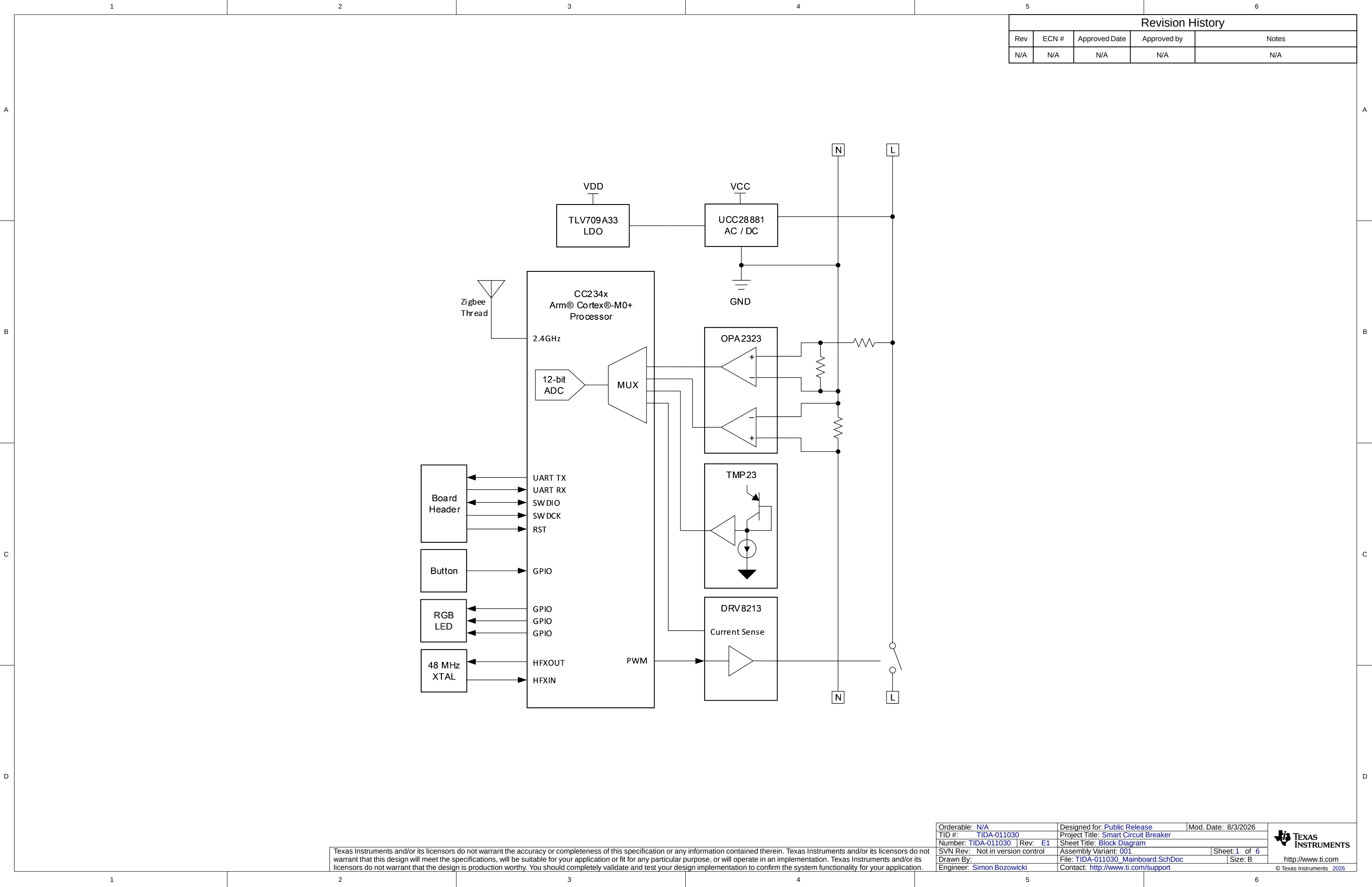
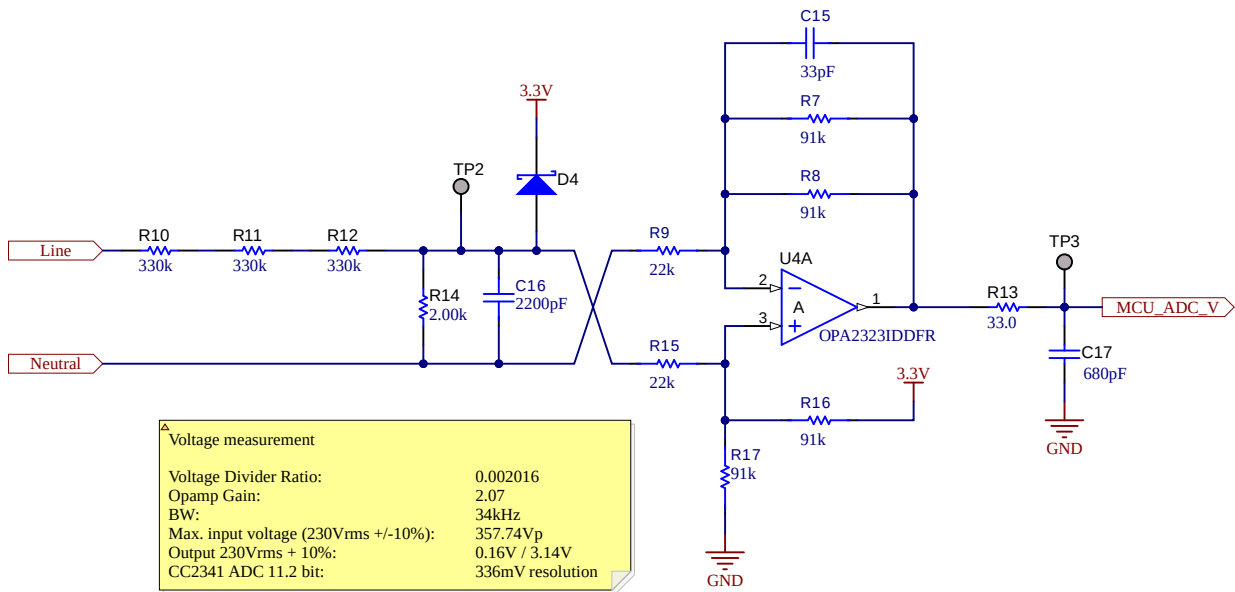
