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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

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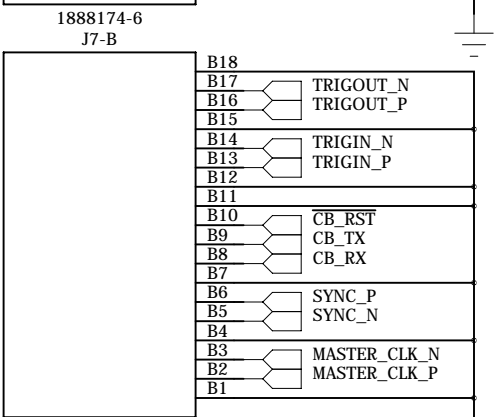
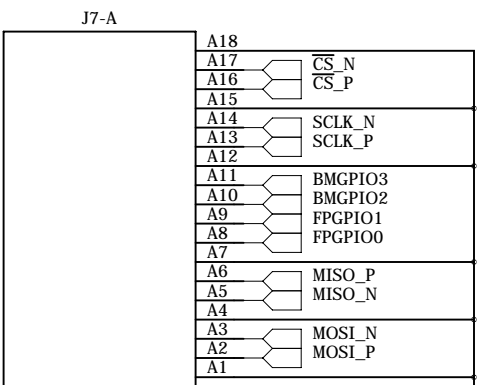
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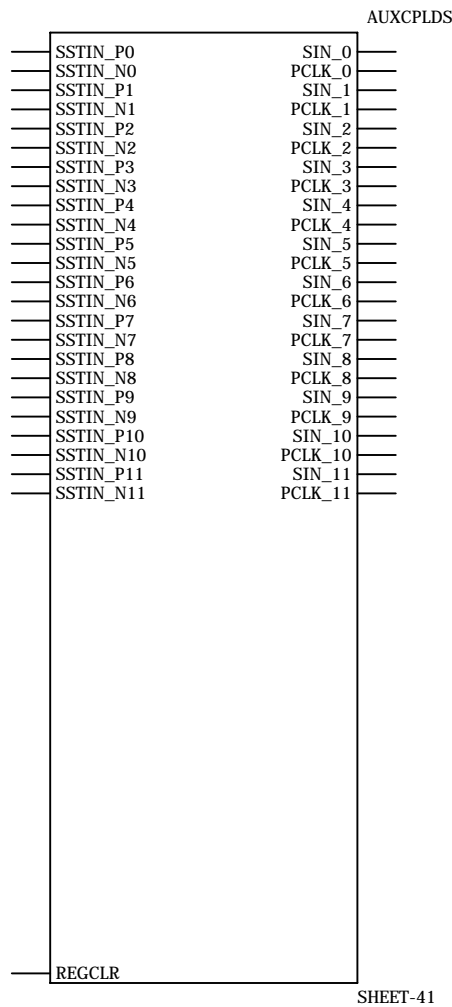
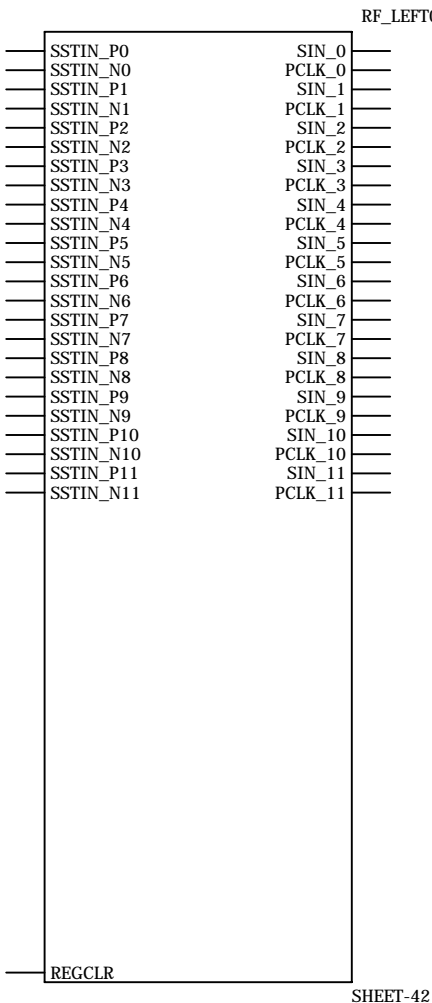
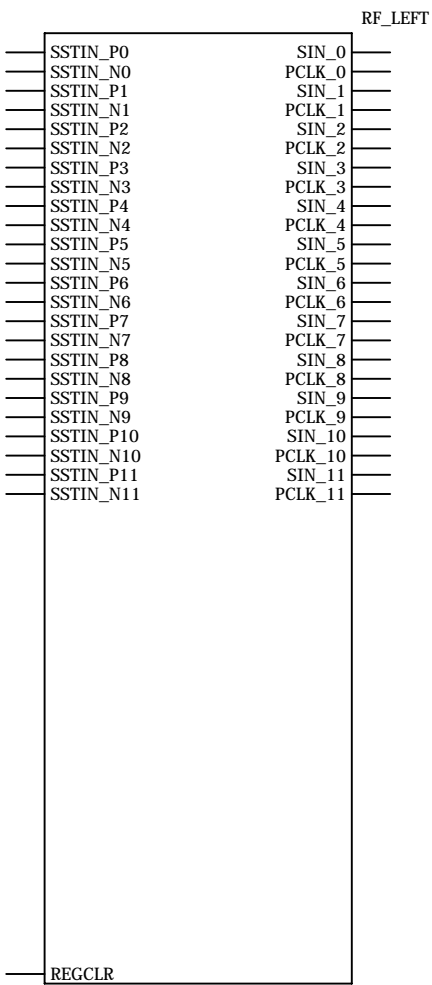
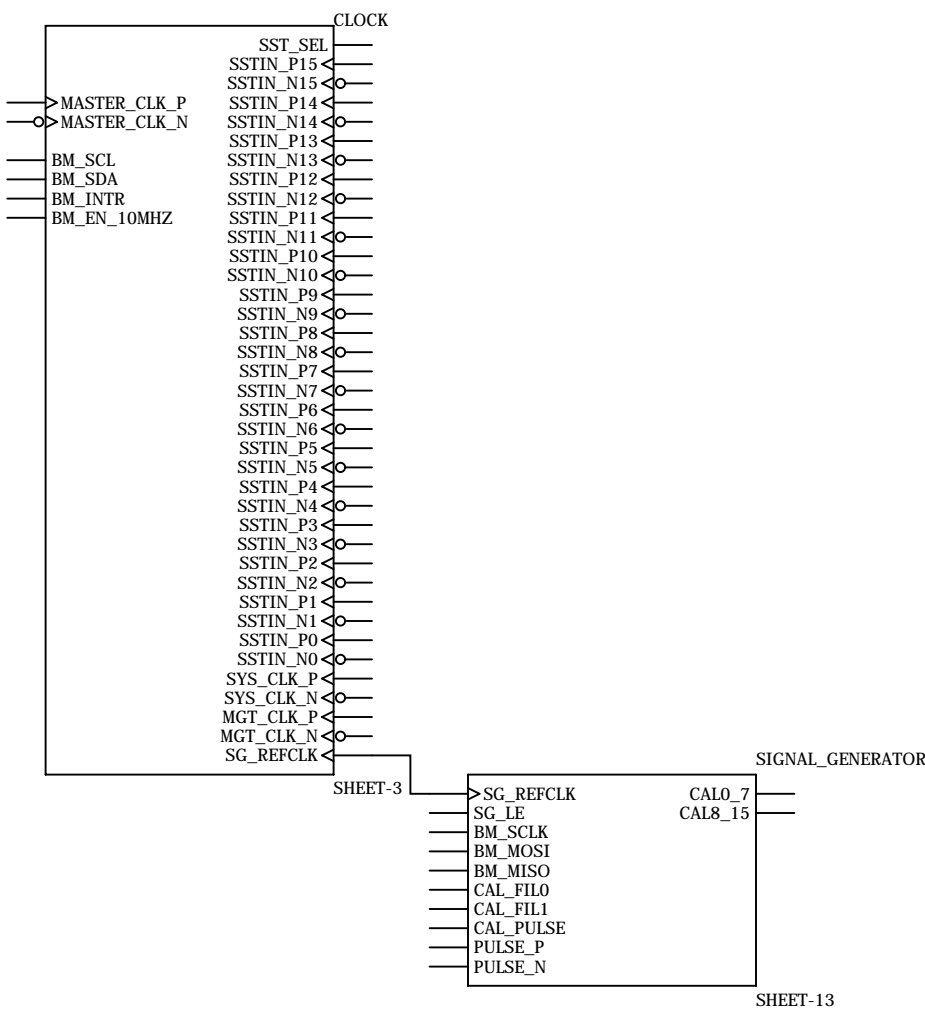
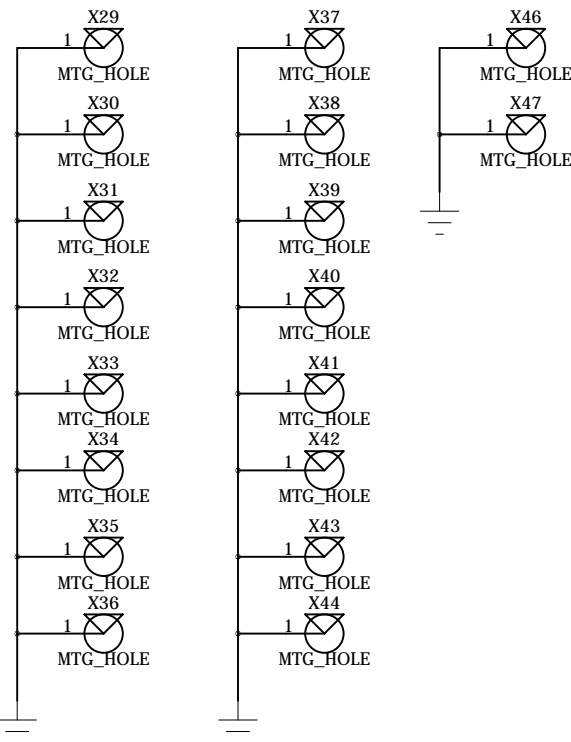
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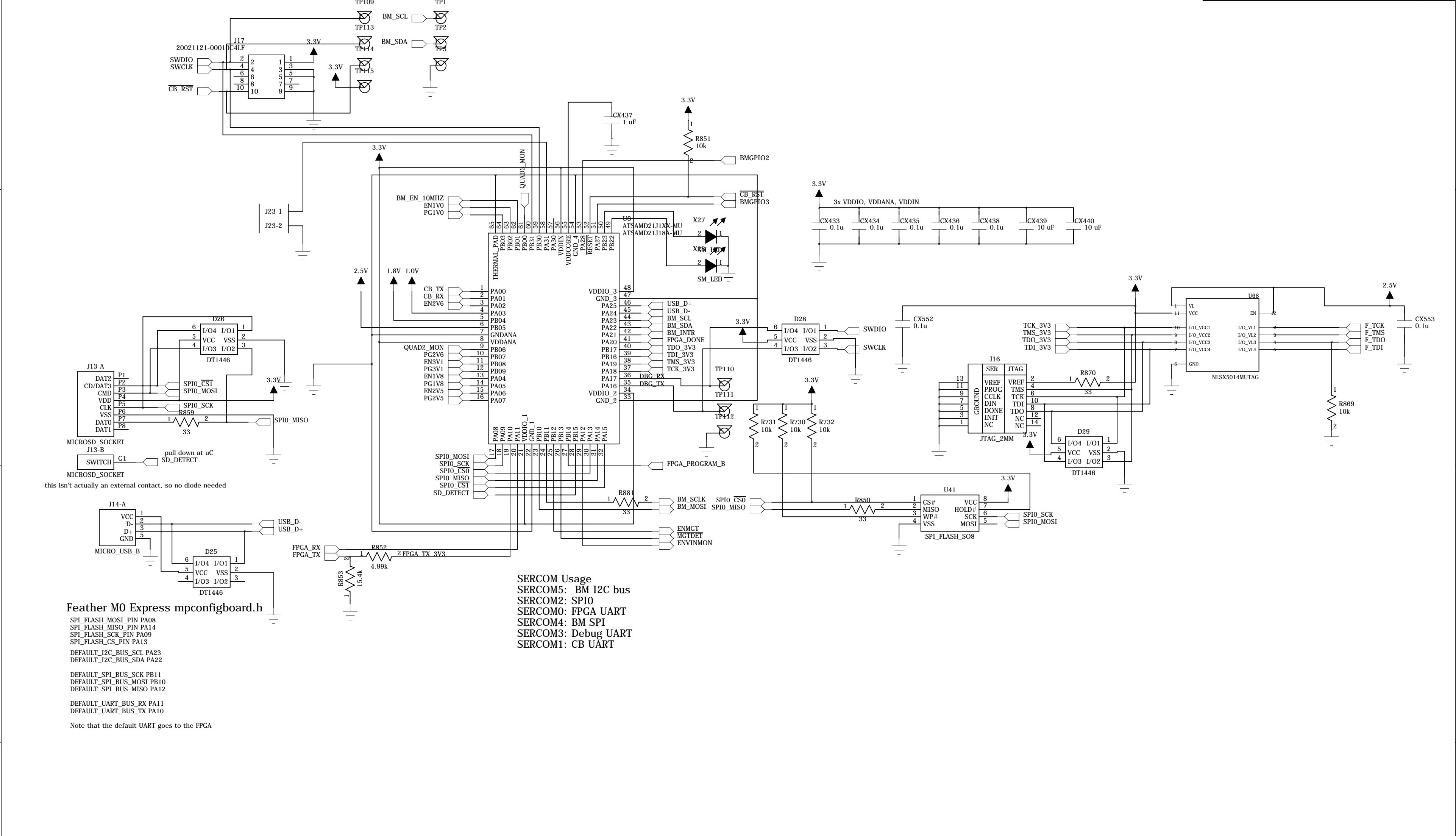
SFF-8087 connector
Cable is designed with 8 differential pairs
TRIGIN+/-
TRIGOUT+/-
CLK+/-
SYNC+/-
MOSI/GND
MISO/GND (these are implemented as differential pairs!)
SCLK/GND (allows for a higher-speed FPGA-to-FPGA link)
CS/GND (if used single ended, just drive N side to ground in FPGA)
There are also 8 sideband signals
RX/TX/RST/GND/GPIO[3:0]

At some point I'll finish a top block diagram...



COMPANY: Ohio State University			
SHEET: TOP			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 1 of 74

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



Feather M0 Express mpconfigboard.h

SPI_FLASH_MOSI_PIN PA08
SPI_FLASH_MISO_PIN PA14
SPI_FLASH_SCK_PIN PA09
SPI_FLASH_CS_PIN PA13
DEFAULT_I2C_BUS_SCL PA23
DEFAULT_I2C_BUS_SDA PA22

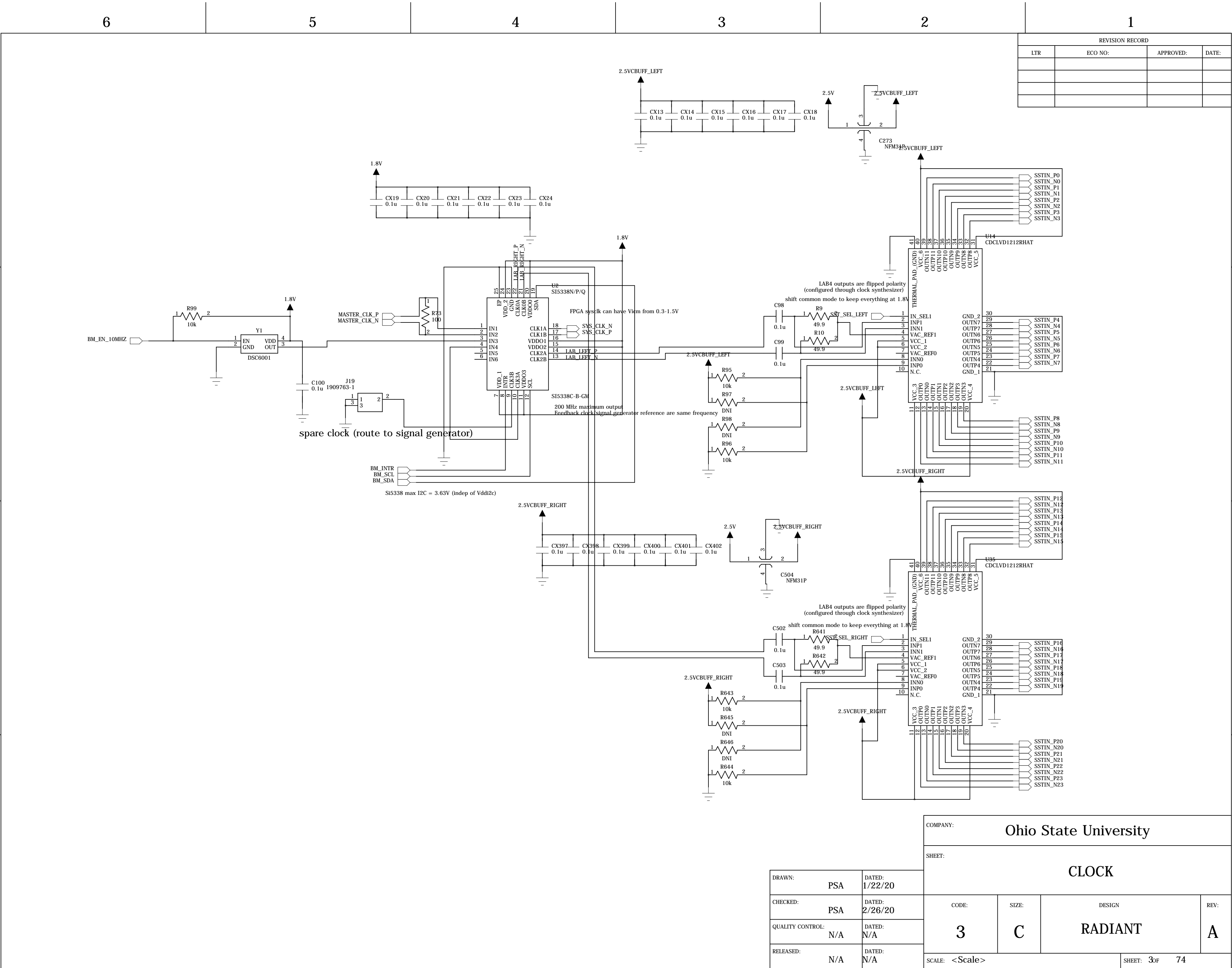
DEFAULT_SPI_BUS_SCK PB11
DEFAULT_SPI_BUS_MOSI PB10
DEFAULT_SPI_BUS_MISO PA12

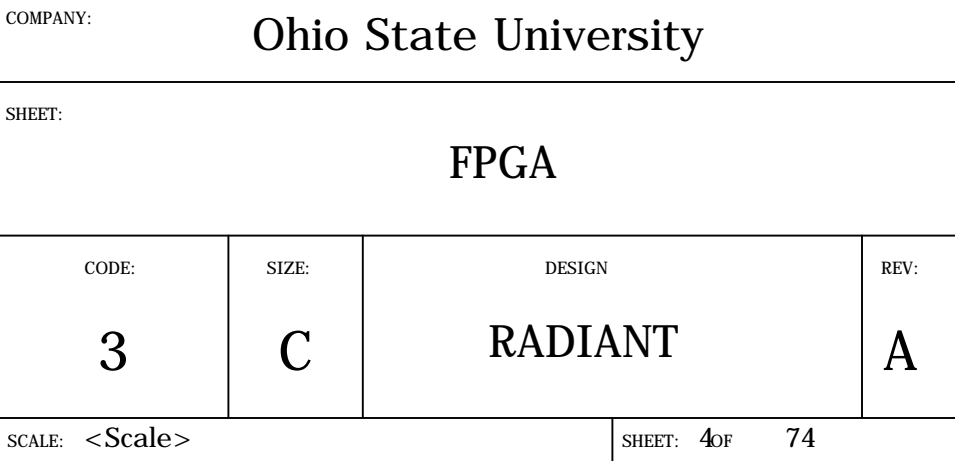
DEFAULT_UART_BUS_RX PA11
DEFAULT_UART_BUS_TX PA10

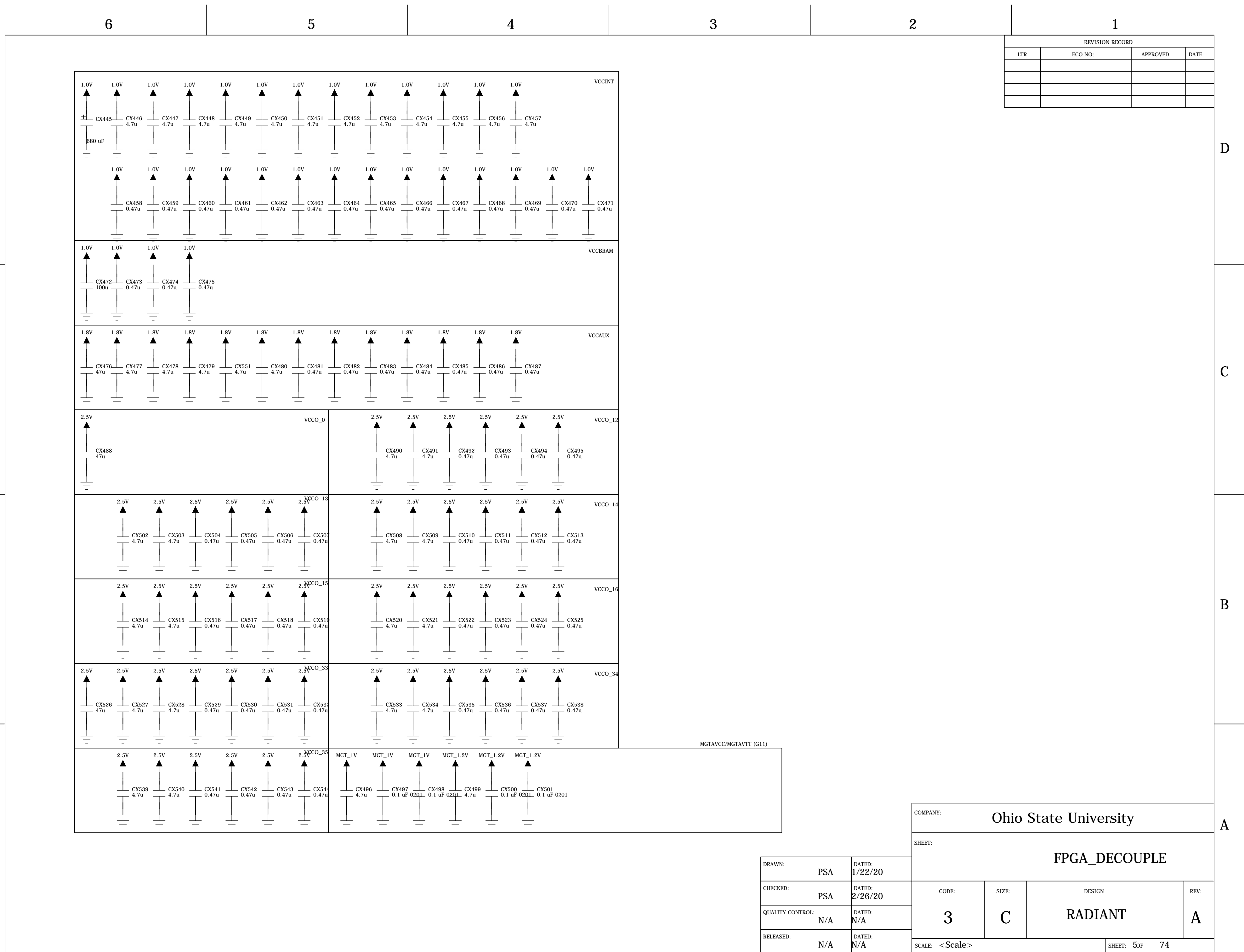
Note that the default UART goes to the FPGA

SERCOM Usage
SERCOM5: BM I2C bus
SERCOM2: SPI0
SERCOM0: FPGA UART
SERCOM4: BM SPI
SERCOM3: Debug UART
SERCOM1: CB UART

COMPANY: Ohio State University			
SHEET: BOARD_MANAGER			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 20 of 74







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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

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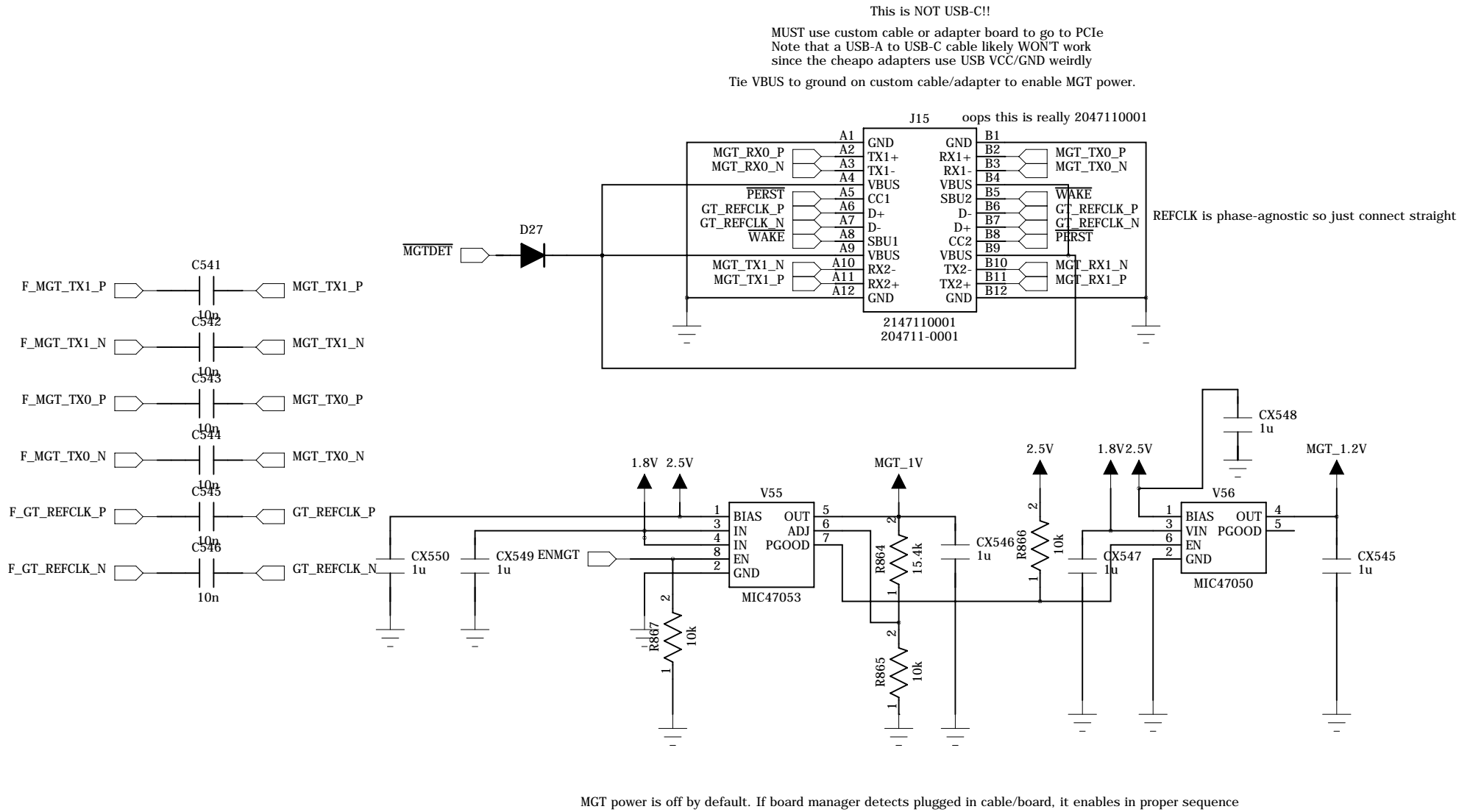
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DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

COMPANY: Ohio State University			
SHEET: FPGA-PCIE			
CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A
SCALE: <Scale>			SHEET: 6 of 74

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:

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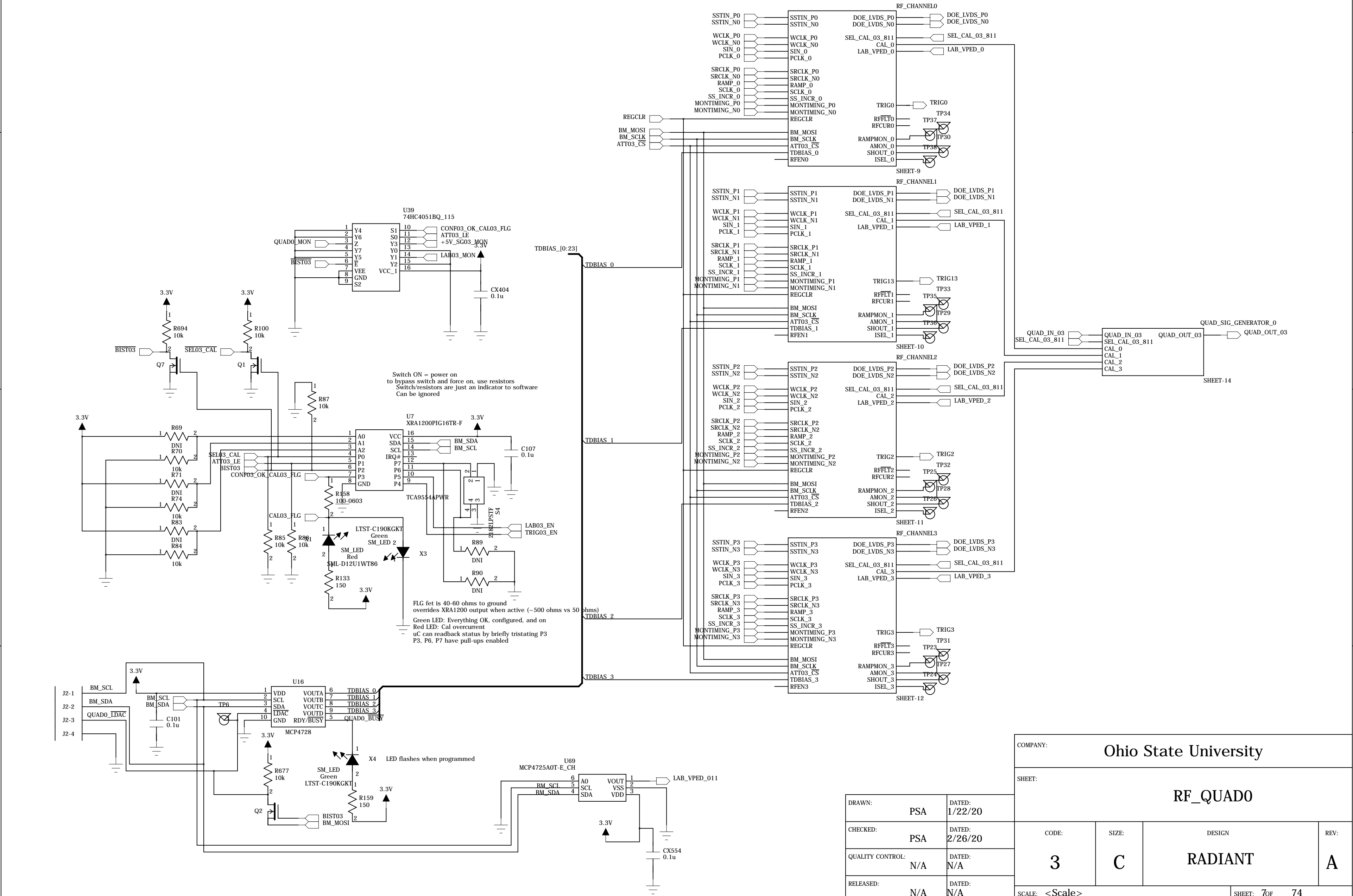
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COMPANY: Ohio State University			
SHEET: RF_QUADO			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 70 of 74	

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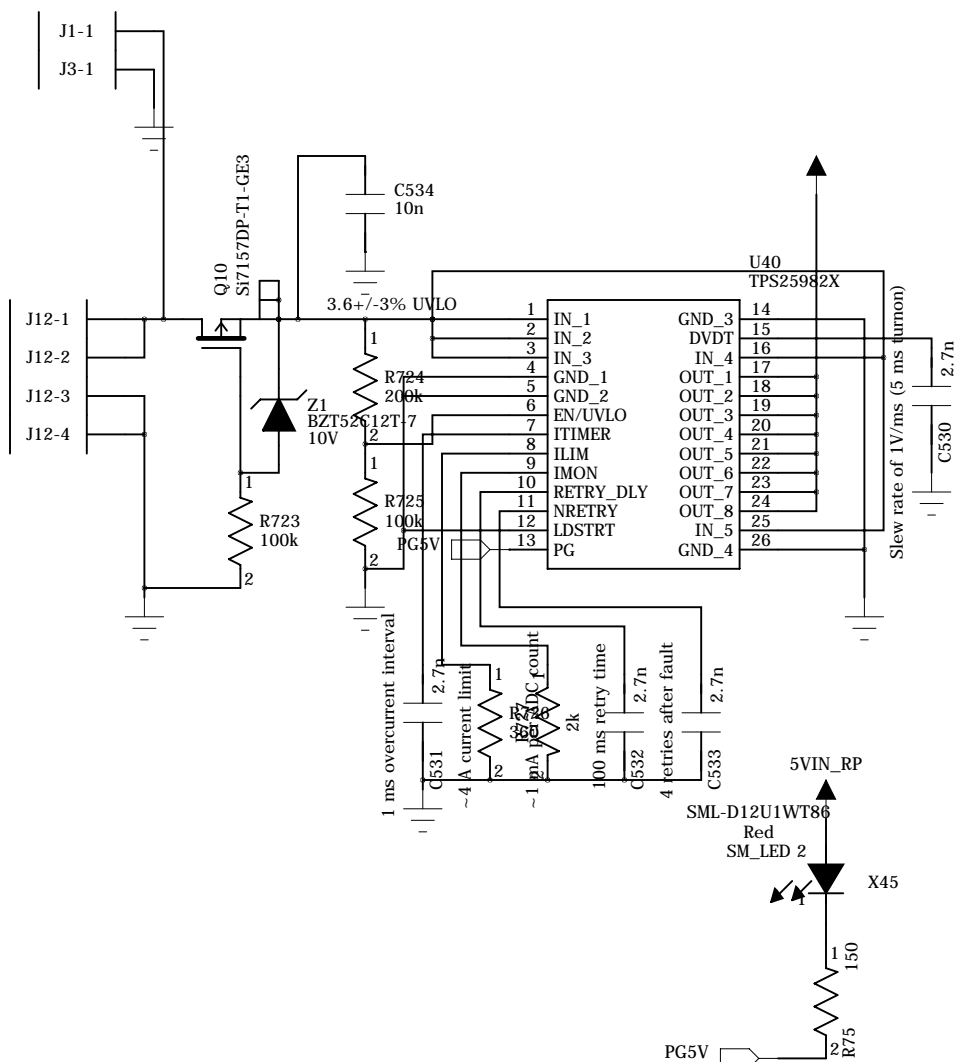
1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

