode = B

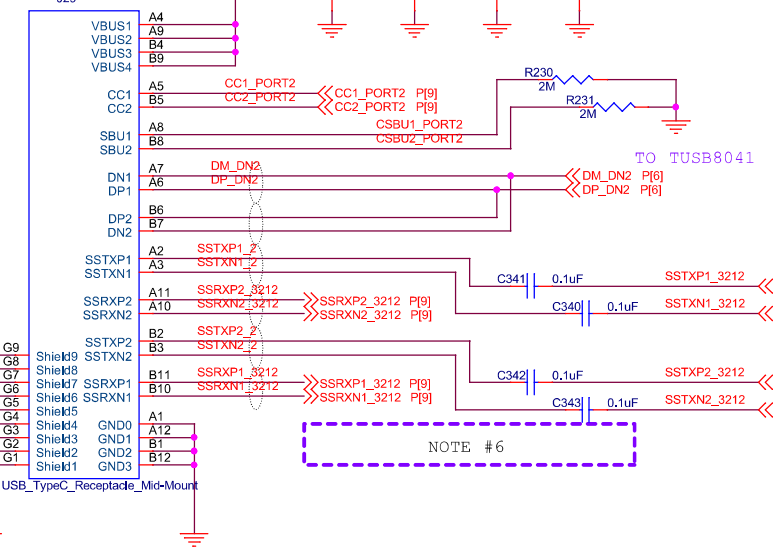
SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# DOWNSTREAM USB C PORT 2

## TypeC Connector Pin Mapping

GND	A1	B12	GND
SSTXP1	A2	B11	SSRXP1
SSTXP2	A3	B10	SSRXP2
SSTXN1	A4	B9	SSRXN1
SSTXN2	A5	B8	SSRXN2
VBUS	A6	B7	VBUS
CC1	A7	B6	SBU2
DP1	A8	B5	DN2
DN1	A9	B4	DP2
SBU1	A10	B3	CC2
VBUS	A11	B2	VBUS
SSRXN2	A12	B1	SSTXN2
SSRXN1	A1	B12	SSTXN1
SSRXP2	A2	B11	SSTXP2
SSRXP1	A3	B10	SSTXP1
GND	A4	B9	GND

## Type C Connector

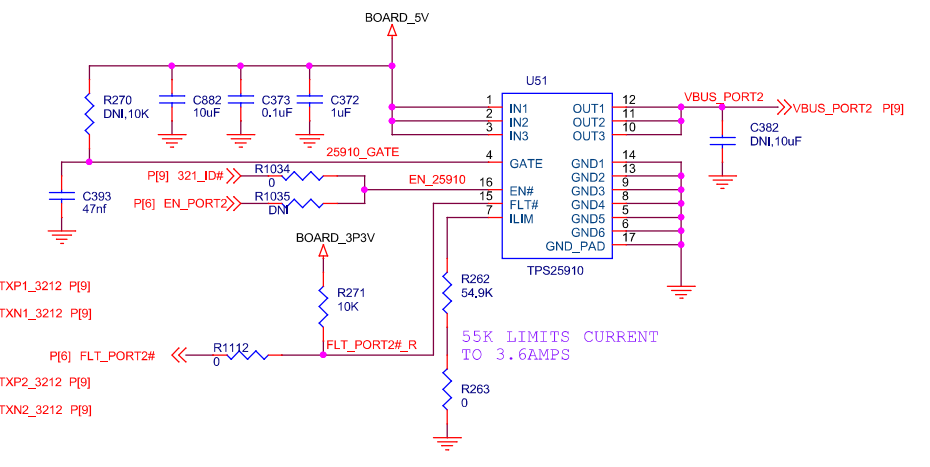
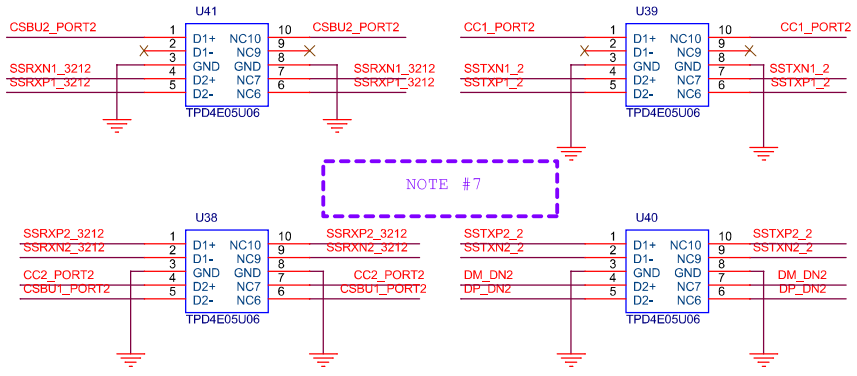


NOTE #6

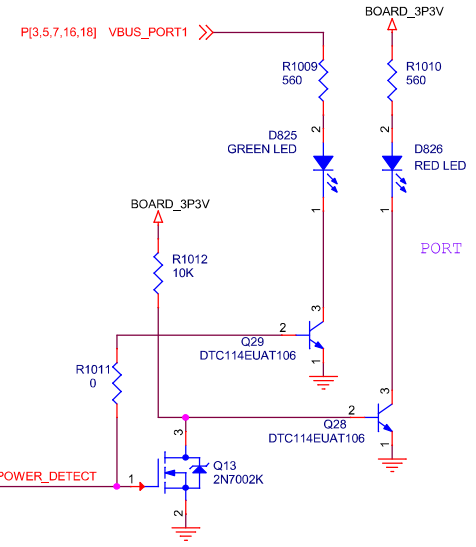
NOTE #3

NOTE #7

NOTE: ALL DIFF PAIRS ARE ROUTED 85 TO 90 OHMS DIFFERENTIAL AND 50 OHMS COMMON MODE. ALL OTHER TRACES ARE 50 OHM.



