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REVISIONS			
REV	DESCRIPTION	DATE	APPROVED
A	INITIAL RELEASE	02AUG23	Z. ARCEO
B	ECR-116325	15AUG23	Z. ARCEO
C	ECR-117464	08NOV23	Z. ARCEO
D	ECR-118553	08JAN24	Z. ARCEO

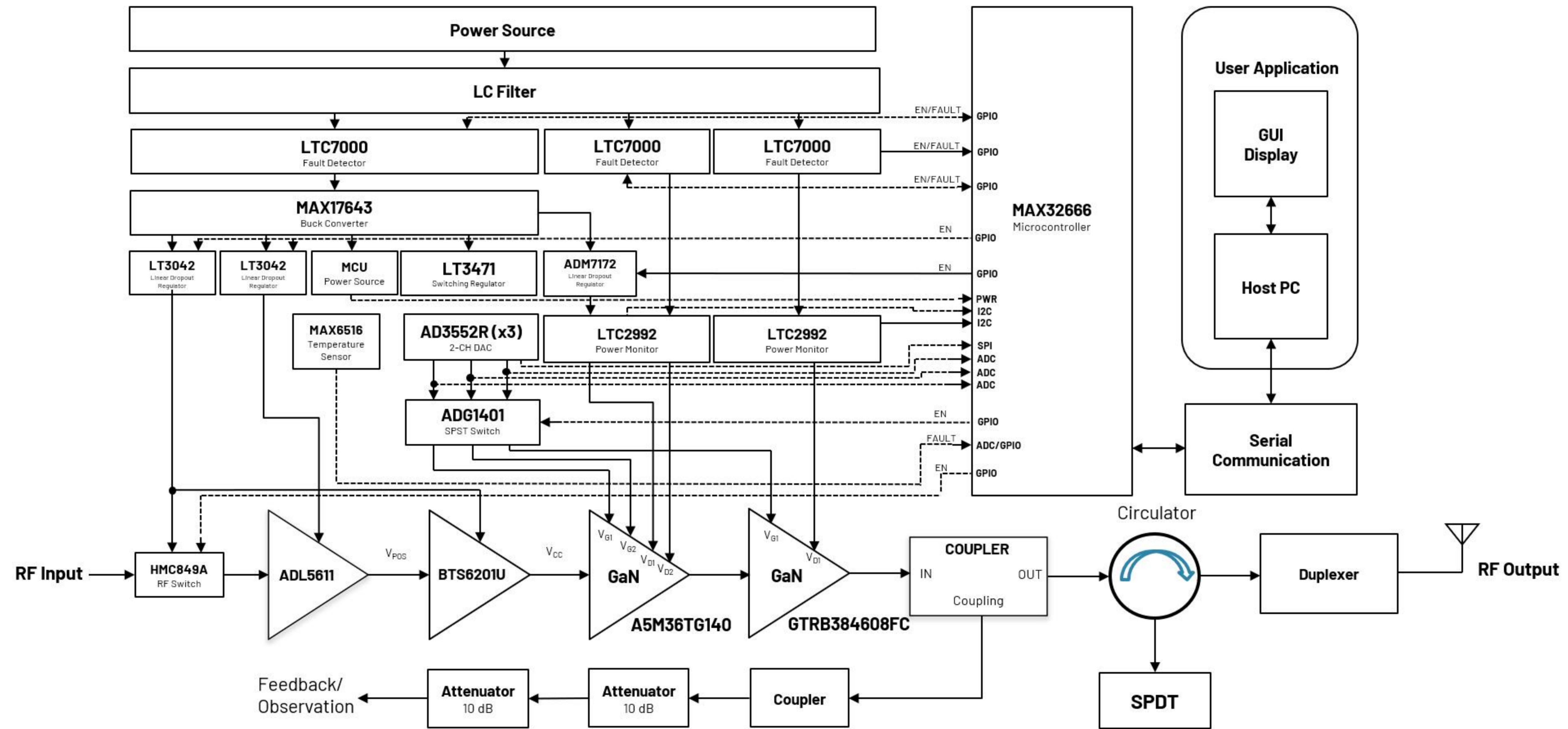
PA ARRAY CONTROLLER BOARD

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- PAGE 3 - LTC7000 FAULT DETECTOR - GAN A5M36TG140
- PAGE 4 - LTC7000 FAULT DETECTOR
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- PAGE 8 - AD3552R DAC - LD MOS A5M36TG140
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- PAGE 13 - LTC2992 VI MONITOR - GAN GTRB384608FC-V1
- PAGE 14 - MAX6516 TEMPERATURE MONITOR

TEMPLATE ENGINEER BILLY PHILLIPS	DATE 07APR21	SCHEMATIC		
HARDWARE SERVICES BOB MACDONALD	07APR21			
HARDWARE SYSTEMS DAVE WILLIAMS	07APR21	HW TYPE : Customer Evaluation		
TEST ENGINEER N/A	N/A	Product(s): AD3552R, MAX32666 : LTC7000		
COMPONENT ENGINEER ADGT LIBRARY	02AUG23	PACKAGE : 0-lead BodySize PackageType-family : Pitch-pitch StyleVendor Style		
TEST PROCESS N/A	N/A	<User Define>		
HARDWARE RELEASE C. PASIA	08NOV23	<User Define>		
DESIGNER C. PASIA	08NOV23	MASTER PROJECT TEMPLATE TBD	TESTER TEMPLATE 067676_b	DRAWING NO. 02_079905
PTD ENGINEER Z. ARCEO	08NOV23	REV. D		
CHECKER N/A	N/A	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		
		TOLERANCES		
		DECIMALS X.XX +0.010 X.XXX +0.005	FRACTIONS +1/32	ANGLES +2
		SIZE D	SCALE 1:1	CODE ID NO. CodeID
		SHEET 1		OF 14

SYSTEM ARCHITECTURE

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



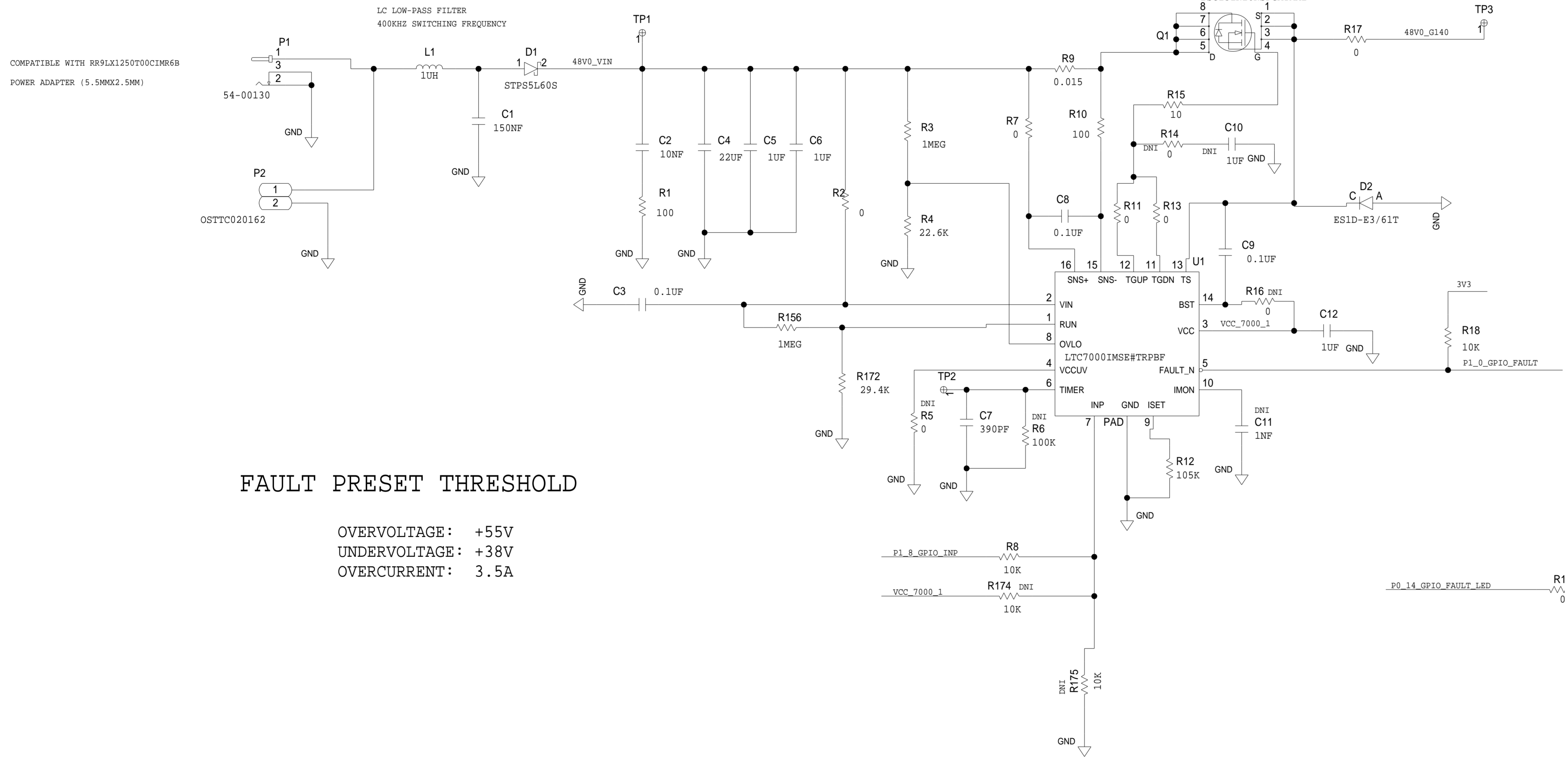
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	HW TYPE : Customer Evaluation Product(s): AD3552R, MAX32666 : LTC7000		
	DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D
	PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1
		SHEET 2 OF 14	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FAULT DETECTION CIRCUIT

