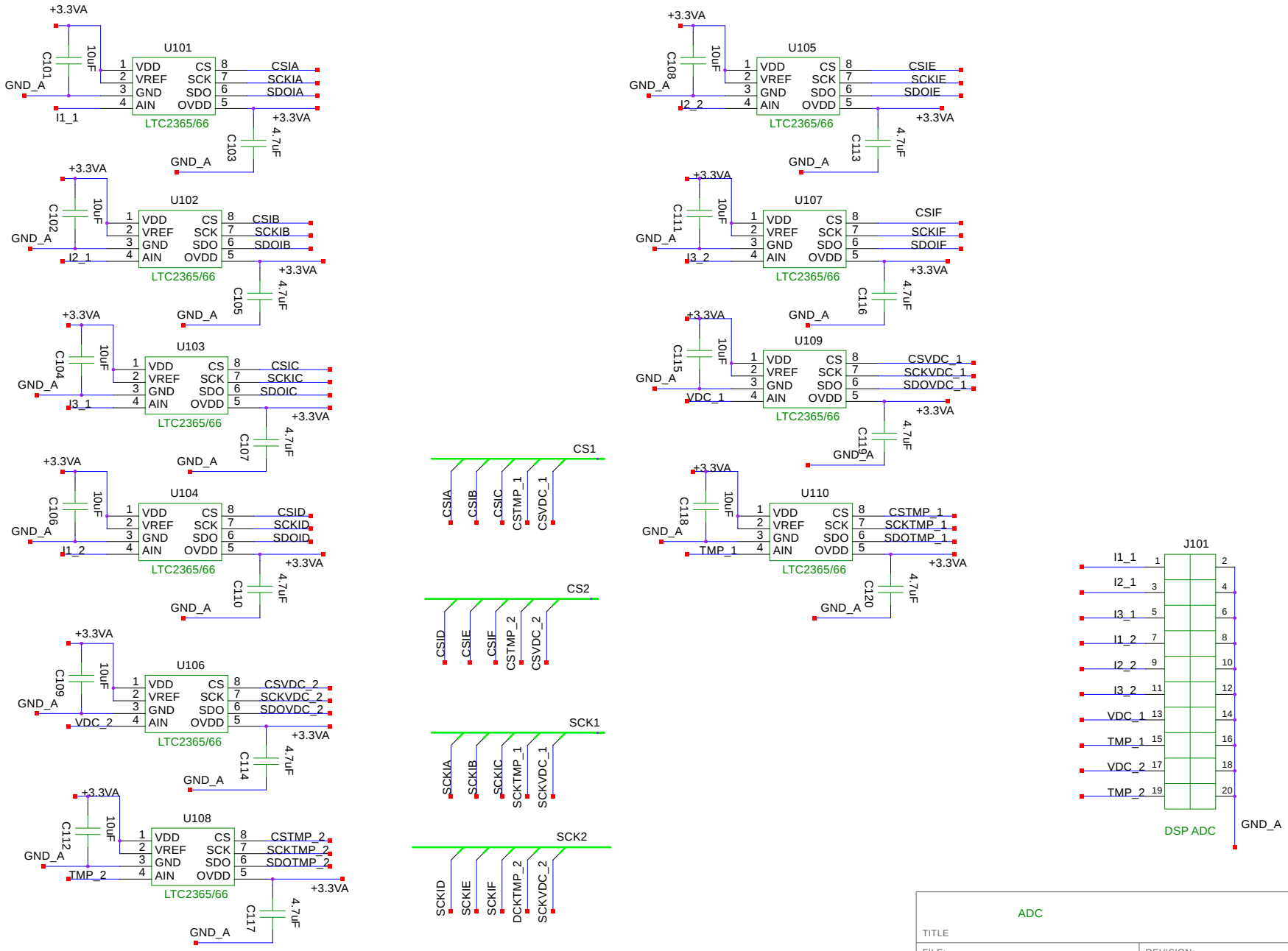
+3.3VA
C101
10uF
GND_A
I1_1
U101
VDD
VREF
GND
AIN
CS
SCK
SDO
OVDD
CSIA
SCKIA
SDOIA
LTC2365/66
C103
4.7uF
C102
I2_1
U102
CSIB
SCKIB
SDOIB
C105
C104
I3_1
U103
CSIC
SCKIC
SDOIC
C107
C106
I1_2
U104
CSID
SCKID
SDOID
C110
C109
VDC_2
U106
CSVDC_2
SCKVDC_2
SDOVDC_2
C114
C112
TMP_2
U108
CSTMP_2
SCKTMP_2
SDOTMP_2
C117
C108
I2_2
U105
CSIE
SCKIE
SDOIE
C113
C111
I3_2
U107
CSIF
SCKIF
SDOIF
C116
C115
VDC_1
U109
CSVDC_1
SCKVDC_1
SDOVDC_1
C119
C118
TMP_1
U110
CSTMP_1
SCKTMP_1
SDOTMP_1
C120
CS1
CSIA
CSIB
CSIC
CSTMP_1
CSVDC_1
CS2
CSID
CSIE
CSIF
CSTMP_2
CSVDC_2
SCK1
SCKIA
SCKIB
SCKIC
SCKTMP_1
SCKVDC_1
SCK2
SCKID
SCKIE
SCKIF
DCKTMP_2
SCKVDC_2
J101
I1_1
I2_1
