

REPLACE

Top Silkscreen

ChargePoint, Inc (c) 2021
SEVB CHAdEMO Factory Stand

Bottom Copper

PCB FAB 27-010297-01

Assembly Drawing

ASY-010297-01

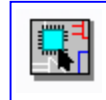
REPLACE

CONTENTS

- 01 - Cover Sheet
- 02 - Revision History
- 03 - Block Diagram
- 04 - DUT Connections
- 05 - External Connections/Level Shift
- 06 - Power Supplies/Relay Drive
- 07 - SEVB CH Vehicle Handshake
- 08 - SEVB CH Power Rail/LEDs
- 09 - SEVB CH NTC/PTC Temp

REPLACE

SCH1



26-010297-01

PCB1



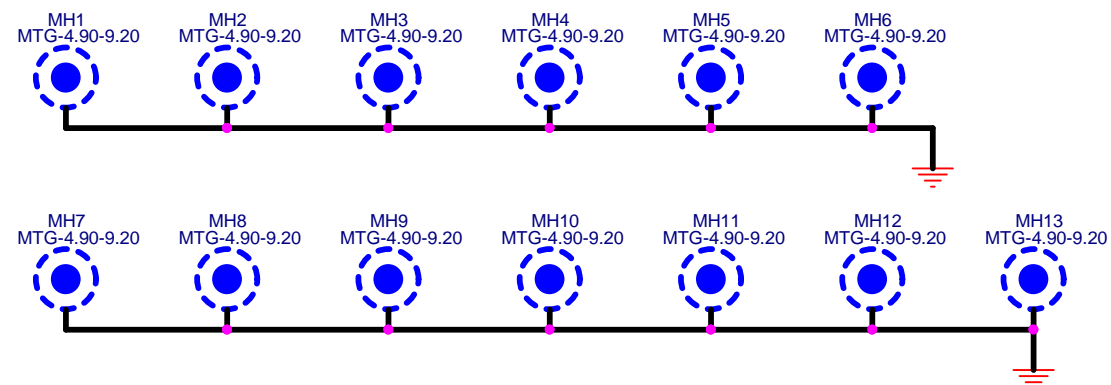
27-010297-01


DWG1



PCBA
ASSY
DWG
ASY-010297-01

Mounting Holes



Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
01 - Cover Sheet			
Variant Name			
<Variant Name>			
Responsible Engineer		Document Description	
Henry Tuckfield		SEVB-CCS Factory Stand Tester	
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number
		B	26-010315-01
		Date	Friday, March 04, 2022
		Sheet 1	of 13

Version (Revision)	Eng	Jira	Date / Revision / Change Description
26-010XXX-01 (1) ECO-007629 <div>REPLACE</div>	HT		Based off of 297 SEVB-CH Tester Design with key changes: 1. CHANGED MAX4820 TO TSSOP PACKAGE 2. LEDs on all power lines, TPs everywhere 3. Start-up states on relays set to RESET 4. Input 48V DUT relay switch 5. Relay DOUT pin

Page Title

02 - Revision History

Variant Name

<Variant Name>

Responsible Engineer

Henry Tuckfield

THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.

chargepoint

254 East Hacienda Avenue
Campbell, CA 95008 USA
Tel: 1-866-480-2936

Document Description

SEVB-CCS Factory Stand Tester

Size

B

Document Number

26-010315-01

Rev

1

Date


Friday, March 04, 2022

Sheet 2 of 13

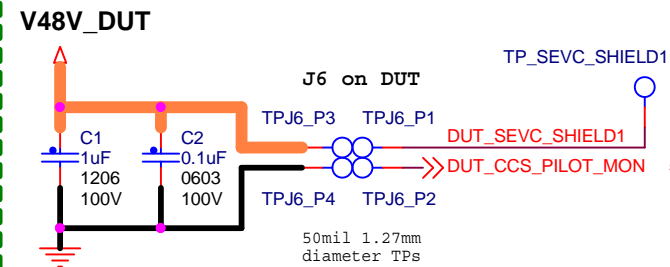
DUT CONNECTORS

BLOCK DIAGRAM

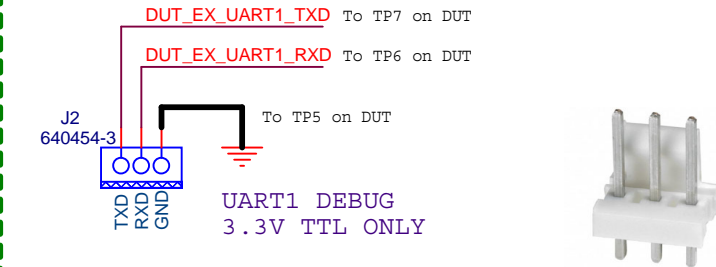
Similar to CHAdeMO, but we'll need a scope and another SEVB to test PLC (?)

Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
03 - Block Diagram			
Variant Name			
<Variant Name>			
Responsible Engineer		Document Description	
Henry Tuckfield		SEVB-CCS Factory Stand Tester	
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number
		B	26-010315-01
		Date	Rev
		Friday, March 04, 2022	1
		Sheet 3 of 13	

