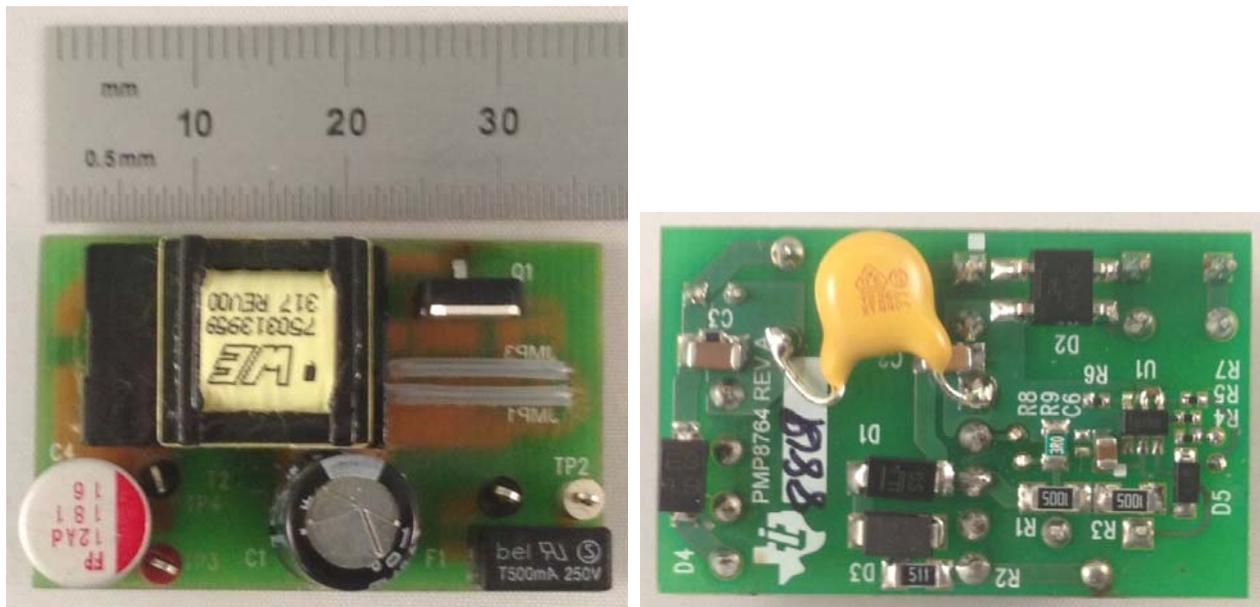


1 Photos

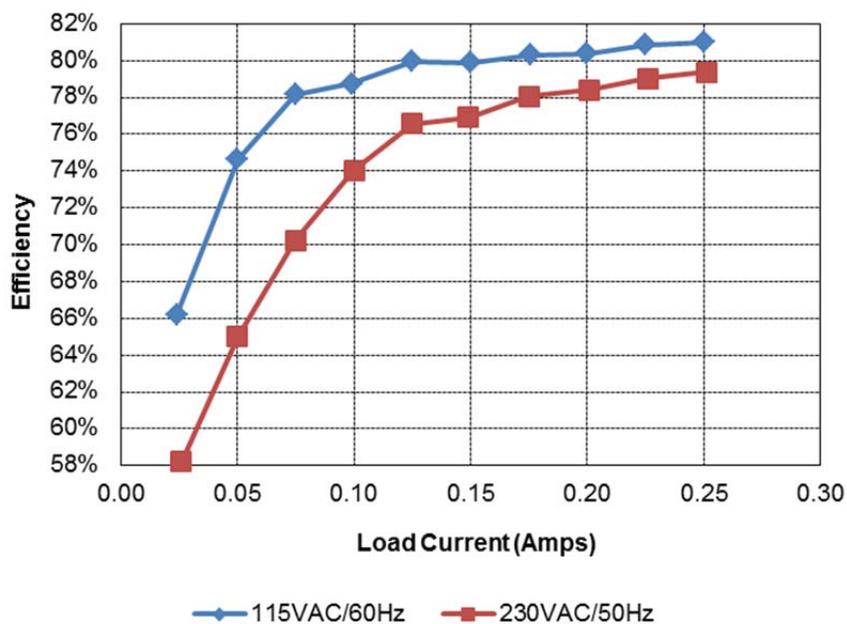
The photographs below show the PMP8869 Rev B prototype assembly. This circuit was built on a PMP8764 Rev A PCB.



