

REVISION CONTROL

Rev 1.0 - Dec 4, 2017, Initial Board Release

Copied from Si5347 board and
updated PCB,label and DUT on BOM. tturner

Rev 1.1 - May 29, 2018, Changed U5 from PCA9517D to
PCA9517AD,118 (this was needed to make sure the NXP
part is ordered instead of the TI version)

<Core Design>



400 W Cesar Chavez
Austin, TX 78701

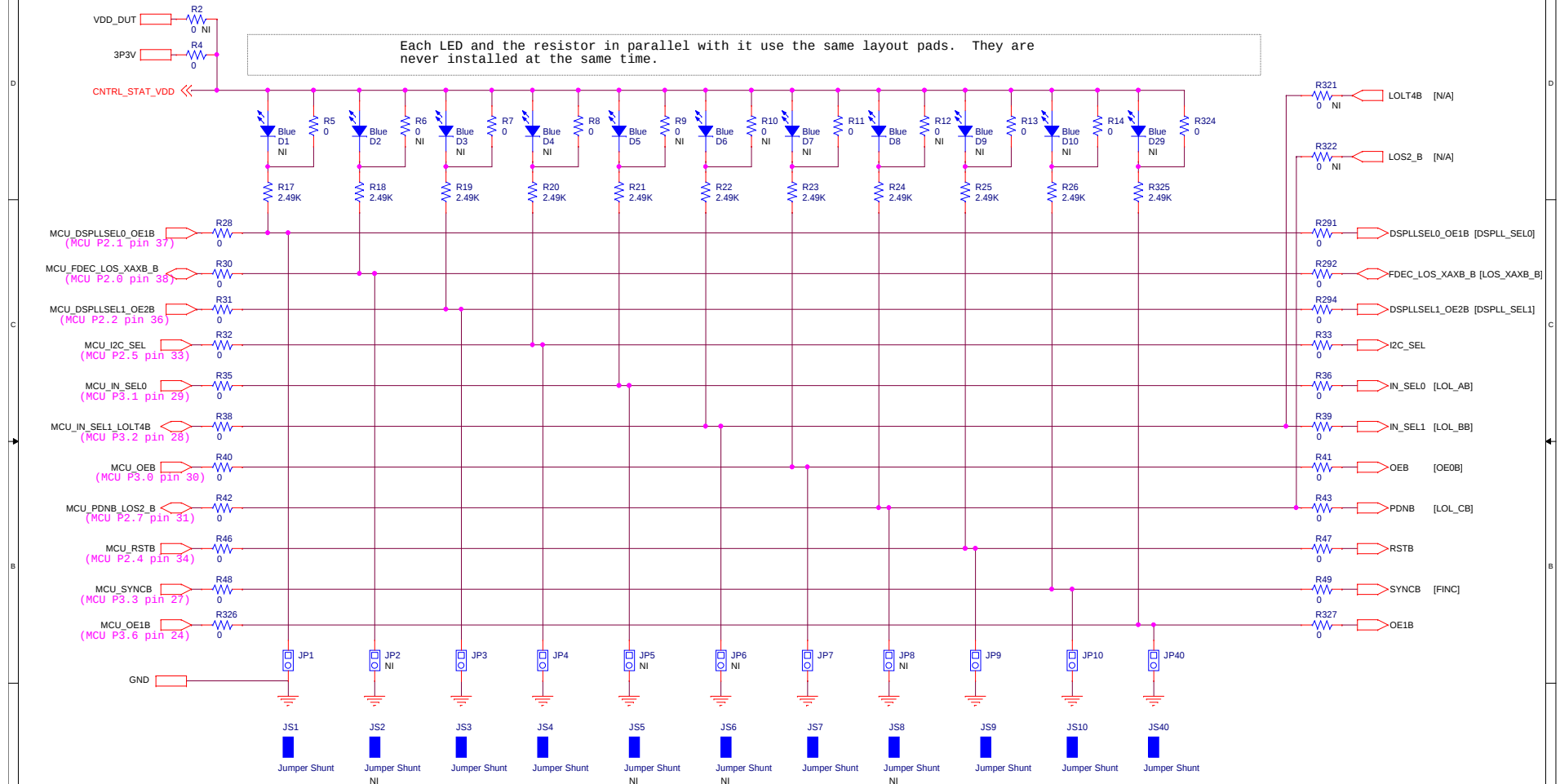
SILICON LABS

Title SI5347-EB_TOP_REVISION

Size	Document Number	Rev
B	SI5397A-A-EB	1.1

Date: Tuesday, May 29, 2018 Sheet 2 of 44

CONTROL PINS CONNECTIONS



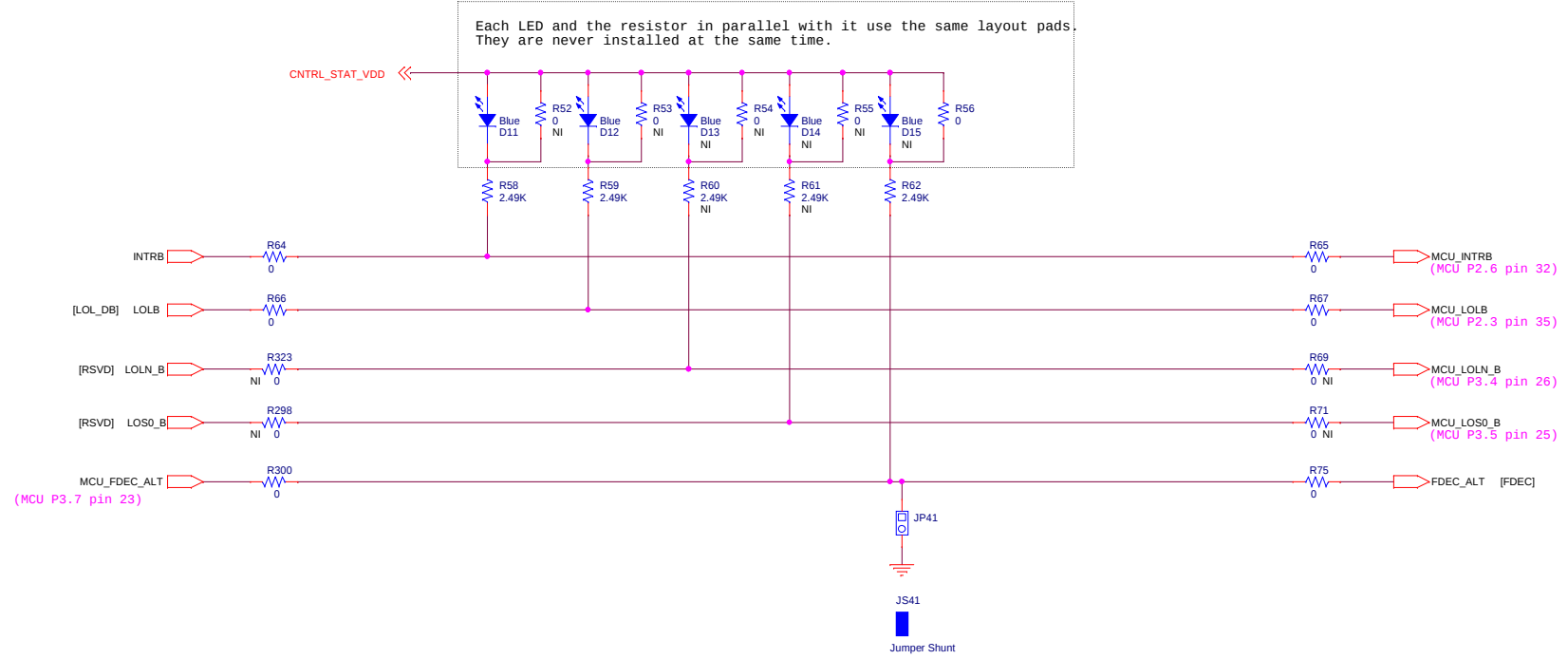
Note:

1. If the net name differs from the DUT pin name, the corresponding DUT pin name is enclosed in brackets. [DUT Pin Name]
2. "N/A" in brackets indicates that the function is not used for the DUT. [N/A]

<Core Design>

		400 W Cesar Chavez Austin, TX 78701
Title CONTROL PINS_P1		
Size B	Document Number SI5397A-A-EB	Rev 1.1
Date: Tuesday, May 29, 2018		Sheet 3 of 44

CONTROL PINS CONNECTIONS



Note:

1. If the net name differs from the DUT pin name, the corresponding DUT pin name is enclosed in brackets. [DUT Pin Name]
2. "N/A" in brackets indicates that the function is not used for the DUT. [N/A]

<Core Design>

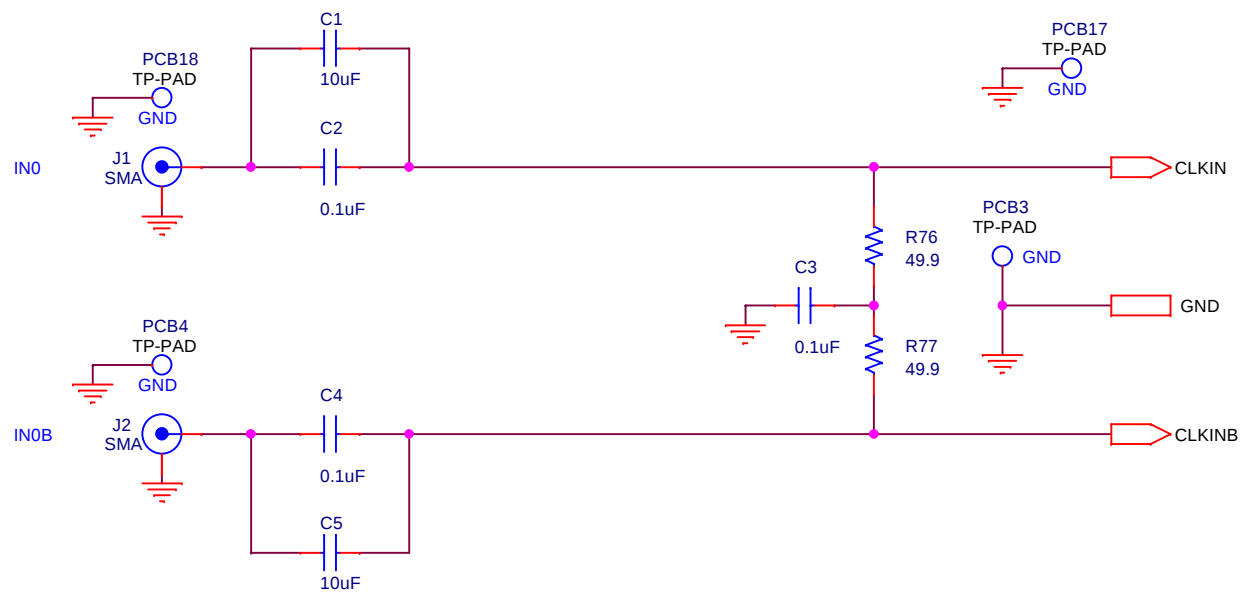


400 W Cesar Chavez
Austin, TX 78701

Title
CONTROL_PINS_P2

Size B	Document Number SI5397A-A-EB	Rev 1.1
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Date: Tuesday, May 29, 2018 Sheet 4 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_INPUT_CLK

