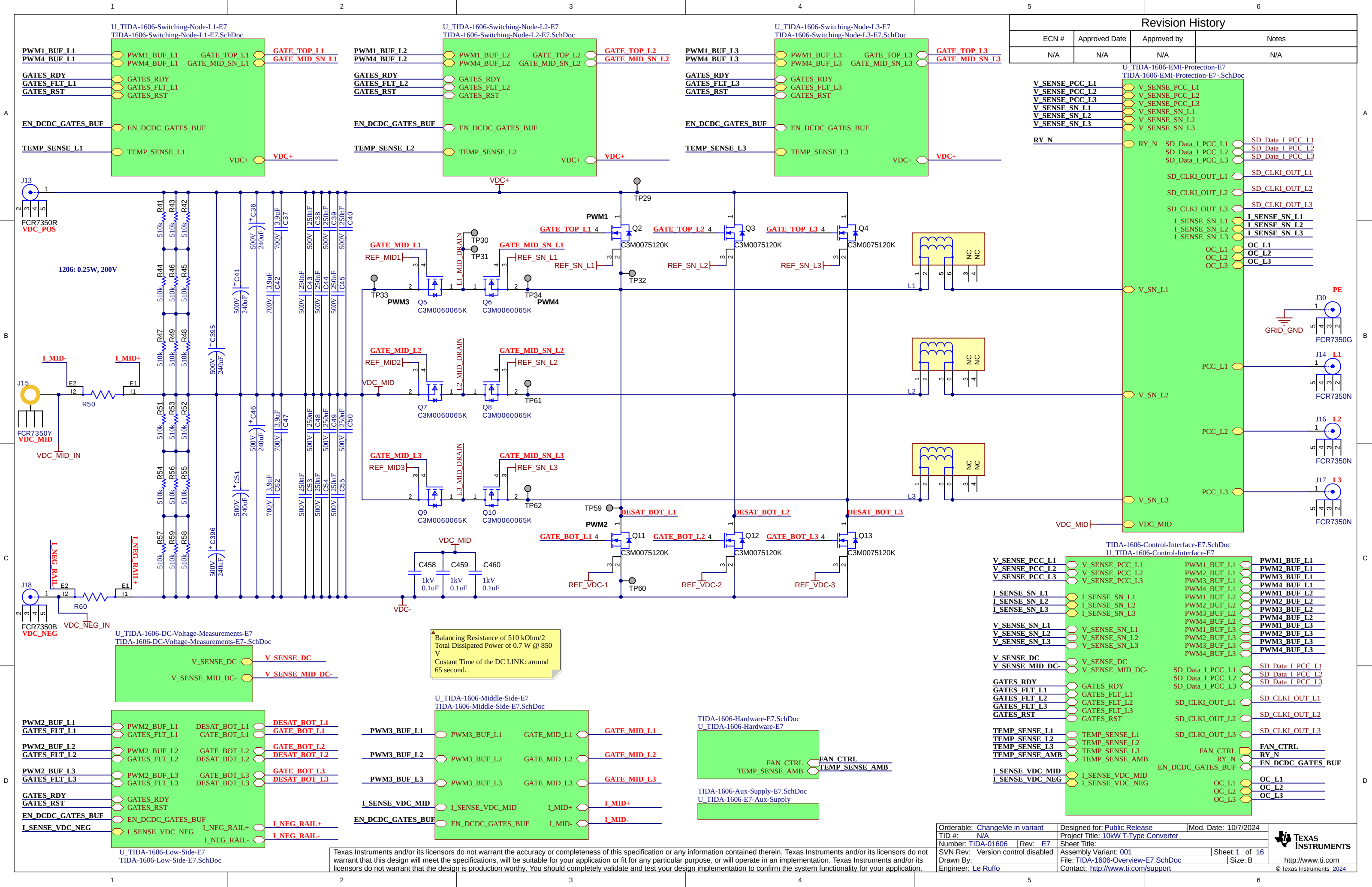




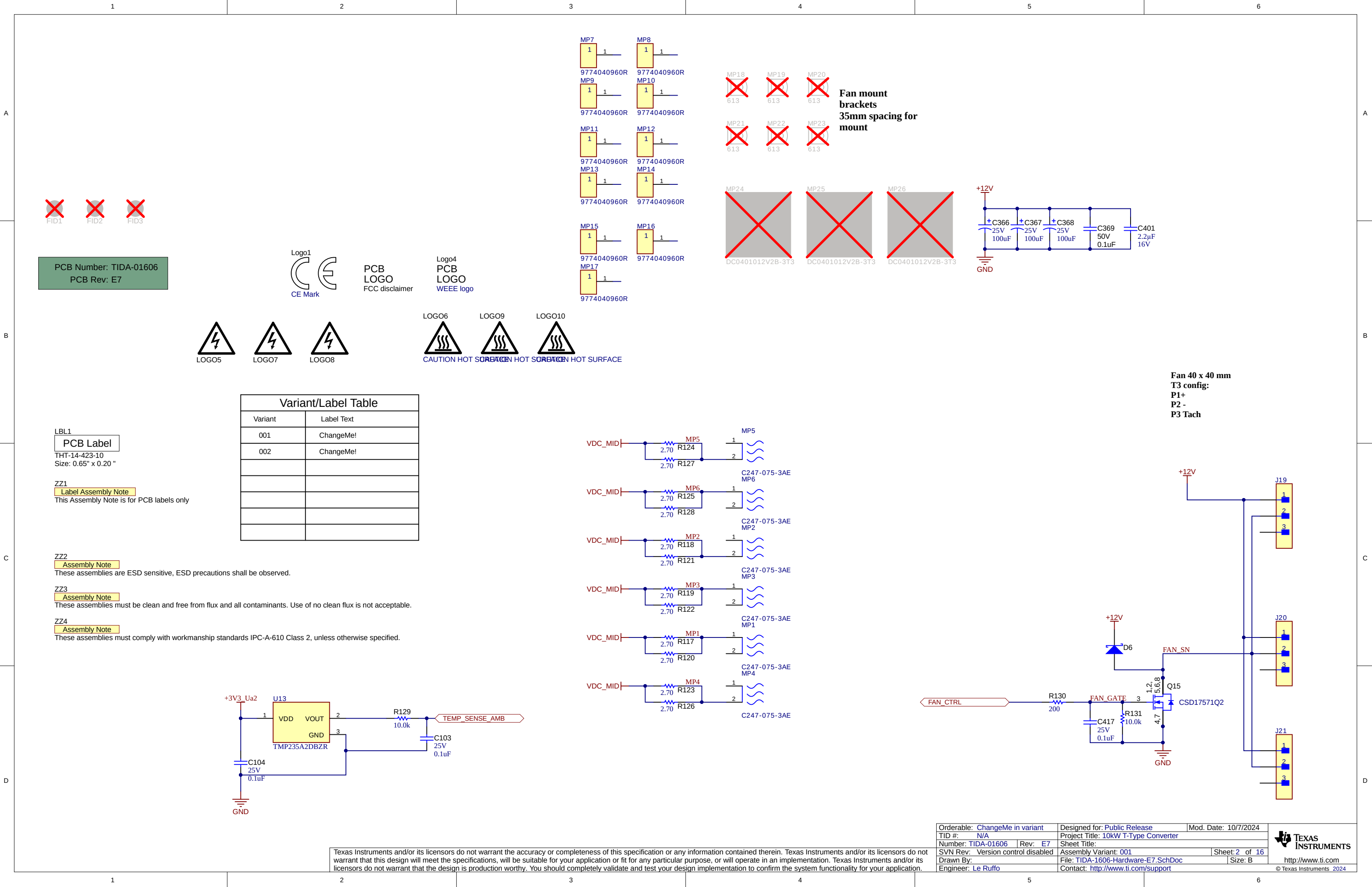
Revision History			
ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A

U_TIDA-1606-EMI-Protection-E7 TIDA-1606-EMI-Protection-E7-.SchDoc			
V_SENSE_PCC_L1	V_SENSE_PCC_L1		
V_SENSE_PCC_L2	V_SENSE_PCC_L2		
V_SENSE_PCC_L3	V_SENSE_PCC_L3		
V_SENSE_SN_L1	V_SENSE_SN_L1		
V_SENSE_SN_L2	V_SENSE_SN_L2		
V_SENSE_SN_L3	V_SENSE_SN_L3		
RY_N	RY_N		
SD_Data_1_PCC_L1	SD_Data_1_PCC_L1		
SD_Data_1_PCC_L2	SD_Data_1_PCC_L2		
SD_Data_1_PCC_L3	SD_Data_1_PCC_L3		
SD_CLKI_OUT_L1	SD_CLKI_OUT_L1		
SD_CLKI_OUT_L2	SD_CLKI_OUT_L2		
SD_CLKI_OUT_L3	SD_CLKI_OUT_L3		
I_SENSE_SN_L1	I_SENSE_SN_L1		
I_SENSE_SN_L2	I_SENSE_SN_L2		
I_SENSE_SN_L3	I_SENSE_SN_L3		
OC_L1	OC_L1		
OC_L2	OC_L2		
OC_L3	OC_L3		

TIDA-1606-Control-Interface-E7.SchDoc U_TIDA-1606-Control-Interface-E7			
V_SENSE_PCC_L1	V_SENSE_PCC_L1	PWM1_BUF_L1	PWM1_BUF_L1
V_SENSE_PCC_L2	V_SENSE_PCC_L2	PWM2_BUF_L1	PWM2_BUF_L1
V_SENSE_PCC_L3	V_SENSE_PCC_L3	PWM3_BUF_L1	PWM3_BUF_L1
