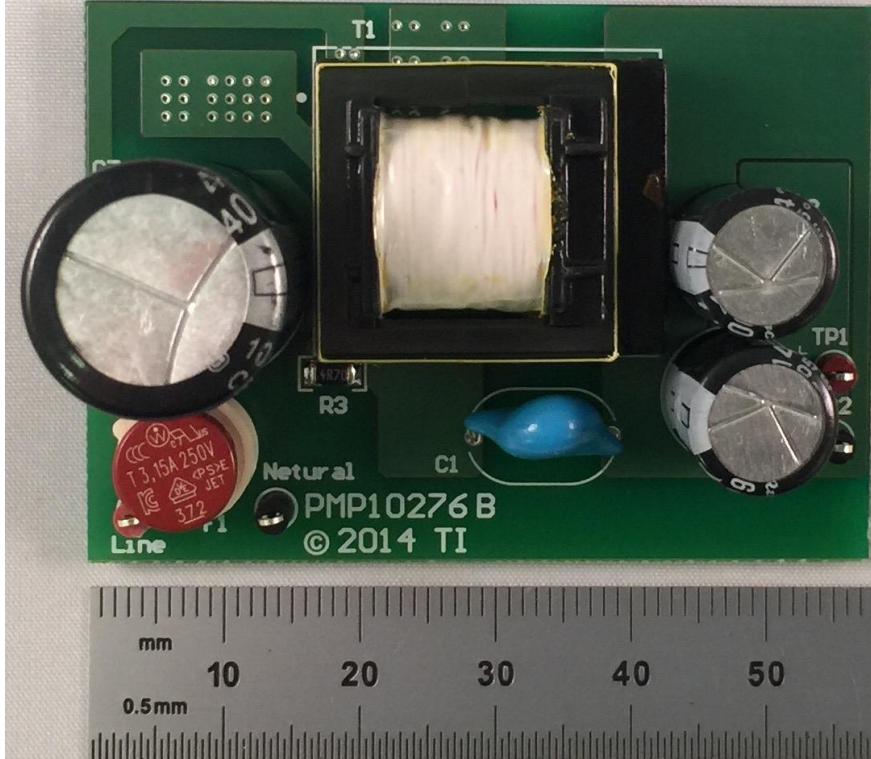


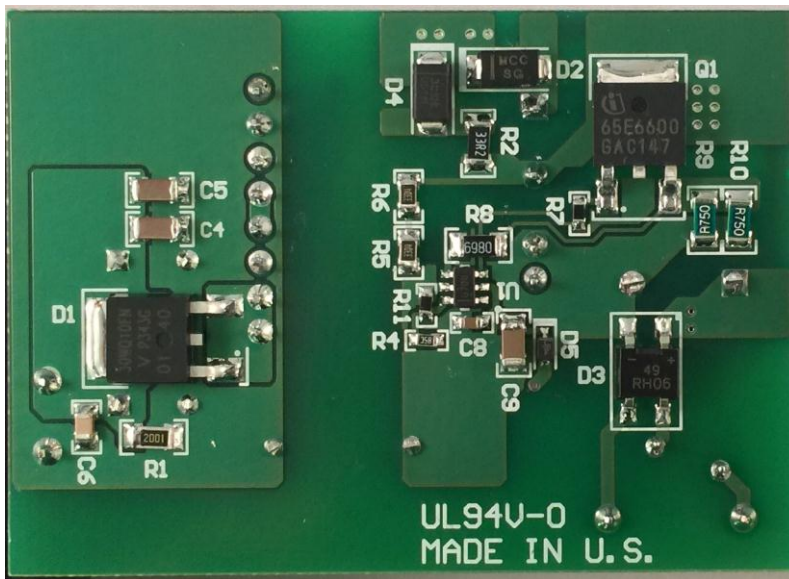
1 Photo

The photographs below show the PMP10276 Rev B assembly. This circuit was built on a PMP10276 Rev B PCB.