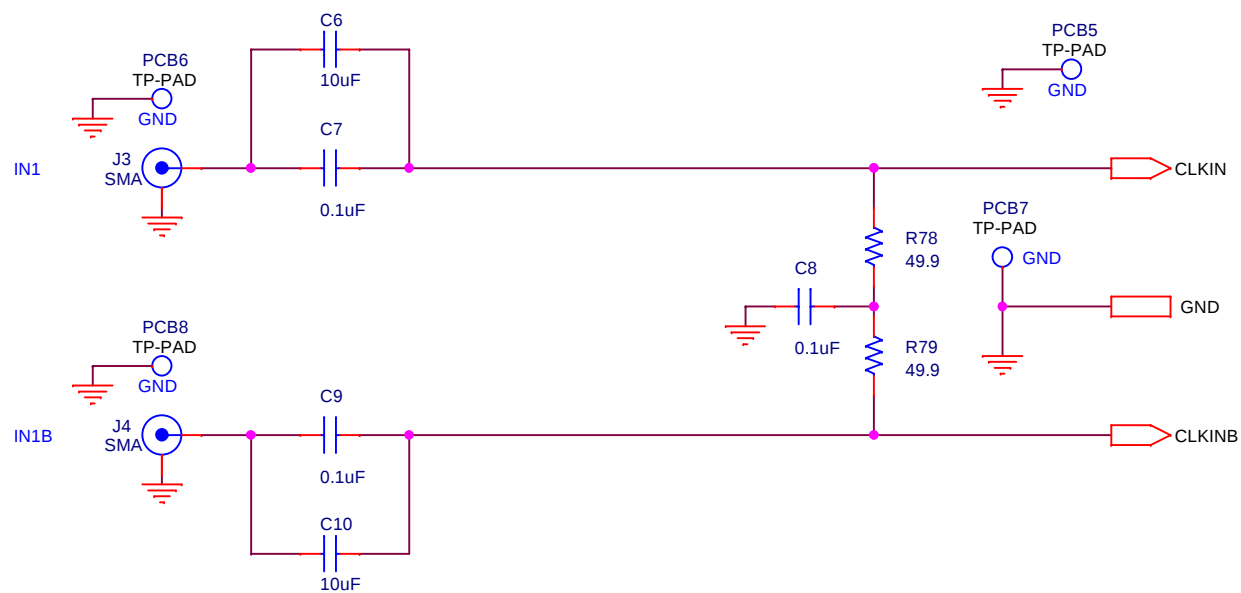
Size
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 5 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_INPUT_CLK

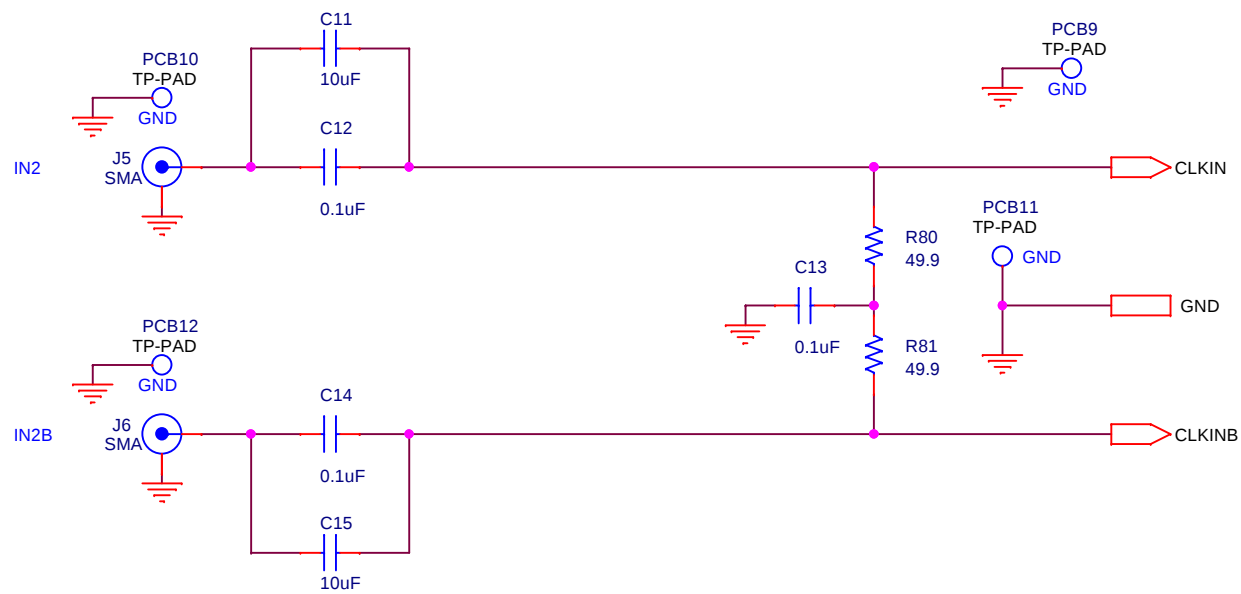
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 6 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_INPUT_CLK

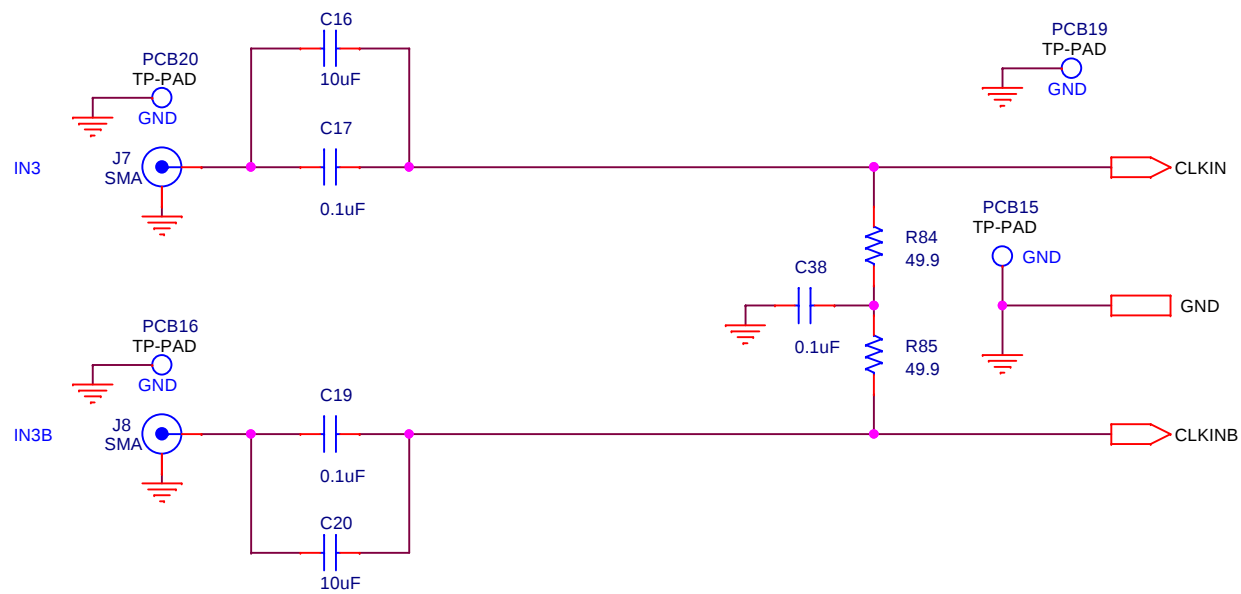
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 7 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_INPUT_CLK

Size
A

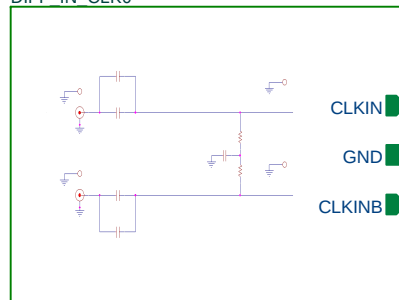
Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 8 of 44

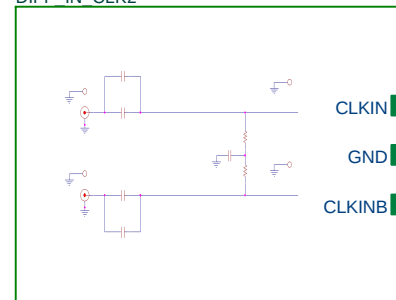
DIFF IN CLK0



CLKIN → CLKIN0
 GND → GND
 CLKINB → CLKIN0B

DIFF_INPUT_CLK

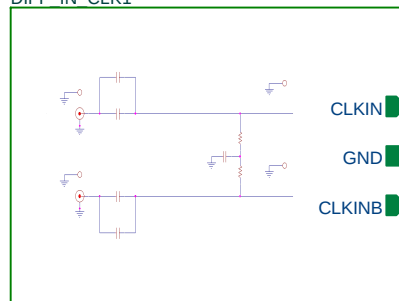
DIFF IN CLK2



CLKIN → CLKIN2
 GND → GND
 CLKINB → CLKIN2B

DIFF_INPUT_CLK

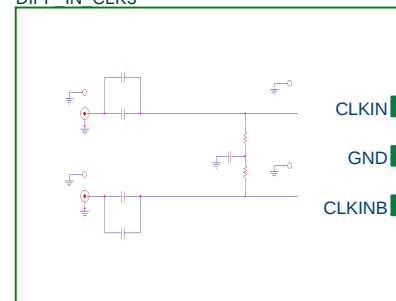
DIFF IN CLK1



CLKIN → CLKIN1
 GND → GND
 CLKINB → CLKIN1B

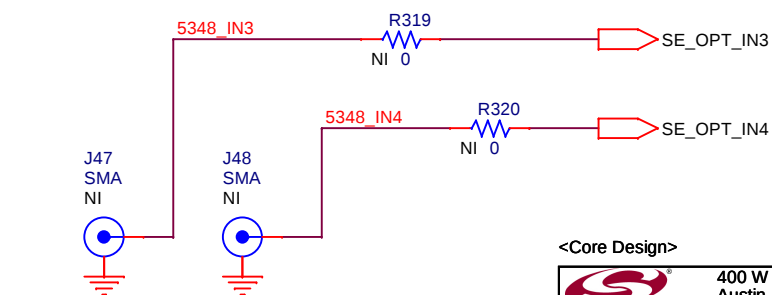
DIFF_INPUT_CLK

DIFF IN CLK3



CLKIN → CLKIN3
 GND → GND
 CLKINB → CLKIN3B

DIFF_INPUT_CLK



Single-ended clocks only.

