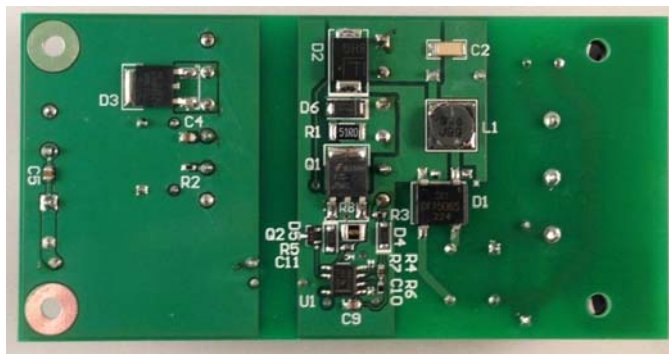
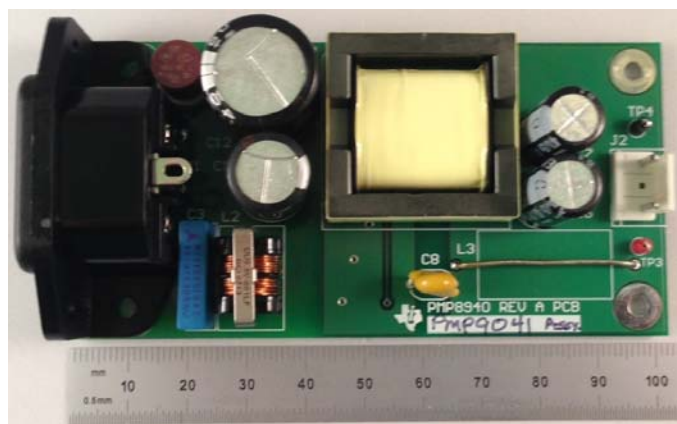


1 Photos

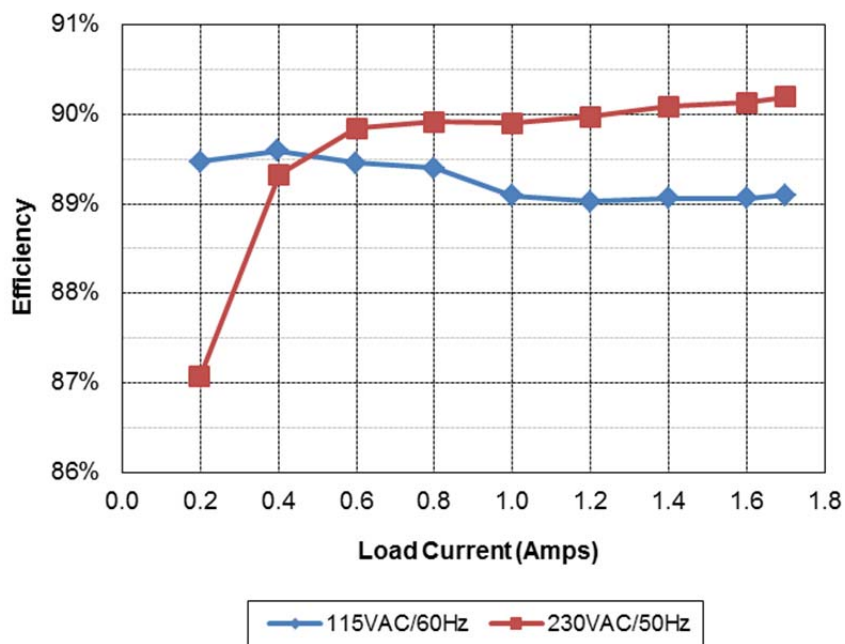
The photographs below show the PMP9041 Rev A prototype assembly. This circuit was built on a PMP8940 Rev A PCB.



2 Standby Power

With no load attached to the output of the supply, the unit draws 37mW of input power with an 115VAC/60Hz input, and 46mW with a 230VAC/50Hz input.