Top side

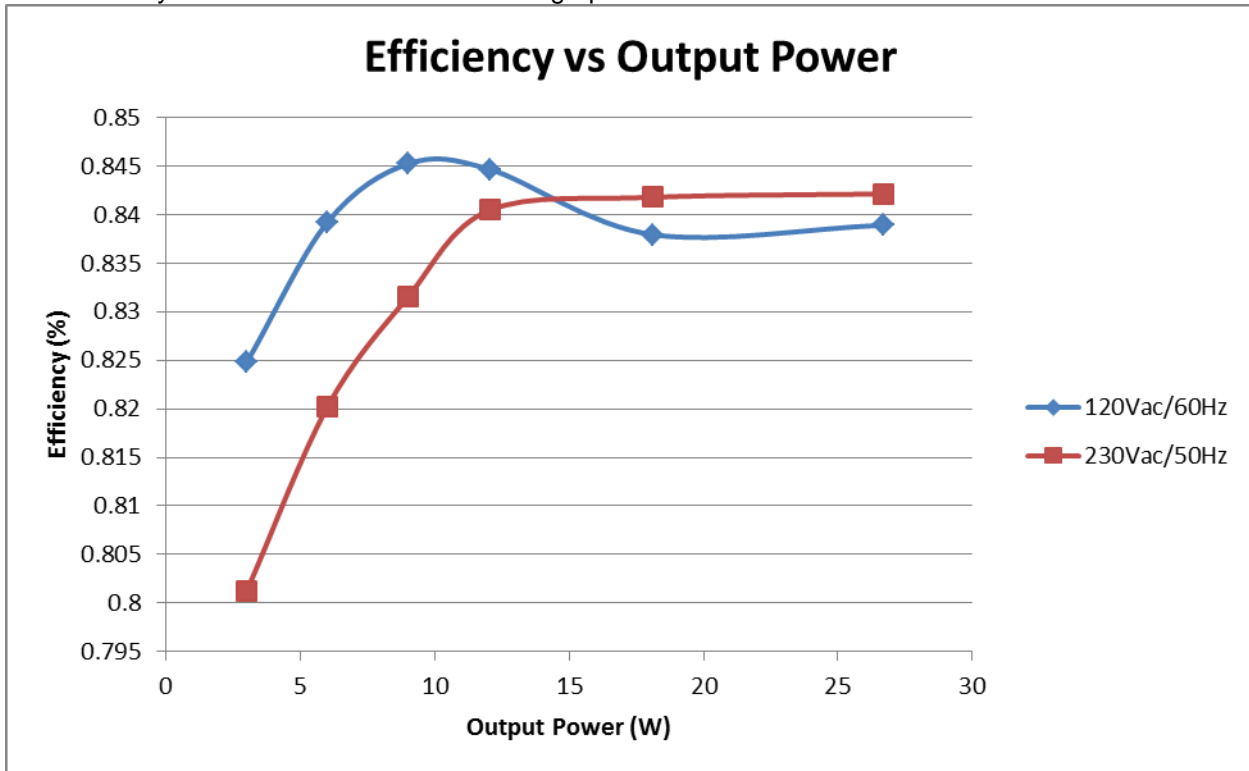


Bottom side



2 Converter Efficiency

The efficiency data is shown in the tables and graph below.



Vin=120V_{AC}/60Hz

Vin(ac)	Iin(A)	Pin(W)	Vo(V)	Io(A)	Pout(W)	Eff. (%)
120.12	0.497	31.82	12.134	2.2	26.6948	0.838931
120.14	0.363	21.61	12.072	1.5	18.108	0.837945
120.14	0.262	14.26	12.045	1	12.045	0.84467
120.15	0.208	10.684	12.041	0.75	9.03075	0.845259
120.15	0.151	7.17	12.035	0.5	6.0175	0.839261
120.16	0.088	3.644	12.022	0.25	3.0055	0.82478
120.17	0.0043	0.111	12.062	0	0	0