I_SENSE_SN_L1	I_SENSE_SN_L1	PWM4_BUF_L1	PWM4_BUF_L1
I_SENSE_SN_L2	I_SENSE_SN_L2	PWM1_BUF_L2	PWM1_BUF_L2
I_SENSE_SN_L3	I_SENSE_SN_L3	PWM2_BUF_L2	PWM2_BUF_L2
V_SENSE_SN_L1	V_SENSE_SN_L1	PWM3_BUF_L2	PWM3_BUF_L2
V_SENSE_SN_L2	V_SENSE_SN_L2	PWM4_BUF_L2	PWM4_BUF_L2
V_SENSE_SN_L3	V_SENSE_SN_L3	PWM1_BUF_L3	PWM1_BUF_L3
V_SENSE_DC	V_SENSE_DC	PWM2_BUF_L3	PWM2_BUF_L3
V_SENSE_MID_DC-	V_SENSE_MID_DC-	PWM3_BUF_L3	PWM3_BUF_L3
GATES_RDY	GATES_RDY	PWM4_BUF_L3	PWM4_BUF_L3
GATES_FLT_L1	GATES_FLT_L1	SD_Data_1_PCC_L1	SD_Data_1_PCC_L1
GATES_FLT_L2	GATES_FLT_L2	SD_Data_1_PCC_L2	SD_Data_1_PCC_L2
GATES_FLT_L3	GATES_FLT_L3	SD_Data_1_PCC_L3	SD_Data_1_PCC_L3
GATES_RST	GATES_RST	SD_CLKI_OUT_L1	SD_CLKI_OUT_L1
TEMP_SENSE_L1	TEMP_SENSE_L1	SD_CLKI_OUT_L2	SD_CLKI_OUT_L2
TEMP_SENSE_L2	TEMP_SENSE_L2	SD_CLKI_OUT_L3	SD_CLKI_OUT_L3
TEMP_SENSE_L3	TEMP_SENSE_L3	FAN_CTRL	FAN_CTRL
TEMP_SENSE_AMB	TEMP_SENSE_AMB	RY_N	RY_N
I_SENSE_VDC_MID	I_SENSE_VDC_MID	EN_DCDC_GATES_BUF	EN_DCDC_GATES_BUF
I_SENSE_VDC_NEG	I_SENSE_VDC_NEG	OC_L1	OC_L1
		OC_L2	OC_L2
		OC_L3	OC_L3

Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 10/7/2024
TID #: N/A	Project Title: 10kW T-Type Converter	
Number: TIDA-01606	Rev: E7	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 1 of 16
Drawn By:	File: TIDA-1606-Overview-E7.SchDoc	Size: B
Engineer: Le Ruffo	Contact: http://www.ti.com/support	

Balancing Resistance of 510 kOhm/2
Total Dissipated Power of 0.7 W @ 850 V
Costant Time of the DC LINK: around 65 second.



PCB Number: TIDA-01606
PCB Rev: E7

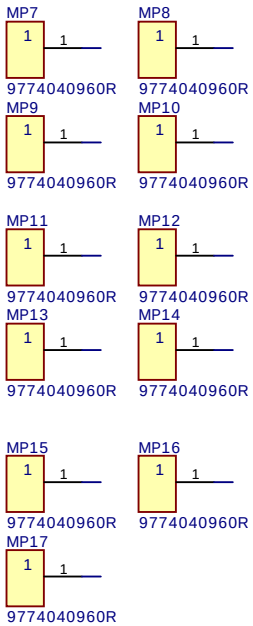


PCB
LOGO
FCC disclaimer

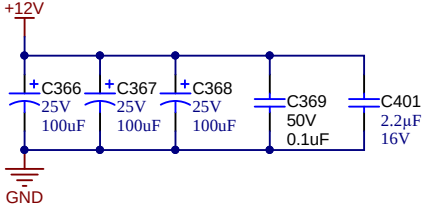
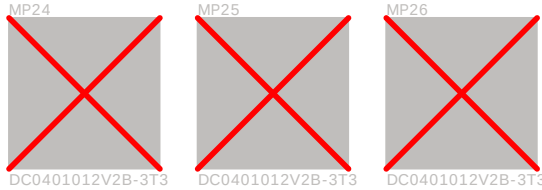
Logo4
PCB
LOGO
WEEE logo



CAUTION HOT SURFACE CAUTION HOT SURFACE CAUTION HOT SURFACE



Fan mount
brackets
35mm spacing for
mount



PCB Label

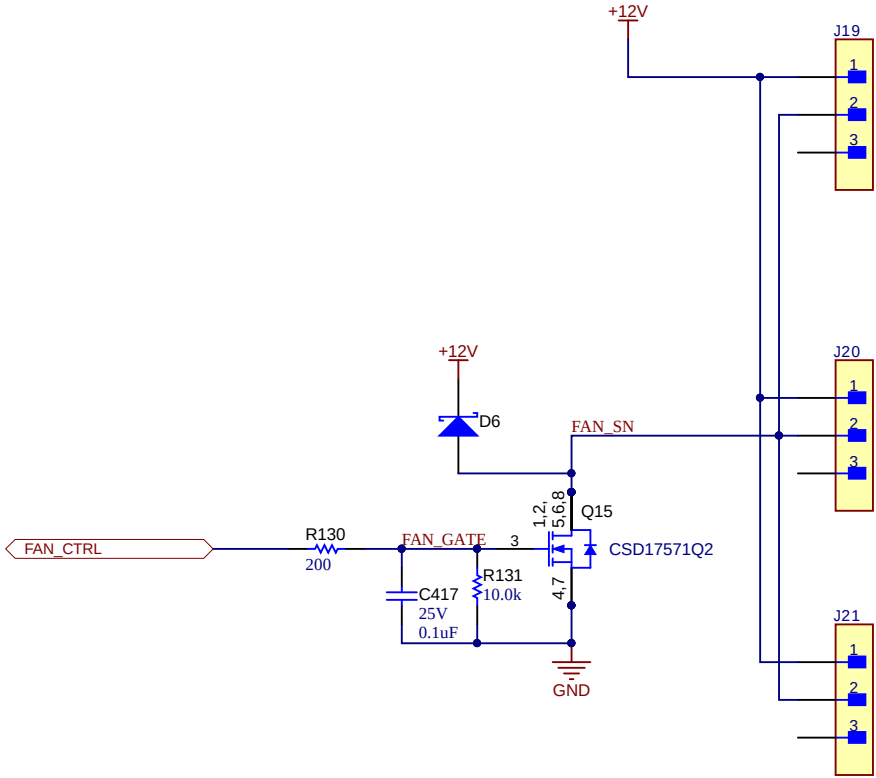
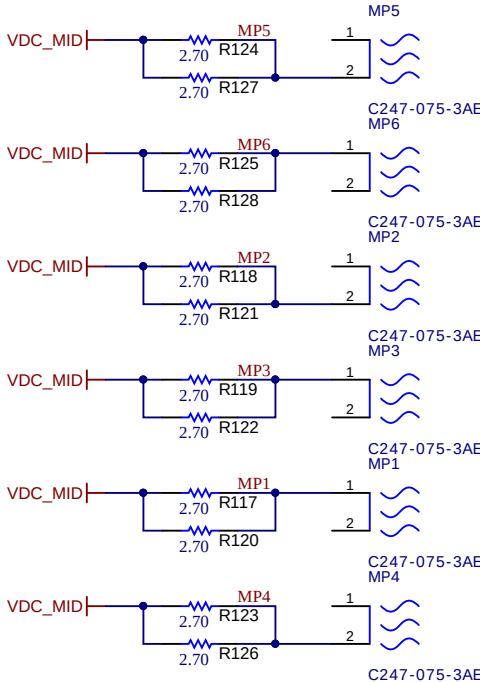
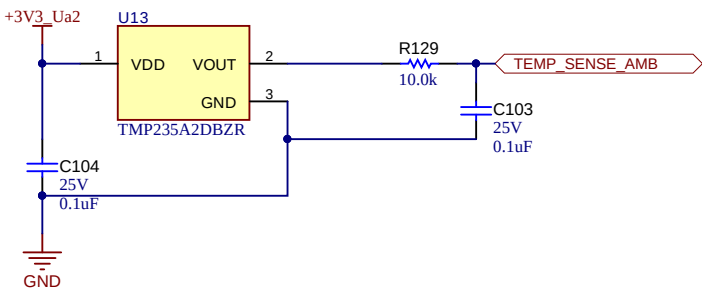
THT-14-423-10
Size: 0.65" x 0.20 "

