

Top Silkscreen

ChargePoint, Inc (c) 2021
SEVB CHAdeMO Factory Stand

Bottom Copper

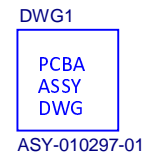
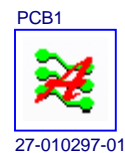
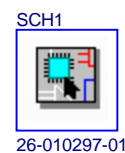
PCB FAB 27-010297-01

Assembly Drawing

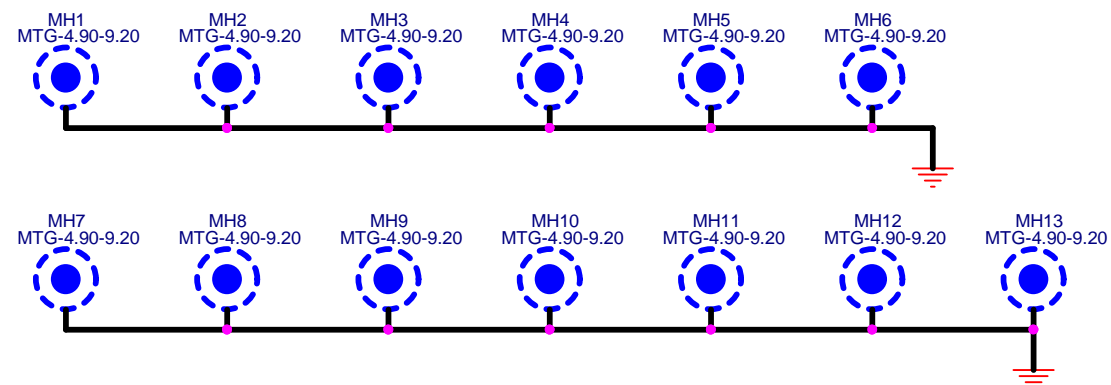
ASY-010297-01


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- 08 - SEVB CH Power Rail/LEDs
- 09 - SEVB CH NTC/PTC Temp




Mounting Holes



Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
Cover Sheet			
Variant Name		SEVB-CH Factory Stand	
28.010297.01			
Responsible Engineer		Document Description	
Henry Tuckfield		SEVB-CH Factory Stand	
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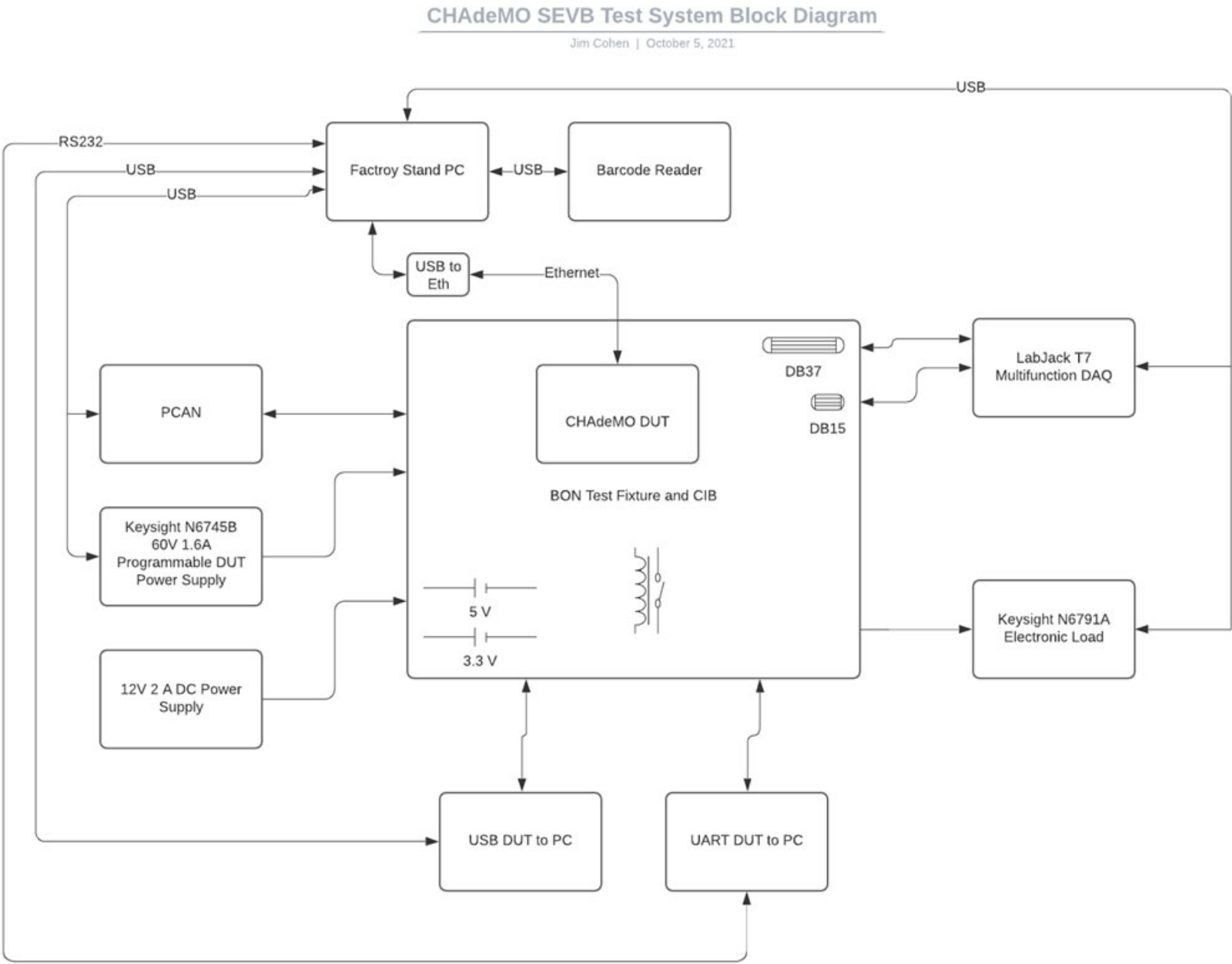
Version (Revision)	Eng	Jira	Date / Revision / Change Description
26-010297-01 (1) ECO-007629	HT	TENG-4458 HRD-6810	10/25/21: Schematic created and reviewed by Henry Tuckfield, Robert Khamashta, Boran Peng, and Jim Cohen


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Revision History			
Variant Name	28.010297.01		
Responsible Engineer	Document Description SEVB-CH Factory Stand		
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DUT CONNECTORS