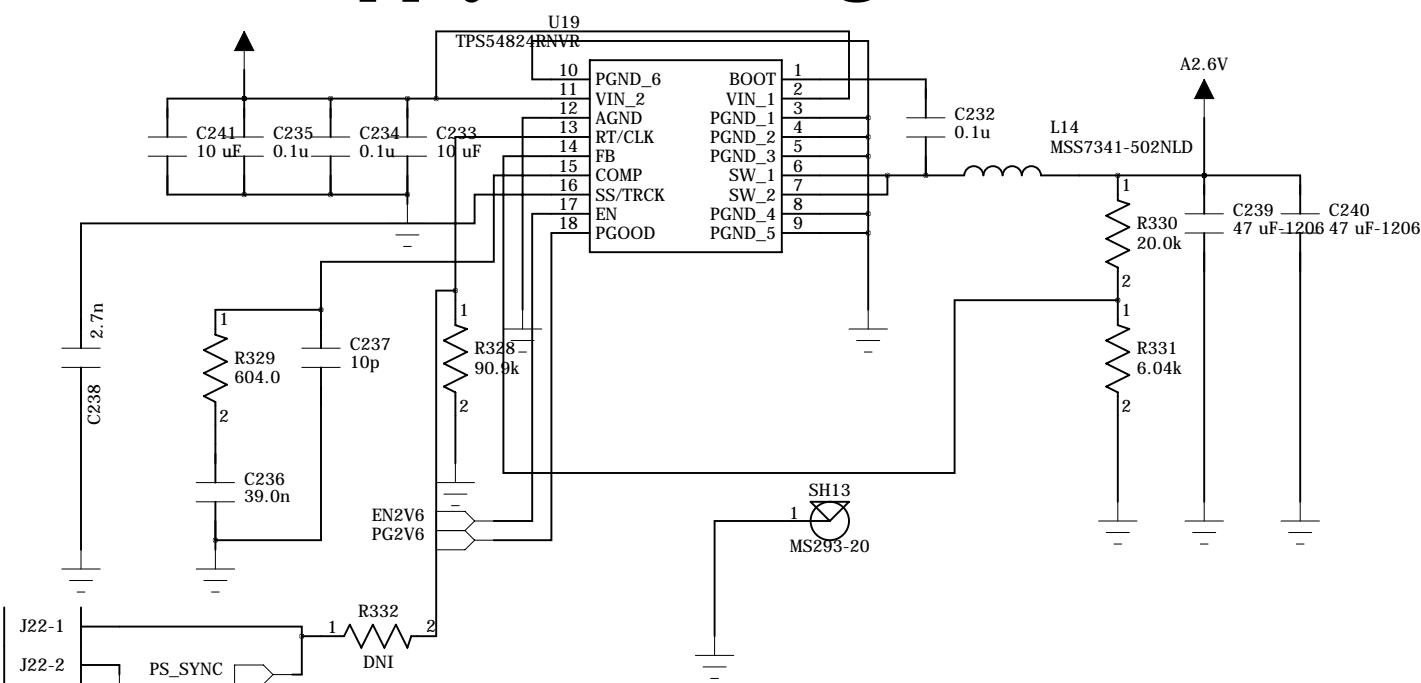
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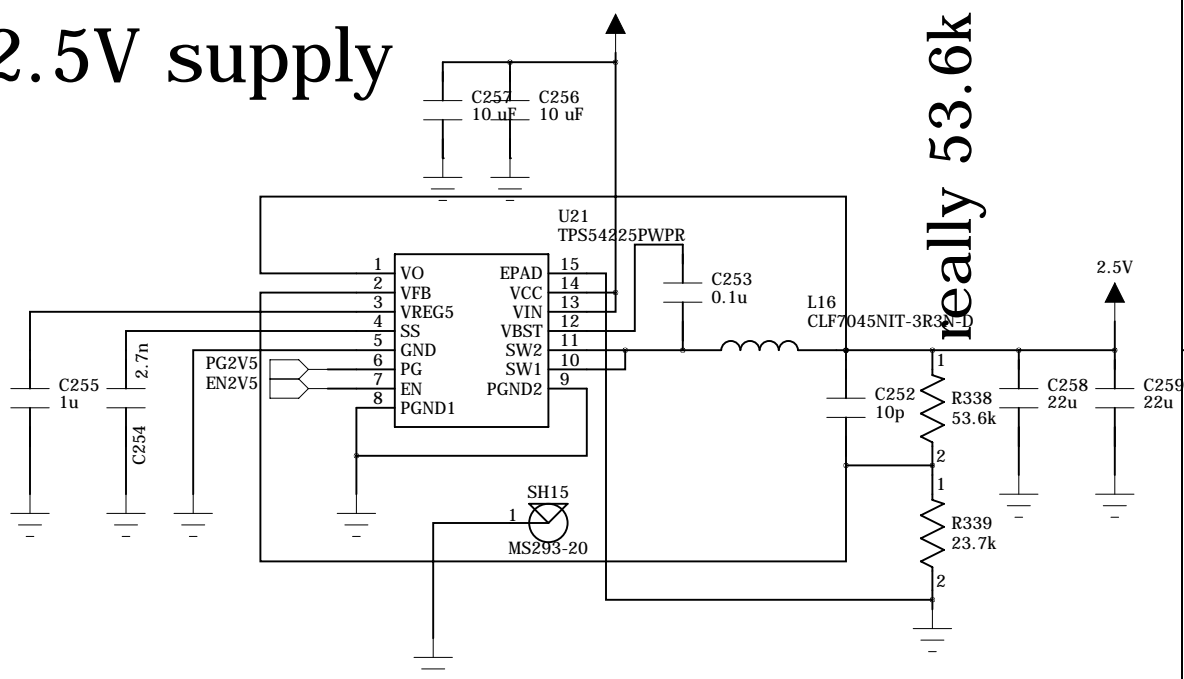
Input power protection



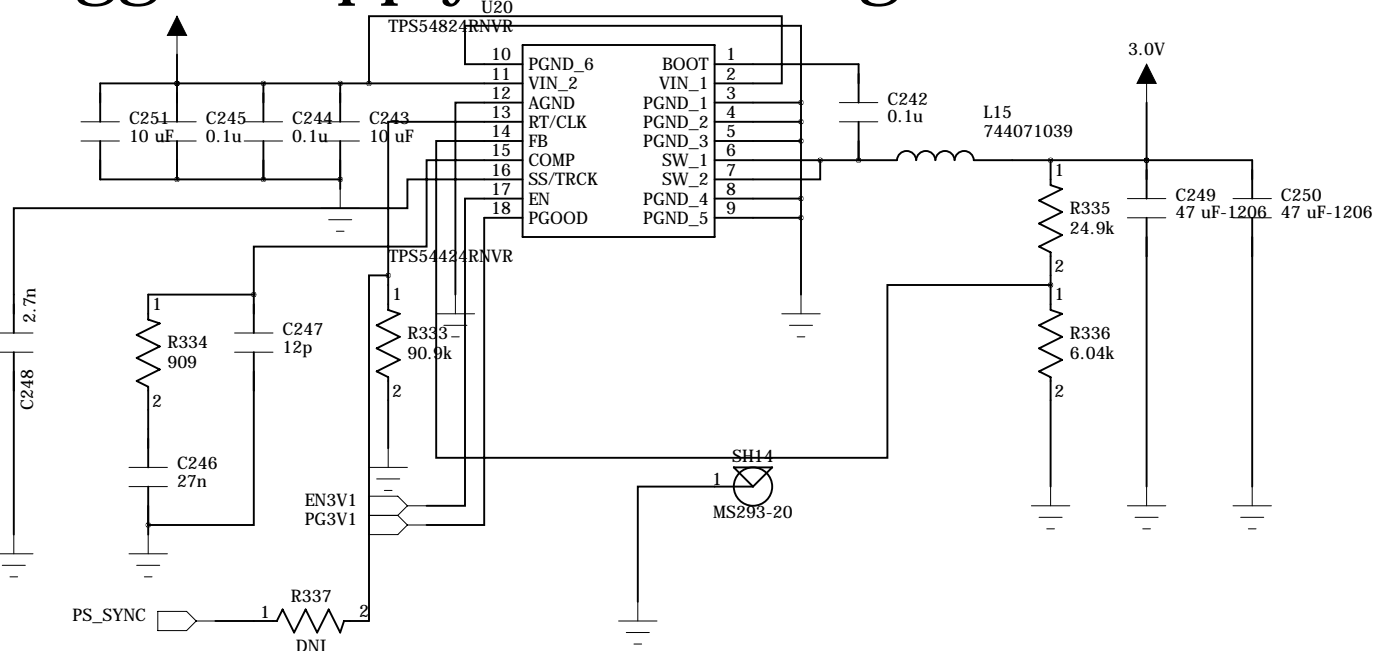
LAB4D supply (2.6V, regulated to 2.5V)



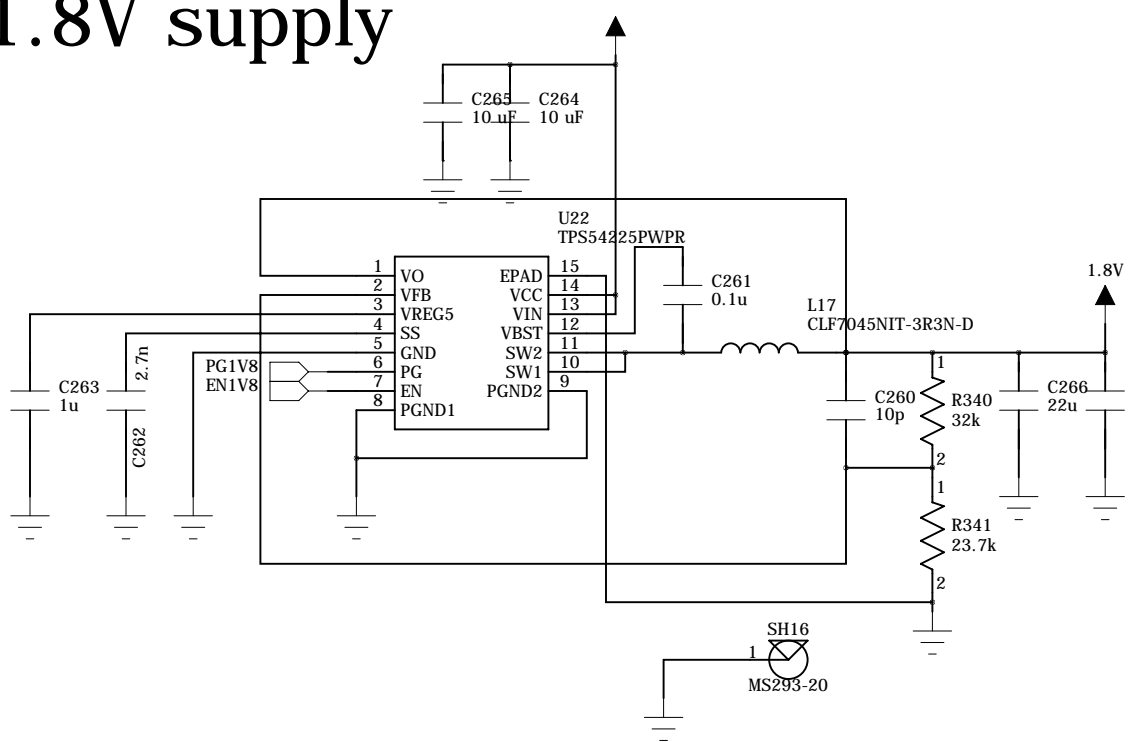
2.5V supply



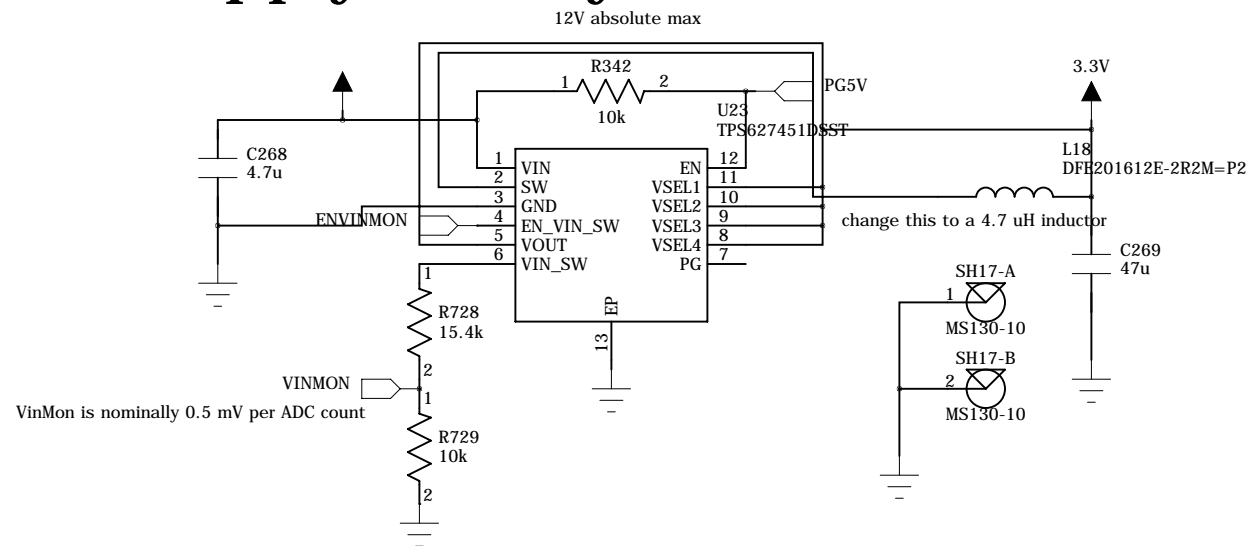
Trigger supply (3.07V, regulated to 3.0V)



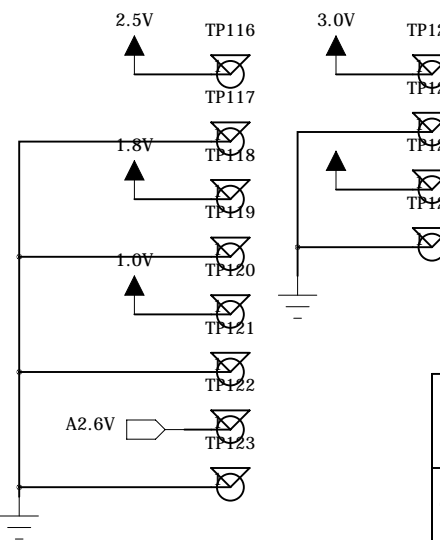
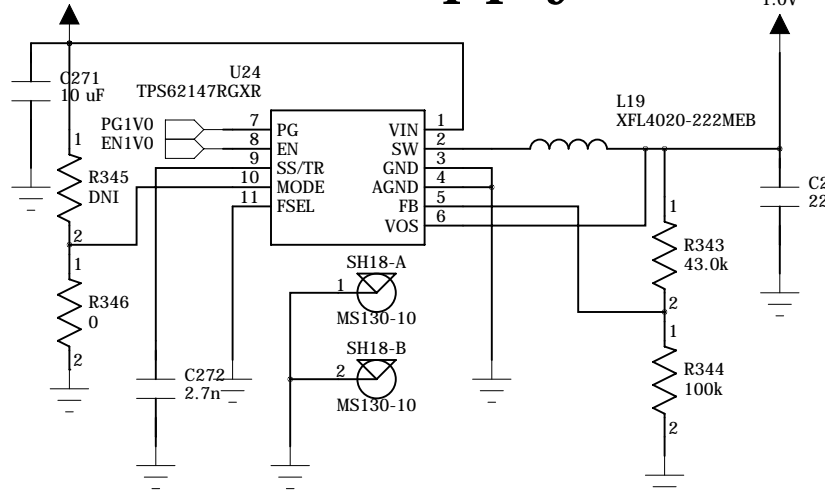
1.8V supply



3.3V supply (always on)



FPGA core supply (1.0V)



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DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

COMPANY: Ohio State University			
SHEET: POWER			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 8 of 74

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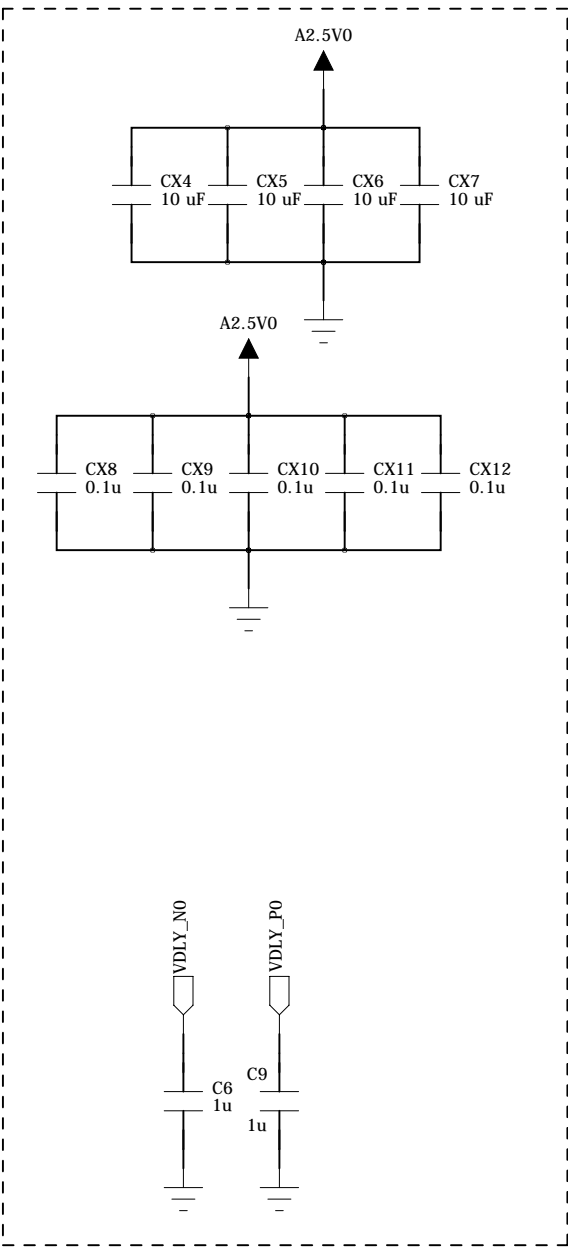
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

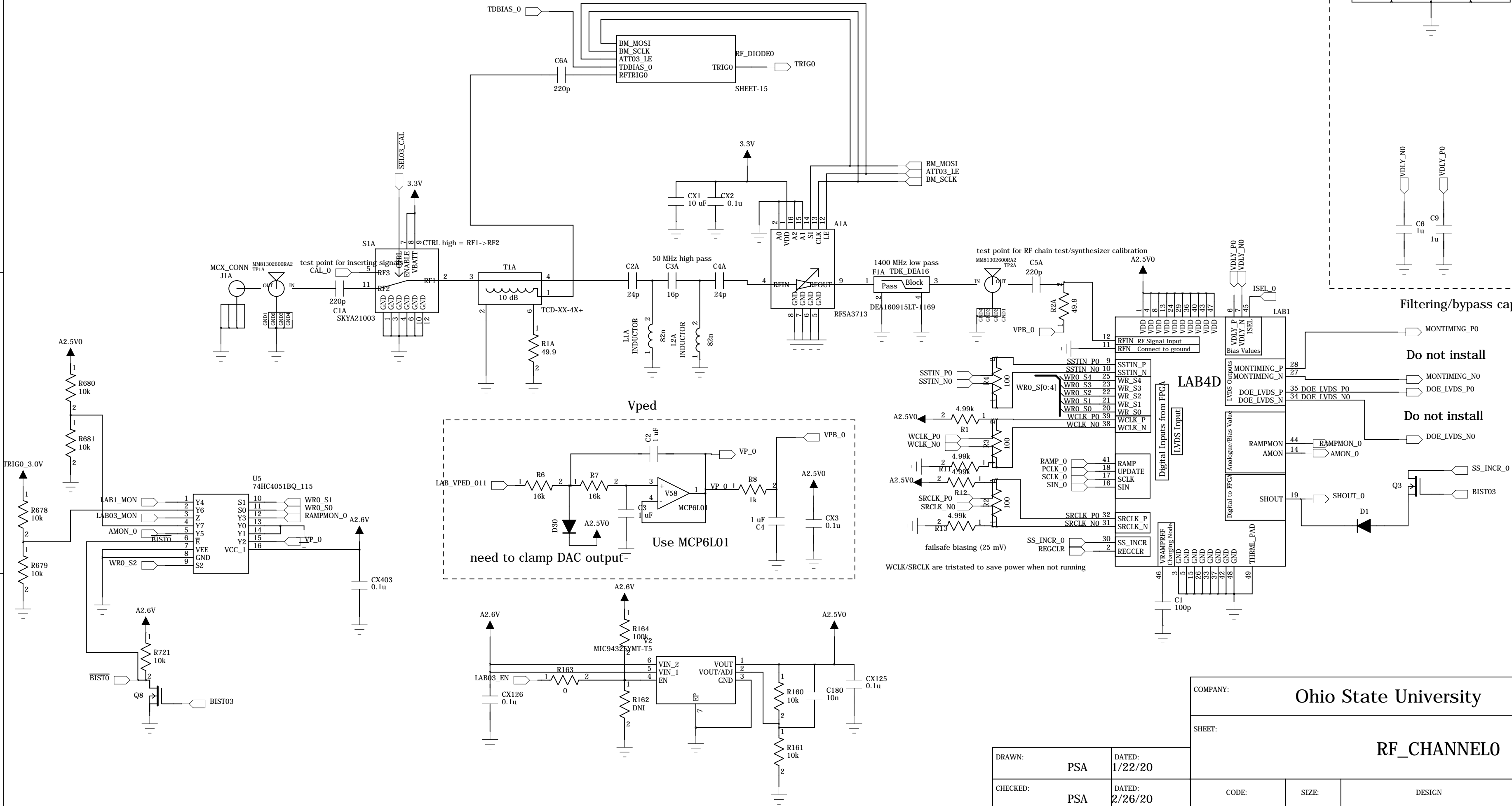


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNEL0			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 9 of 74	



Vped

need to clamp DAC output

Use MCP6L01

LAB4D

WCLK/SRCLK are tristated to save power when not running

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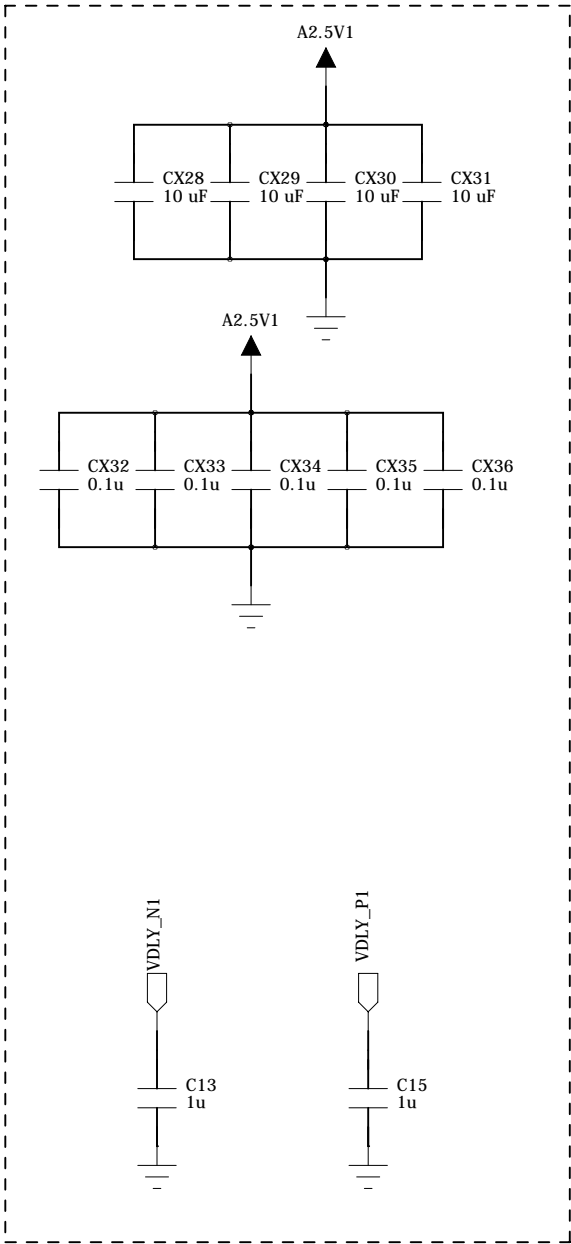
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



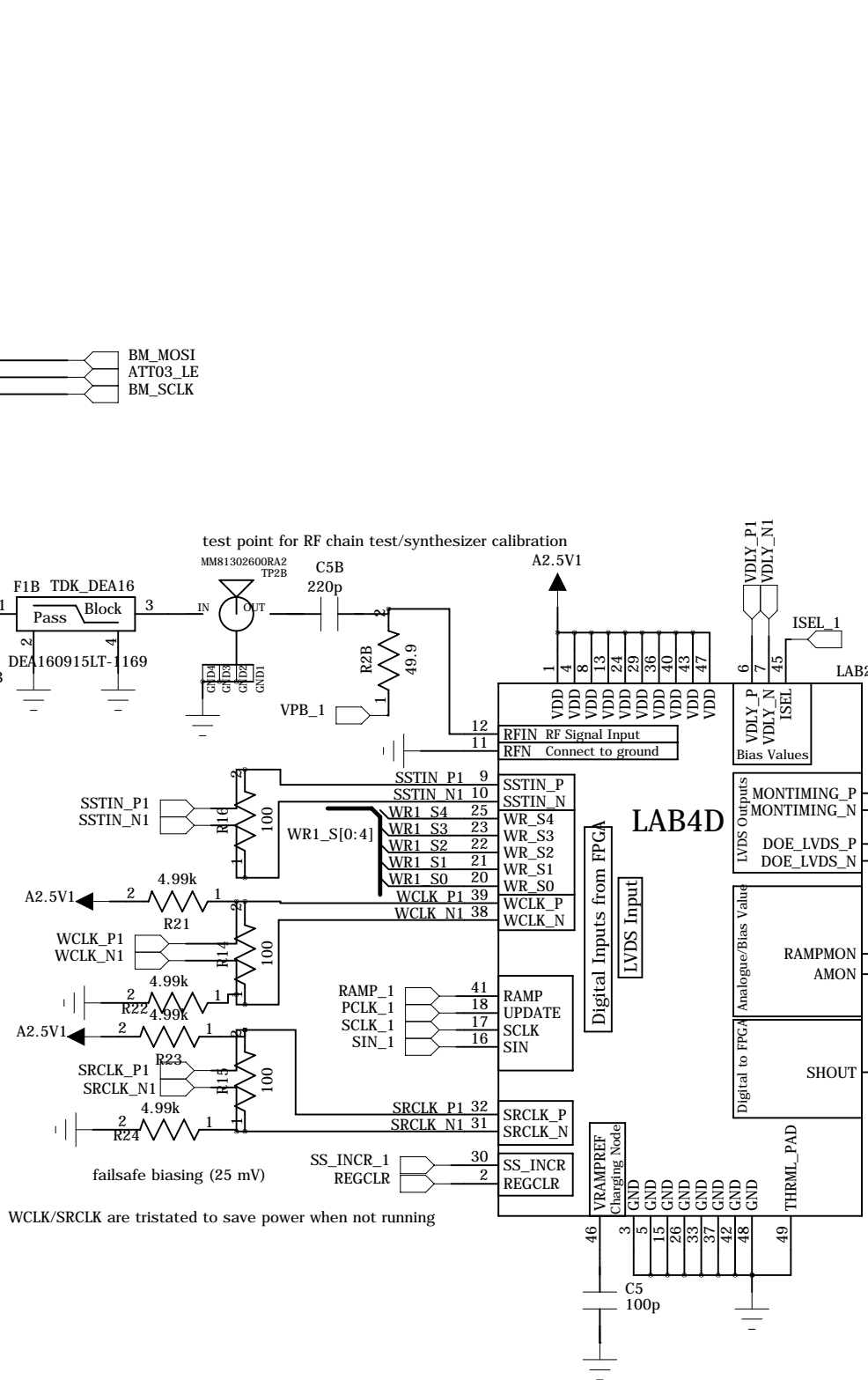
Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNEL1			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 10 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A



WCLK/SRCLK are tristated to save power when not running

LAB4D

LAB2

LAB2

LAB2

LAB2

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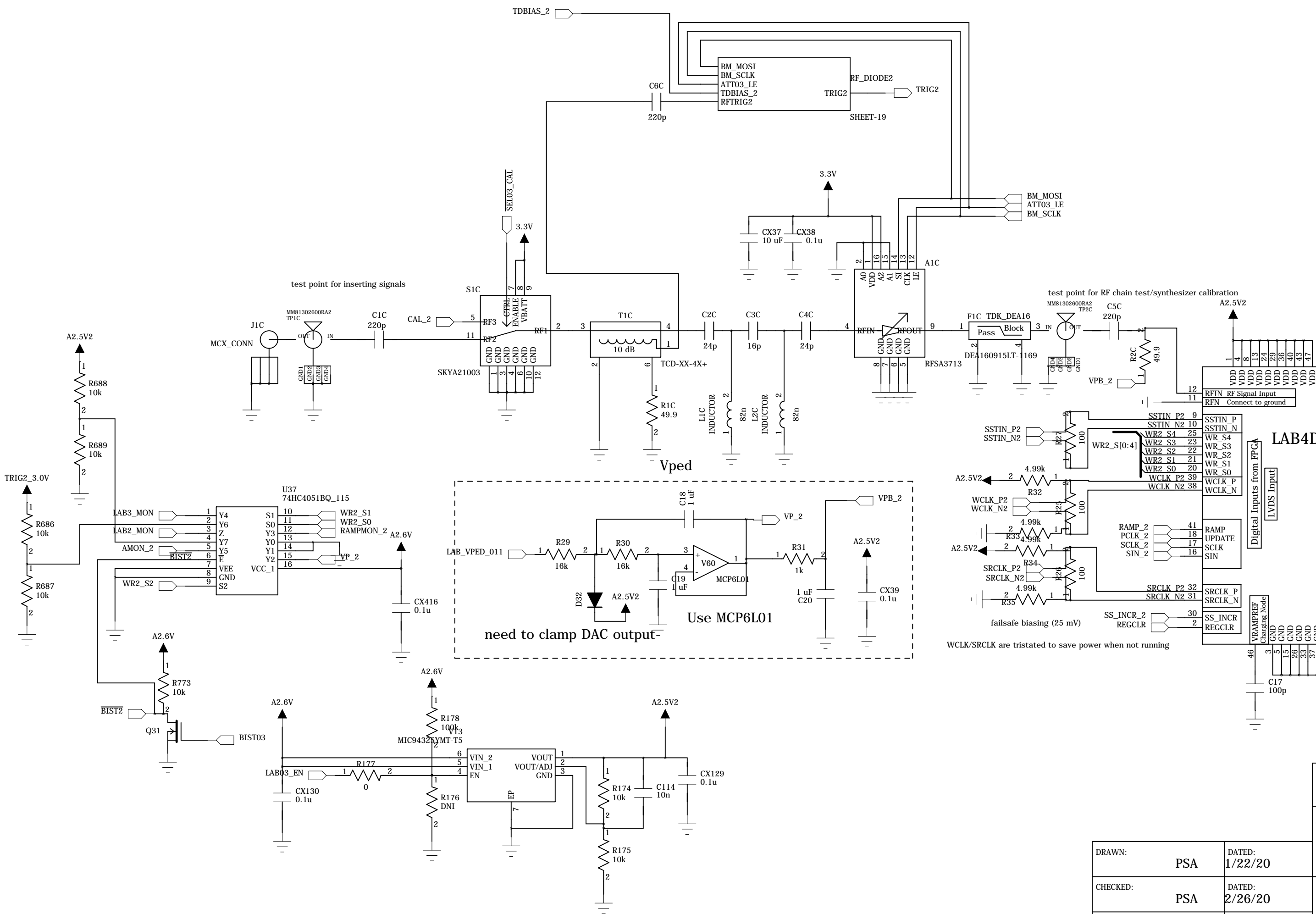
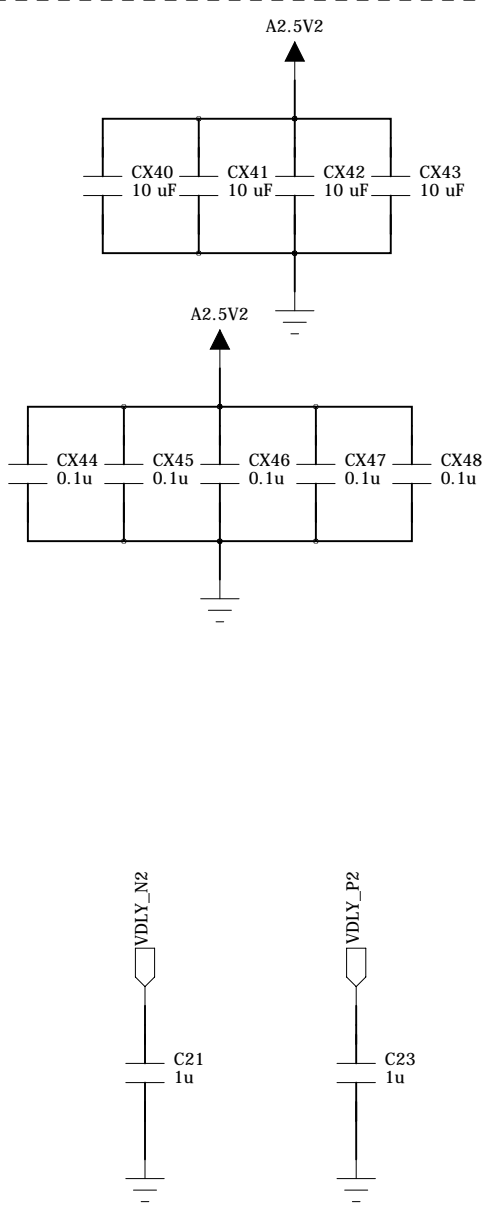
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNEL2			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 1d 74