2 Standby Power

With no load attached to the output of the supply, the unit draws 23mW of input power with an 115VAC/60Hz input, and 29mW with a 230VAC/50Hz input.

3 Efficiency

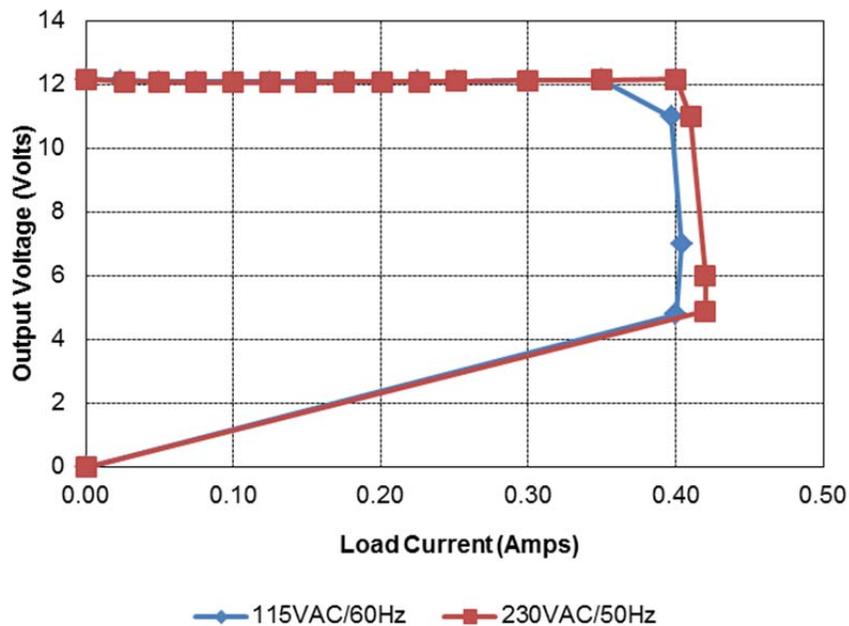


115VAC/60Hz								
I _{out}	V _{out}	V _{in}	I _{in}	P _{in}	PF	P _{out}	Losses	Efficiency
0.000	12.18	114.9	0.0011	0.023		0.00	0.02	0.0%
0.024	12.13	114.9	0.010	0.44	0.39	0.29	0.15	66.2%
0.050	12.09	114.9	0.016	0.81	0.44	0.60	0.21	74.6%
0.075	12.09	114.9	0.022	1.16	0.47	0.91	0.25	78.2%
0.099	12.09	114.9	0.027	1.52	0.49	1.20	0.32	78.7%
0.125	12.09	114.9	0.033	1.89	0.50	1.51	0.38	80.0%
0.150	12.09	114.9	0.038	2.27	0.52	1.81	0.46	79.9%
0.176	12.09	114.9	0.044	2.65	0.53	2.13	0.52	80.3%
0.200	12.10	114.9	0.049	3.01	0.54	2.42	0.59	80.4%
0.225	12.11	114.9	0.054	3.37	0.55	2.72	0.65	80.9%
0.250	12.12	114.9	0.059	3.74	0.55	3.03	0.71	81.0%