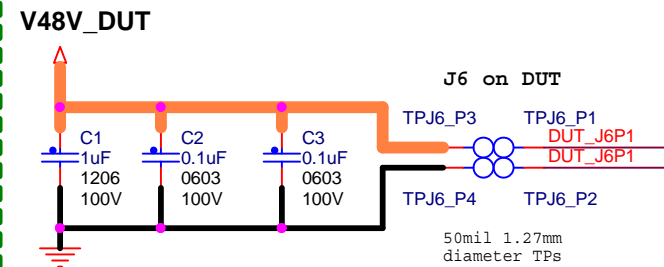
Conn. Ref Des	Number	Net Name	Wire AWG (max/min)	Type
J5	1	VEH_LED_WHITE_RTN	18/22	EV Harness
J5	2	VEH_CH_PERM	18/22	EV Harness
J5	3	VEH_TMP_0	18/22	EV Harness
J5	4	VEH_TMP_RTN_0	18/22	EV Harness
J5	5	VEH_TMP_RTN_1	18/22	EV Harness
J5	6	VEH_P3V3_SW	18/22	EV Harness
J5	7	VEH_PWRCABLE_DET	18/22	EV Harness
J5	8	SEVC_SHIELD	18/22	EV Harness
J5	9	VEH_EV_GND_FLOAT	18/22	EV Harness
J5	10	VEH_CH_Seq_2	18/22	EV Harness
J5	11	VEH_CH_Seq_1	18/22	EV Harness
J5	12	VEH_CH_L_ON_p	18/22	EV Harness
J5	13	VEH_LED_WHITE	18/22	EV Harness
J5	14	VEH_CH_PROX	18/22	EV Harness
J5	15	VEH_TMP_RTN_2	18/22	EV Harness
J5	16	VEH_TMP_2	18/22	EV Harness
J5	17	VEH_TMP_1	18/22	EV Harness
J5	18	VEH_I2C1_SDA	18/22	EV Harness
J5	19	VEH_I2C1_SCL	18/22	EV Harness
J5	20	V5P0_EV_SW	18/22	EV Harness
J5	21	VEH_CH_CAN_LO	18/22	EV Harness
J5	22	VEH_CH_CAN_HI	18/22	EV Harness
J5	23	VEH_CH_L_ON_n	18/22	EV Harness
J5	24	VEH_EV_GND_FLOAT	18/22	EV Harness
J6	1	SEVC_SHIELD	18/22	PWR Harness
J6	2	**no connection**	18/22	PWR Harness
J6	3	V48V0_SEVB	18/22	PWR Harness
J6	4	GND	18/22	PWR Harness
J7	1	V48_LEDS	n/a	Ribbon Cable
J7	2	V48_LEDS	n/a	Ribbon Cable
J7	3	V48_LEDS	n/a	Ribbon Cable
J7	4	SEVC_SHIELD	n/a	Ribbon Cable
J7	5	STATUS_LED_RED	n/a	Ribbon Cable
J7	6	STATUS_LED_GND	n/a	Ribbon Cable
J7	7	STATUS_LED_GREEN	n/a	Ribbon Cable
J7	8	STATUS_LED_GND	n/a	Ribbon Cable
J7	9	STATUS_LED_BLUE	n/a	Ribbon Cable
J7	10	STATUS_LED_GND	n/a	Ribbon Cable
J8	1	SEVC_ETH1_TX_P	24/26	LAN/CAT5e
J8	2	SEVC_ETH1_TX_N	24/26	LAN/CAT5e
J8	3	SEVC_ETH1_RX_P	24/26	LAN/CAT5e
J8	4	SEVC_ETH1_RX_N	24/26	LAN/CAT5e
J8	5	SEVC_SHIELD	24/26	LAN/CAT5e

BLOCK DIAGRAM

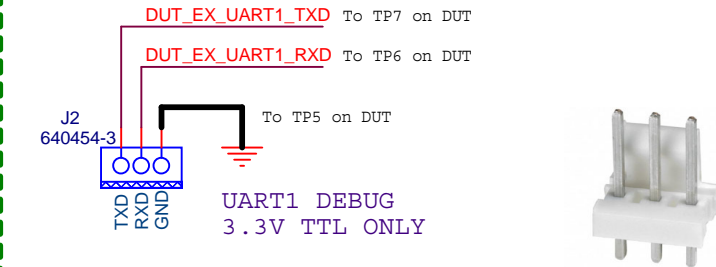


Page Title		 <div>254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936</div>		
Block Diagram				
Variant Name				
28.010297.01				
Responsible Engineer		Document Description		
Henry Tuckfield		SEVB-CH Factory Stand		
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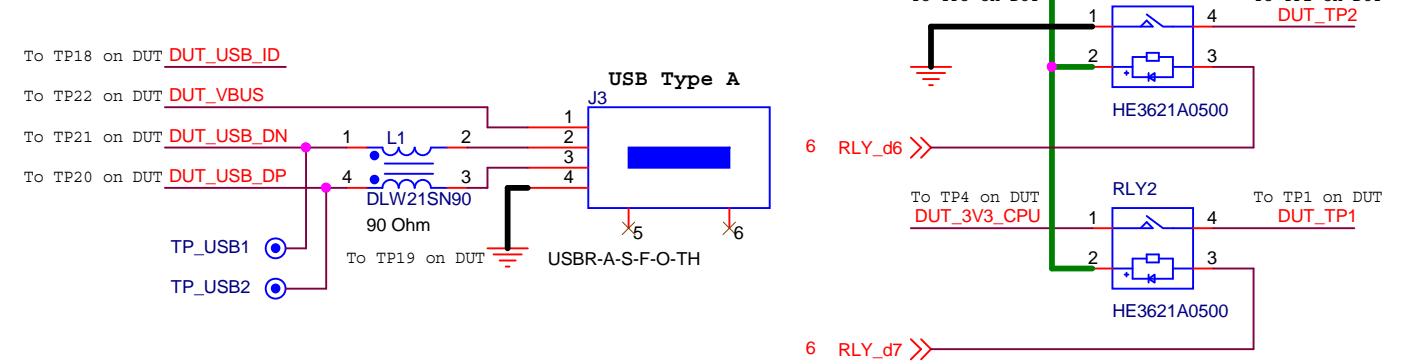
DUT 48V CONNECTOR