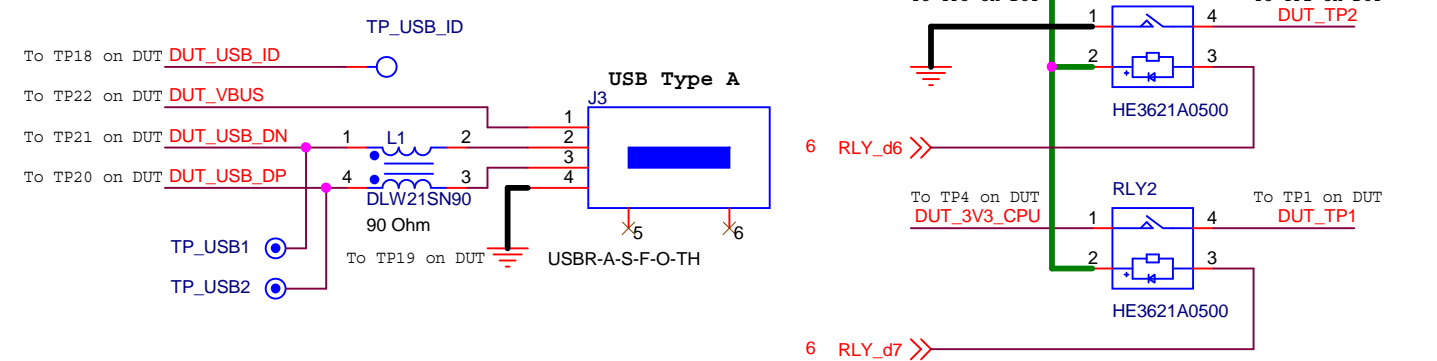
DUT 48V CONNECTOR



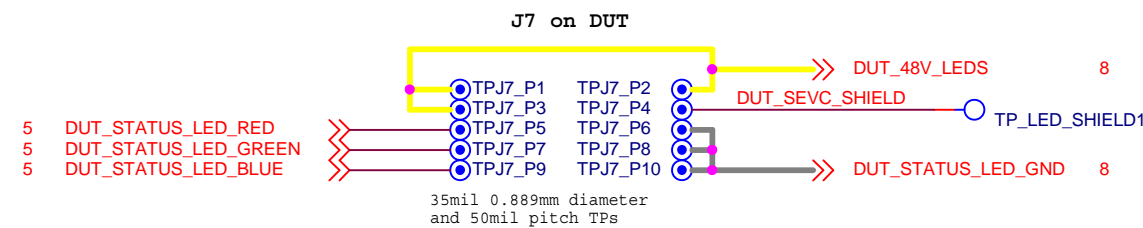
DUT UART - DEBUG HEADER



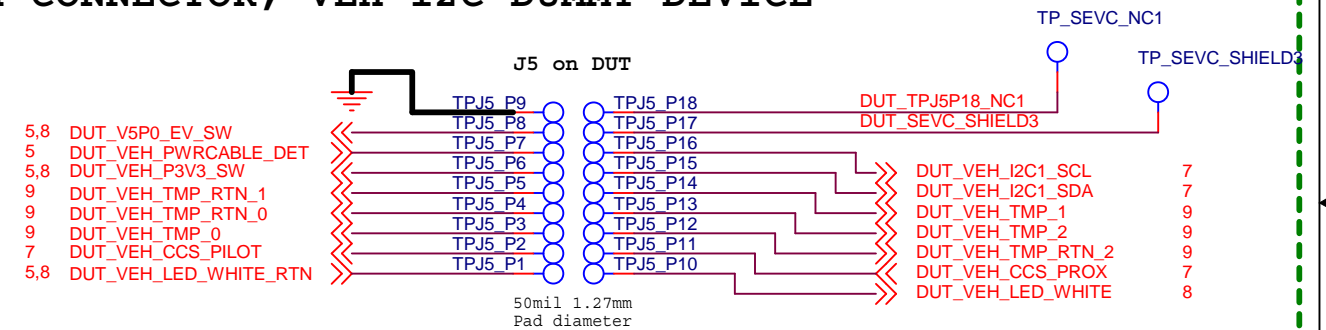
DUT USB + BOOT MODE SELECT



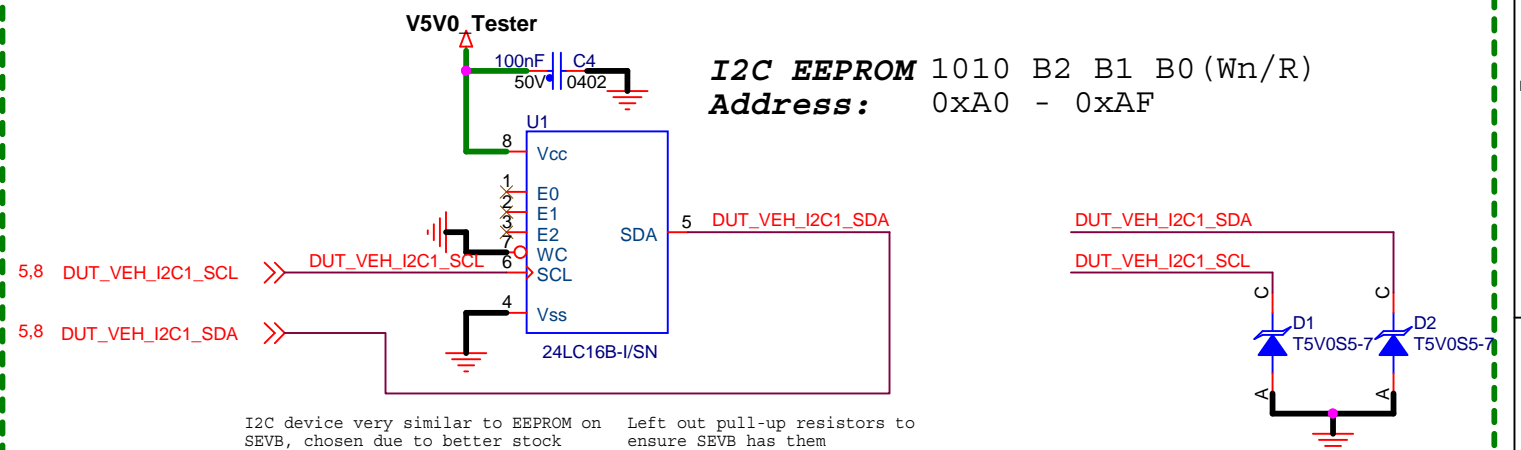
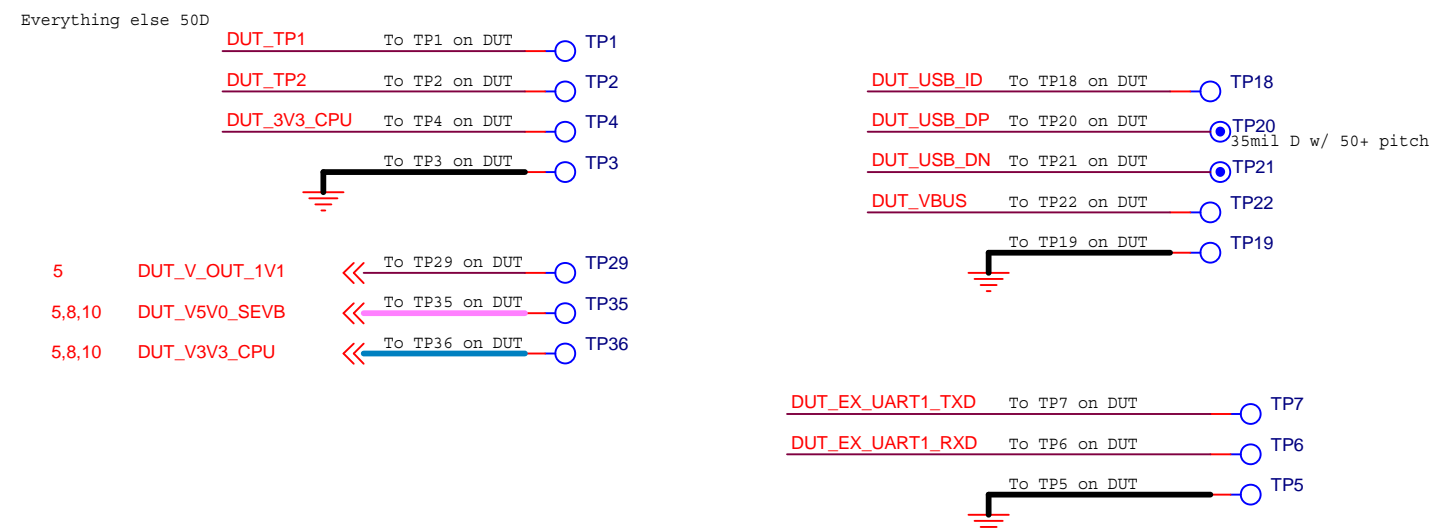
DUT LED BOARD CONNECTOR OUT




DUT VEH CONNECTOR, VEH I2C DUMMY DEVICE

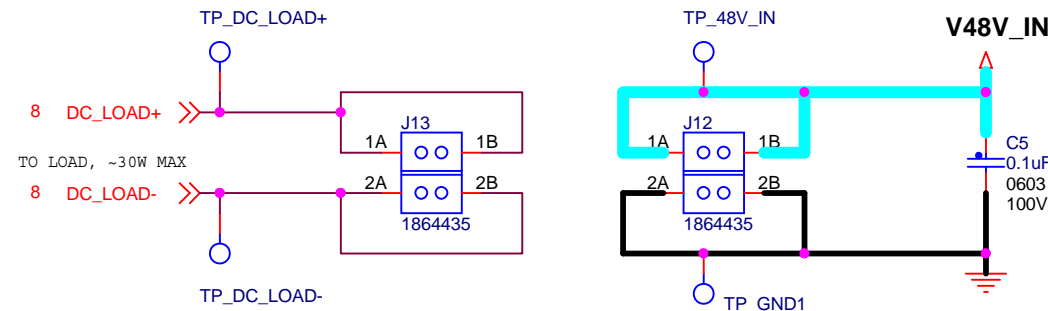


TP to TP Nail connections to DUT

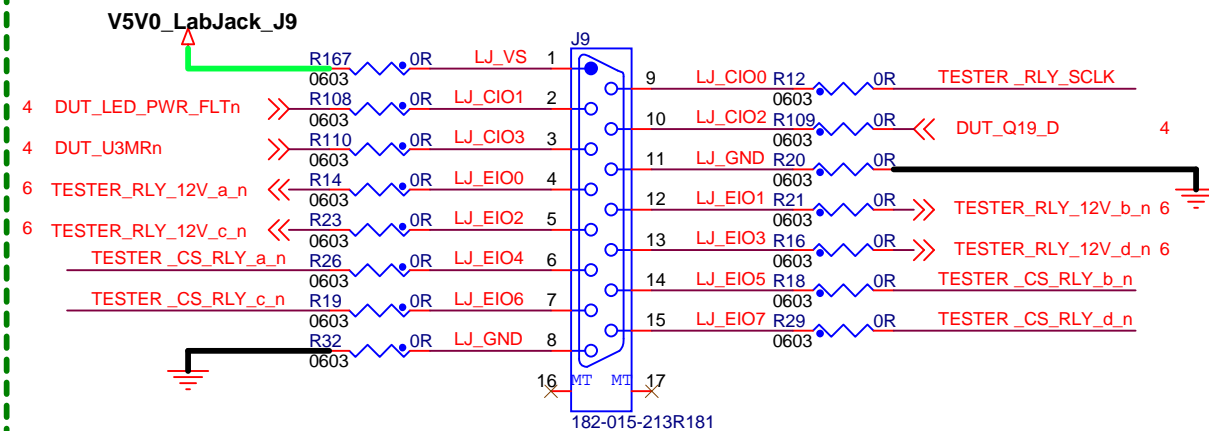


Page Title 04 - DUT Connections	 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
Variant Name <Variant Name>			
Responsible Engineer Henry Tuckfield	Document Description SEVB-CCS Factory Stand Tester		
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.	Size B	Document Number 26-010315-01	Rev 1
	Date Friday, March 04, 2022		Sheet 4 of 13