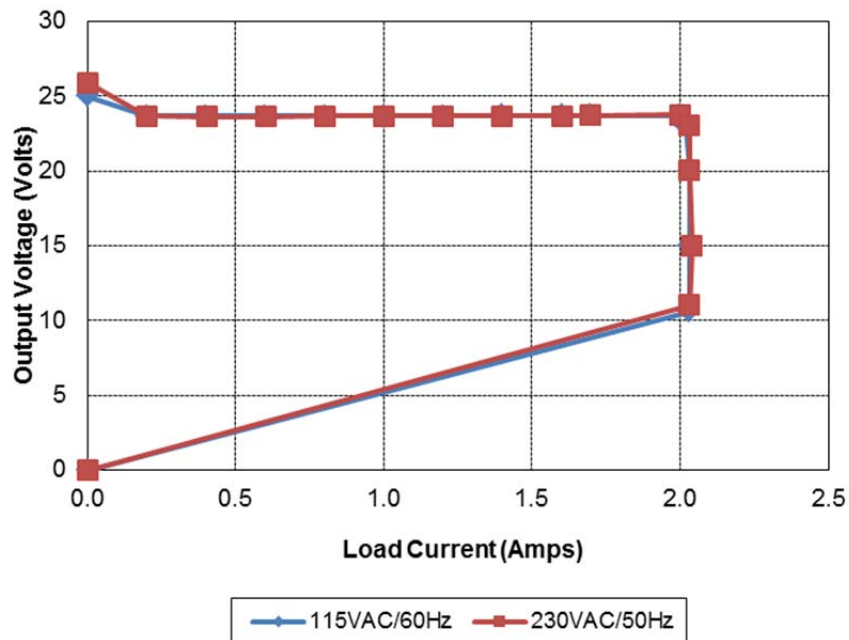
3 Efficiency



115VAC/60Hz								
I _{out}	V _{out}	V _{in}	I _{in}	P _{in}	PF	P _{out}	Losses	Efficiency
0.000	25.03	115.0	0.0063	0.037		0.00	0.04	0.0%
0.200	23.71	115.0	0.127	5.30	0.36	4.74	0.56	89.5%
0.399	23.69	115.0	0.220	10.55	0.41	9.45	1.10	89.6%
0.599	23.70	115.0	0.305	15.87	0.45	14.20	1.67	89.5%
0.800	23.69	115.0	0.384	21.20	0.48	18.95	2.25	89.4%
1.000	23.68	115.0	0.460	26.58	0.50	23.68	2.90	89.1%
1.199	23.70	115.0	0.534	31.92	0.52	28.42	3.50	89.0%
1.399	23.72	115.0	0.606	37.26	0.54	33.18	4.08	89.1%
1.600	23.74	114.9	0.678	42.65	0.55	37.98	4.67	89.1%
1.699	23.73	114.9	0.712	45.25	0.55	40.32	4.93	89.1%
230VAC/50Hz								
I _{out}	V _{out}	V _{in}	I _{in}	P _{in}	PF	P _{out}	Losses	Efficiency
0.000	25.91	229.8	0.0098	0.046		0.00	0.05	0.0%
0.199	23.67	230.0	0.084	5.41	0.28	4.71	0.70	87.1%
0.403	23.65	230.0	0.150	10.67	0.31	9.53	1.14	89.3%
0.601	23.65	230.0	0.208	15.82	0.33	14.21	1.61	89.8%
0.800	23.67	230.0	0.260	21.06	0.35	18.94	2.12	89.9%
1.000	23.68	230.0	0.308	26.34	0.37	23.68	2.66	89.9%
1.198	23.68	230.0	0.353	31.53	0.39	28.37	3.16	90.0%
1.400	23.70	230.0	0.398	36.83	0.40	33.18	3.65	90.1%
1.600	23.71	230.0	0.441	42.09	0.42	37.94	4.15	90.1%
1.699	23.73	230.0	0.462	44.70	0.42	40.32	4.38	90.2%