Label Assembly Note
This Assembly Note is for PCB labels only

Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

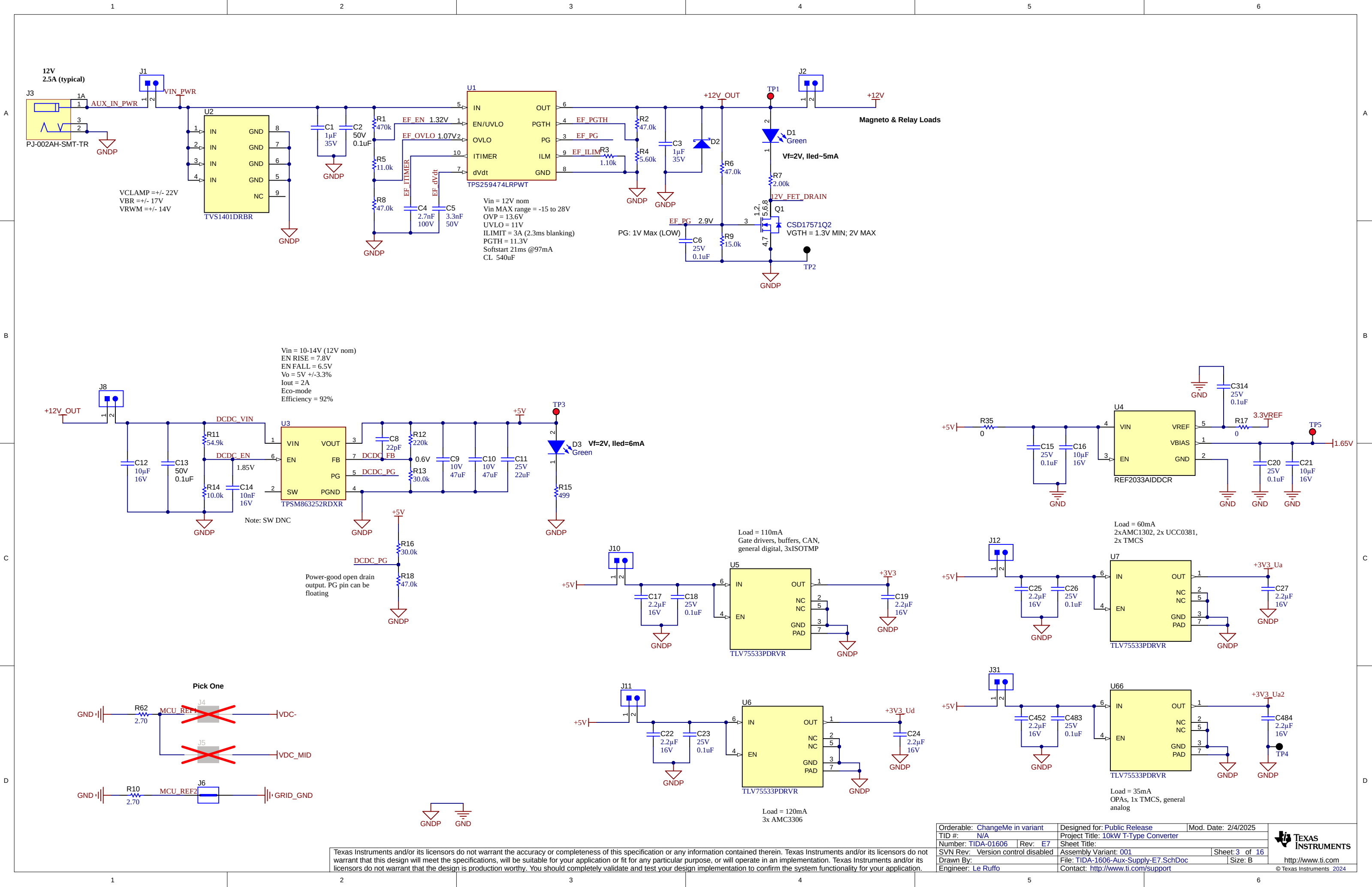
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.