Vin=230V_{AC}/50Hz

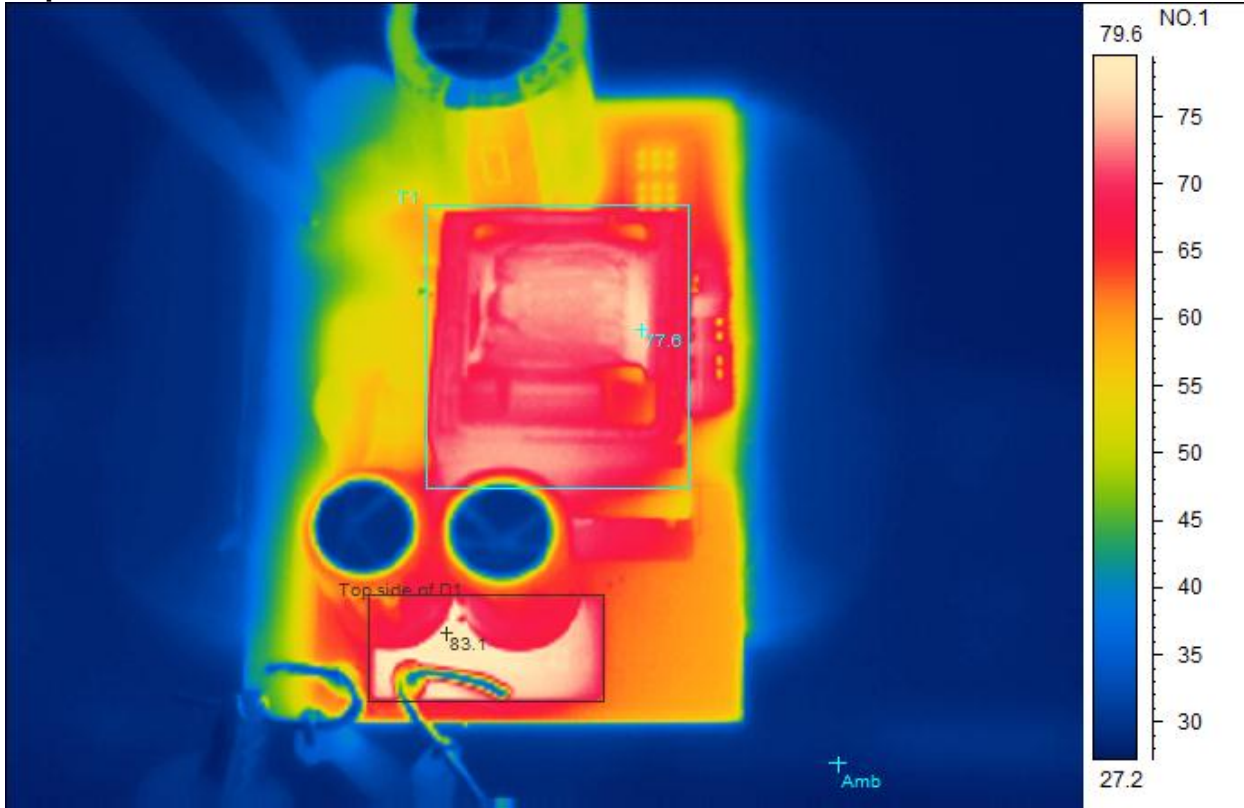
Vin(ac)	Iin(A)	Pin(W)	Vo(V)	Io(A)	Pout(W)	Eff. (%)
230.2	0.339	31.68	12.127	2.2	26.6794	0.842153
230.2	0.254	21.49	12.06	1.5	18.09	0.841787
230.2	0.186	14.329	12.043	1	12.043	0.840463
230.2	0.148	10.826	12.003	0.75	9.00225	0.83154
230.2	0.105	7.329	12.023	0.5	6.0115	0.820235
230.2	0.058	3.748	12.012	0.25	3.003	0.801227
230.2	0.00369	0.174	12.054	0	0	0

3 Thermal Images

The thermal images below show a top view and bottom view of the board. The ambient temperature was 20°C with no forced air flow. The output was at 12V/2.2A.