LTC7000

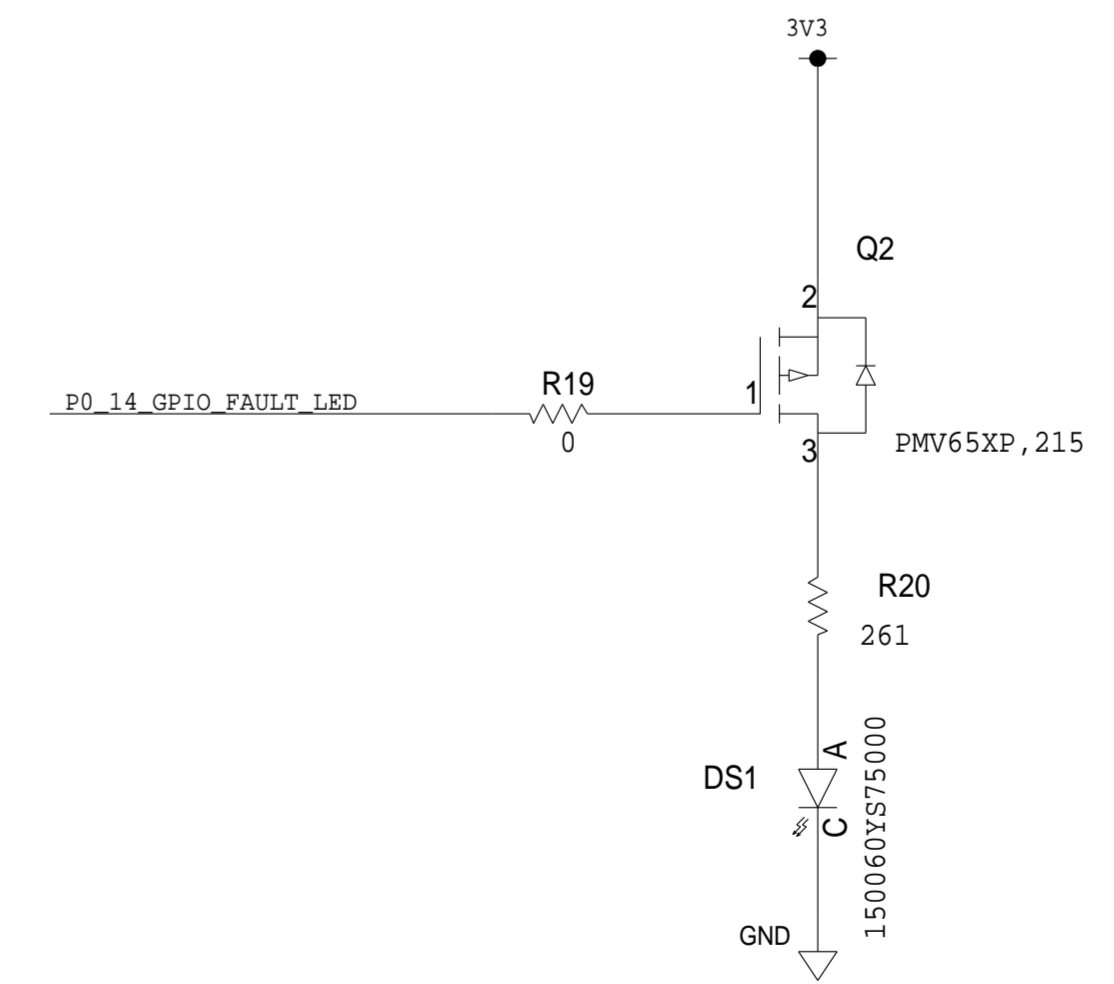
PROTECTION CIRCUIT FOR GAN A5M36TG140



FAULT PRESET THRESHOLD

- OVERVOLTAGE : +55V
- UNDERVOLTAGE : +38V
- OVERCURRENT : 3.5A

OV, OC, UV FAULT LED



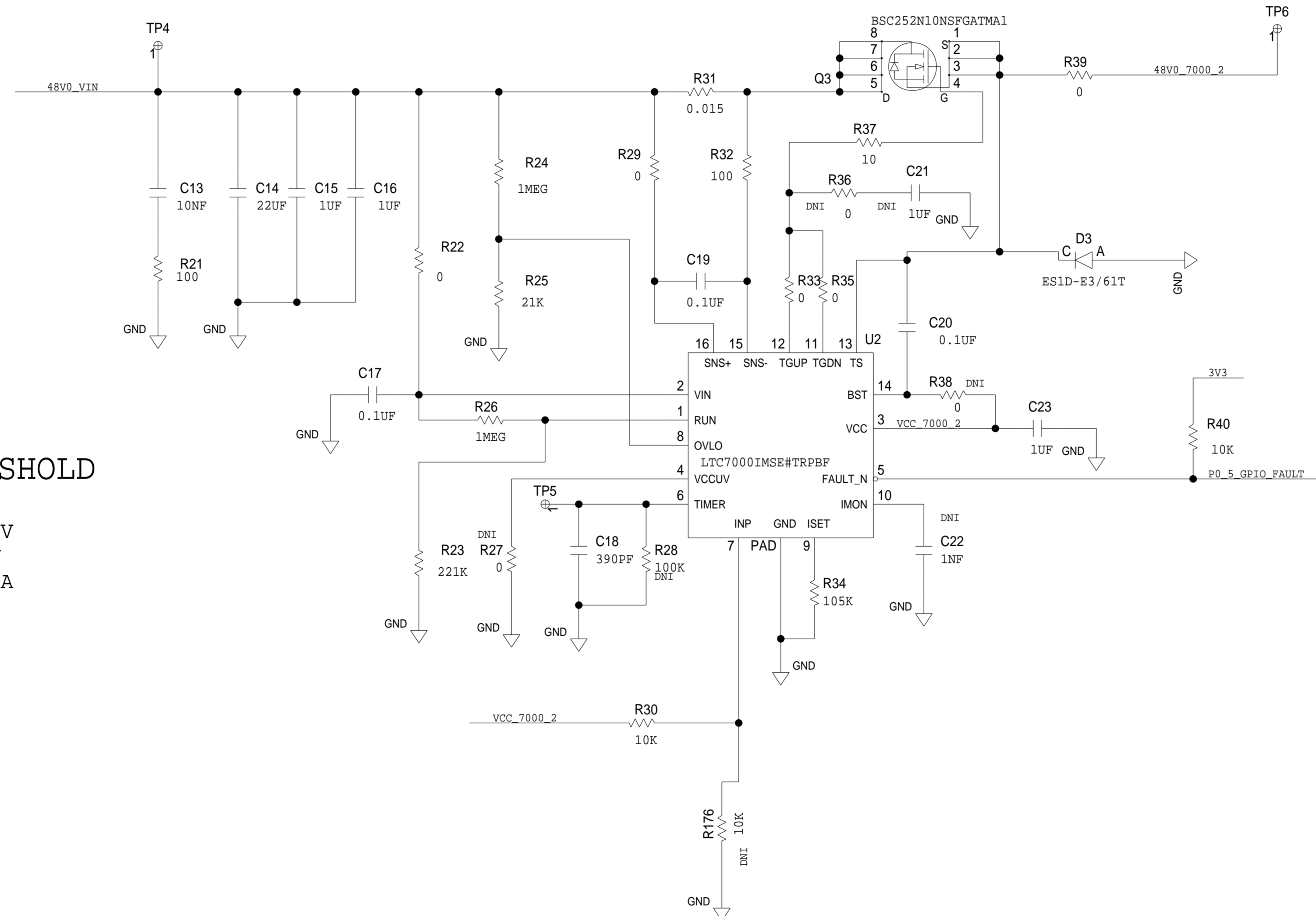
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DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 3 OF 14

FAULT DETECTION CIRCUIT

LTC7000

SYSTEM'S PROTECTION CIRCUIT

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



FAULT PRESET THRESHOLD

OVERVOLTAGE : +60V
 UNDERVOLTAGE : +6V
 OVERCURRENT : 3.5A

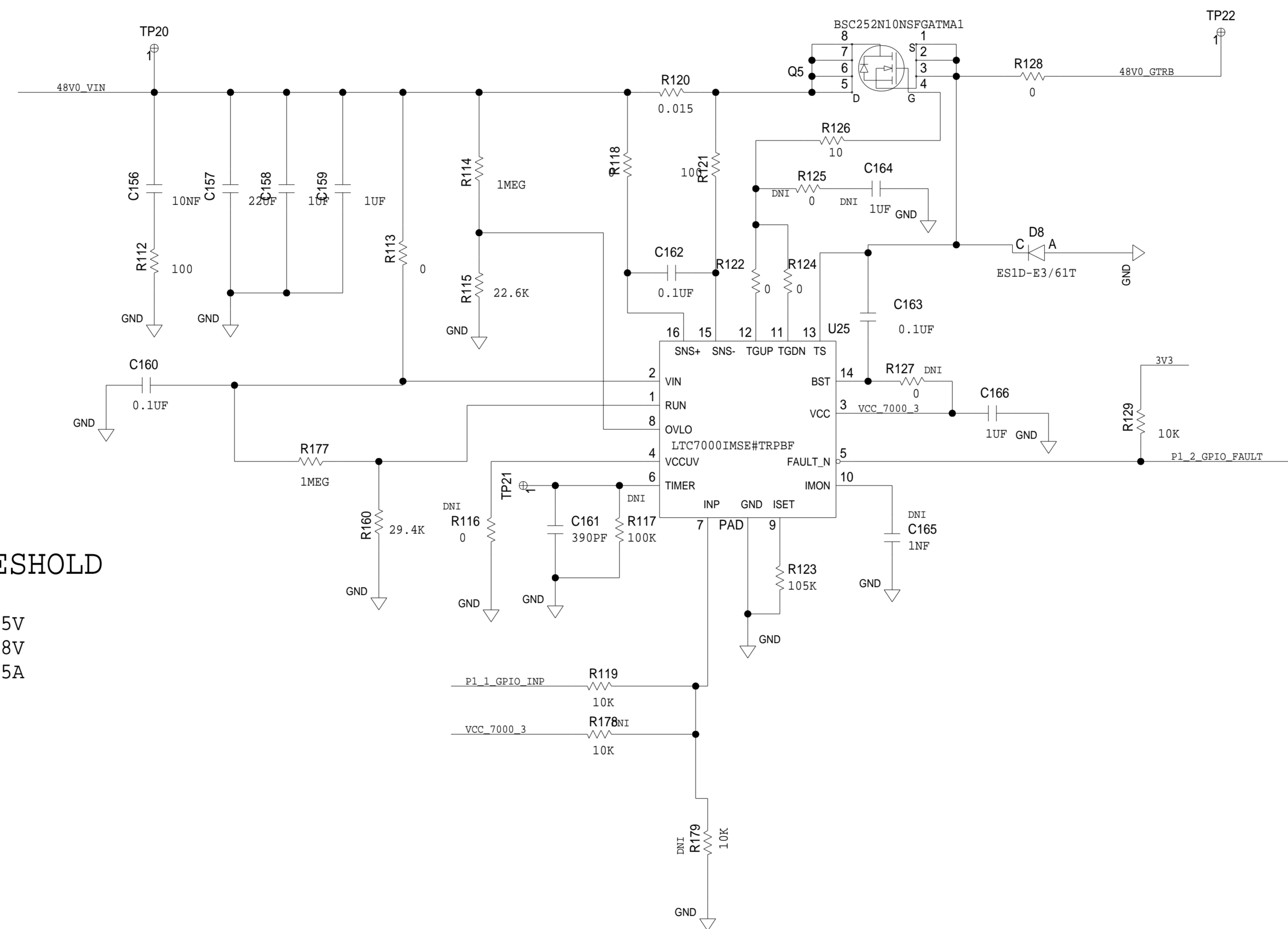
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	HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
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PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 4 OF 14