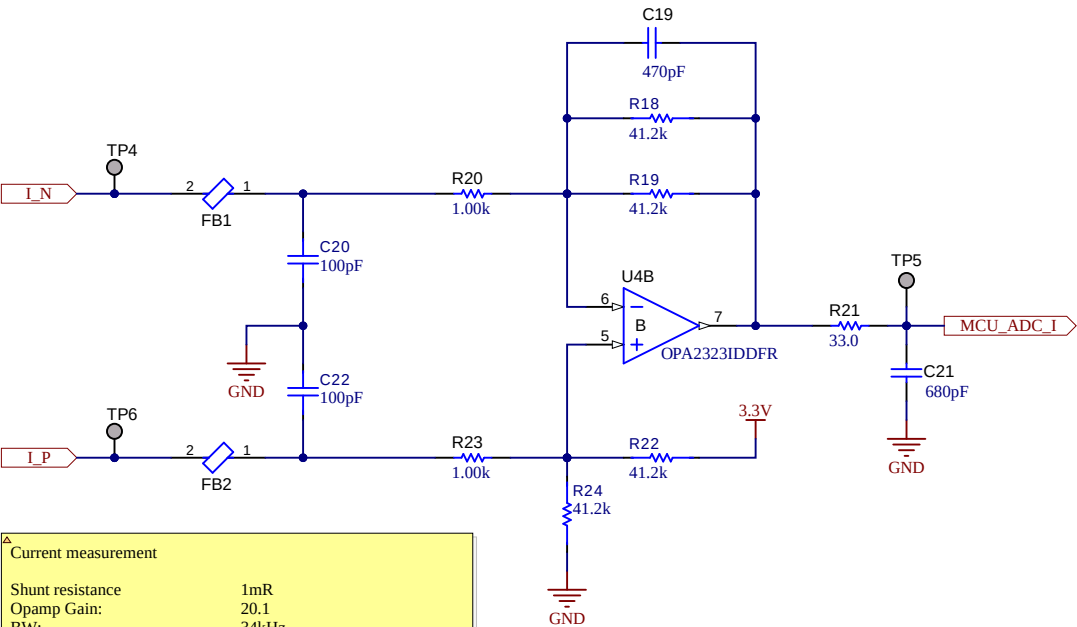
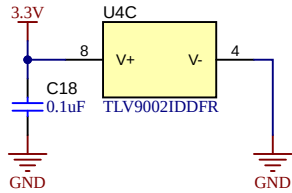