4 Current Limit

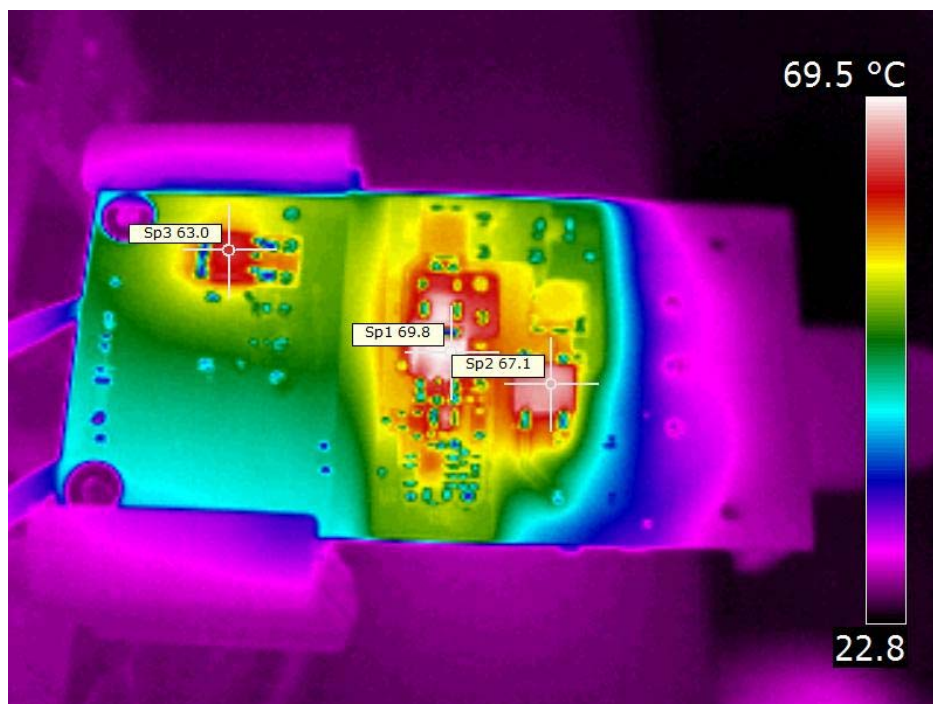
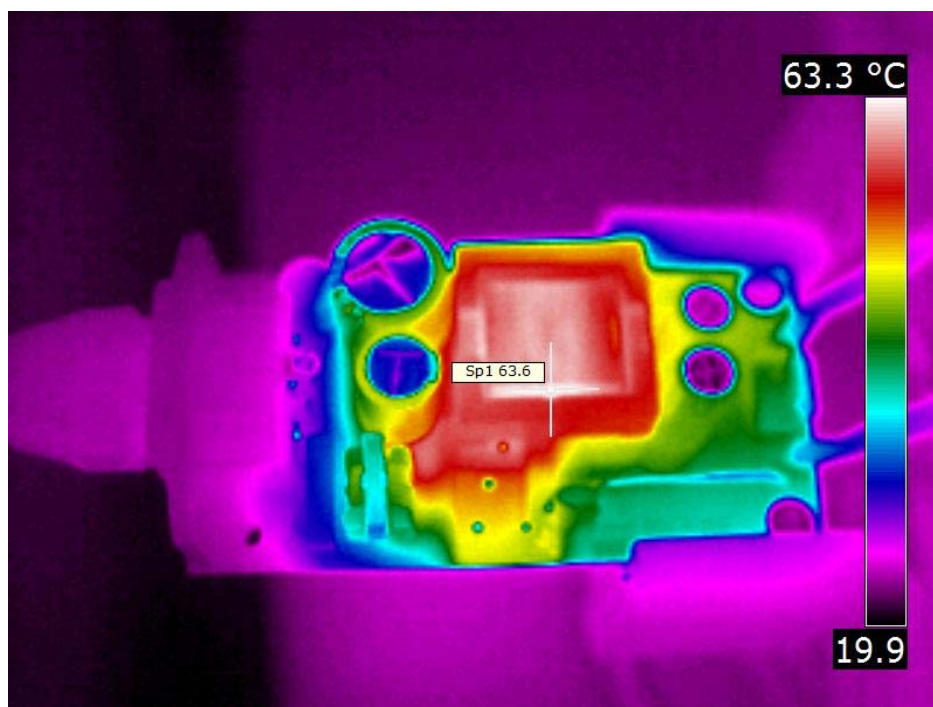
A plot of the output voltage