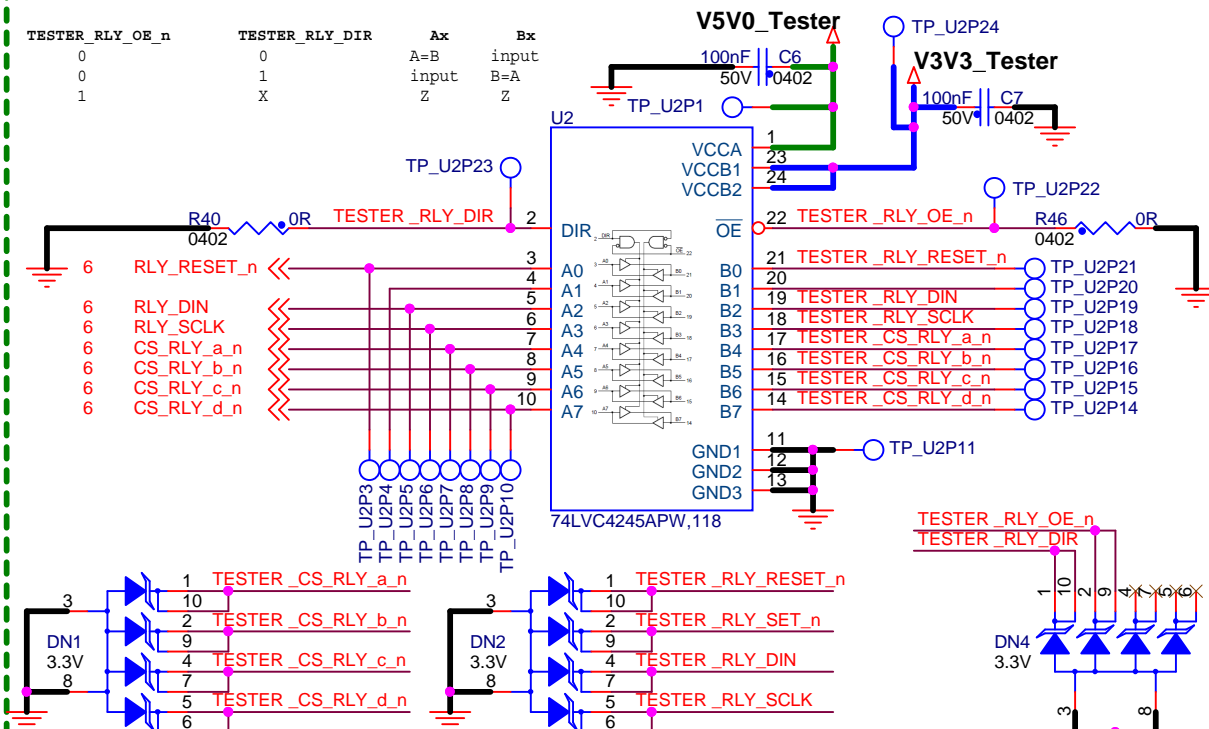
DUT POWER SUPPLY IN AND DC LOAD OUT



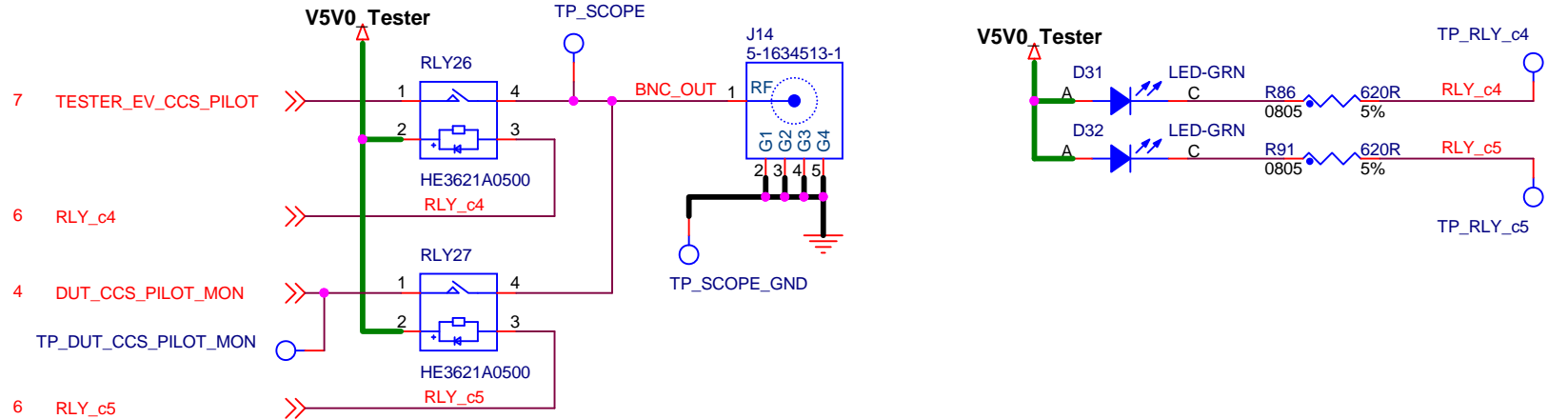
LABJACK T7 NETS: DB15



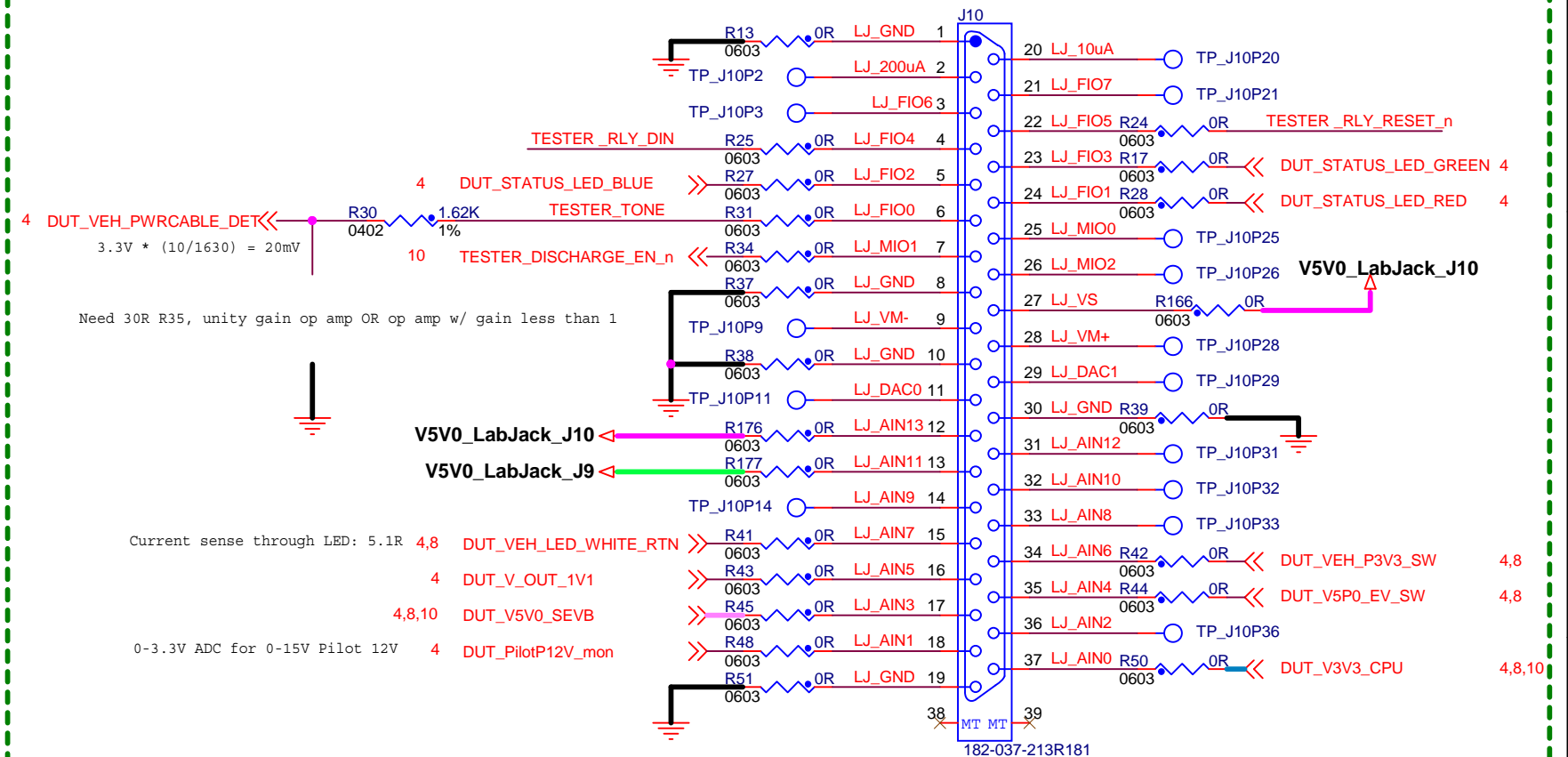
5V RELAY LEVEL SHIFT FROM LABJACK



OSCILLOSCOPE BNC FEMALE CONNECTOR



LABJACK T7 NETS: DB37

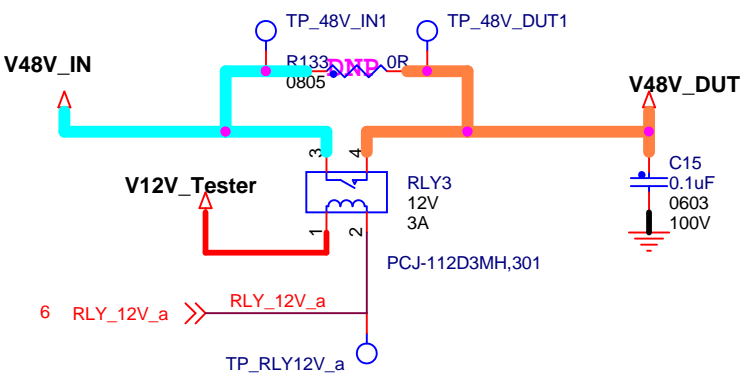


Page Title		05 - External Connections/Level	
Variant Name		<Variant Name>	
Responsible Engineer		Henry Tuckfield	
Document Description		SEVB-CCS Factory Stand Tester	
Size	Document Number	Rev	
B	26-010315-01	1	
Date	Friday, March 04, 2022	Sheet	5 of 13

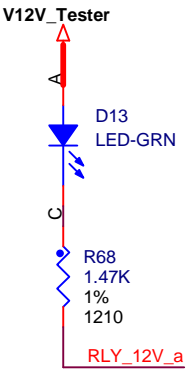
chargepoint 254 East Hacienda Avenue
Campbell, CA 95008 USA
Tel: 1-866-480-2936

THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.