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

FAULT DETECTION CIRCUIT

LTC7000

PROTECTION CIRCUIT FOR GAN GTRB384608FC-V1



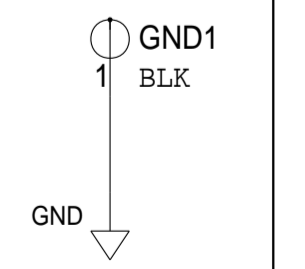
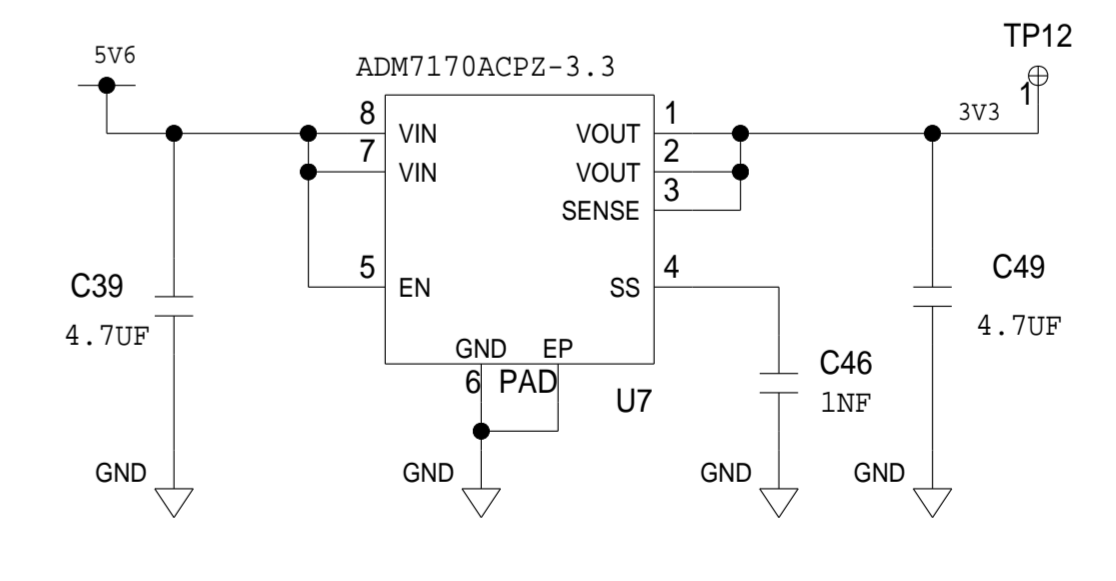
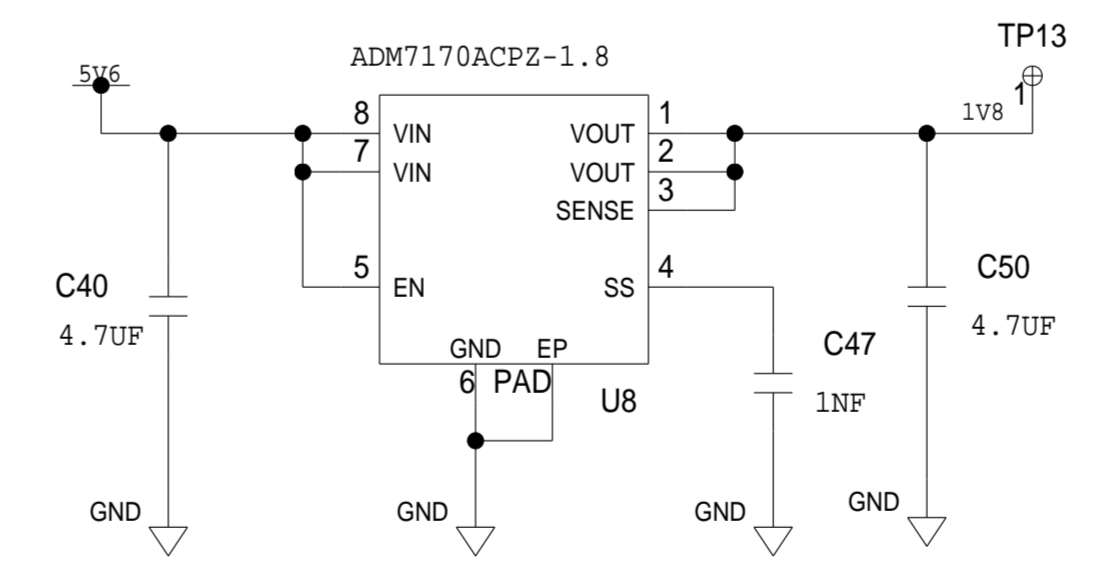
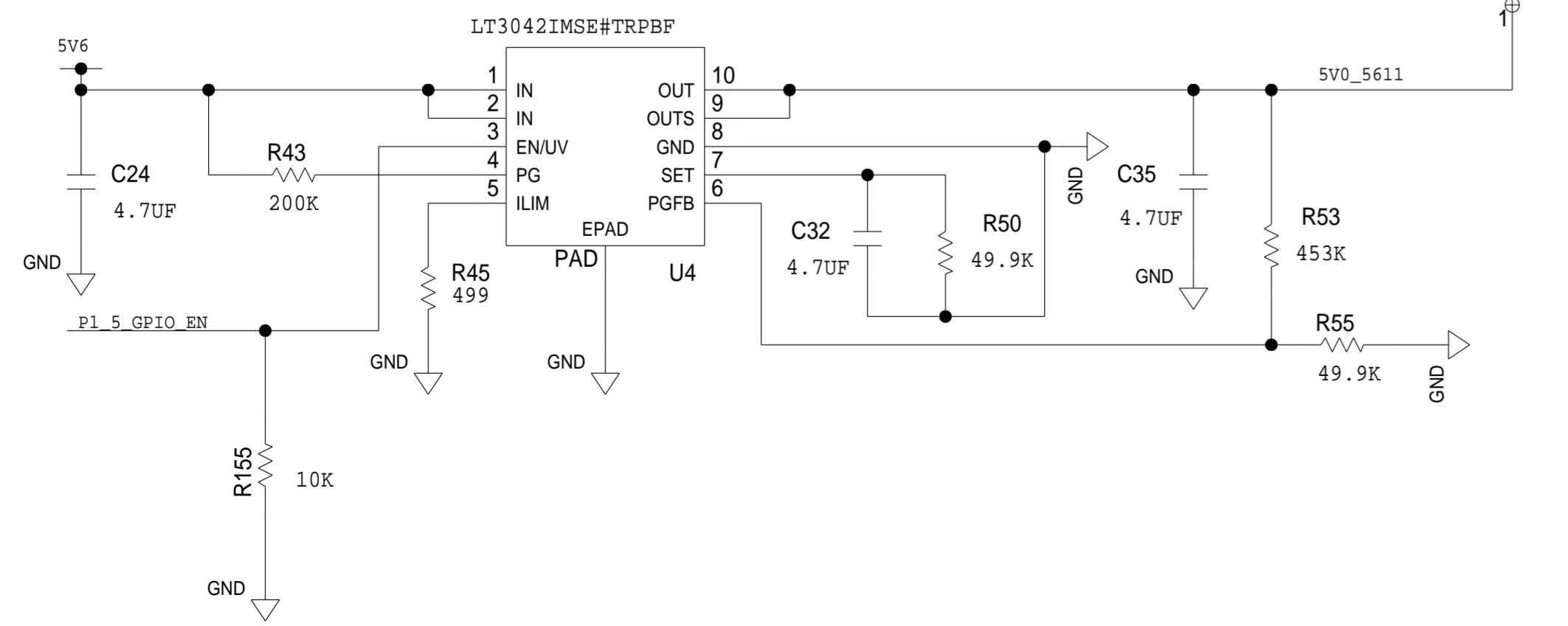
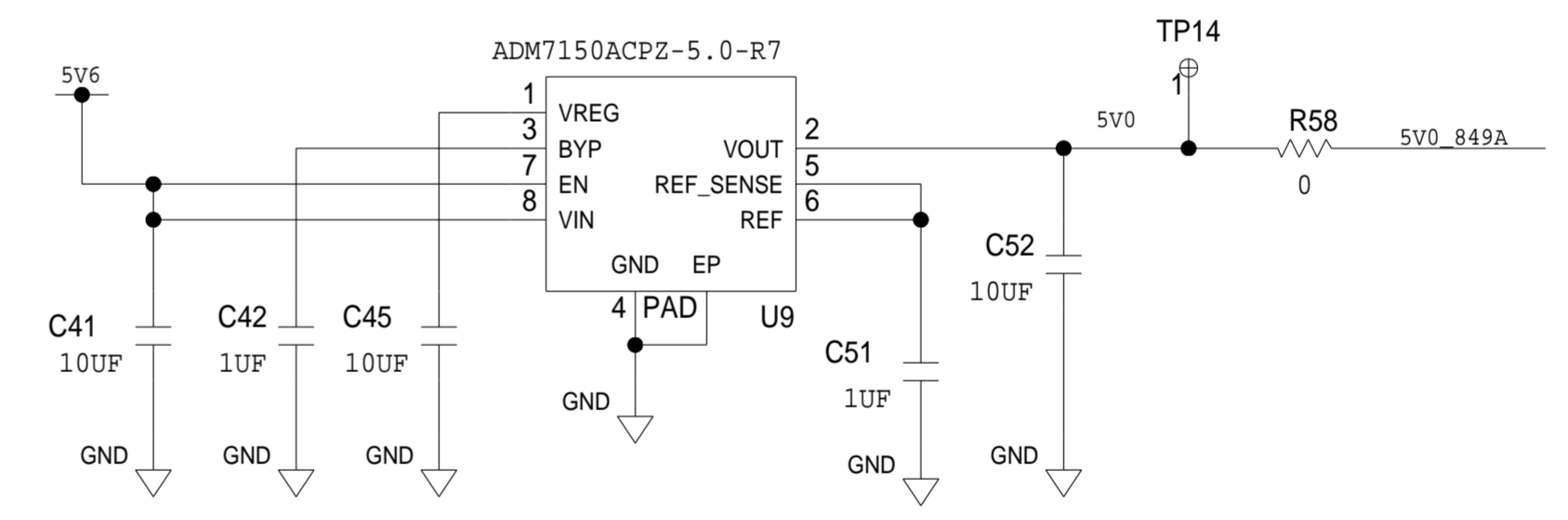
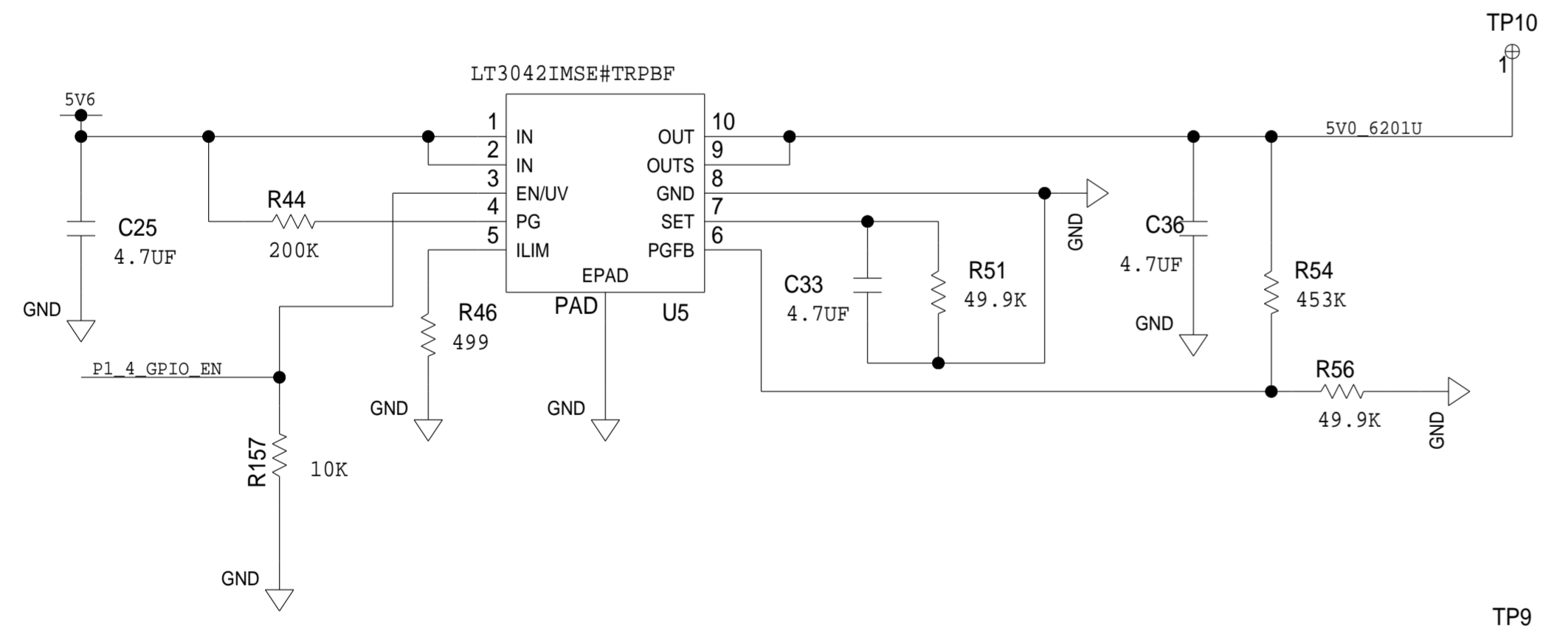
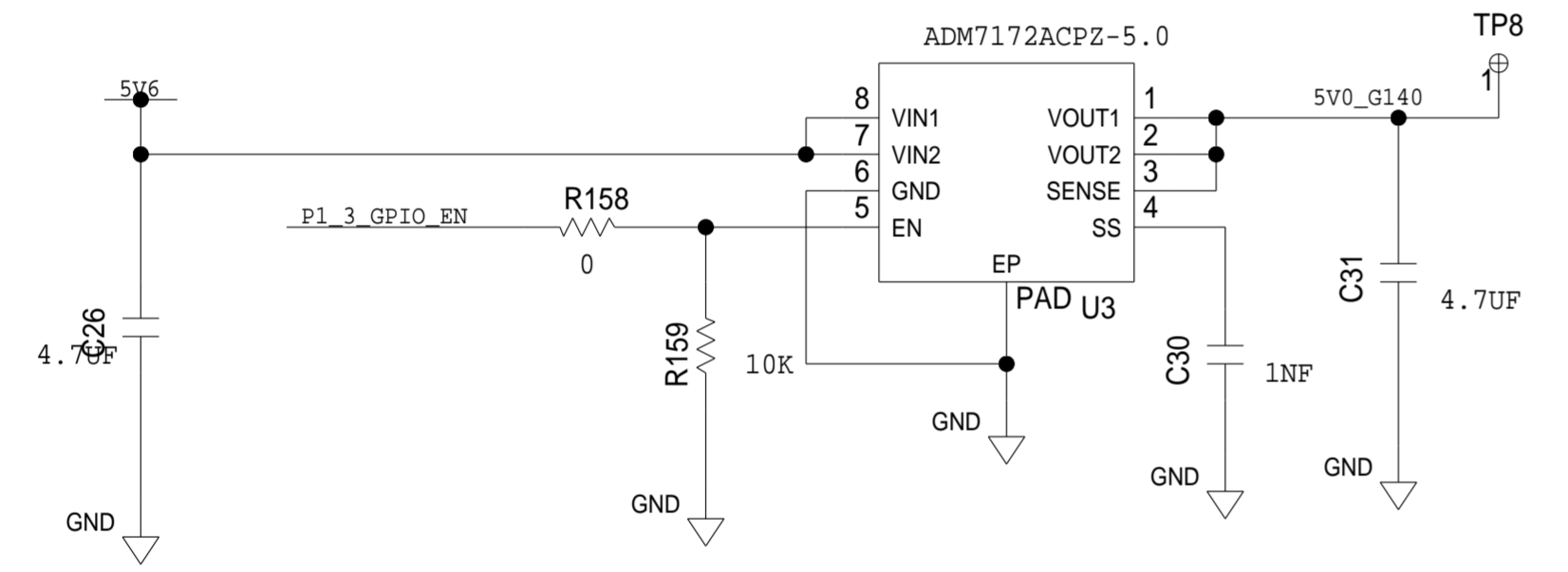
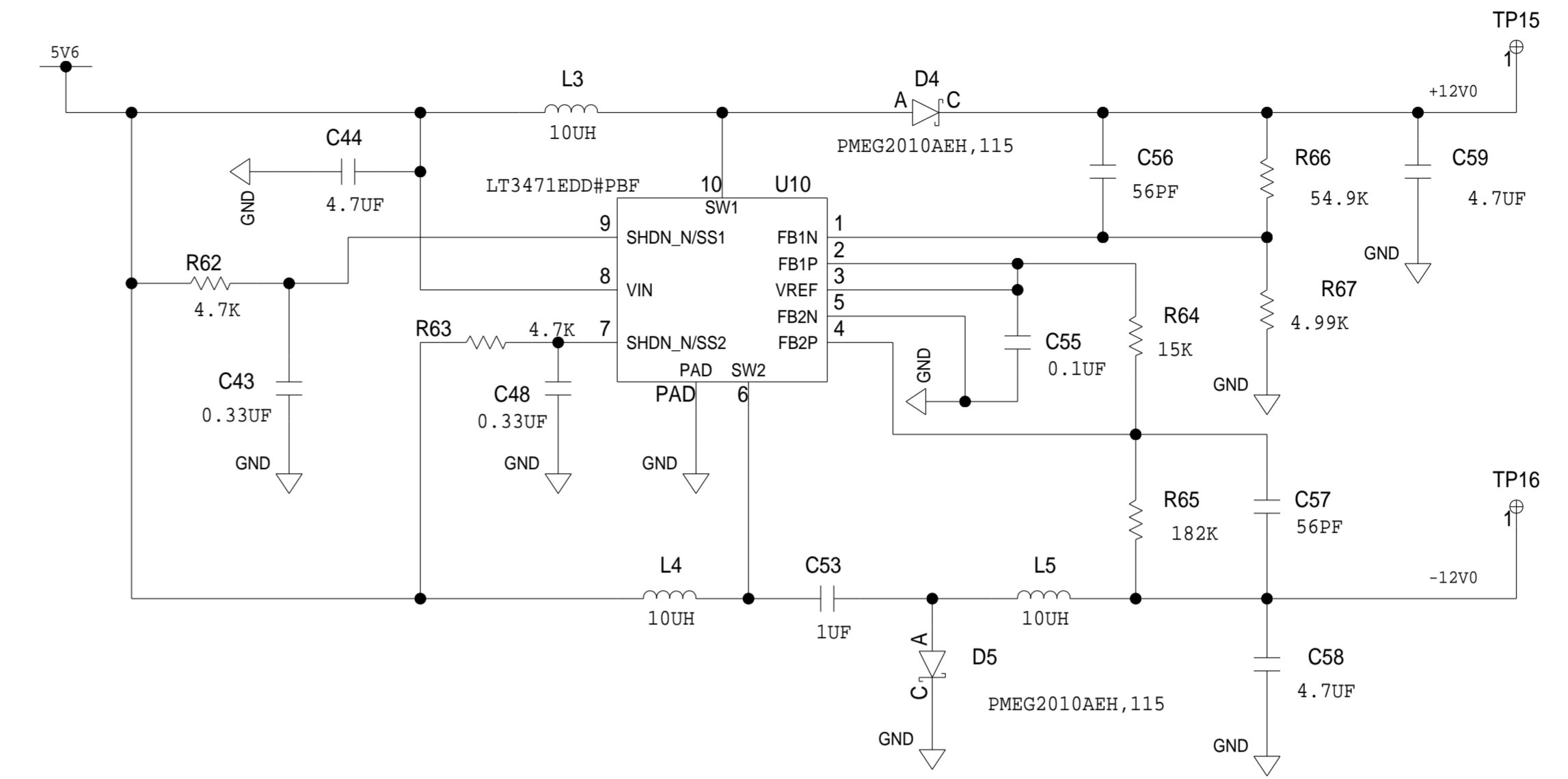
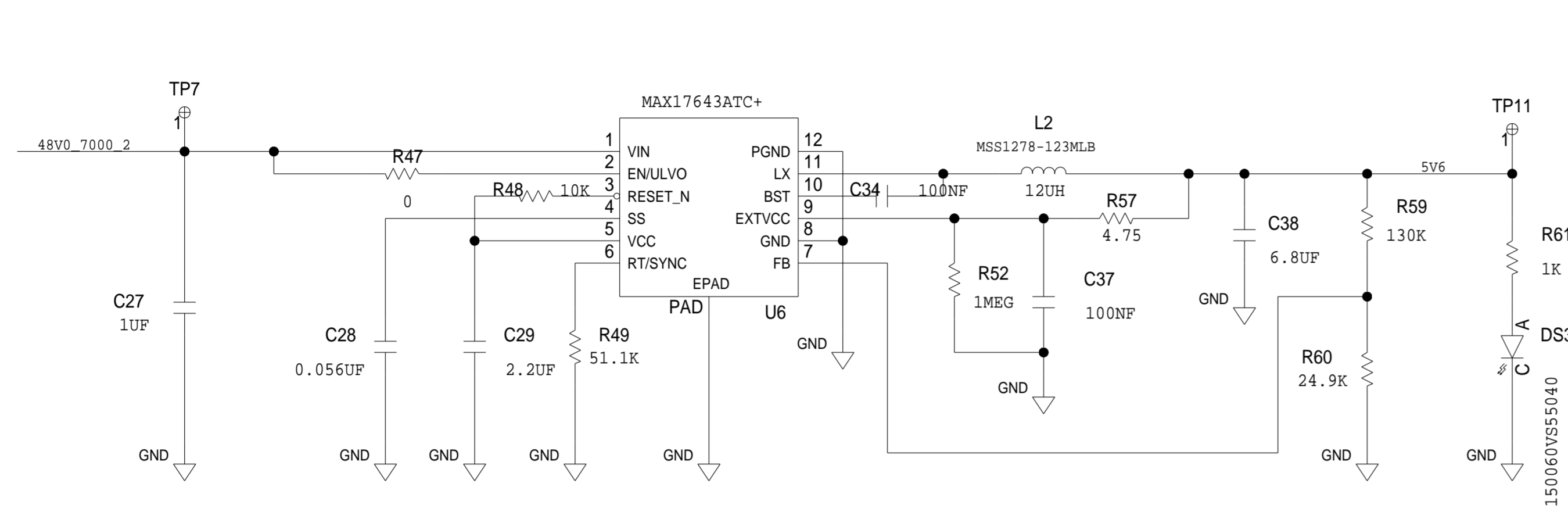
FAULT PRESET THRESHOLD