55K LIMITS CURRENT TO 3.6AMPS



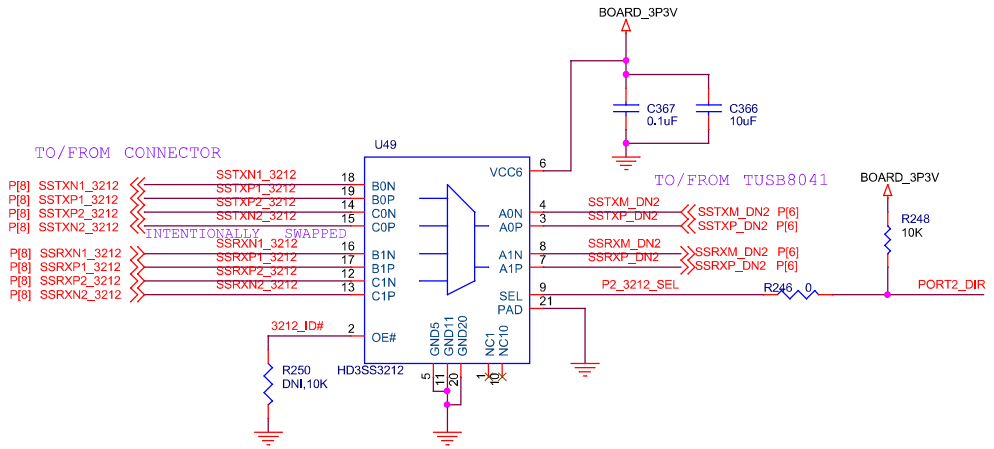
PORT 2 LEDS



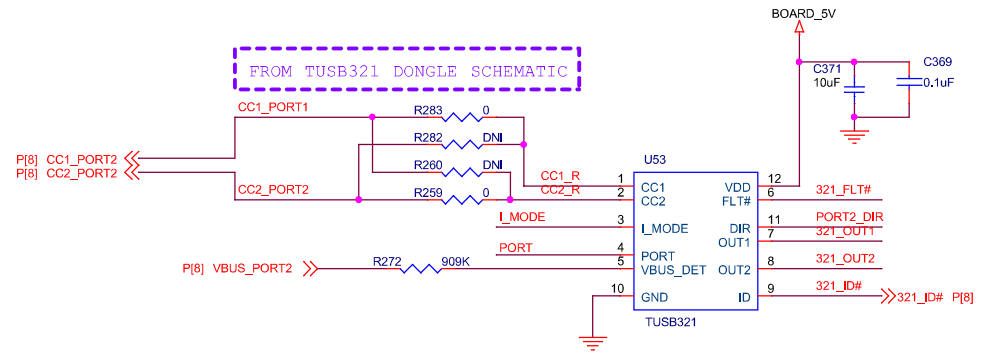
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RevCode = B	
SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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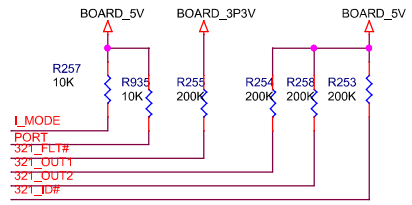
DOWNSTREAM USB C PORT 2



FROM TUSB321 DONGLE SCHEMATIC



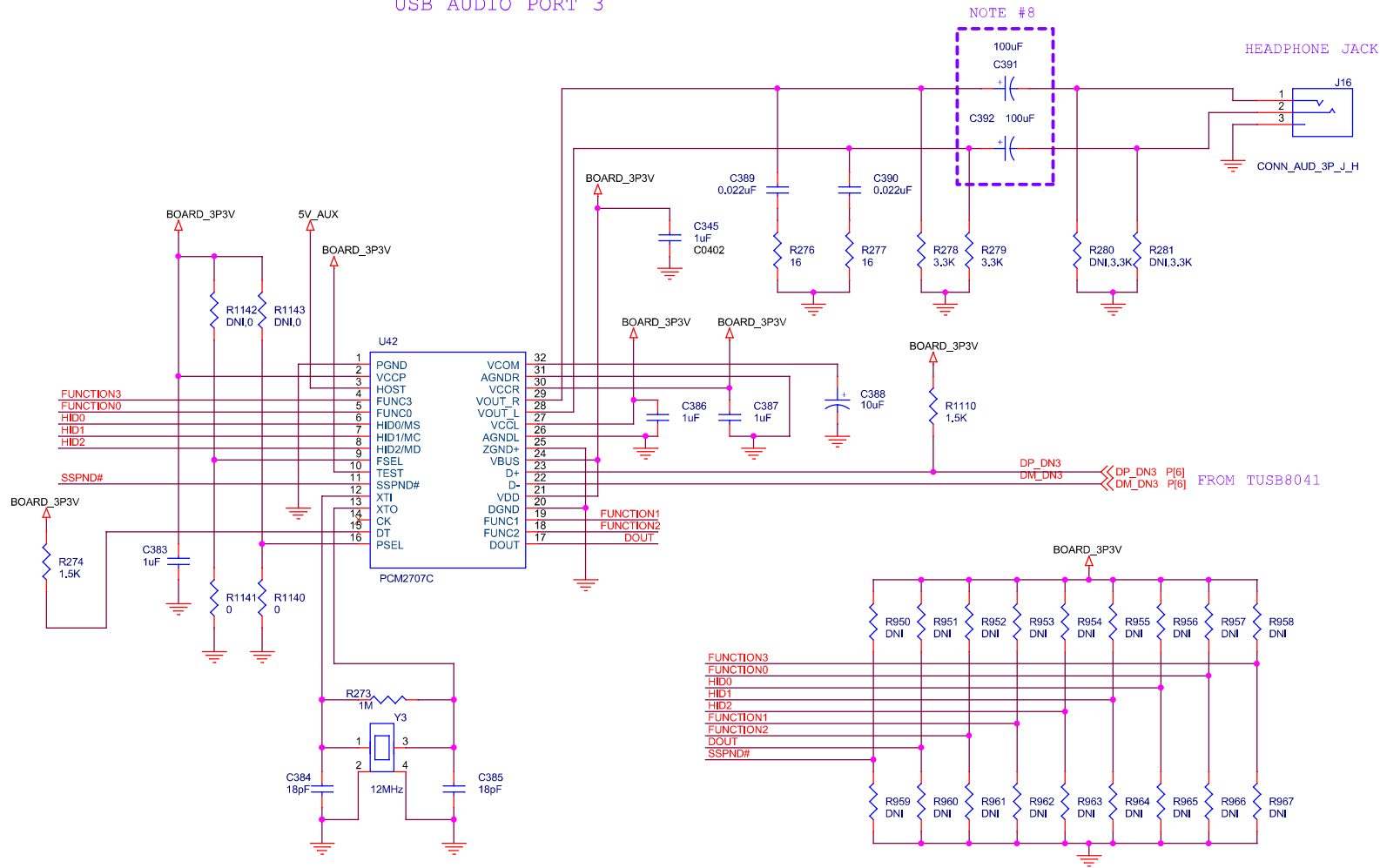
L\_MODE = 10K (3A)  
PORT = 1, DFP MODE



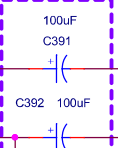
TIDA-01243: PORT2\_USBC\_2  
RevCode = B

SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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USB AUDIO PORT 3