I3_1
I1_2
I2_2
I3_2
VDC_1
TMP_1
VDC_2
TMP_2
DSP ADC
ADC
TITLE
FILE:
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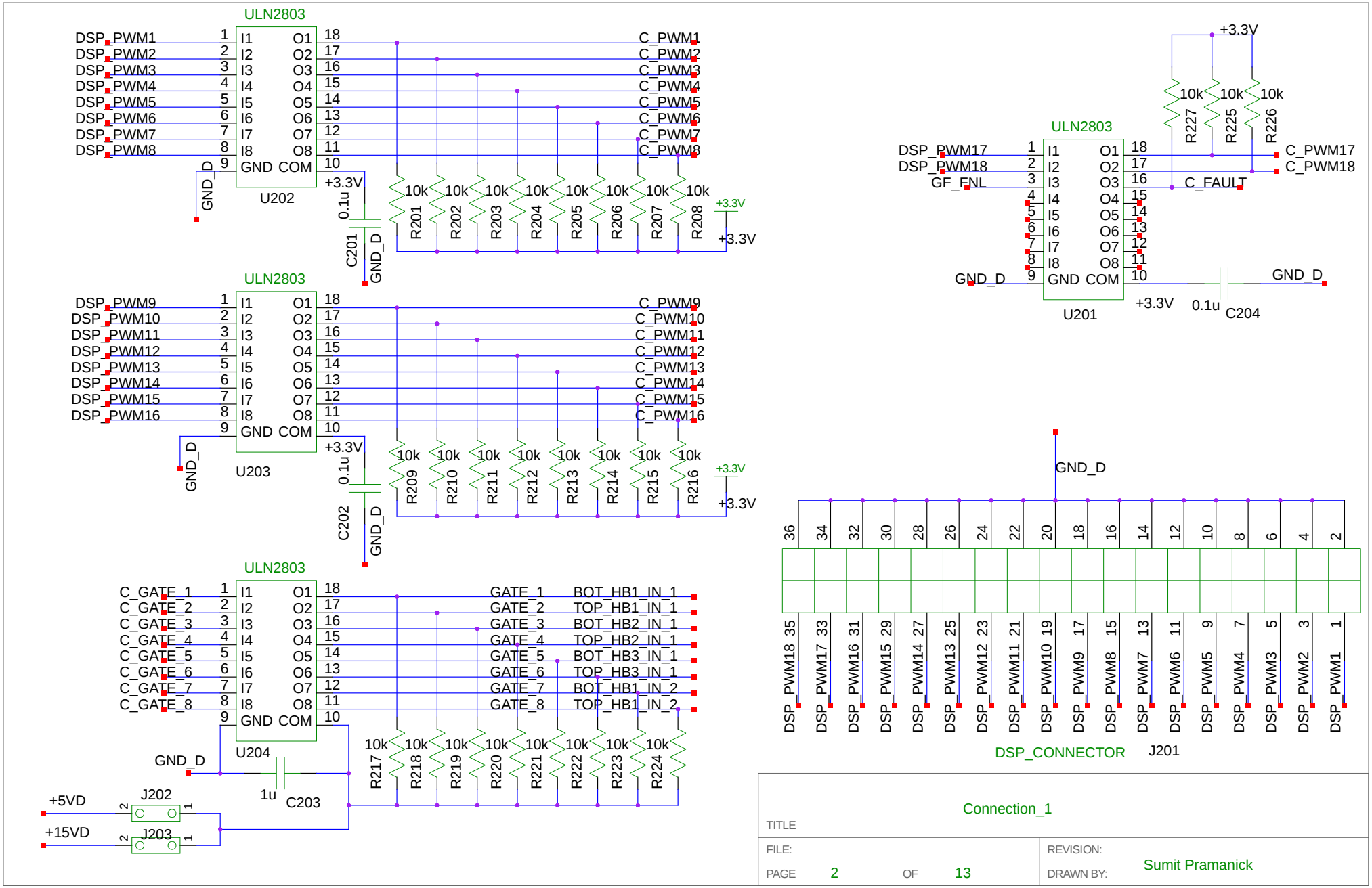
13
DRAWN BY:
Parthasarathy Nayak


ULN2803
DSP_PWM1
DSP_PWM2
DSP_PWM3
DSP_PWM4
DSP_PWM5
DSP_PWM6
DSP_PWM7
DSP_PWM8
I1
I2
I3
I4
I5
I6
I7
I8
O1
O2
O3
O4
O5
O6
O7
O8
GND COM
C_PWM1
C_PWM2
C_PWM3
C_PWM4
C_PWM5
C_PWM6
C_PWM7
C_PWM8
U202
GND_D
+3.3V
0.1u
C201
10k
R201
R202
R203
R204
R205
R206
R207
R208
ULN2803
DSP_PWM9
DSP_PWM10
DSP_PWM11
DSP_PWM12
DSP_PWM13
DSP_PWM14
DSP_PWM15
DSP_PWM16
C_PWM9
C_PWM10
C_PWM11
C_PWM12
C_PWM13
C_PWM14
C_PWM15
C_PWM16
U203
C202
R209
R210
R211
R212
R213
R214
R215
R216
ULN2803
C_GATE_1
C_GATE_2