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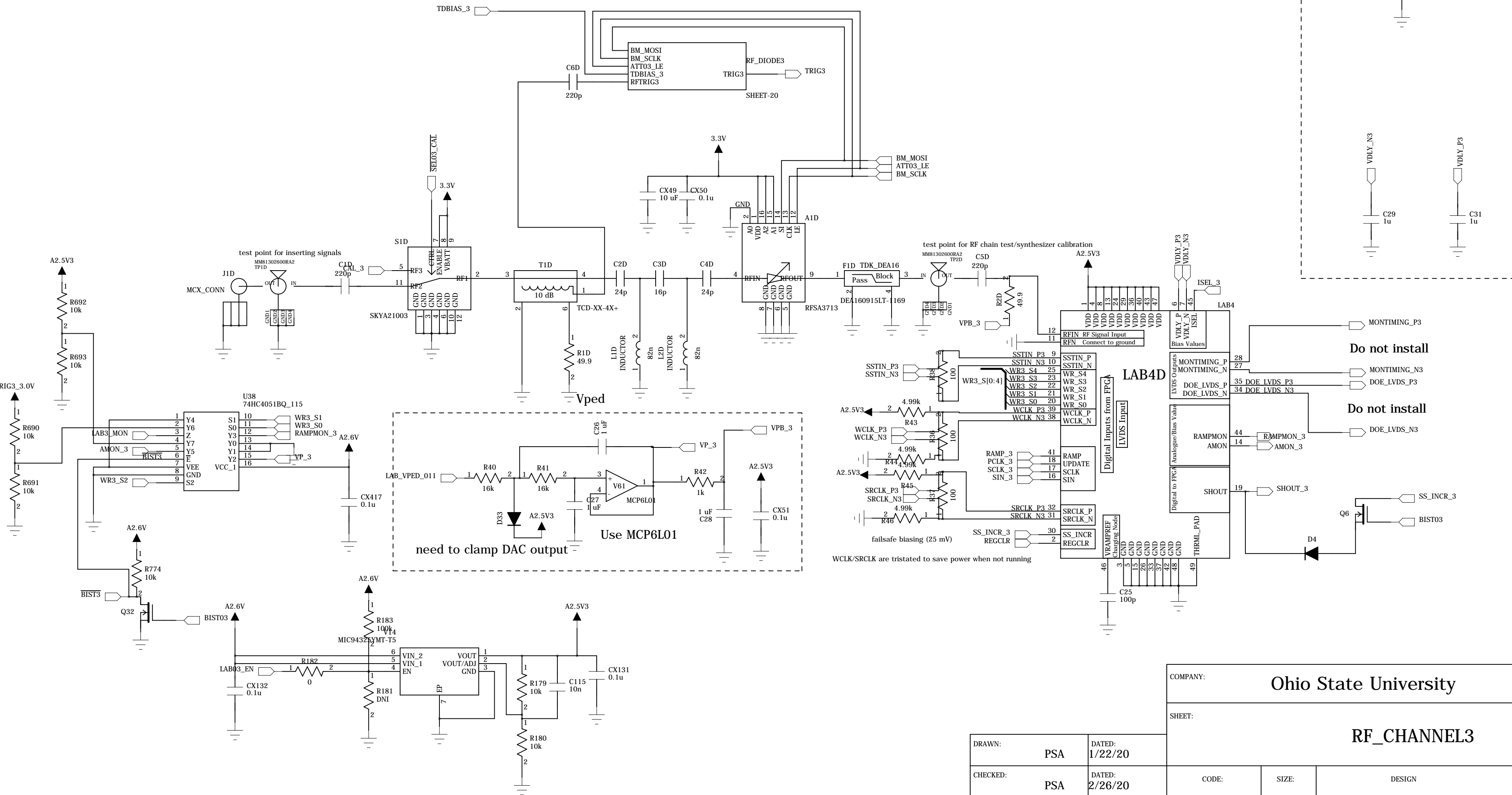
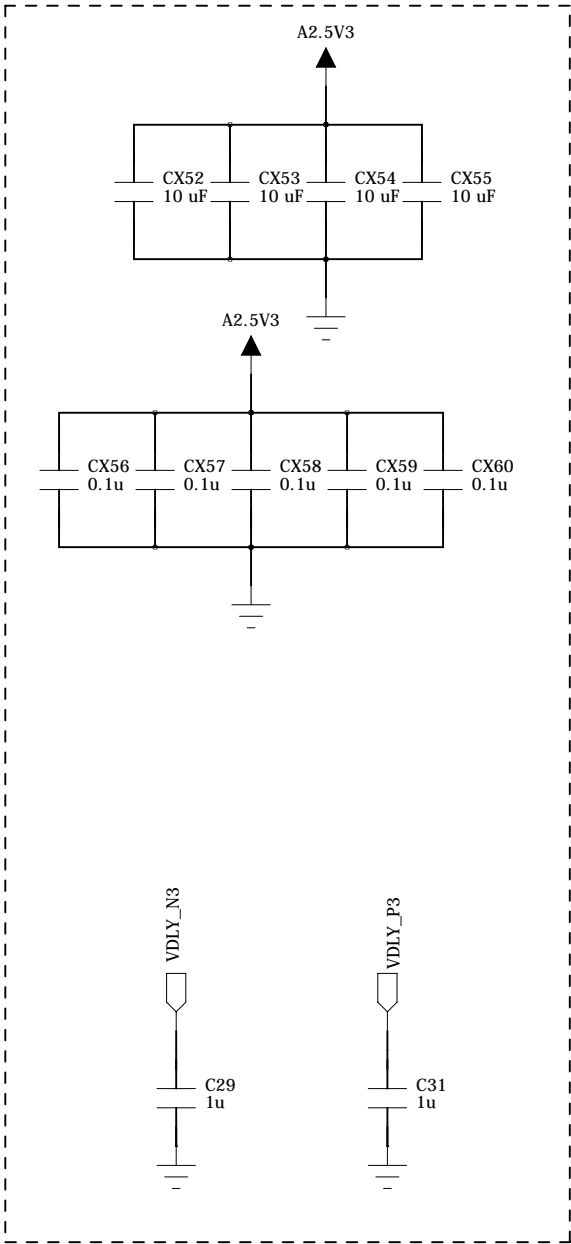
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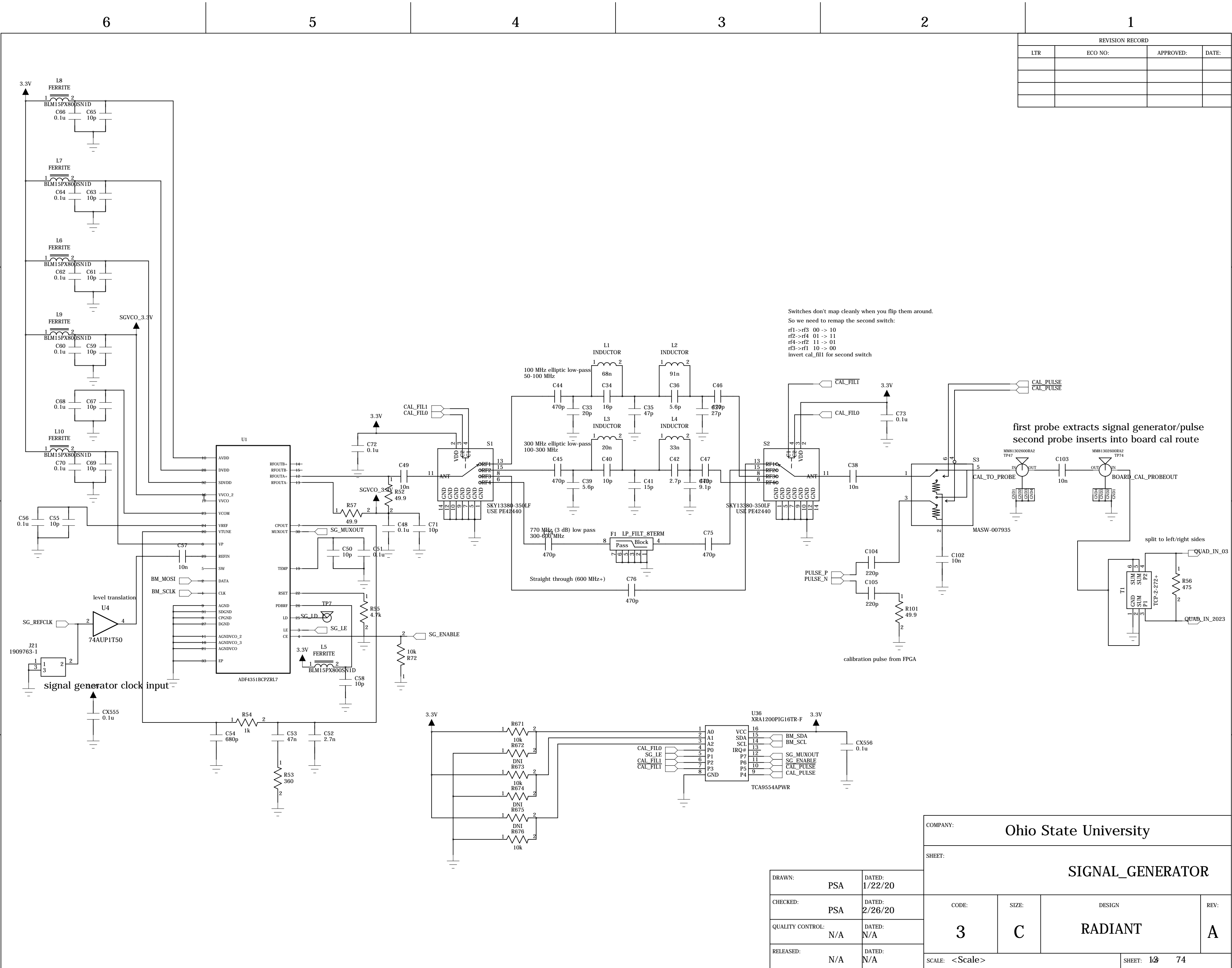
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNEL3			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 1074

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Switches don't map cleanly when you flip them around.
So we need to remap the second switch:

rf1->rf3 00 -> 10
rf2->rf4 01 -> 11
rf4->rf2 11 -> 01
rf3->rf1 10 -> 00
invert cal_fil1 for second switch

first probe extracts signal generator/pulse
second probe inserts into board cal route

COMPANY: Ohio State University			
SHEET: SIGNAL_GENERATOR			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 13 74

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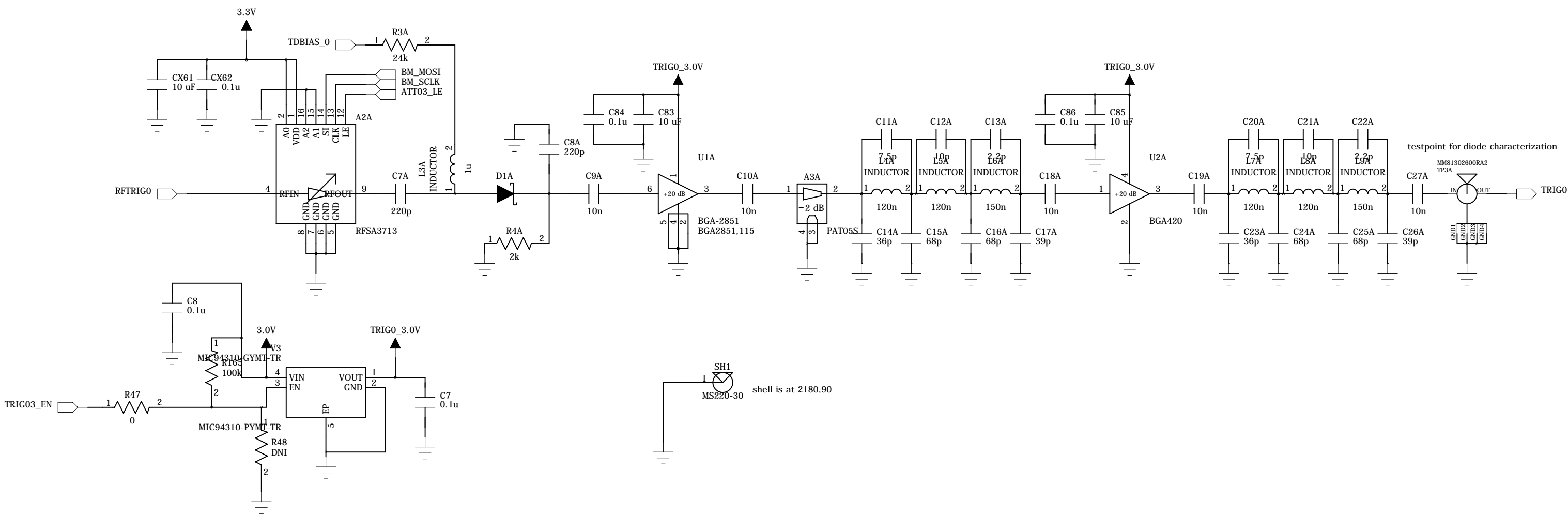
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIODE0			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 15 74

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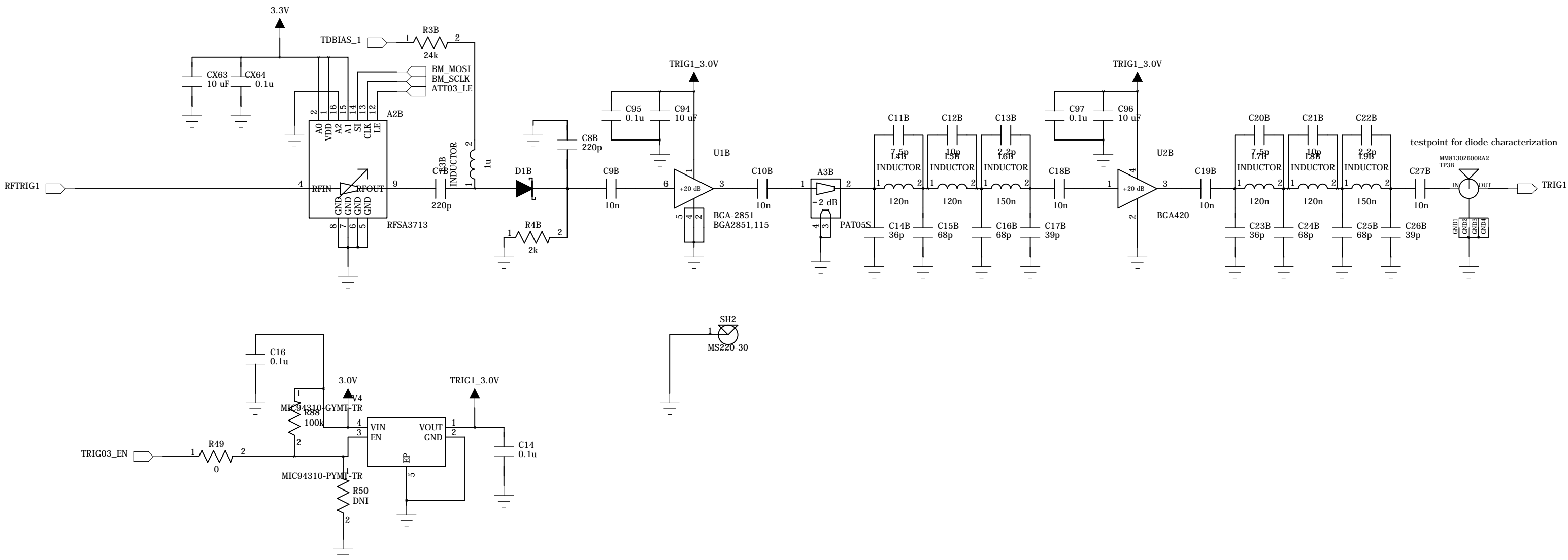
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIODE1

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:

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SIZE:

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DESIGN

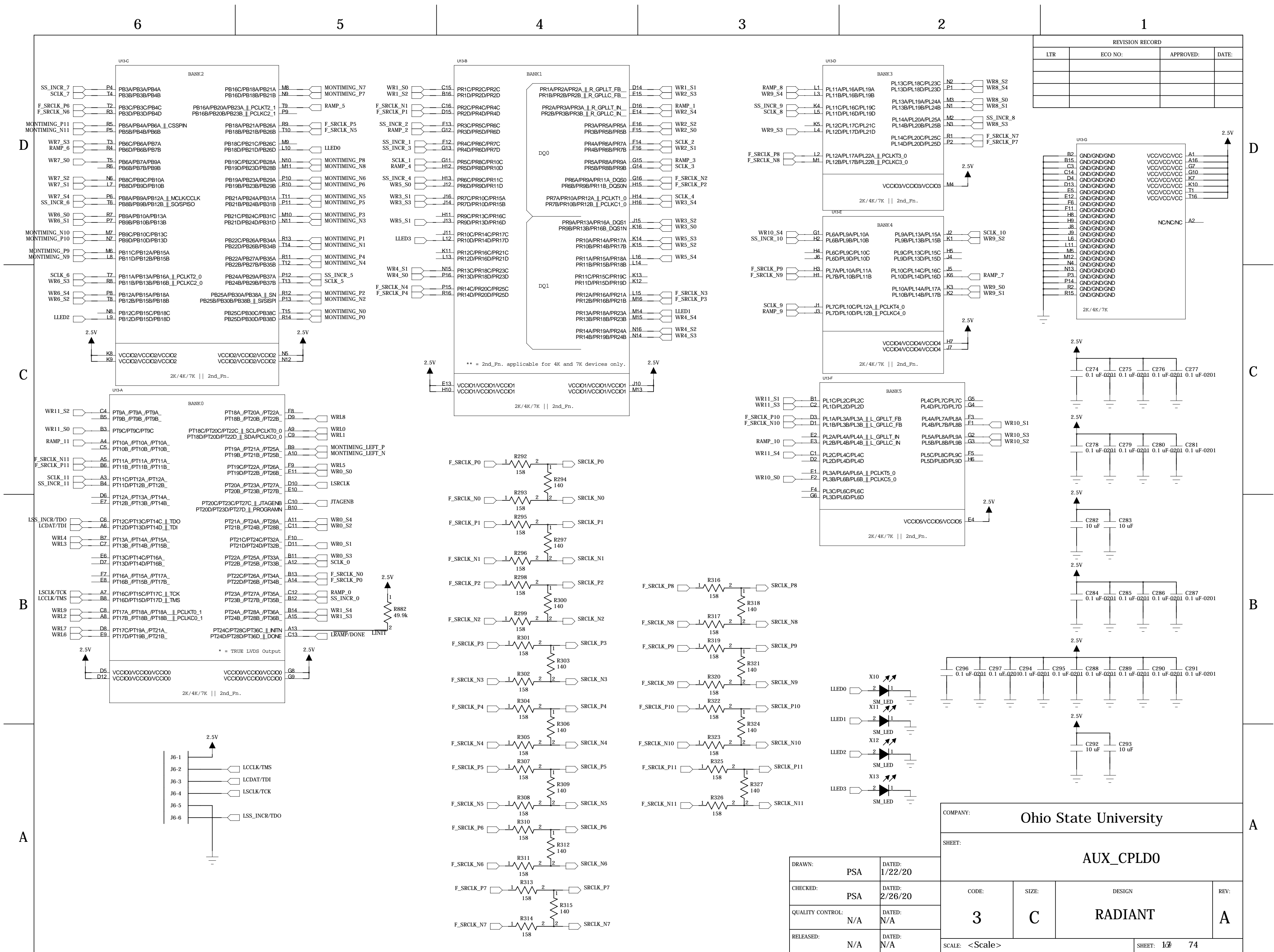
RADIANT

REV:

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SCALE: <Scale>

SHEET: 16 74



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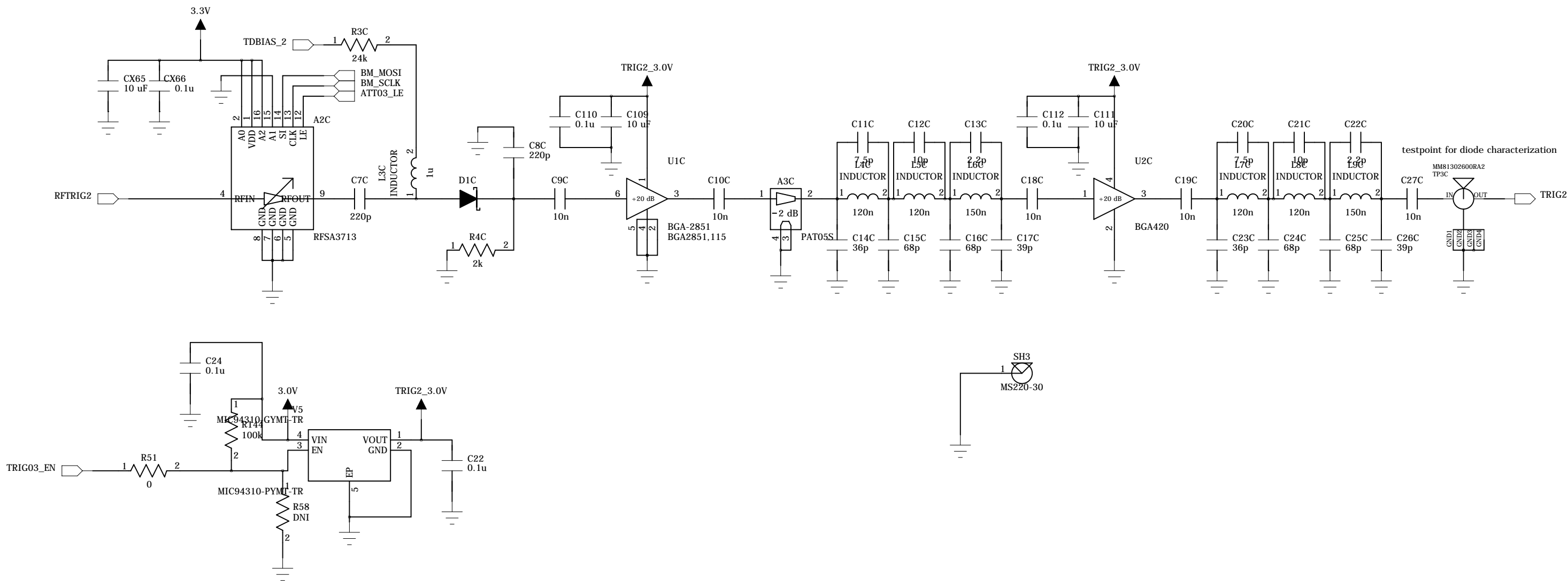
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIODE2

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:

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SIZE:

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DESIGN

RADIANT

REV:

A

SCALE: <Scale>

SHEET: 19 74

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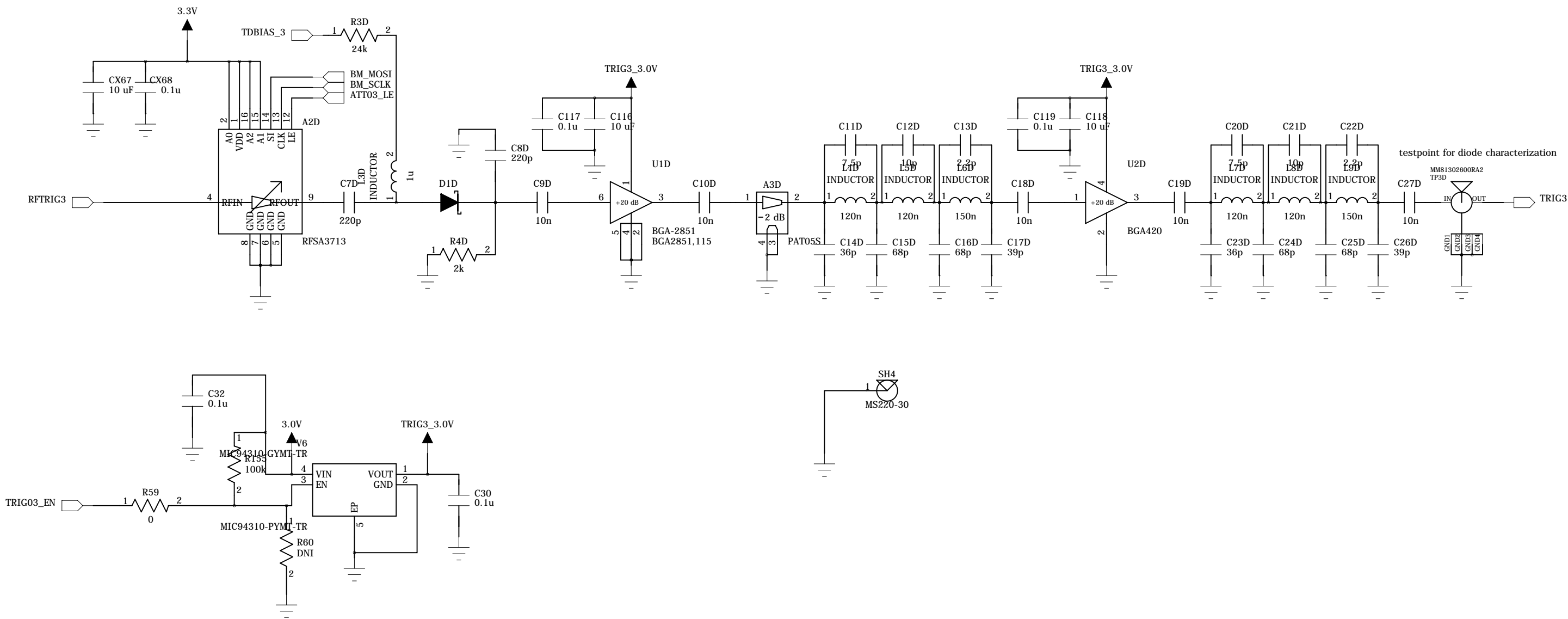
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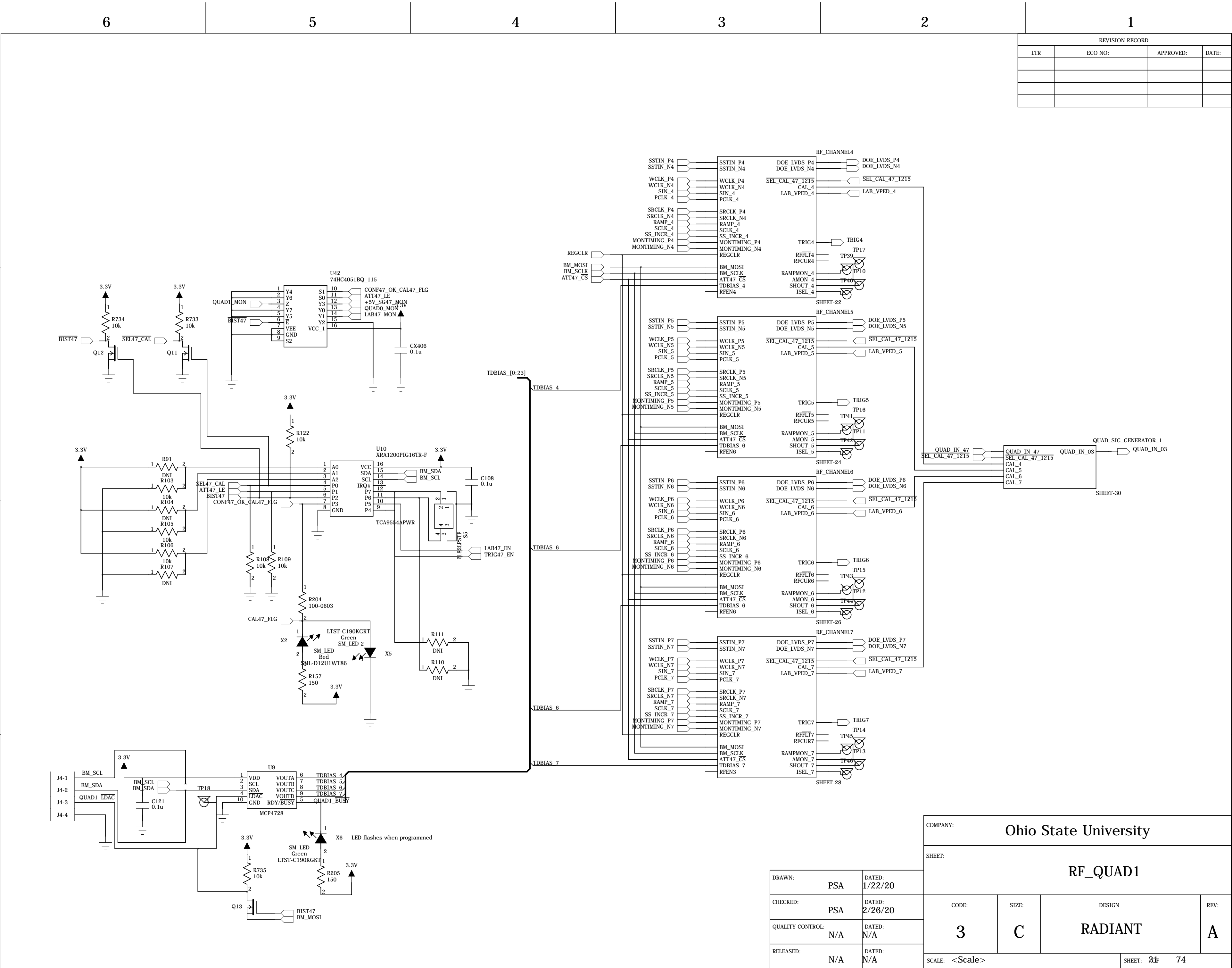
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIODE3			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 20 74



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

COMPANY: Ohio State University			
SHEET: RF_Quad1			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 21 of 74

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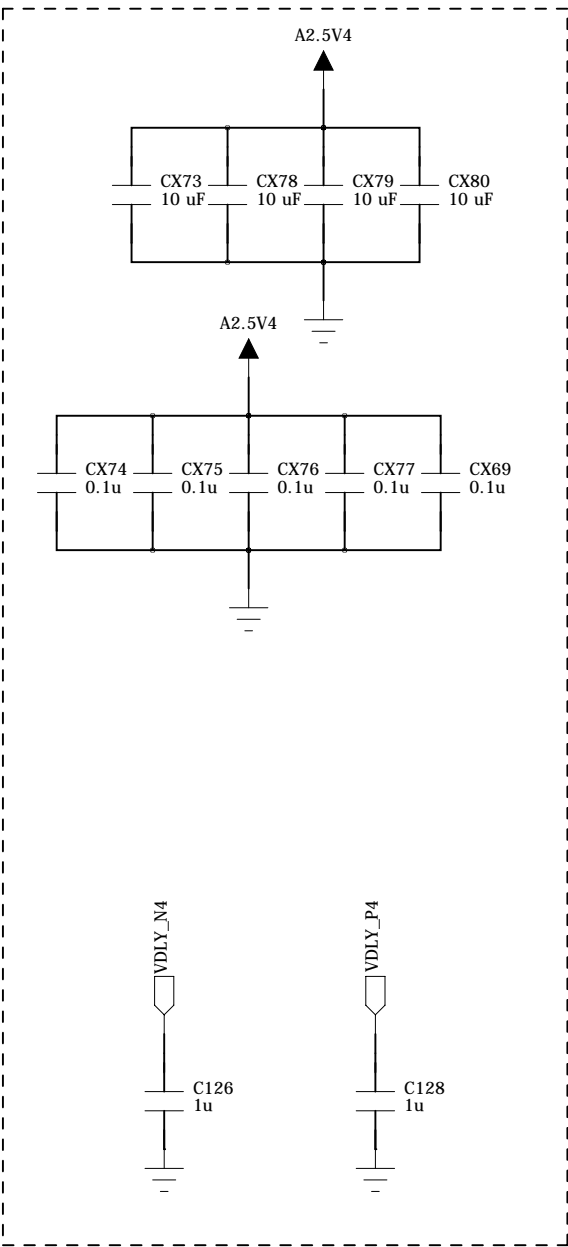
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