Revision History				
Rev	ECN #	Approved Date	Approved by	Notes
N/A	N/A	N/A	N/A	N/A



Voltage measurement	
Voltage Divider Ratio:	0.002016
Opamp Gain:	2.07
BW:	34kHz
Max. input voltage (230Vrms +/-10%):	357.74Vp
Output 230Vrms + 10%:	0.16V / 3.14V
CC2341 ADC 11.2 bit:	336mV resolution



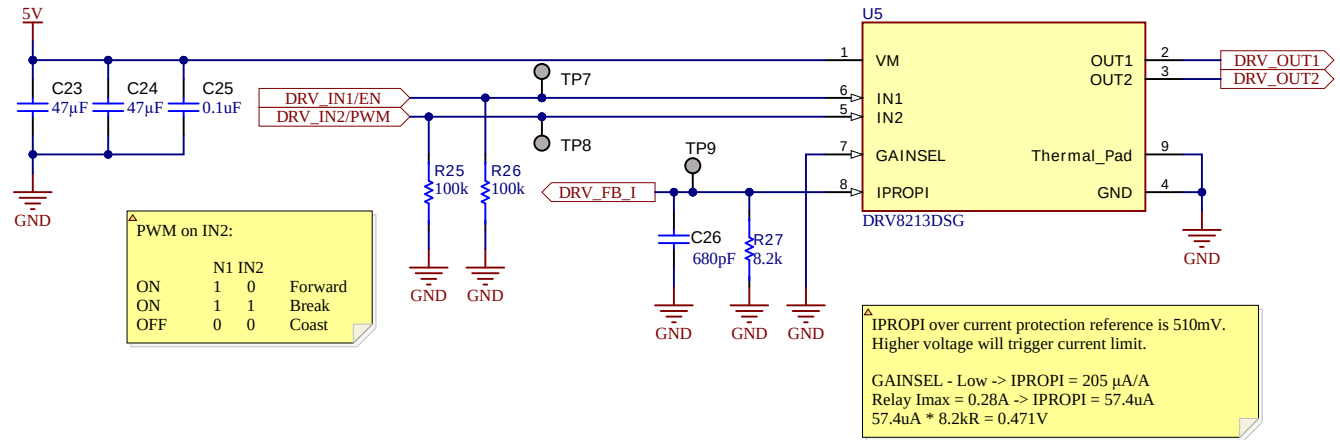
Current measurement	
Shunt resistance	1mR
Opamp Gain:	20.1
BW:	34kHz
Measurement range:	+/- 52Arms (16A * 3.25 OCP)
Output 52Arms	0.135V / 3.165V
CC2341 ADC 11.2 bit:	68mA resolution

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Orderable: N/A	Designed for: Public Release	Mod. Date: 8/3/2026
TID #: TIDA-011030	Project Title: Smart Circuit Breaker	
Number: TIDA-011030	Rev: E1	Sheet Title: Metering
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 3 of 6
Drawn By:	File: TIDA-011030 Mainboard Metering.SchDoc	Size: B
Engineer: Simon Bozowicki	Contact: http://www.ti.com/support	