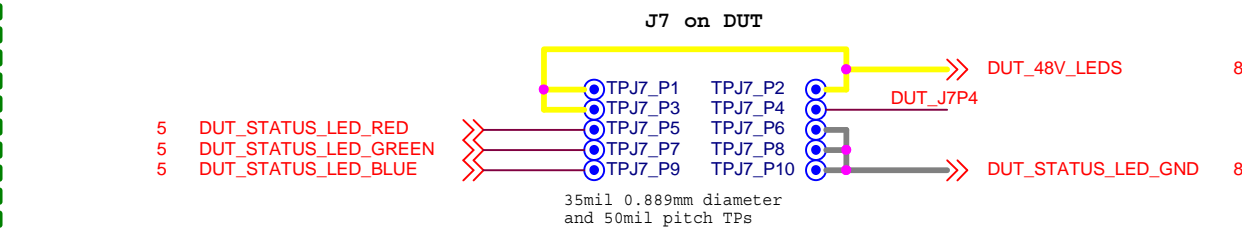
DUT UART - DEBUG HEADER



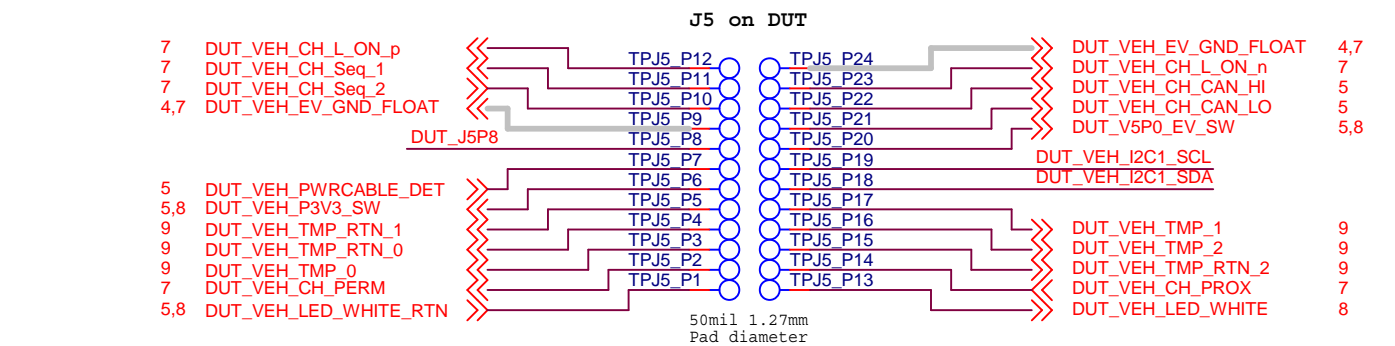
DUT USB + BOOT MODE SELECT



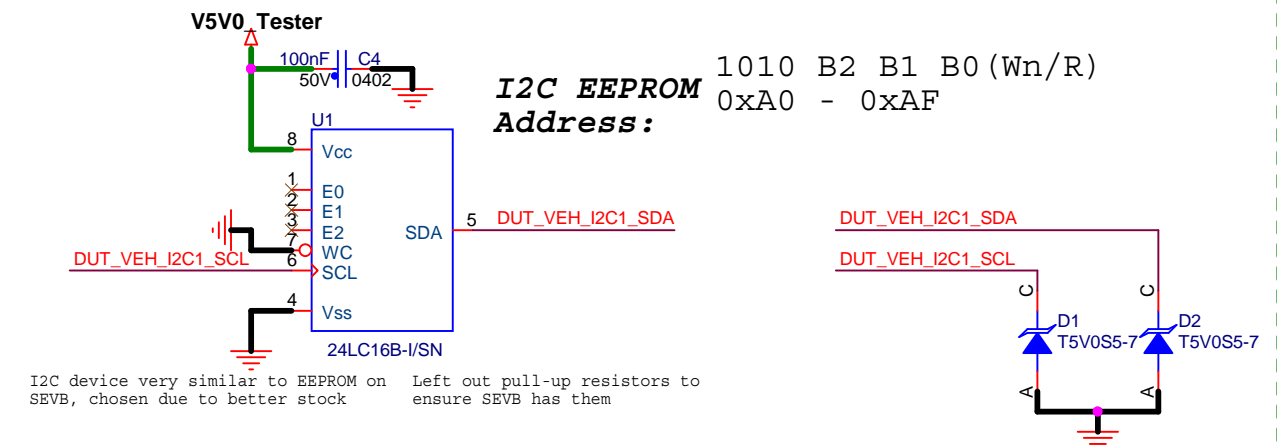
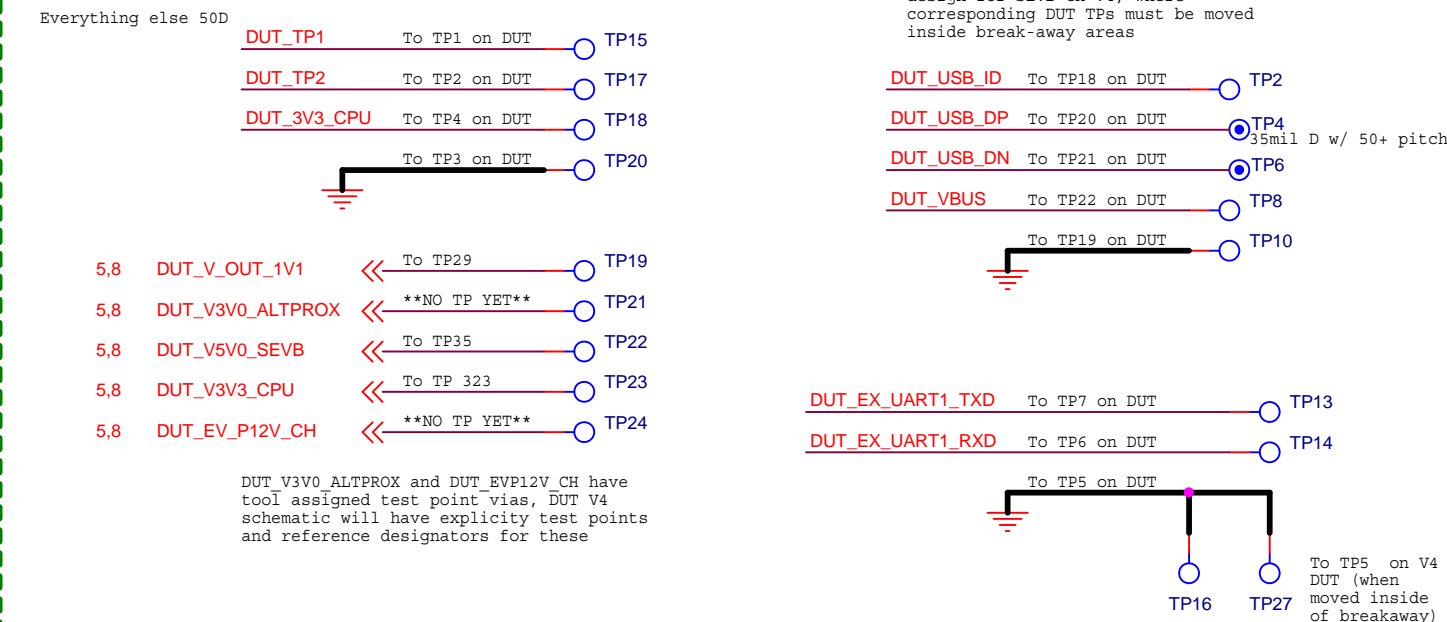
DUT LED BOARD CONNECTOR OUT




DUT VEH CONNECTOR, VEH I2C DUMMY DEVICE

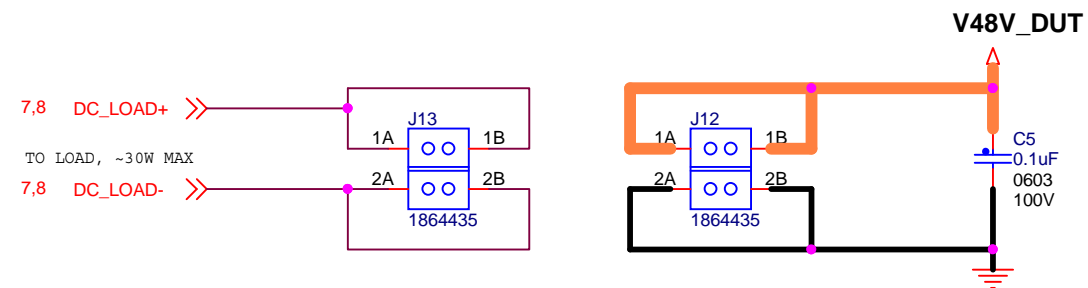


TP to TP Nail connections to DUT

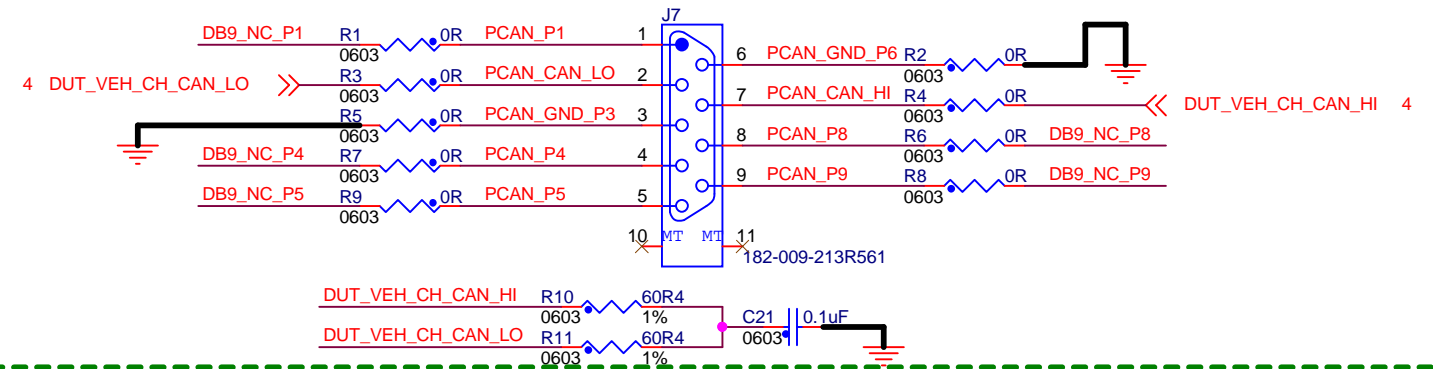
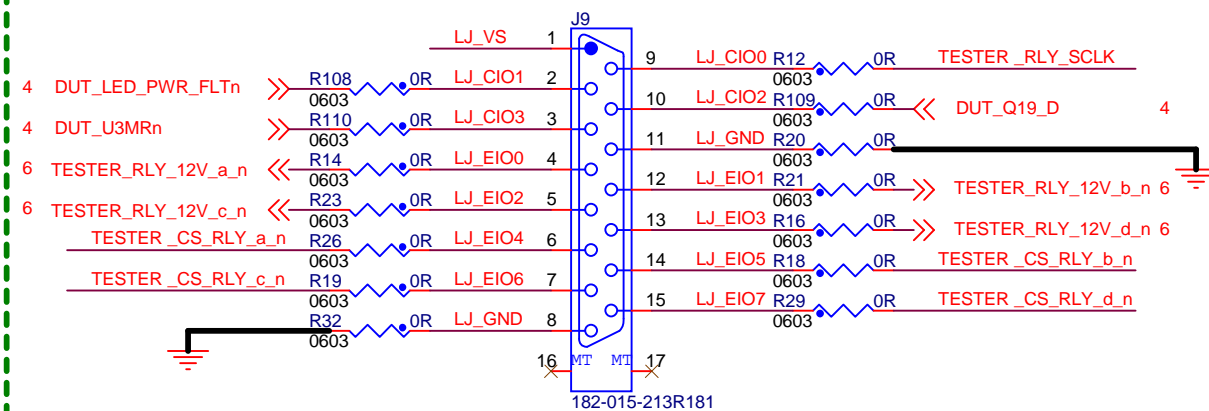