versus load current is shown below.

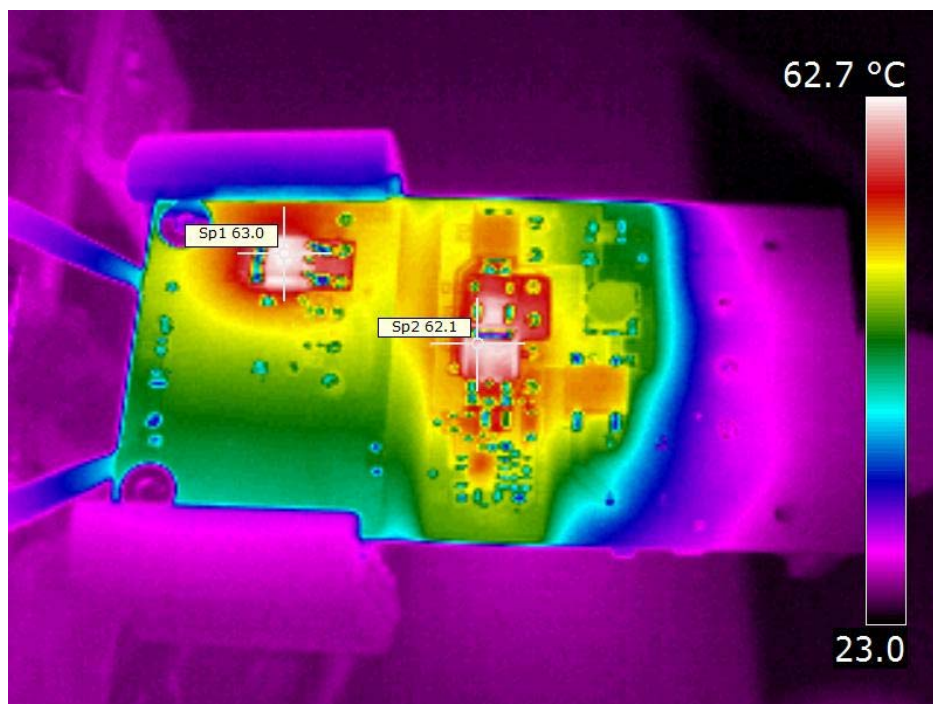
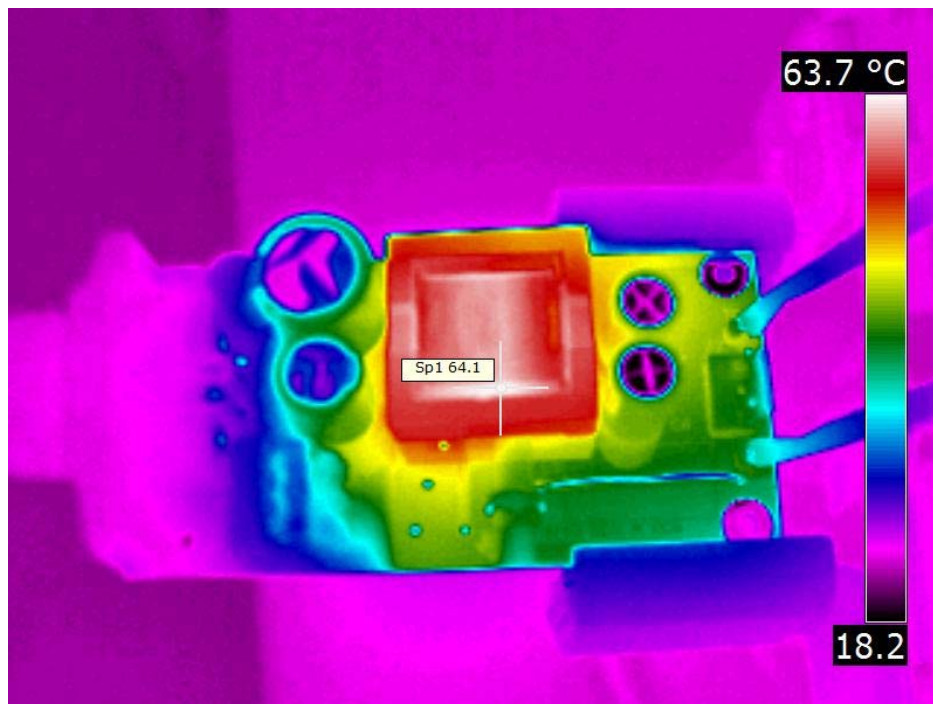