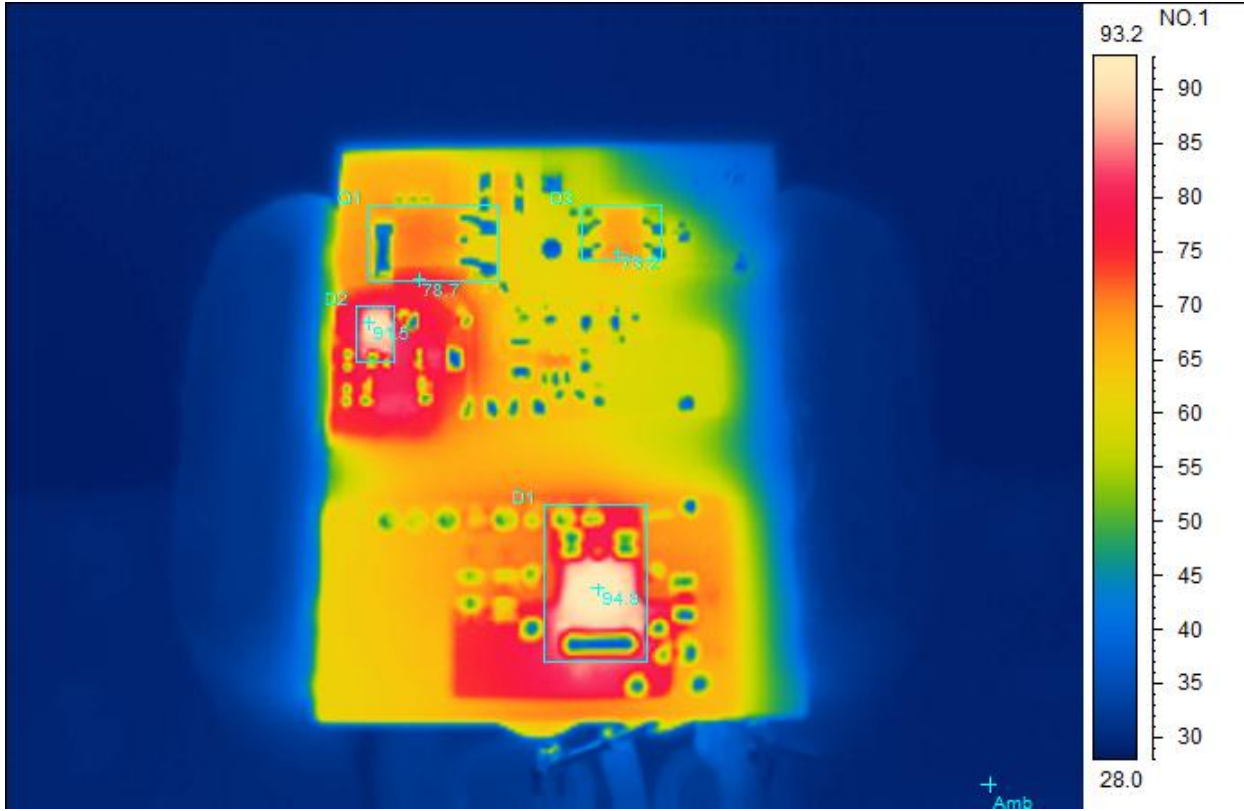
120V_{AC}/60Hz

Top Side



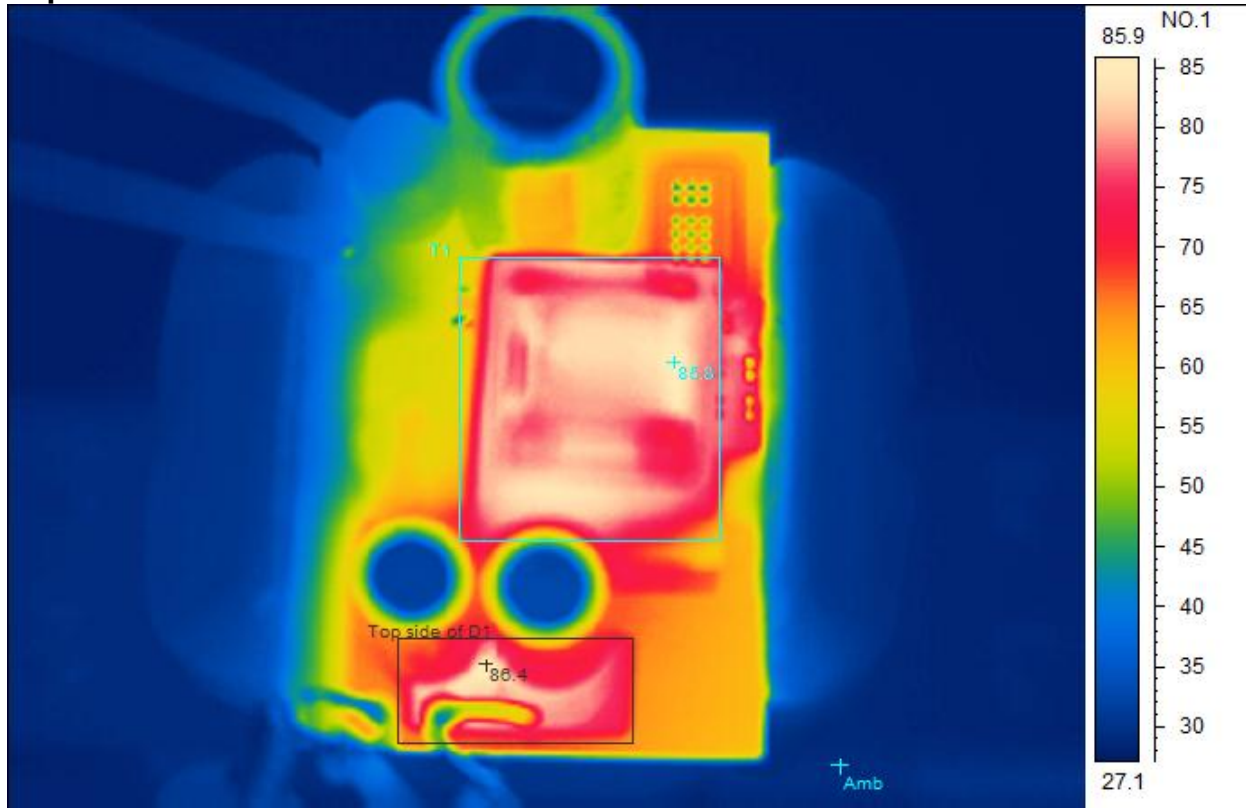
Spot analysis	Value
Amb Temperature	28.7°C
Area analysis	Value
T1Max	77.6°C
Top side of D1 Max	83.1°C