Page Title DUT Connections	 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
Variant Name 28.010297.01			
Responsible Engineer Henry Tuckfield	Document Description SEVB-CH Factory Stand		
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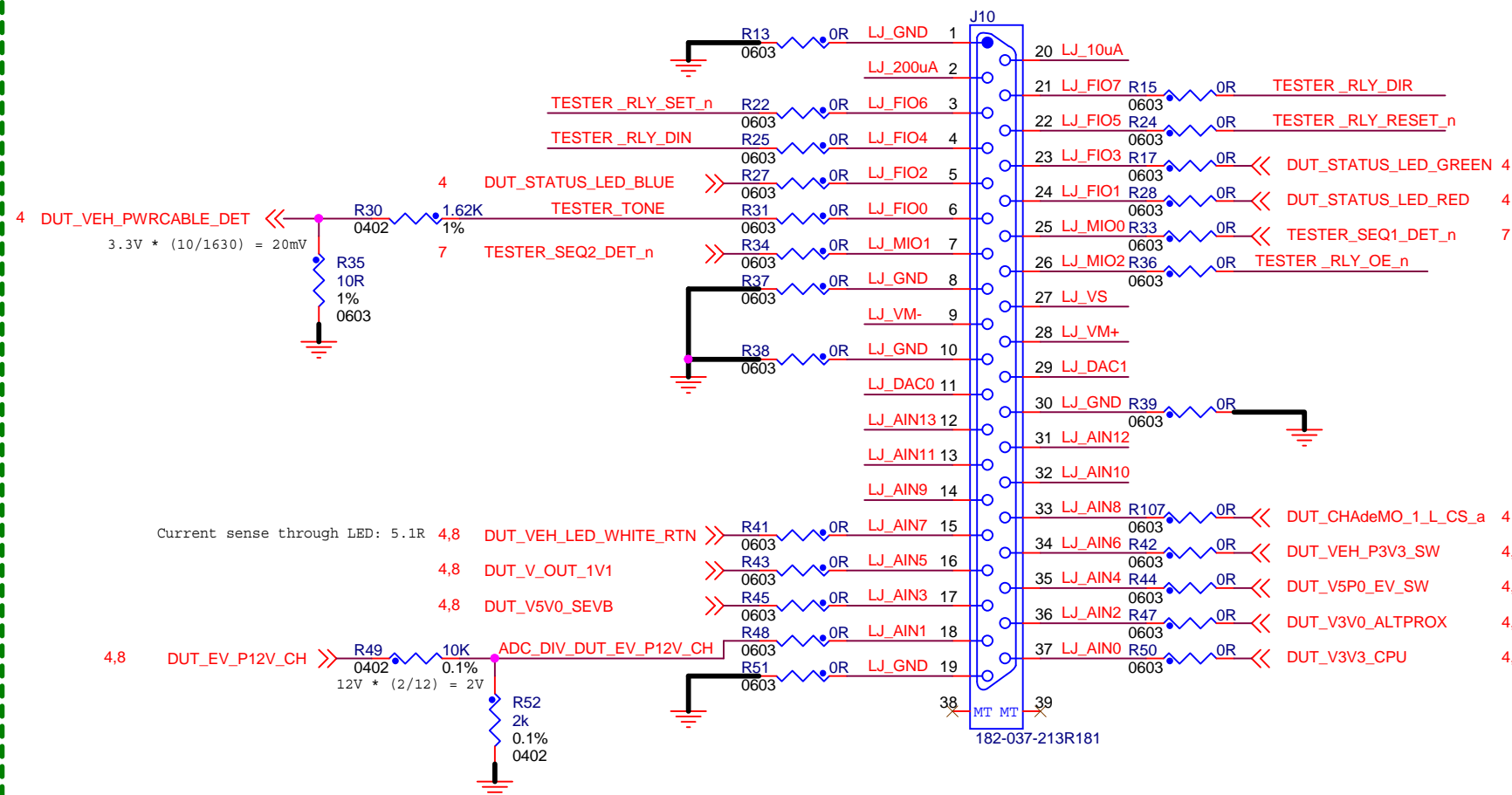
DUT POWER SUPPLY IN AND DC LOAD OUT