5 Thermal Images

The ambient temperature was 25°C. The output was loaded with 1.7A.

5.1 115VAC/60Hz Input

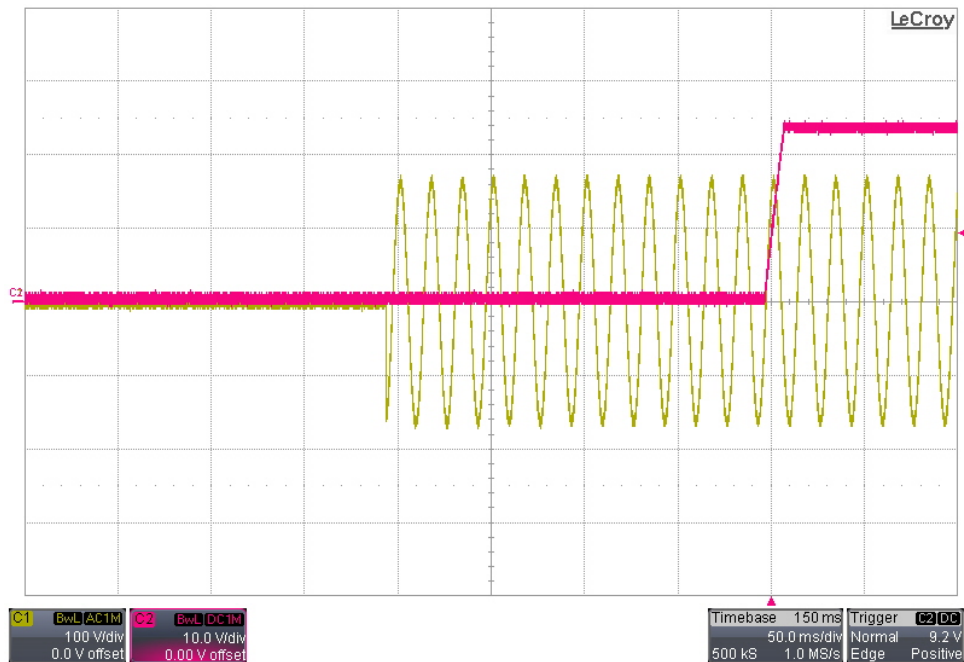


5.2 230VAC/50Hz Input

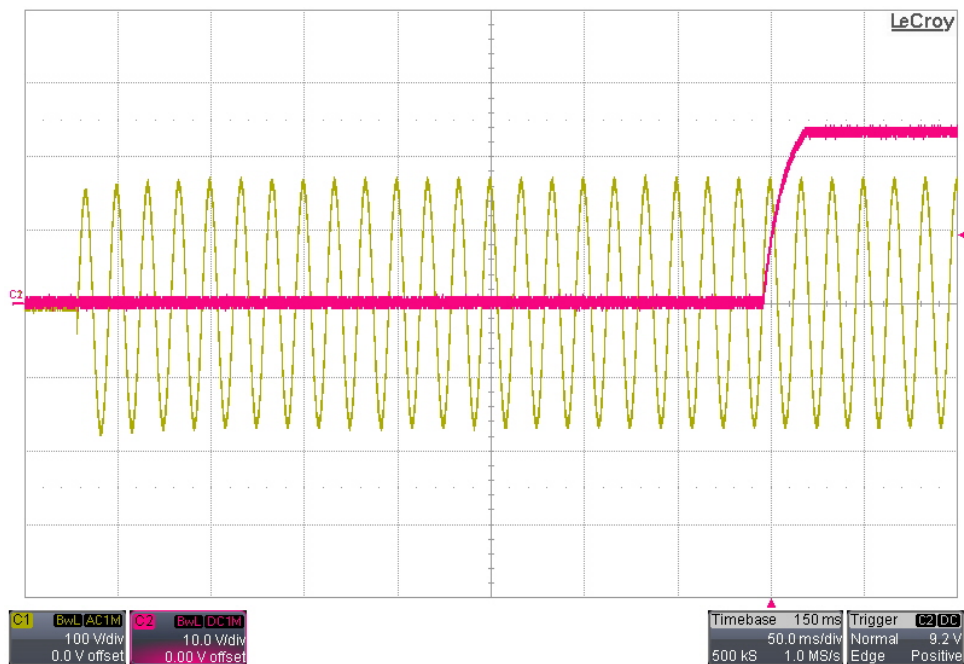
6 Startup

Channel 1 shows the AC input voltage. Channel 2 shows the output voltage.