<Core Design>



400 W Cesar Chavez
 Austin, TX 78701

Title

DIFF_INPUT_CLOCKS_4

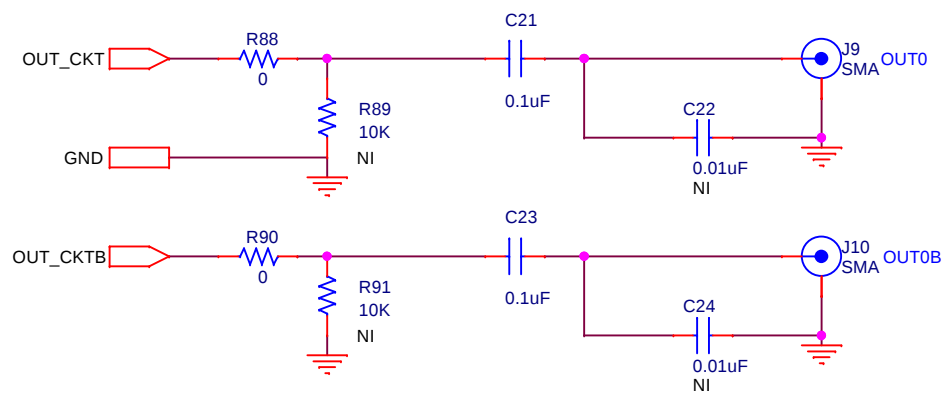
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Document Number
 SI5397A-A-EB

Rev
 1.1

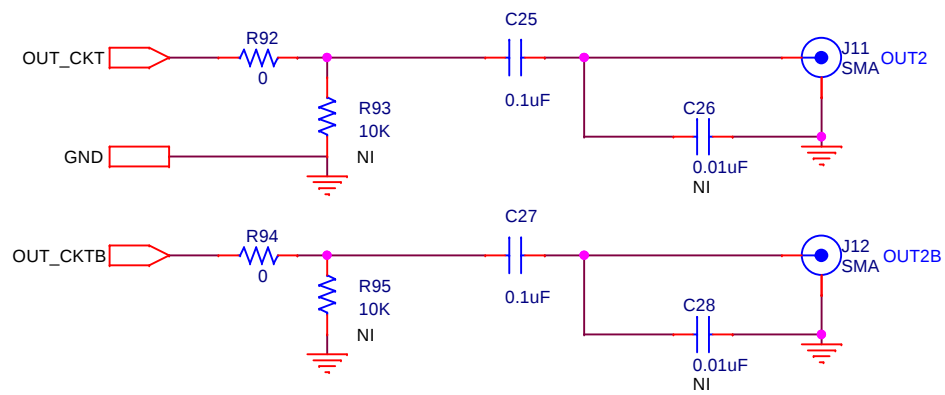
Date: Tuesday, May 29, 2018

Sheet 9 of 44



<Core Design>

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Title		
DIFF_OUTPUT_CLK		
Size A	Document Number SI5397A-A-EB	Rev 1.1
Date:	Tuesday, May 29, 2018	Sheet 10 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK

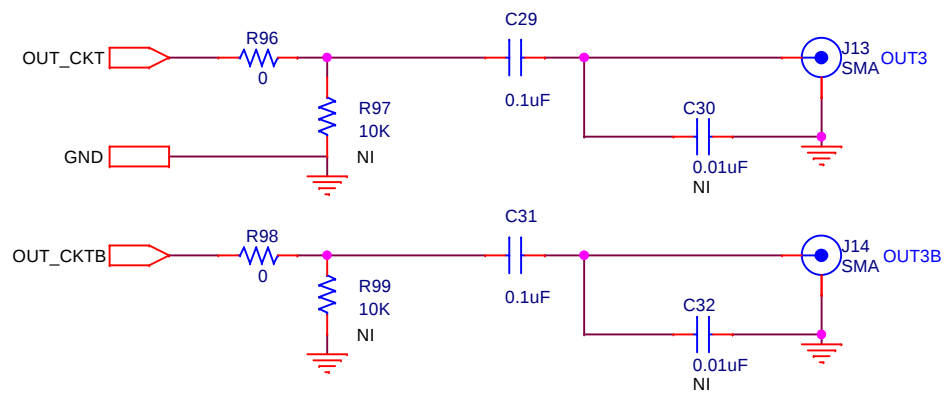
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 11 of 44



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400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK

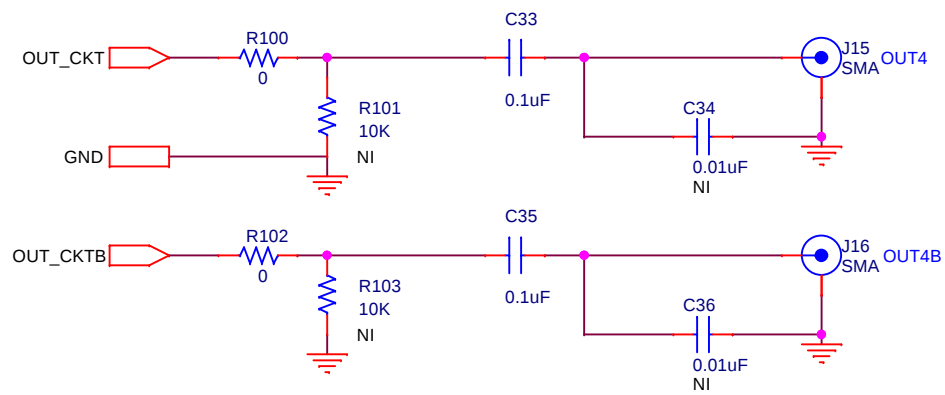
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 12 of 44



<Core Design>



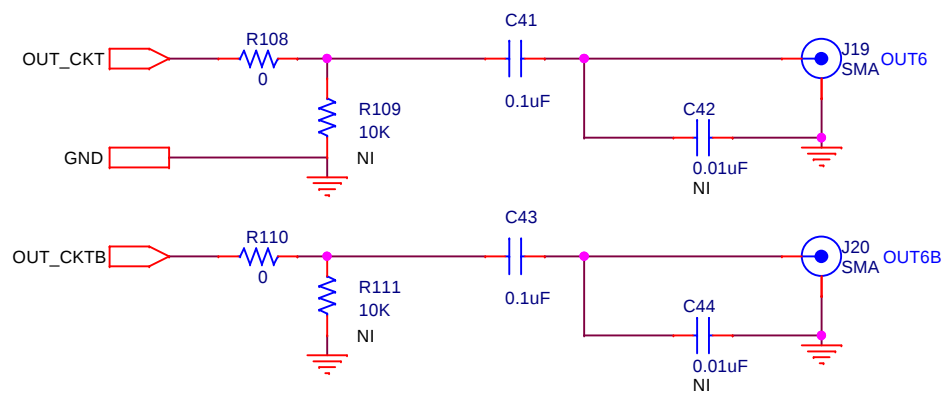
400 W Cesar Chavez
Austin, TX 78701

Title
DIFF_OUTPUT_CLK

Size
A Document Number
SI5397A-A-EB

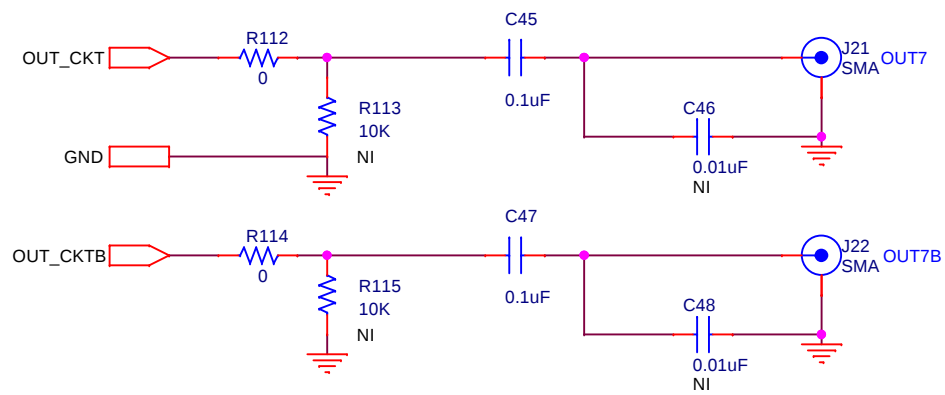
Rev
1.1

Date: Tuesday, May 29, 2018 Sheet 13 of 44



<Core Design>

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Title		
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Size A	Document Number SI5397A-A-EB	Rev 1.1
Date:	Tuesday, May 29, 2018	Sheet 14 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK

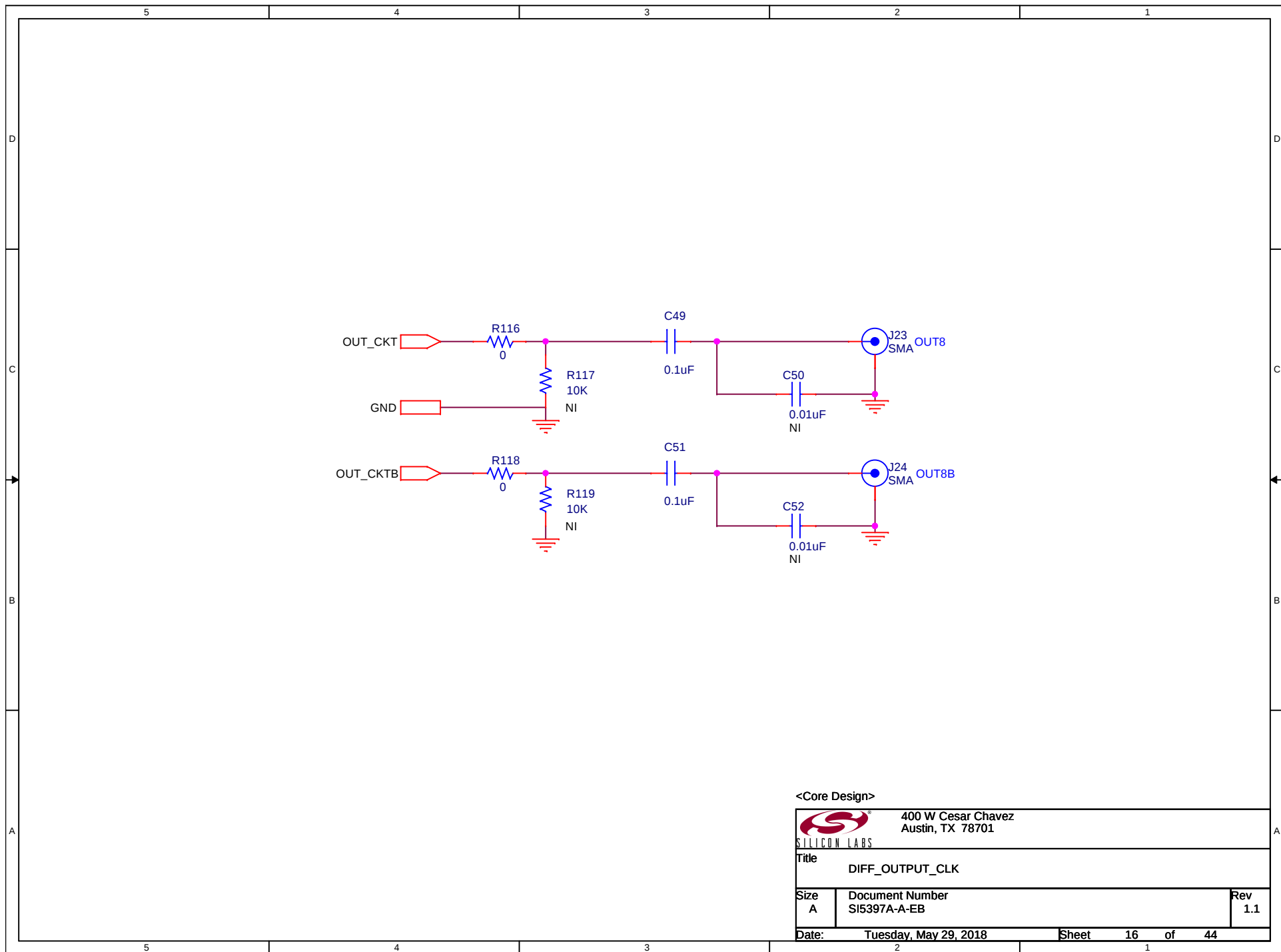
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Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 15 of 44