C_GATE_3
C_GATE_4
C_GATE_5
C_GATE_6
C_GATE_7
C_GATE_8
GATE_1
GATE_2
GATE_3
GATE_4
GATE_5
GATE_6
GATE_7
GATE_8
BOT_HB1_IN_1
TOP_HB1_IN_1
BOT_HB2_IN_1
TOP_HB2_IN_1
BOT_HB3_IN_1
TOP_HB3_IN_1
BOT_HB1_IN_2
TOP_HB1_IN_2
U204
1u
C203
R217
R218
R219
R220
R221
R222
R223
R224
+5VD
+15VD
J202
J203
ULN2803
DSP_PWM17
DSP_PWM18
GF_FNL
C_PWM17
C_PWM18
C_FAULT
U201
C204
R227
R225
R226
DSP_CONNECTOR
J201
Connection_1
TITLE
FILE:
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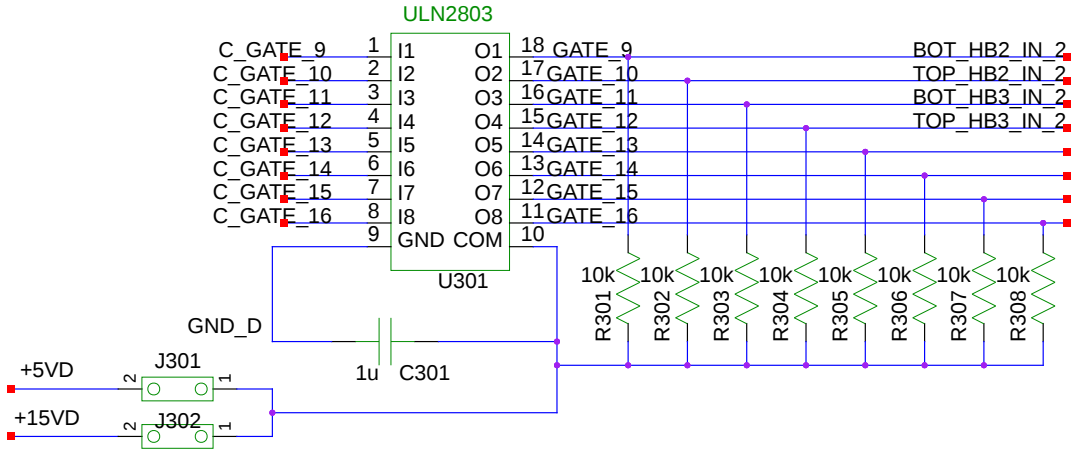

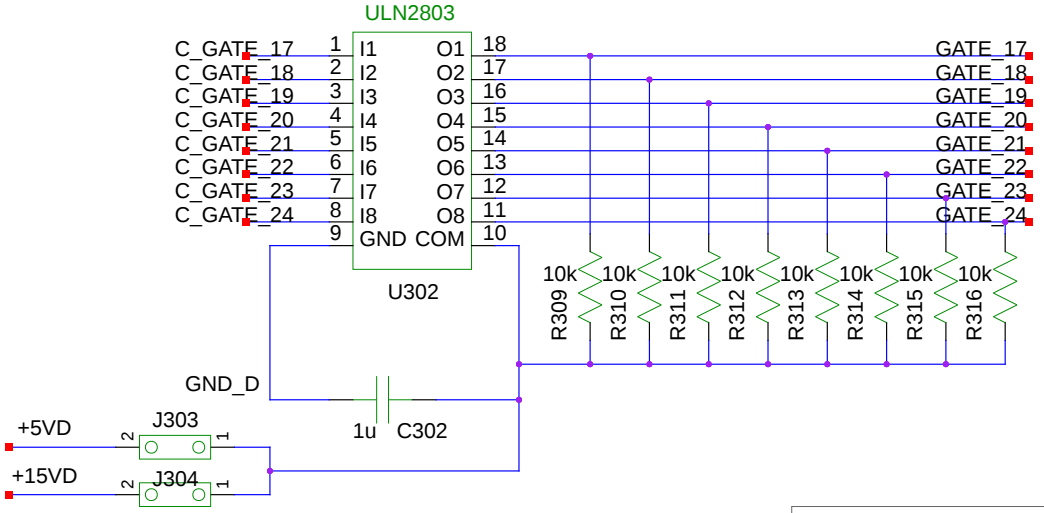

TITLE	Connection_2		
FILE:		REVISION:	
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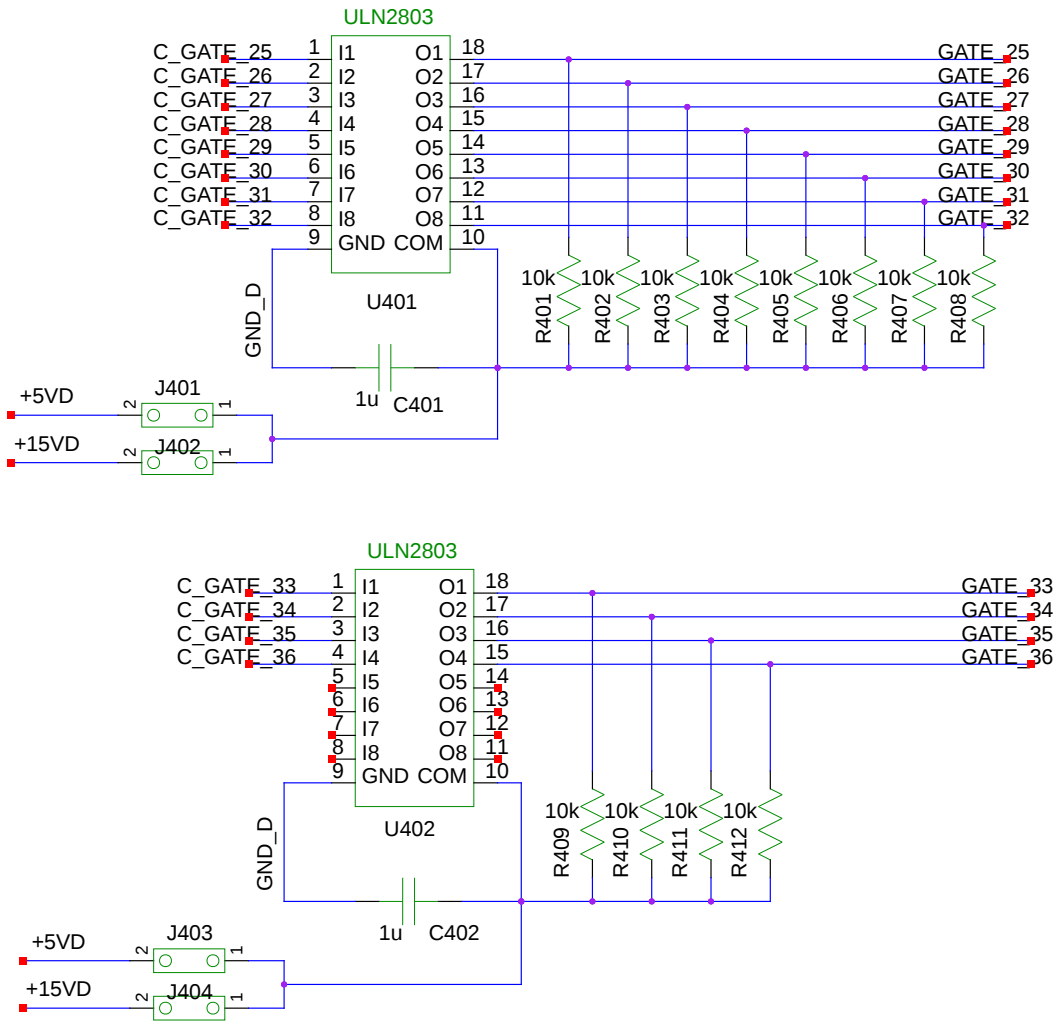