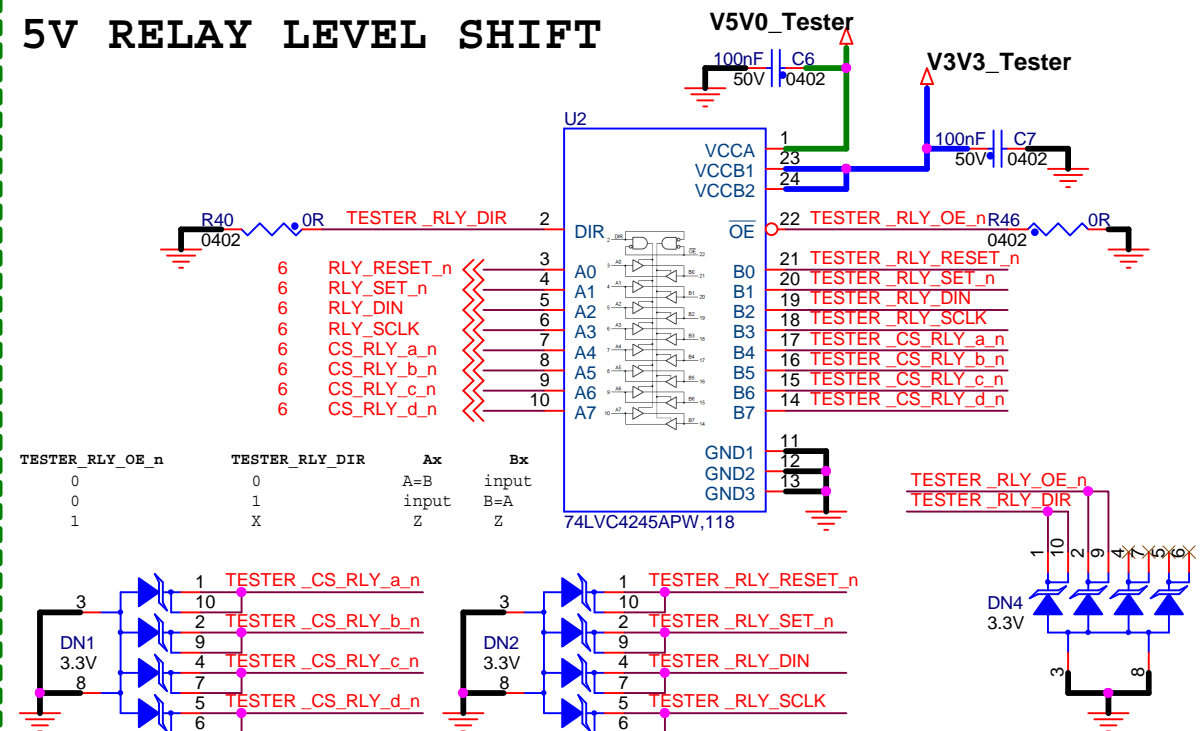
"PCAN-USB" DEVICE: FEMALE DB9


**LABJACK T7 NETS: DB15**

LABJACK T7 NETS: DB37

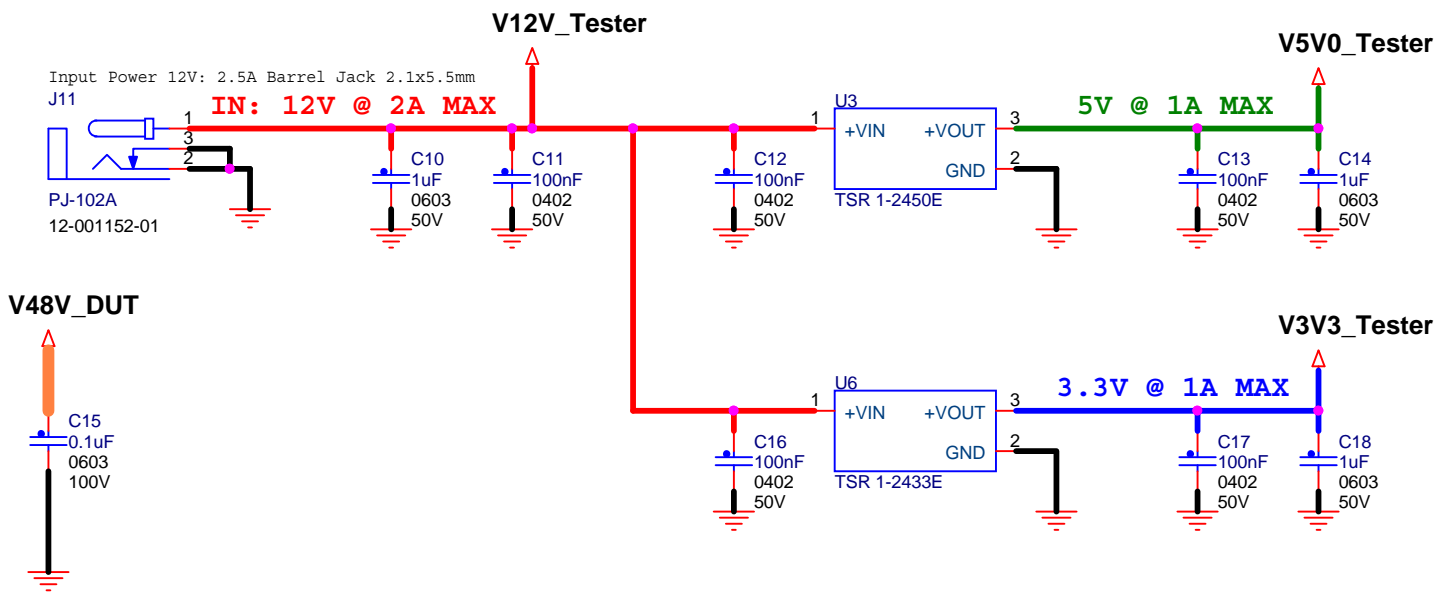


5V RELAY LEVEL SHIFT

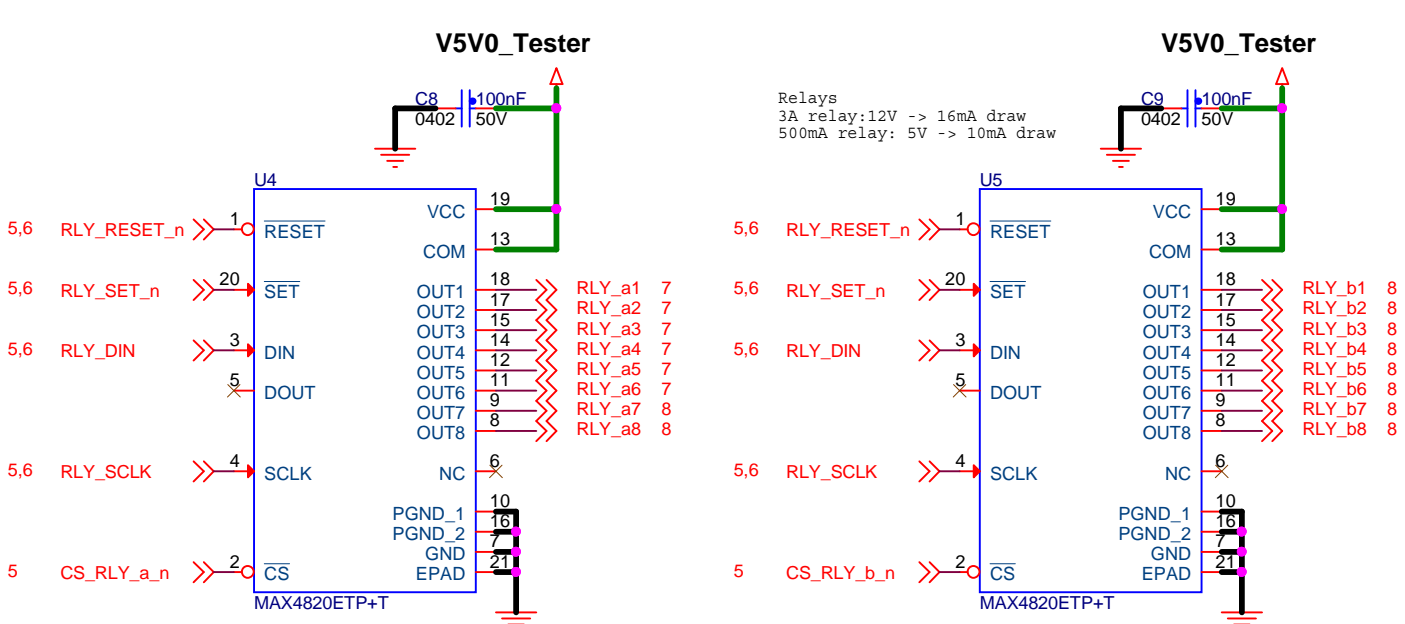


Page Title	External Connections/Level Shift		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936	
Variant Name	28.010297.01			
Responsible Engineer	Henry Tuckfield		Document Description	
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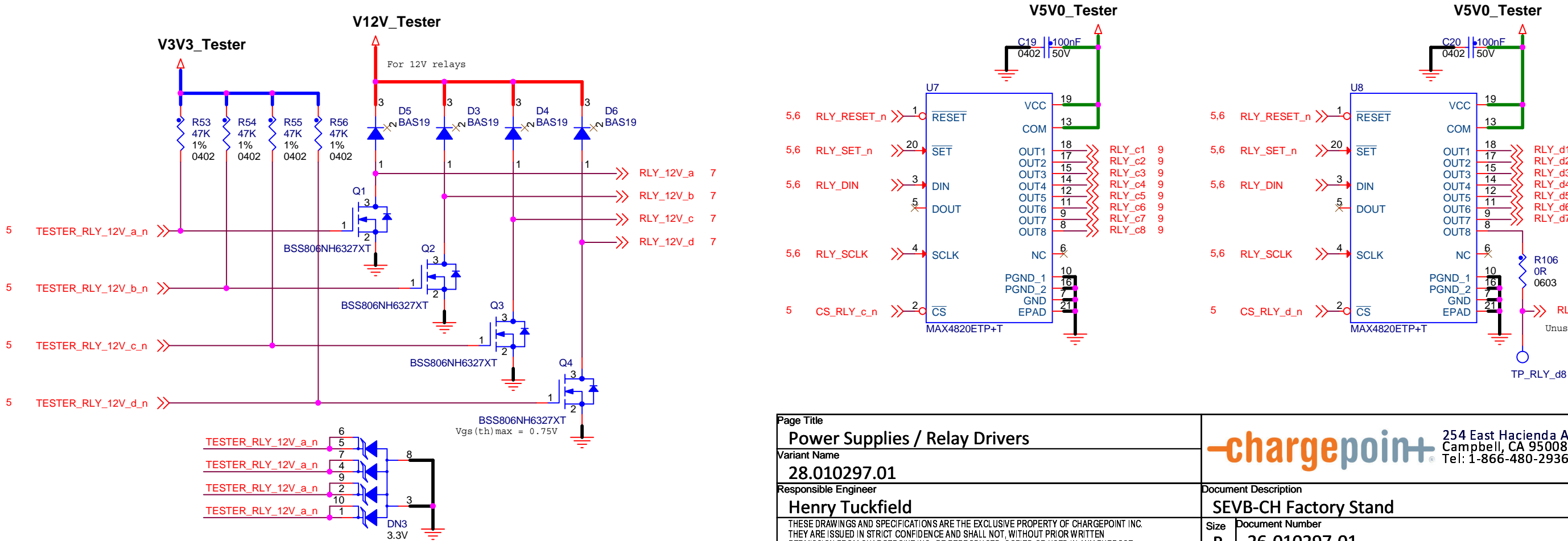
TESTER POWER RAILS: 48V FROM DUT, 12V, 5V, 3.3V