48V to DUT W/ RELAY

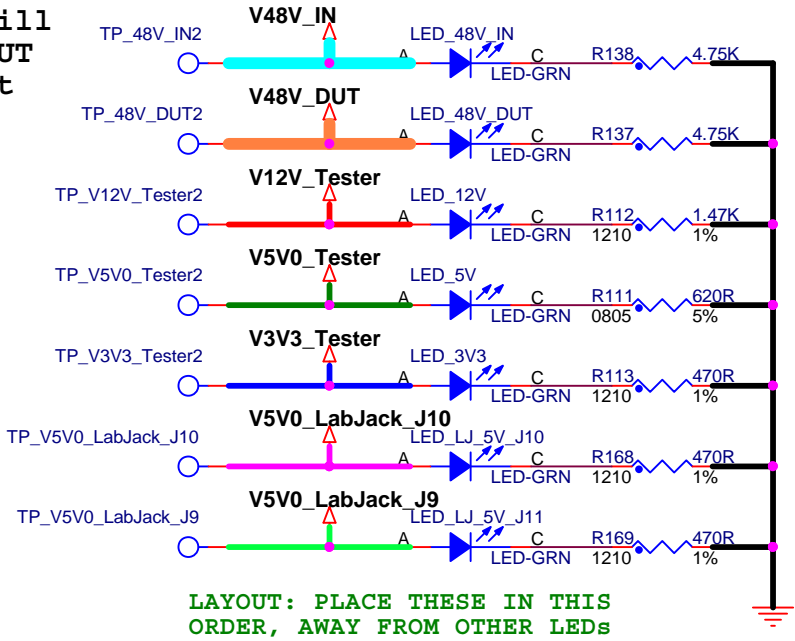


48V IN RELAY LED

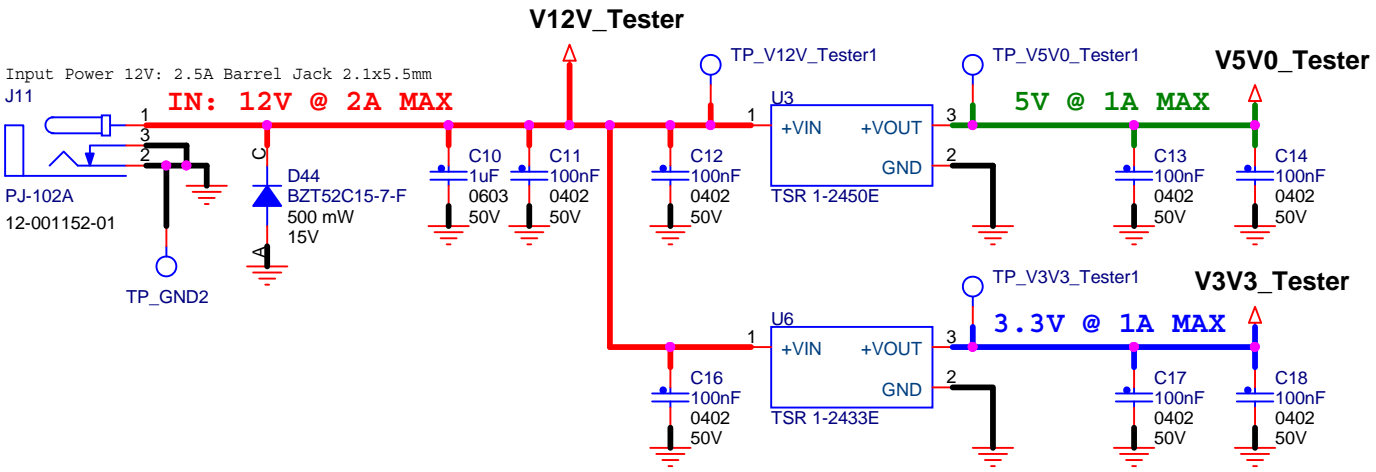



POWER RAIL INDICATOR LEDS

NOTE: this will add 2mA to DUT input current measurement from supply

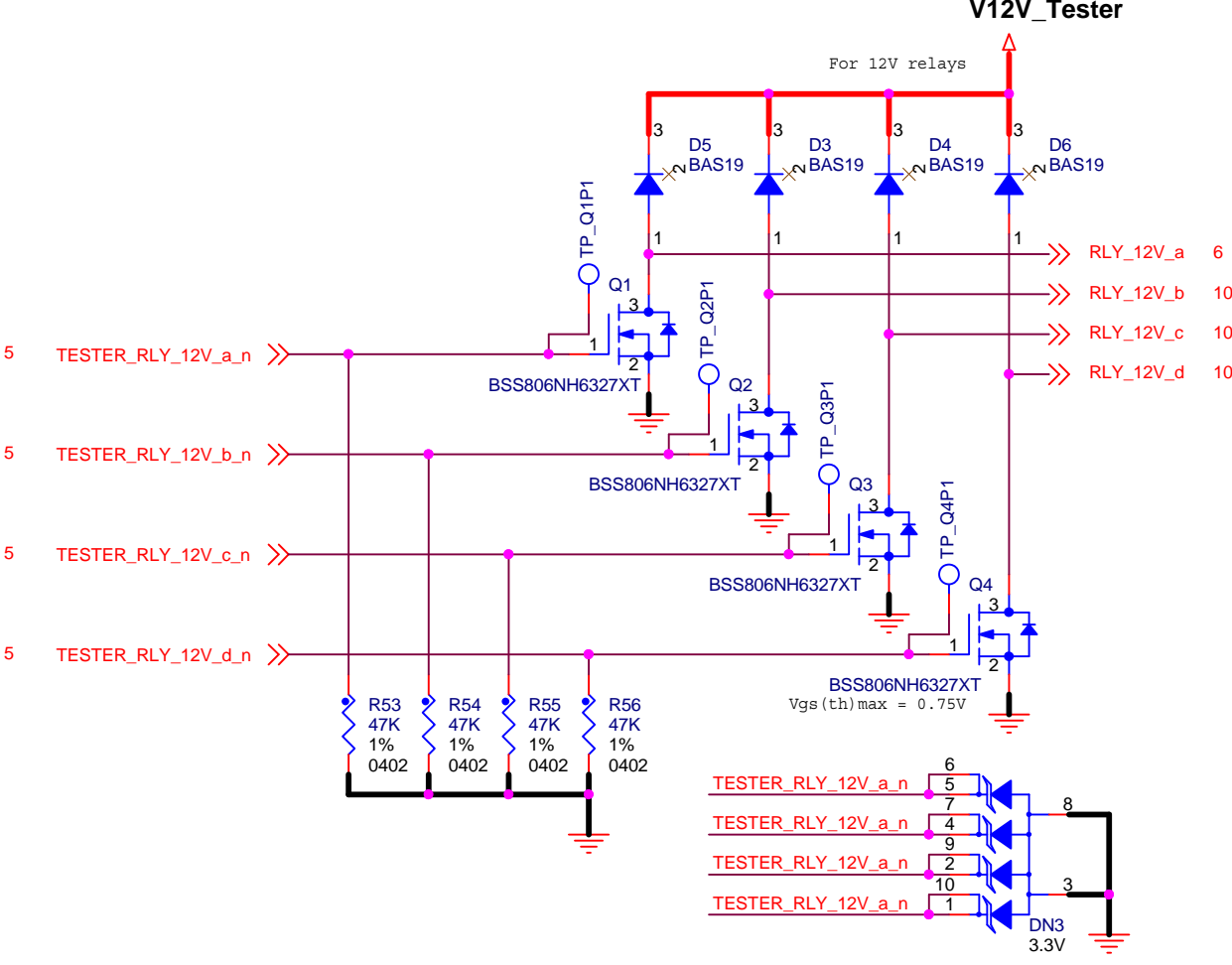


TESTER POWER RAILS: 12V, 5V, 3.3V

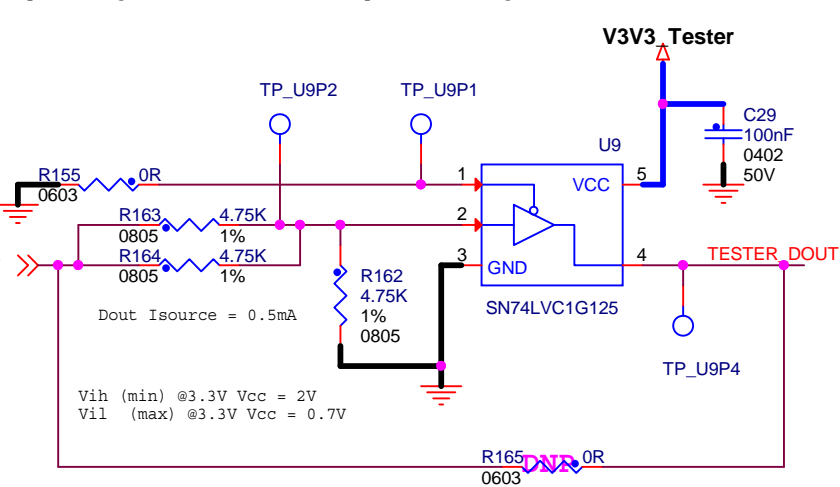


Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
06 - Power Supplies			
Variant Name			
<Variant Name>			
Responsible Engineer		Document Description	
Henry Tuckfield		SEVB-CCS Factory Stand Tester	
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number
		B	26-010315-01
		Date	Friday, March 04, 2022
		Sheet	6 of 13
		Rev	1