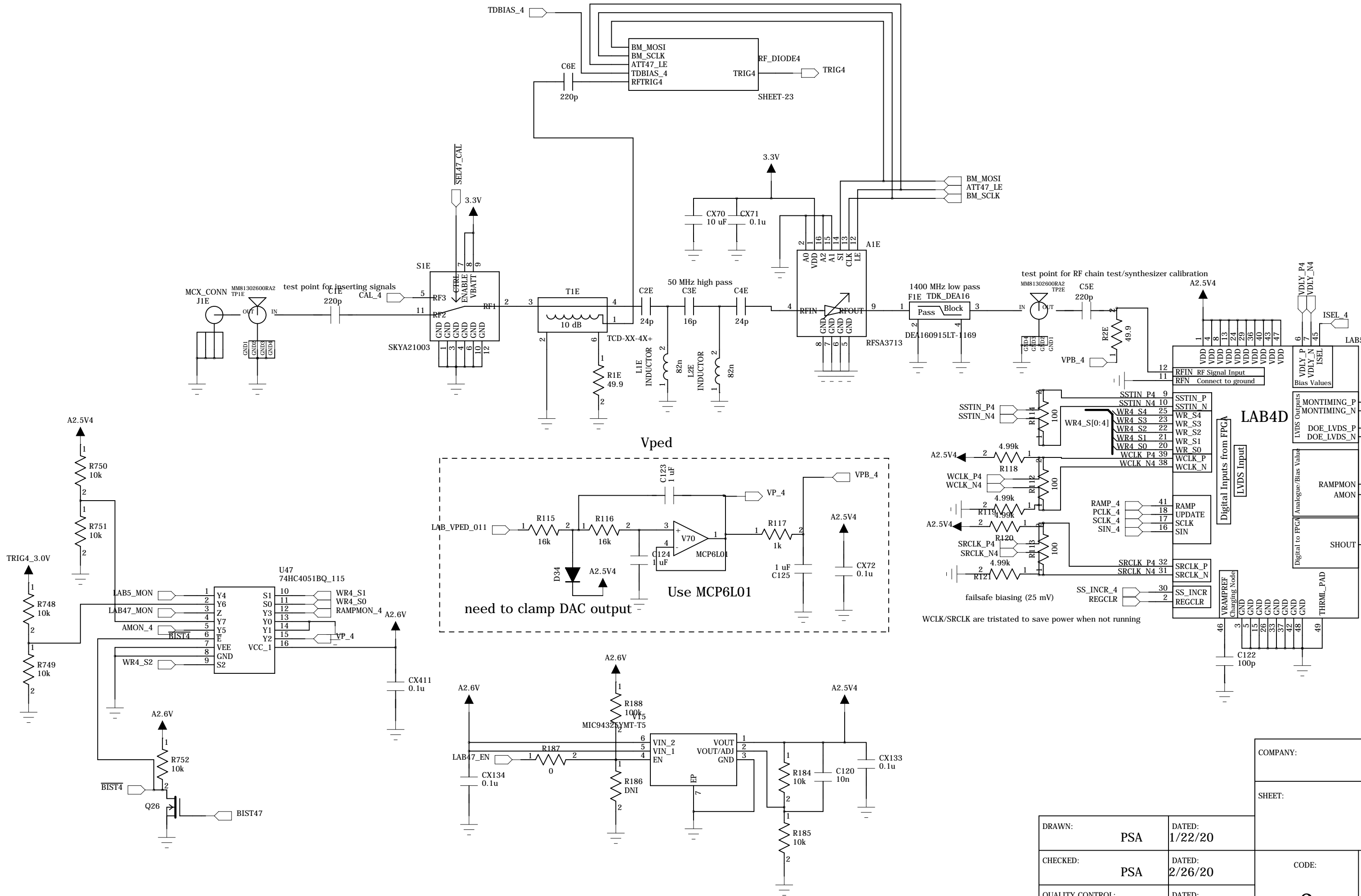


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNEL4			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 22 74



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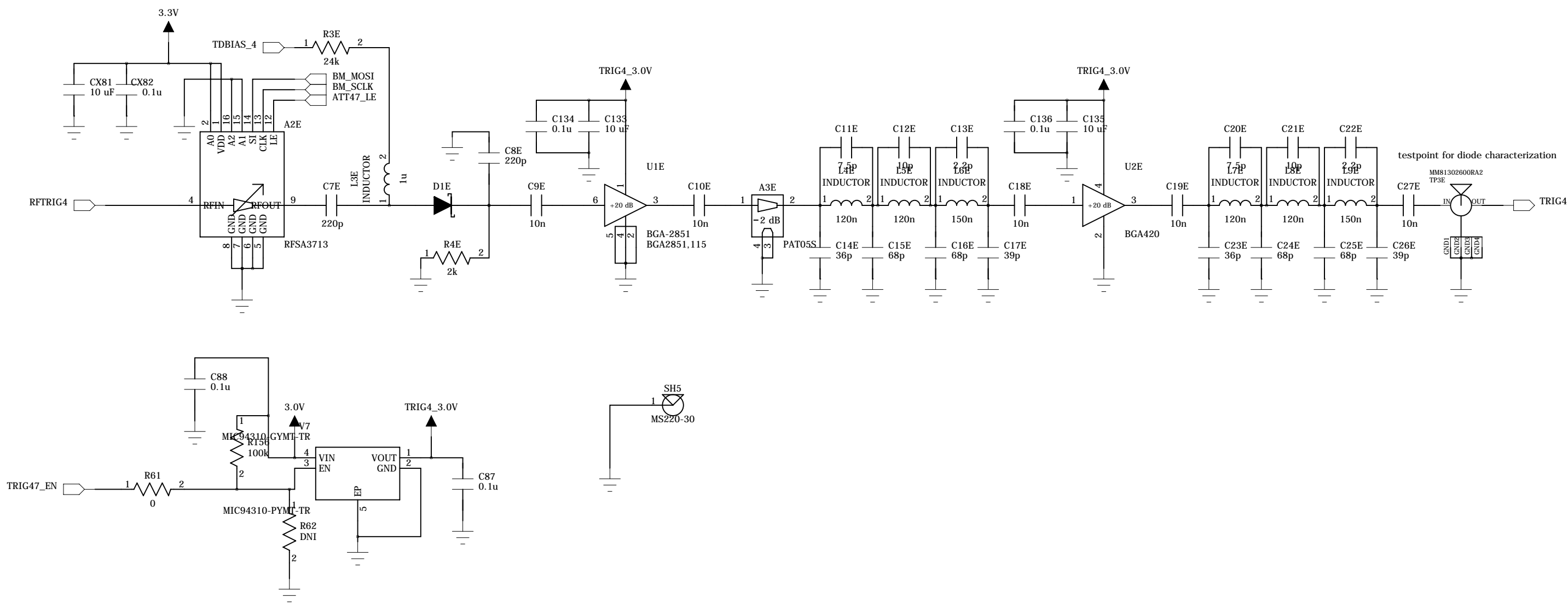
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIODE4

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:

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SIZE:

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REV:

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SCALE: <Scale>

SHEET: 23 74

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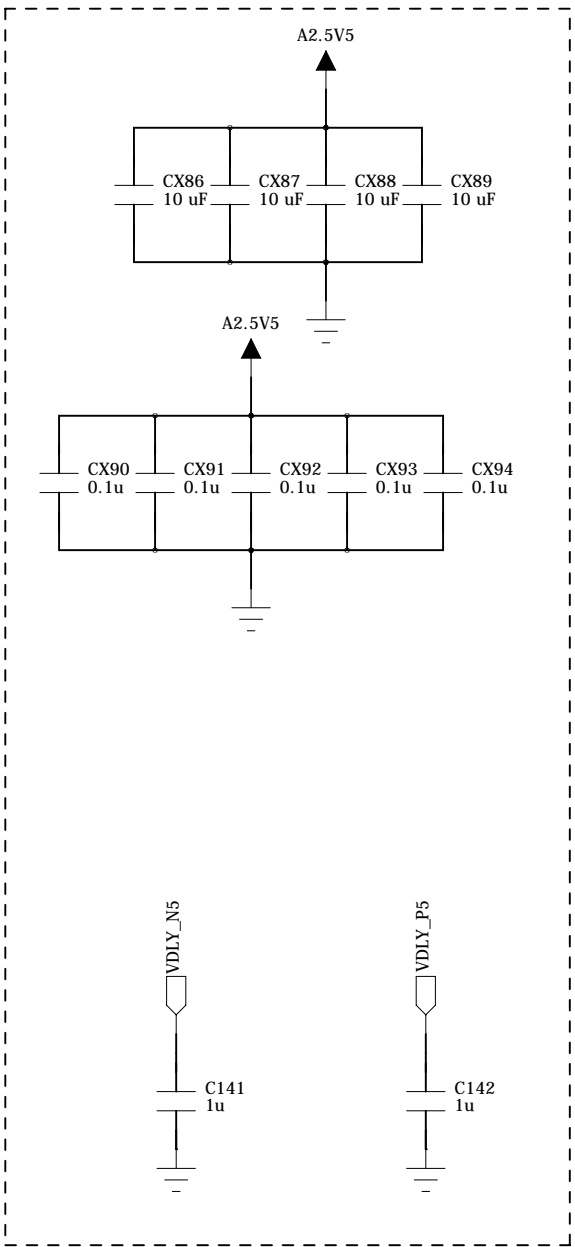
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

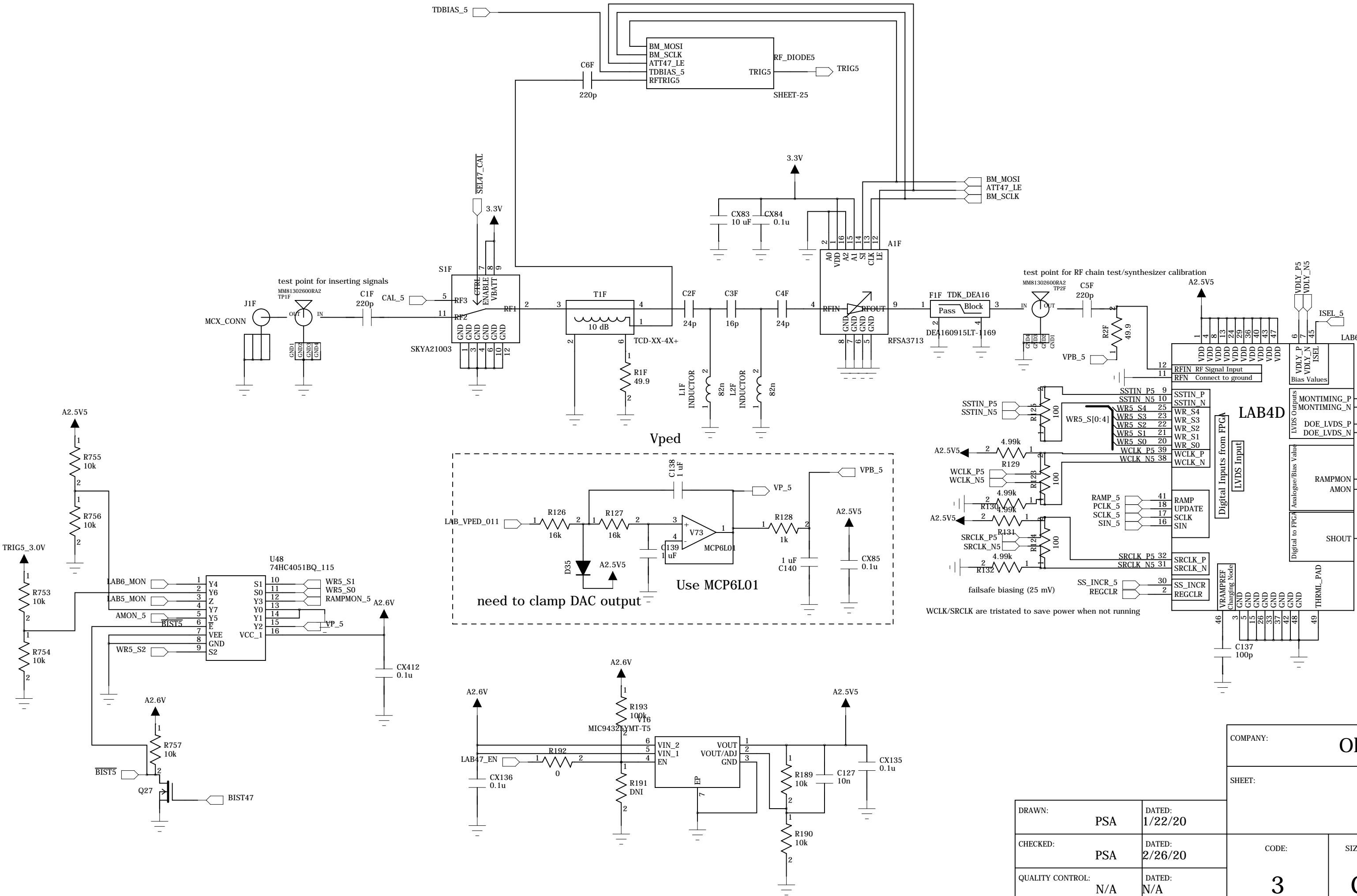


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNEL5			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 24 74	



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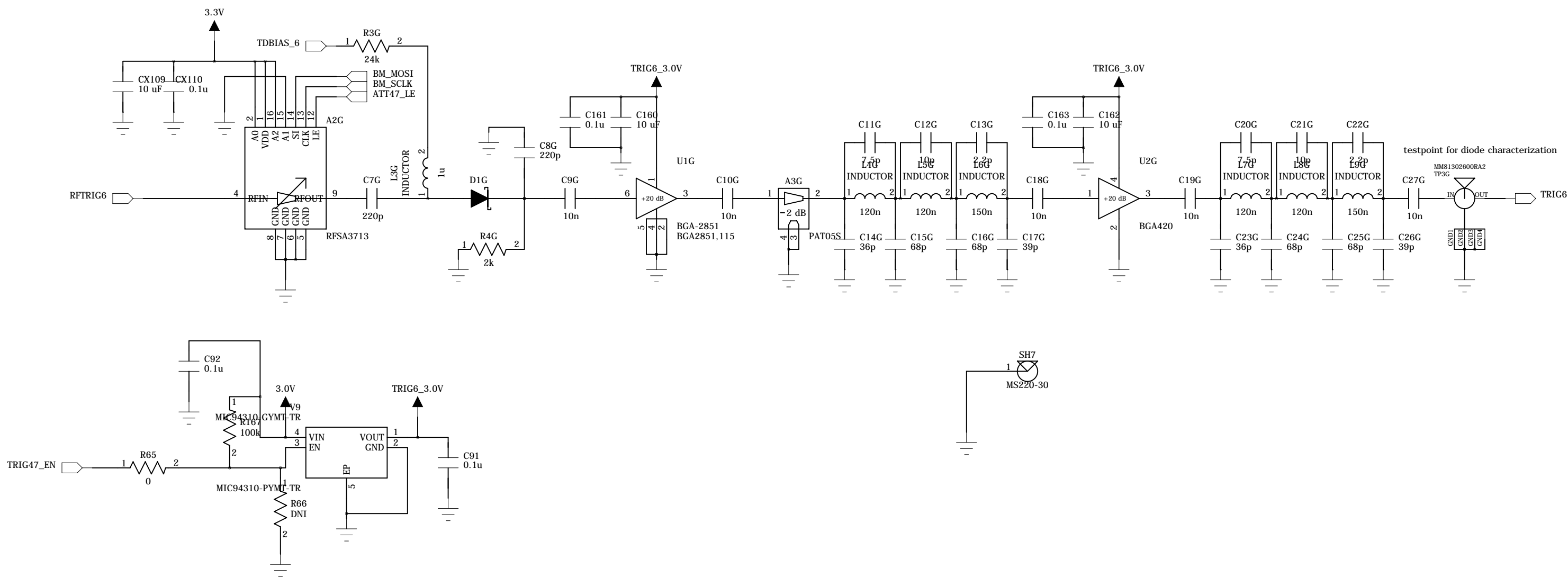
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIODE6			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 27 74

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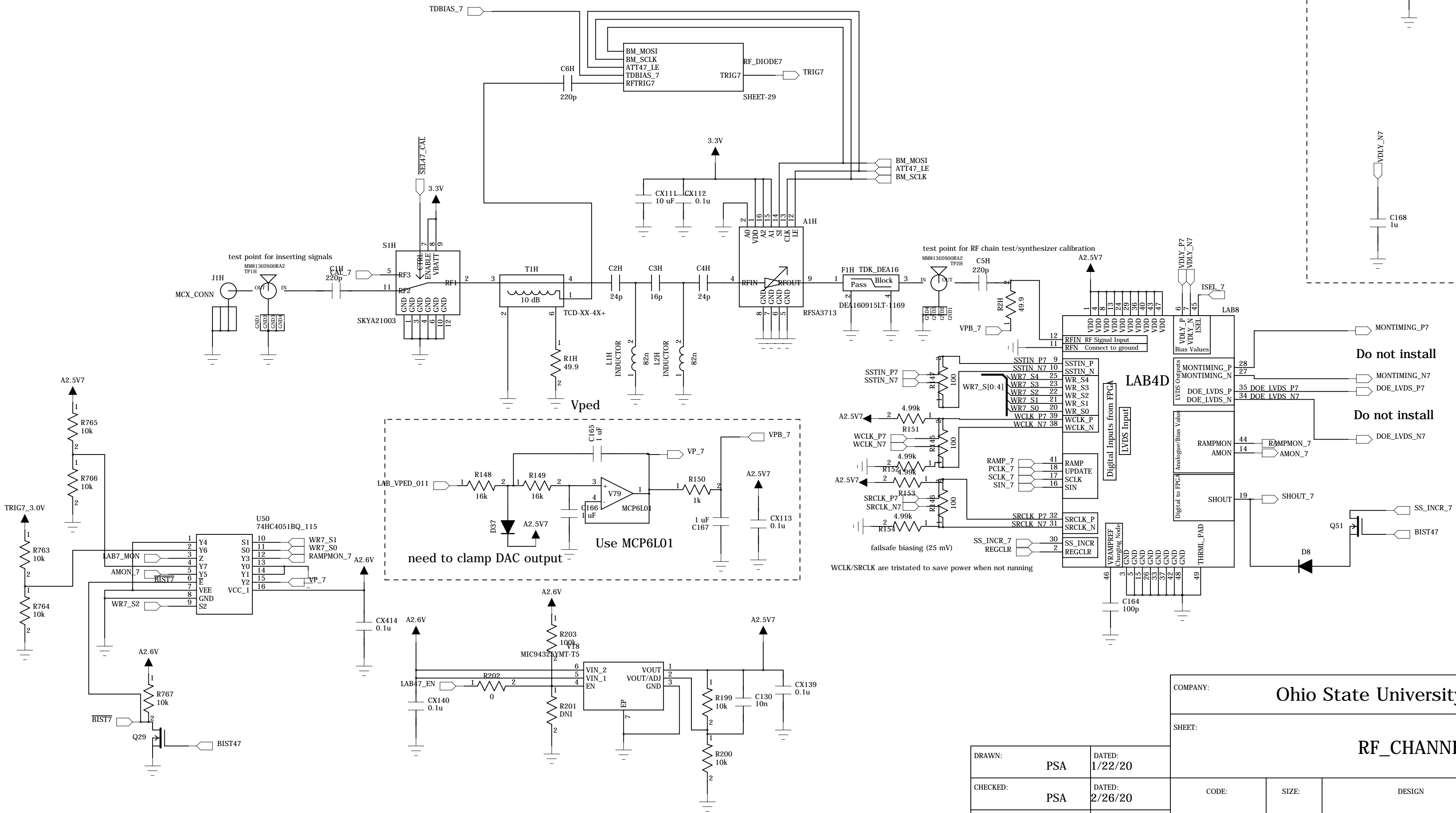
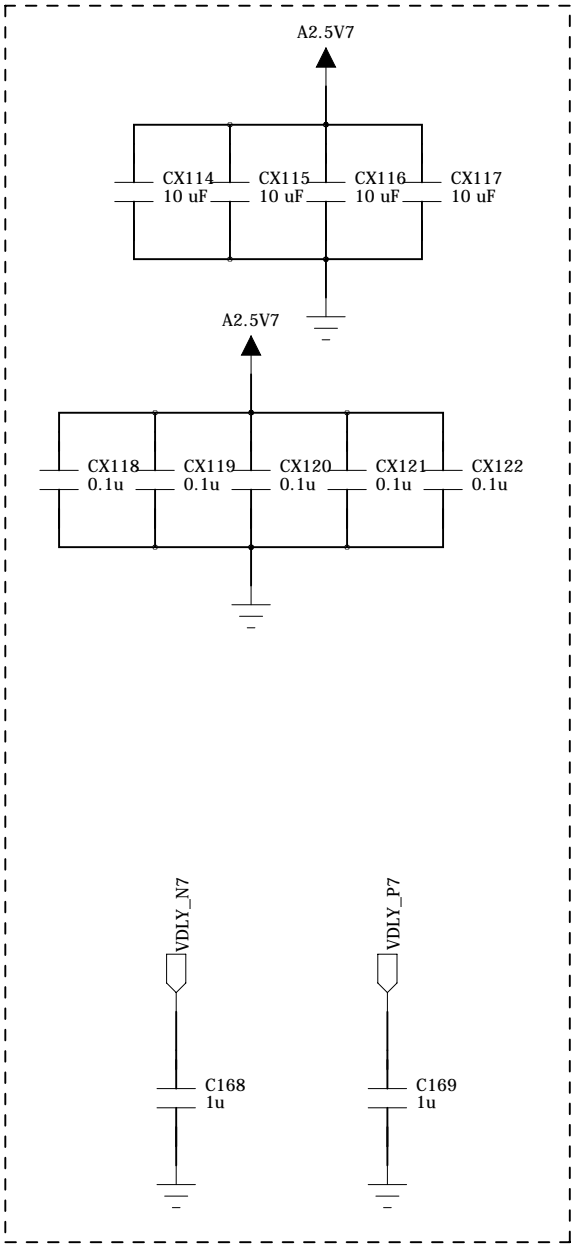
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

COMPANY: Ohio State University			
SHEET: RF_CHANNEL7			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 28 74

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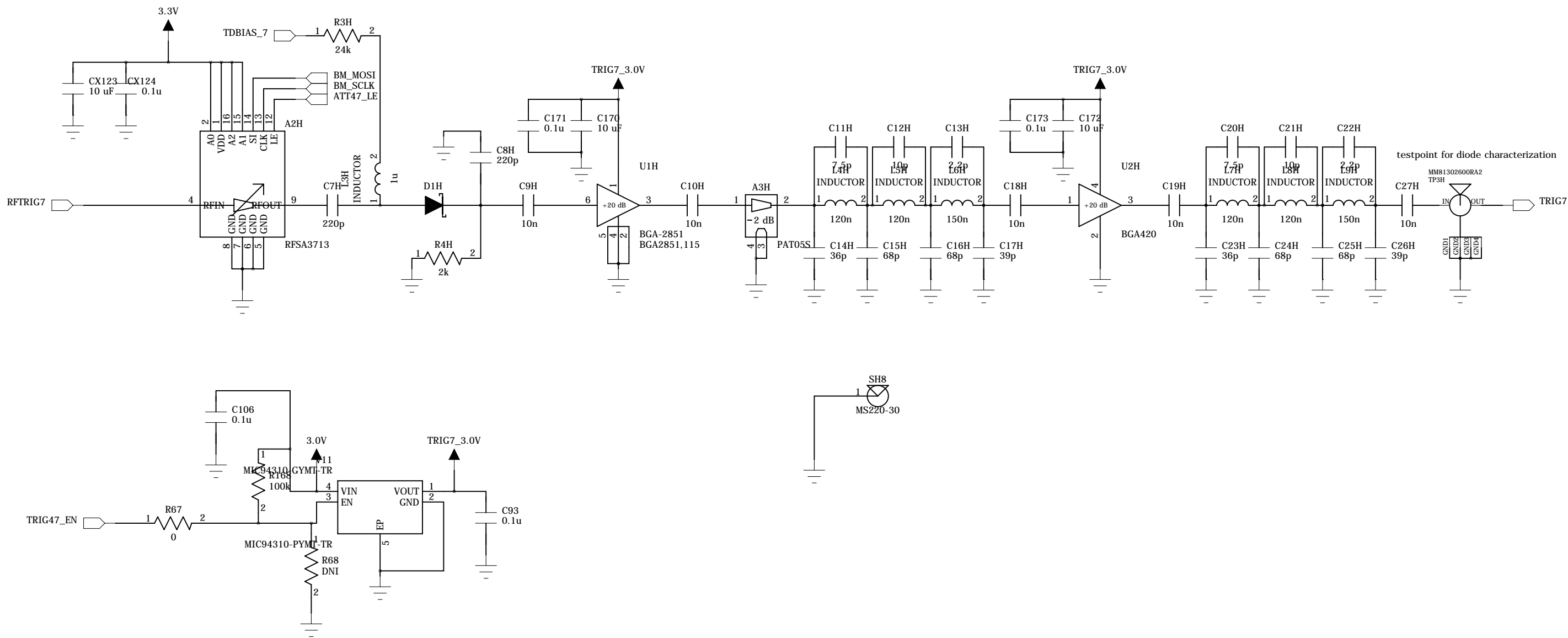
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIODE7

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:

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SIZE:

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REV:

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SCALE: <Scale>

SHEET: 29 74

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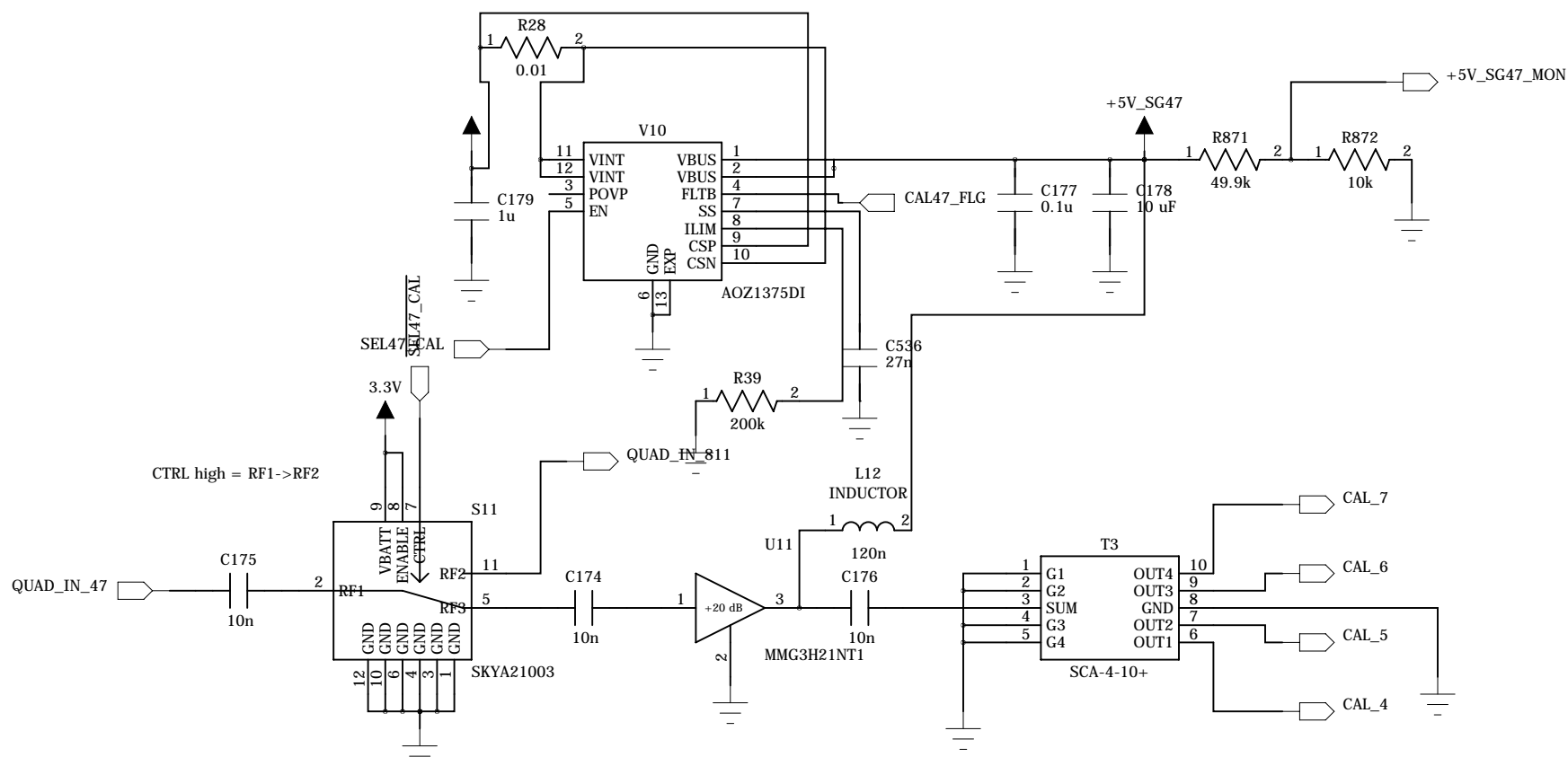
A

D

C

B

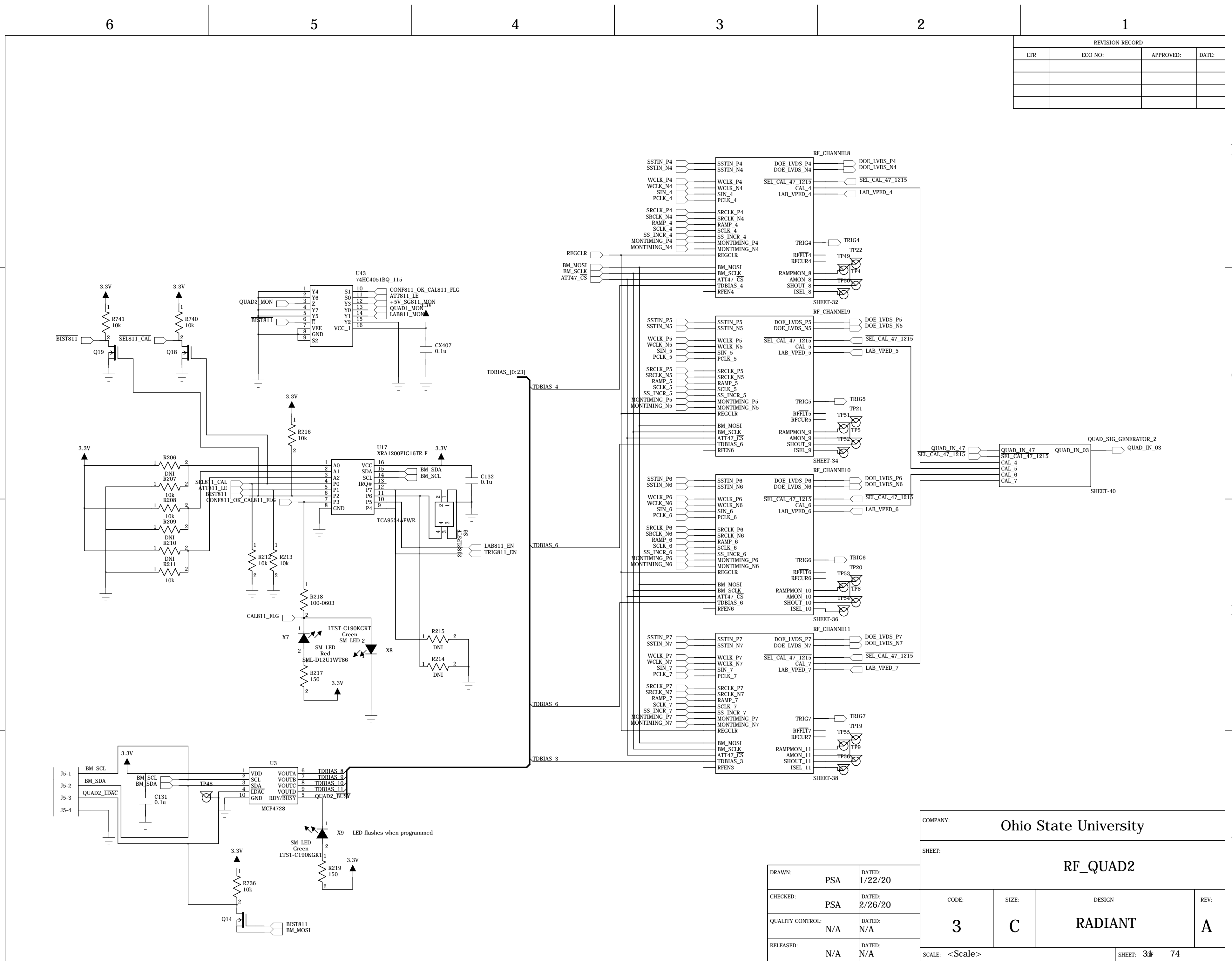
A



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

COMPANY:		Ohio State University	
SHEET:		QUAD_SIG_GENERATOR	
CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A
SCALE: <Scale>		SHEET: 30	74



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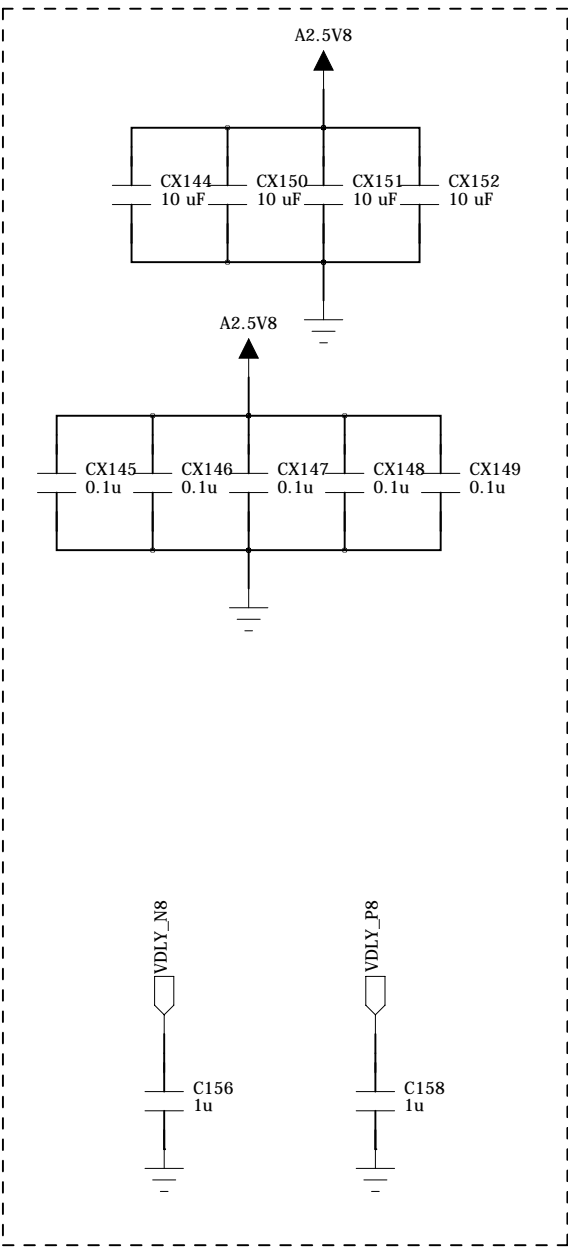
D