NOTE #8

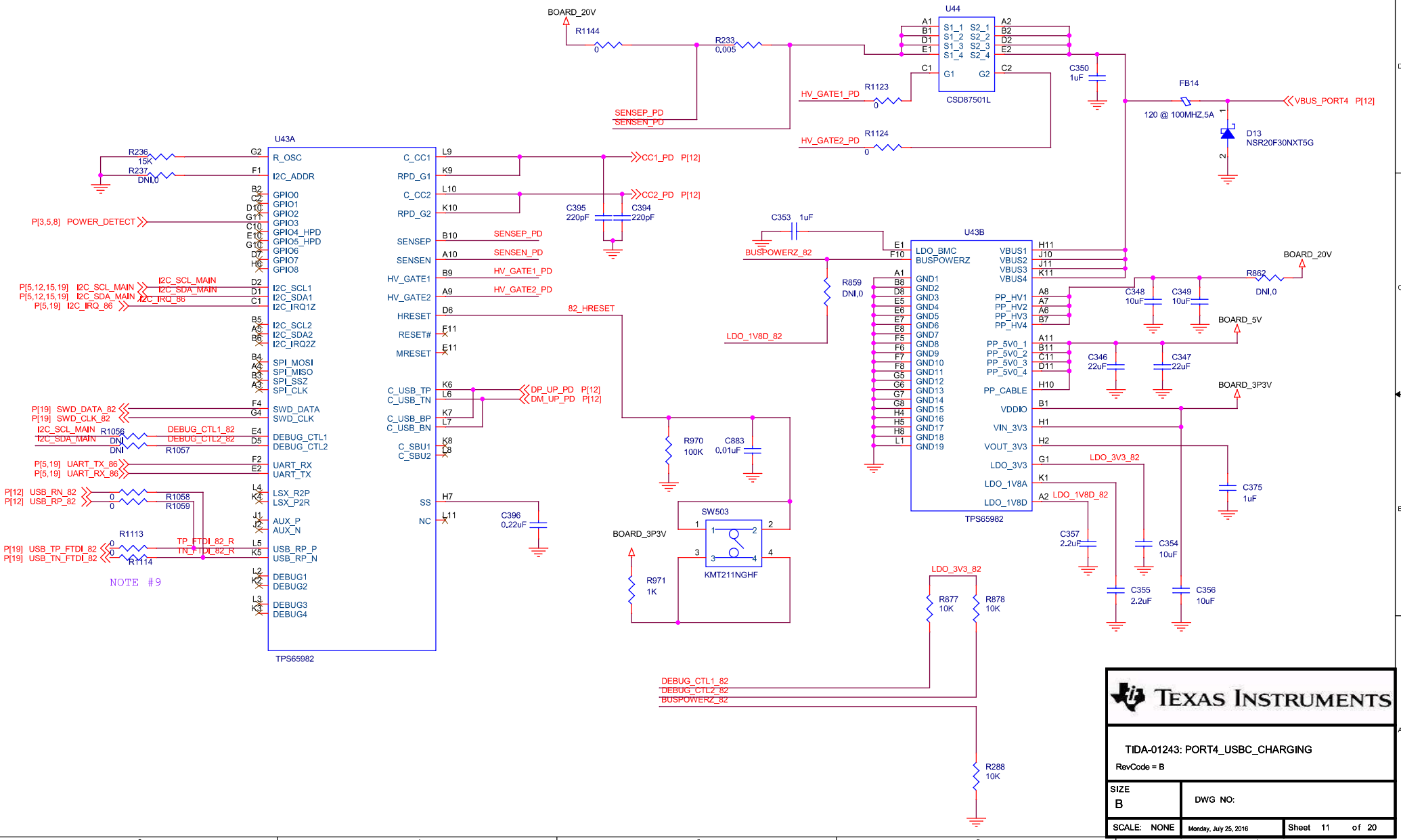


**TEXAS INSTRUMENTS**

TIDA-01243: PORT3 USB AUDIO  
RevCode = B

SIZE B	DWG NO:
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PORT 4 - TPS65982



**TEXAS INSTRUMENTS**

TIDA-01243: PORT4\_USBC\_CHARGING

RevCode = B

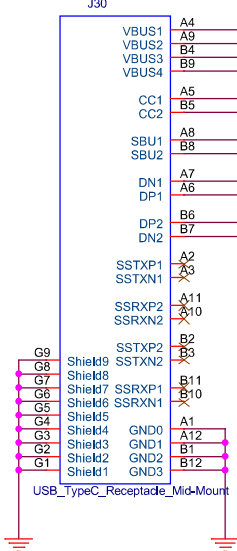
SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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PORT 4 - TYPE C PD  
ONLY USED TO SUPPLY POWER

TypeC Connector Pin Mapping

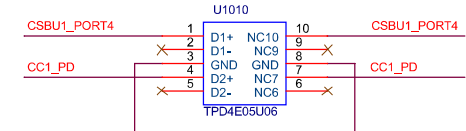
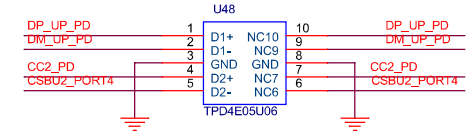
GND	A1	B12	GND
SSTXP1	A2	B11	SSRX1
SSTXP2	A3	B10	SSRX2
VBUS	A4	B9	VBUS
CC1	A5	B8	SBU2
DP1	A6	B7	DN2
DN1	A7	B6	DP2
SBU1	A8	B5	CC2
VBUS	A9	B4	VBUS
SSRX2	A10	B3	SSTX2
SSRX1	A11	B2	SSTX1
GND	A12	B1	GND