120V_{AC}/60Hz Bottom Side



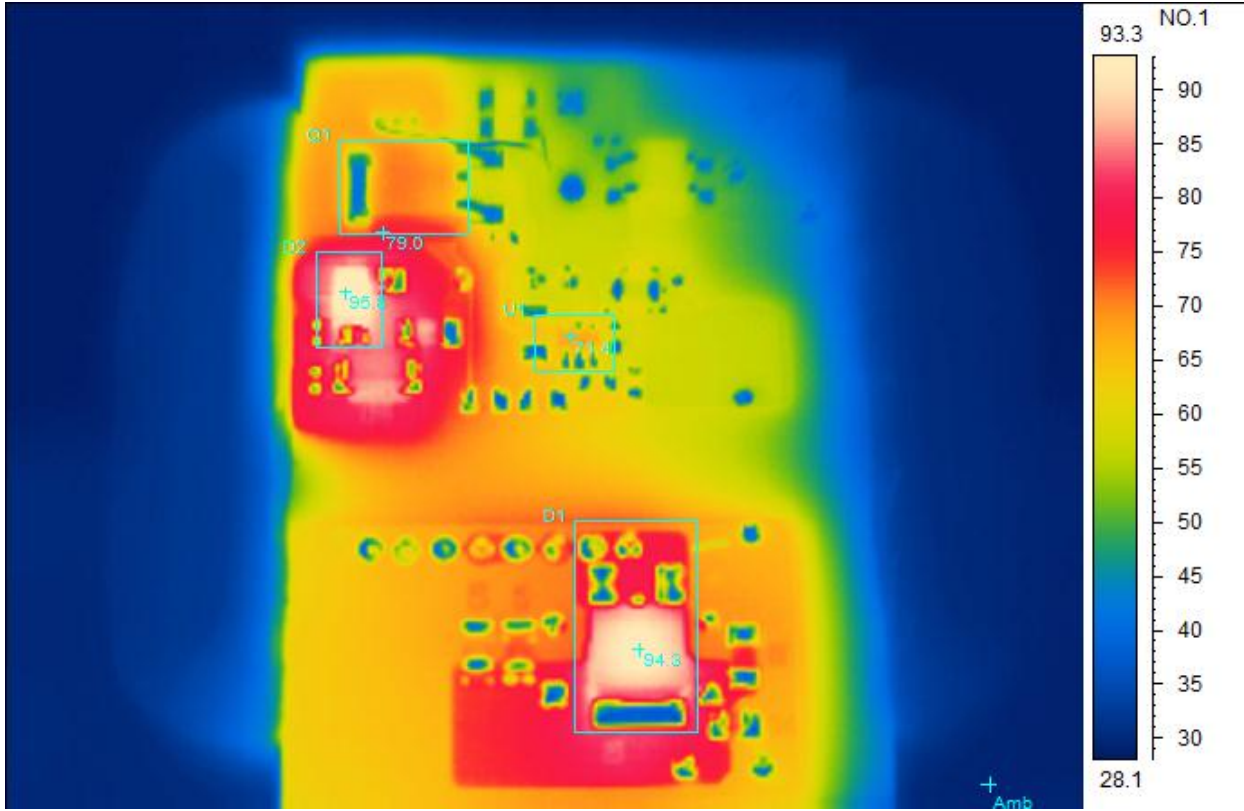
Spot analysis	Value
Amb Temperature	29.4°C
Area analysis	Value
D2Max	91.5°C
D1Max	94.9°C
Q1Max	78.7°C
D3Max	73.2°C

**230V_{AC}/50Hz
Top Side**



Spot analysis	Value
Amb Temperature	29.6°C
Area analysis	Value
T1Max	85.8°C
Top side of D1 Max	86.4°C