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A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

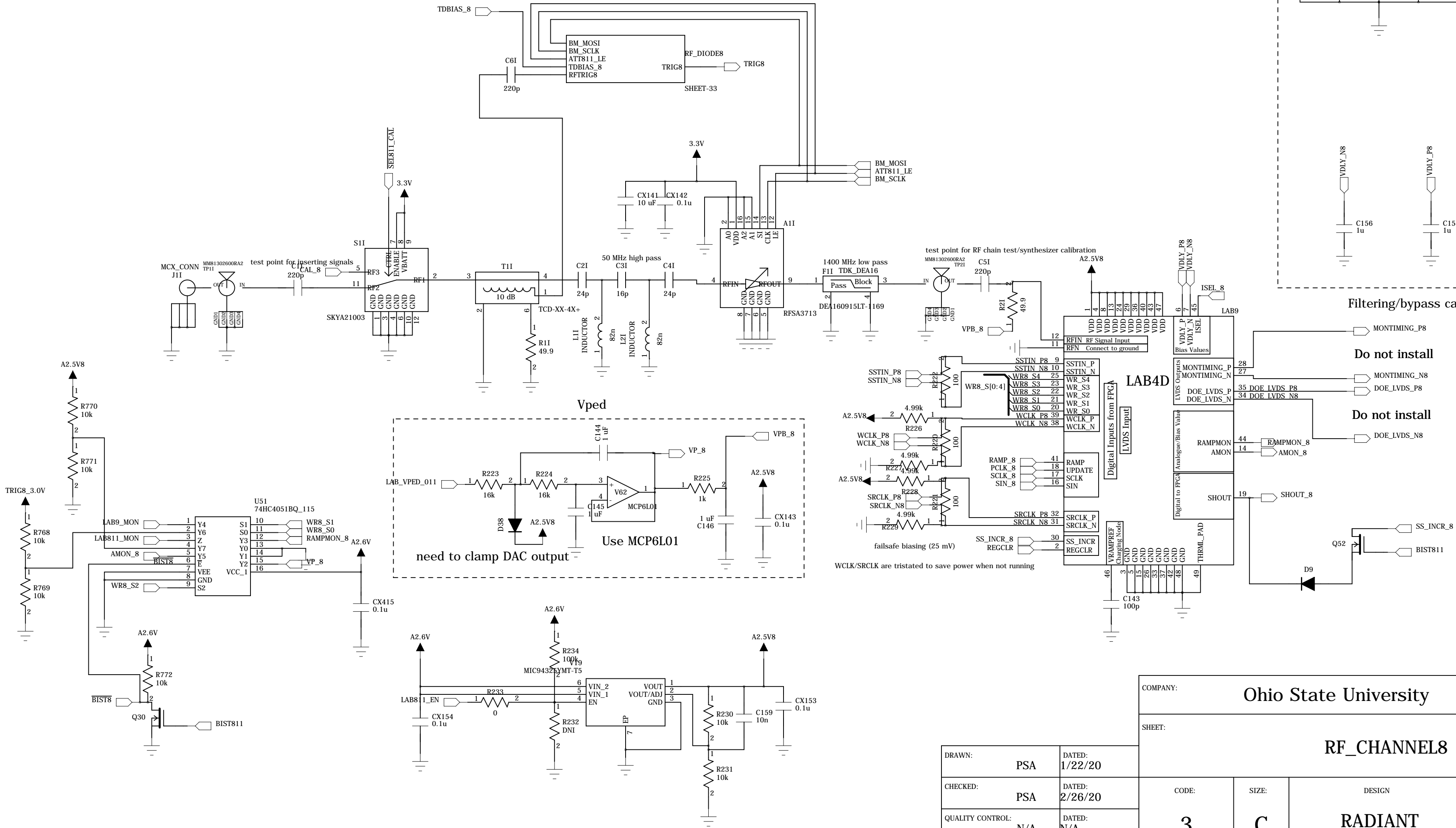


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNEL8			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 32 74	



Vped

Use MCP6L01

need to clamp DAC output

LAB4D

Digital Inputs from FPGA

LVDS Input

Digital to FPGA

Analog/Bias Value

Charging Node

VRAMPREF

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

SS_INCR_8

REGCLR

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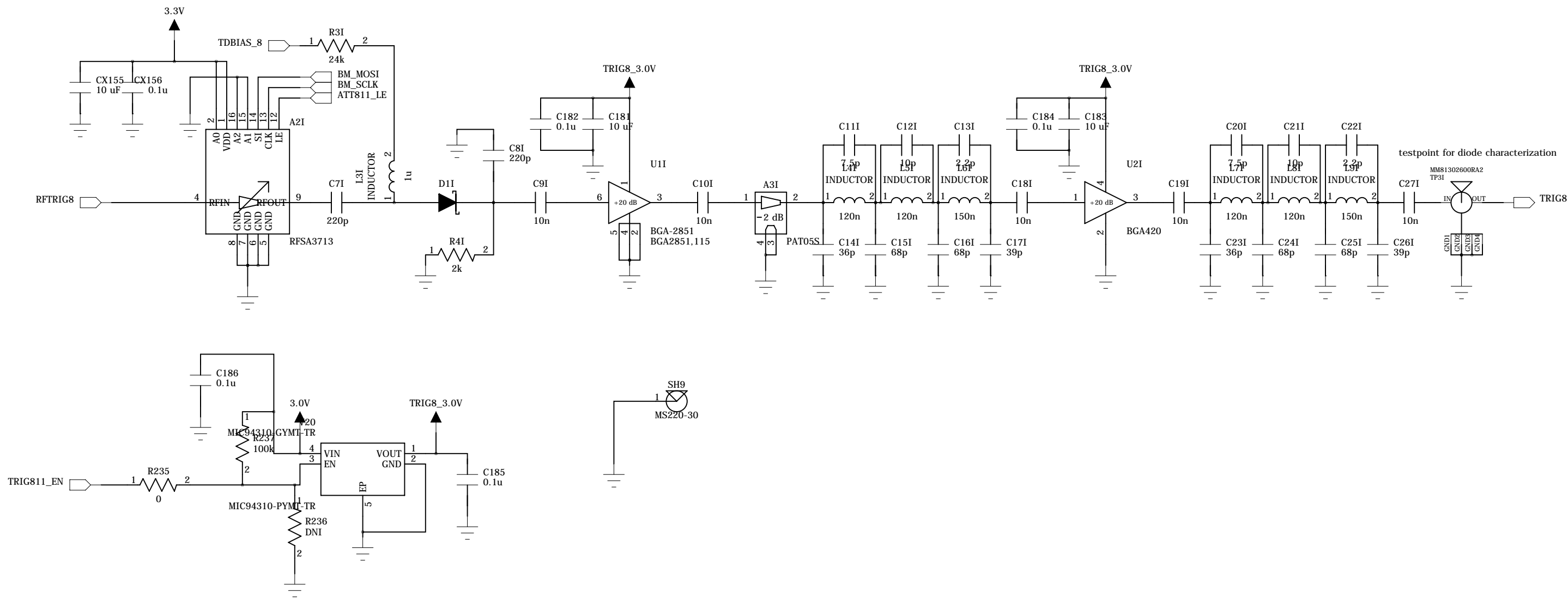
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIODE8			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 38 74

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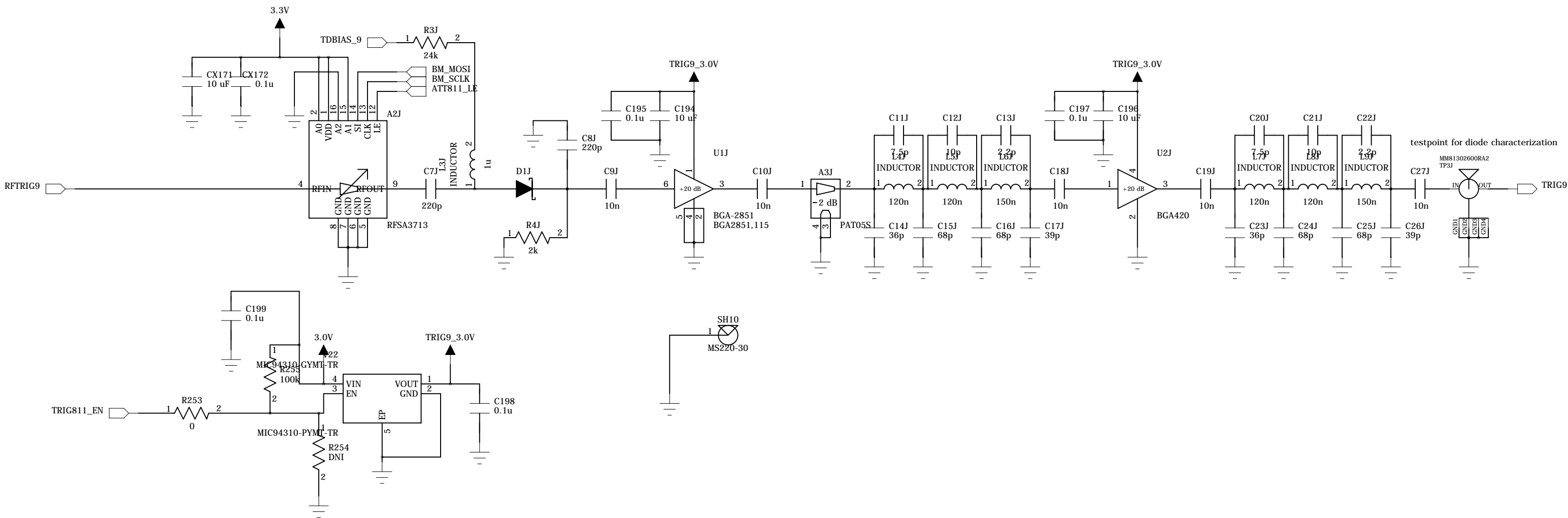
3

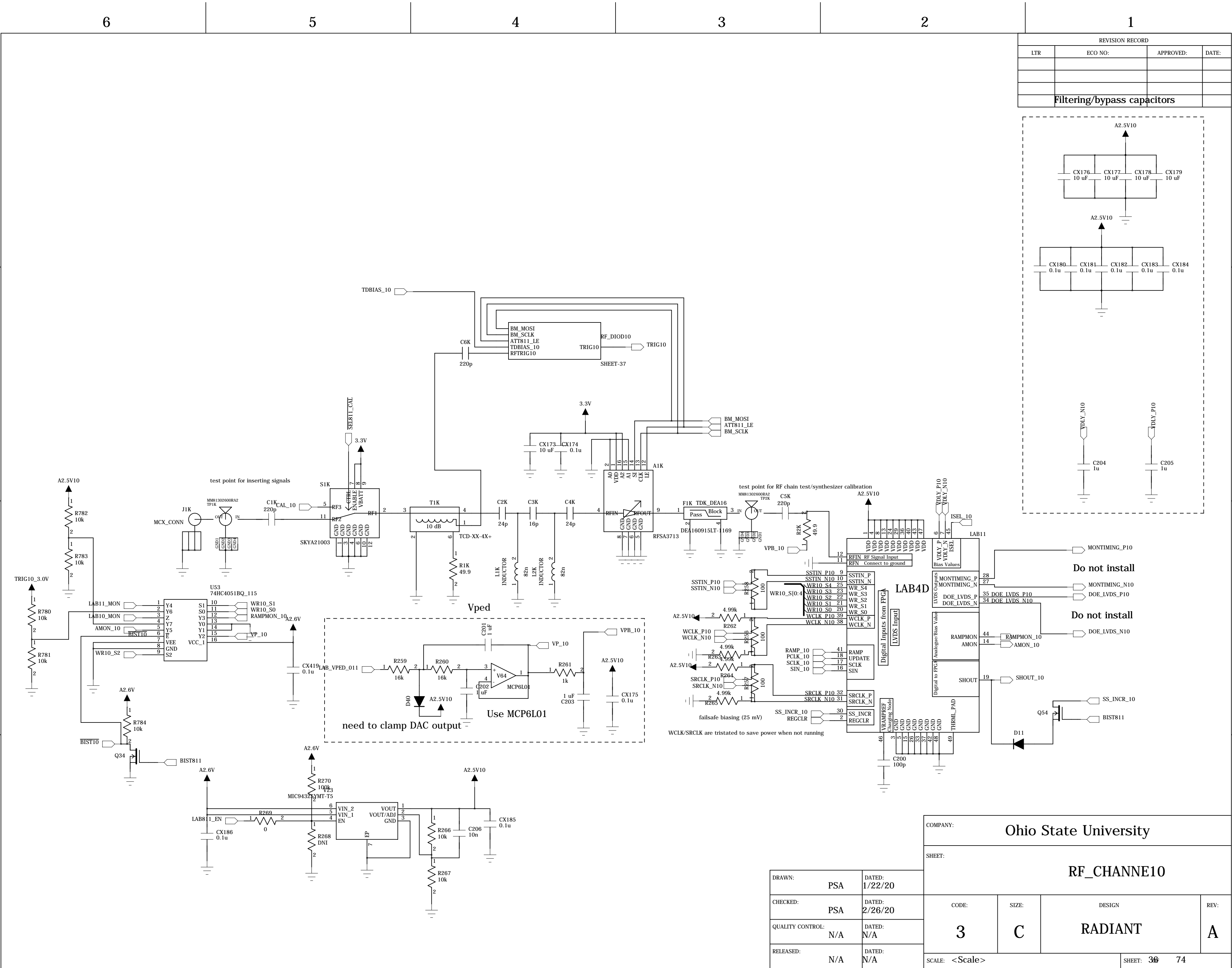
2

1

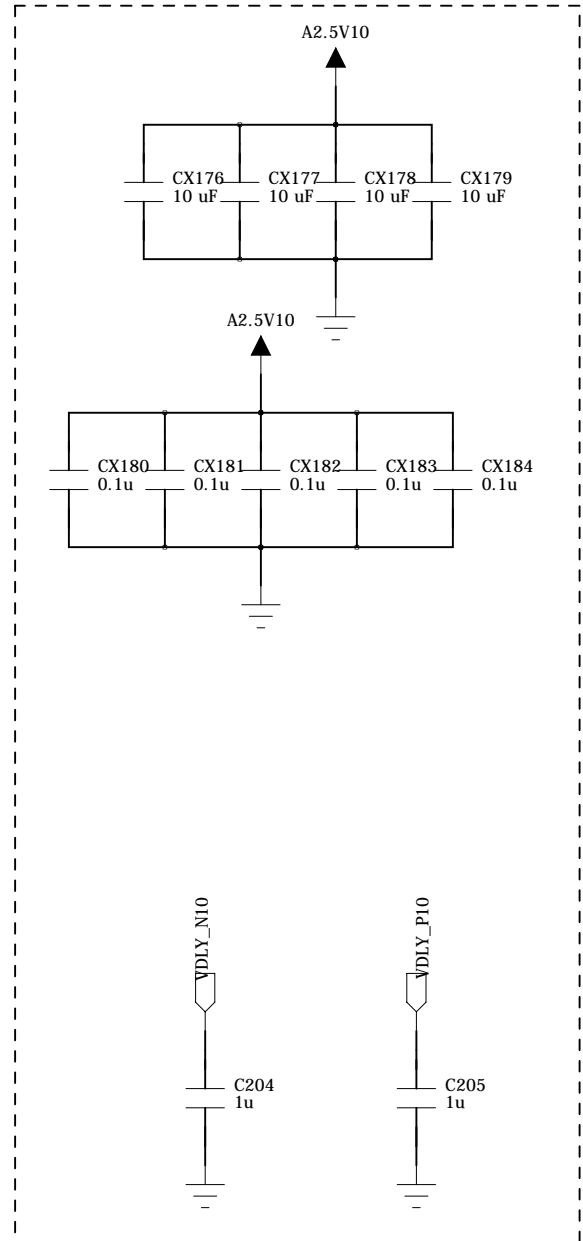
REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:





REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNE10			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 36 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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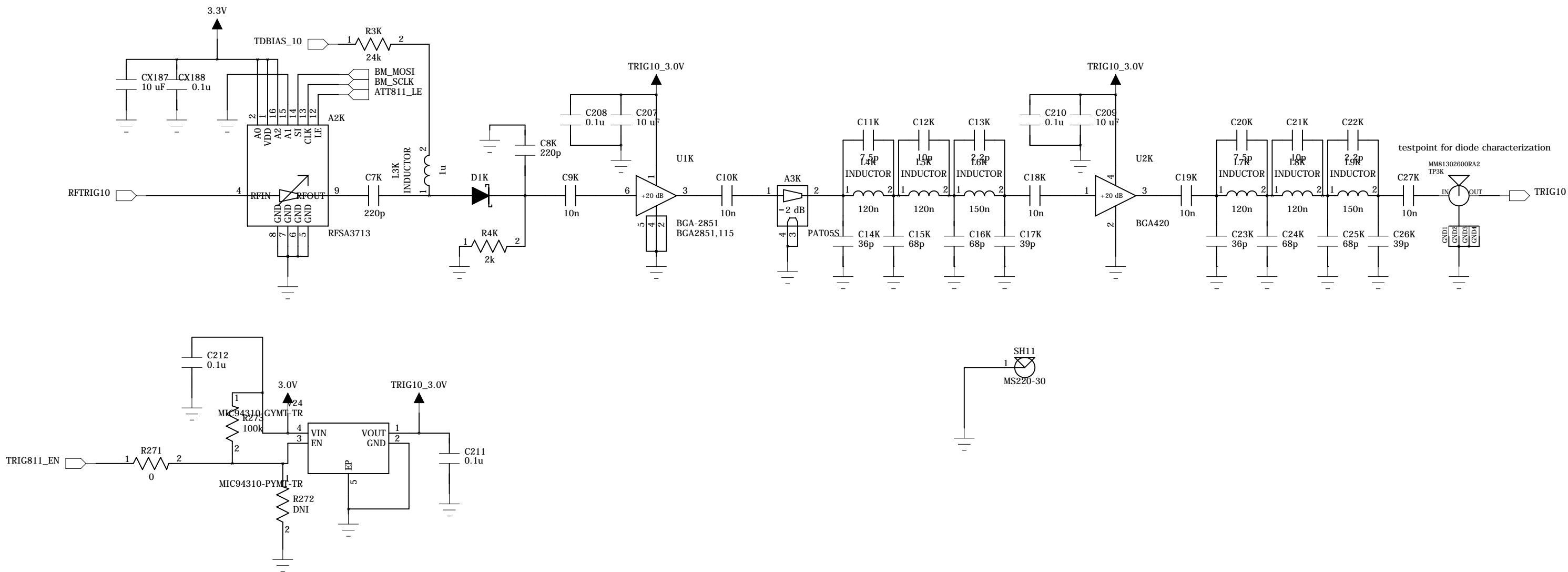
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIOD10

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:

3

SIZE:

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DESIGN

RADIANT

REV:

A

SCALE: <Scale>

SHEET: 37 74

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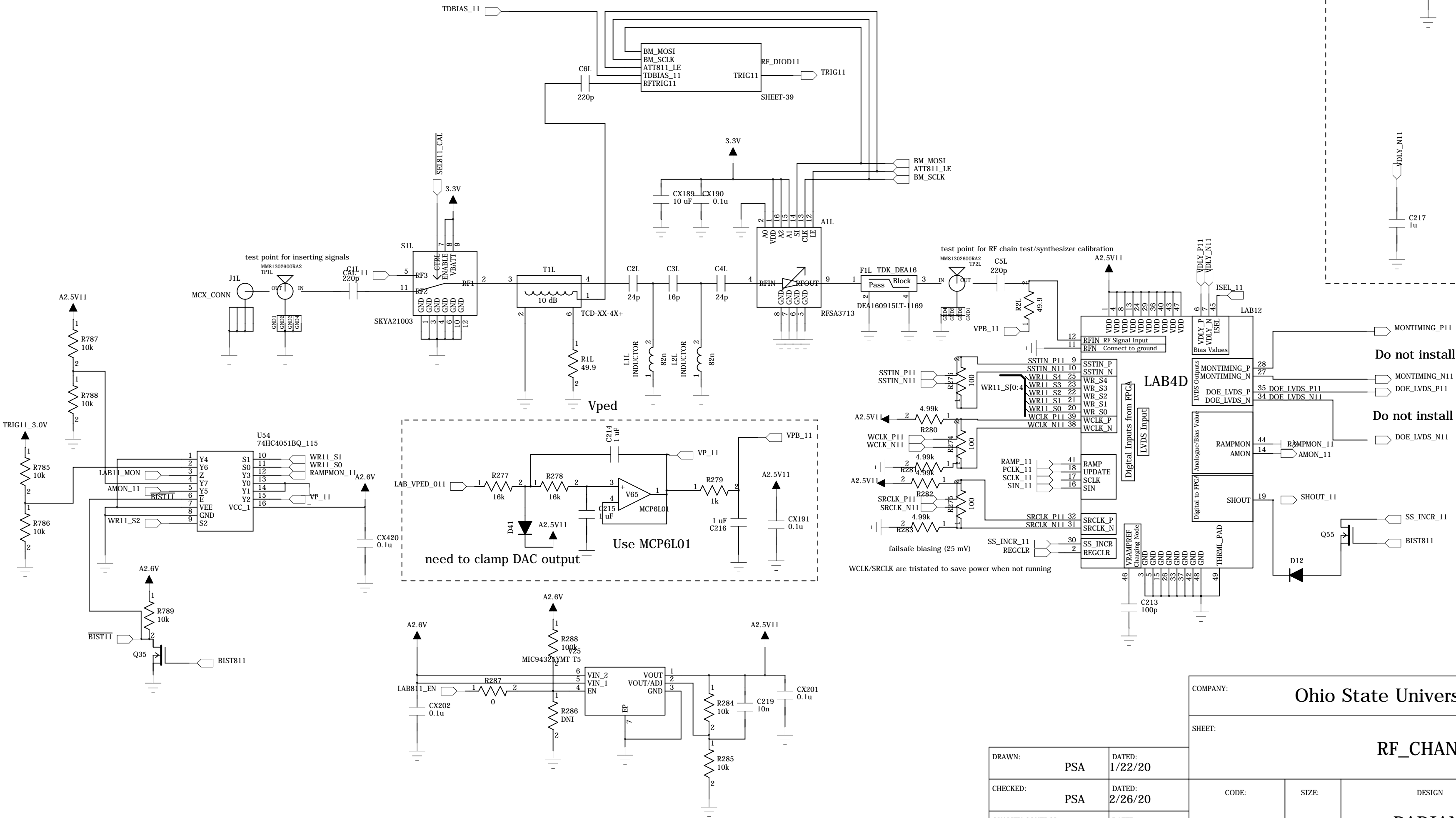
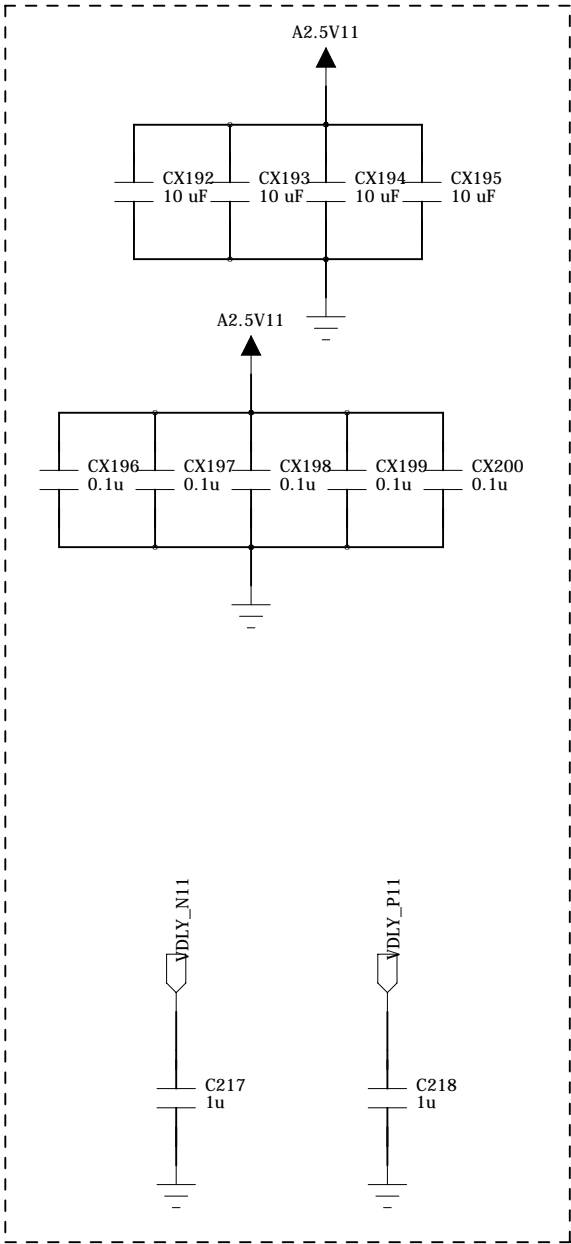
D

C

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A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNE11			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 38 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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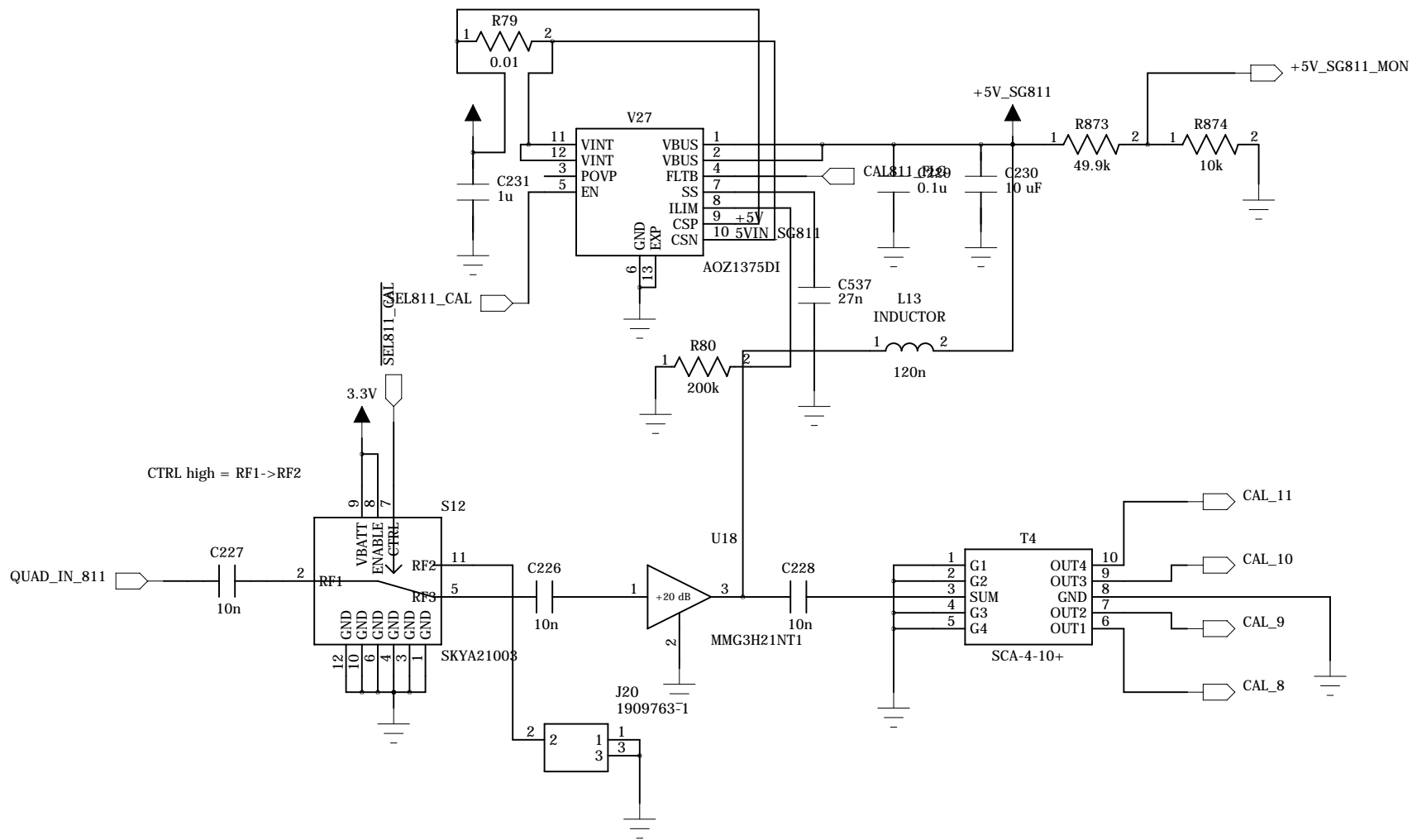
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University

SHEET: QUAD_SIG_GENERATOR_2

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A

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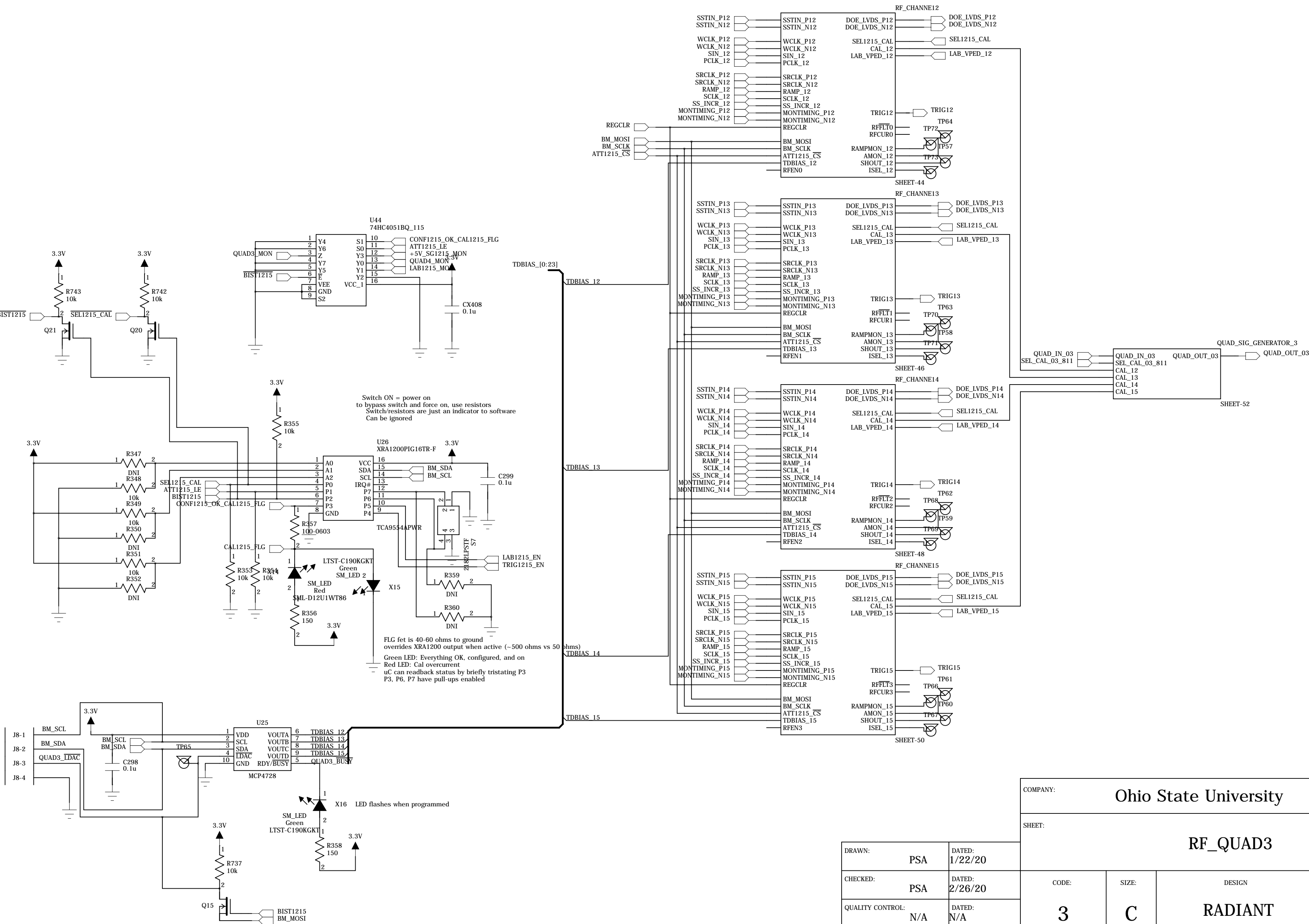
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_Quad3			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 43 74	

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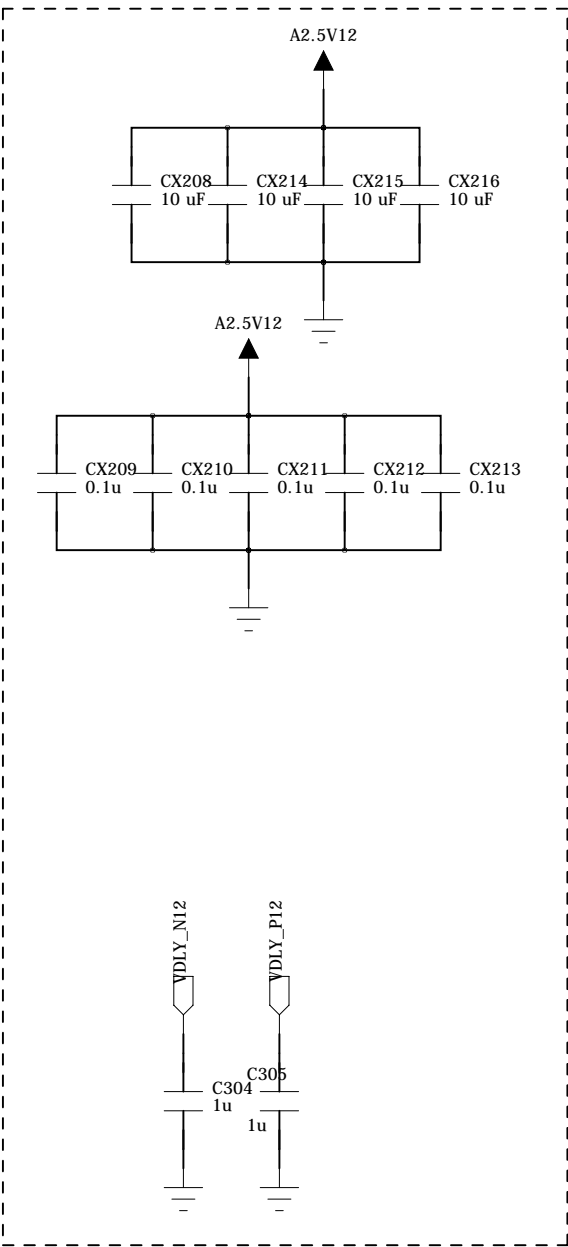
D