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK

Size
A

Document Number
SI5397A-A-EB

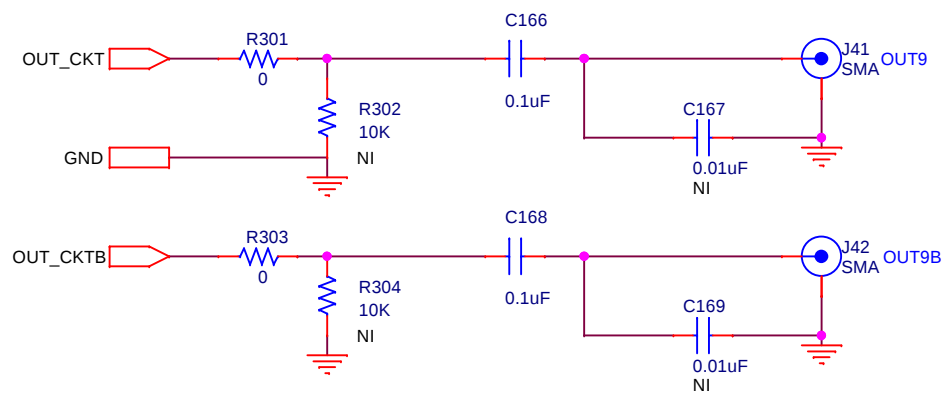
Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 16 of 44

2

1



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK

Size
A

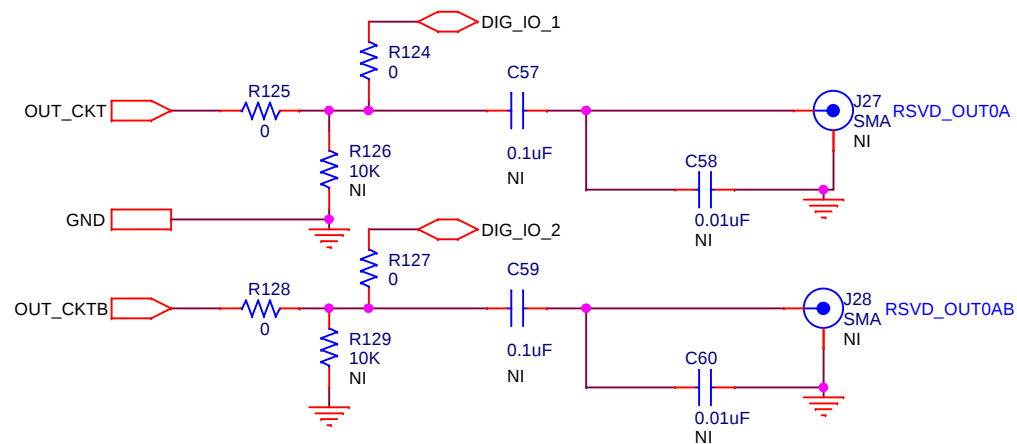
Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 17 of 44

DIFF_OUTPUT_CLK_DIG_IO



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title

DIFF_OUTPUT_CLK_DIG_IO

Size
A

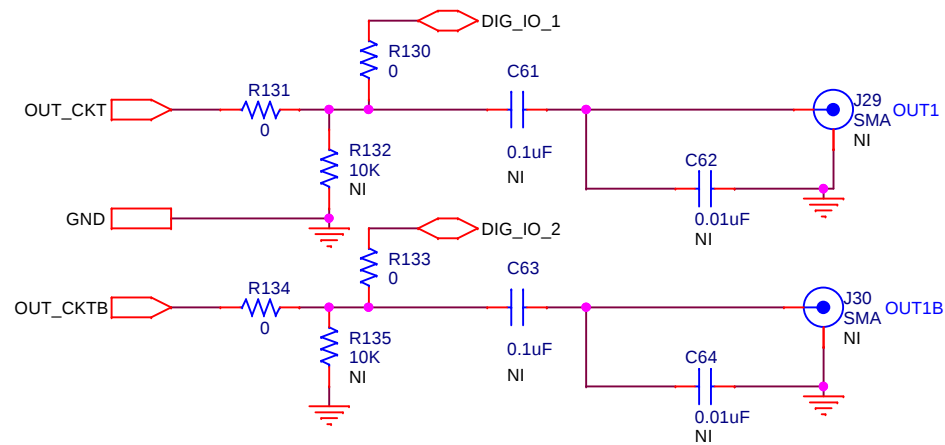
Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 18 of 44

DIFF_OUTPUT_CLK_DIG_IO



<Core Design>



400 W Cesar Chavez
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Title

DIFF_OUTPUT_CLK_DIG_IO

Size
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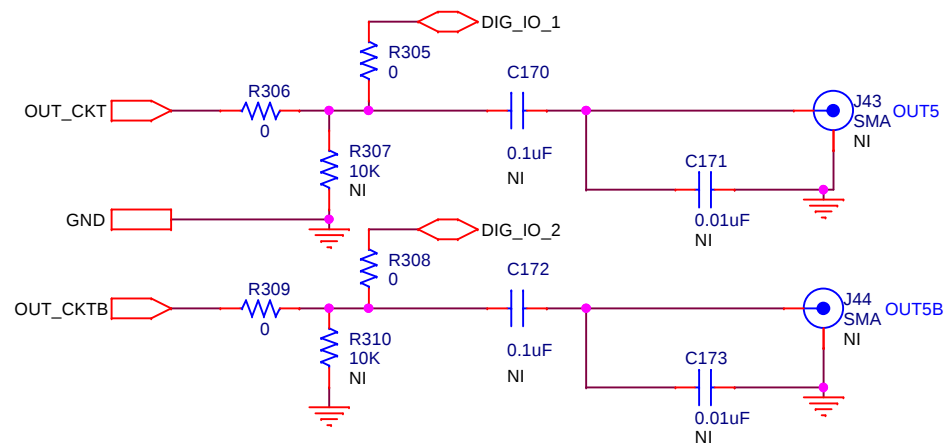
Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 19 of 44

DIFF_OUTPUT_CLK_DIG_IO



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

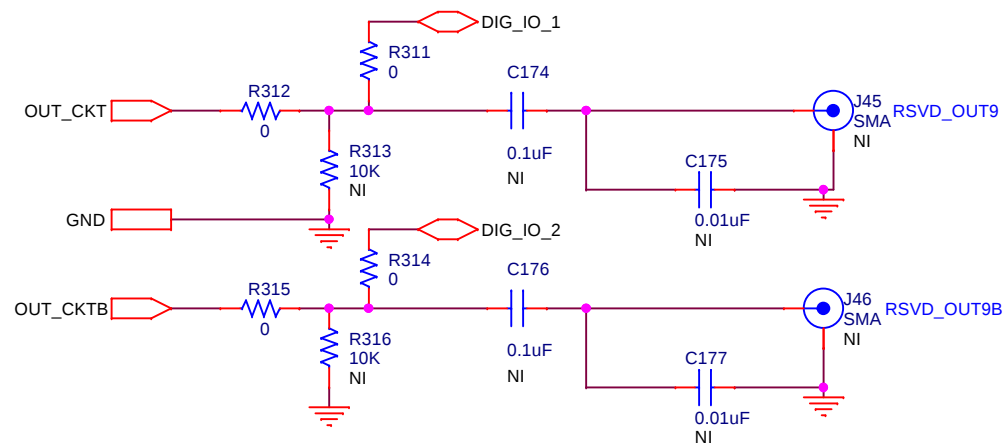
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DIFF_OUTPUT_CLK_DIG_IO

Size
A Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018 Sheet 20 of 44

DIFF_OUTPUT_CLK_DIG_IO



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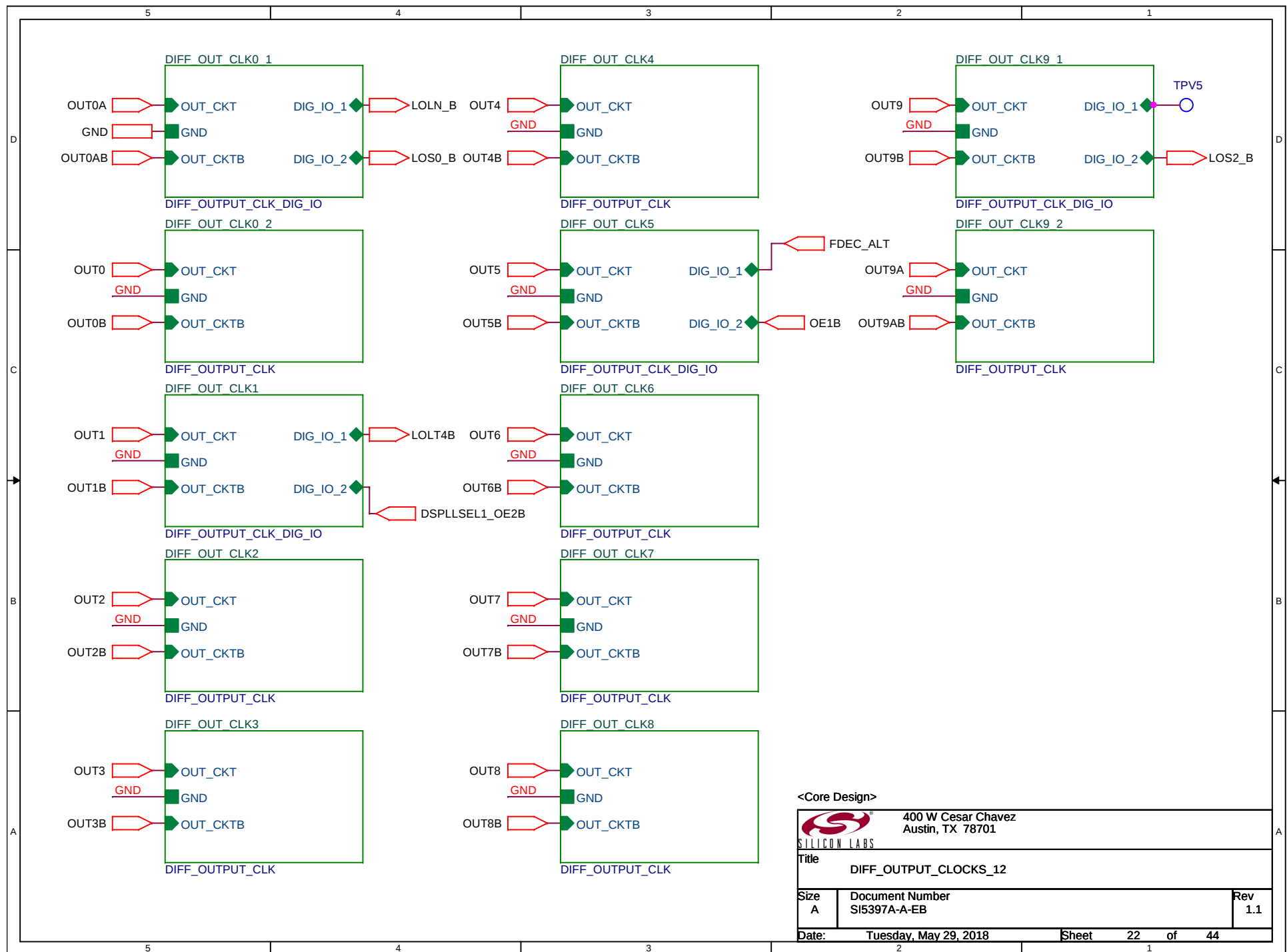
400 W Cesar Chavez
Austin, TX 78701