230VAC/50Hz								
I _{out}	V _{out}	V _{in}	I _{in}	P _{in}	PF	P _{out}	Losses	Efficiency
0.000	12.17	229.8	0.0009	0.029		0.00	0.03	0.0%
0.026	12.09	229.8	0.007	0.54	0.33	0.31	0.23	58.2%
0.050	12.09	229.8	0.011	0.93	0.36	0.60	0.33	65.0%
0.075	12.08	229.8	0.015	1.29	0.38	0.91	0.38	70.2%
0.100	12.07	229.8	0.018	1.63	0.40	1.21	0.42	74.0%
0.125	12.07	229.8	0.021	1.97	0.41	1.51	0.46	76.6%
0.149	12.08	229.8	0.024	2.34	0.42	1.80	0.54	76.9%
0.175	12.09	229.8	0.027	2.71	0.44	2.12	0.59	78.1%
0.201	12.09	229.8	0.030	3.10	0.45	2.43	0.67	78.4%
0.226	12.10	229.8	0.033	3.46	0.46	2.73	0.73	79.0%
0.251	12.11	229.8	0.036	3.83	0.47	3.04	0.79	79.4%

4 Current Limit

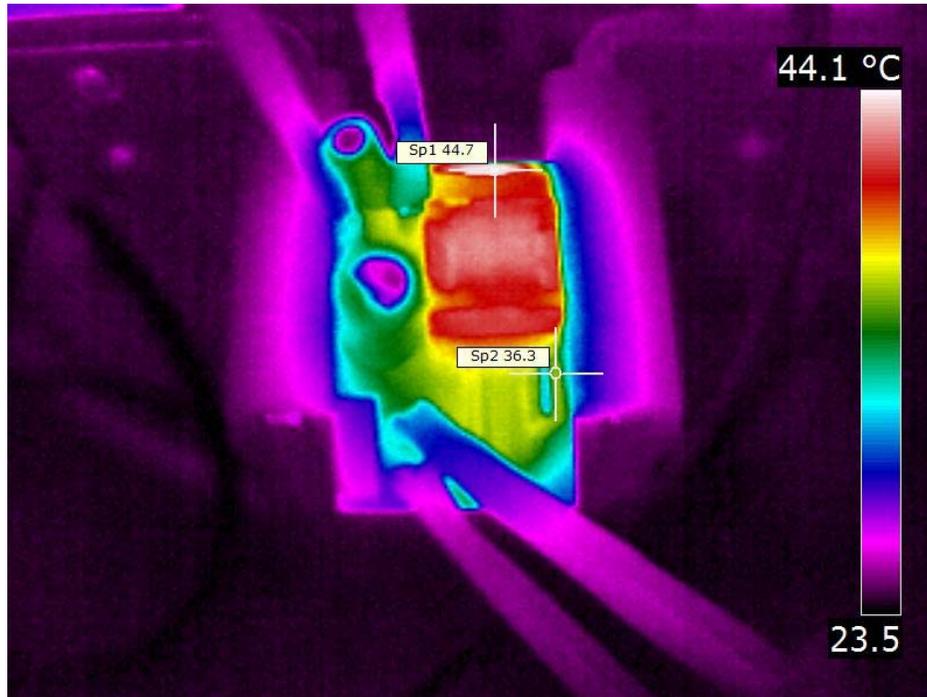
A plot of the output voltage versus load current is shown below.