6.1 115VAC/60Hz Startup – 0A Load



6.2 115VAC/60Hz Startup – 14Ω Load

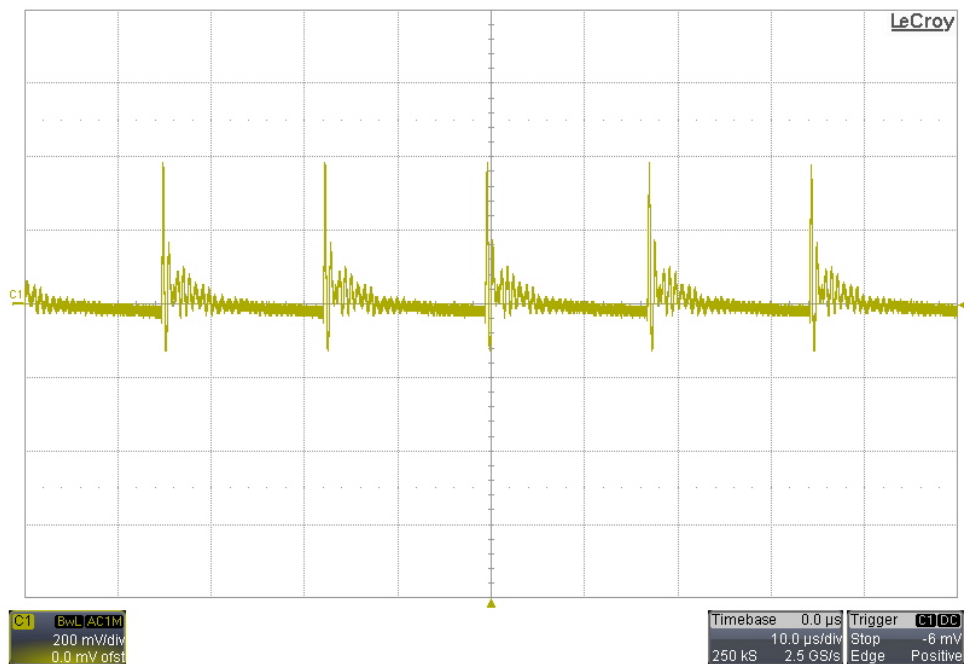


6.3 230VAC/50Hz Startup – 0A Load**6.4 230VAC/50Hz Startup – 14Ω Load**

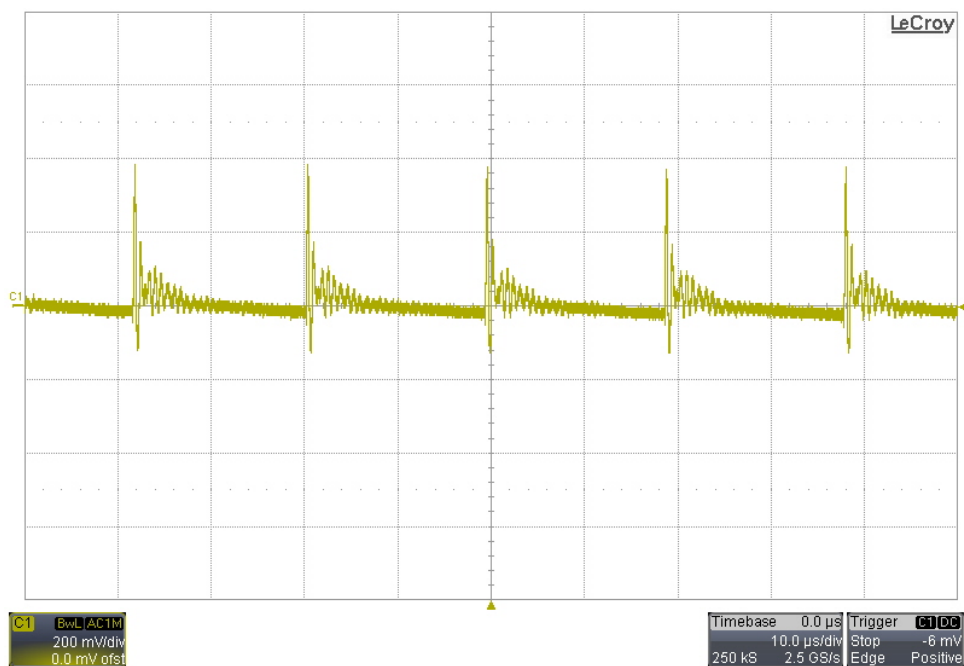
7 Output Ripple Voltage

The output was loaded with 1.7A.