Title
DIFF_OUTPUT_CLK_DIG_IO

Size
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SI5397A-A-EB

Rev
1.1

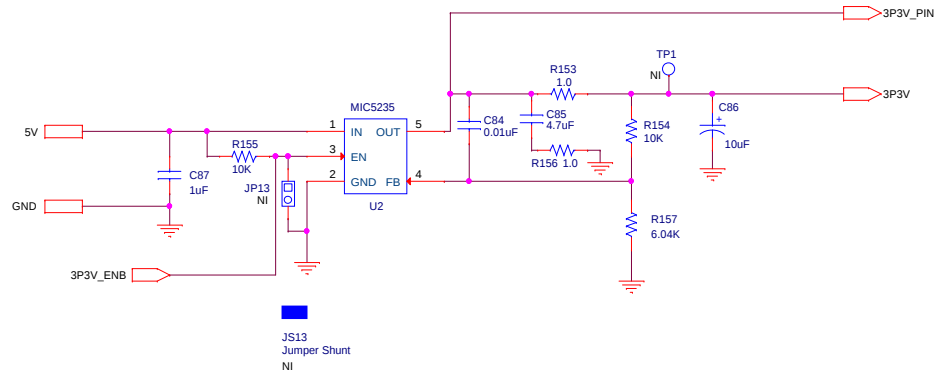
Date: Tuesday, May 29, 2018 Sheet 21 of 44



<Core Design>

		400 W Cesar Chavez Austin, TX 78701	
		Title DIFF_OUTPUT_CLOCKS_12	
Size A	Document Number SI5397A-A-EB		Rev 1.1
Date: Tuesday, May 29, 2018		Sheet 22 of 44	

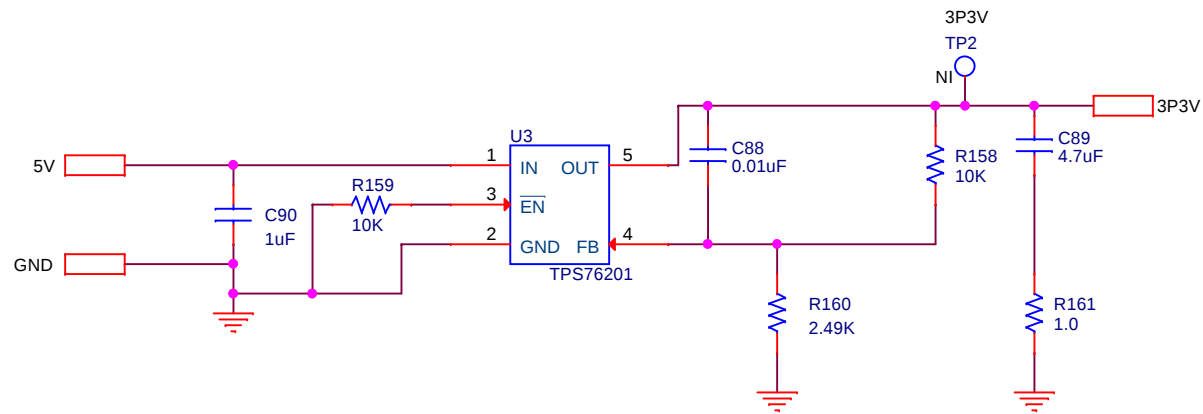
Fixed 3.3V 150 mA Voltage Regulator



3P3V_DUT (In Schematic)
VDDA DUT (Board Silkscreen)

 400 W Cesar Chavez Austin, TX 78701			
Title VDD_REG_TPS76201			
Size B	Document Number SI5397A-A-EB	<Core Design>	Rev 1.1
Date: Tuesday, May 29, 2018	Sheet 23	of 44	1

Fixed 3.3V 100 mA Voltage Regulator (Enabled, no current measurement supported.)



3P3V (In Schematic)
3P3V (Board Silkscreen)

		400 W Cesar Chavez Austin, TX 78701	
Title			
FIXED_3V3_REG_TPS76201_EN_NO_IM			
Size	Document Number		Rev
A	SI5397A-A-EB		1.1
		<Core Design>	
Date:	Tuesday, May 29, 2018		
Sheet	24	of	44

I2C Accelerator

[*Note: handles bus capacitances of +400pF]

SDA_3V3_5V
SCL_3V3_5V

3P3V

3P3V

3P3V

5V

5V

5V

TP3 BLUE
SCL_5V

TP4 BLUE
SDA_5V

SCL_5V

SDA_5V

U5
PCA9517AD
[Used to control 5V I2C devices]

U4
LTC4311

R162 1K

R163 1K

R164 1K

R165 10K

R166 10K

R167 0 NI

R168 0 NI

R169 0 NI

R170 0 NI

C92 0.1uF

C93 0.1uF

C91 0.1uF

JP14
JS14 Jumper Shunt

VCCB VCCA
SCLB SCLA
SDAB SDAA
EN GND

VCC BUS1
EN BUS2
GND GND

Size B

Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 25 of 44

<Core Design>

400 W Cesar Chavez
Austin, TX 78701

SILICON LABS

Title
I2C_TRANSLATORS

[*Note: handles bus capacitances of +400pF]

[Used to control 5V I2C devices]

<Core Design>



400 W Cesar Chavez
Austin, TX 78701

TABLE 1

I2C_TRANSLATORS

Size
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Document Number
SI5397A-A-EB

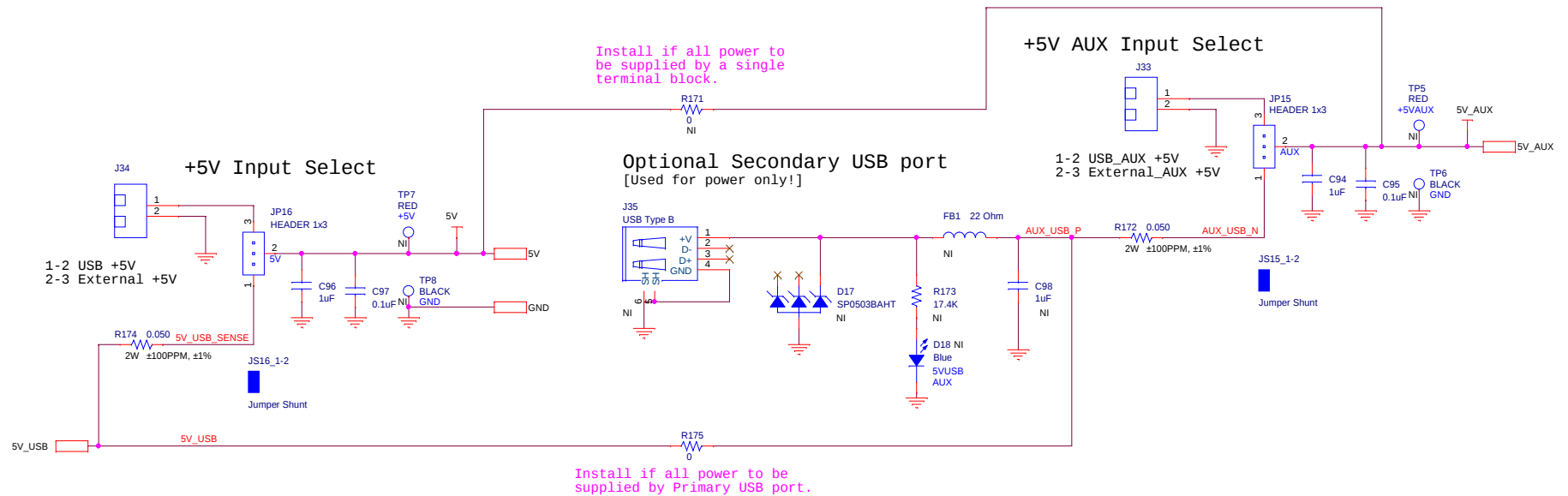
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Date: Tuesday, May 29, 2018