5V, 0.5A RELAY DRIVERS

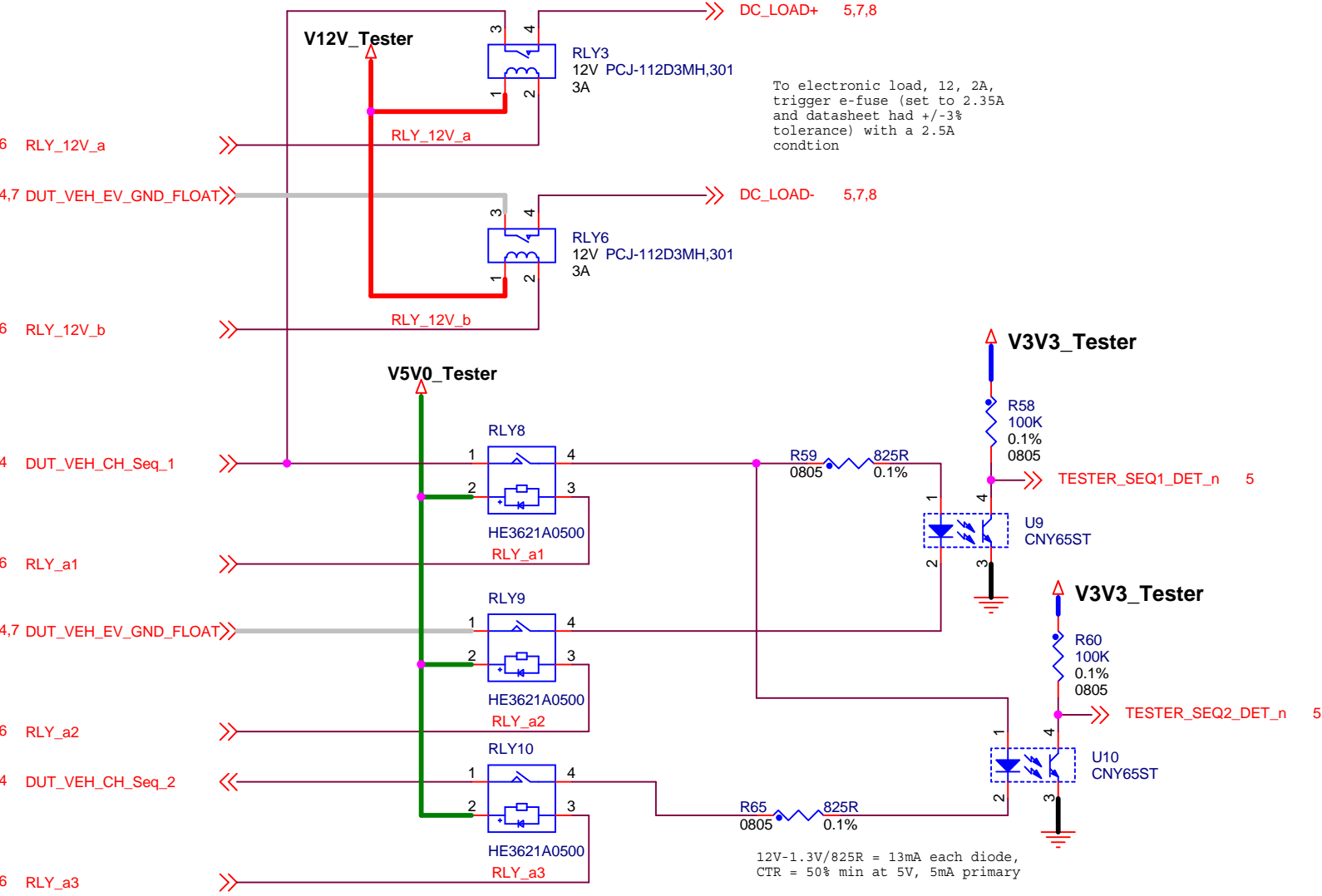


12V, 3A RELAY DRIVERS

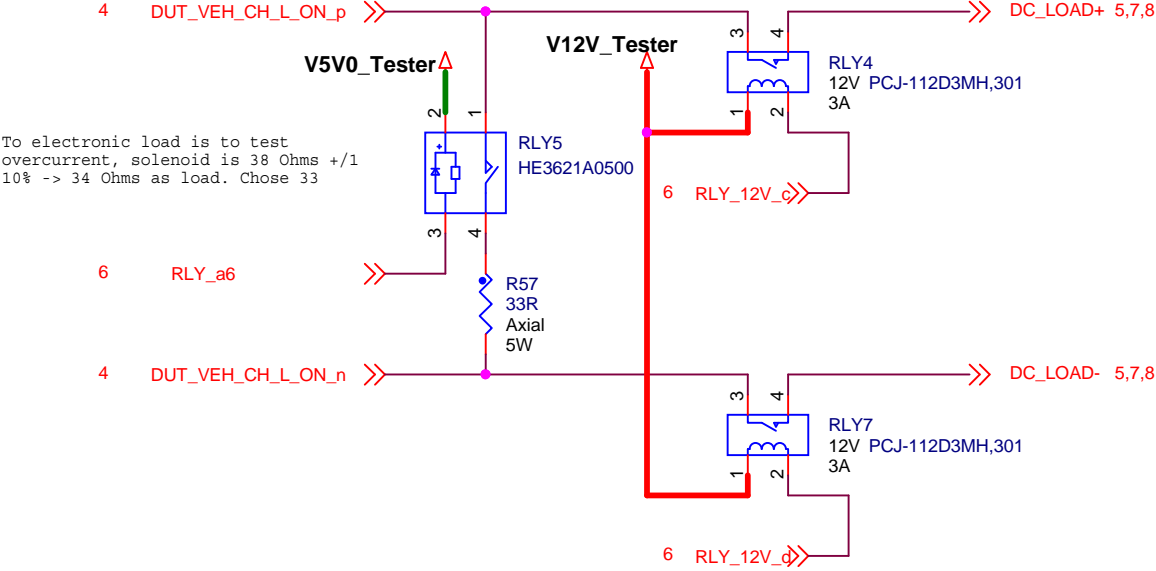


Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
Power Supplies / Relay Drivers				
Variant Name		Document Description		
28.010297.01				
Responsible Engineer		SEVB-CH Factory Stand		
Henry Tuckfield				
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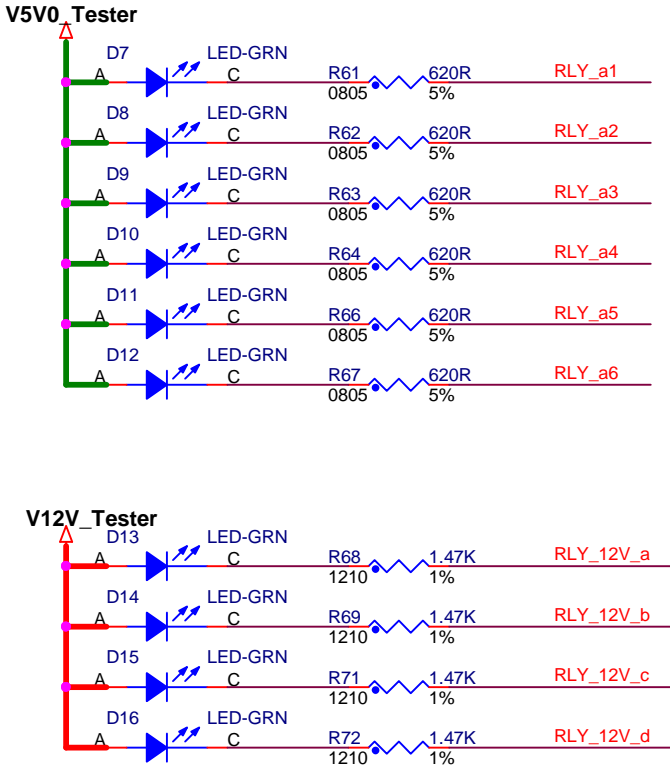
CHADEMO SEQUENCE 1+2 , 12V MAX LOAD, E-FUSE CHECK, ALT. PROX.