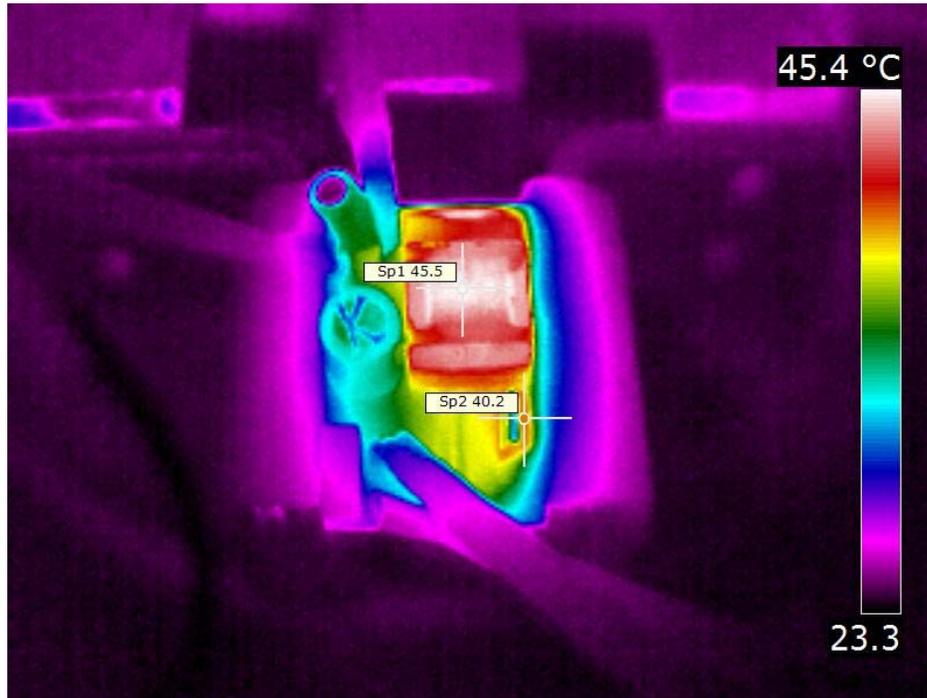
5 Thermal Images

The ambient temperature was 25°C. The output was loaded with 250mA.