OVERVOLTAGE: +55V
 UNDERVOLTAGE: +38V
 OVERCURRENT: 3.5A

	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s): AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 5 OF 14

POWER SUPPLY MANAGEMENT

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



	SCHEMATIC HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
	DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 6 OF 14

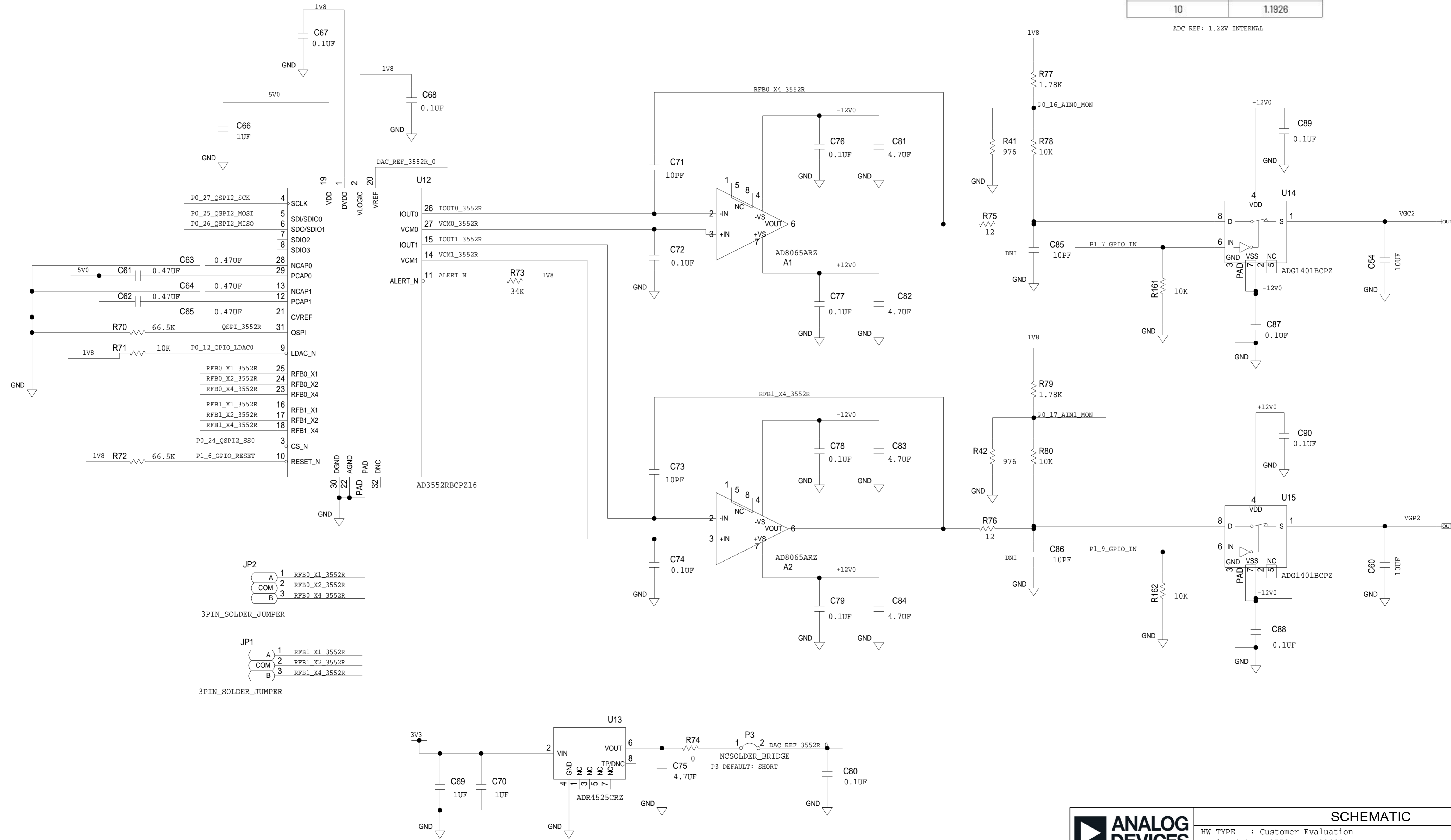
AD3552R - DUAL CHANNEL DAC 0

GATE VOLTAGE BIASING FOR GAN A5M36TG140

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Gate Voltage Range (V)	ADC Input Range (V)
-10	0.0066
0	0.5996
10	1.1926

ADC REF: 1.22V INTERNAL



P0_27_QSPI2_SCK	4	SCLK	19	VDD
P0_25_QSPI2_MOSI	5	SDI/SDIO0	2	DVDD
P0_26_QSPI2_MISO	6	SDO/SDIO1	20	VLOGIC
	7	SDIO2		VREF
	8	SDIO3		
	28	NCAP0		
	29	PCAP0		
	13	NCAP1		
	12	PCAP1		
	21	CVREF		
	31	QSPI		
	9	LDAC_N		
	25	RFB0_X1		
	24	RFB0_X2		
	23	RFB0_X4		
	16	RFB1_X1		
	17	RFB1_X2		
	18	RFB1_X4		
	3	CS_N		
	10	RESET_N		

JP2

1	RFB0_X1_3552R
2	RFB0_X2_3552R
3	RFB0_X4_3552R

3PIN_SOLDER_JUMPER

JP1

1	RFB1_X1_3552R
2	RFB1_X2_3552R
3	RFB1_X4_3552R

3PIN_SOLDER_JUMPER

	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 7 OF 14

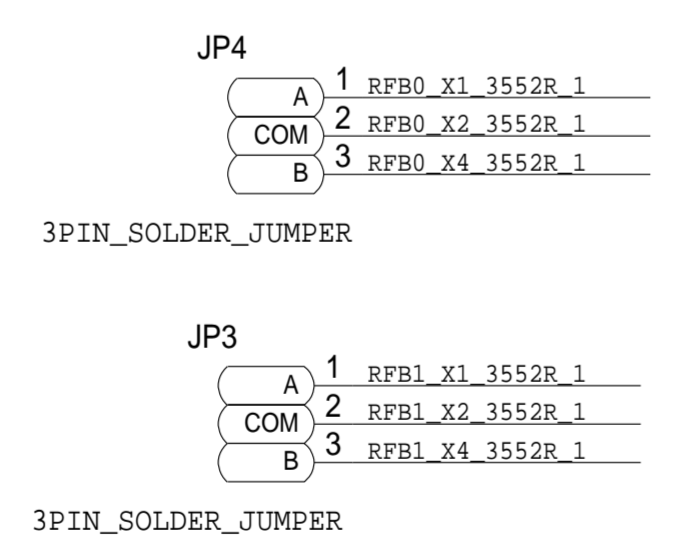
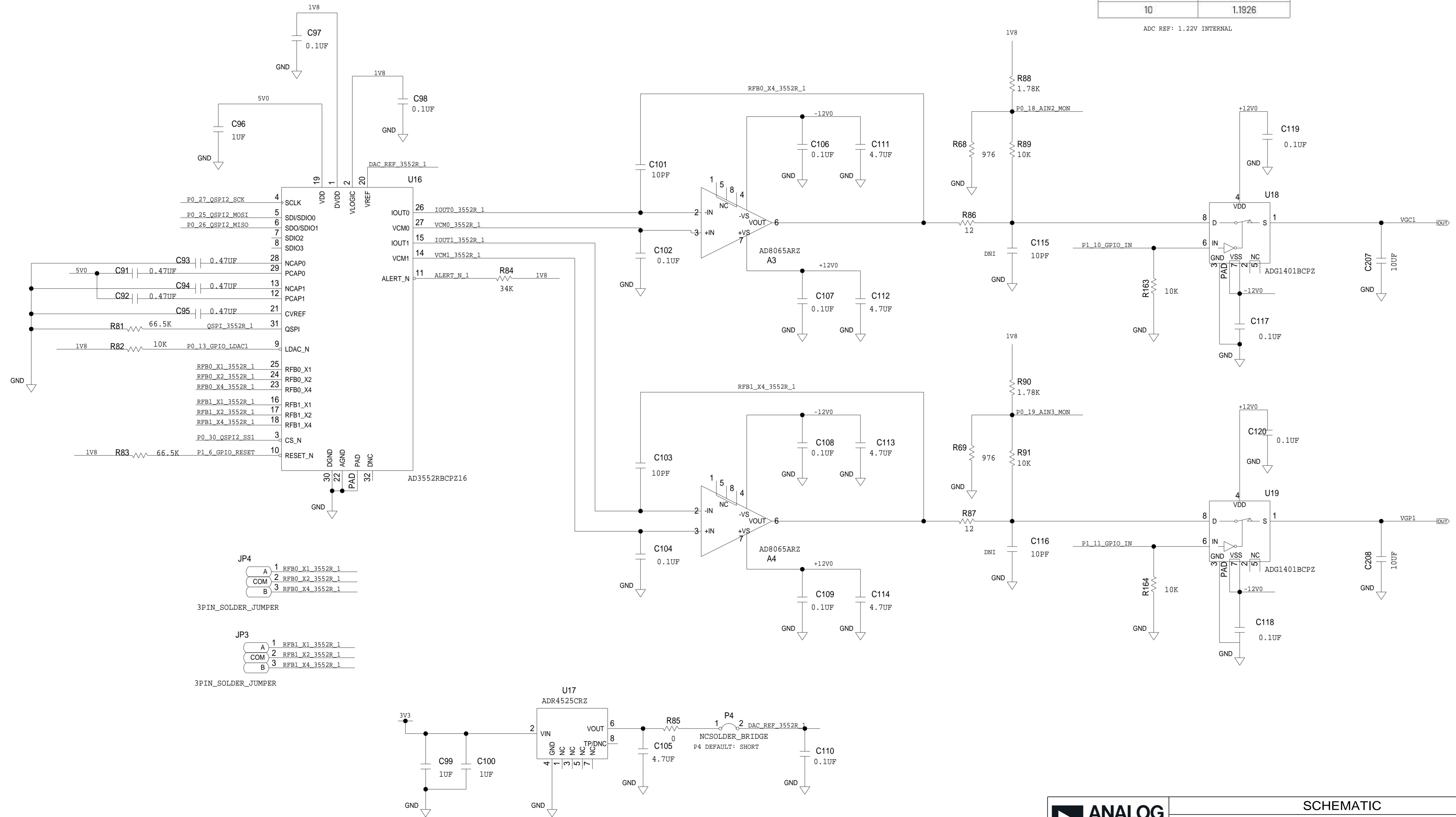
AD3552R - DUAL CHANNEL DAC 1

GATE VOLTAGE BIASING FOR LDMOS A5M36TG140

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Gate Voltage Range (V)	ADC Input Range (V)
-10	0.0066
0	0.5996
10	1.1926