Type C Connector

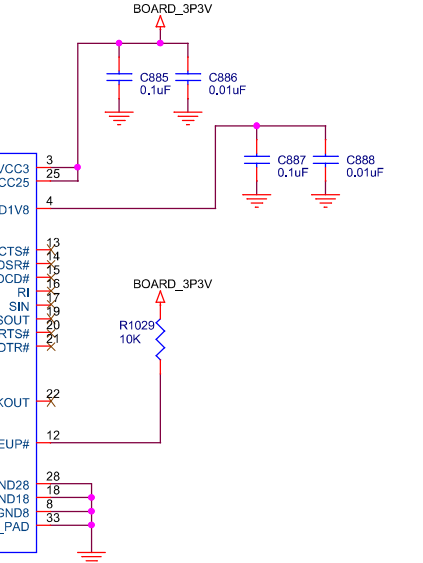
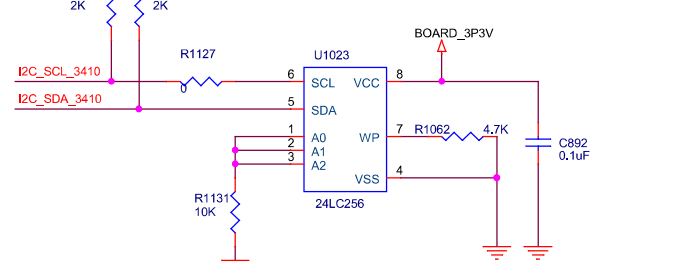
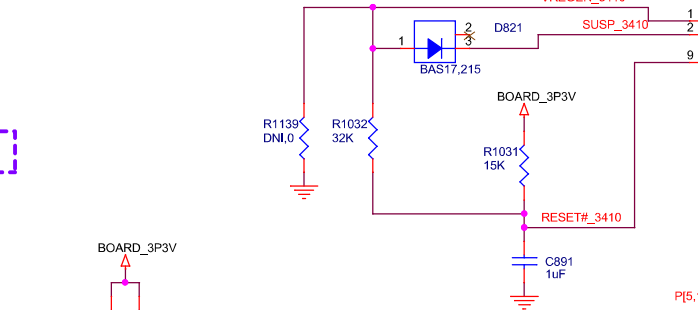
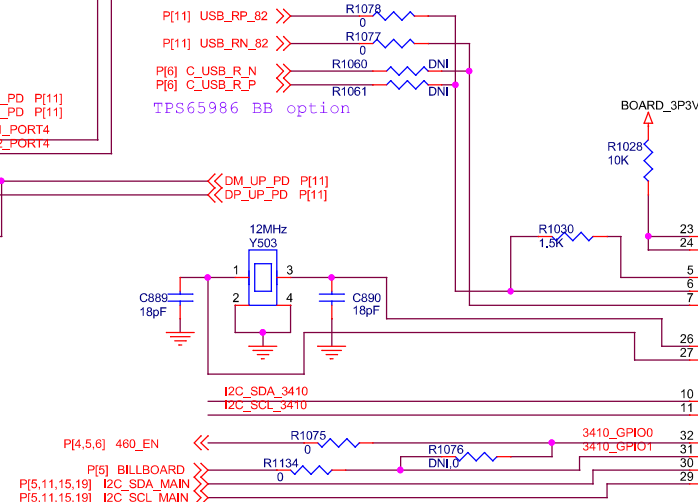


NOTE: ALL DIFF PAIRS ARE ROUTED 85 TO 90 OHMS DIFFERENTIAL AND 50 OHMS COMMON MODE. ALL OTHER TRACES ARE 50 OHM.

NOTE #3



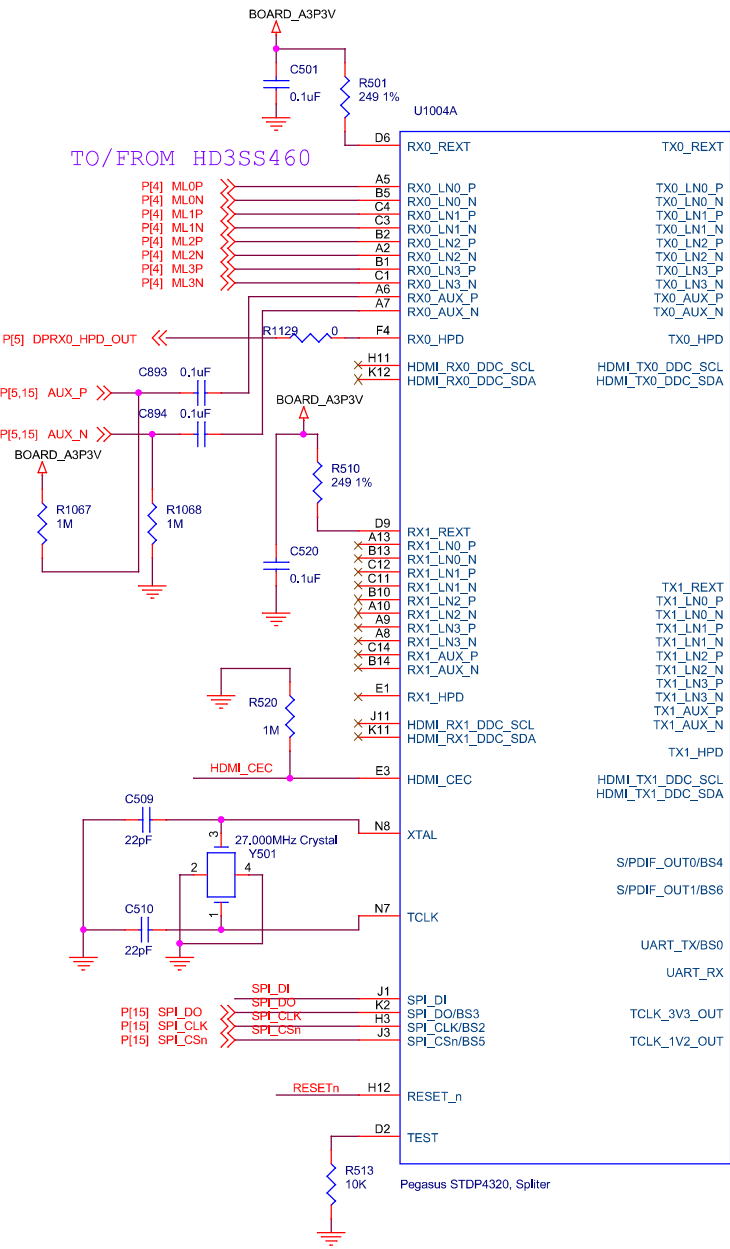
NOTE #7



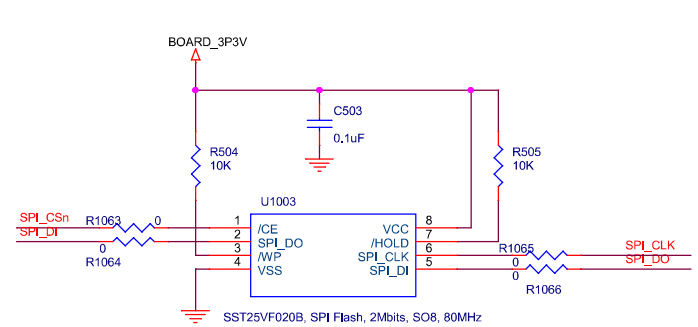
TIDA-01243: PORT4 USBC CON	
RevCode = B	
SIZE B	DWG NO:
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STDP4320