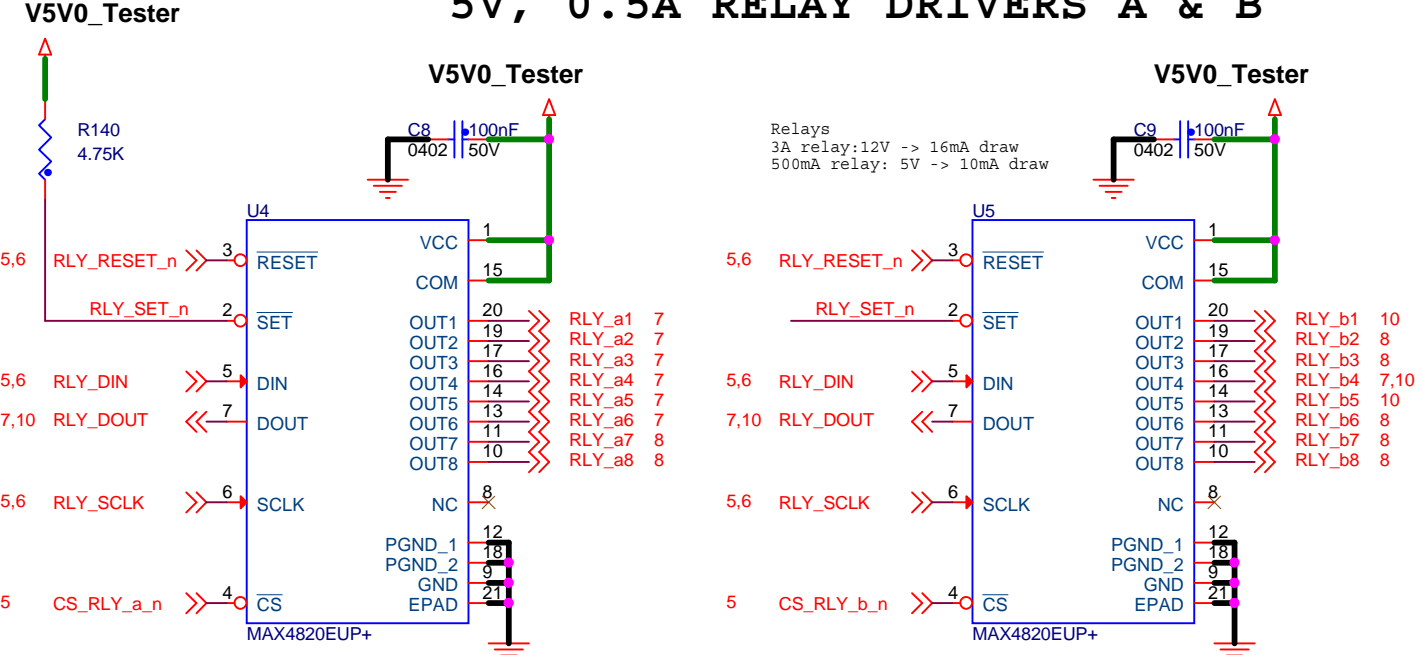
12V, 3A RELAY DRIVERS



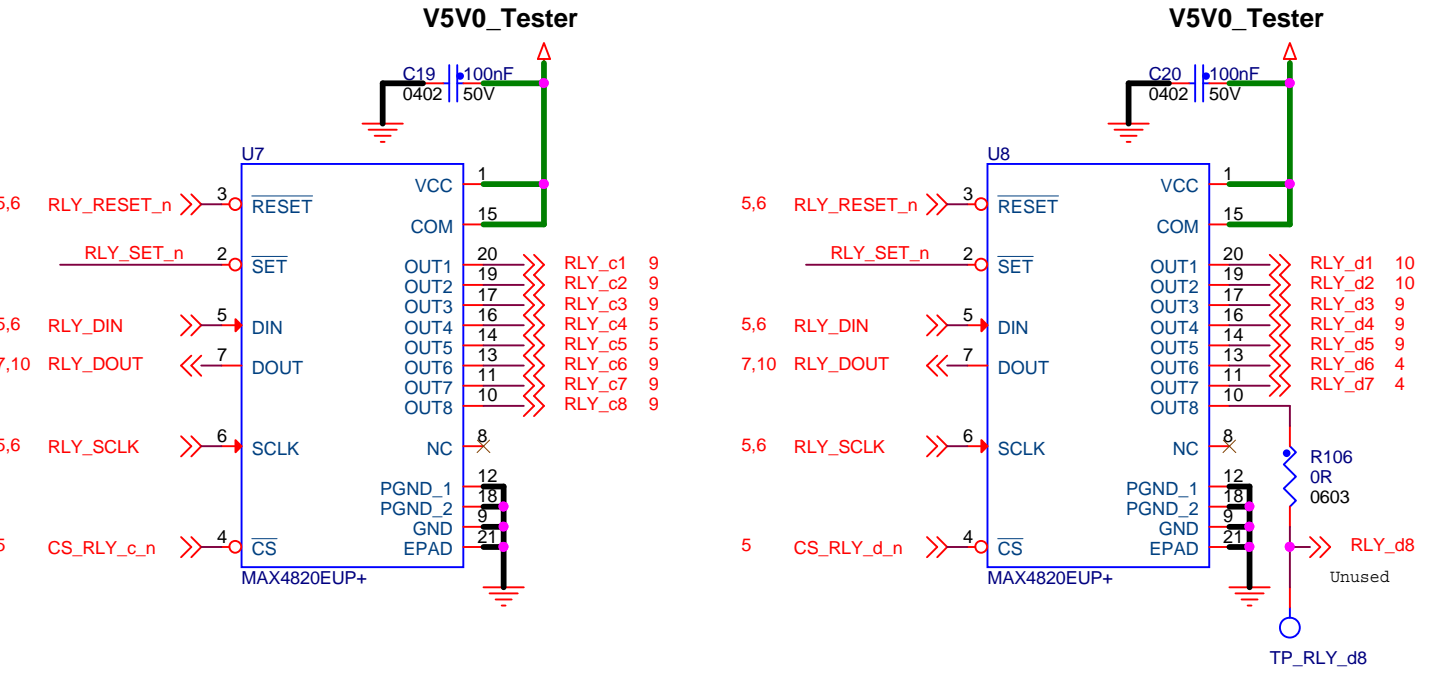
5V RELAY DOUT TRANSLATION




5V, 0.5A RELAY DRIVERS A & B

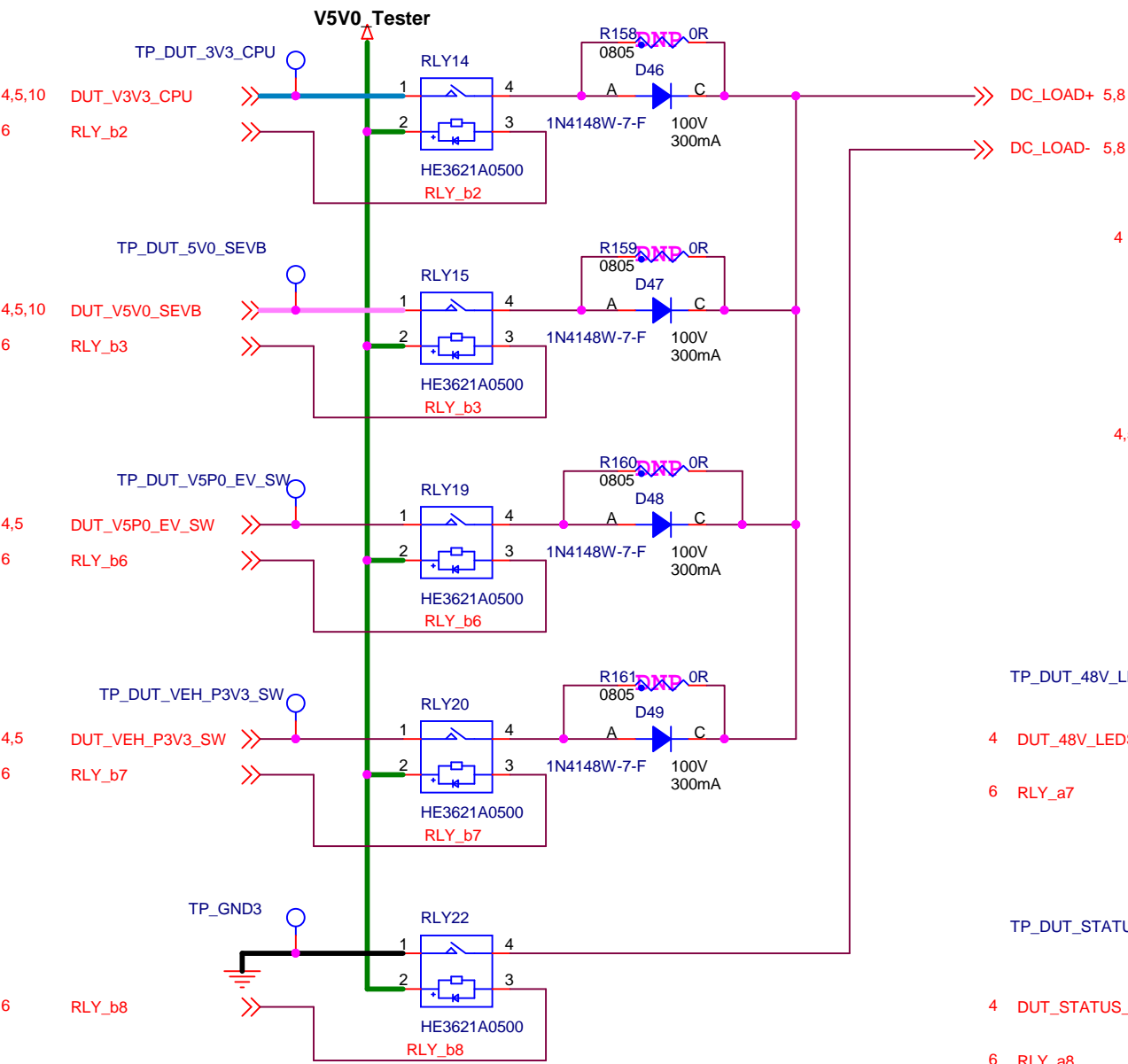


5V, 0.5A RELAY DRIVERS C & D

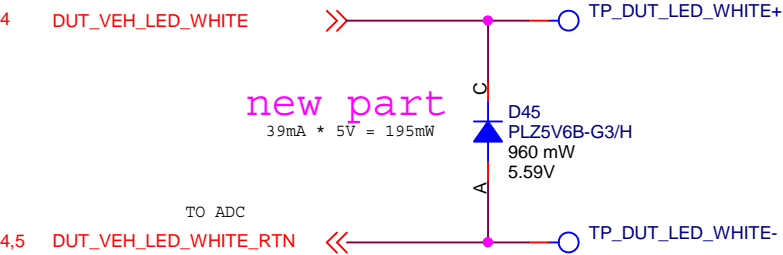


Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
07 - Relay Drivers			
Variant Name			
<Variant Name>			
Responsible Engineer		Document Description	
Henry Tuckfield		SEVB-CCS Factory Stand Tester	