C

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A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

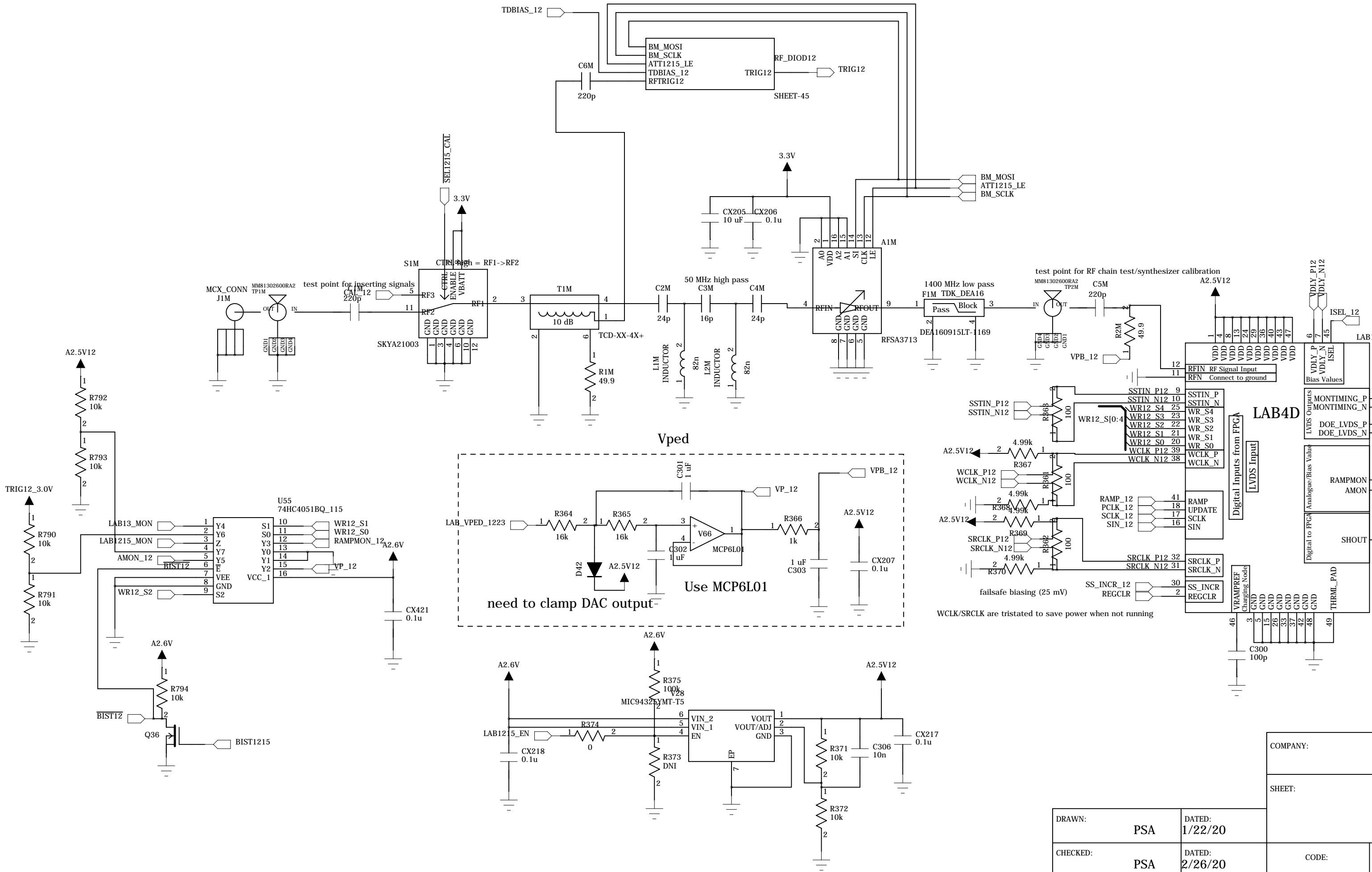


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNE12			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 44 74



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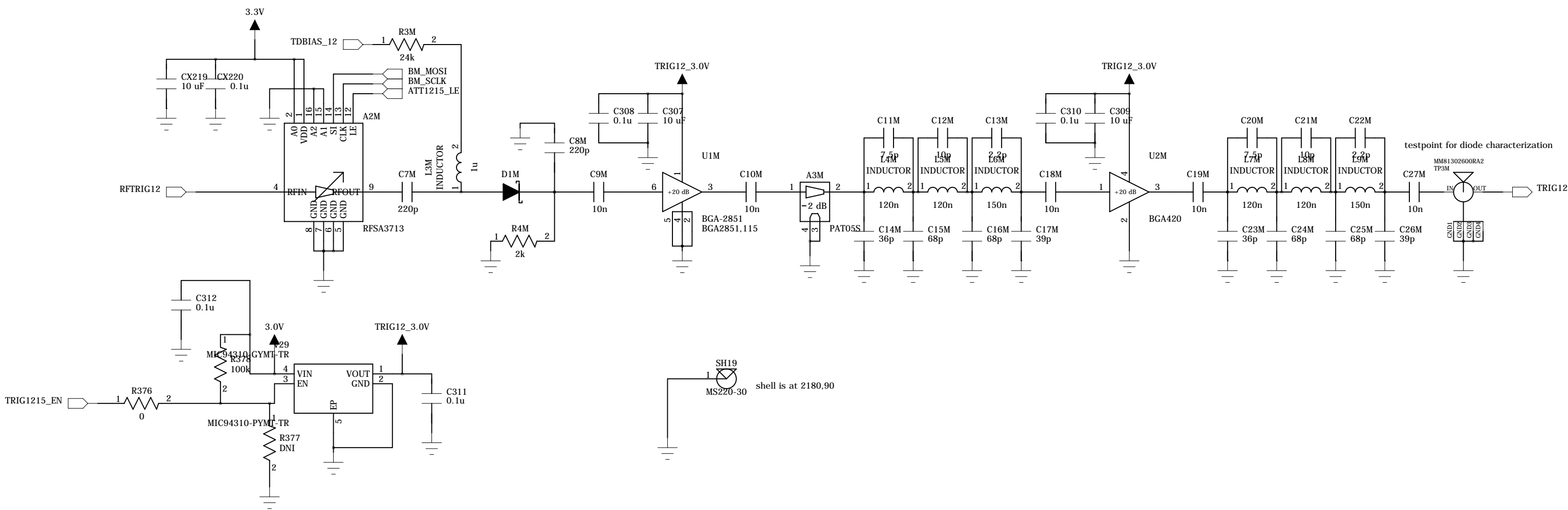
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIOD12

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A
SCALE: <Scale>			SHEET: 45 74

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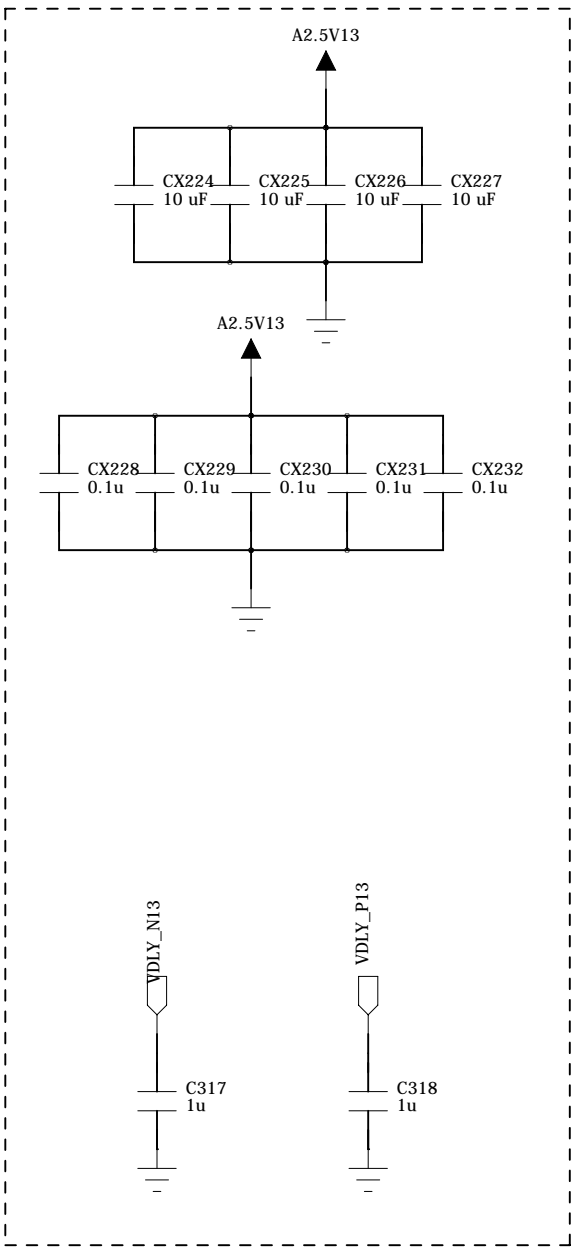
D

C

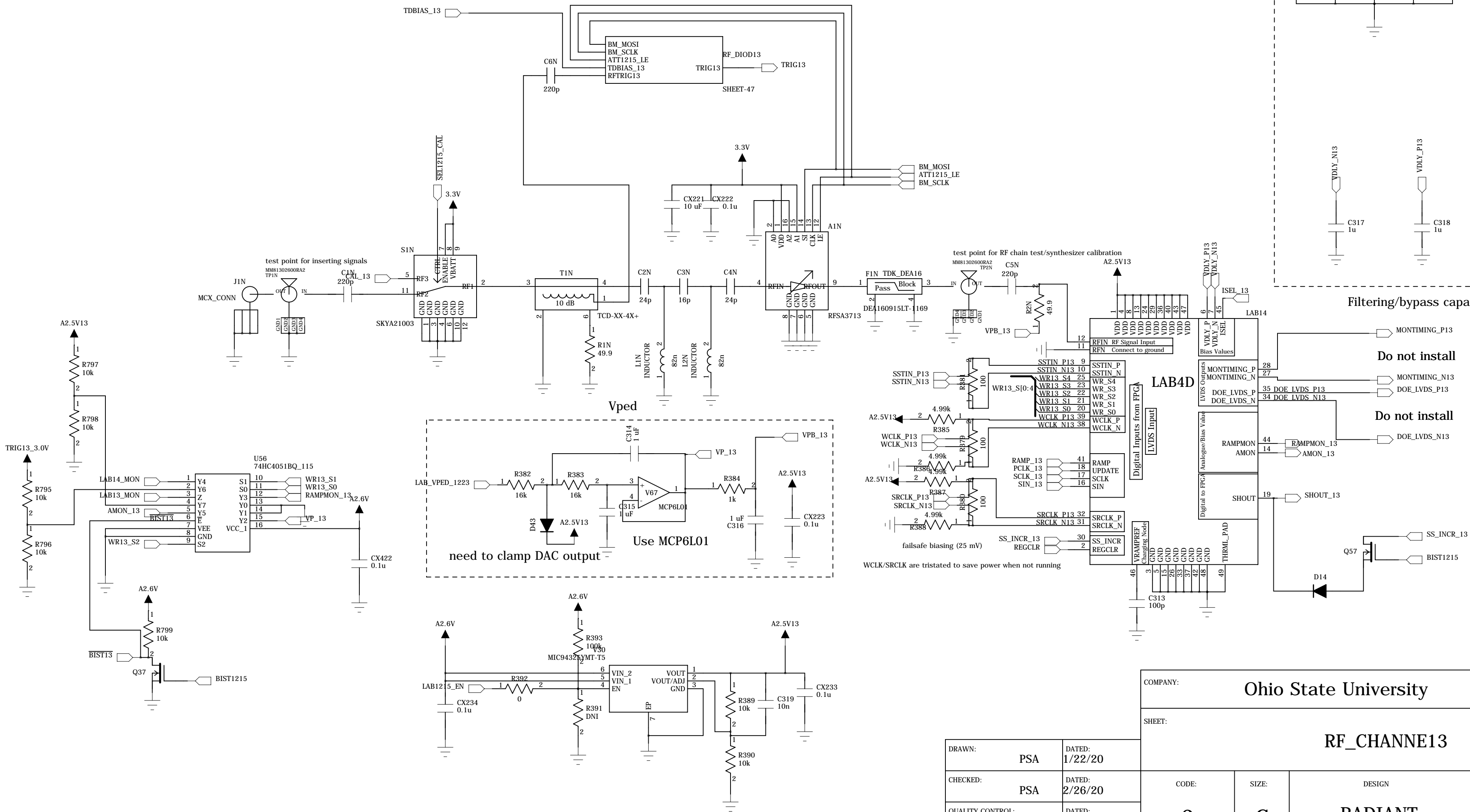
B

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



Filtering/bypass capacitors



COMPANY: Ohio State University			
SHEET: RF_CHANNE13			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 46 74	

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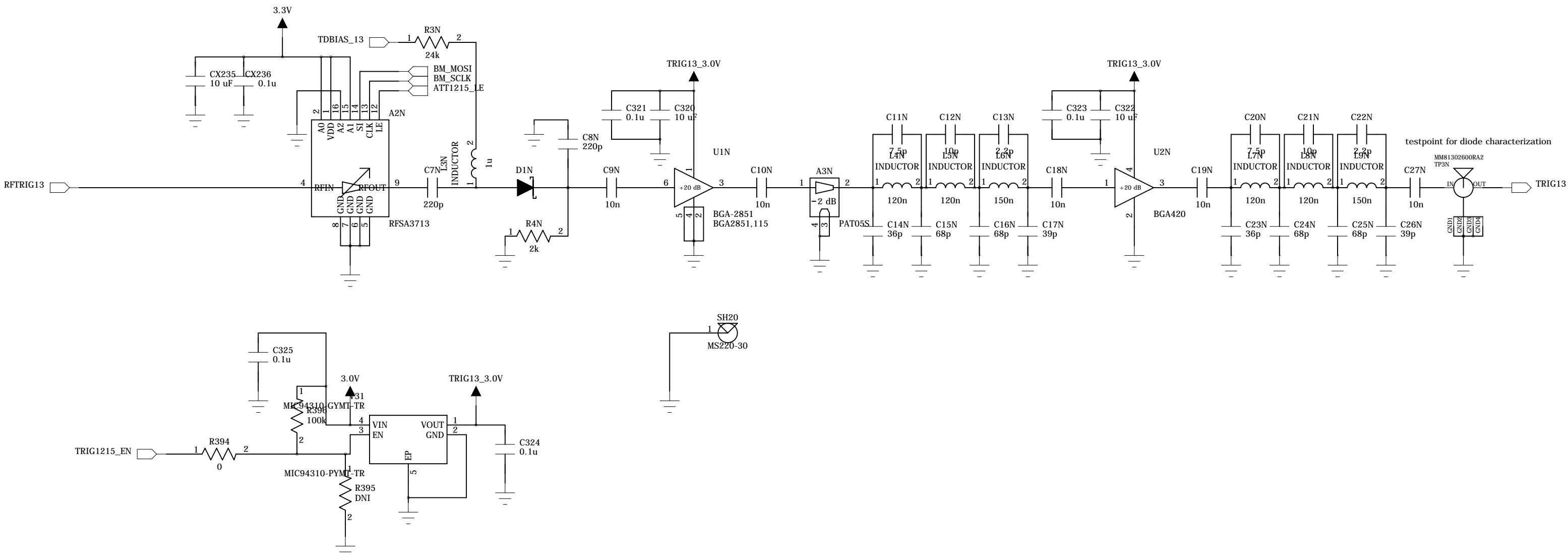
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIOD13

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A
SCALE: <Scale>			SHEET: 47 74

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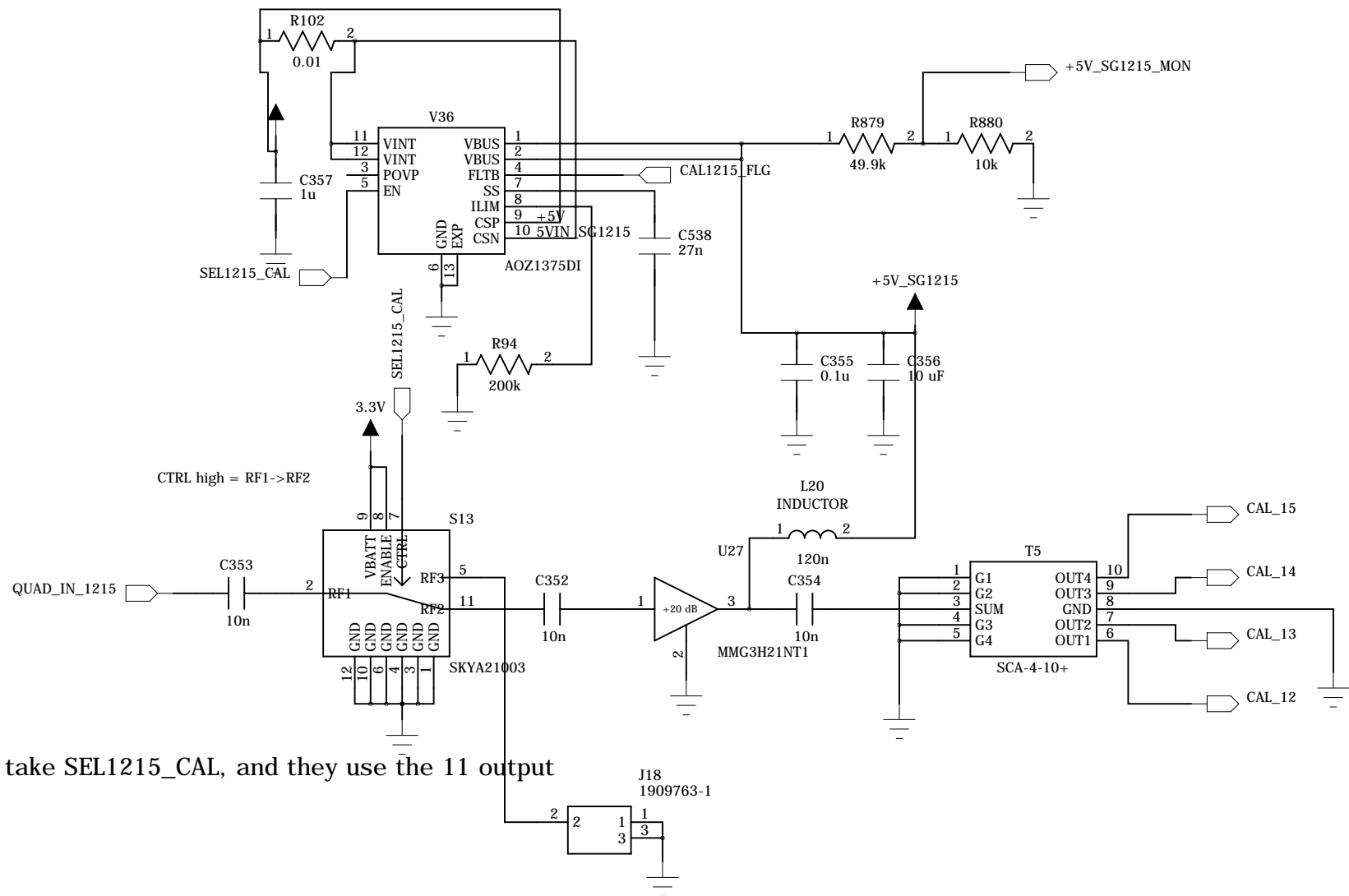
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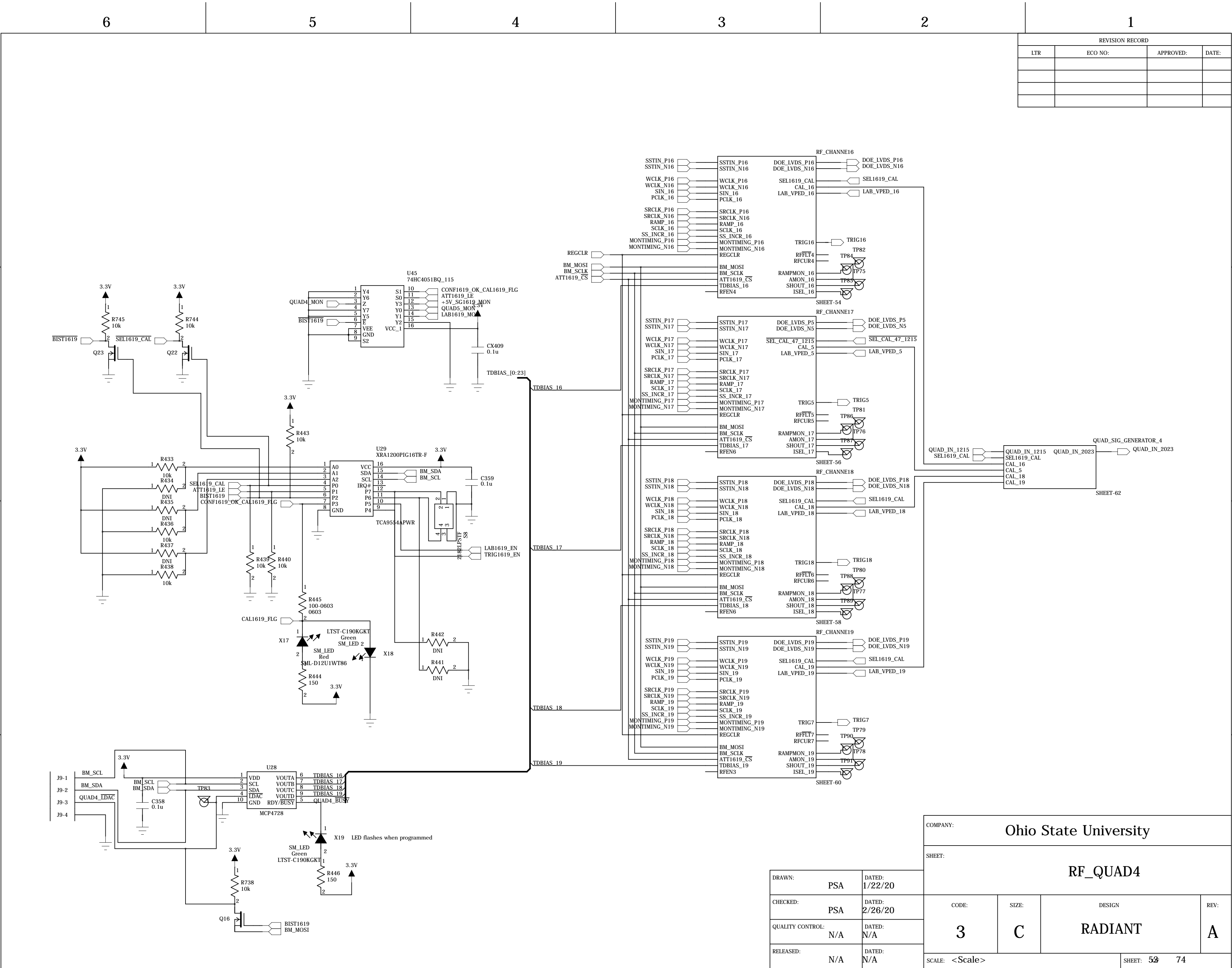
1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



Quad 3/4/5 take SEL1215_CAL, and they use the 11 output

COMPANY: Ohio State University			
SHEET: QUAD_SIG_GENERATOR_3			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 52 74



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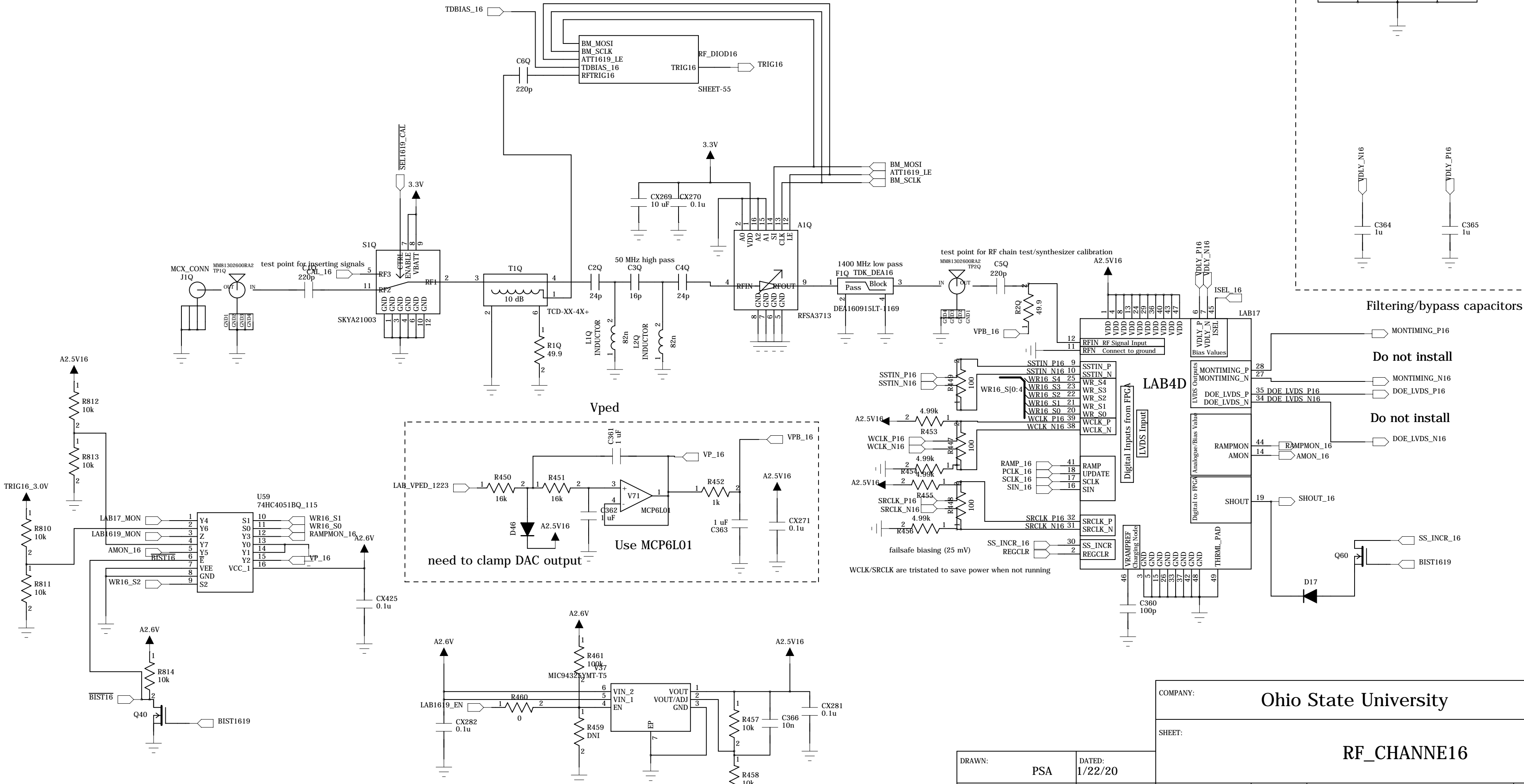
D

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNE16			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A		
RELEASED: N/A	DATED: N/A		
SCALE: <Scale>			SHEET: 54 74

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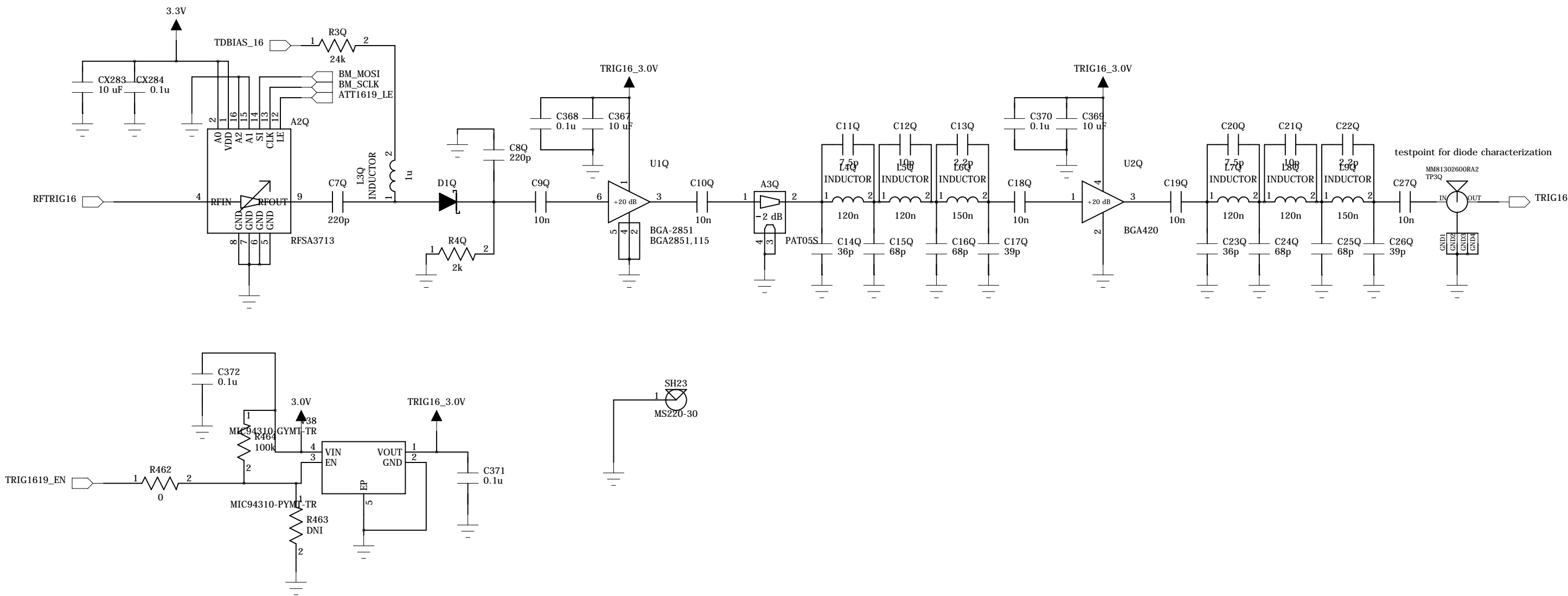
D

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



DRAWN: PSA		DATED: 1/22/20		COMPANY: Ohio State University			
CHECKED: PSA		DATED: 2/26/20		SHEET: RF_DIOD16			
QUALITY CONTROL: N/A		DATED: N/A		CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
RELEASED: N/A		DATED: N/A		SCALE: <Scale>			SHEET: 55 74

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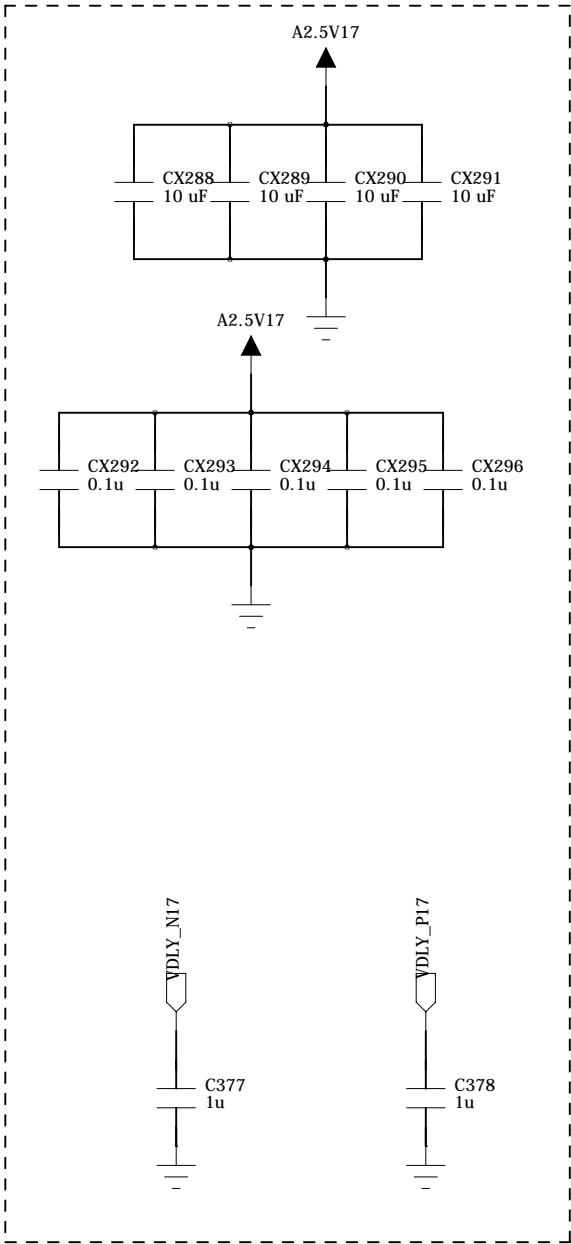
D

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A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