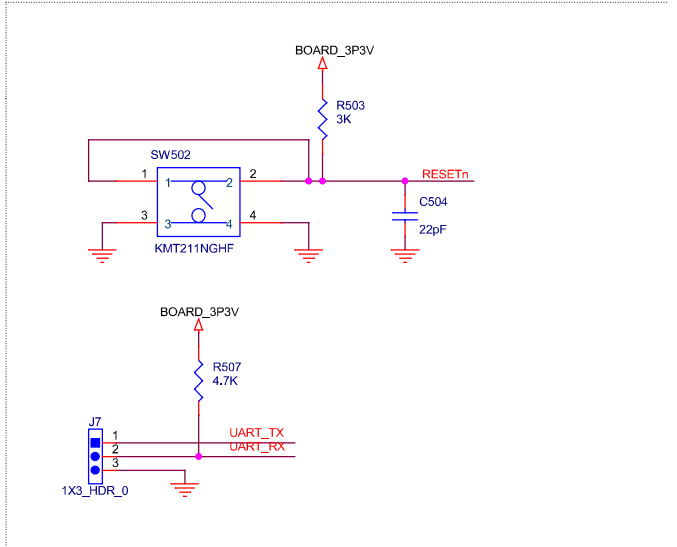
TO/FROM HD3SS460



DISPLAYPORT



TO DP/HDMI CONVERTER

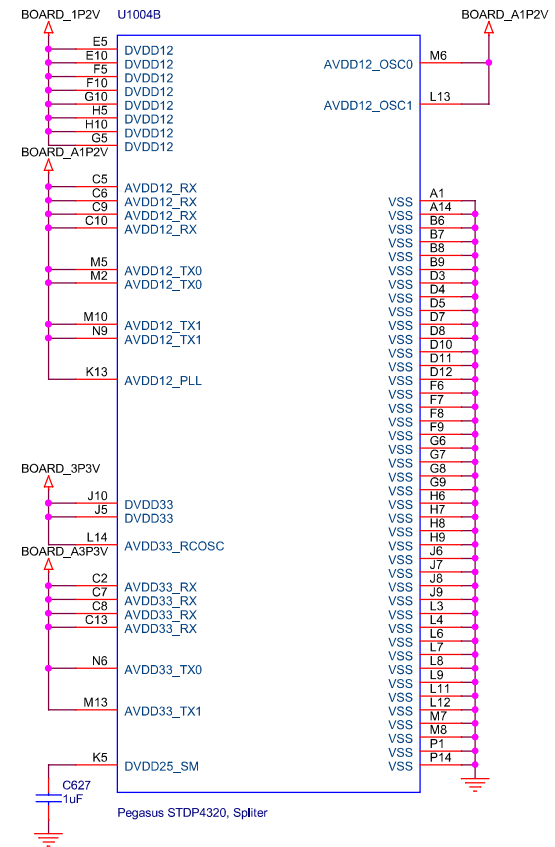
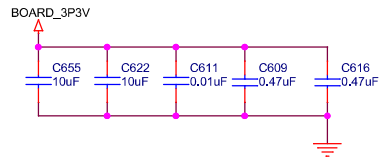
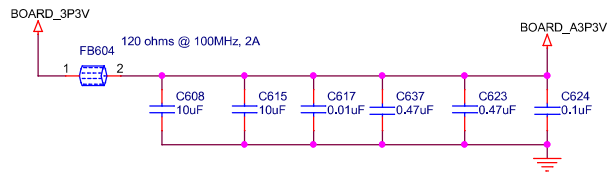
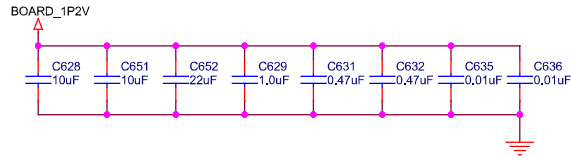
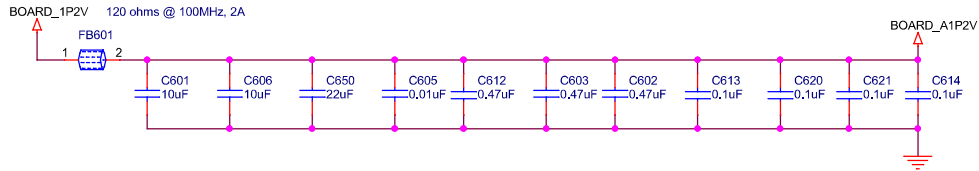


For DEBUG ONLY

**TEXAS INSTRUMENTS**  
 TIDA-01243: DP4320  
 RevCode = B  

SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# STDP4320 POWER

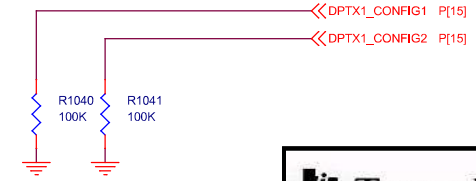
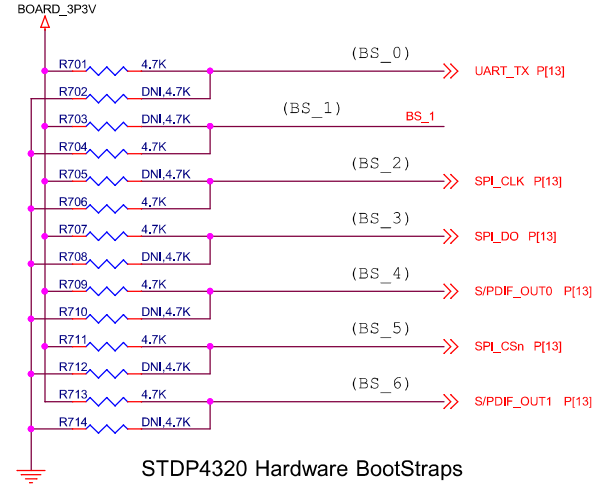
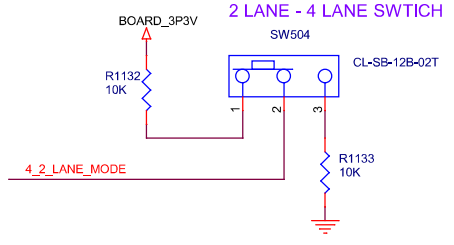
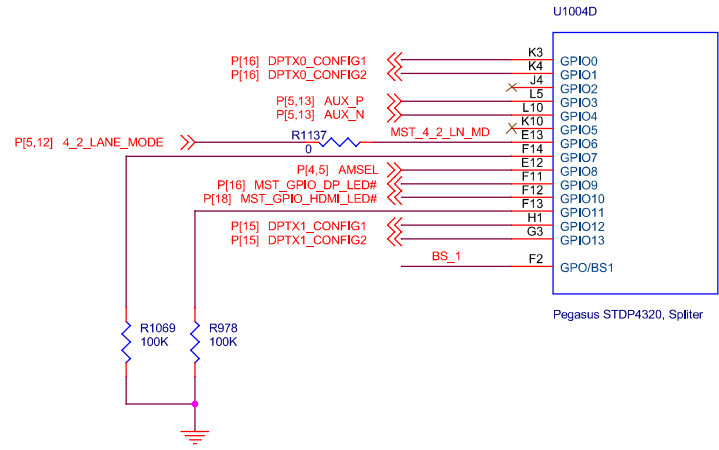
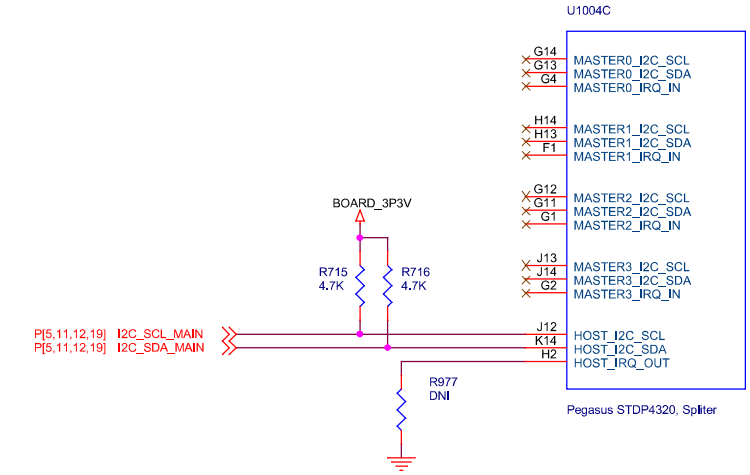