ADC REF: 1.22V INTERNAL



	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 8 OF 14

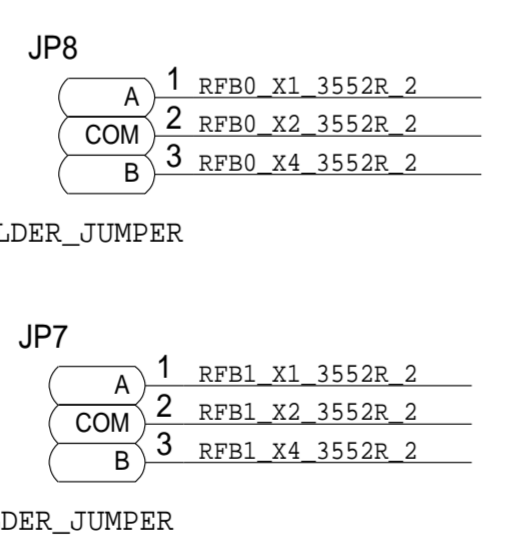
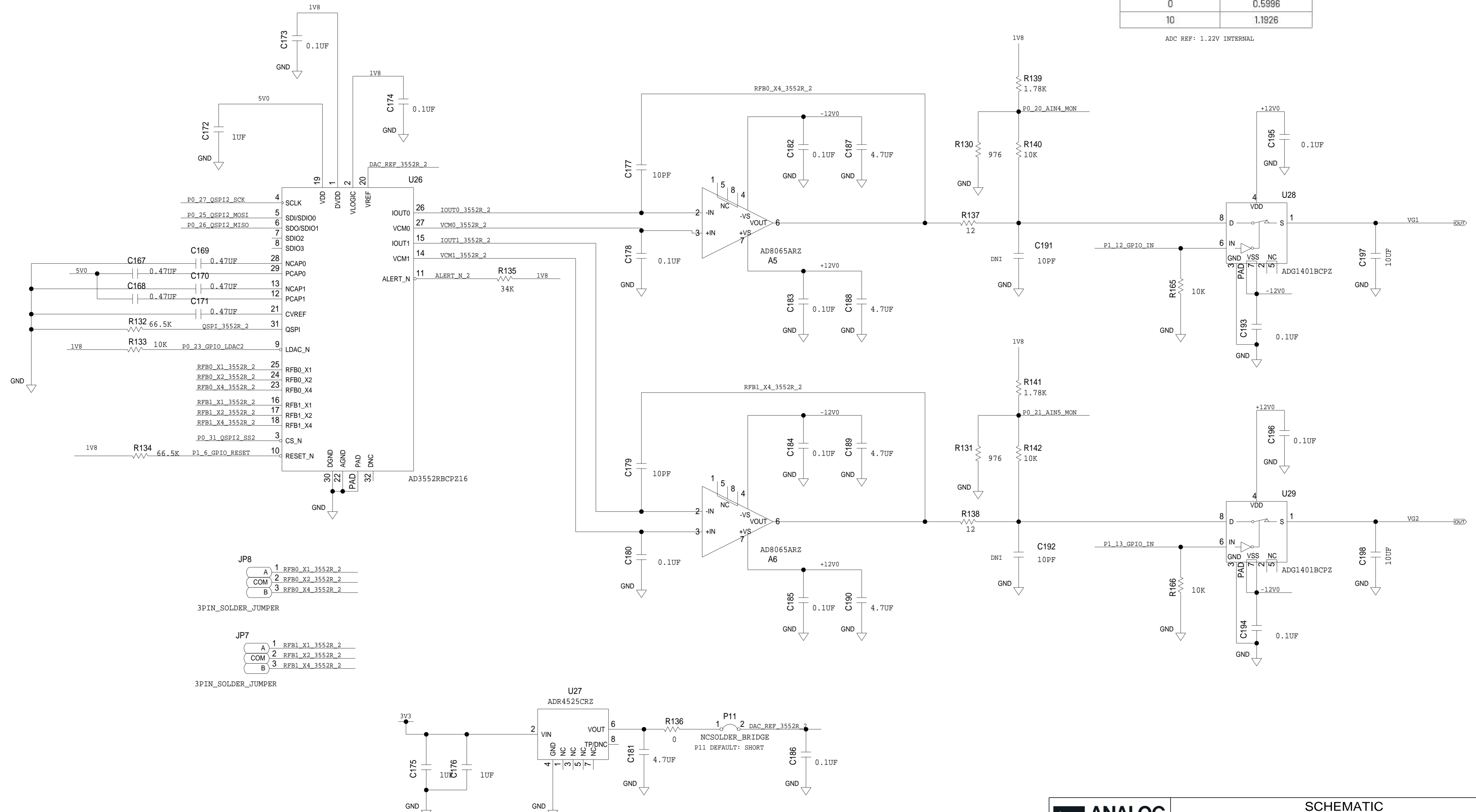
AD3552R - DUAL CHANNEL DAC 2

GATE VOLTAGE BIASING FOR GAN GTRB384608FC-V1

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Gate Voltage Range (V)	ADC Input Range (V)
-10	0.0068
0	0.5996
10	1.1926

ADC REF: 1.22V INTERNAL

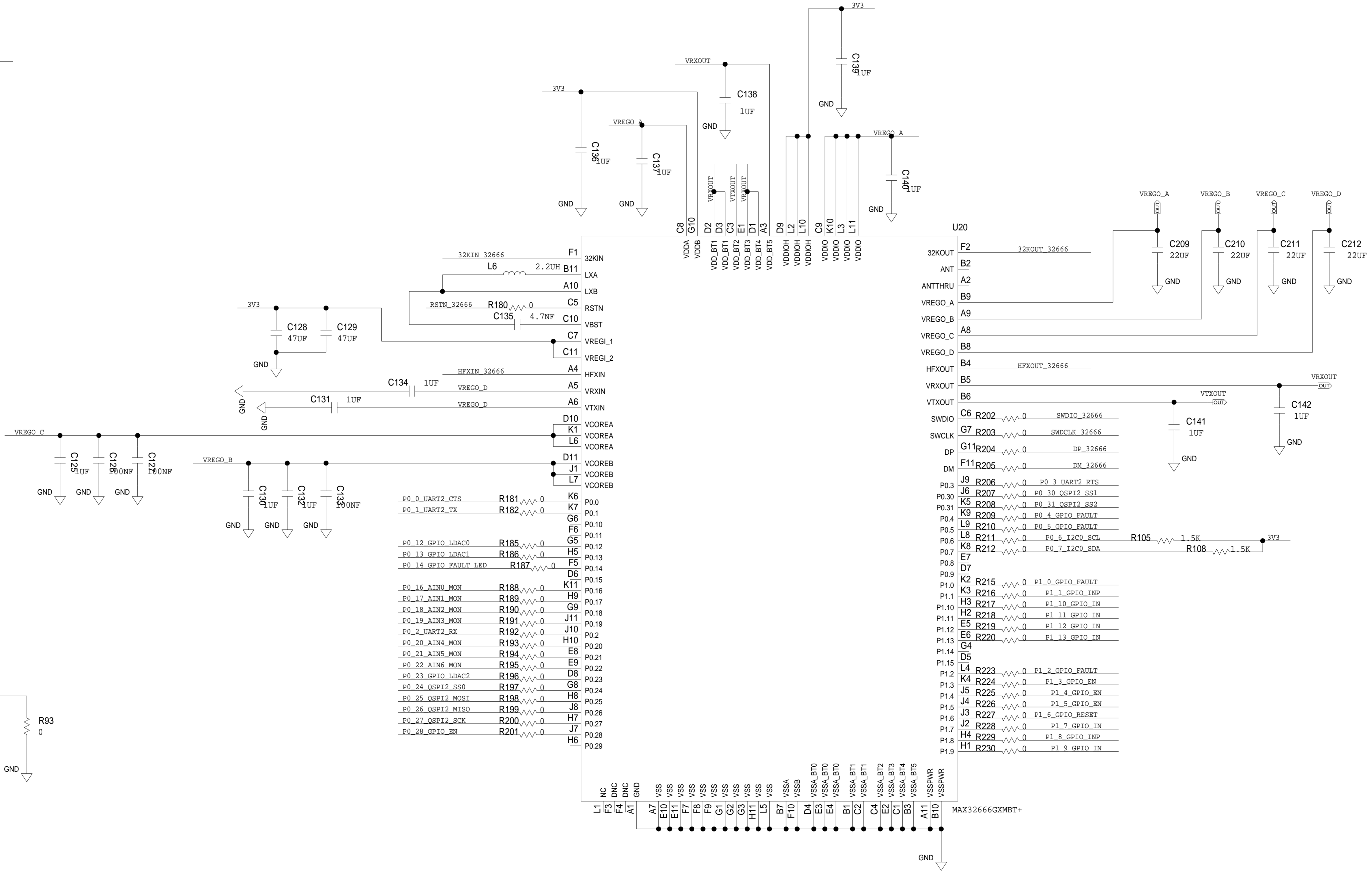
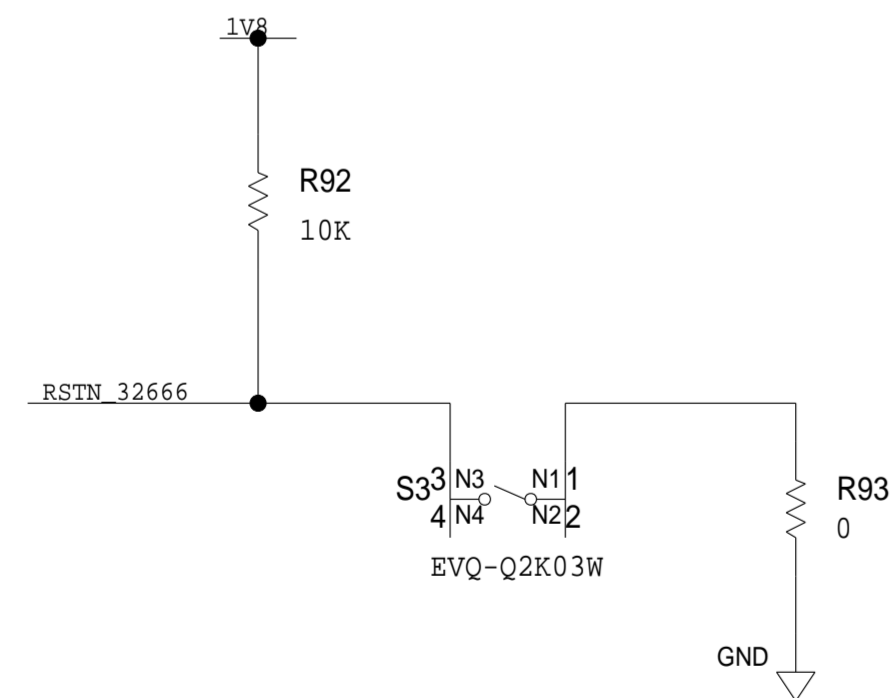
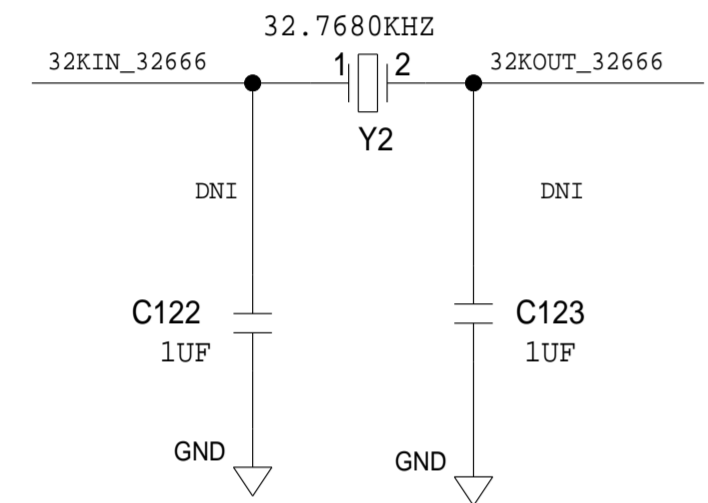
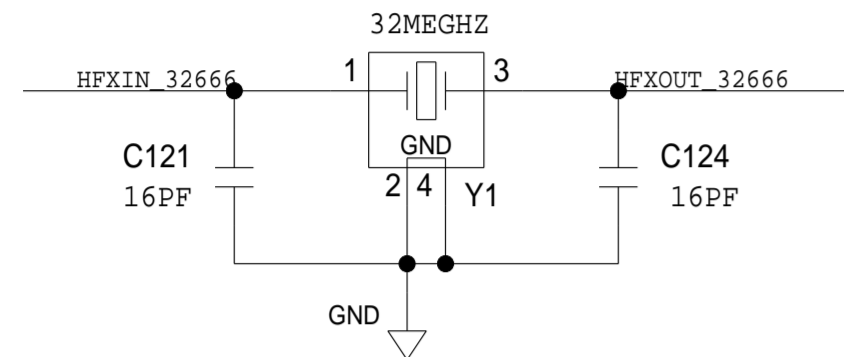


	SCHEMATIC HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
	DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 9 OF 14