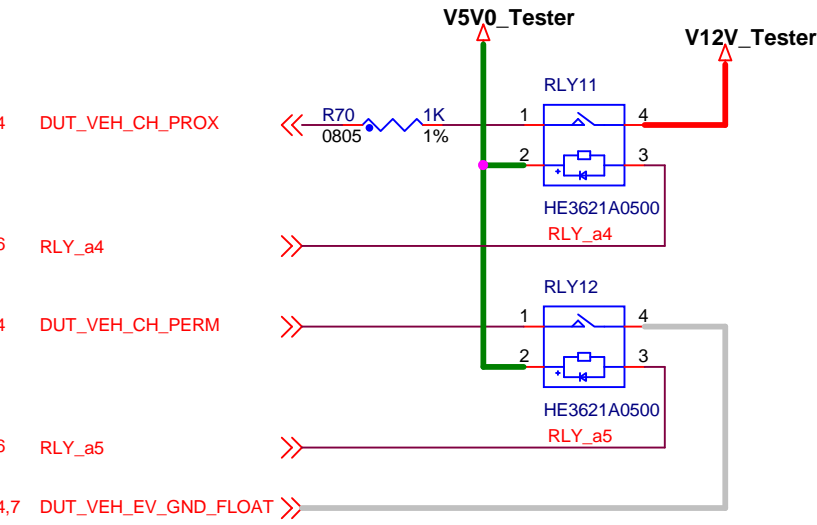
CHADEMO CABLE LATCH



RELAY LEDS



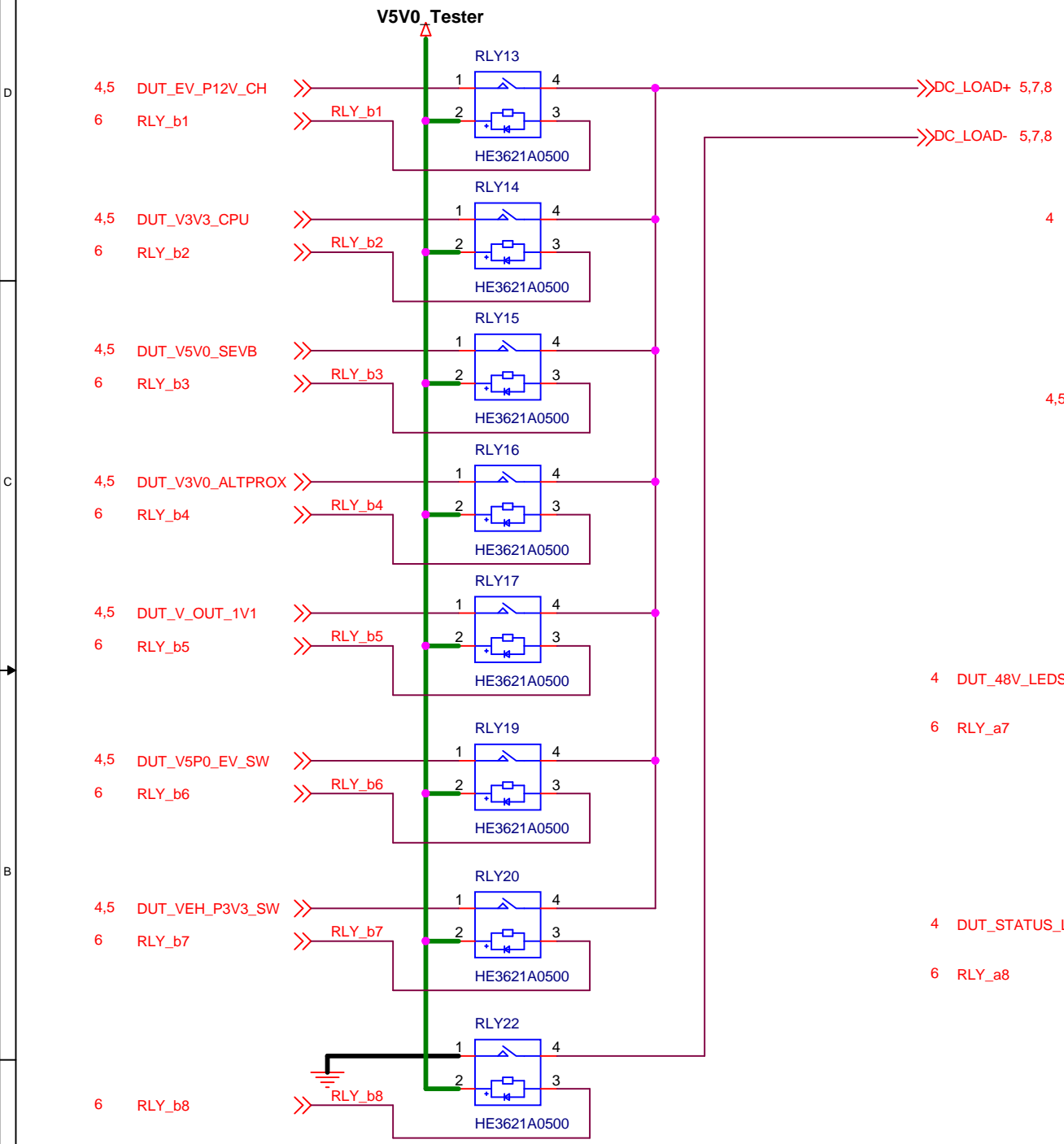
CHADEMO PROXIMITY AND PERMISSION



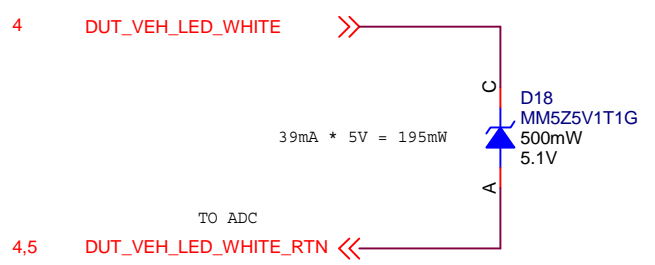
Page Title	SEVB CH Vehicle Handshake		
Variant Name	28.010297.01		
Responsible Engineer	Henry Tuckfield		
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		Size	Document Number
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		Rev	1