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number
		B	26-010315-01
		Date	Friday, March 04, 2022
		Sheet	7 of 13

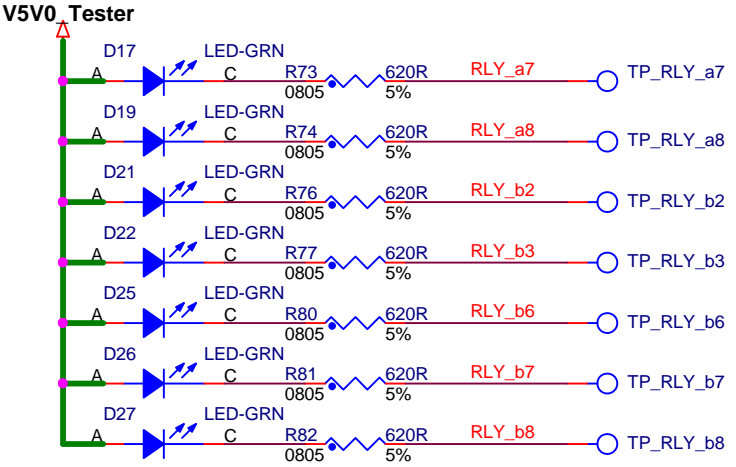
DUT POWER RAILS TO DC LOAD



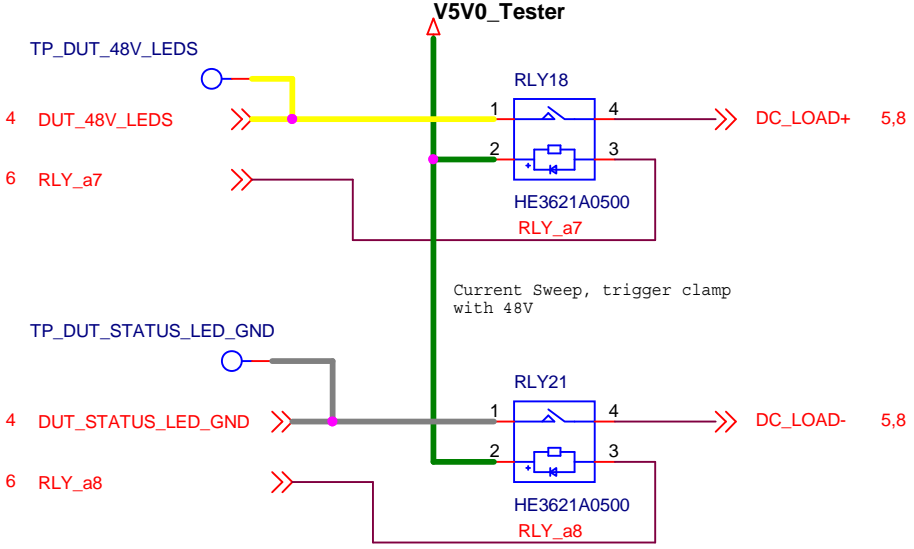
LED WHITE




RELAY LEDS



STATUS LED BOARD



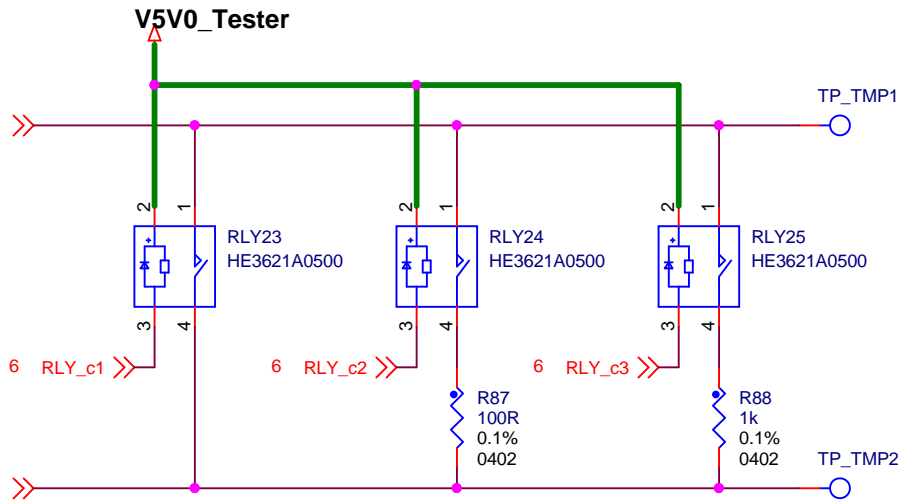
Logic from SEVB to LED board:
DUT_STATUS_LED_RED,
DUT_STATUS_LED_GREEN,
DUT_STATUS_LED_BLUE are routed directly
to DAQ