Fan 40 x 40 mm
T3 config:
P1+
P2 -
P3 Tach

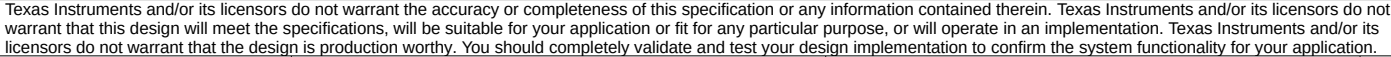
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Orderable: ChangeMe in variant		Designed for: Public Release		Mod. Date: 10/7/2024	
TID #: N/A		Project Title: 10kW T-Type Converter			
Number: TIDA-01606		Rev: E7		Sheet Title:	
SVN Rev: Version control disabled		Assembly Variant: 001		Sheet: 2 of 16	
Drawn By:		File: TIDA-1606-Hardware-E7.SchDoc		Size: B	
Engineer: Le Ruffo		Contact: http://www.ti.com/support			



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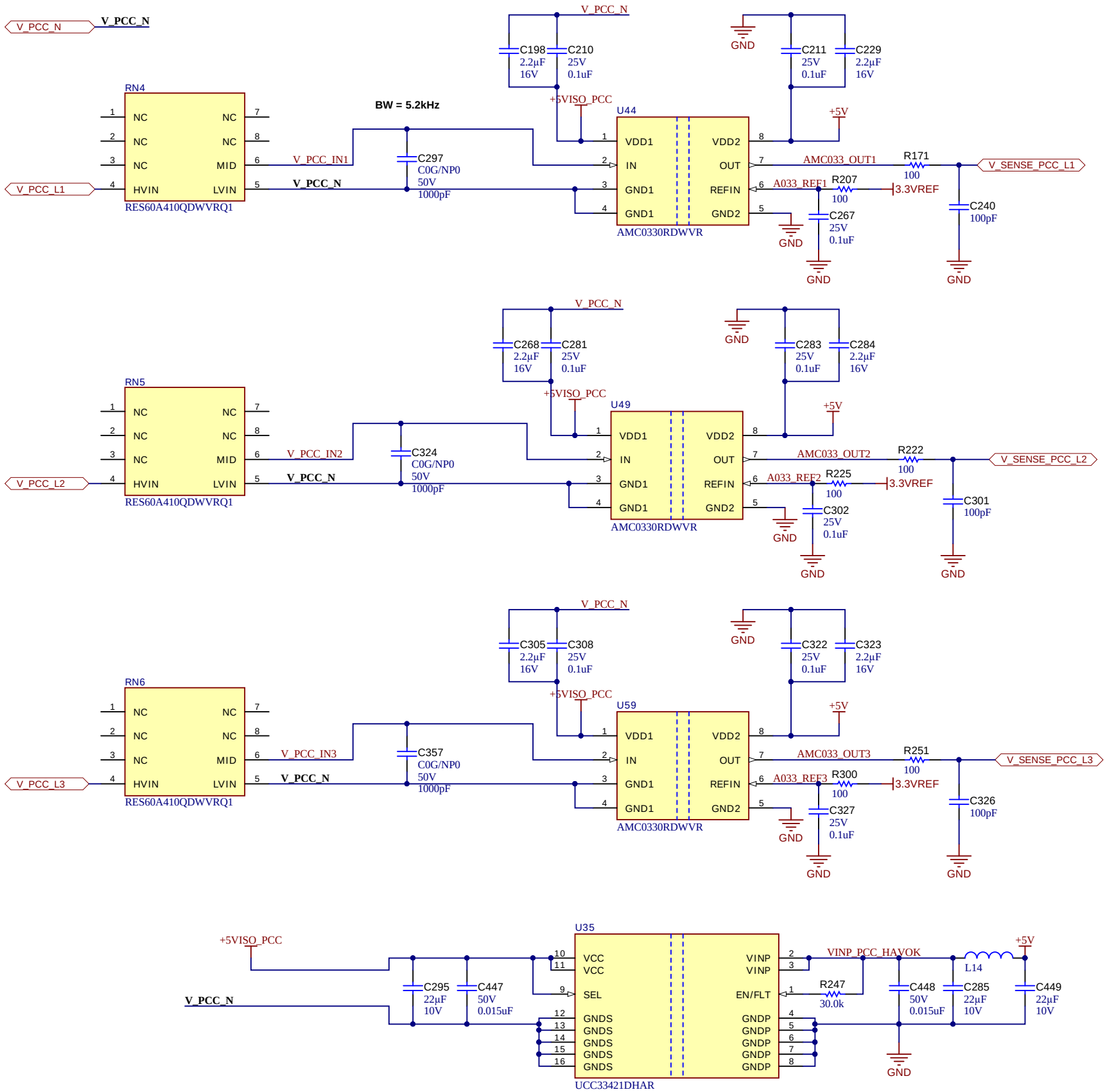
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TID #: N/A	Project Title: 10kW T-Type Converter	
Number: TIDA-01606	Rev: E7	Sheet Title:
SVN Rev: Version control disabled	Assembly Variant: 001	Sheet: 3 of 16
Drawn By:	File: TIDA-1606-Aux-Supply-E7.SchDoc	Size: B
Engineer: Le Ruffo	Contact: http://www.ti.com/support	