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

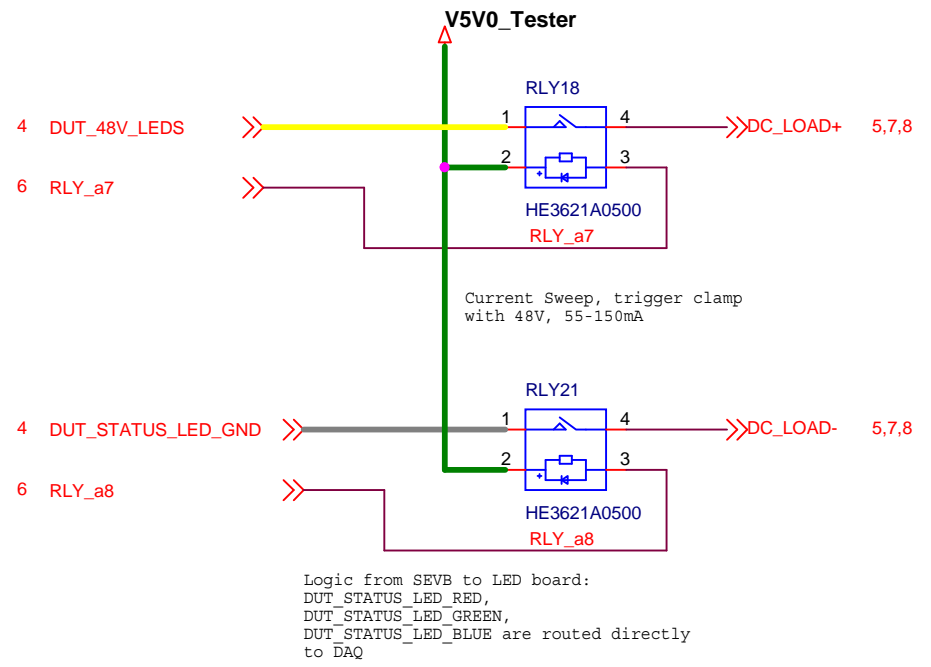
DUT POWER RAILS TO DC LOAD



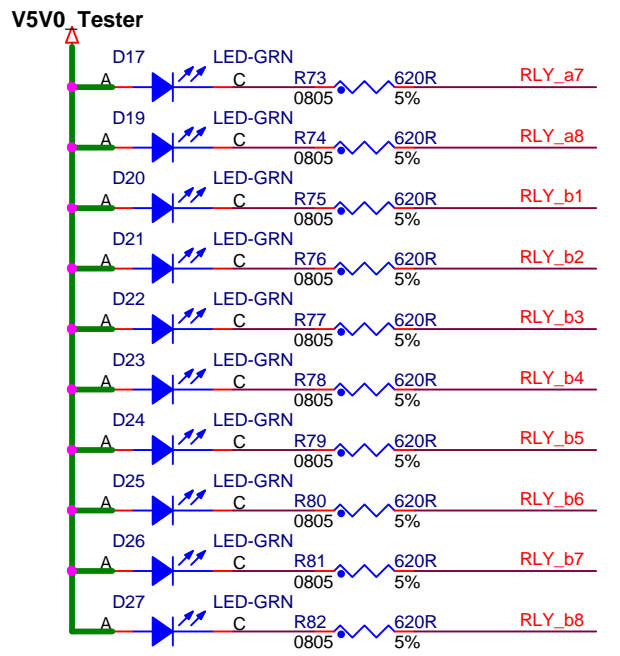
LED WHITE




STATUS LED BOARD



RELAY LEDS



Page Title		 254 East Hacienda Avenue Campbell, CA 95008 USA Tel: 1-866-480-2936		
SEVB CH Power Rail/LEDs				
Variant Name		Document Description		
28.010297.01				
Responsible Engineer		SEVB-CH Factory Stand		
Henry Tuckfield				
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TMP0

4 DUT_VEH_TMP_0

Test:
1. Open/short circuit detection for both NTC and PTC circuits
2. 100R -> PT100 accuracy for 0C
3. 1k-> PT1000 accuracy for 0C
4. 1.3k -> NTC accuracy at 88.7C
5. 249k -> NTC open circuit detection
should NOT raise fault flag for ~-40C condition

4 DUT_VEH_TMP_RTN_0

V5V0_Tester

RLY23
HE3621A0500

6 RLY_c1

RLY24
HE3621A0500

6 RLY_c2

RLY25
HE3621A0500

6 RLY_c3

RLY26
HE3621A0500

6 RLY_c4

RLY27
HE3621A0500

6 RLY_c5

R87
100R
0.1%
0402

R88
1k
0.1%
0402

R89
1.3k
0.1%
0402

R90
249k
1%
0402

TP_TMP1

TP_TMP2

TMP1

4 DUT_VEH_TMP_1

Test:
1. Open/short circuit detection for both NTC and PTC circuits
2. 100R -> PT100 accuracy for 0C
3. 1k-> PT1000 accuracy for 0C
4. 1.3k -> NTC accuracy at 88.7C
5. 249k -> NTC open circuit detection
should NOT raise fault flag for ~-40C condition

4 DUT_VEH_TMP_RTN_1

V5V0_Tester

RLY28
HE3621A0500

6 RLY_c6

RLY29
HE3621A0500

6 RLY_c7

RLY30
HE3621A0500

6 RLY_c8

RLY31
HE3621A0500

6 RLY_d1

RLY32
HE3621A0500

6 RLY_d2

R100
100R
0.1%
0402

R101
1k
0.1%
0402

R102
1.3k
0.1%
0402

R103
249k
1%
0402

TP_TMP3

TP_TMP4

TMP2

4 DUT_VEH_TMP_2

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

4 DUT_VEH_TMP_RTN_2

V5V0_Tester

RLY33
HE3621A0500

6 RLY_d3

RLY34
HE3621A0500

6 RLY_d4

RLY35
HE3621A0500

6 RLY_d5

R104
100R
0.1%
0402

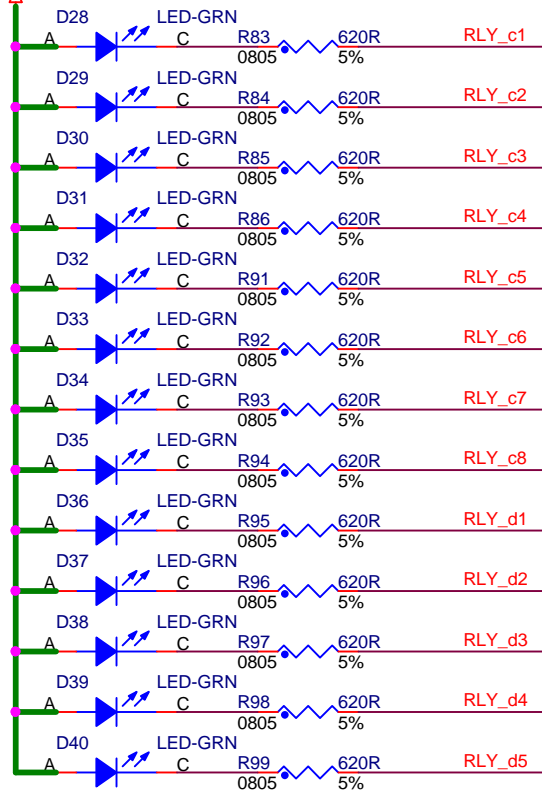
R105
1k
0.1%
0402

TP_TMP5

TP_TMP6

RELAY LEDS

V5V0_Tester



Page Title

SEVB CH NTC/PTC Temp Sensing

Variant Name

28.010297.01

Responsible Engineer

Henry Tuckfield

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

Document Description

SEVB-CH Factory Stand

Size

B

Document Number

26-010297-01

Date

Monday, October 25, 2021

Sheet

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Rev

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