5.1 115VAC/60Hz Input



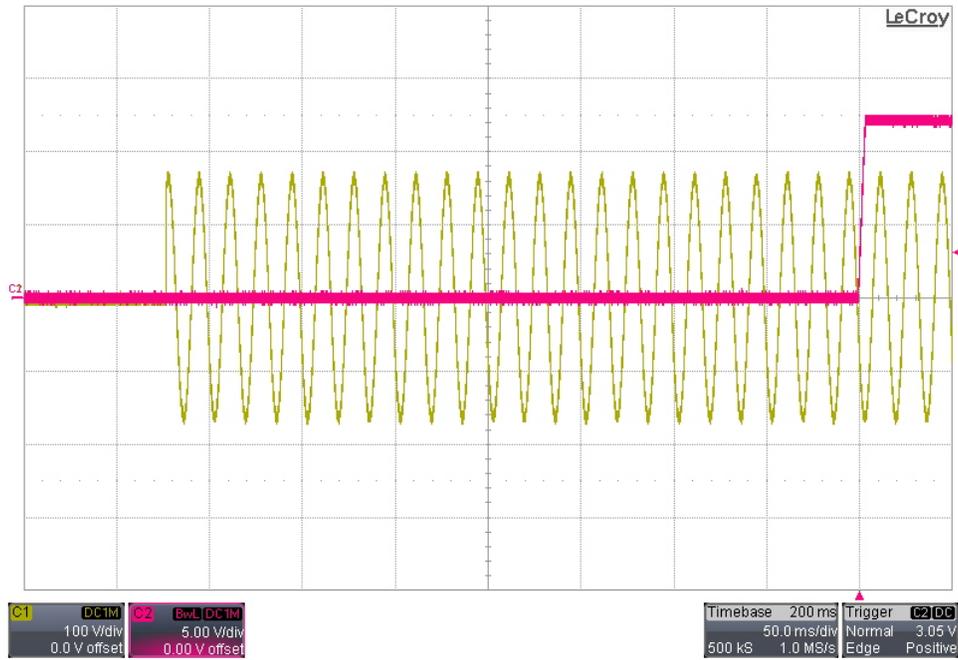
5.2 230VAC/50Hz Input



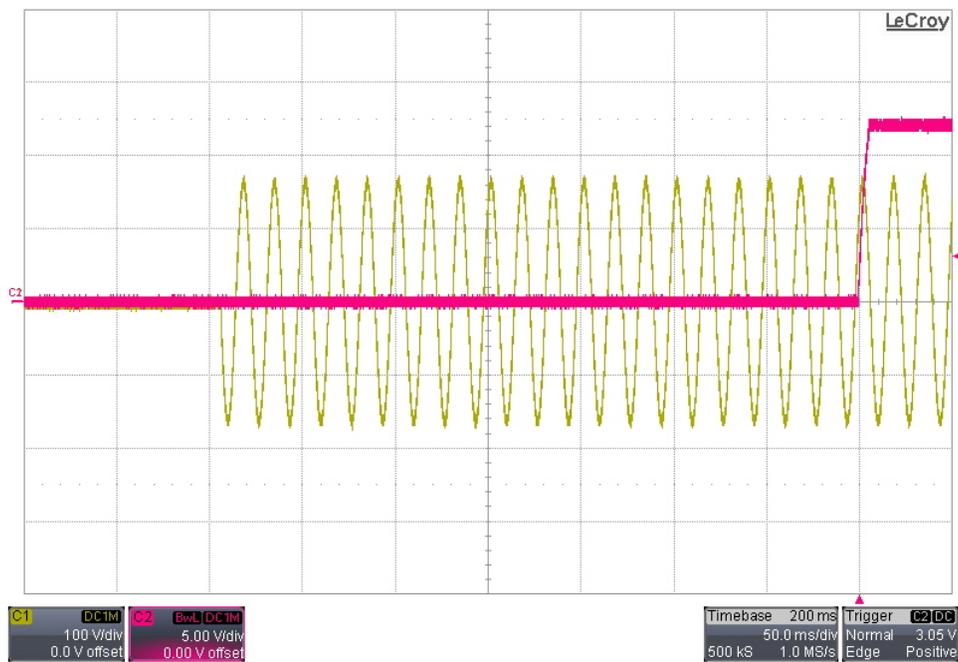
6 Startup

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

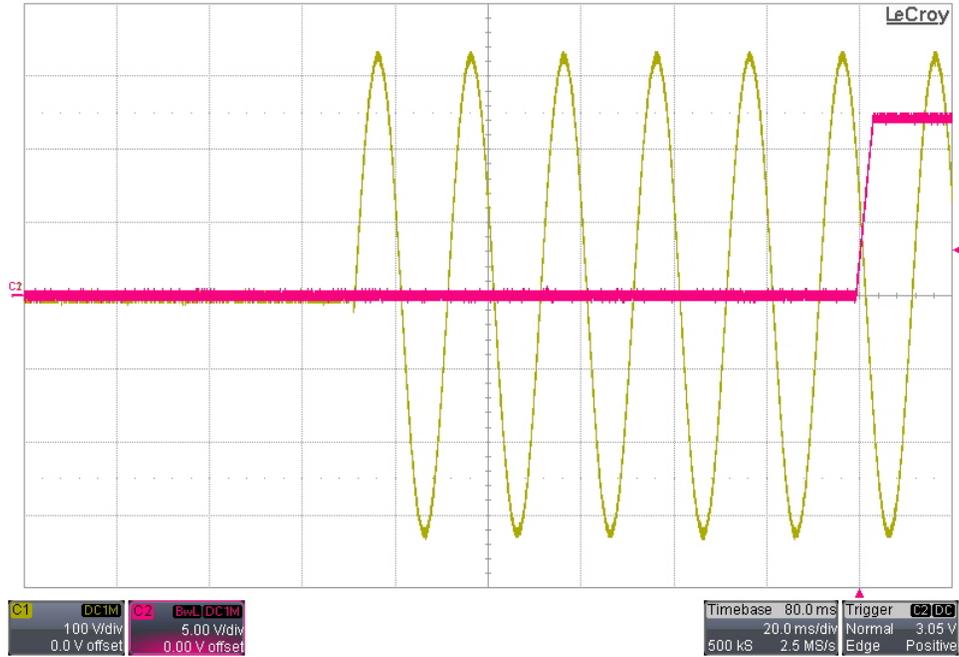