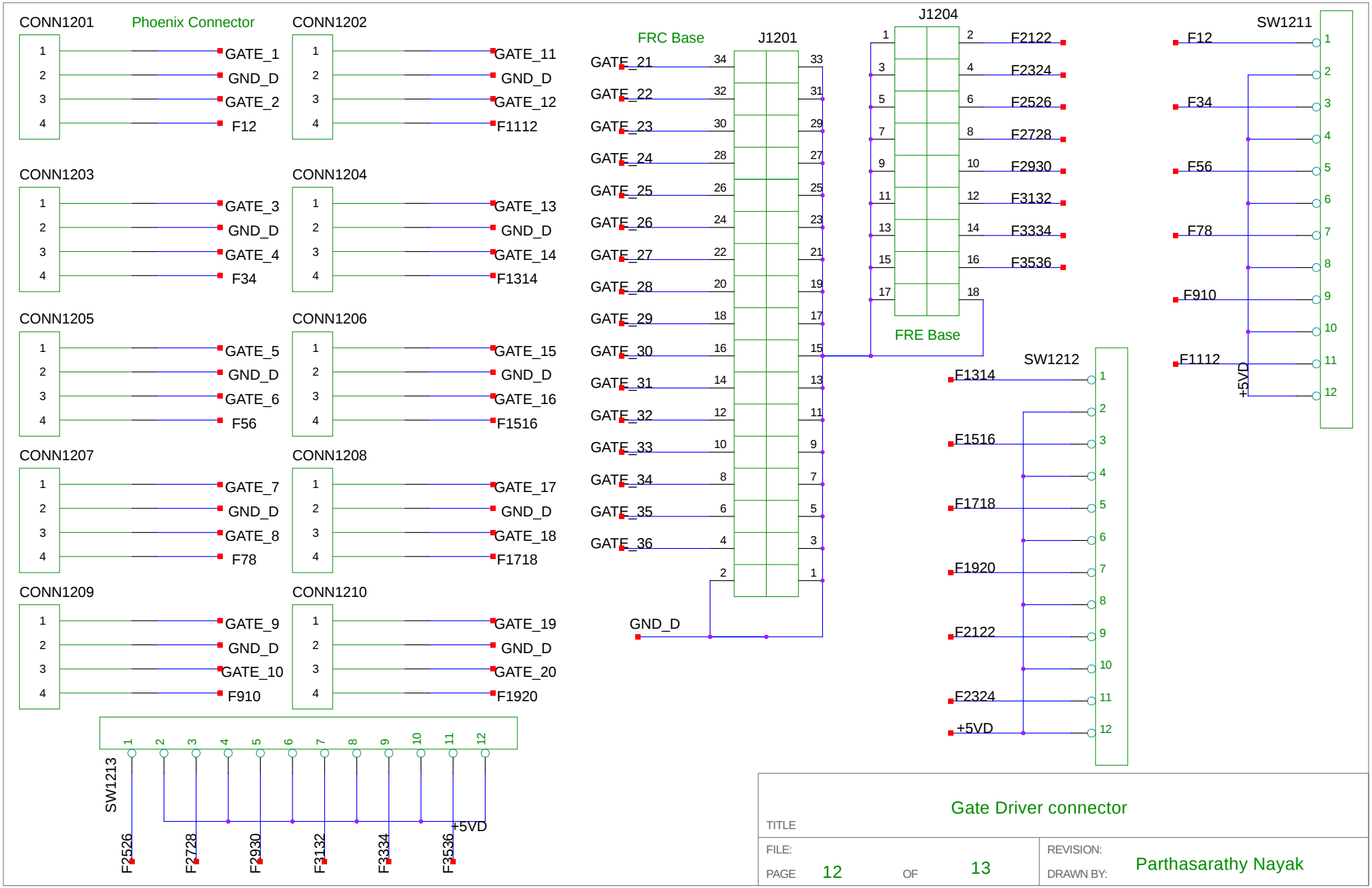


TITLE	connection_3		
FILE:		REVISION:	
PAGE 4	OF 13	DRAWN BY:	Sumit Pramanick


CONN1201
Phoenix Connector
1
2
3
4
GATE_1
GND_D
GATE_2
F12
CONN1202
GATE_11
GND_D
GATE_12
F1112
CONN1203
GATE_3
GND_D
GATE_4
F34
CONN1204
GATE_13
GND_D
GATE_14
F1314
CONN1205
GATE_5
GND_D
GATE_6
F56
CONN1206
GATE_15
GND_D
GATE_16
F1516
CONN1207
GATE_7
GND_D
GATE_8
F78
CONN1208
GATE_17
GND_D
GATE_18
F1718
CONN1209
GATE_9
GND_D
GATE_10
F910
CONN1210
GATE_19
GND_D
GATE_20
F1920
SW1213
F2526
F2728
F2930
F3132
F3334
F3536
+5VD
FRC Base
J1201
GATE_21
GATE_22
GATE_23
GATE_24
GATE_25
GATE_26
GATE_27
GATE_28
GATE_29
GATE_30
GATE_31
GATE_32
GATE_33
GATE_34
GATE_35
GATE_36