Sheet 25 of 44

1

MAIN POWER INPUT SELECTS EXTERNAL OR USB



<Core Design>

400 W Cesar Chavez
Austin, TX 78701

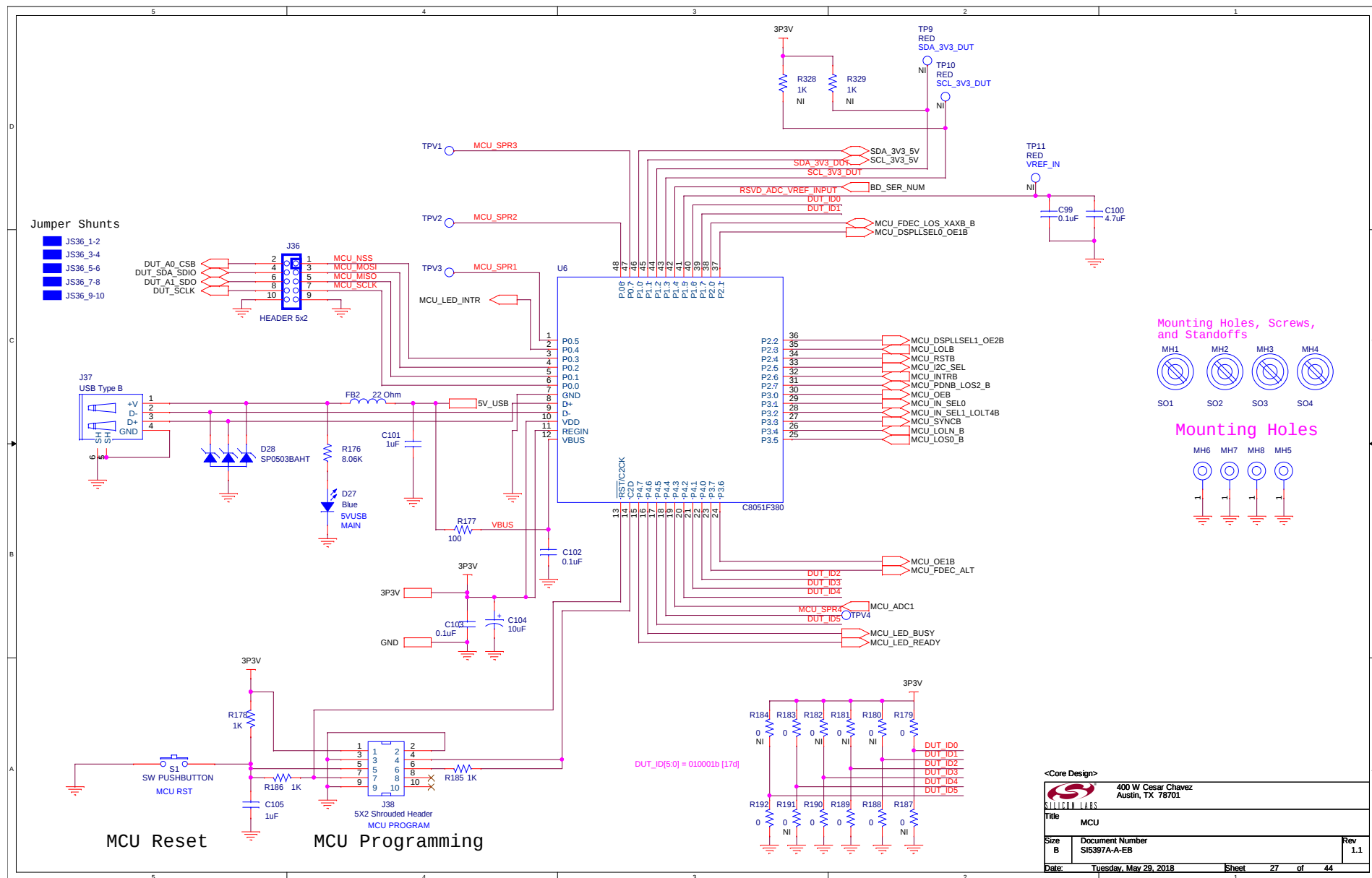
SILICON LABS

Title MAIN_POWER_CONNECTIONS

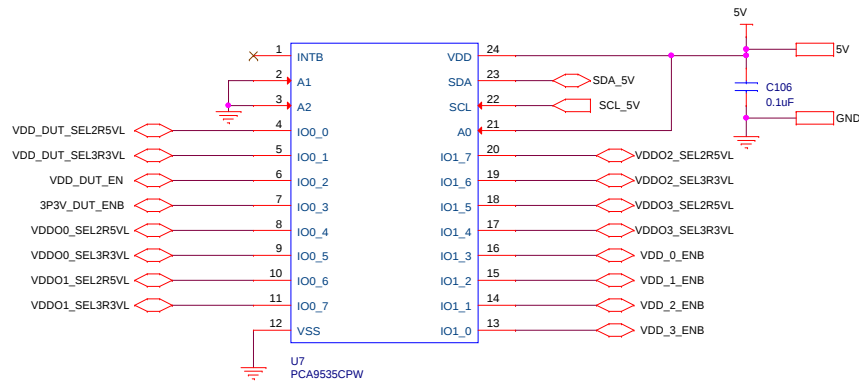
Size B Document Number SI5397A-A-EB

Rev 1.1

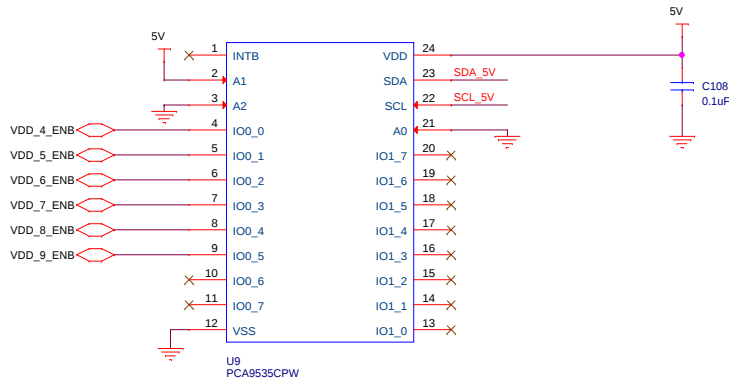
Date: Tuesday, May 29, 2018 Sheet 26 of 44



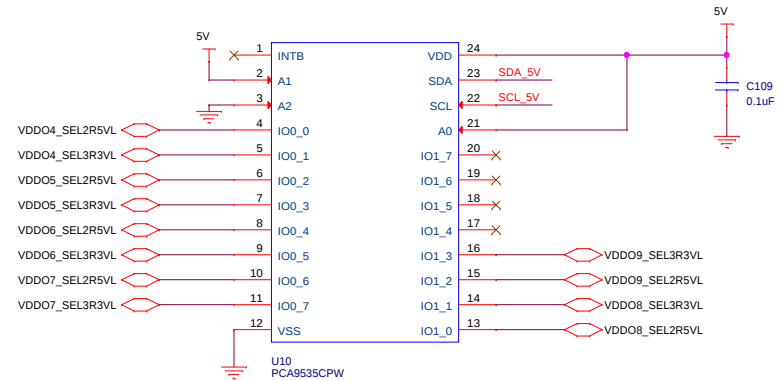
PERIPHERALS



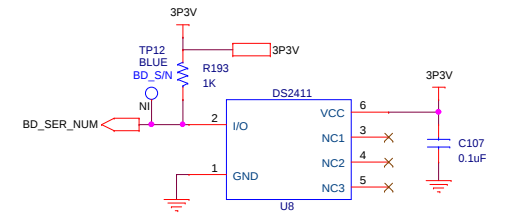
I2C VDD ENABLES/SELECTS FOR REGULATORS
I2C address: 0100001



I2C VDD ENABLES/SELECTS FOR REGULATORS
I2C address: 0100010



I2C VDD ENABLES/SELECTS FOR REGULATORS
I2C address: 0100011



Board Serial Number

<Core Design>



400 W Cesar Chavez
Austin, TX 78701

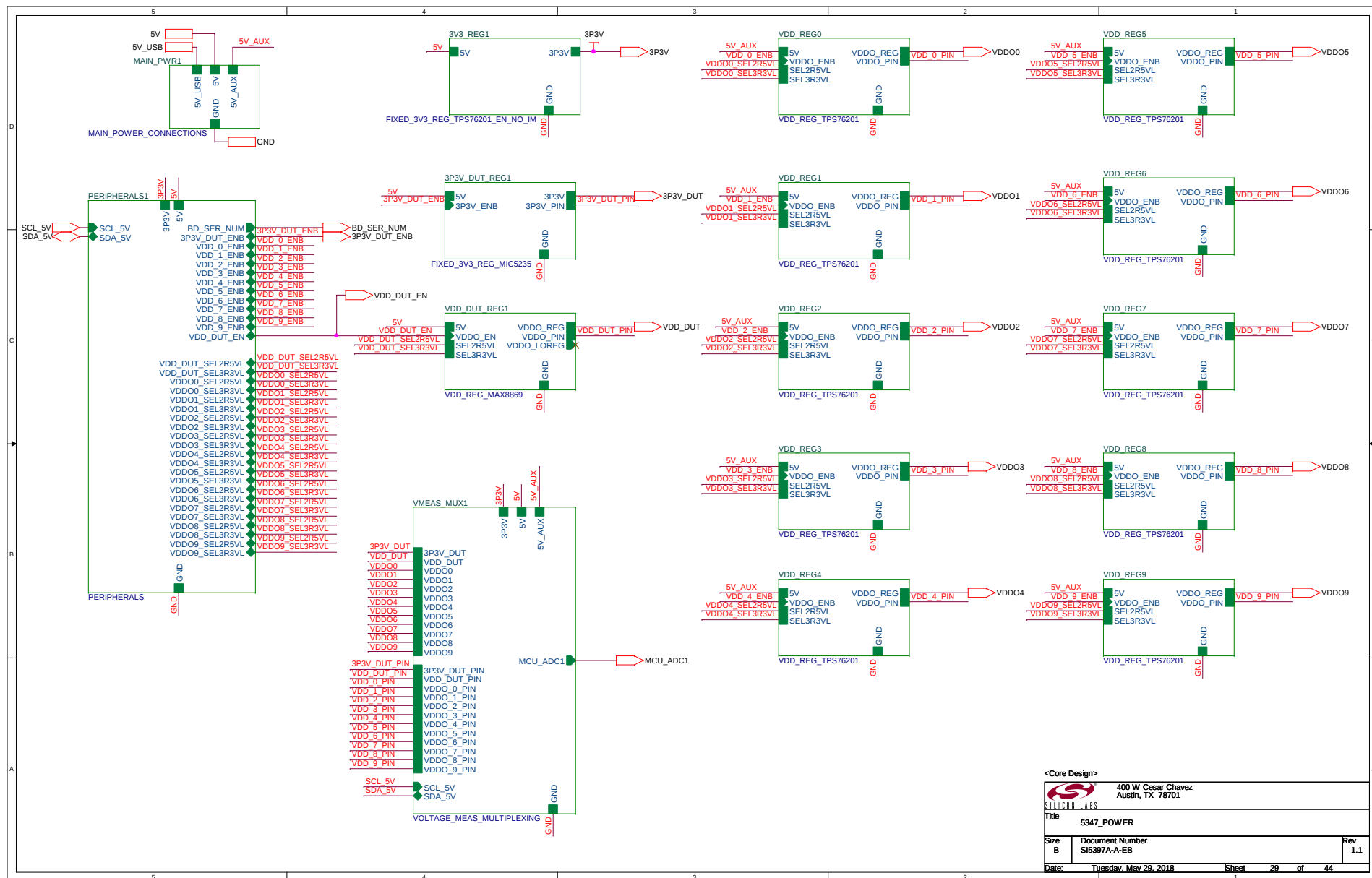
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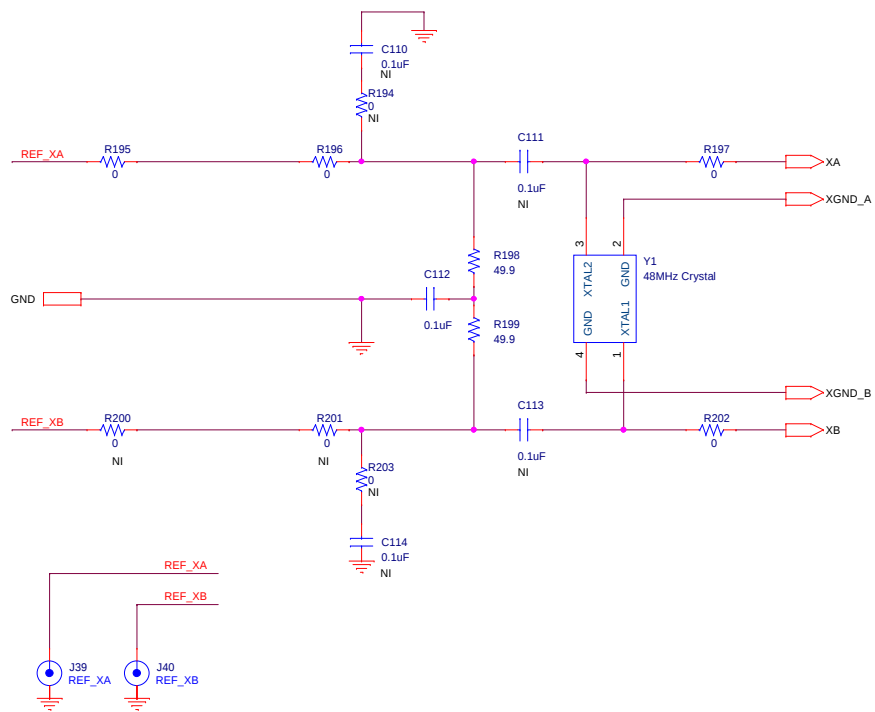
Rev 1.1