230V_{AC}/50Hz Bottom Side

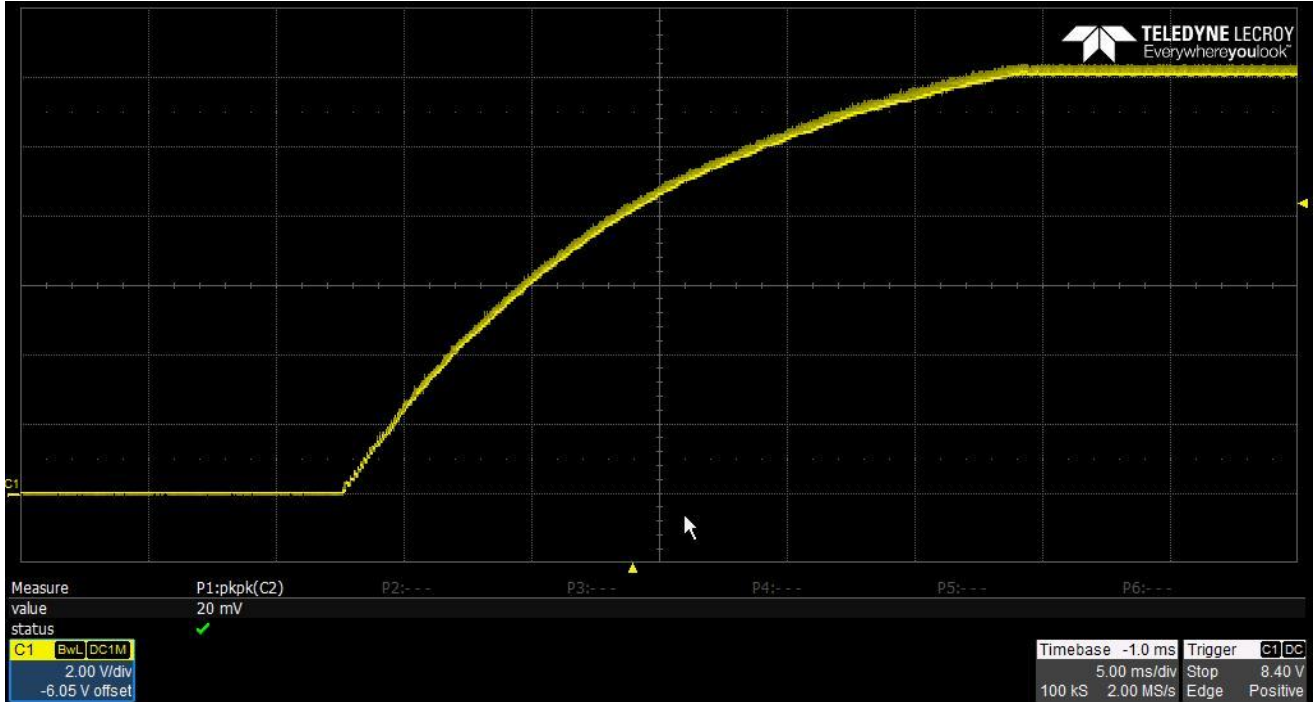


Spot analysis	Value
Amb Temperature	29.4°C
Area analysis	
D2Max	95.8°C
D1Max	94.3°C
Q1Max	79.0°C
U1 Max	71.4°C

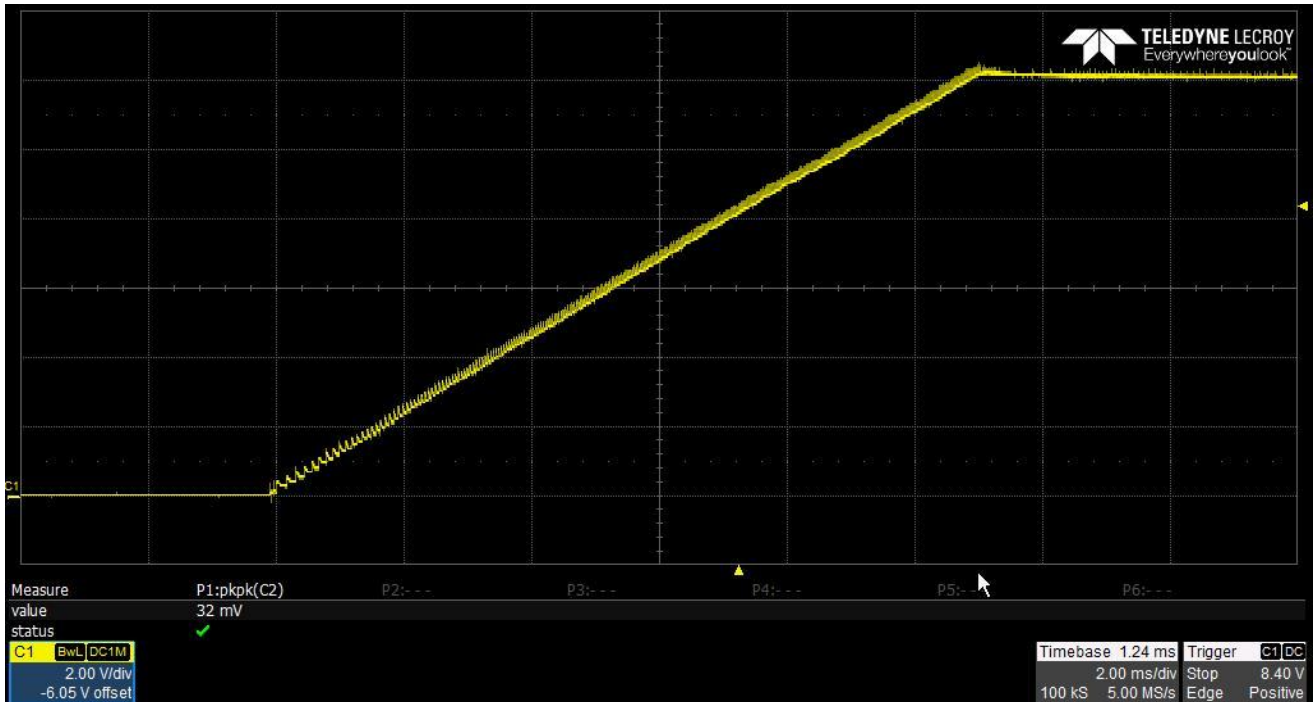
4 Startup

The output voltages at startup are shown in the images below.