GND_D
J1204
F2122
F2324
F2526
F2728
F2930
F3132
F3334
F3536
FRE Base
SW1212
F1314
F1516
F1718
F1920
F2122
F2324
+5VD
SW1211
F12
F34
F56
F78
F910
F1112
+5VD
Gate Driver connector
TITLE
FILE:
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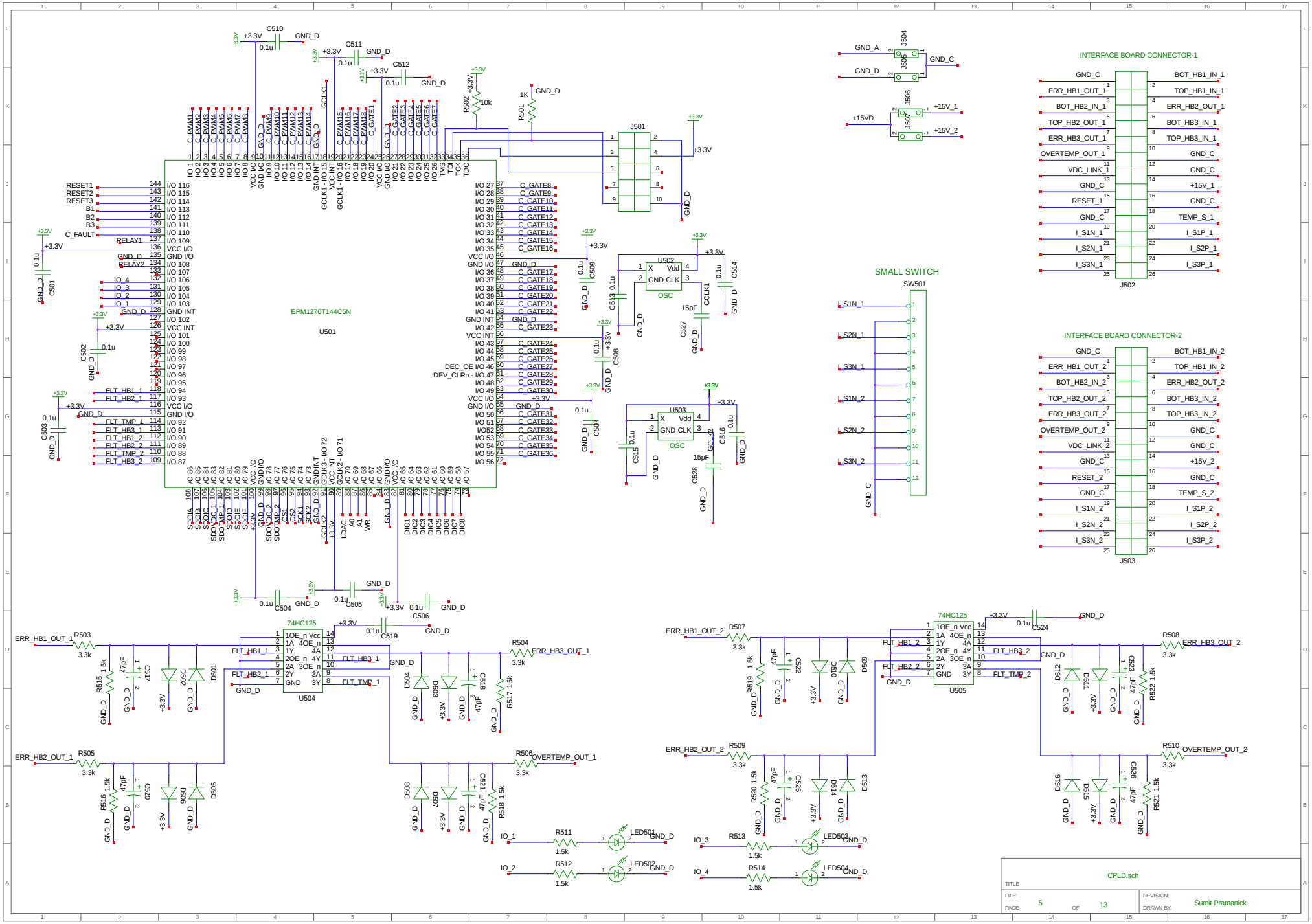
DRAWN BY: Parthasarathy Nayak


EPM1270T144C5N
U501
INTERFACE BOARD CONNECTOR-1
J502
INTERFACE BOARD CONNECTOR-2
J503
SMALL SWITCH
SW501
J504
J505
J506
J507
74HC125
U504
U505
OSC
CPLD.sch
Sumit Pramanick
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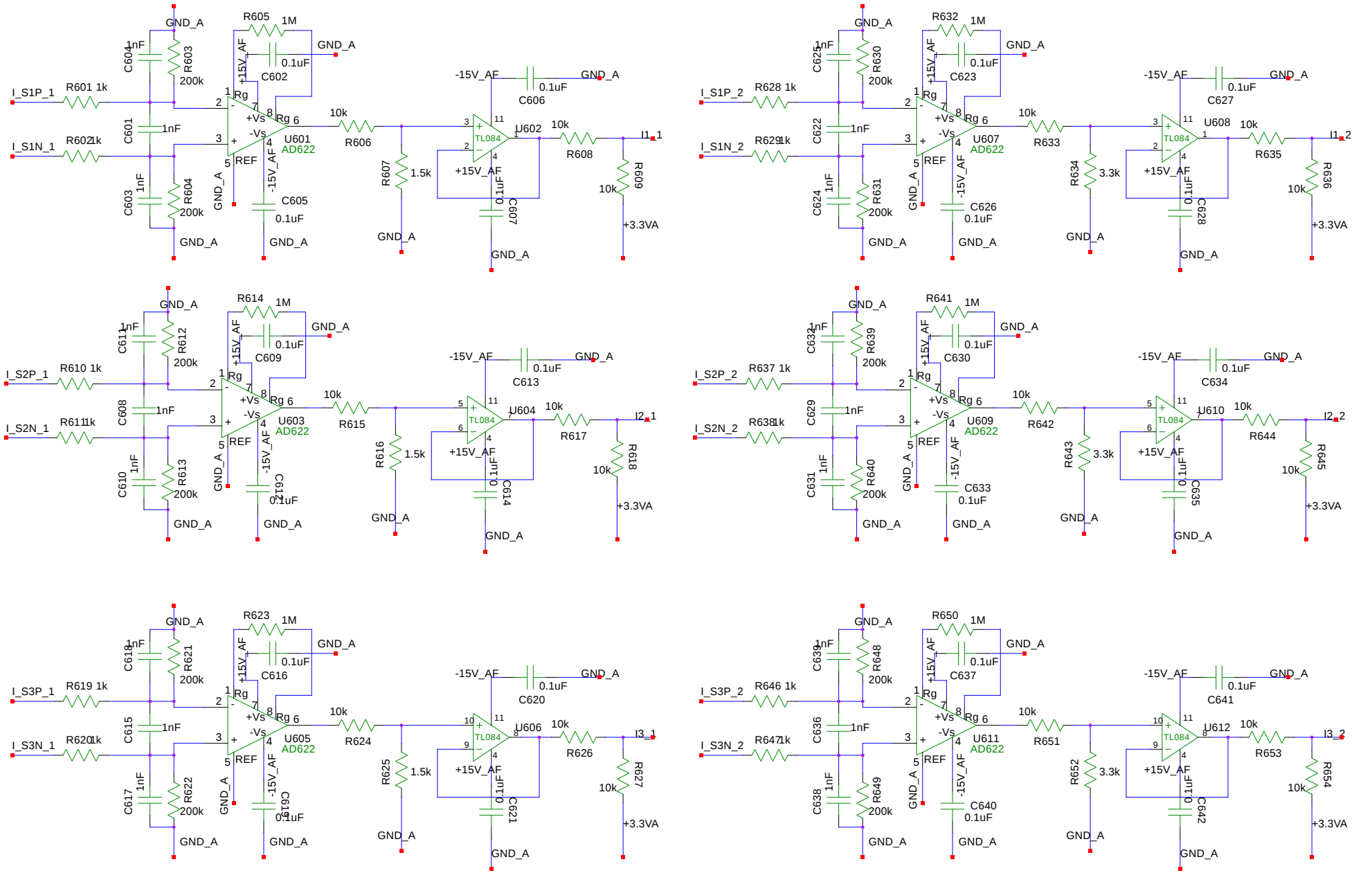

TITLE	Current Conditioning		
FILE:		REVISION:	
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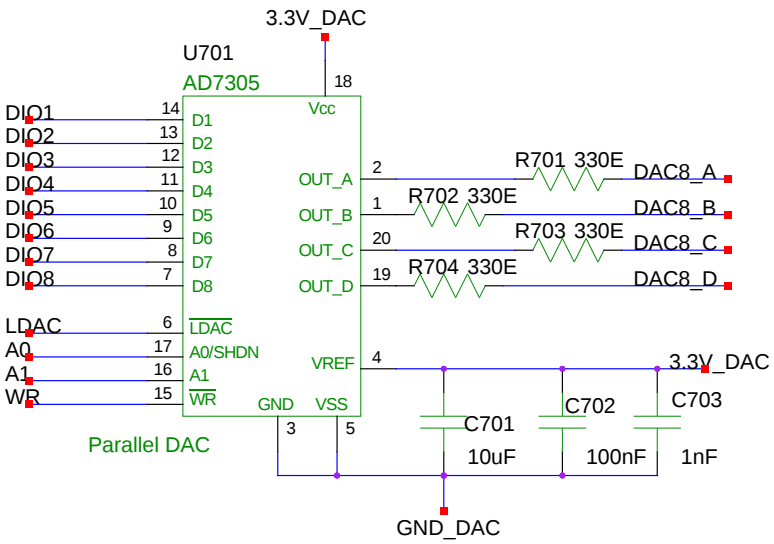