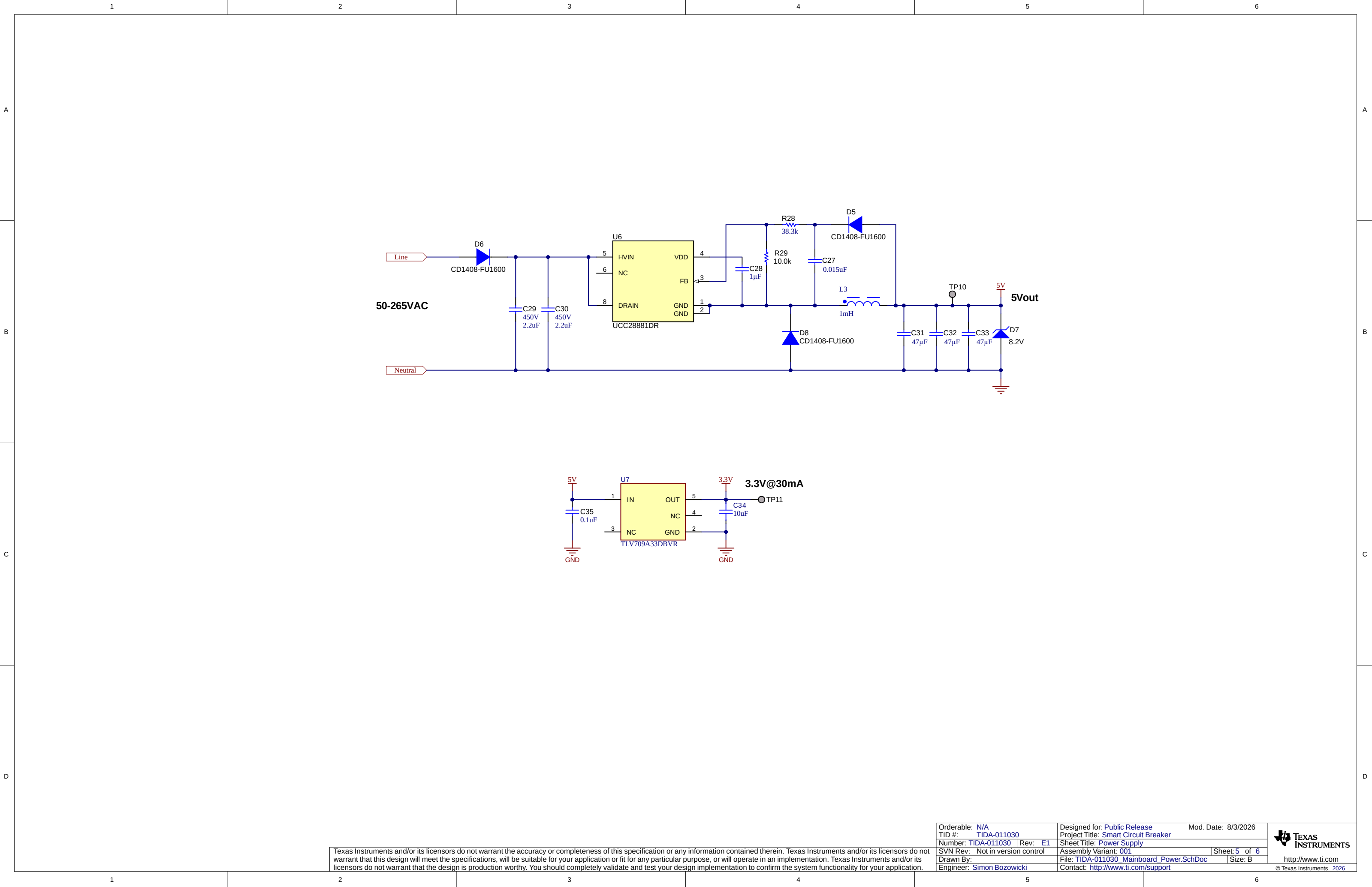


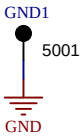
Relay Driver



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TID #: TIDA-011030	Project Title: Smart Circuit Breaker	
Number: TIDA-011030	Rev: E1	Sheet Title: Relay Driver
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 4 of 6
Drawn By:	File: TIDA-011030_Mainboard_RelayDRV.SchDoc	Size: B
Engineer: Simon Bozowicki	Contact: http://www.ti.com/support	