7.1 115VAC/60Hz Input

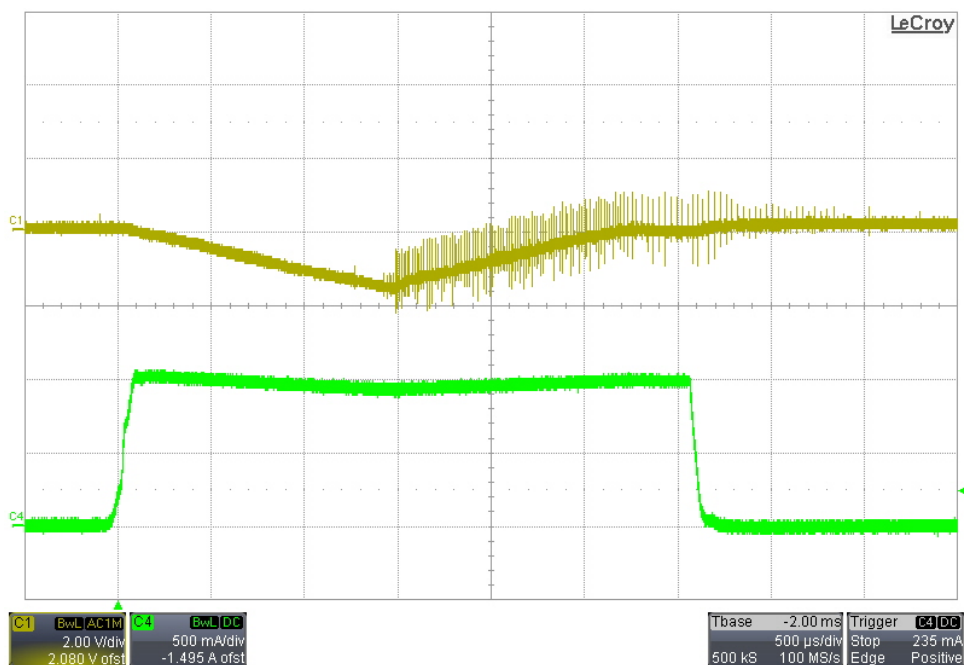


7.2 230VAC/50Hz Input

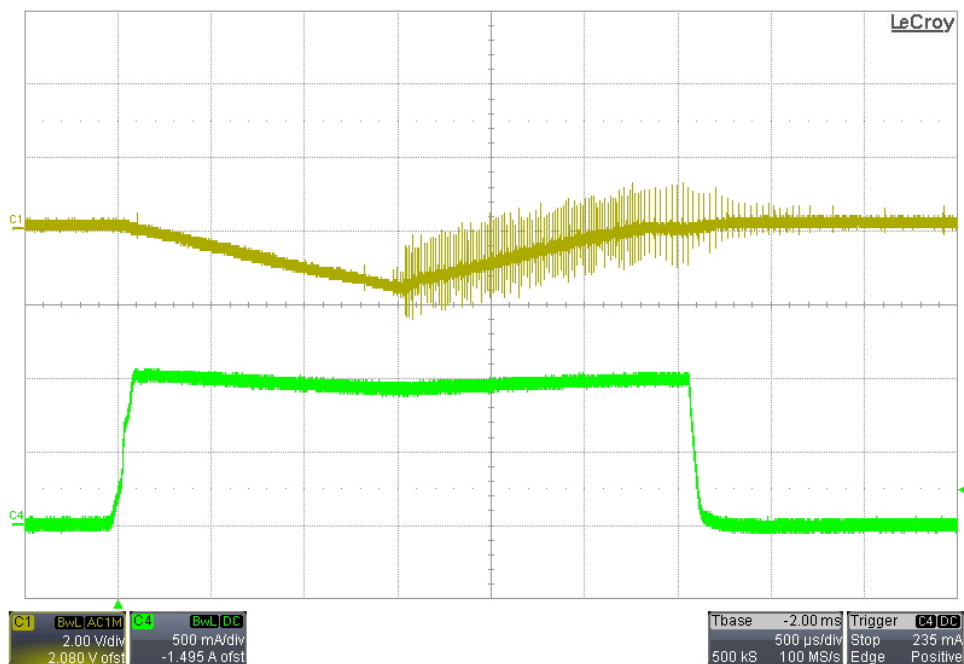


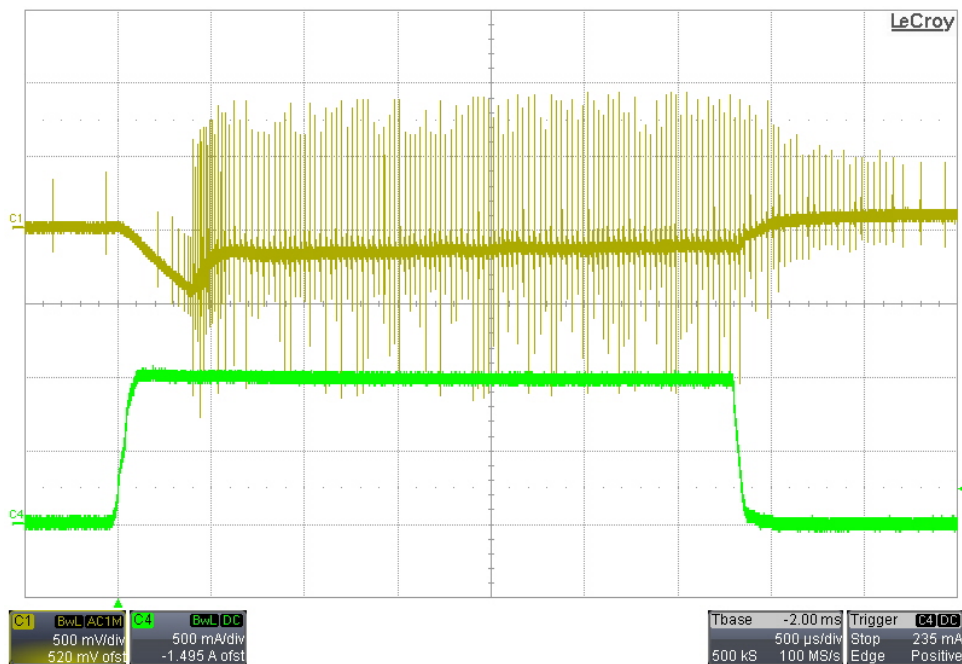
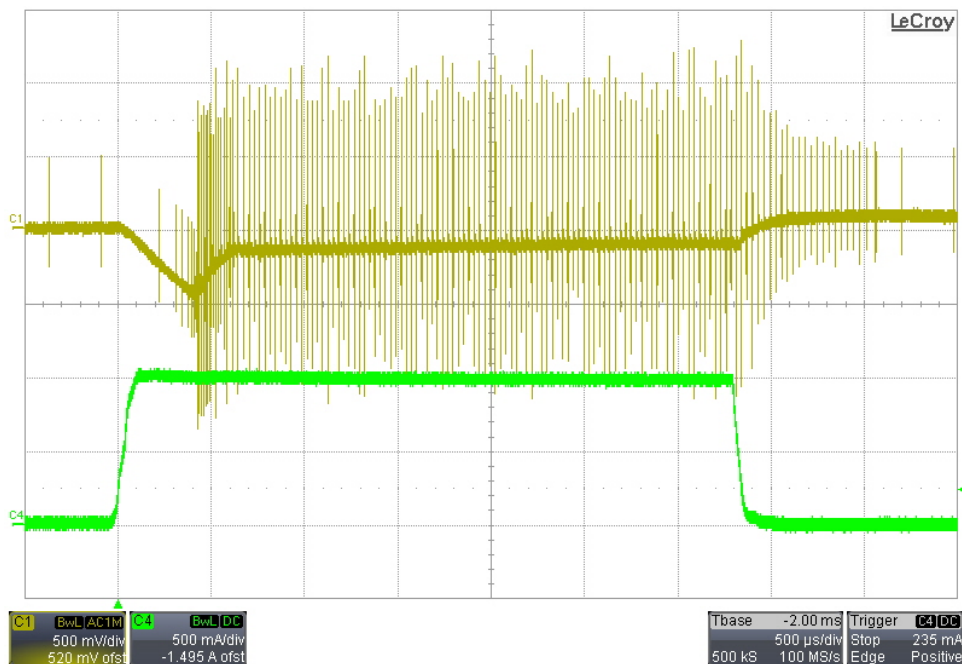
8 Load Transients