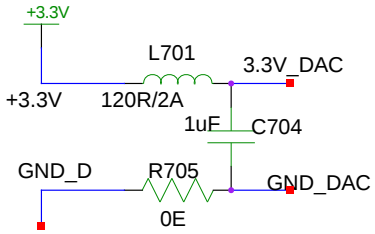
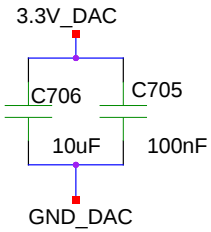
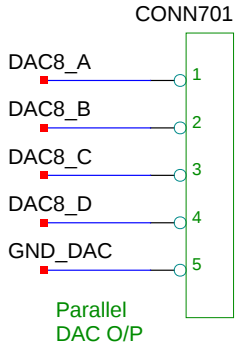
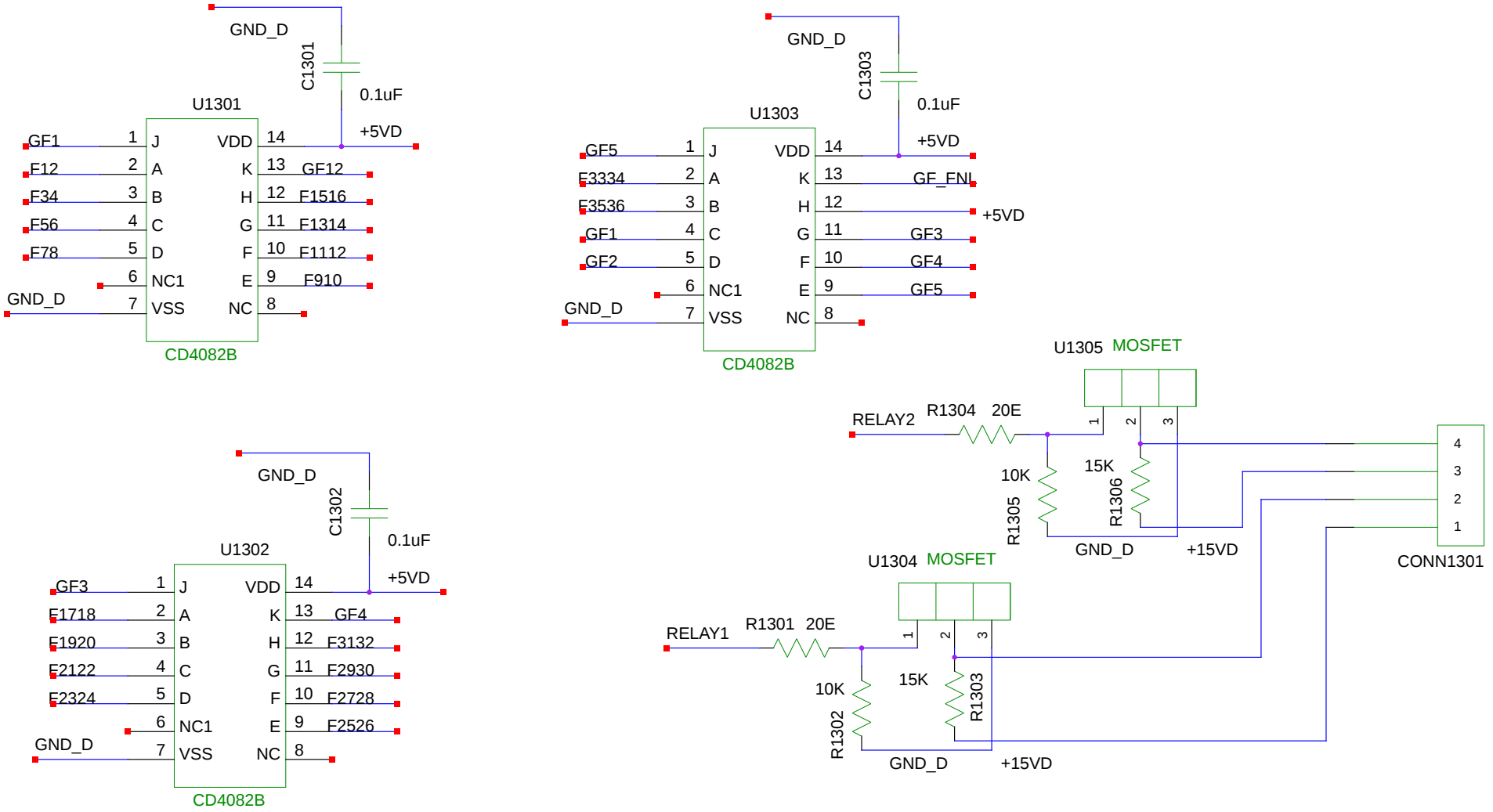




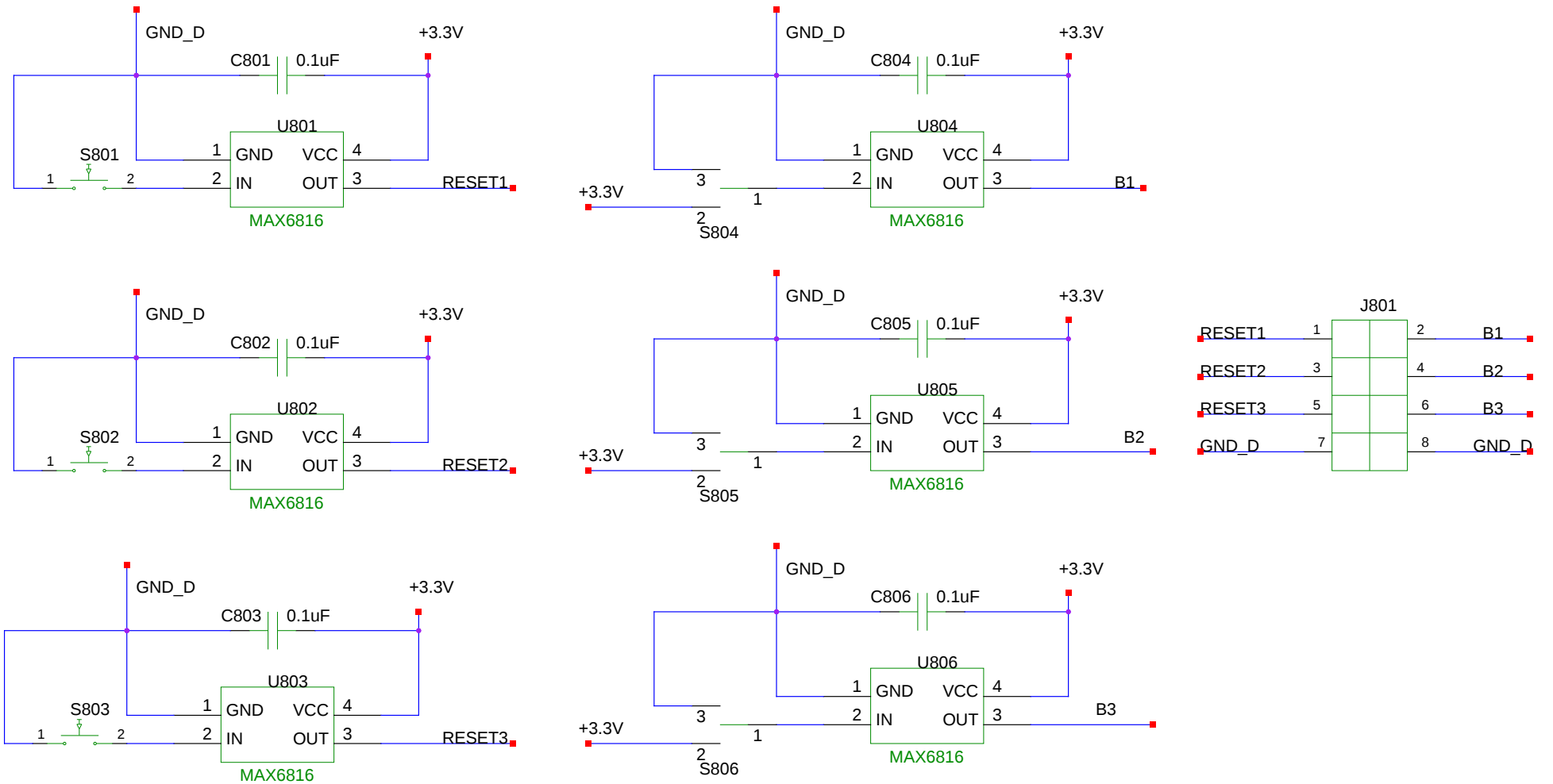




TITLE: DAC			
FILE:	PAGE 7	OF 13	REVISION:
			DRAWN BY: Sumit Pramanick



TITLE	Fault		
FILE:		REVISION:	
PAGE	13 OF 13	DRAWN BY:	Parthasarathy Nayak



TITLE	Handshaking		
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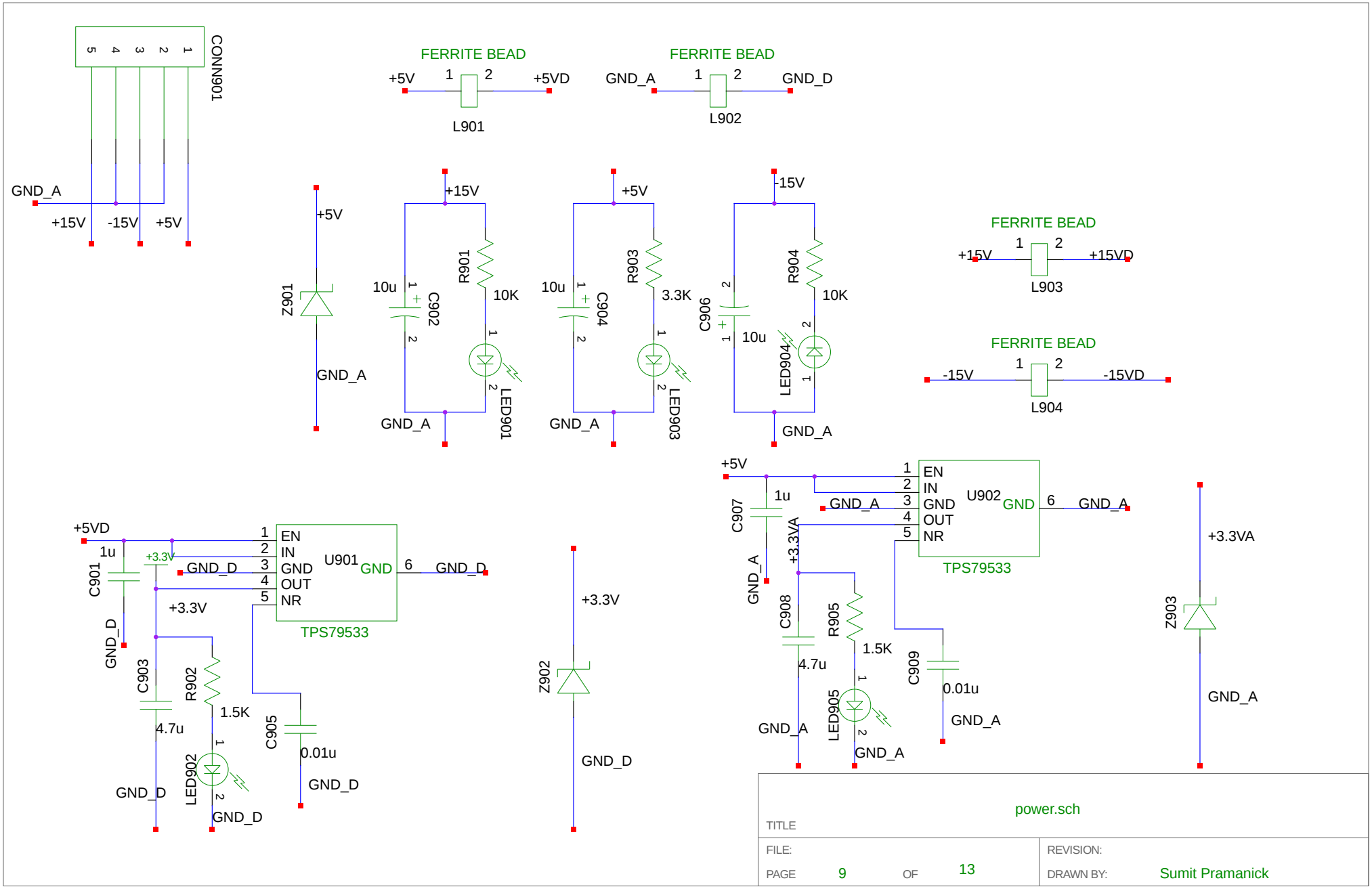
CONN901
5 4 3 2 1
GND_A
+15V -15V +5V
FERRITE BEAD
+5V 1 2 +5VD
L901
FERRITE BEAD
GND_A 1 2 GND_D
L902
+5V
Z901
GND_A
+15V
10u C902
R901 10K
LED901
GND_A
+5V
10u C904