Date: Tuesday, May 29, 2018

Sheet 28 of 44



REFERENCE INPUT CONNECTIONS



<Core Design>



400 W Cesar Chavez
Austin, TX 78701

SILICON LABS

Title REFERENCE

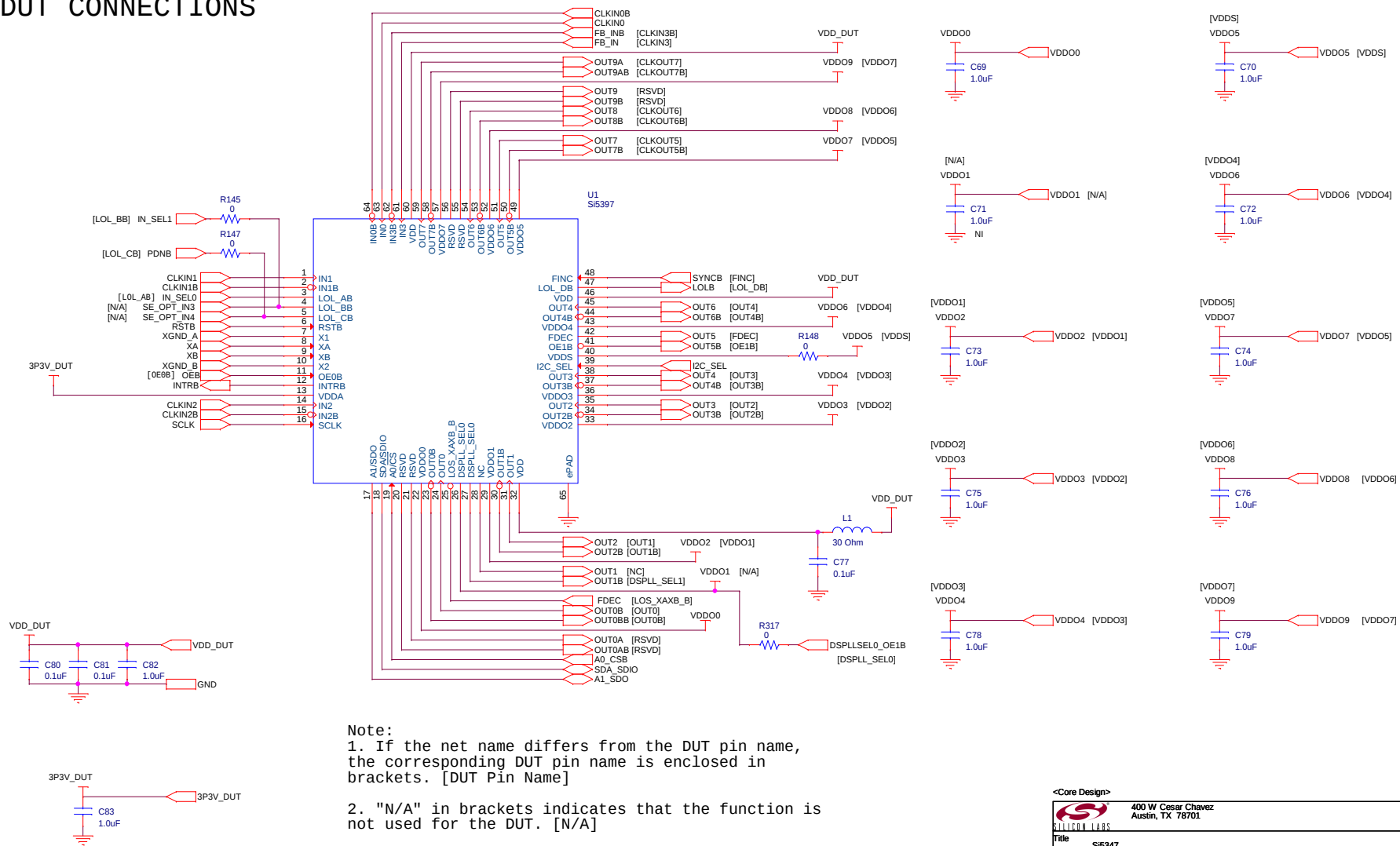
Size B Document Number SI5397A-A-EB

Rev 1.1

Date: Tuesday, May 29, 2018

Sheet 30 of 44

DUT CONNECTIONS

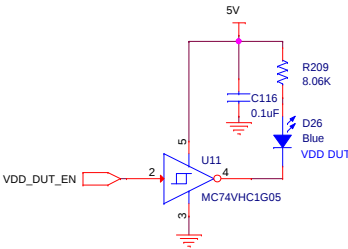
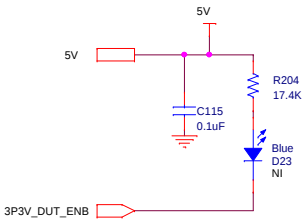
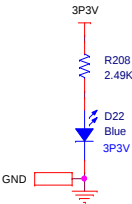
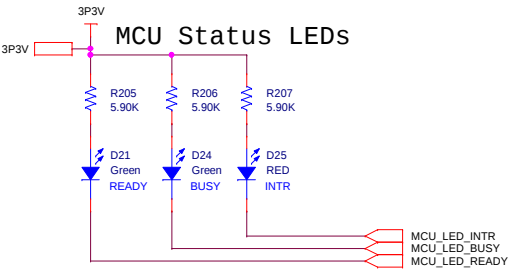


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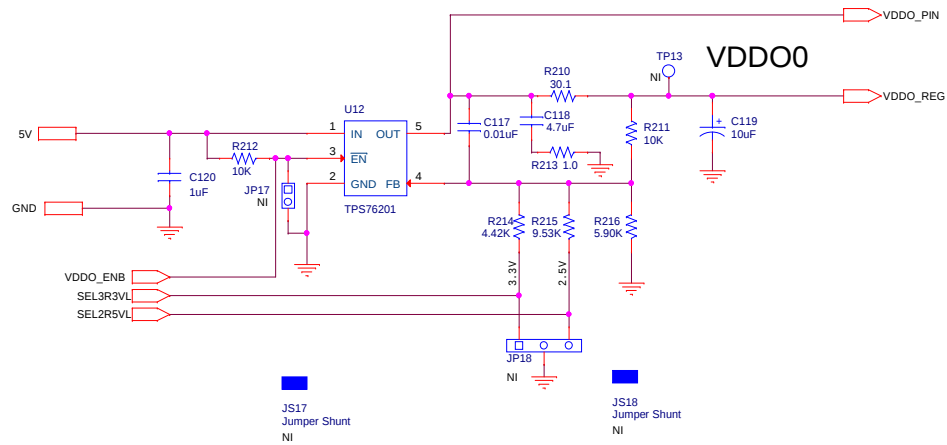
1. If the net name differs from the DUT pin name, the corresponding DUT pin name is enclosed in brackets. [DUT Pin Name]

2. "N/A" in brackets indicates that the function is not used for the DUT. [N/A]

LEDS - SUPPLIES & STATUS

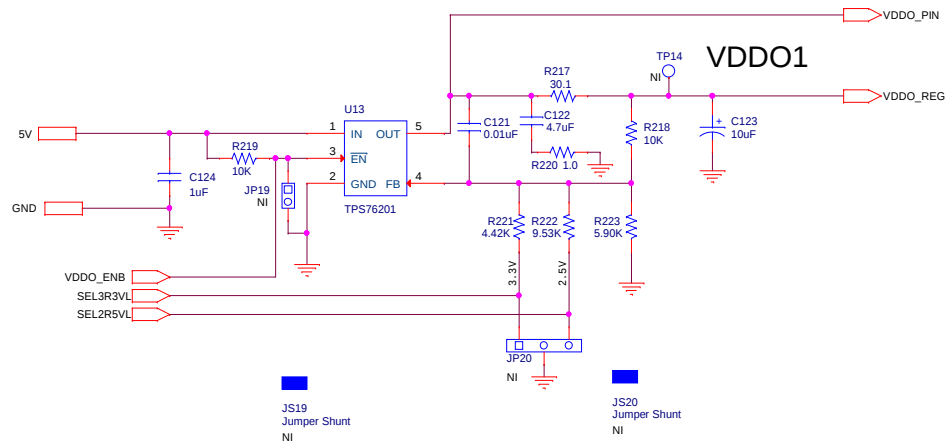


100 mA Adjustable Voltage Regulator



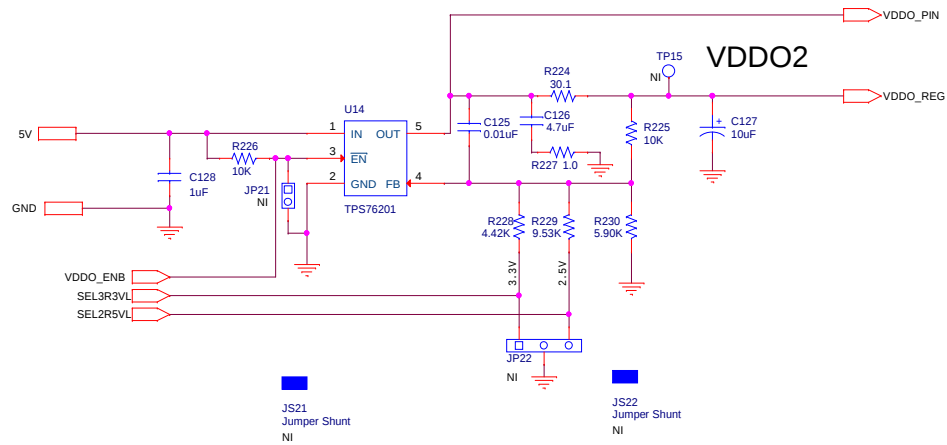
 400 W Cesar Chavez Austin, TX 78701			
Title VDD_REG_TPS76201			
Size B	Document Number SI5397A-A-EB	<Core Design>	Rev 1.1
Date: Tuesday, May 29, 2018	Sheet 33 of 44		

100 mA Adjustable Voltage Regulator



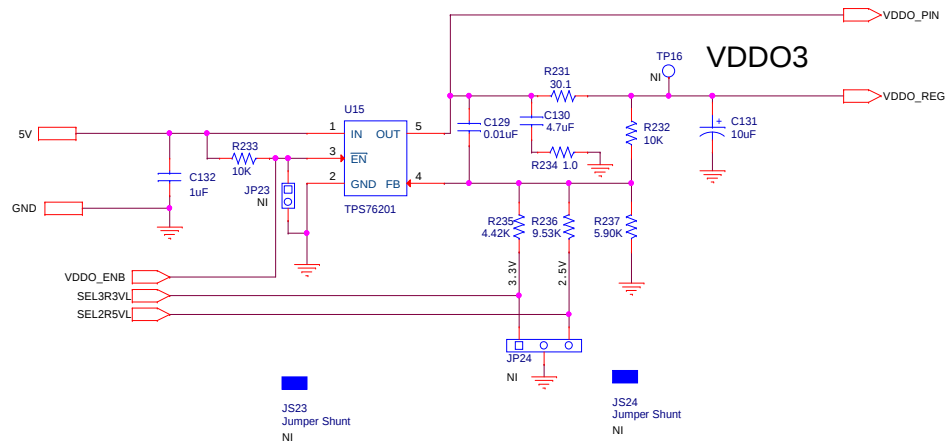
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Title			
VDD_REG_TPS76201			
Size	Document Number	<Core Design>	Rev
B	SI5397A-A-EB		1.1
Date:	Tuesday, May 29, 2018	Sheet	34 of 44