6.1 115VAC/60Hz Startup – 0A Load



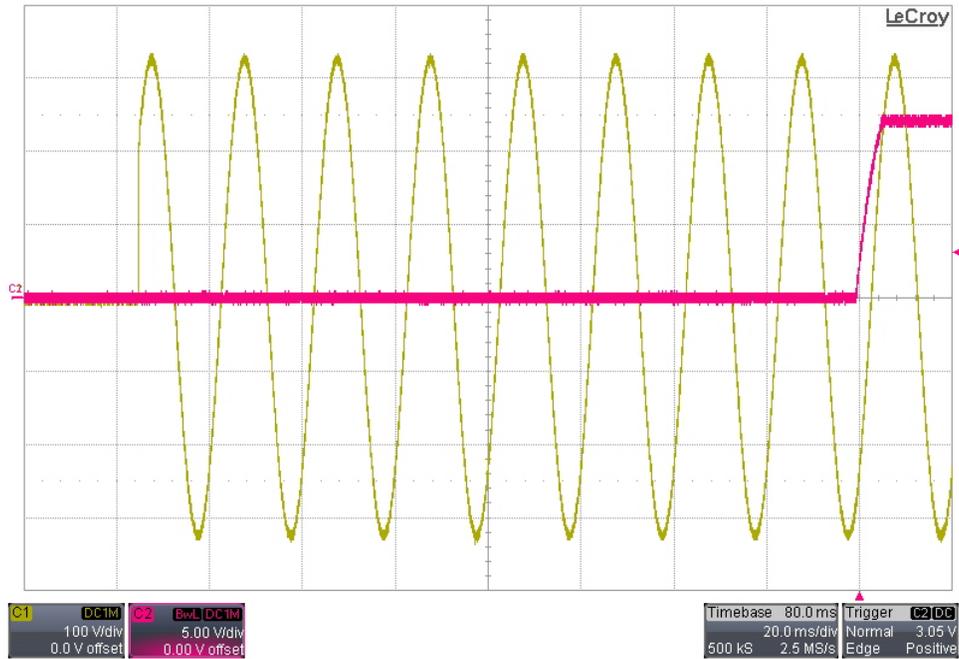
6.2 115VAC/50Hz Startup – 48Ω Load



6.3 230VAC/50Hz Startup – 0A Load



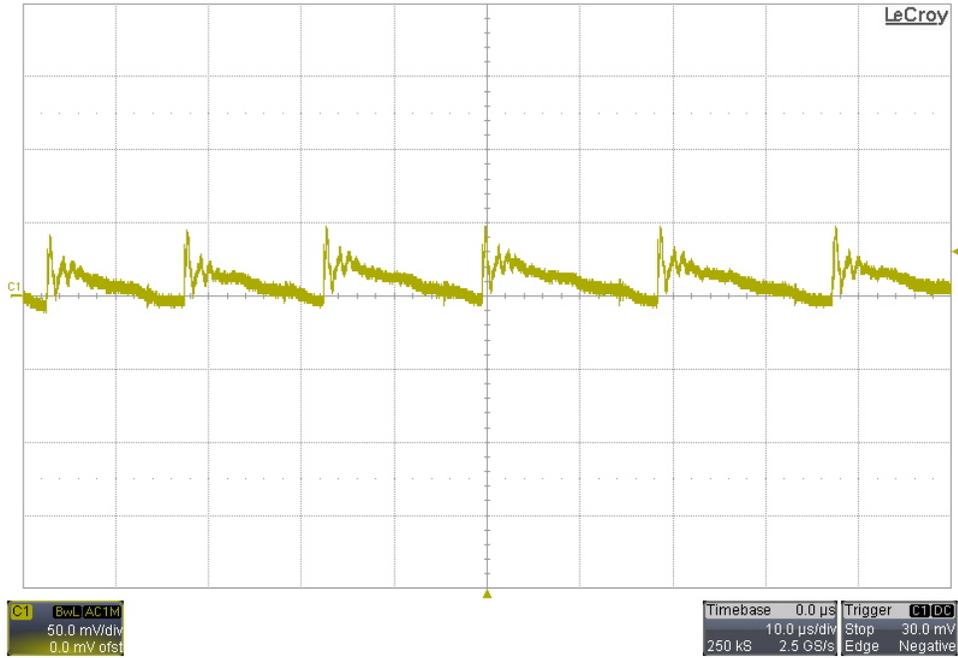