**TEXAS INSTRUMENTS**

TIDA-01243: DP4320 POWER  
RevCode = B

SIZE B	DWG NO:
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# STDP4320 BOOTSTRAPS





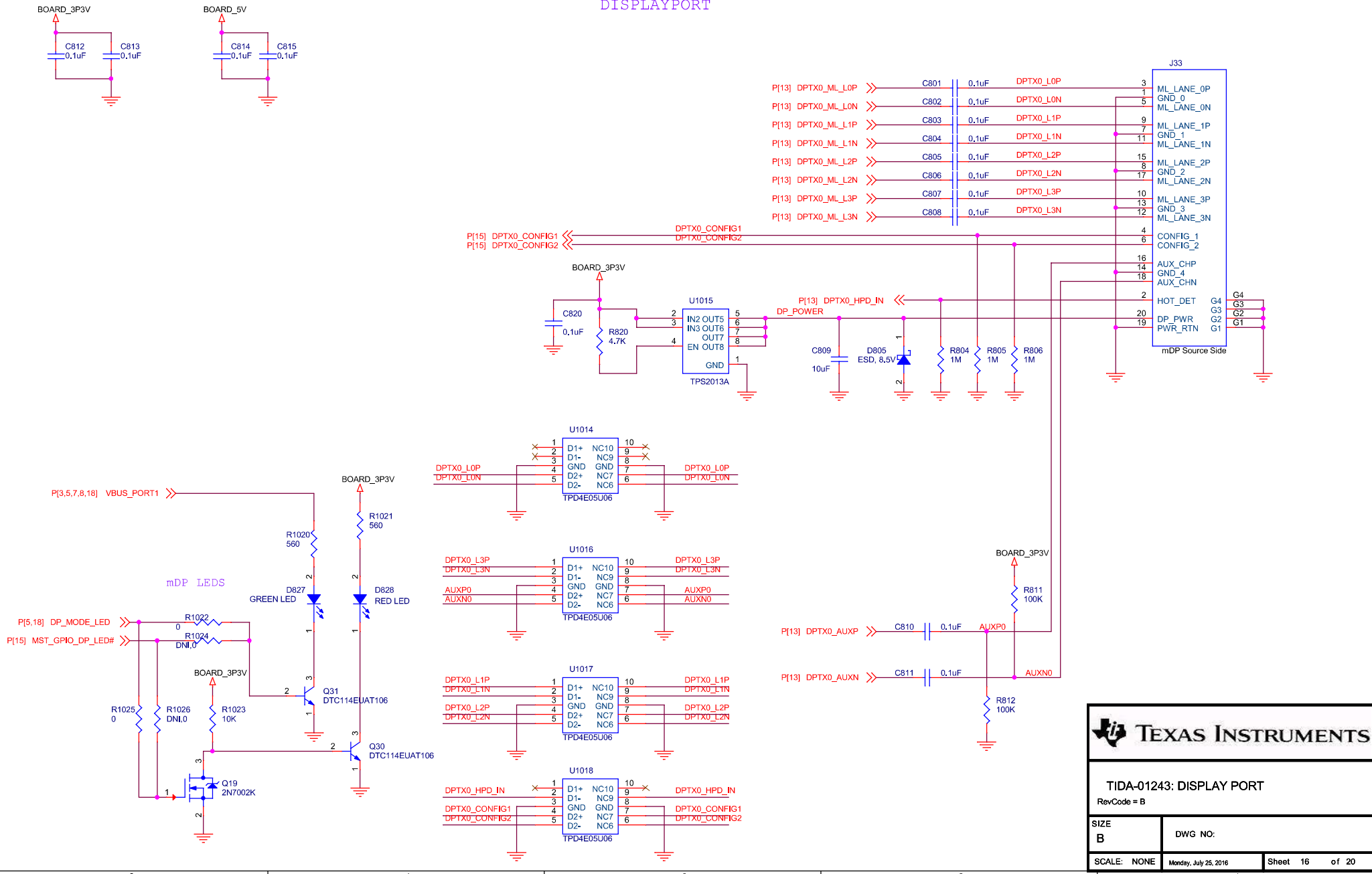
## TEXAS INSTRUMENTS

TIDA-01243: DP4320 BOOTSTRAP

RevCode = B

SIZE <b>B</b>	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# DISPLAYPORT