100 mA Adjustable Voltage Regulator



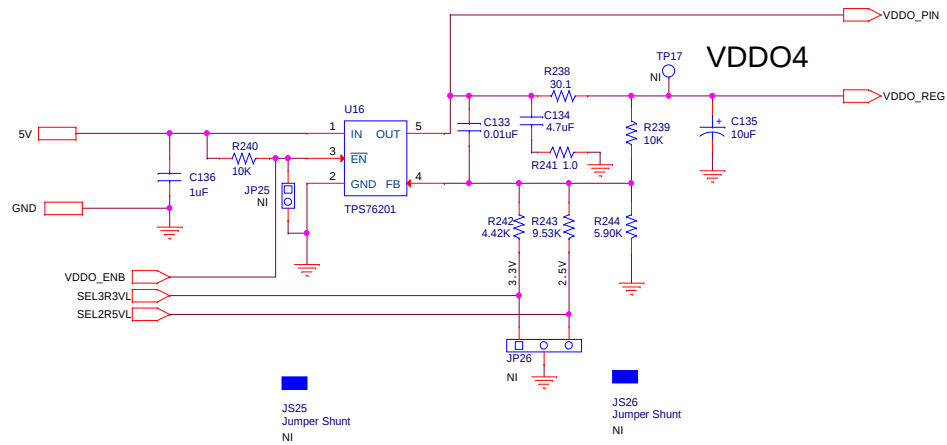
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Date:	Tuesday, May 29, 2018	Sheet	35 of 44

100 mA Adjustable Voltage Regulator



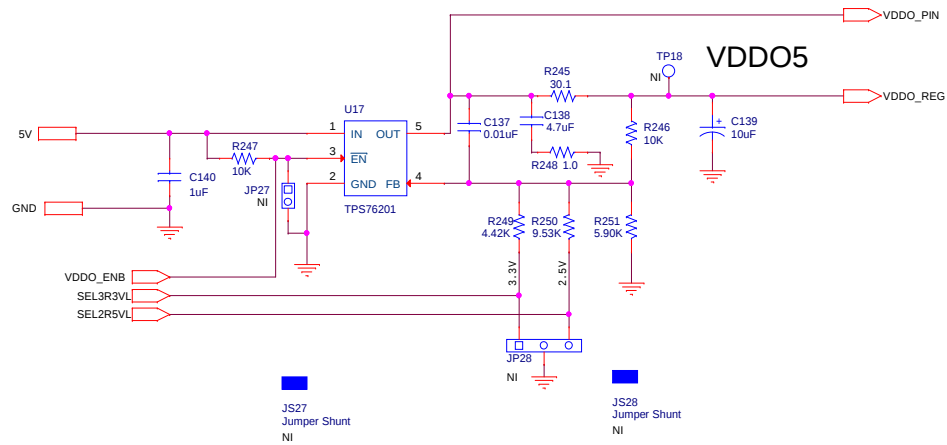
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Size	Document Number	<Core Design>	Rev
B	SI5397A-A-EB		1.1
Date:	Tuesday, May 29, 2018	Sheet	36 of 44

100 mA Adjustable Voltage Regulator



 400 W Cesar Chavez Austin, TX 78701			
Title			
VDD_REG_TPS76201			
Size	Document Number	<Core Design>	Rev
B	SI5397A-A-EB		1.1
Date:	Tuesday, May 29, 2018	Sheet	37 of 44

100 mA Adjustable Voltage Regulator



 400 W Cesar Chavez Austin, TX 78701			
Title			
VDD_REG_TPS76201			
Size	Document Number	<Core Design>	Rev
B	SI5397A-A-EB		1.1
Date:	Tuesday, May 29, 2018	Sheet	38 of 44

100 mA Adjustable Voltage Regulator

VDDO6

VDDO_REG

VDDO_PIN

5V

GND

VDDO_ENB

SEL3R3VL

SEL2R5VL

U18

IN

OUT

EN

GND

FB

TPS76201

R254

10K

C144

1uF

JP29

NI

R252

30.1K

C142

4.7uF

R255

1.0K

R253

10K

TP19

NI

C143

10uF

R256

4.42K

R257

9.53K

R258

5.90K

3.3V

2.5V

JP30

NI

JS29

Jumper Shunt

NI

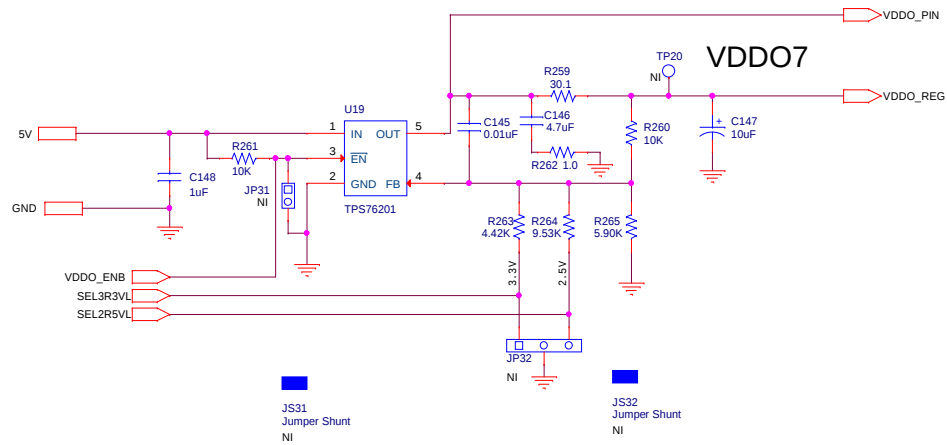
JS30

Jumper Shunt

NI

400 W Cesar Chavez Austin, TX 78701	
Title	
VDD_REG_TPS76201	
Size	Document Number
B	SI5397A-A-EB
<Core Design>	
Date:	Tuesday, May 29, 2018
Sheet	39 of 44
Rev	1.1

100 mA Adjustable Voltage Regulator



 400 W Cesar Chavez Austin, TX 78701			
Title			
VDD_REG_TPS76201			
Size	Document Number	<Core Design>	Rev
B	SI5397A-A-EB		1.1
Date:	Tuesday, May 29, 2018	Sheet	40 of 44

100 mA Adjustable Voltage Regulator

5V

GND

VDDO_ENB

SEL3R3VL

SEL2R5VL

U20

TPS76201

IN

OUT

EN

GND

FB

5

4

3

2

1

R268

10K

C152

1uF

JP33

NI

R266

30.1

C149

0.01uF

C150

4.7uF

R269

1.0

R267

10K

TP21

NI

C151

10uF

R270

4.42K

R271

9.53K

R272

5.90K

3.3V

2.5V

JP34

NI

JS33

Jumper Shunt

NI

JS34

Jumper Shunt

NI

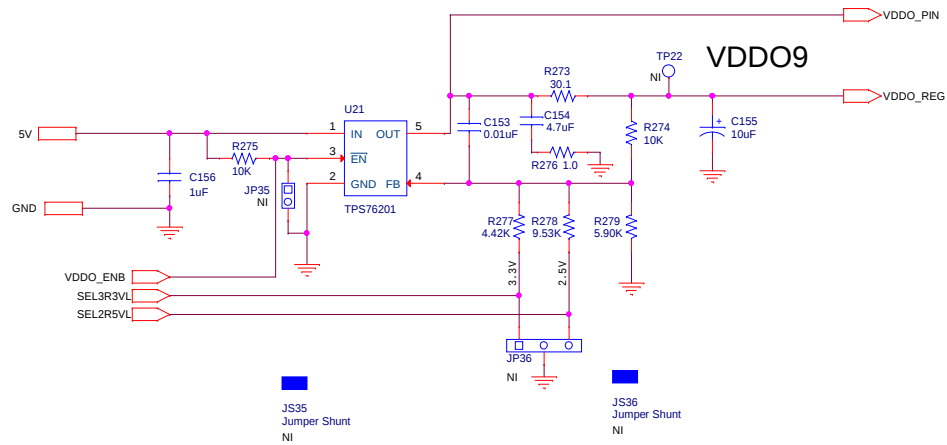
VDDO8

VDDO_REG

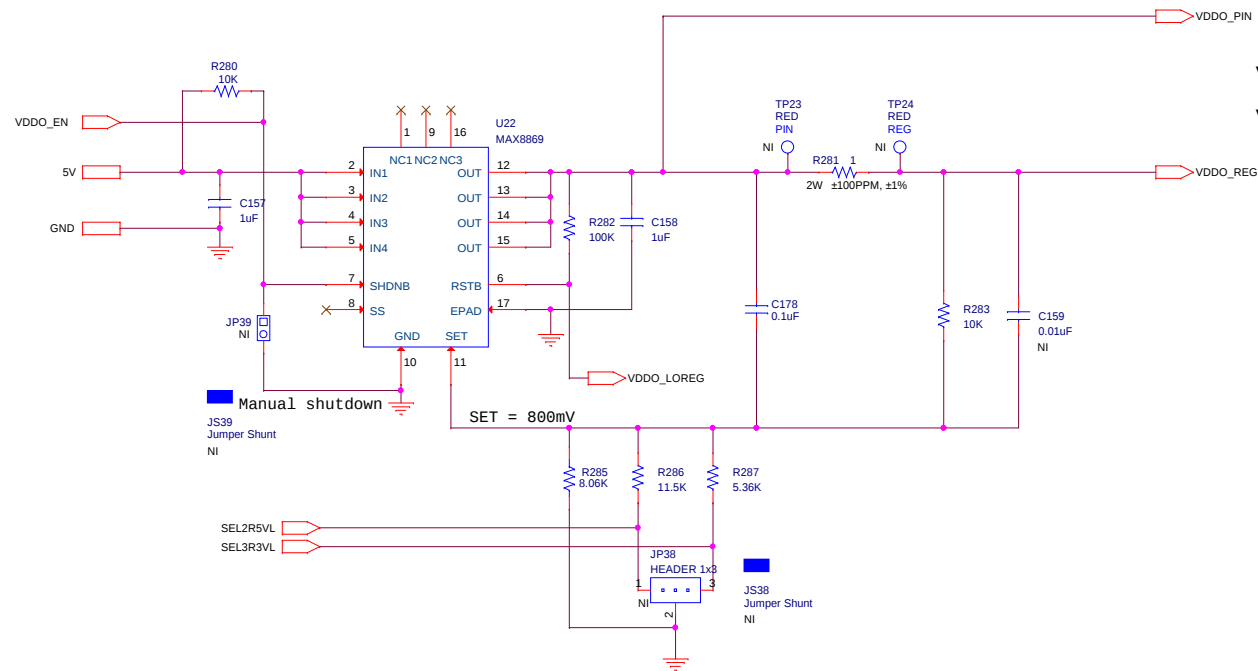
VDDO_PIN

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Title	
VDD_REG_TPS76201	
Size	Document Number
B	SI5397A-A-EB
<Core Design>	
Date:	Tuesday, May 29, 2018
Sheet	41 of 44
Rev	1.1

100 mA Adjustable Voltage Regulator



 400 W Cesar Chavez Austin, TX 78701			
Title VDD_REG_TPS76201			
Size B	Document Number SI5397A-A-EB	<Core Design>	Rev 1.1
Date:	Tuesday, May 29, 2018	Sheet 42 of 44	1



VDD_DUT (In Schematic)
VDD DUT (Board Silkscreen)

<Core Design>



400 W Cesar Chavez
Austin, TX 78701

Title
VDD_REG_MAX8869

Size
B Document Number
SI5397A-A-EB

Rev
1.1

Date: Tuesday, May 29, 2018

Sheet 43 of 44

VOLTAGE MEASUREMENT MULTIPLEXING