4.1 Start Up @ 120V_{AC}: 12V/2.2A.



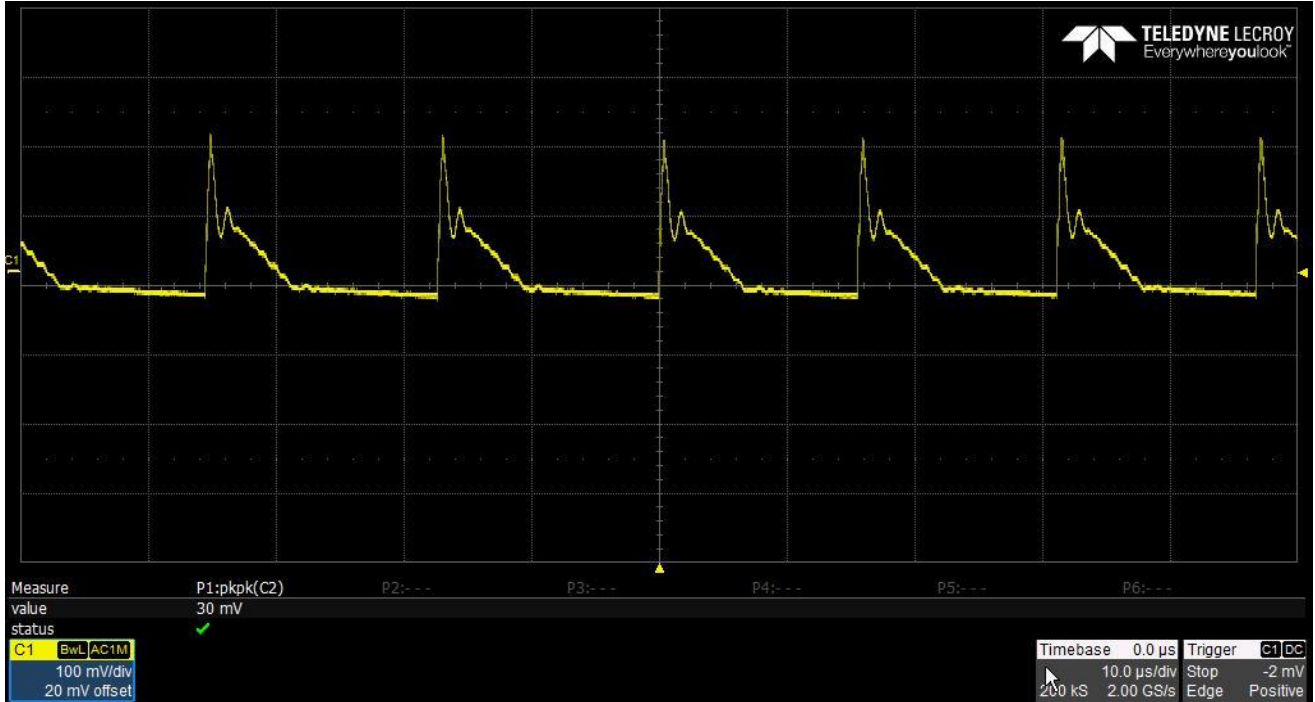
4.2 Start Up @ 120V_{AC}: no load.