## TEXAS INSTRUMENTS

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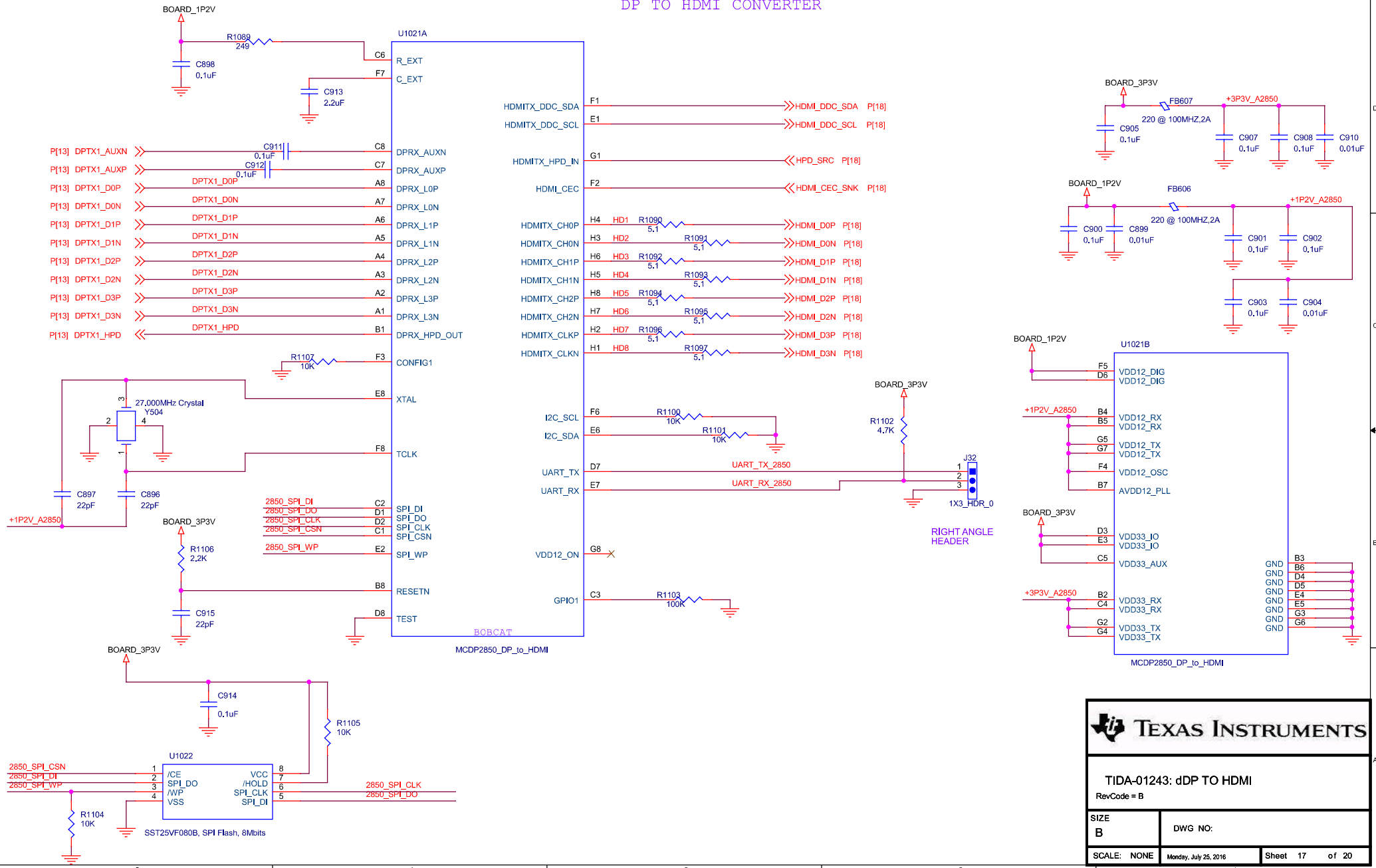
**TIDA-01243: DISPLAY PORT**

RevCode = B

SIZE <b>B</b>	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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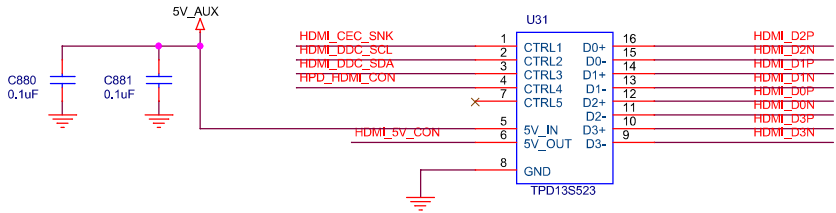


# DP TO HDMI CONVERTER

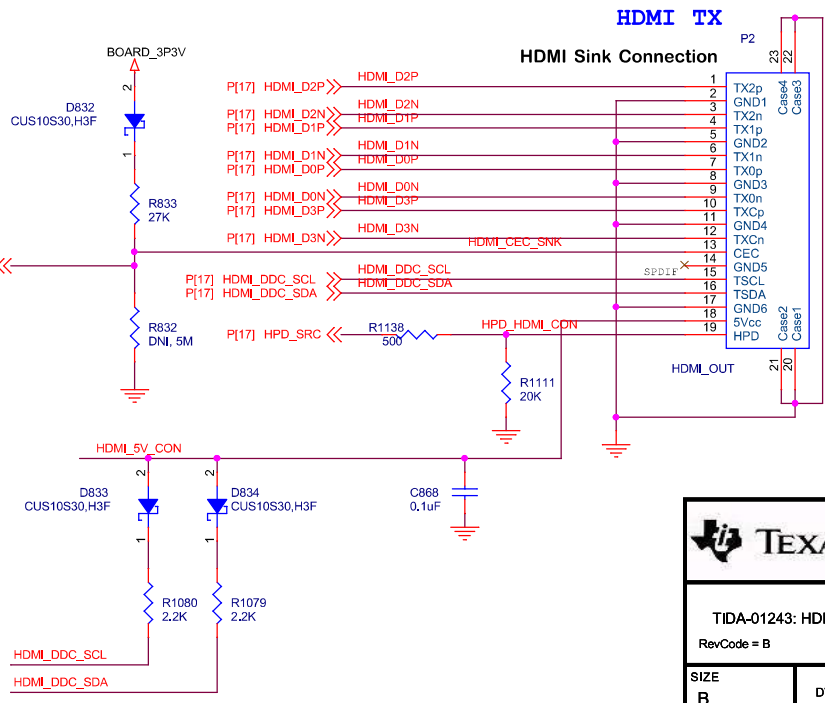
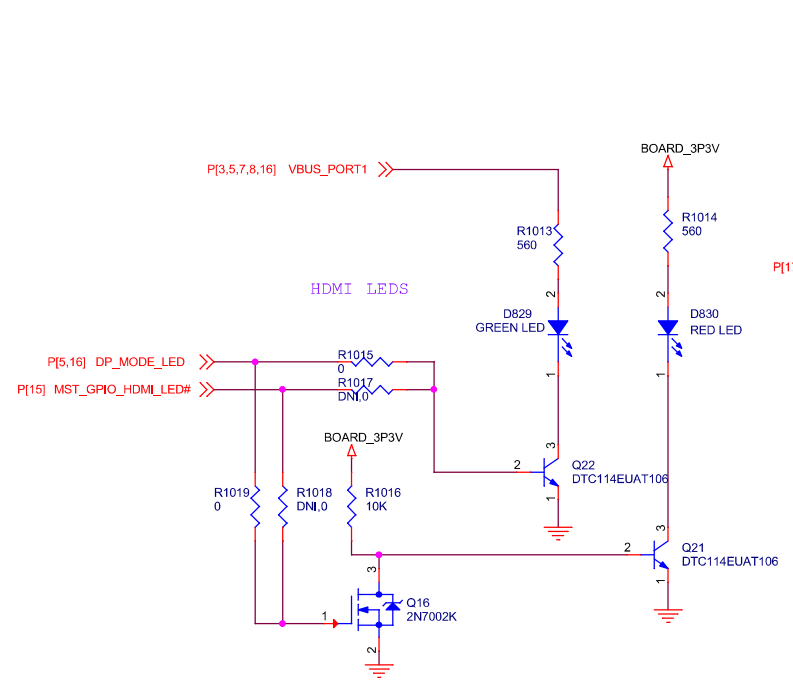