MAX32666

MICROCONTROLLER

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED



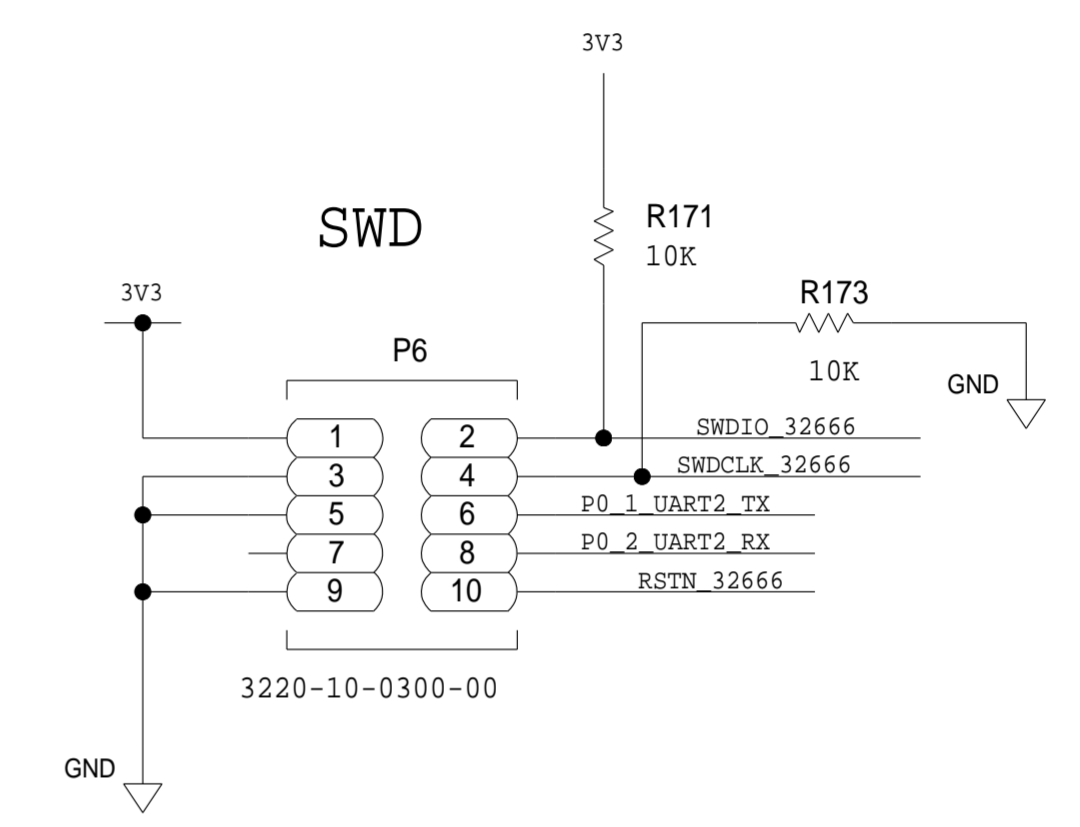
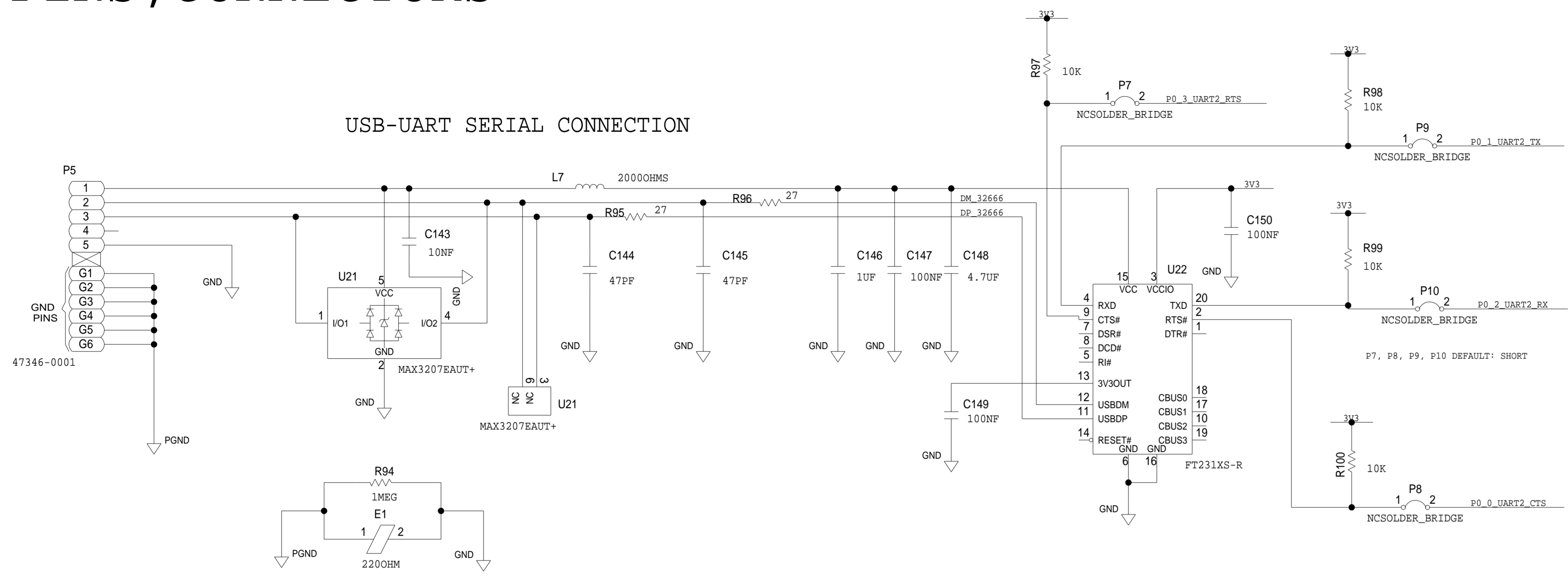
_P0_0_UART2_CTS	R181	0	K6	P0.0
_P0_1_UART2_TX	R182	0	K7	P0.1
			G6	P0.10
			F6	P0.11
_P0_12_GPIO_LDAC0	R185	0	G5	P0.12
_P0_13_GPIO_LDAC1	R186	0	H5	P0.13
_P0_14_GPIO_FAULT_LED	R187	0	F5	P0.14
			D6	P0.15
_P0_16_AIN0_MON	R188	0	K11	P0.16
_P0_17_AIN1_MON	R189	0	H9	P0.17
_P0_18_AIN2_MON	R190	0	G9	P0.18
_P0_19_AIN3_MON	R191	0	J11	P0.19
_P0_2_UART2_RX	R192	0	J10	P0.2
_P0_20_AIN4_MON	R193	0	H10	P0.20
_P0_21_AIN5_MON	R194	0	E8	P0.21
_P0_22_AIN6_MON	R195	0	E9	P0.22
_P0_23_GPIO_LDAC2	R196	0	D8	P0.23
_P0_24_QSPI2_SS0	R197	0	G8	P0.24
_P0_25_QSPI2_MOSI	R198	0	H8	P0.25
_P0_26_QSPI2_MISO	R199	0	J8	P0.26
_P0_27_QSPI2_SCK	R200	0	H7	P0.27
_P0_28_GPIO_EN	R201	0	J7	P0.28
			H6	P0.29

	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s) : AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 10 OF 14