R903 3.3K
LED903
GND_A
-15V
C906 10u
R904 10K
LED904
GND_A
FERRITE BEAD
+15V 1 2 +15VD
L903
FERRITE BEAD
-15V 1 2 -15VD
L904
+5VD
1u C901
+3.3V
GND_D
+3.3V
C903 4.7u
R902 1.5K
LED902
GND_D
C905 0.01u
GND_D
1 EN
2 IN
3 GND
4 OUT
5 NR
U901 GND 6 GND_D
TPS79533
+3.3V
Z902
GND_D
+5V
1u C907
GND_A
+3.3VA
C908 4.7u
R905 1.5K
LED905
GND_A
C909 0.01u
GND_A
1 EN
2 IN
3 GND
4 OUT
5 NR
U902 GND 6 GND_A
TPS79533
+3.3VA
Z903
GND_A
TITLE
power.sch
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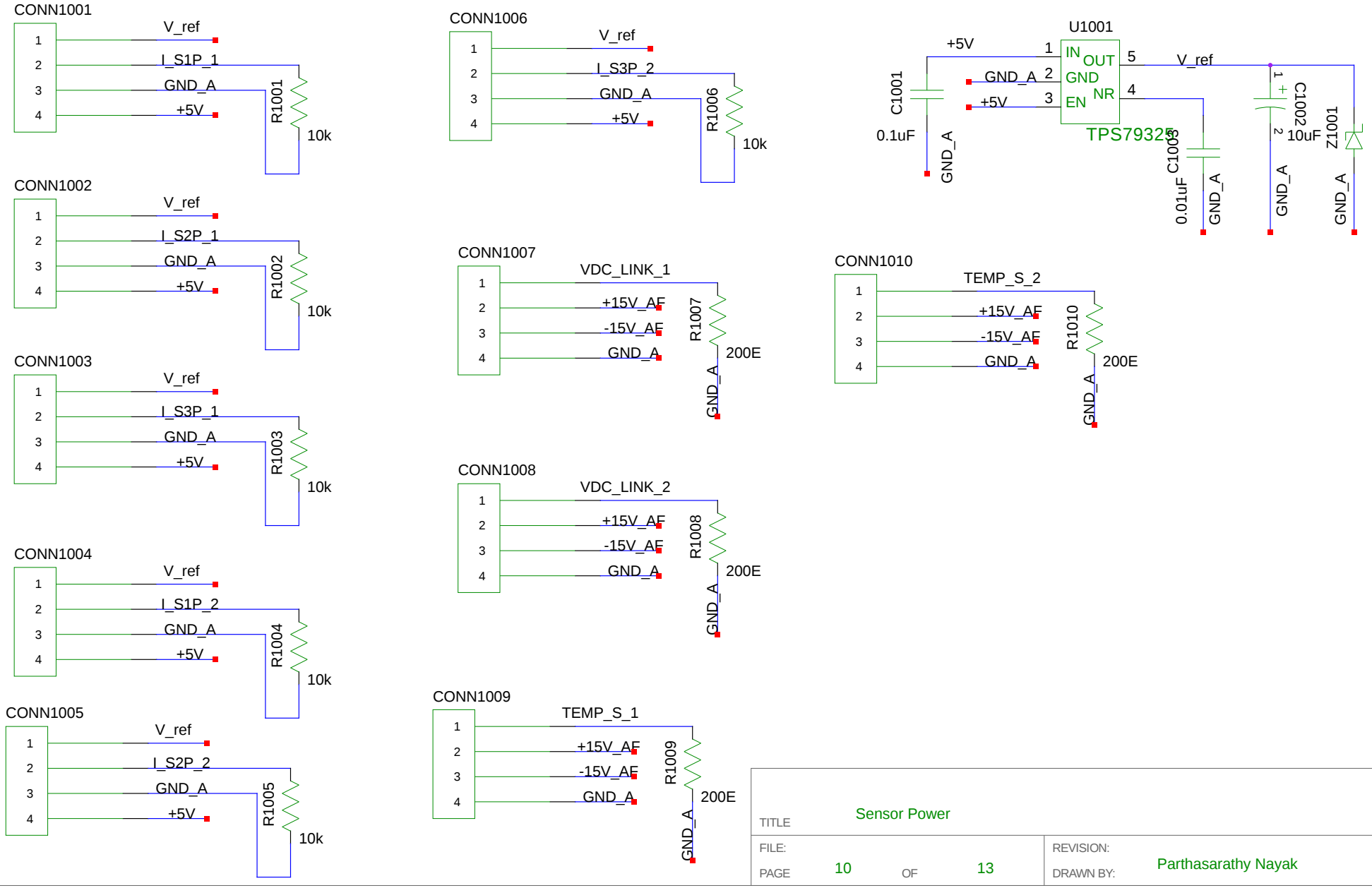
CONN1001
1
2
3
4
V_ref
I_S1P_1
GND_A
+5V
R1001
10k
CONN1002
V_ref
I_S2P_1
GND_A
+5V
R1002
10k
CONN1003
V_ref
I_S3P_1
GND_A
+5V
R1003
10k
CONN1004
V_ref
I_S1P_2