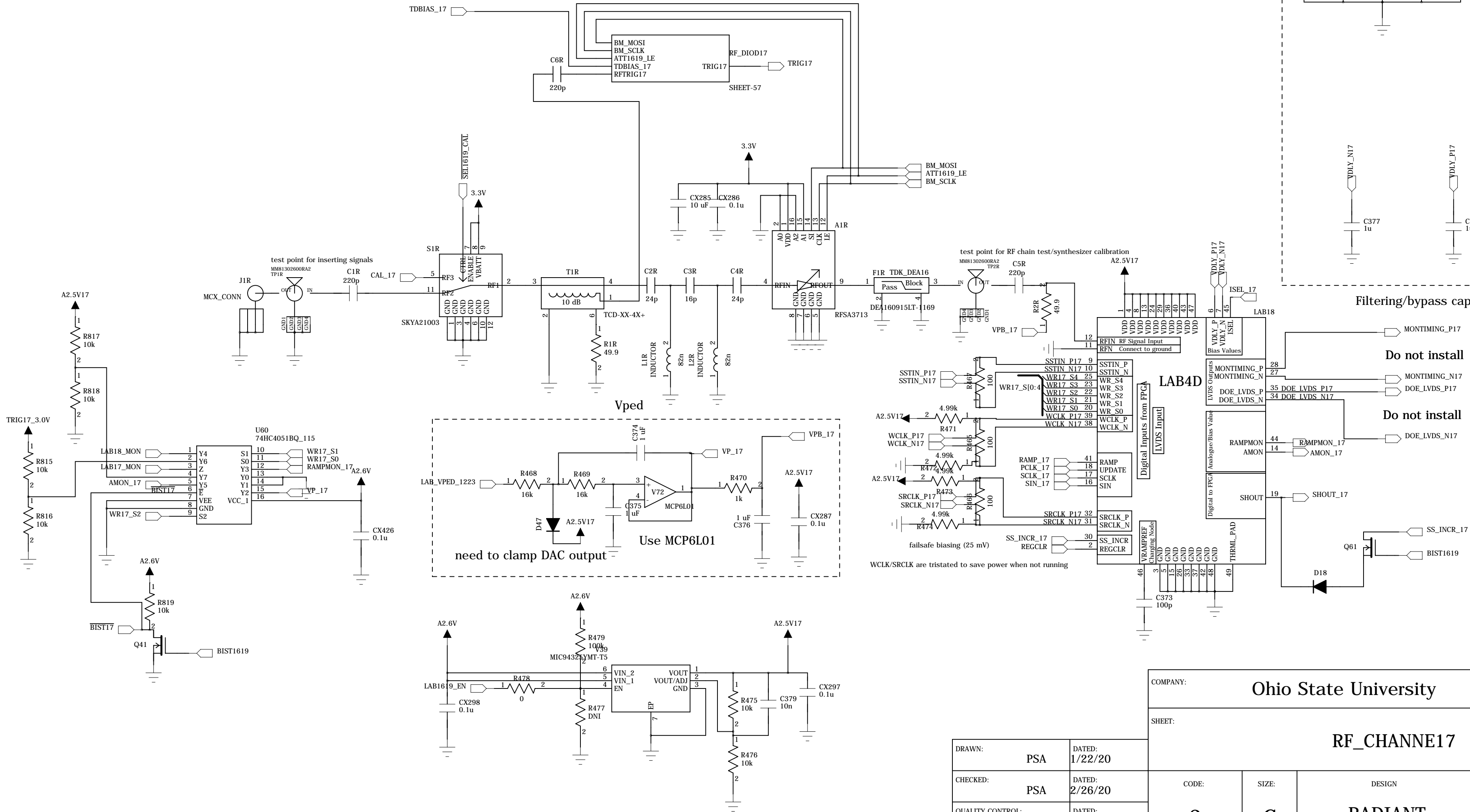
Filtering/bypass capacitors

Do not install

Do not install

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

COMPANY: Ohio State University			
SHEET: RF_CHANNE17			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 56 74



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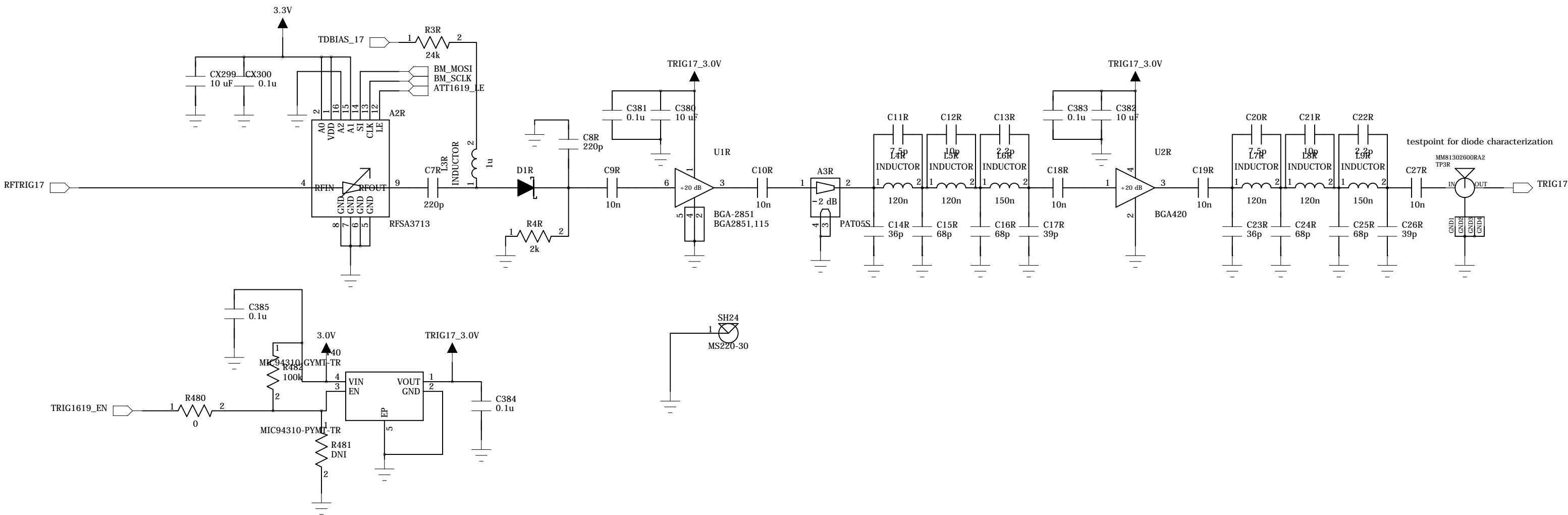
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIOD17			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 57 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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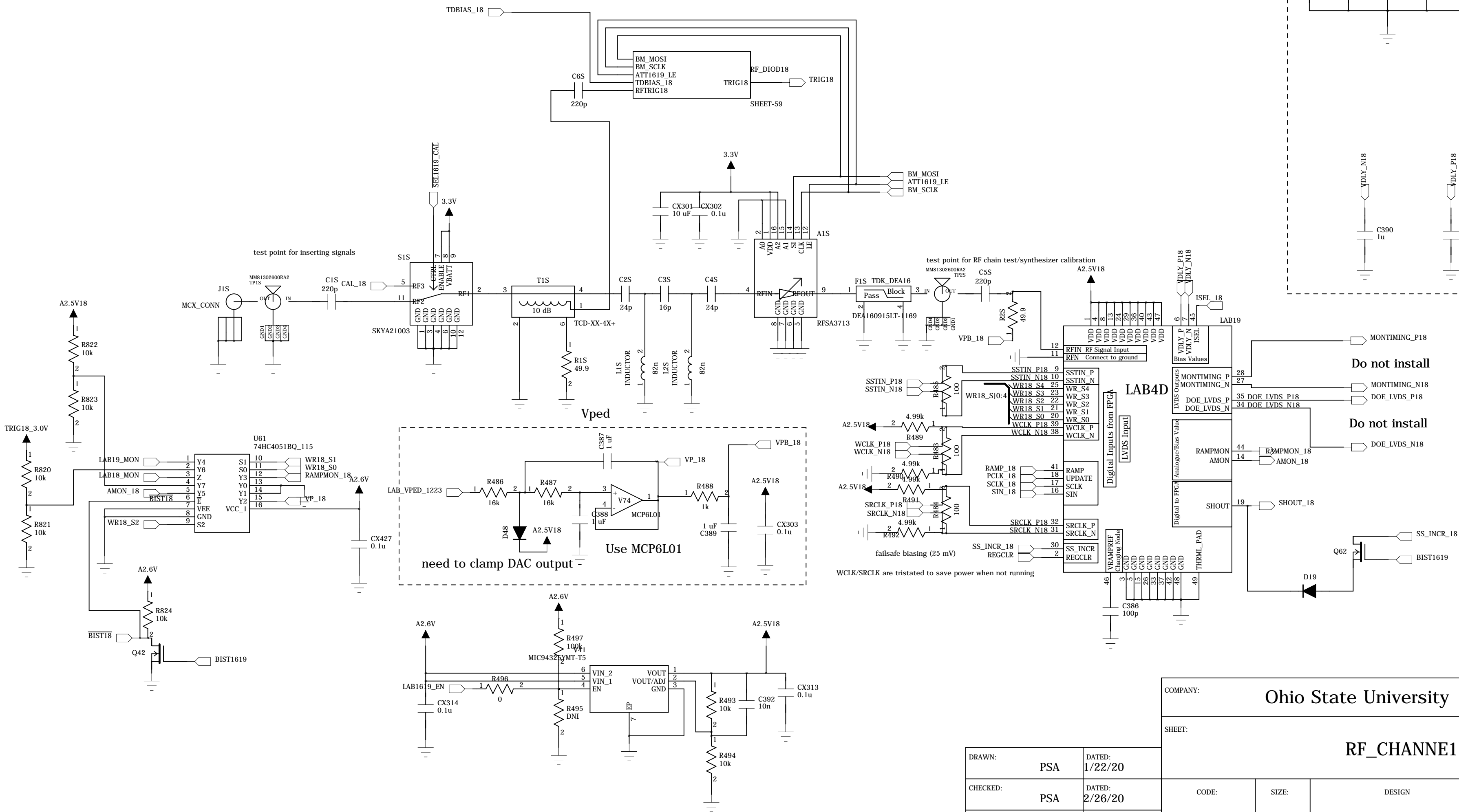
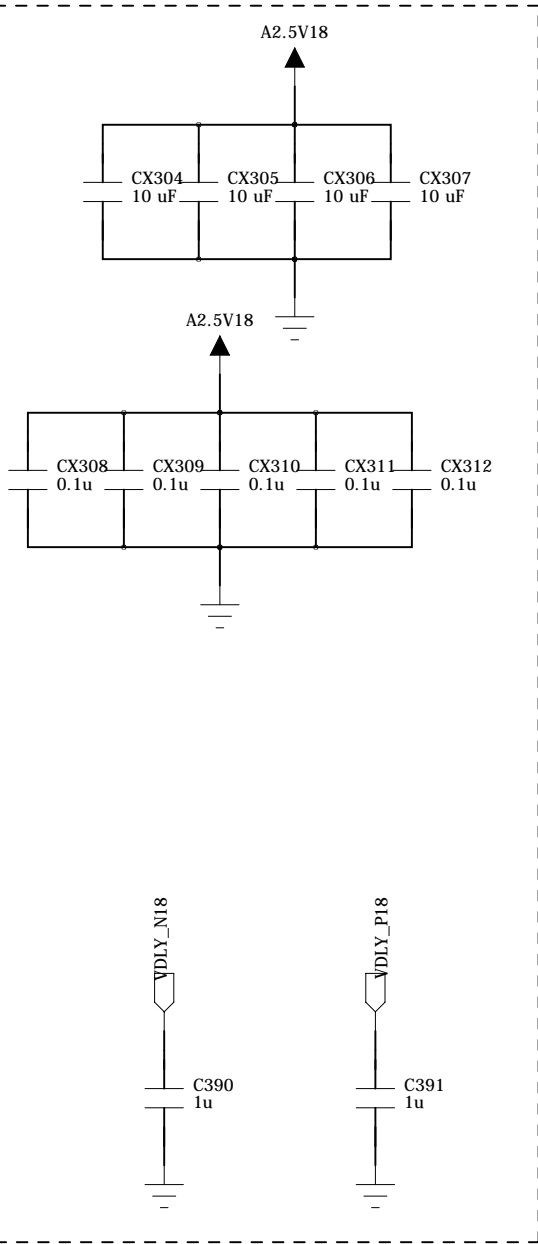
D

C

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A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNE18			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 58 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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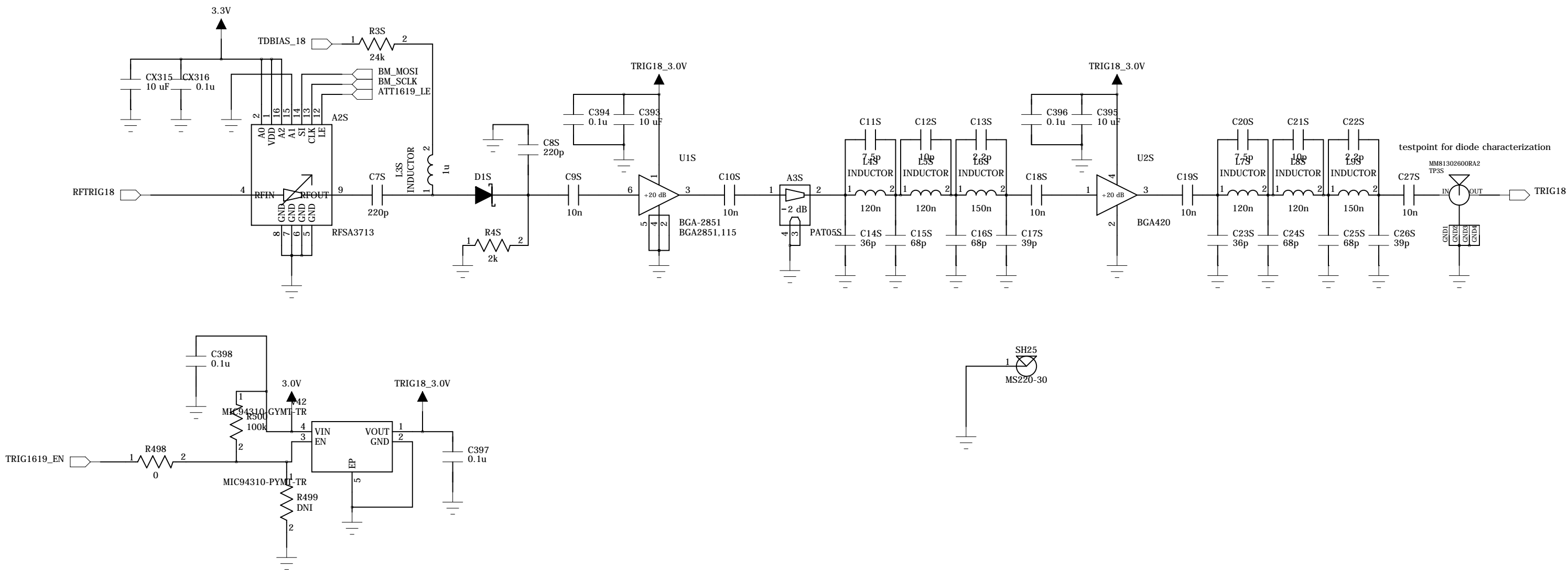
3

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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIOD18			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 59 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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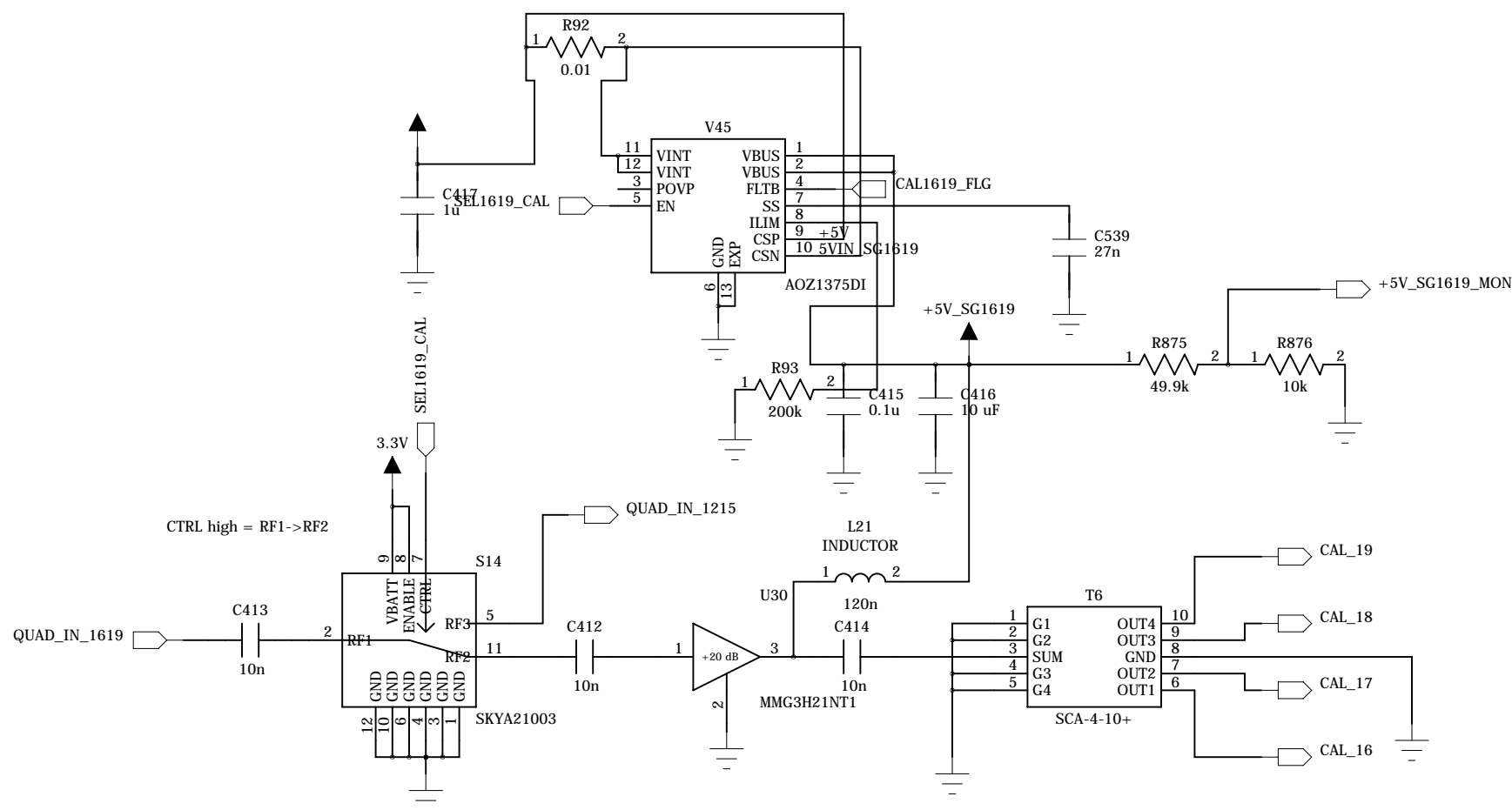
4

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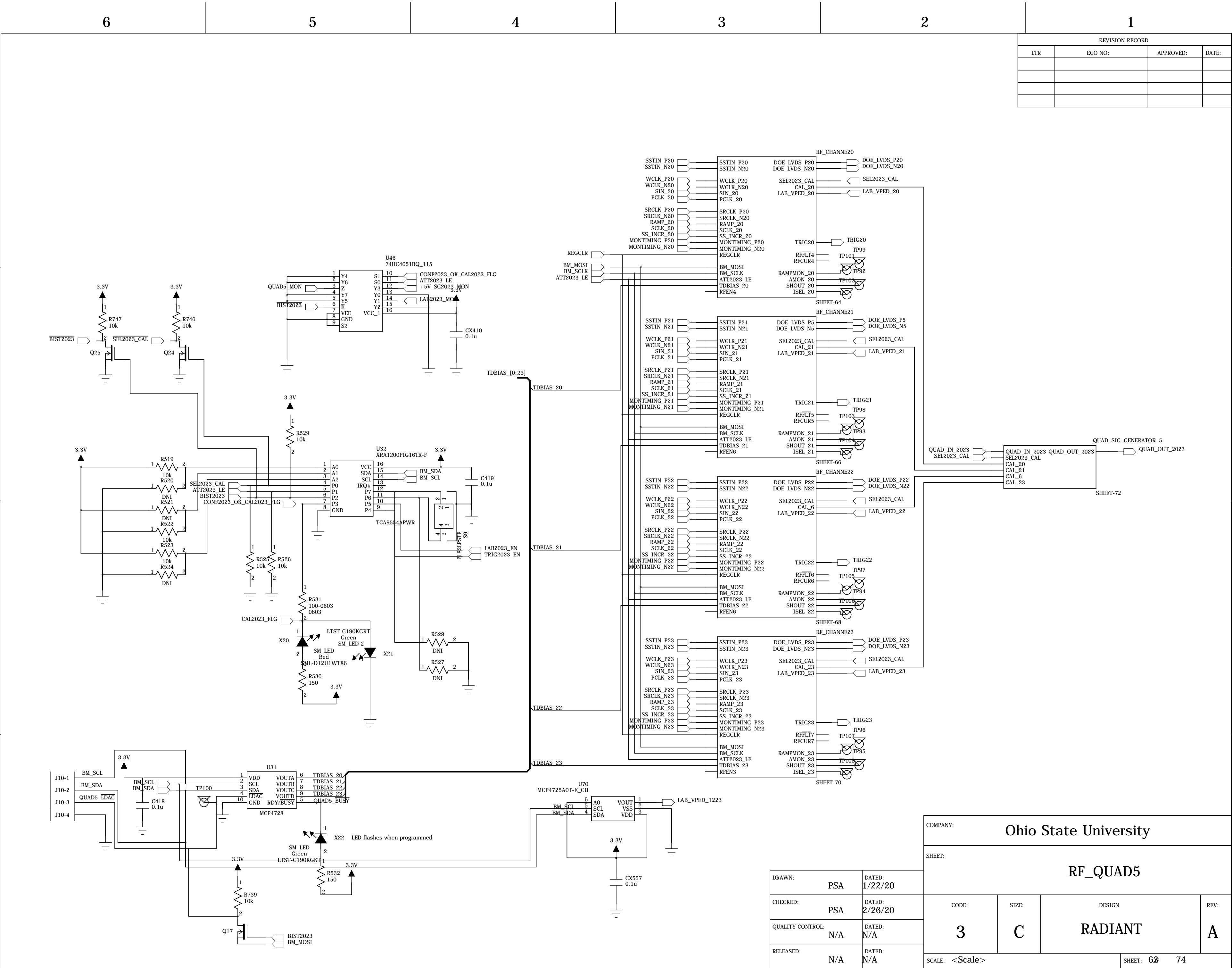
1

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: QUAD_SIG_GENERATOR_4			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>		SHEET: 62 74	

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

COMPANY: Ohio State University			
SHEET: RF_QUAD5			
CODE:	SIZE:	DESIGN	REV:
3	C	RADIANT	A
SCALE: <Scale>			SHEET: 68 74

DRAWN:	PSA	DATED:	1/22/20
CHECKED:	PSA	DATED:	2/26/20
QUALITY CONTROL:	N/A	DATED:	N/A
RELEASED:	N/A	DATED:	N/A

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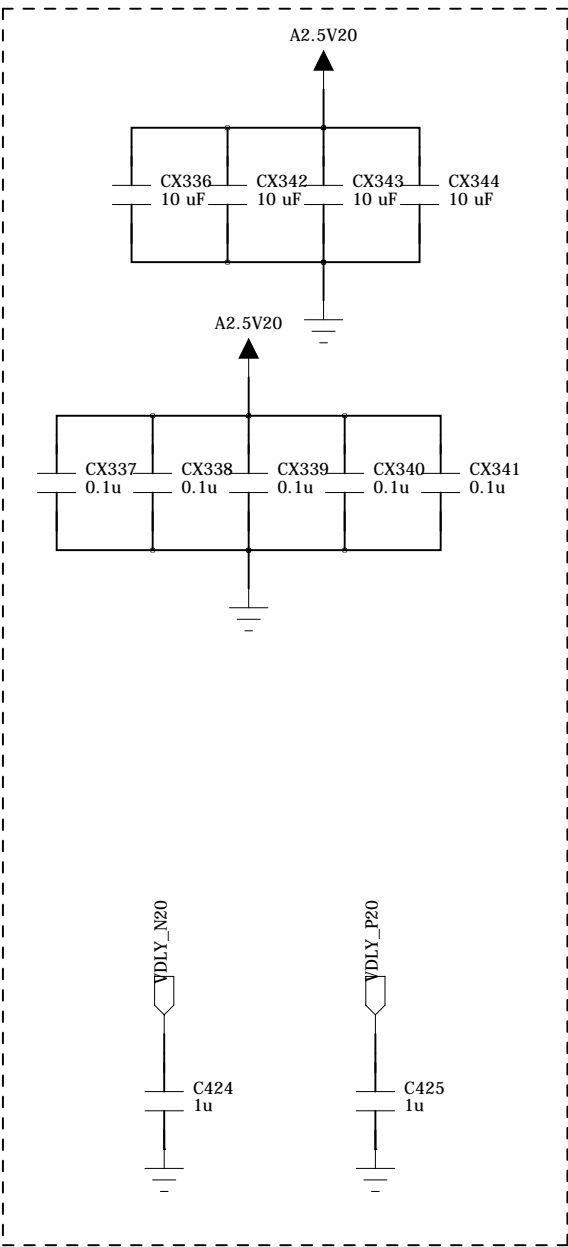
D

C

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			

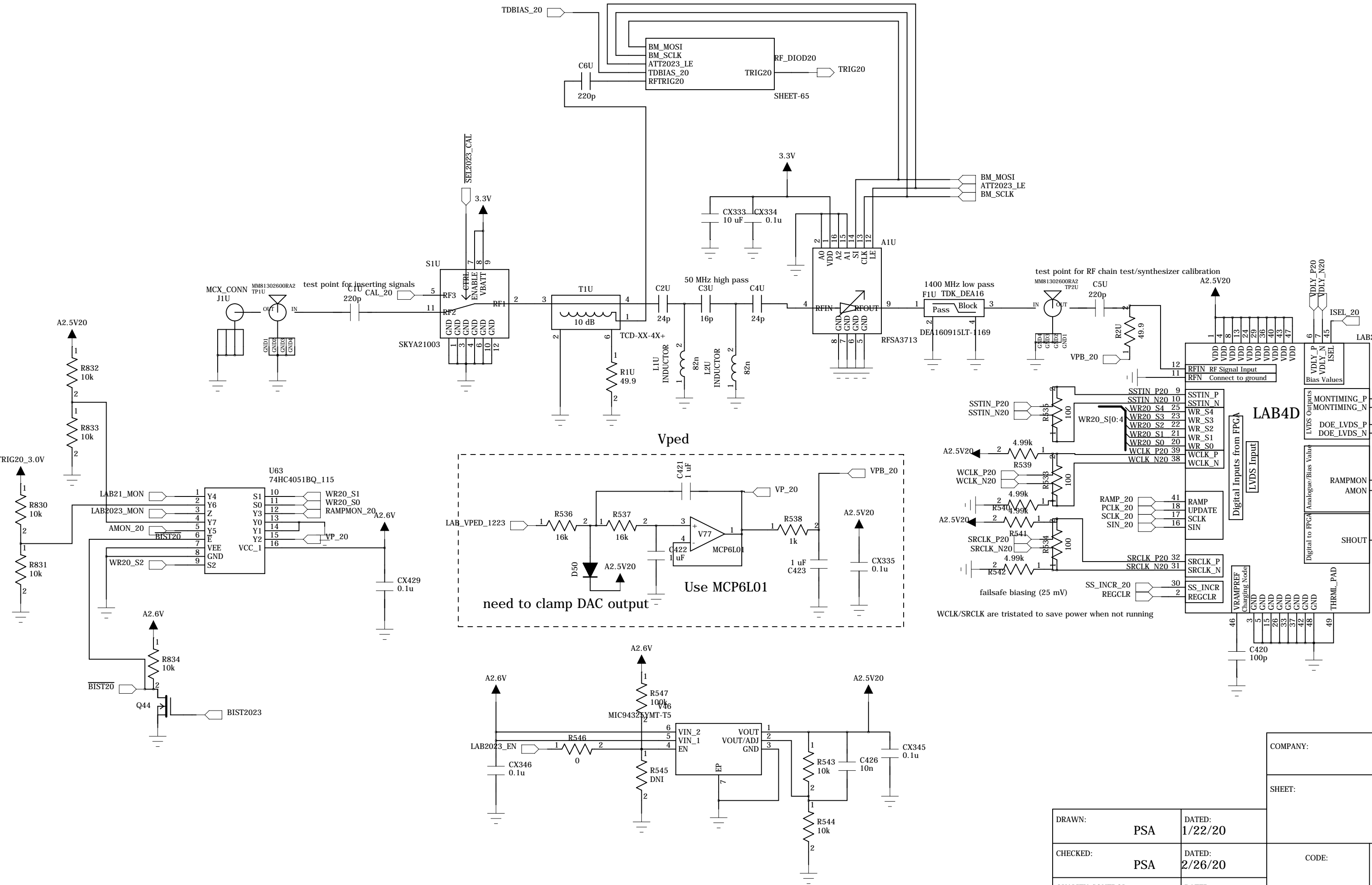


Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNE20			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
QUALITY CONTROL: N/A	DATED: N/A	SCALE: <Scale>	
RELEASED: N/A	DATED: N/A	SHEET: 64 74	



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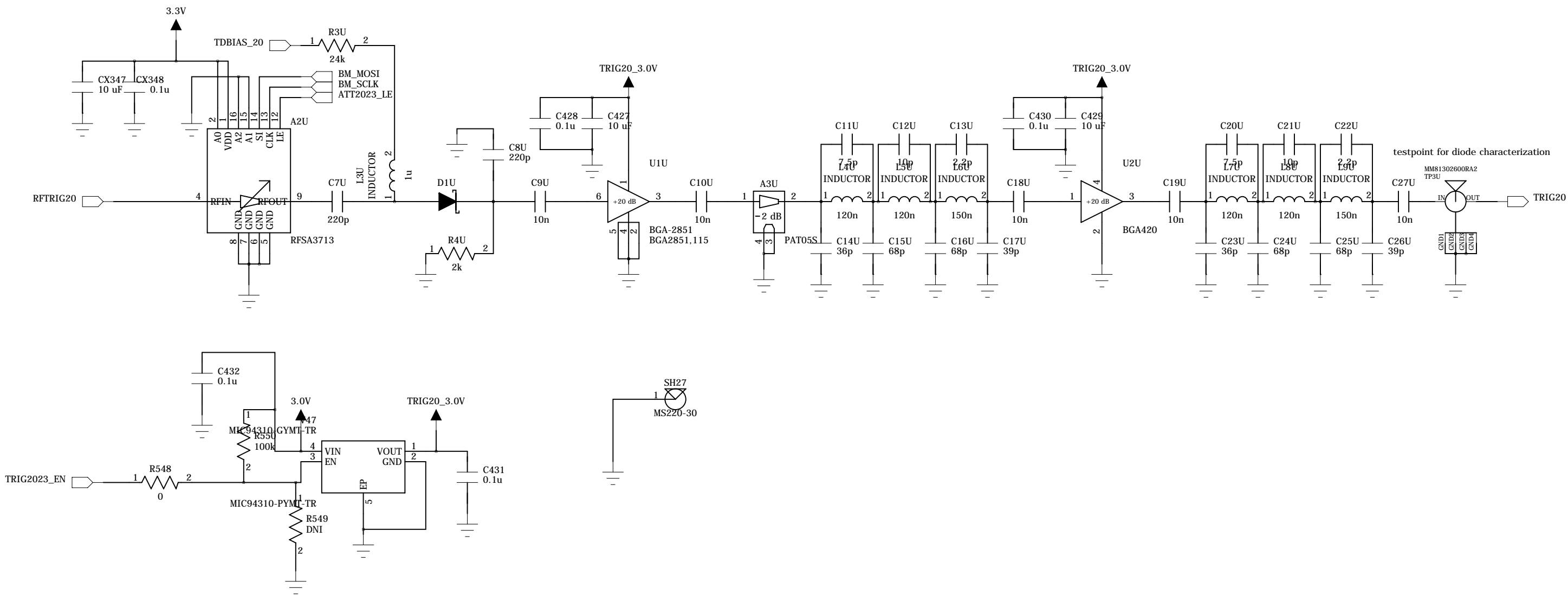
D

C

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



DRAWN: PSA		DATED: 1/22/20		COMPANY: Ohio State University			
CHECKED: PSA		DATED: 2/26/20		SHEET: RF_DIOD20			
QUALITY CONTROL: N/A		DATED: N/A		CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
RELEASED: N/A		DATED: N/A		SCALE: <Scale>			SHEET: 65 74

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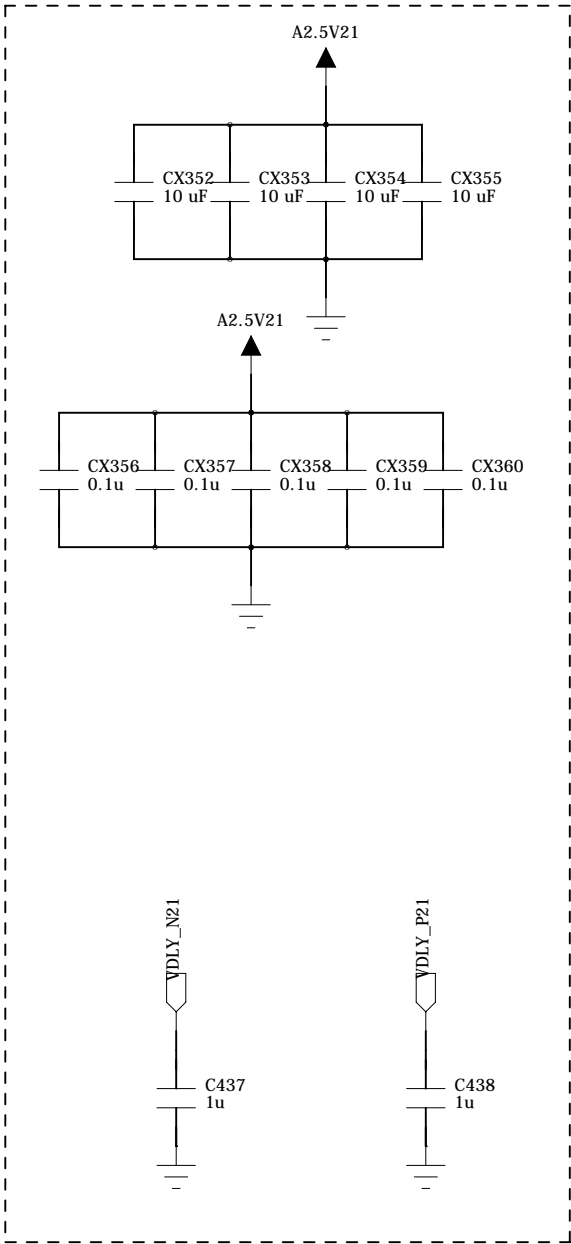
D