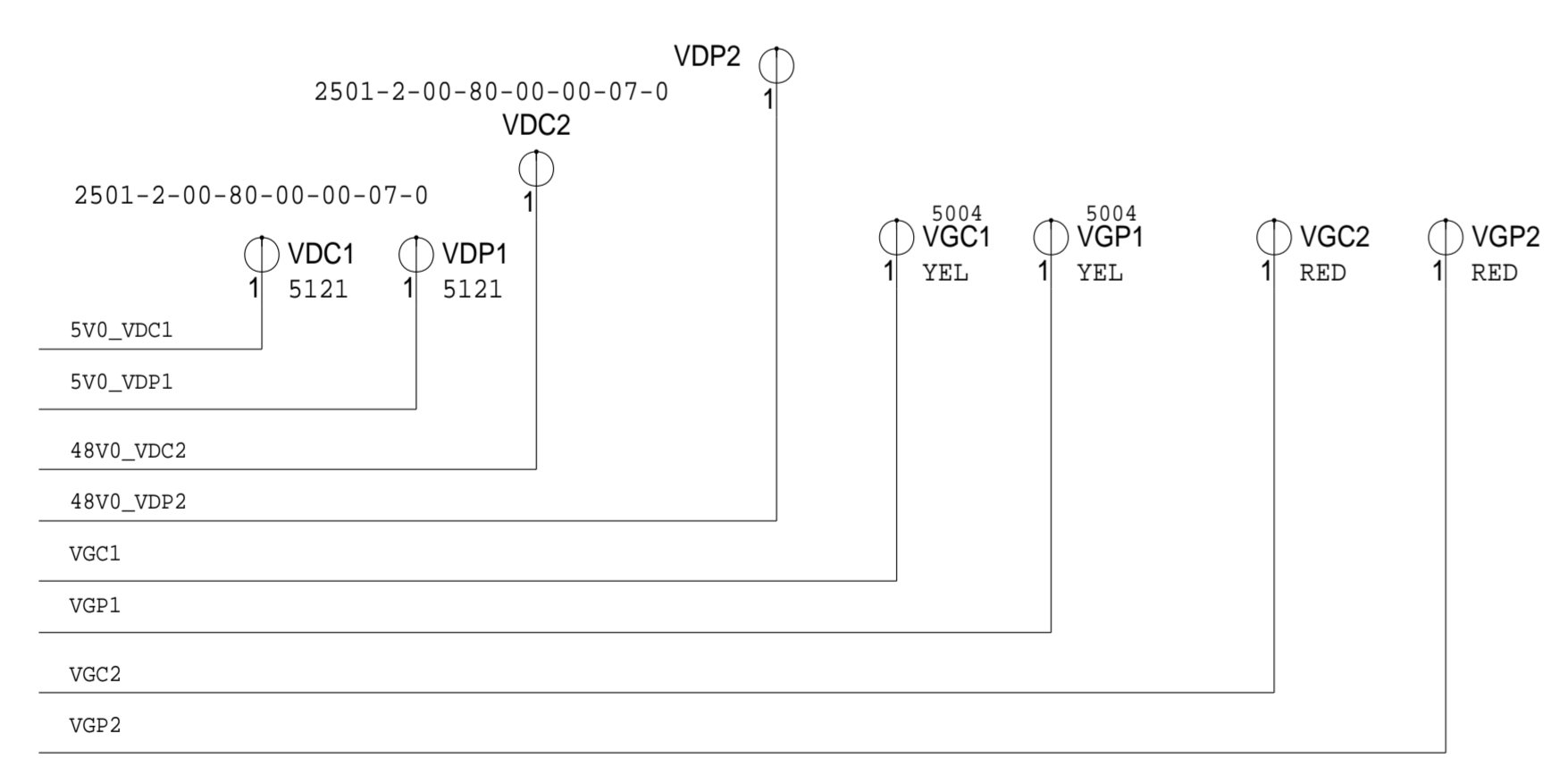
PINS , CONNECTORS

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

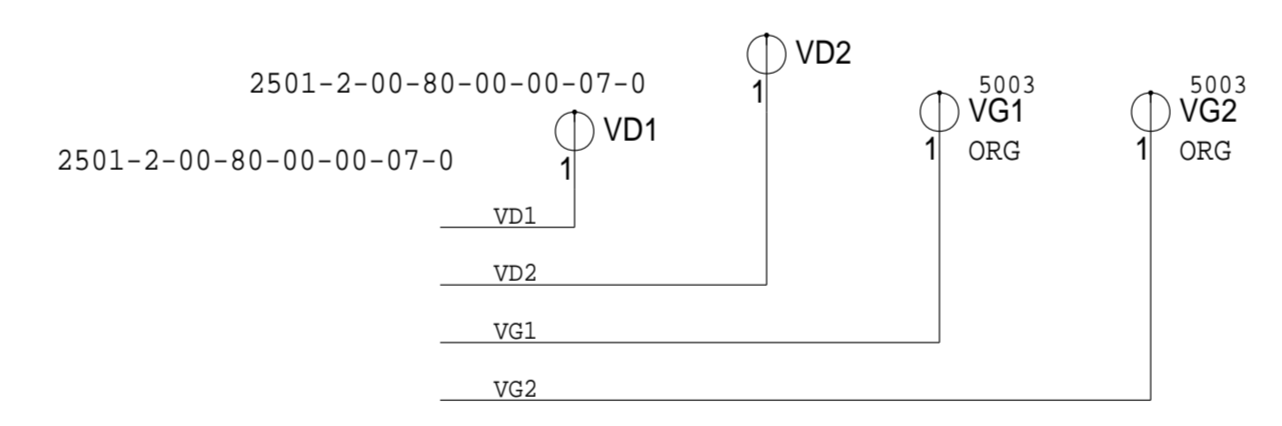
USB-UART SERIAL CONNECTION



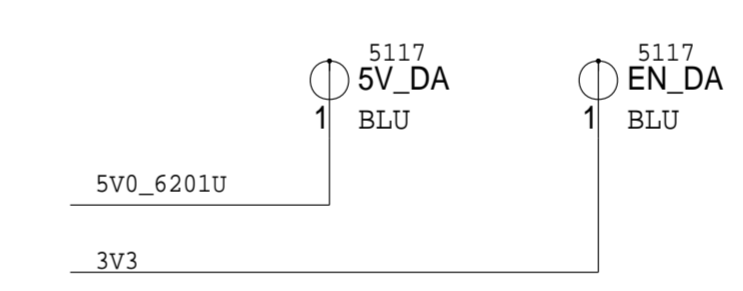
A5M36TG140 GAN AMP



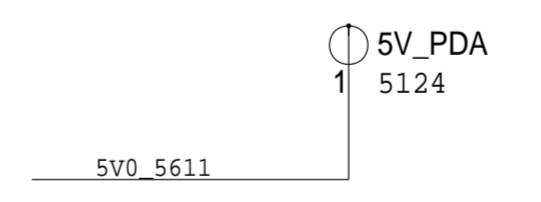
GTRB394608FC-V1 GAN AMP



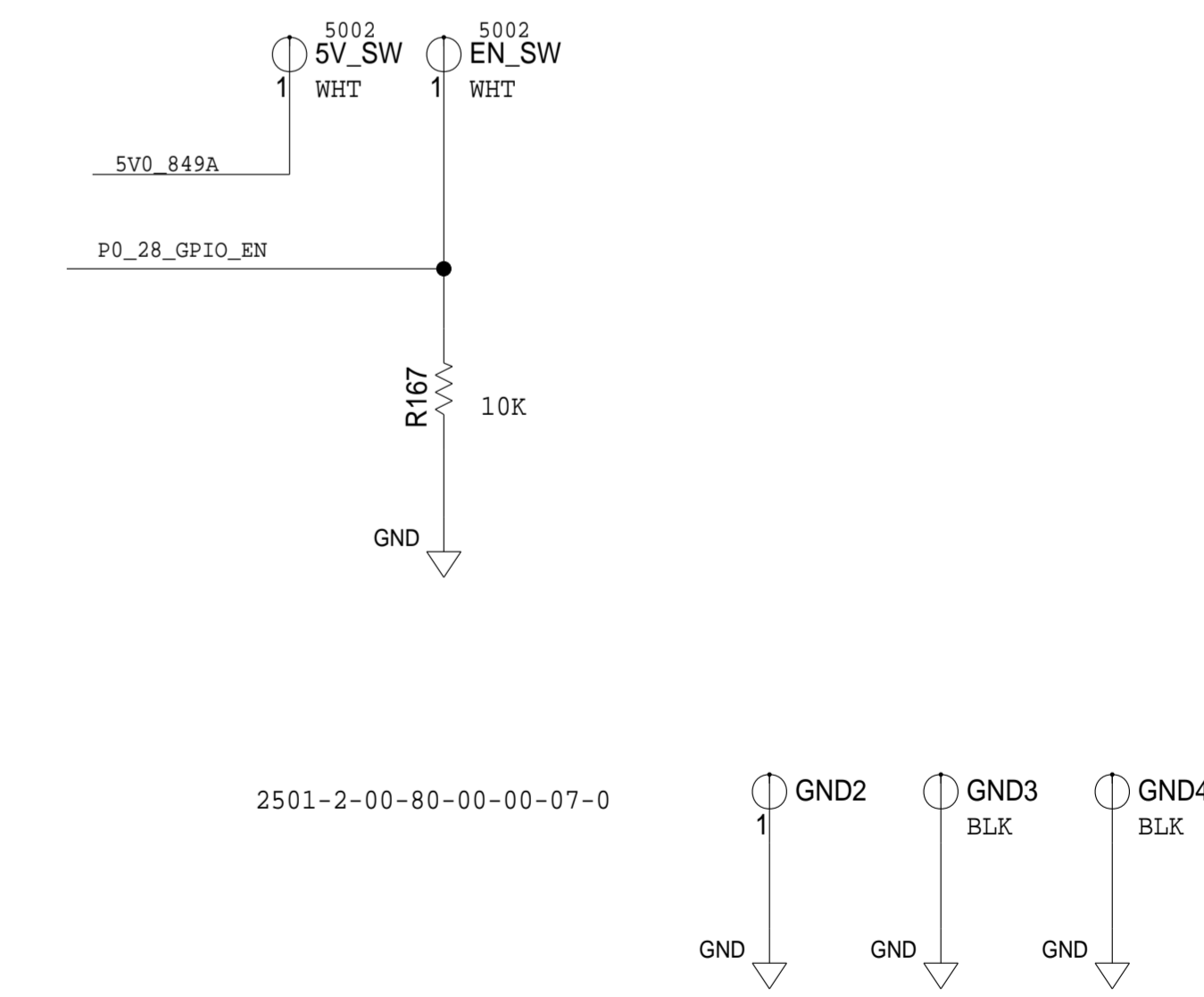
BTS6201U DRIVER AMP



ADL5611 GAIN BLOCK



HMC849A RF SWITCH

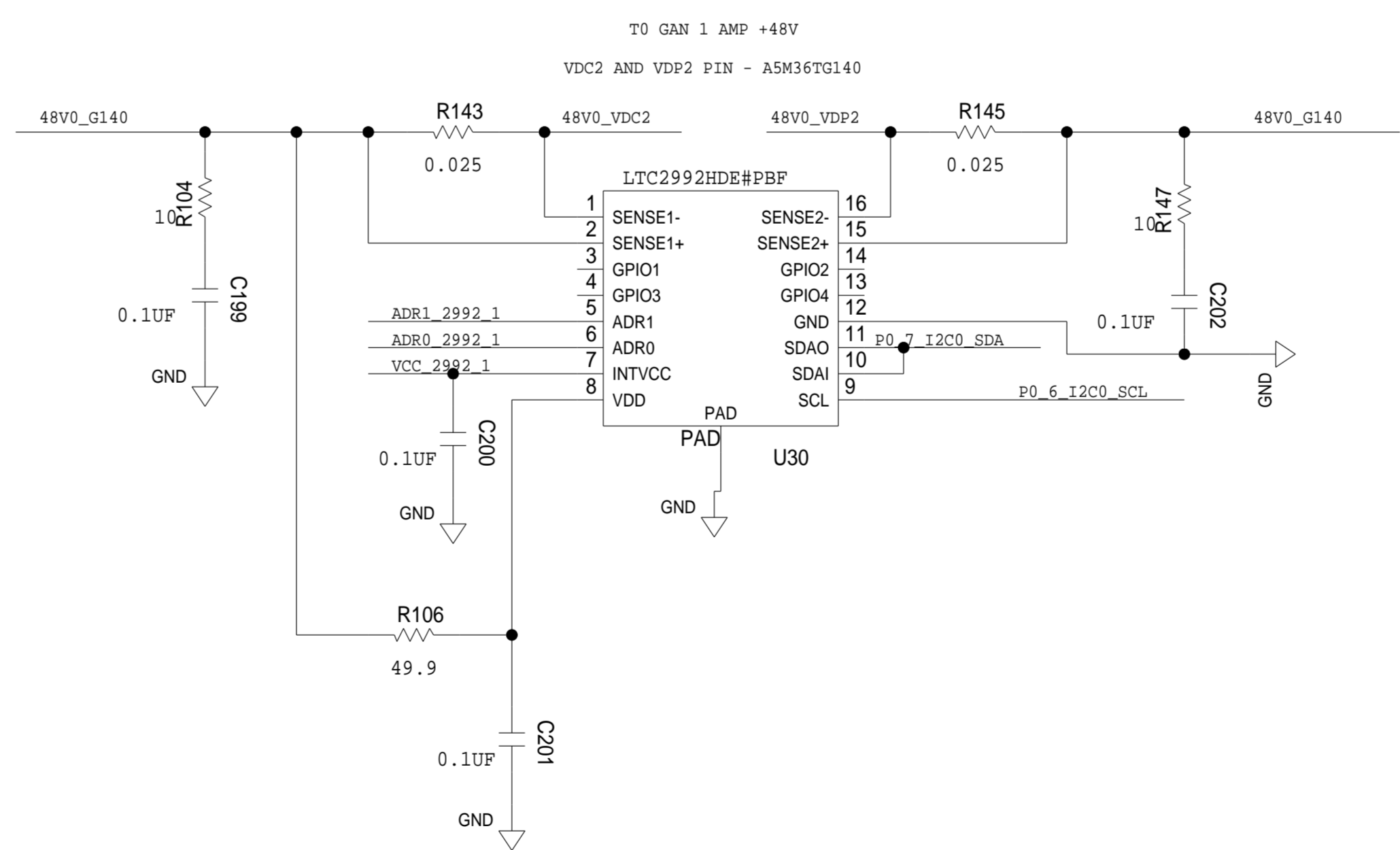
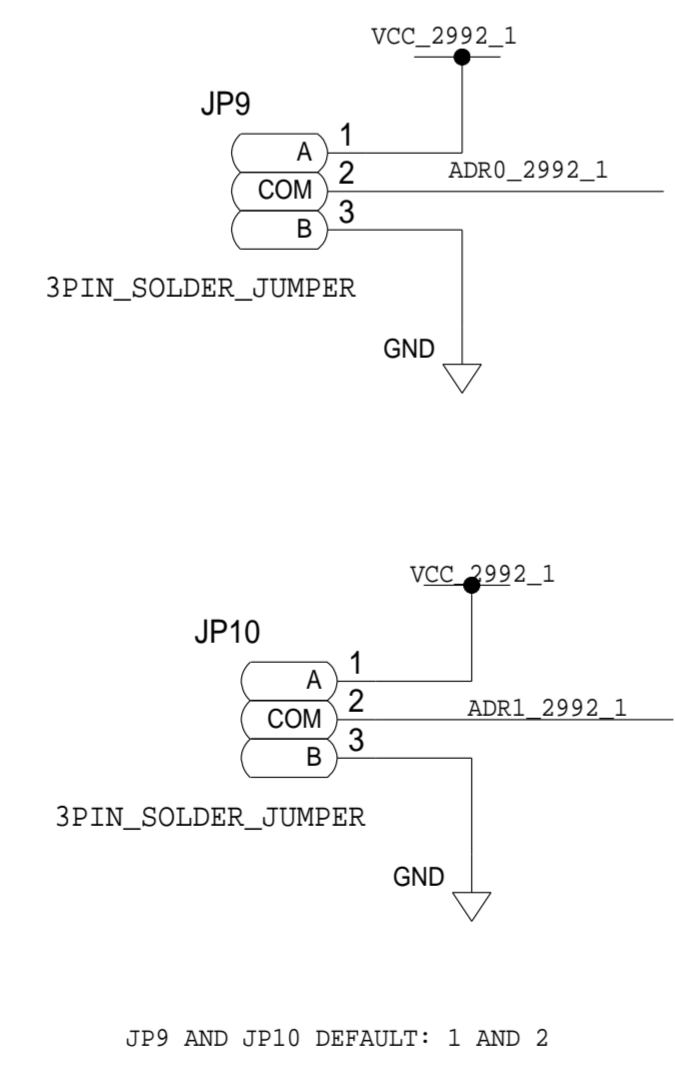
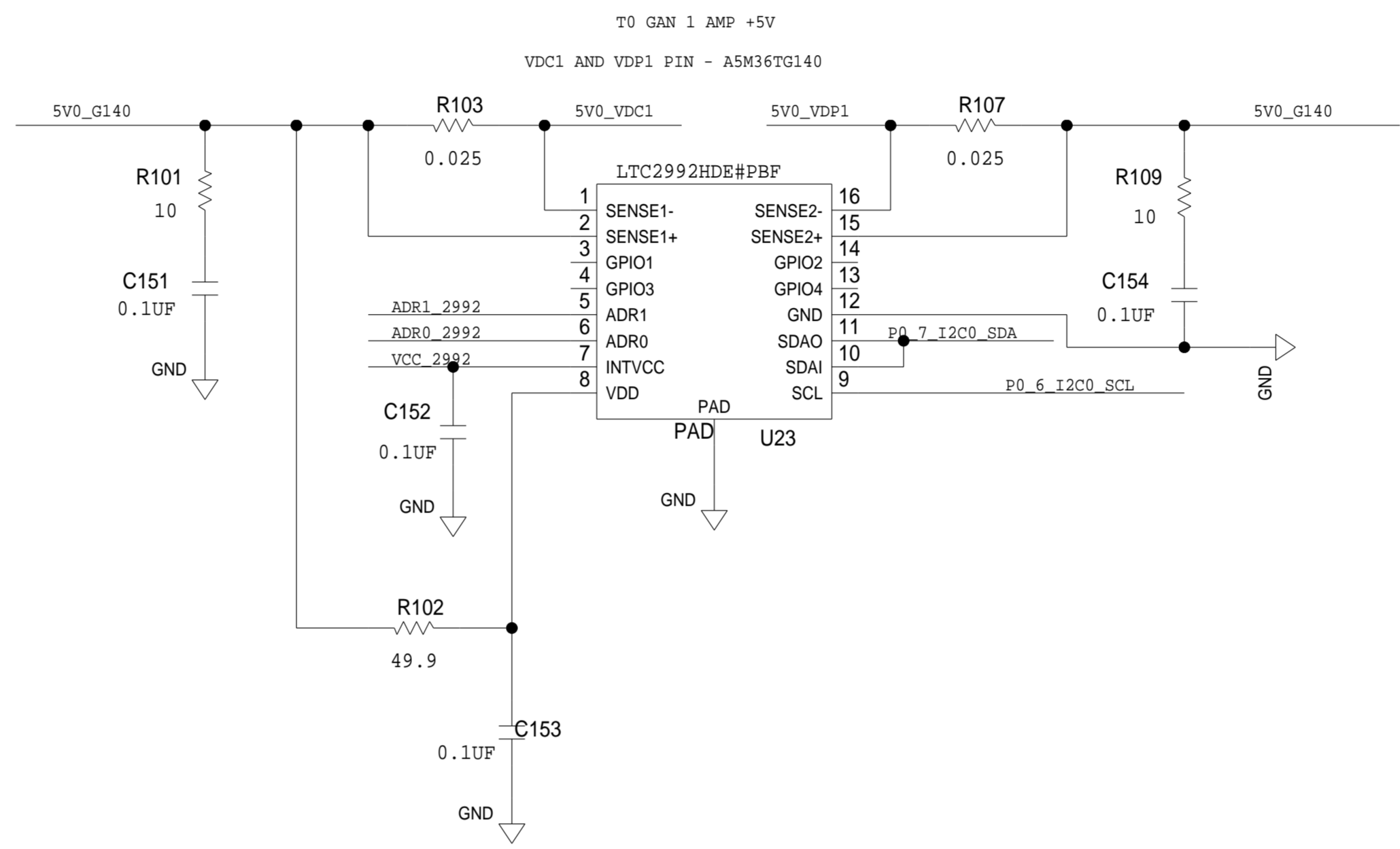
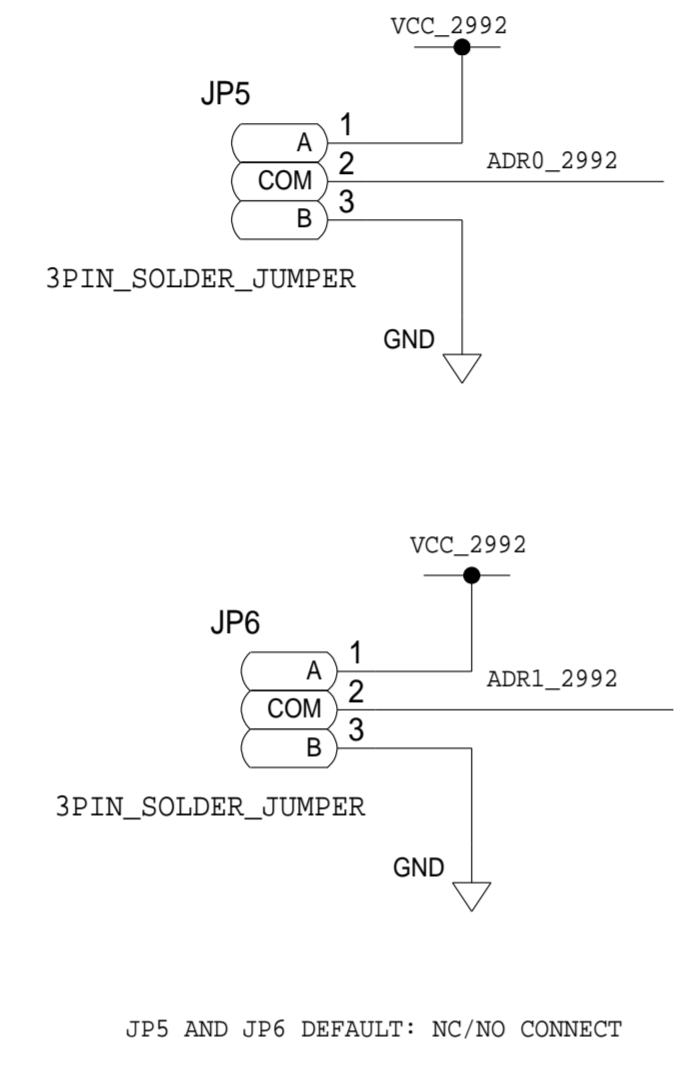