Page Title		 <div>254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936</div>	
09 - SEVB CCS Power Rail/LEDs			
Variant Name		Document Description	
<Variant Name>			
Responsible Engineer		SEVB-CCS Factory Stand Tester	
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Rev
		B	1
		Date	Friday, March 04, 2022
		Sheet 9 of 13	

Test:
1. Open/short circuit detection for both
NTC and PTC circuits
2. 100R -> PT100 accuracy for 0C
3. 1k-> PT1000 accuracy for 0C

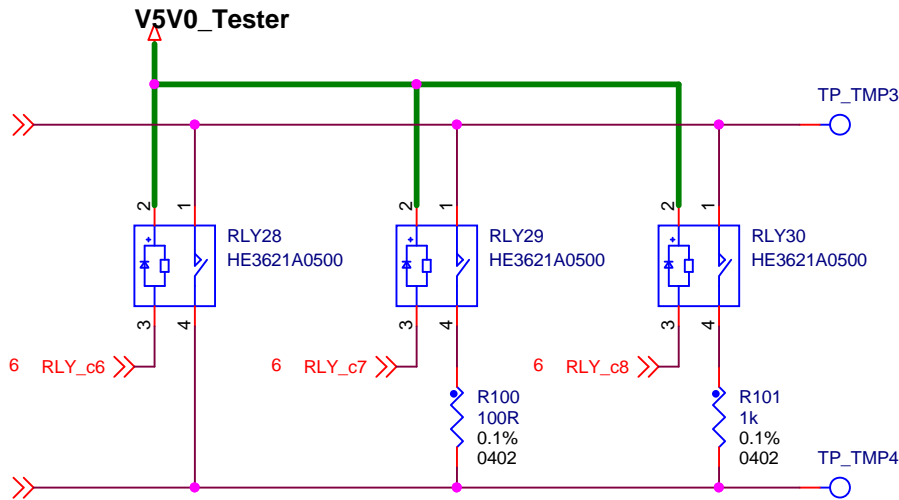
TMP0

4 DUT_VEH_TMP_0



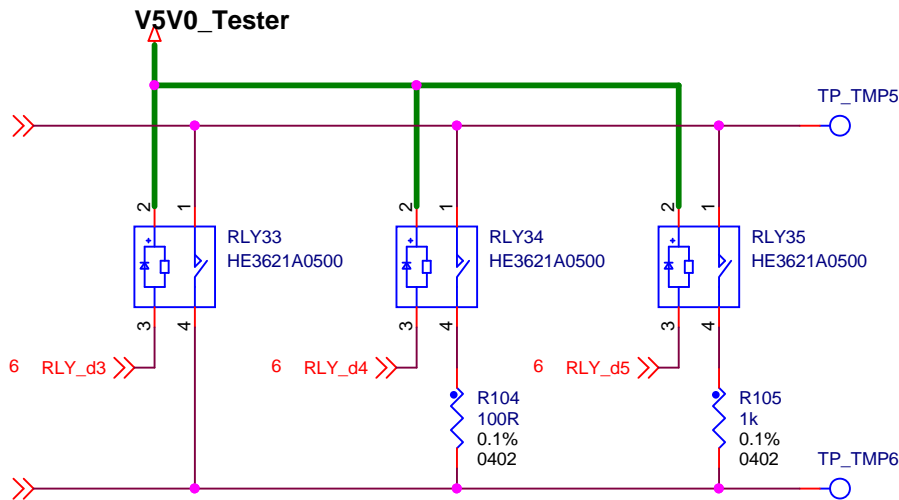
TMP1

4 DUT_VEH_TMP_1

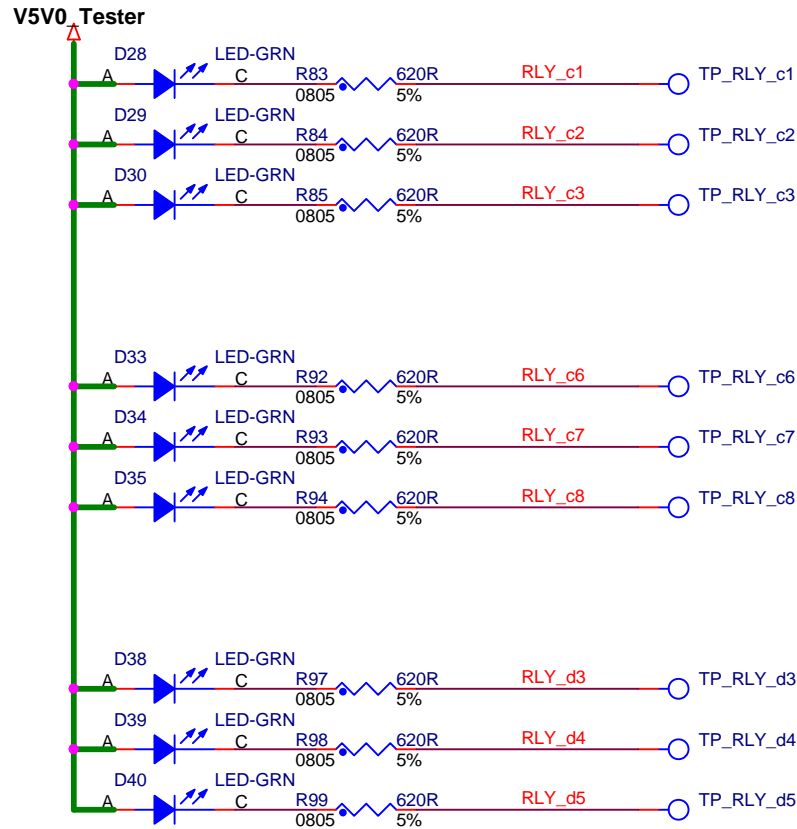



TMP2

4 DUT_VEH_TMP_2



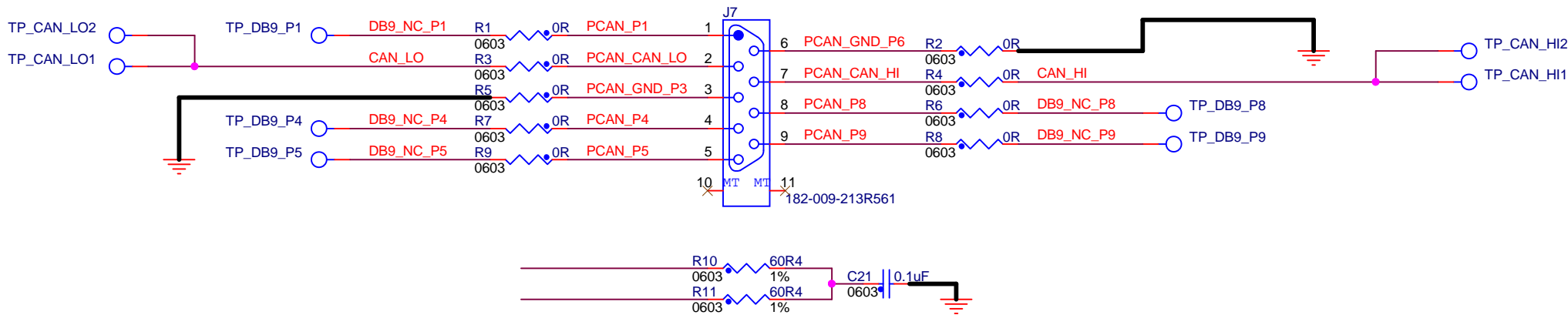
RELAY LEDS




Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
SEVB CCS RTD Temp				
Variant Name				
<Variant Name>				
Responsible Engineer		Document Description		
Henry Tuckfield		SEVB-CCS Factory Stand Tester		
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC, BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number	Rev
		B	26-010XXX-01	1
		Date	Friday, March 04, 2022	