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VOUT = (VIN / VClipping) x VREFIN / 2 + VREFIN / 2.
VClipping = +/-1.25V
G = 1/410 Vin = 410V max
RHV = 12.5 Mohm
RLV = 30.5kohm

Point of Common Coupling Voltages



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Orderable: ChangeMe in variant	Designed for: Public Release	Mod. Date: 10/7/2024	 TEXAS INSTRUMENTS http://www.ti.com © Texas Instruments 2024
TID #: N/A	Project Title: 10kW T-Type Converter	Sheet Title:	
Number: TIDA-01606	[Rev: E7]	Assembly Variant: 001	
SVN Rev: Version control disabled		Sheet: 5 of 16	
Drawn By: Engineer: Le Ruffo	File: TIDA-1606-PCC-Voltage-Measurements-E7.Sch	Size: A3	

A

B

C

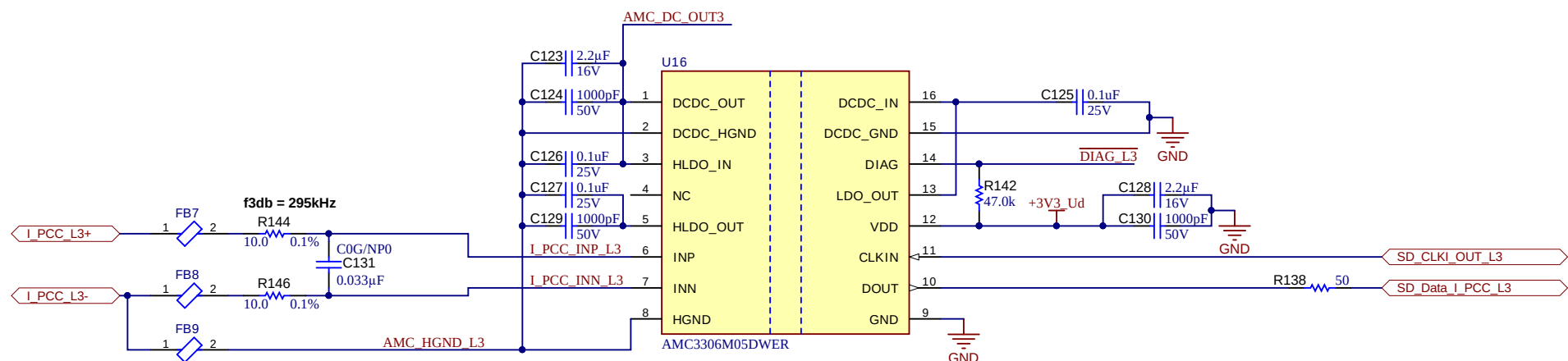
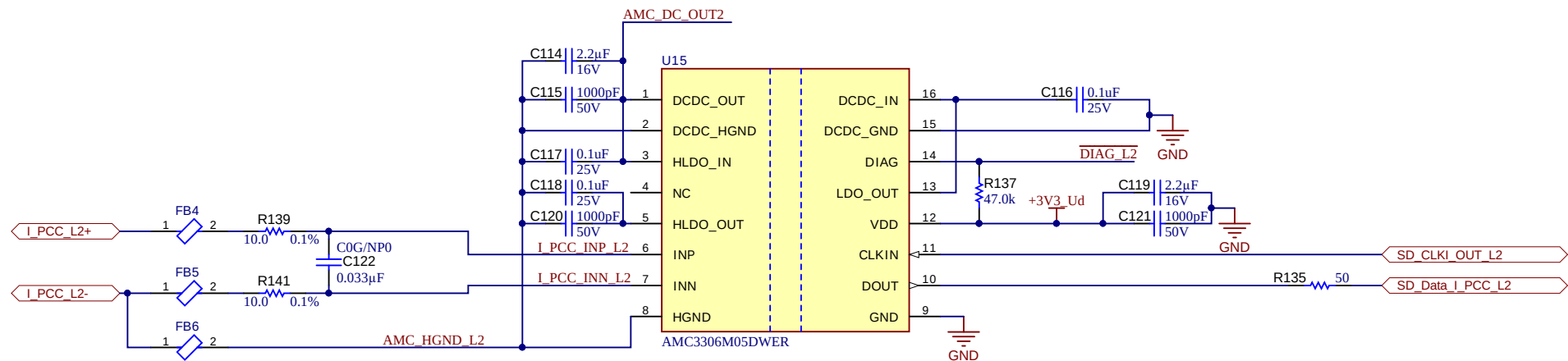
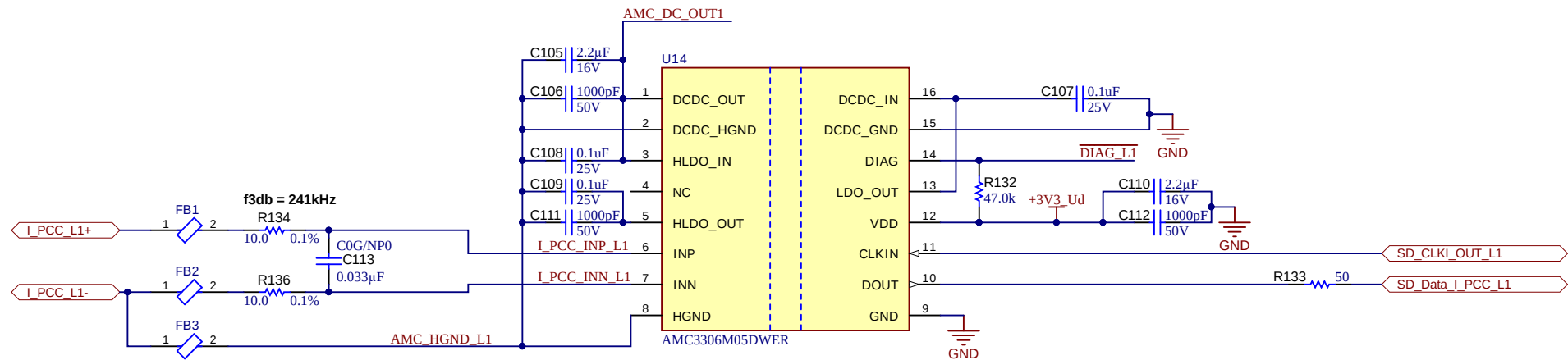
D