ANALOG DEVICES				SCHEMATIC			
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				DESIGN VIEW <DESIGN_VIEW>		DRAWING NO. 02_079905	
PTD ENGINEER Z. ARCEO		SIZE D		SCALE 1:1		SHEET 11 OF 14	

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

LTC2992

DRAIN CURRENT AND VOLTAGE MONITOR LDMOS AND GAN A5M36TG140



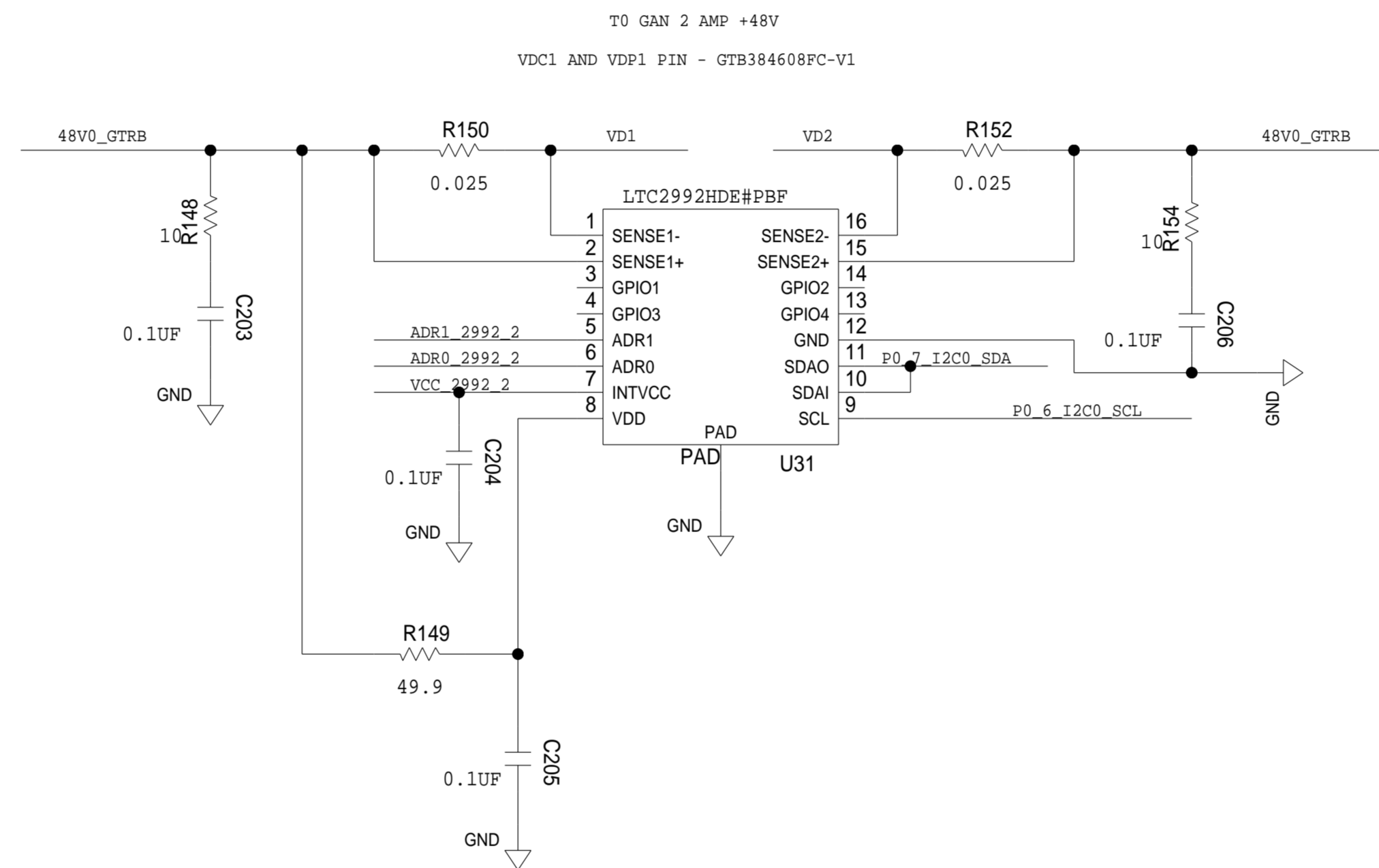
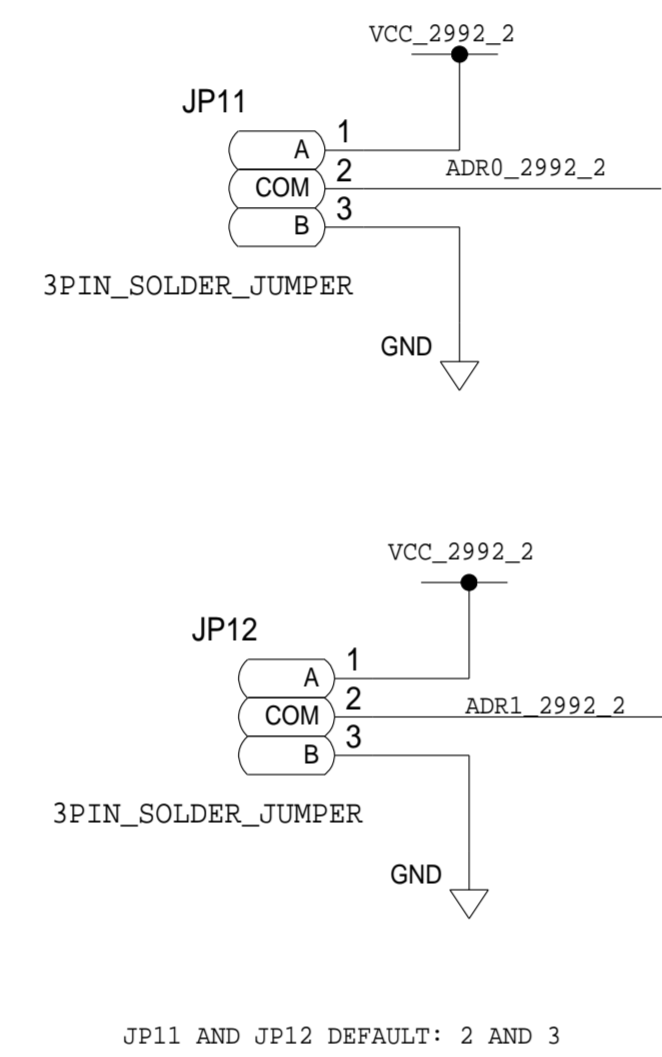
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	HW TYPE : Customer Evaluation Product(s): Ad3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 12 OF 14

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

LTC2992

DRAIN CURRENT AND VOLTAGE MONITOR

GAN GTRB384608FC-V1



	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s): AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 13 OF 14

MAX6516

TEMPERATURE SENSOR

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

Temperature Range (°C)	Output Voltage (V)	ADC Input (V)
-45	2.6	1.1581
0	2.12	0.9443
+125	0.81	0.3608

ADC REF: 1.22V INTERNAL

DEFAULT HYSTERESIS: 10 DEGREES

HYSTERESIS SETTINGS

2 DEGREES OF HYSTERESIS:

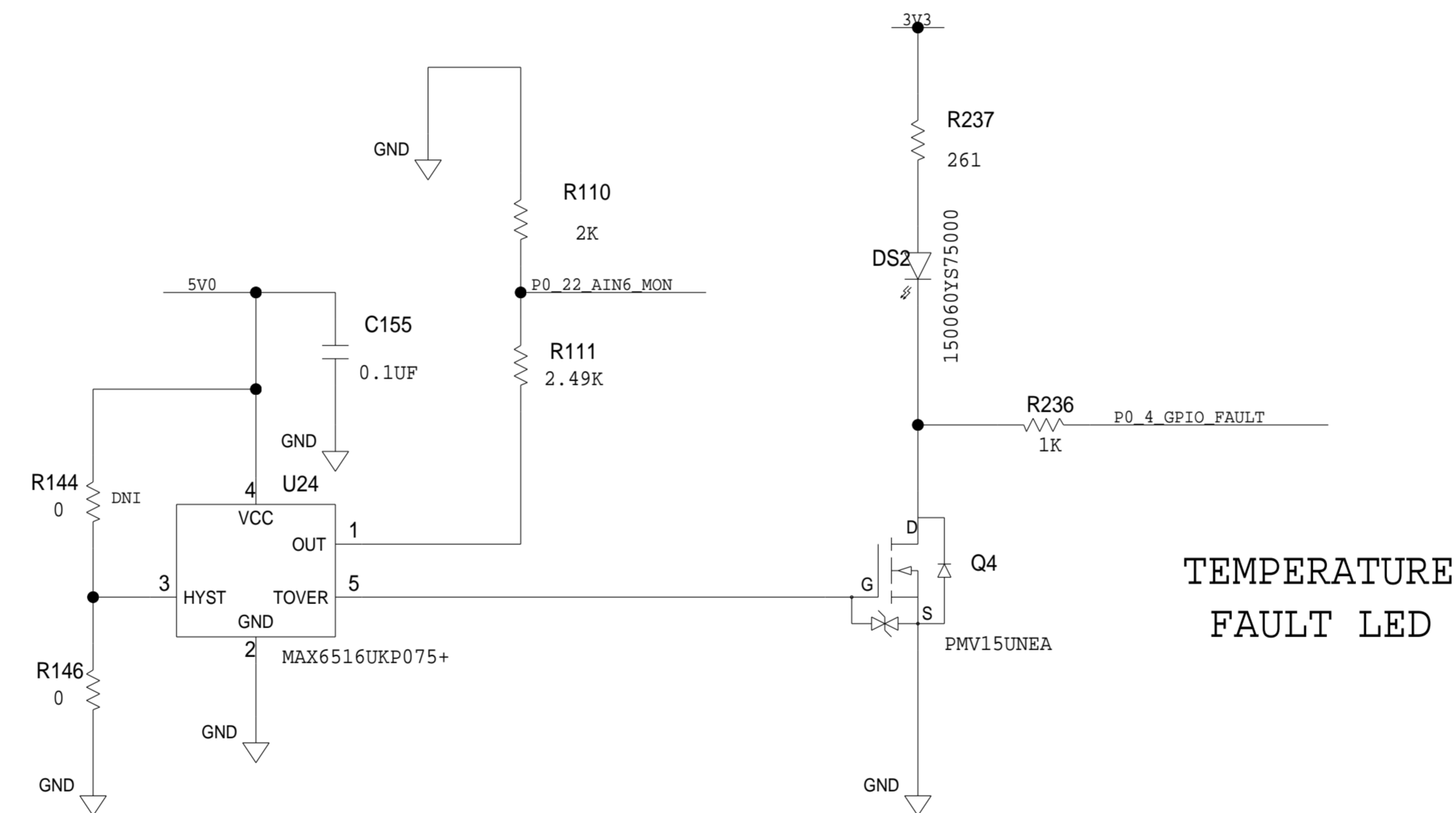
R144: CONNECT TO VCC. POPULATE WITH 0 OHM RESISTOR

R146: UNPOPULATE/NO CONNECT

10 DEGREES OF HYSTERESIS:

R144: UNPOPULATE/NO CONNECT

R146: CONNECT TO GND. POPULATE WITH 0 OHM RESISTOR



TEMPERATURE
FAULT LED

	SCHEMATIC		
	HW TYPE : Customer Evaluation Product(s): AD3552R, MAX32666 : LTC7000		
DESIGN VIEW <DESIGN_VIEW>	DRAWING NO. 02_079905	REV D	
PTD ENGINEER Z. ARCEO	SIZE D	SCALE 1:1	SHEET 14 OF 14