PCB Number: TIDA-011030
PCB Rev: E1



PCB
LOGO
FCC disclaimer

PCB
LOGO
WEEE logo



DANGER HIGH VOLTAGE



DANGER HIGH VOLTAGE

Variant/Label Table	
Variant	Label Text
001	default

ZZ1

Assembly Note

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

ZZ2

Assembly Note

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

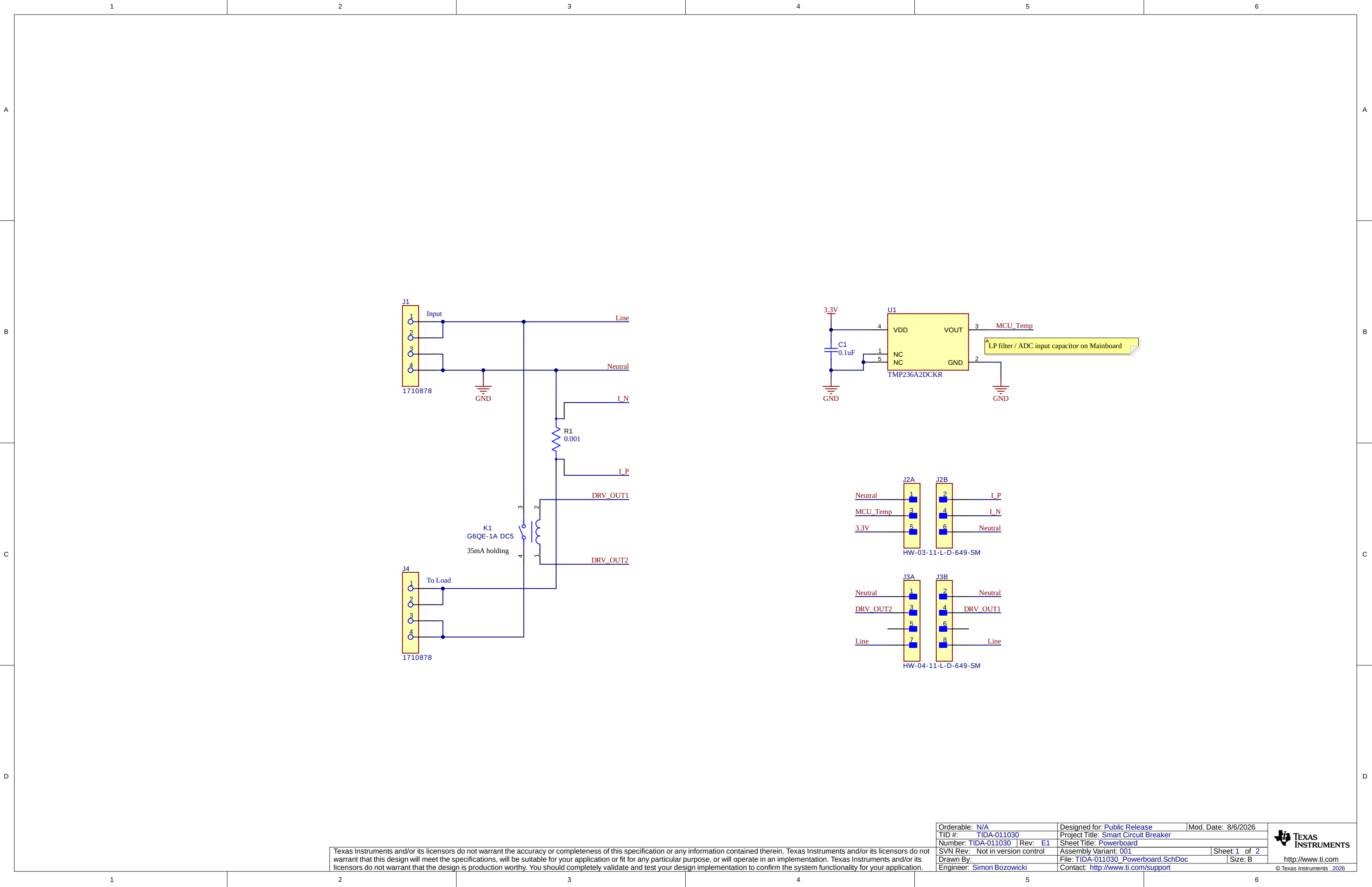
ZZ3

Assembly Note

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

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TID #: TIDA-011030	Project Title: Smart Circuit Breaker	
Number: TIDA-011030	Rev: E1	Sheet Title: Hardware
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 6 of 6
Drawn By:	File: TIDA-011030_Mainboard_Hardware.SchDoc	Size: B
Engineer: Simon Bozowicki	Contact: http://www.ti.com/support	



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Orderable: N/A	Designed for: Public Release	Mod. Date: 8/6/2026
TID #: TIDA-011030	Project Title: Smart Circuit Breaker	
Number: TIDA-011030	Rev: E1	Sheet Title: Powerboard
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 1 of 2
Drawn By:	File: TIDA-011030_Powerboard_SchDoc	Size: B
Engineer: Simon Bozowicki	Contact: http://www.ti.com/support	

MP1
9774040243R

MP2
9774040243R

PCB Number: TIDA-011030
PCB Rev: E1



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DANGER HIGH VOLTAGE



DANGER HIGH VOLTAGE



CAUTION HOT SURFACE

Variant/Label Table	
Variant	Label Text
001	default

ZZ1
Assembly Note
These assemblies are ESD sensitive, ESD precautions shall be observed.

ZZ2
Assembly Note
These assemblies must be clean and free from flux and all contaminants. Use of no clean flux is not acceptable.

ZZ3
Assembly Note
These assemblies must comply with workmanship standards IPC-A-610 Class 2, unless otherwise specified.

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Orderable: N/A	Designed for: Public Release	Mod. Date: 8/6/2026
TID #: TIDA-011030	Project Title: Smart Circuit Breaker	
Number: TIDA-011030	Rev: E1	Sheet Title: Hardware
SVN Rev: Not in version control	Assembly Variant: 001	Sheet: 2 of 2
Drawn By:	File: TIDA-011030_Powerboard_Hardware.SchDoc	Size: B
Engineer: Simon Bozowicki	Contact: http://www.ti.com/support	

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Last updated 10/2025