A

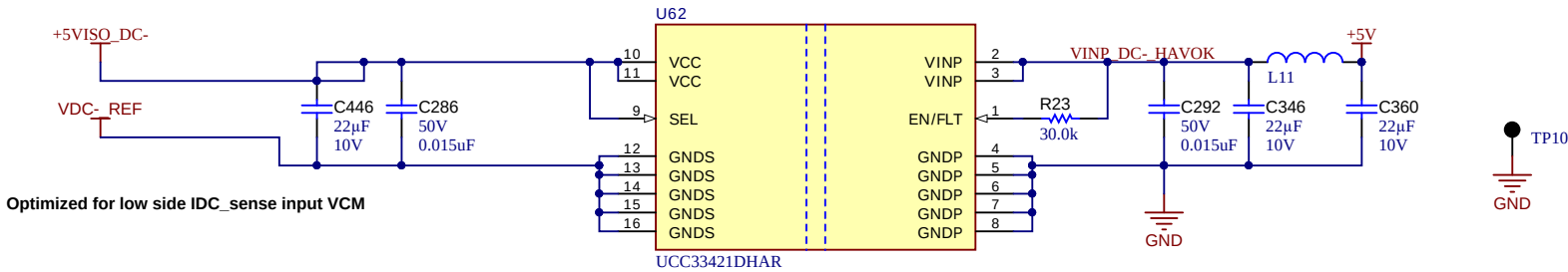
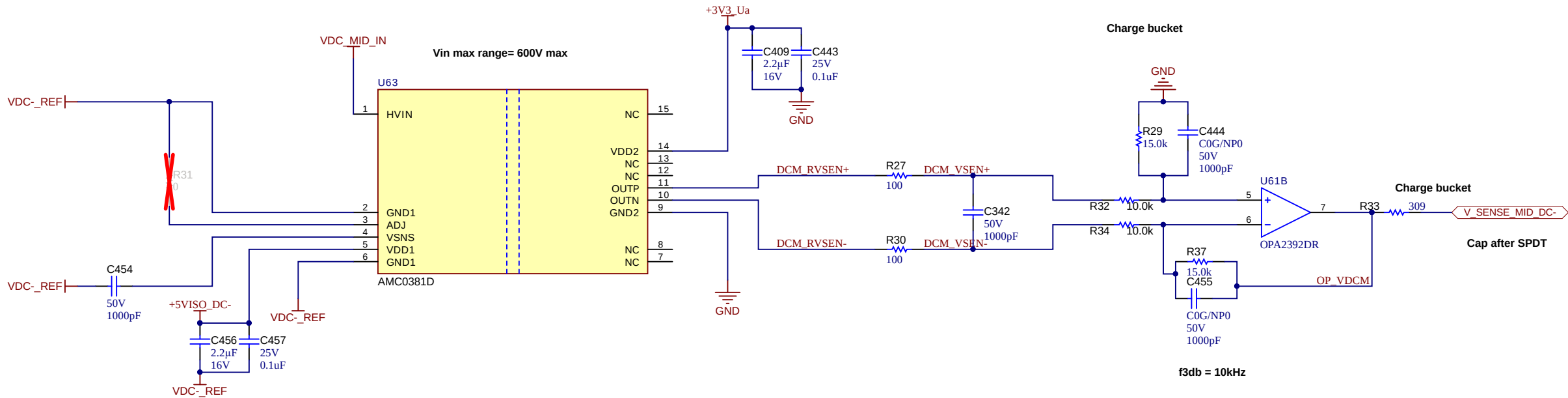
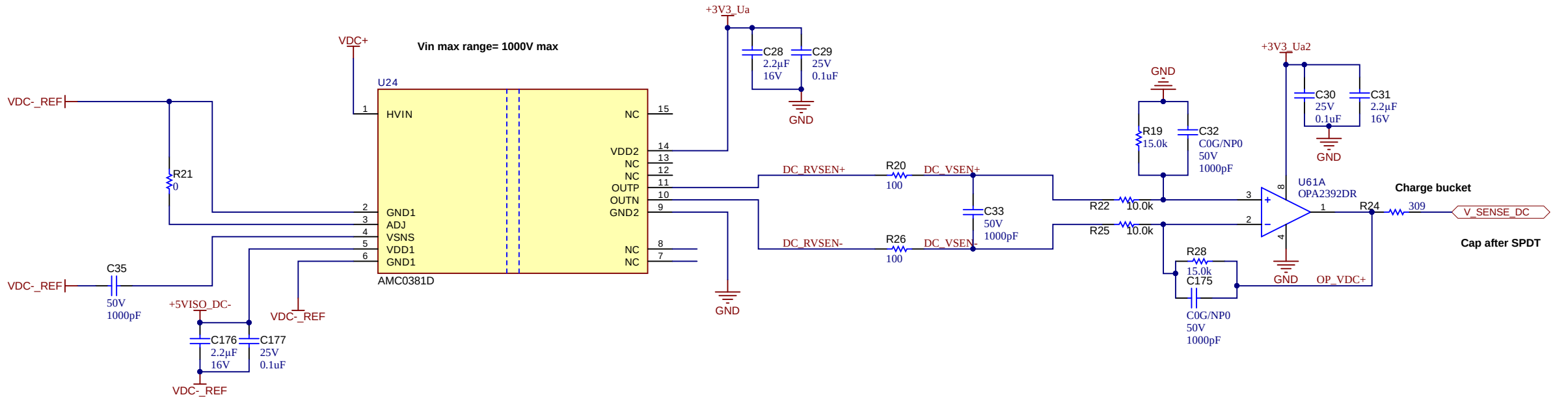
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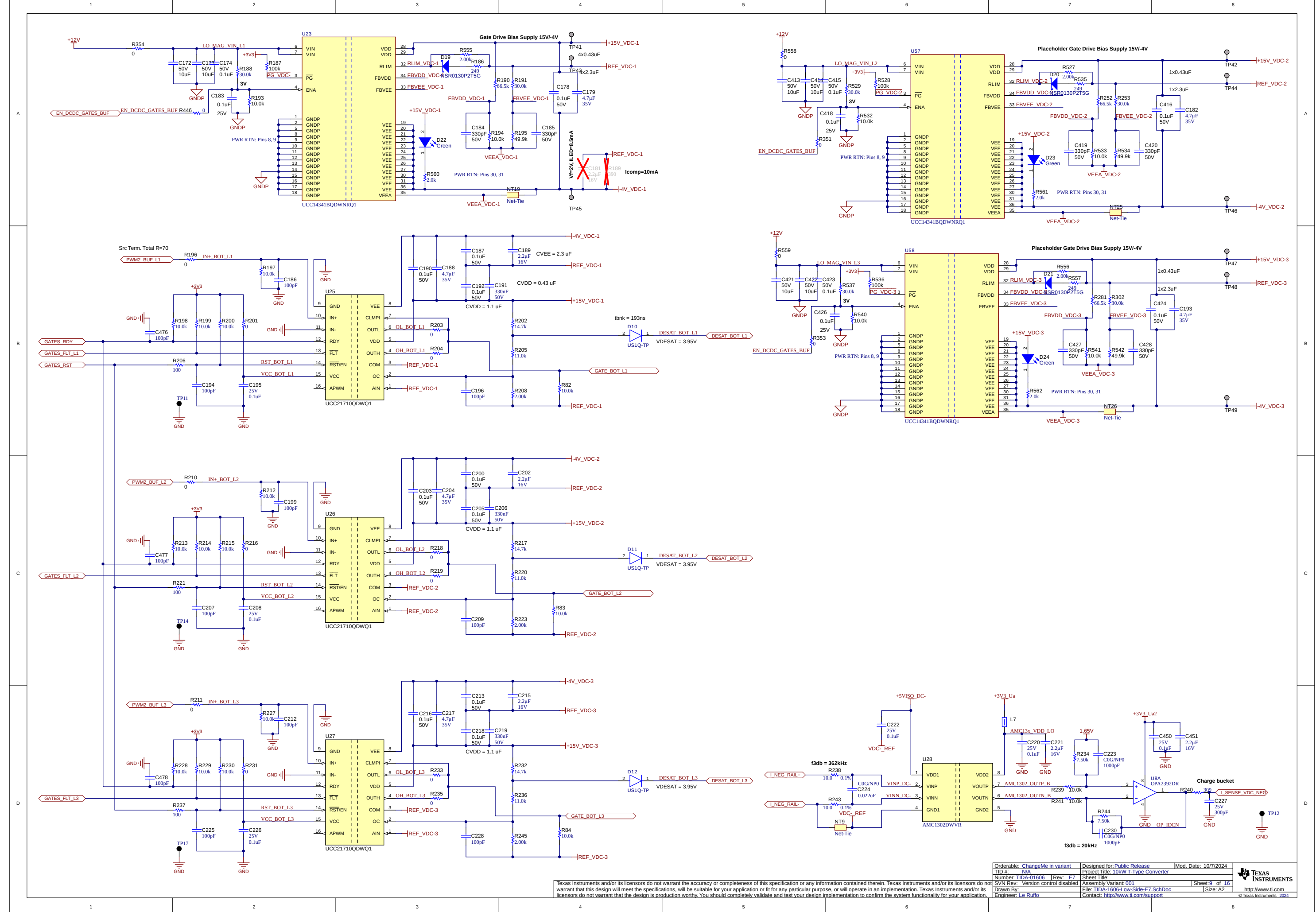
C

D



VOUT = +/-2V Differential
Vlinear= 1000
G=1/602, 1/1000 Vin max range= 1000V max
float ADJ pin for Gain = 1/602





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