<b>TIDA-01243: dDP TO HDMI</b>	
RevCode = B	
SIZE <b>B</b>	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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ESD PROTECTION FOR HDMI



CURRENT LIMITS 5V TO 55mA



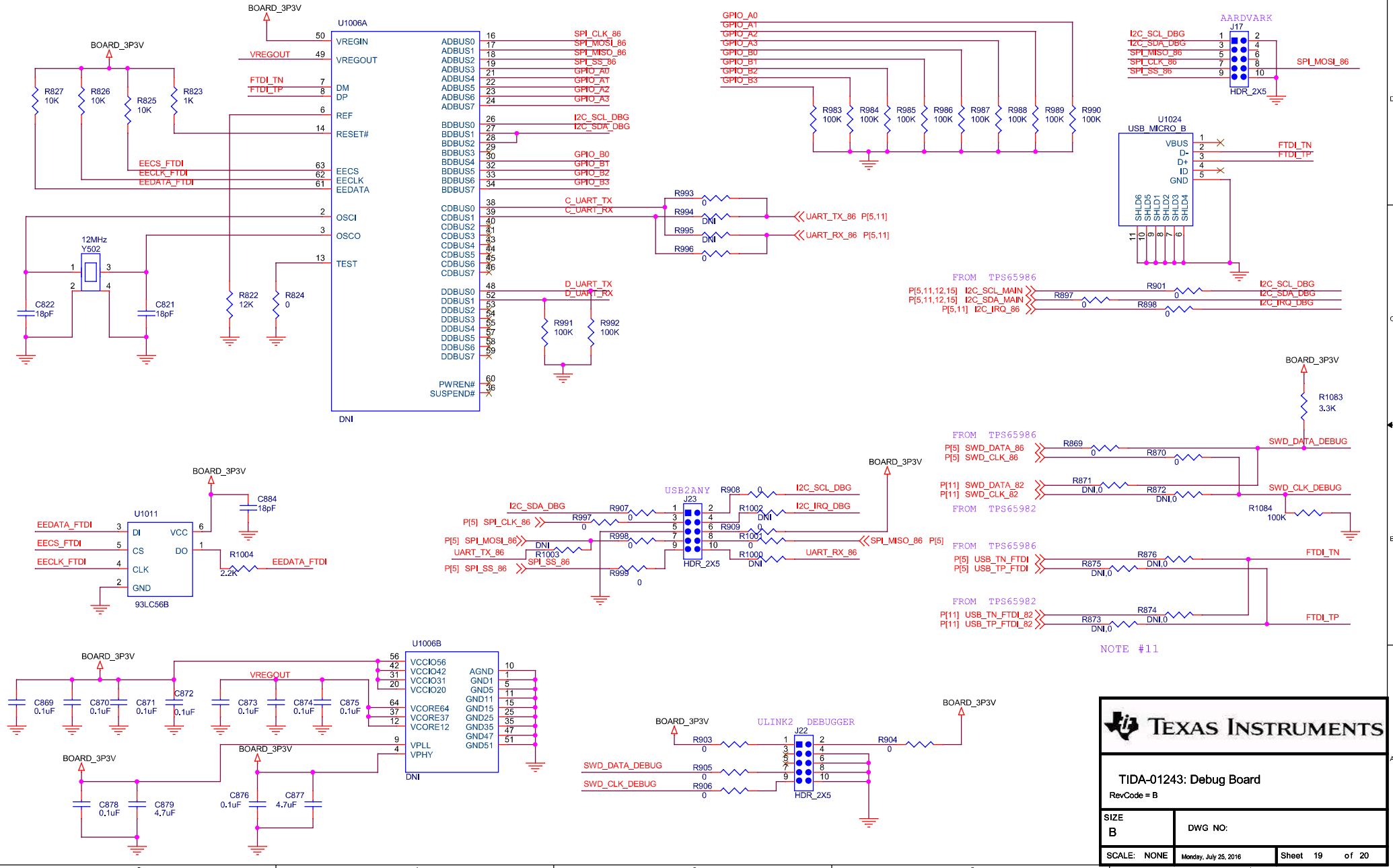
**TEXAS INSTRUMENTS**

TIDA-01243: HDMI CONNECTOR

RevCode = B

SIZE B	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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# DEBUG BOARD - FTDI - USB - I2C/SPI/UART



## TEXAS INSTRUMENTS

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**TIDA-01243: Debug Board**  
RevCode = B

SIZE <b>B</b>	DWG NO:
SCALE: NONE	Monday, July 25, 2016
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NOTE #11

- 1- PLACE C916 C917 ANY WHERE ON THE BOARD
- 2- KEEP C2, C3, C7, C8 CAPS CLOSE TO CONNECTOR LET RESISTORS SHARE PADS
- 3- KEEP ESD CLOSE TO CONNECTOR
- 4- THESE CONNECTIONS ARE FOR FLOW THROUGH ROUTING
- 5- DP MODE LED PLACE NEAR DP/HDMI
- 6- KEEP C340, C341, C342, C343 CAPS CLOSE TO CONNECTOR LET RESISTORS SHARE PADS
- 7- THESE CONNECTIONS ARE FOR FLOW THROUGH ROUTING
- 8- C291 AND C192 MUST BE 5.4mm TALL
- 9- PAD SHARING R1058 AND R1114, R1059 AND R1113
- 10- Place R1077 and R1078 as close as possible to R1060 and R1061
- 11- PAD SHARING R873 AND R875, R874 AND 876
- 12- Pad sharing with R1060 and R1061 on page 12



TIDA-01243: PCB Fab Notes

Rev = B

SIZE

A

DWG NO:

SCALE: NONE

Monday, July 25, 2016

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