GND_A
+5V
R1004
10k
CONN1005
V_ref
I_S2P_2
GND_A
+5V
R1005
10k
CONN1006
V_ref
I_S3P_2
GND_A
+5V
R1006
10k
CONN1007
VDC_LINK_1
+15V_AF
-15V_AF
GND_A
R1007
200E
GND_A
CONN1008
VDC_LINK_2
+15V_AF
-15V_AF
GND_A
R1008
200E
GND_A
CONN1009
TEMP_S_1
+15V_AF
-15V_AF
GND_A
R1009
200E
GND_A
U1001
+5V
GND_A
+5V
IN
GND
EN
OUT
NR
V_ref
TPS79325
C1001
0.1uF
GND_A
C1003
0.01uF
GND_A
C1002
10uF
GND_A
Z1001
GND_A
CONN1010
TEMP_S_2
+15V_AF
-15V_AF
GND_A
R1010
200E
GND_A
TITLE
Sensor Power
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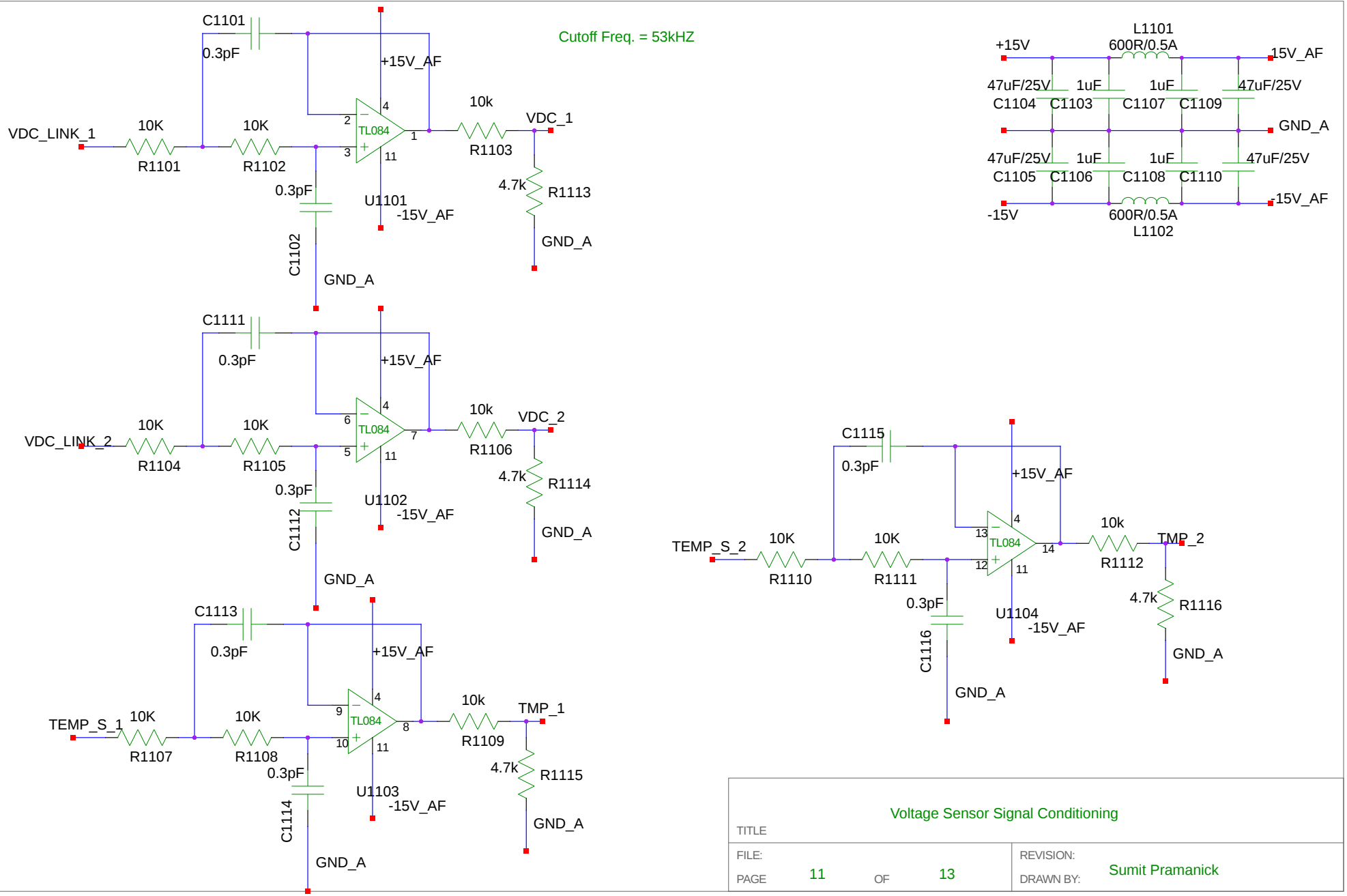
Parthasarathy Nayak



Voltage Sensor Signal Conditioning

TITLE

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