FUTURE-ISH PROOFING FOR CAN COMMUNICATIONS NEEDED IN SEVB-CCS-LCC

"PCAN-USB" DEVICE: FEMALE DB9



Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936			
11 - CAN Interface					
Variant Name					
<Variant Name>					
Responsible Engineer		Document Description			
Henry Tuckfield		SEVB-CCS Factory Stand Tester			
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number	Rev	
		B	26-010315-01	1	
		Date	Friday, March 04, 2022		Sheet 11 of 13

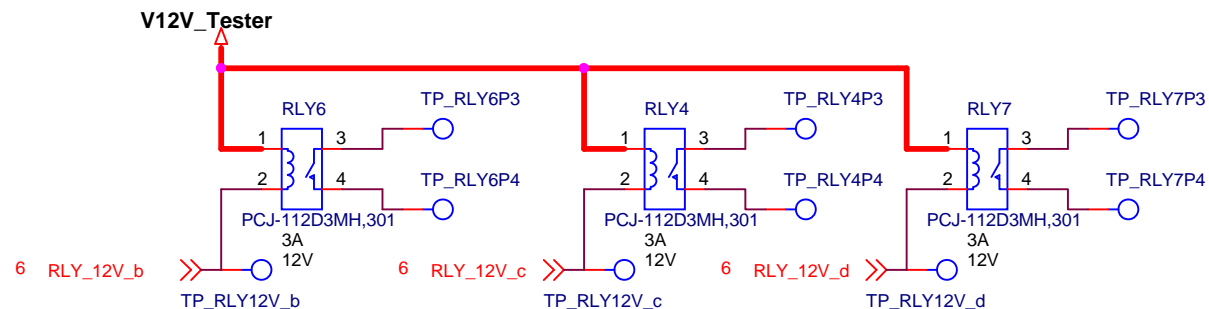
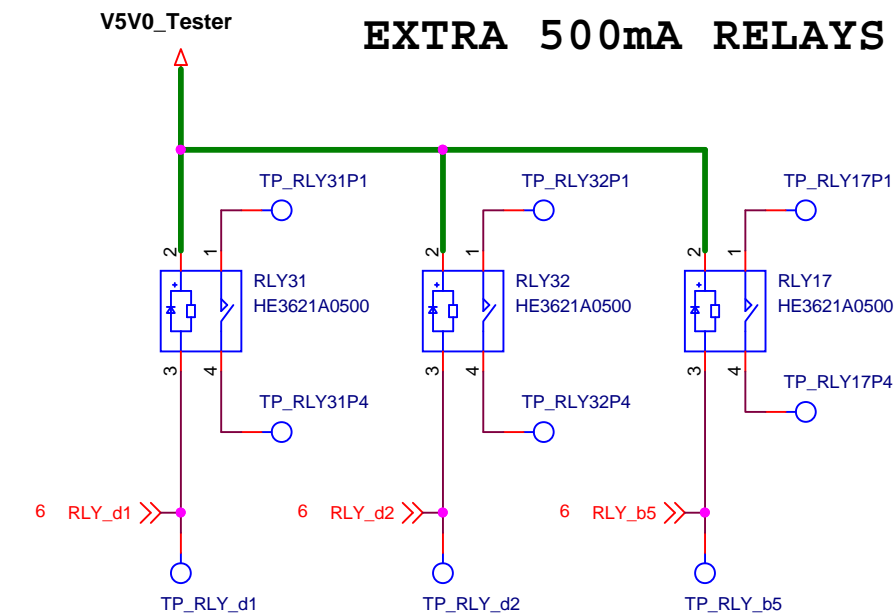
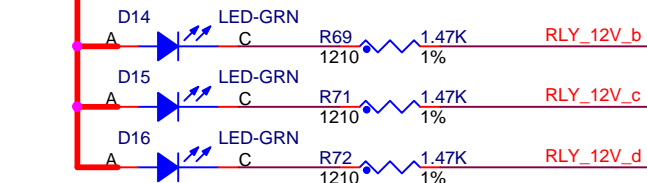
D


C

B

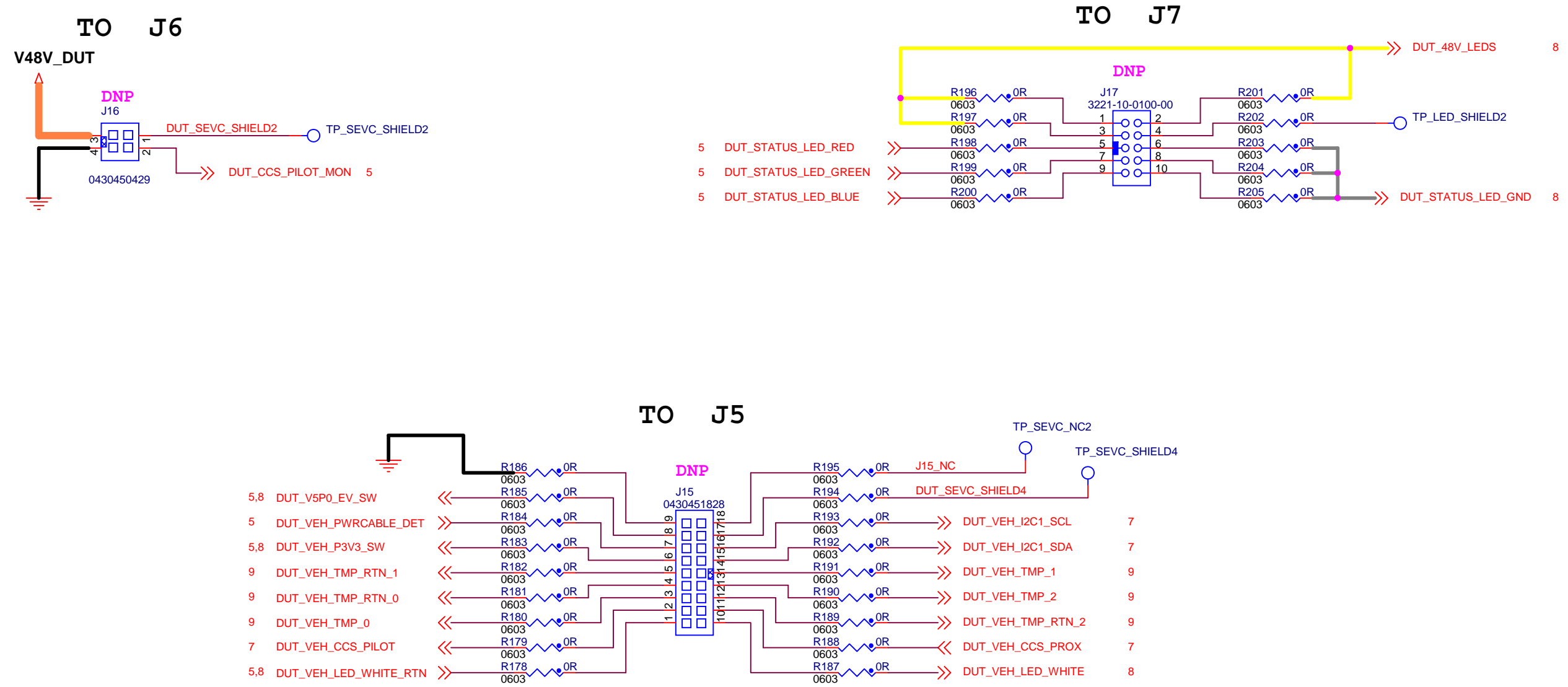
A


EXTRA 3A RELAYS



Page Title 12 - DUT Discharge, Extra Relay	 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
Variant Name <Variant Name>			
Responsible Engineer Henry Tuckfield	Document Description SEVB-CCS Factory Stand Tester		
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.	Size B	Document Number 26-010315-01	Rev 1
	Date Friday, March 04, 2022	Sheet 12 of 13	

DNP CONNECTORS FOR LIMITED DEVELOPMENT WITHOUT FIXUTRE



Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
12 - Development DNI				
Variant Name				
<Variant Name>				
Responsible Engineer		Document Description		
Henry Tuckfield		SEVB-CCS Factory Stand Tester		
THESE DRAWINGS AND SPECIFICATIONS ARE THE EXCLUSIVE PROPERTY OF CHARGEPOINT INC. THEY ARE ISSUED IN STRICT CONFIDENCE AND SHALL NOT, WITHOUT PRIOR WRITTEN PERMISSION FROM CHARGEPOINT INC., BE REPRODUCED, COPIED OR USED IN ANY PURPOSE WHATSOEVER, EXCEPT IN THE MANUFACTURE OF ARTICLES FOR CHARGEPOINT INC.		Size	Document Number	Rev
		B	26-010315-01	1
Date		Friday, March 04, 2022		Sheet 13 of 13