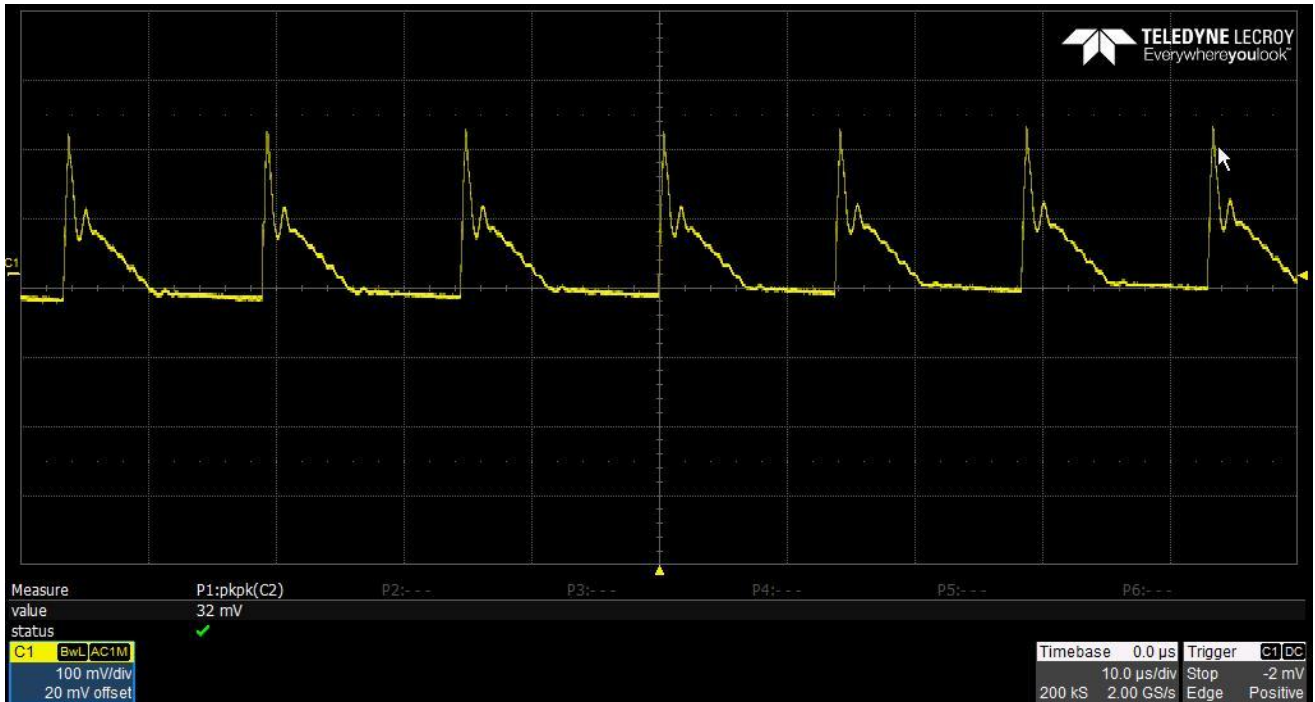
5 Output Ripple Voltages

The output ripple voltage is shown in the plots below at 12V/2.2A full load.

5.1 12V_{ripple} at 120V_{AC}/60Hz



5.2 12V_{ripple} at 230V_{AC}/50Hz



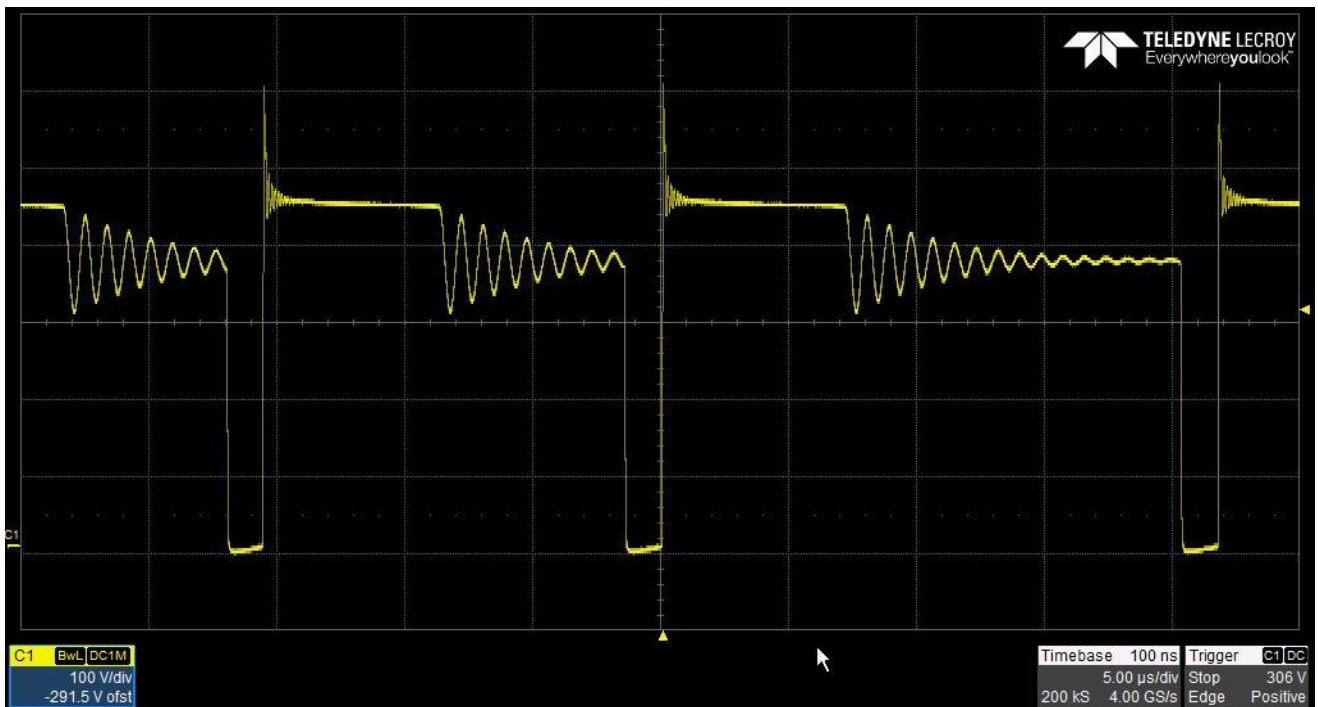
6 Switching Waveforms

The images below show key switching waveforms of PMP10276RevB. The waveforms are measured with 12V/2.2A load.

6.1 Primary MOSFET Q1 @ 85V_{ac}/60Hz



6.2 Primary MOSFET Q1 @ 264V_{ac}/50Hz



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