8.1 0A to 1A Transient – 115VAC/60Hz Input



8.2 0A to 1A Transient – 230VAC/50Hz Input



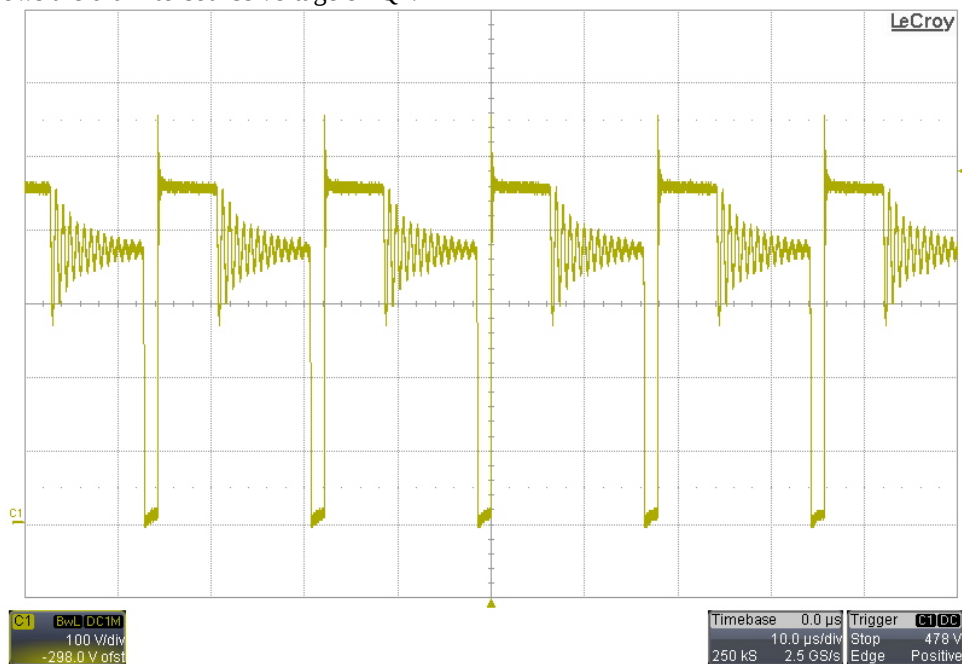
8.3 10mA to 1A Transient – 115VAC/60Hz Input**8.4 10mA to 1A Transient – 230VAC/50Hz Input**

9 Switching Waveforms

The images below show the voltage waveforms on the switching devices within the supply. The input was 265VAC/50Hz. The output was loaded 1.7A.

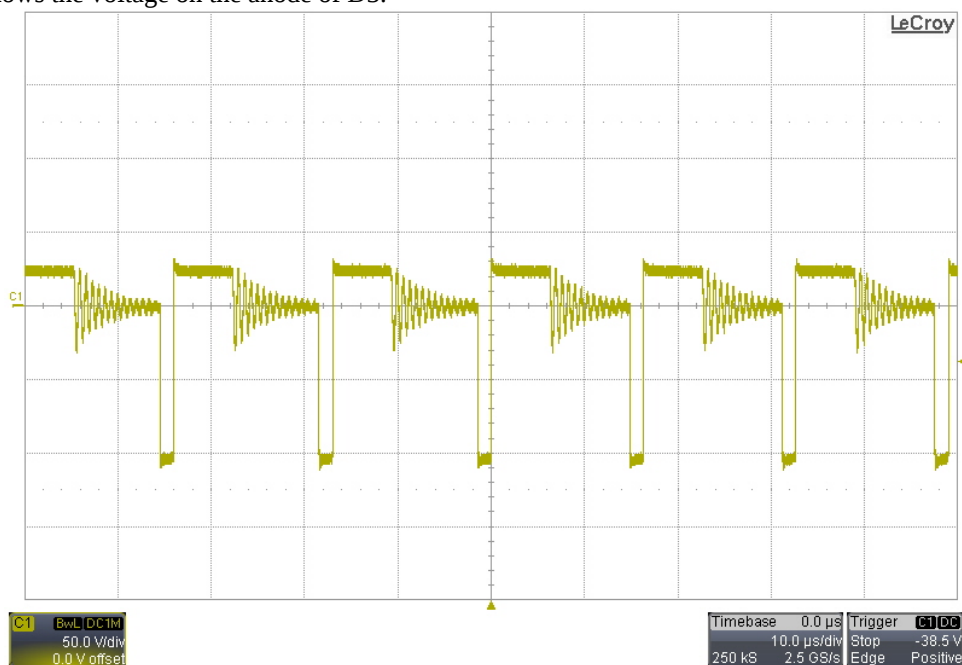
9.1 Primary Waveforms

The image below shows the drain-to-source voltage on Q1.



9.2 Secondary Waveforms

The image below shows the voltage on the anode of D3.



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