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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



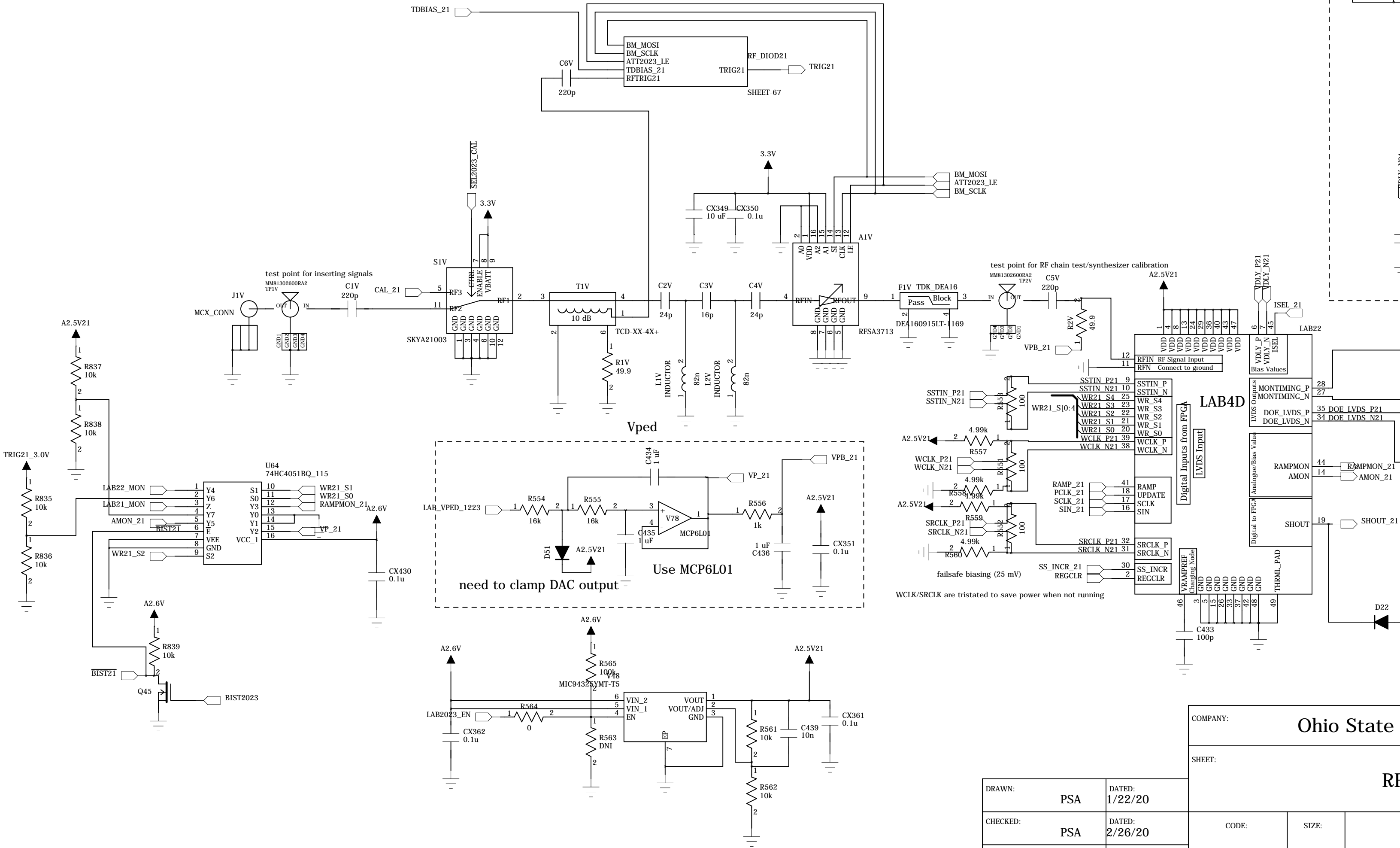
Filtering/bypass capacitors

Do not install

Do not install

COMPANY: Ohio State University			
SHEET: RF_CHANNE21			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 66 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A



Vped

Use MCP6L01

need to clamp DAC output

COMPANY:

Ohio State University

SHEET:

RF_CHANNE21

CODE:

SIZE:

DESIGN:

REV:

3

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RADIANT

A

SCALE: <Scale>

SHEET: 66 74

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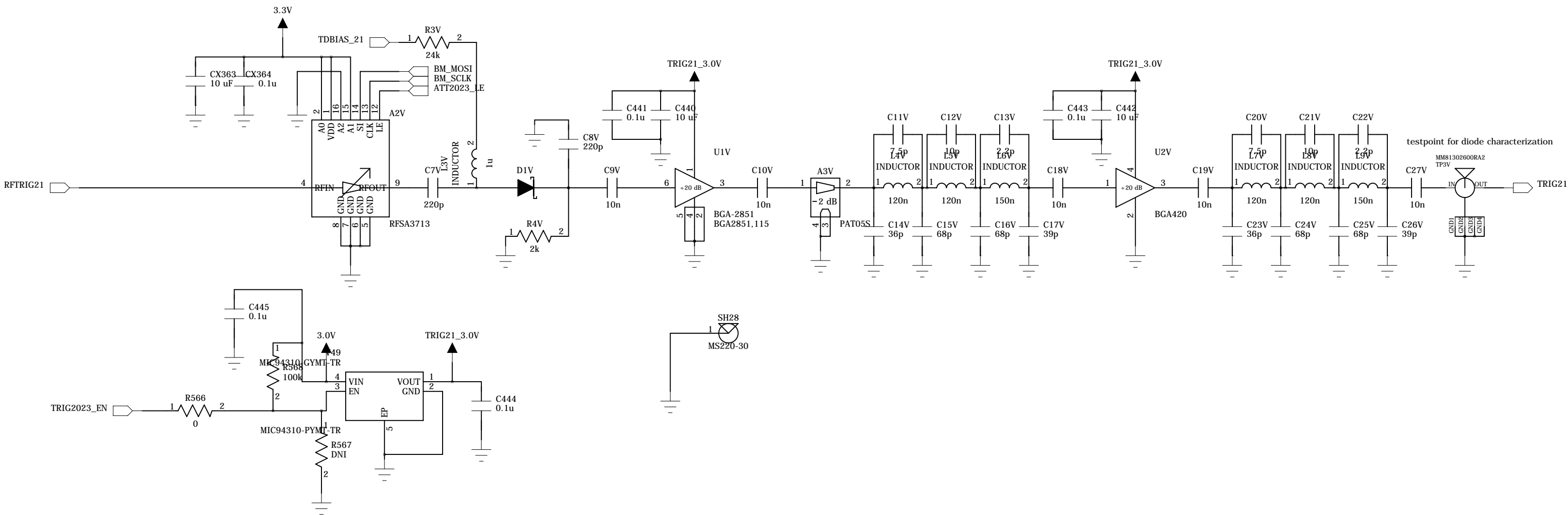
3

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1

REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Ohio State University			
SHEET: RF_DIOD21			
CODE: 3	SIZE: C	DESIGN: RADIANT	REV: A
SCALE: <Scale>			SHEET: 67 74

DRAWN: PSA	DATED: 1/22/20
CHECKED: PSA	DATED: 2/26/20
QUALITY CONTROL: N/A	DATED: N/A
RELEASED: N/A	DATED: N/A

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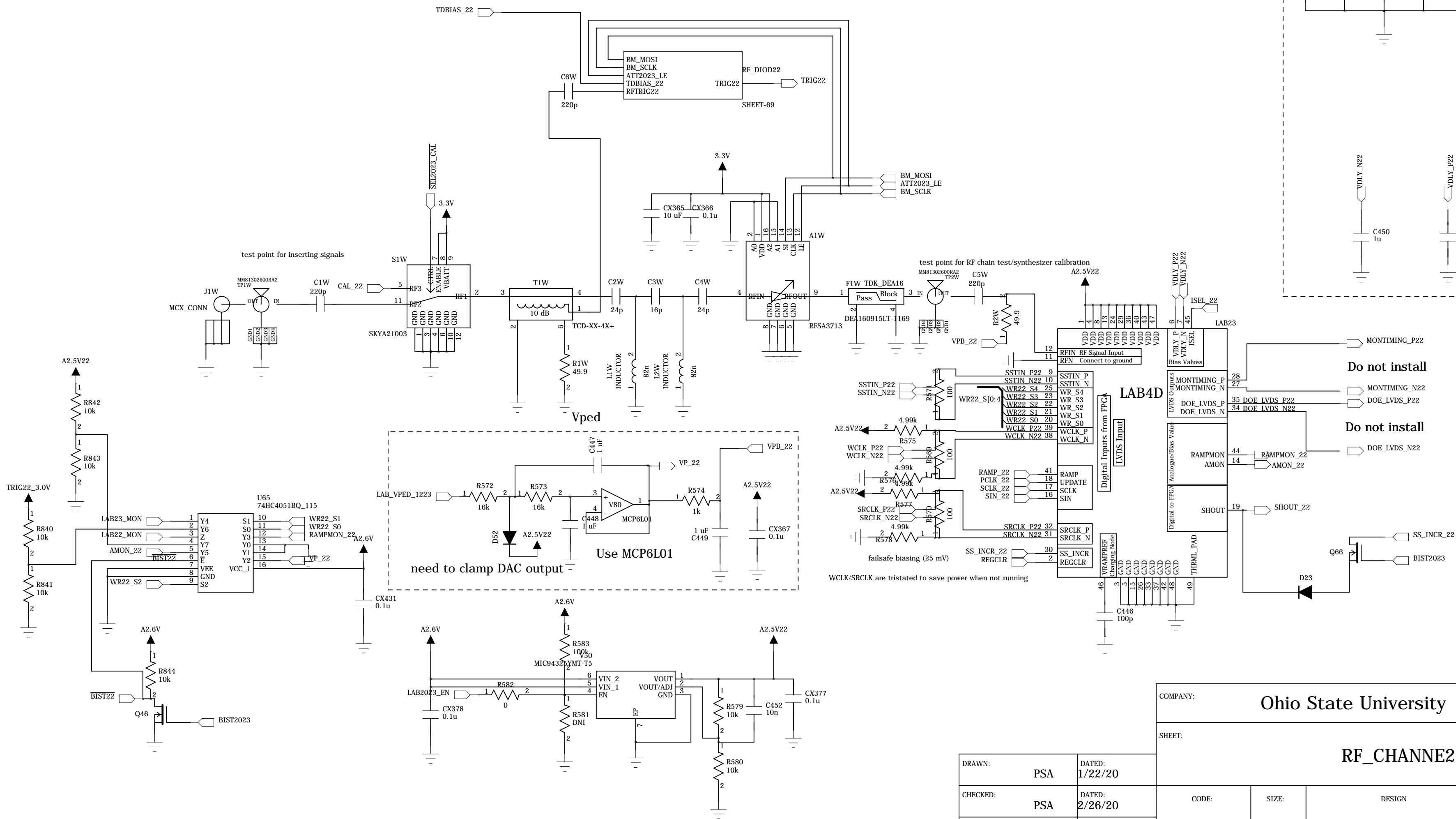
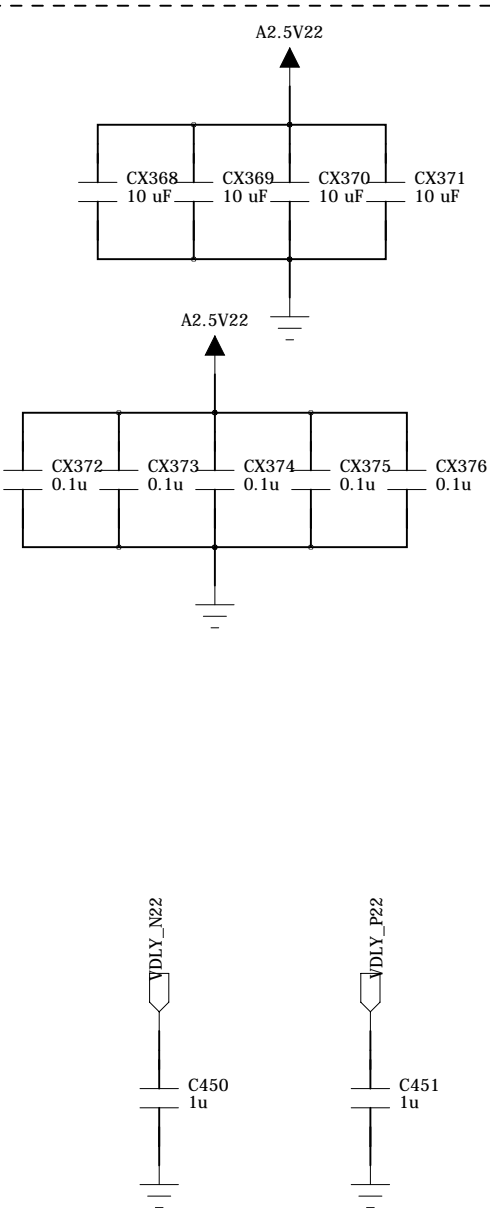
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:
Filtering/bypass capacitors			



COMPANY: Ohio State University			
SHEET: RF_CHANNE22			
DRAWN: PSA	DATED: 1/22/20	CODE: 3	SIZE: C
CHECKED: PSA	DATED: 2/26/20	DESIGN: RADIANT	REV: A
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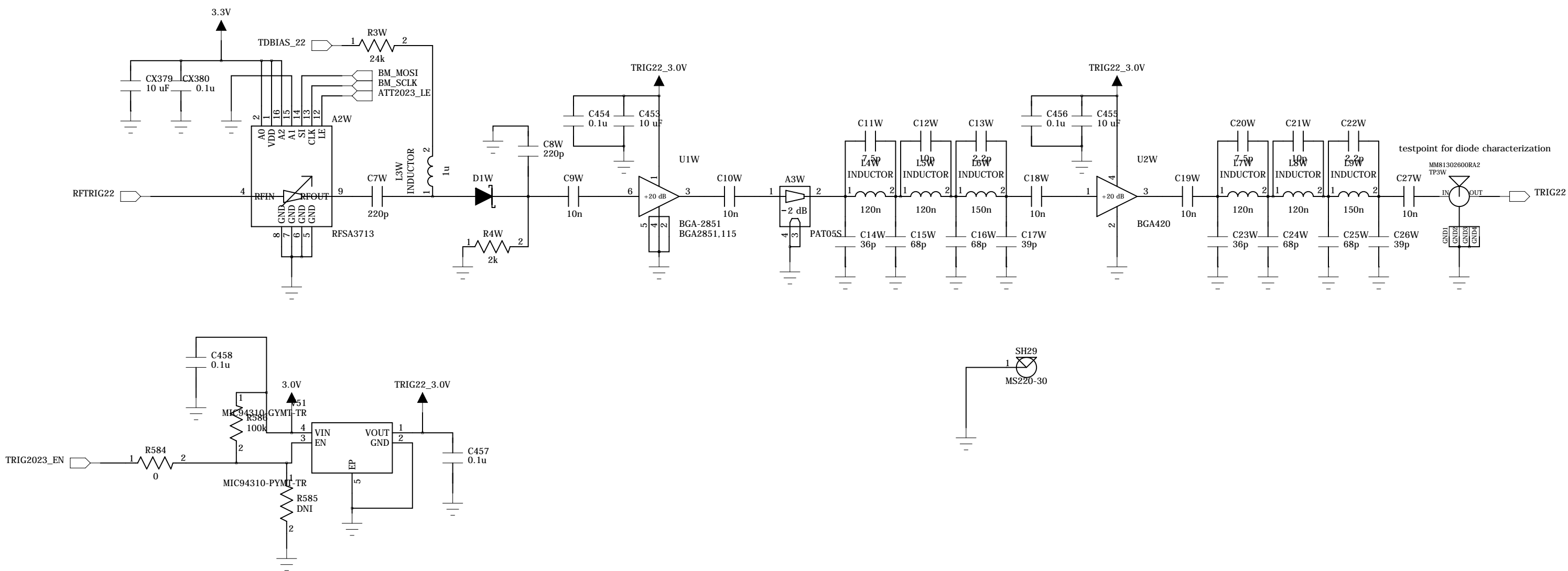
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



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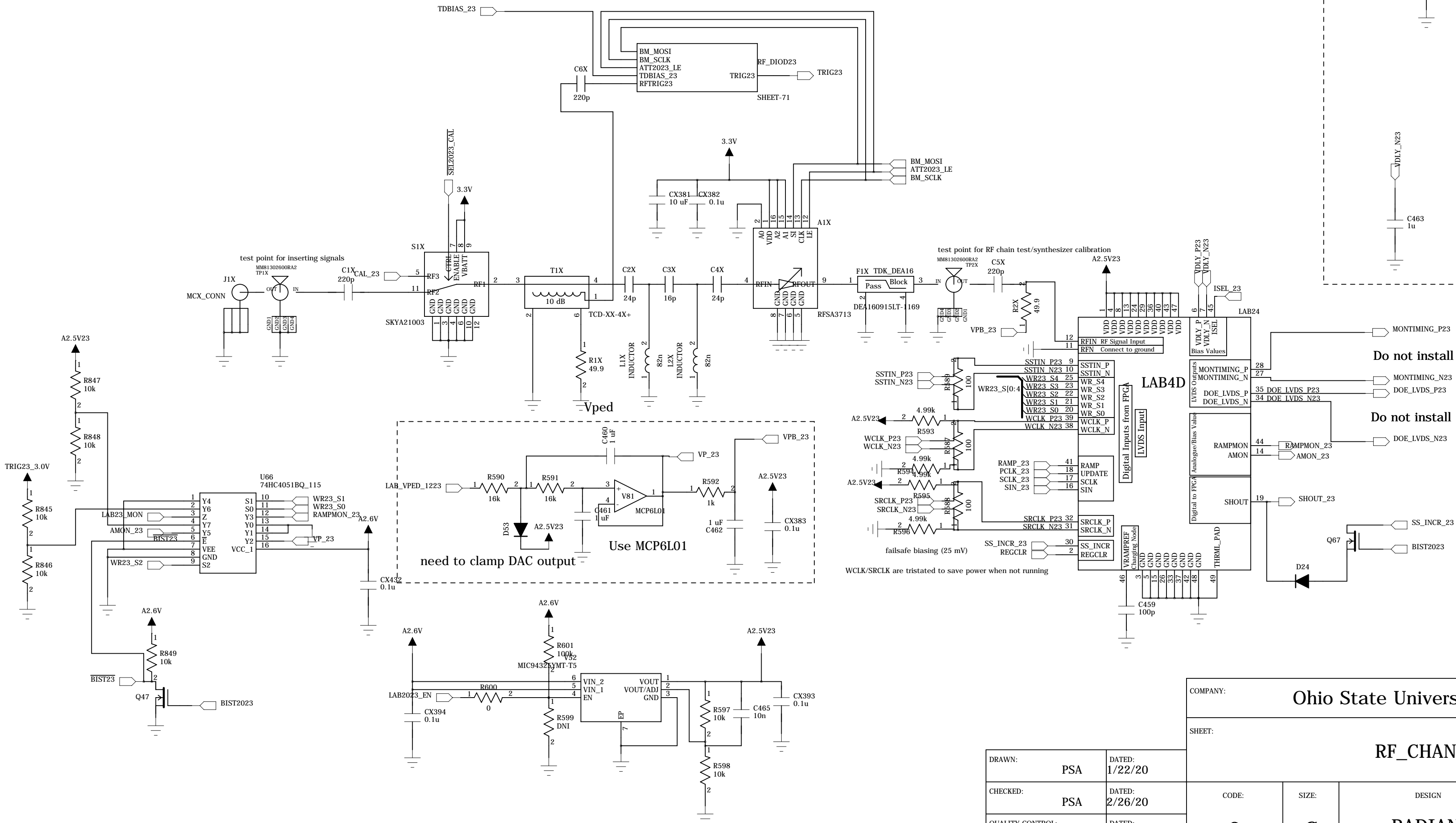
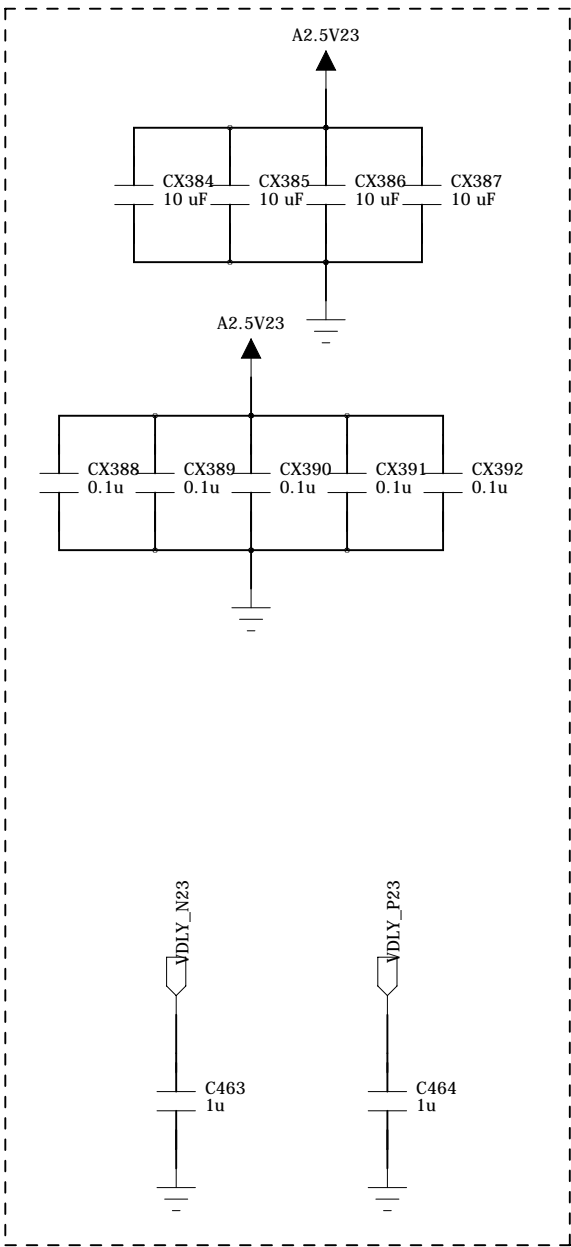
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REVISION RECORD			
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Filtering/bypass capacitors			



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COMPANY: Ohio State University			
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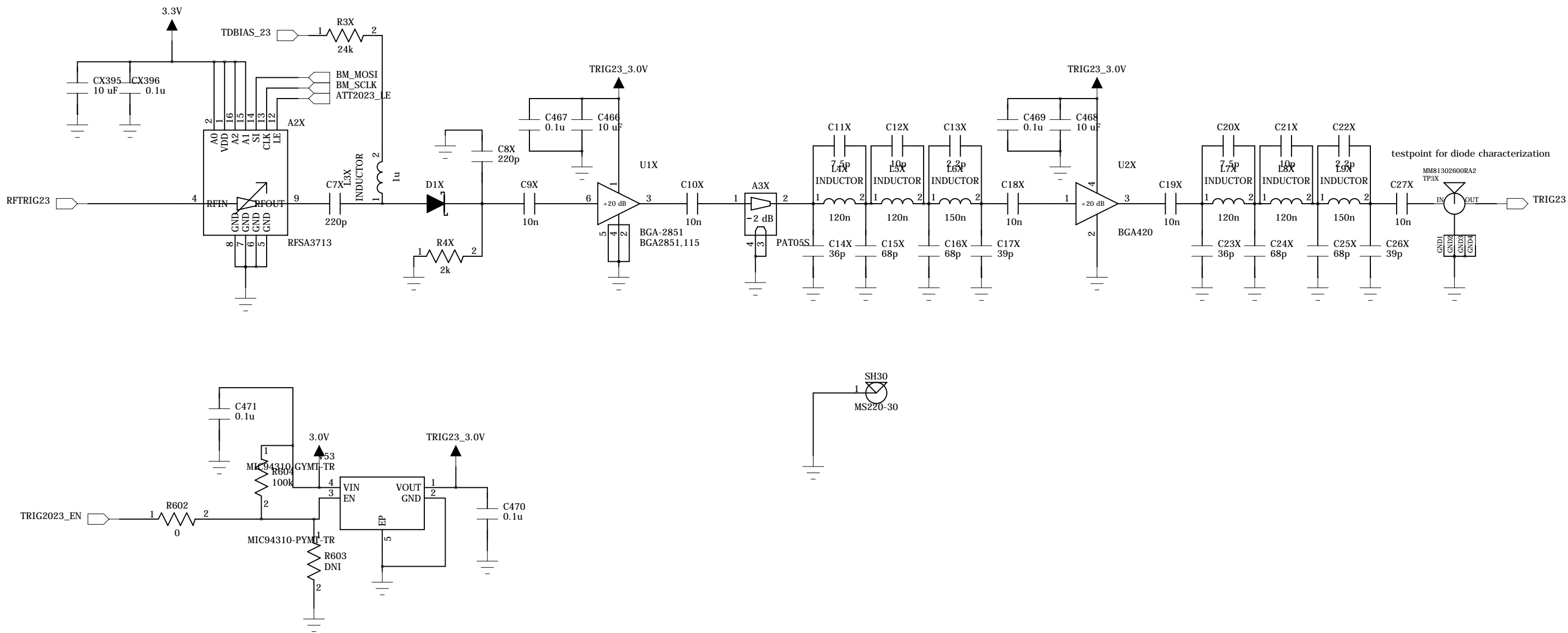
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REVISION RECORD

LTR	ECO NO:	APPROVED:	DATE:



COMPANY:

Ohio State University

SHEET:

RF_DIOD23

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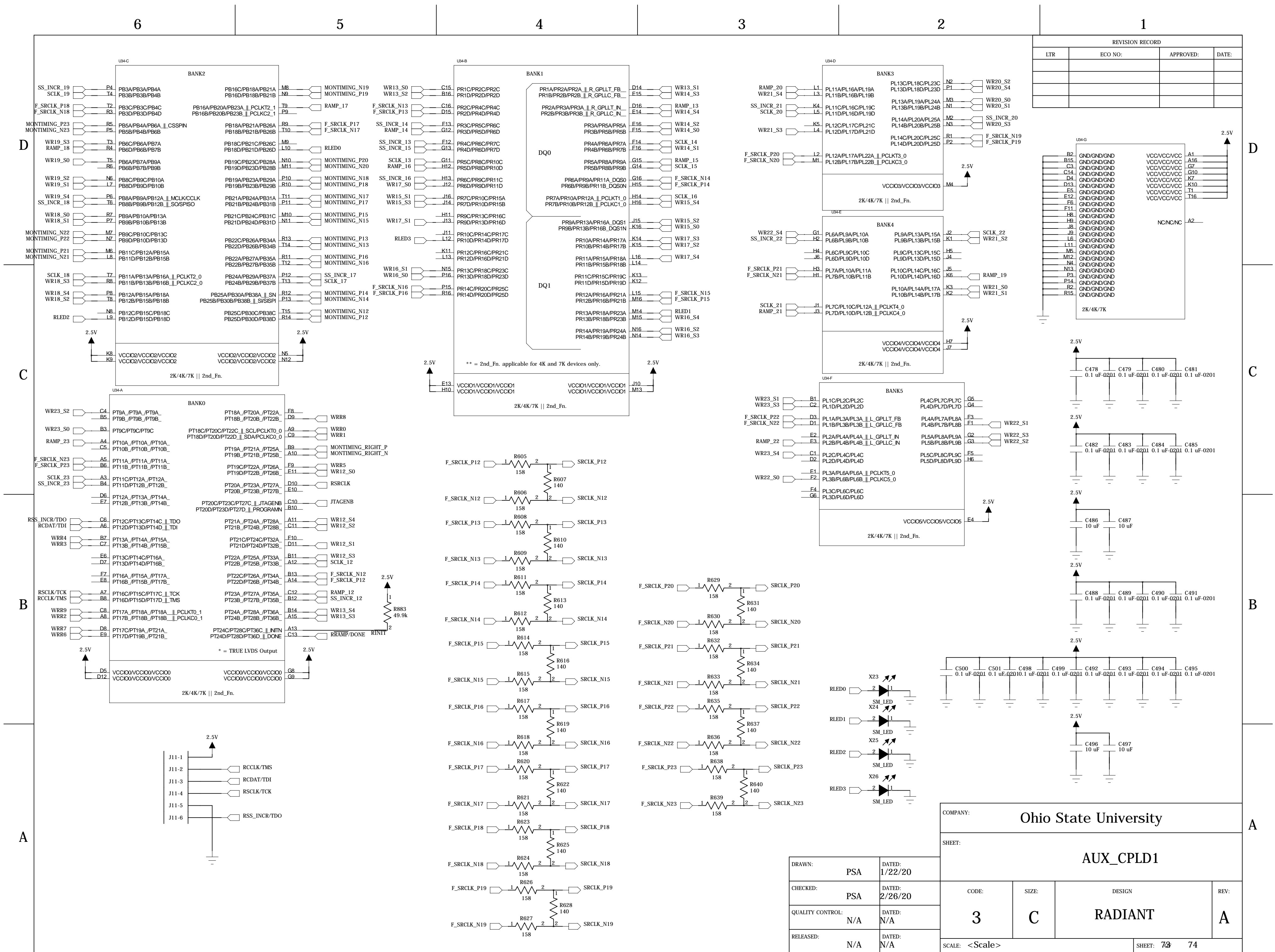
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SHEET: 74 of 74



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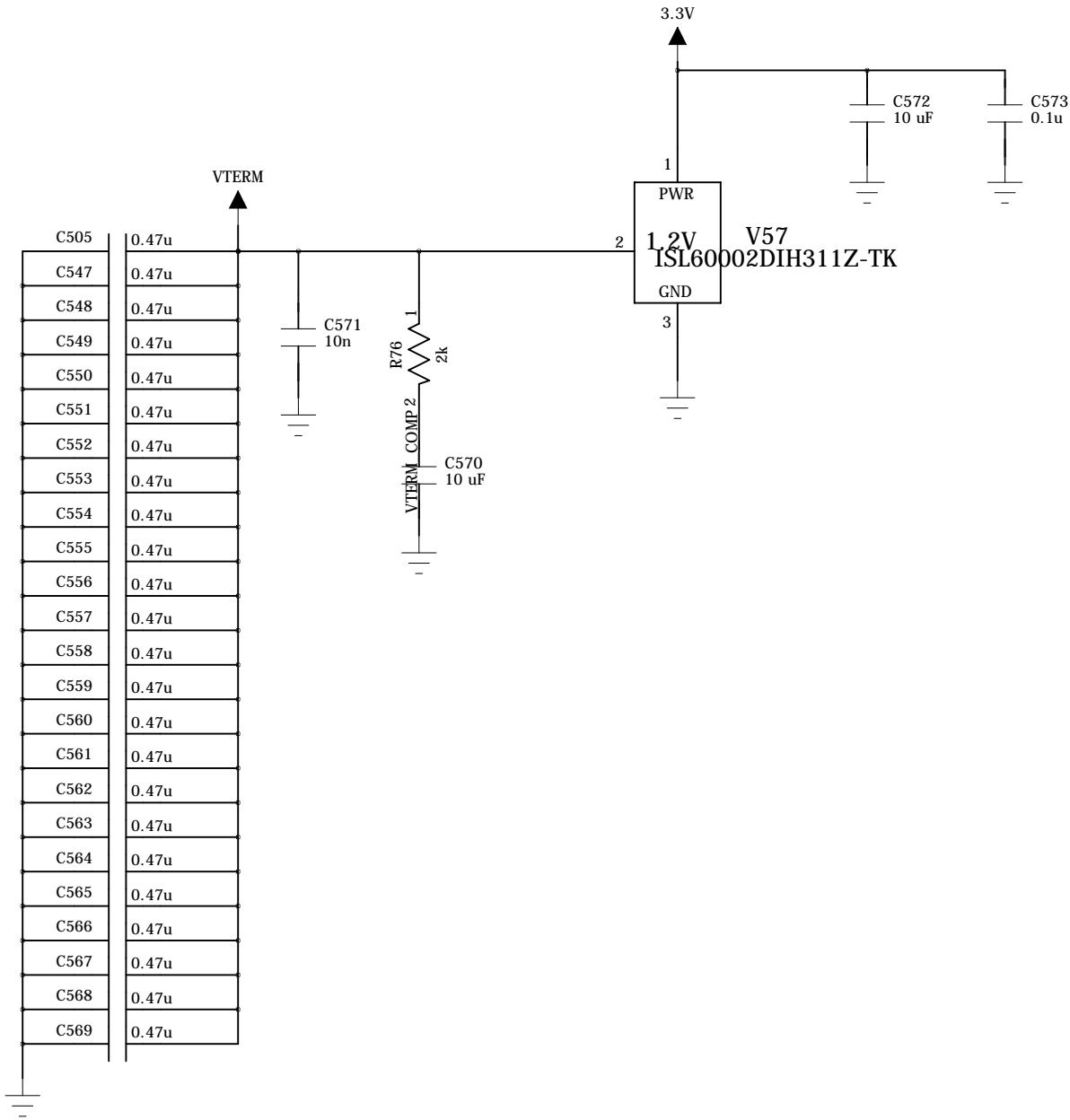
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REVISION RECORD			
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COMPANY:		Ohio State University	
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