6.4 230VAC/50Hz Startup – 48Ω Load



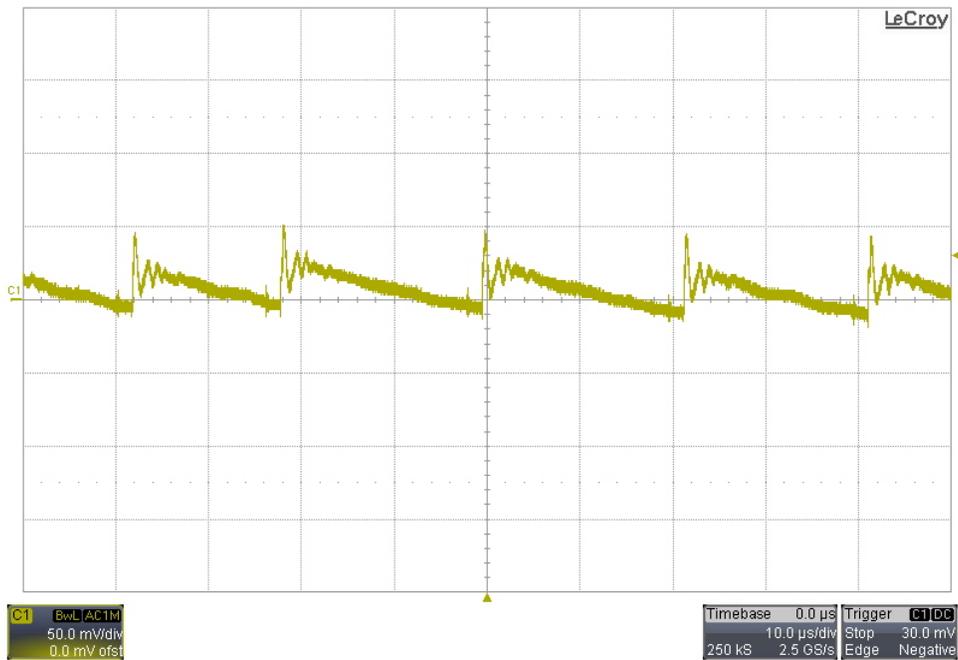
7 Output Ripple Voltage

The output was loaded with 250mA.

7.1 115VAC/60Hz Input

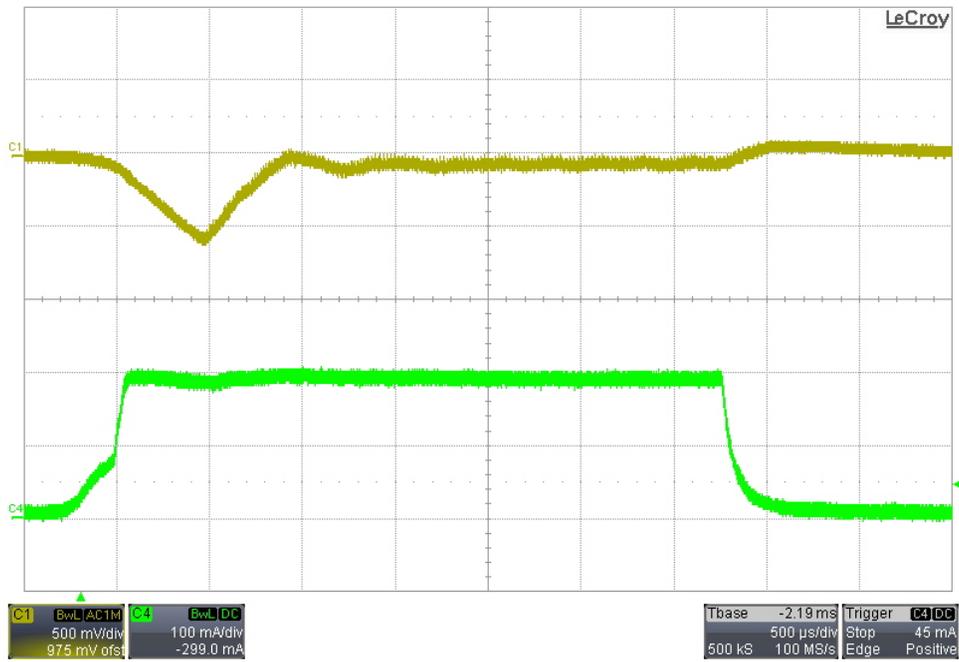


7.2 230VAC/50Hz Input

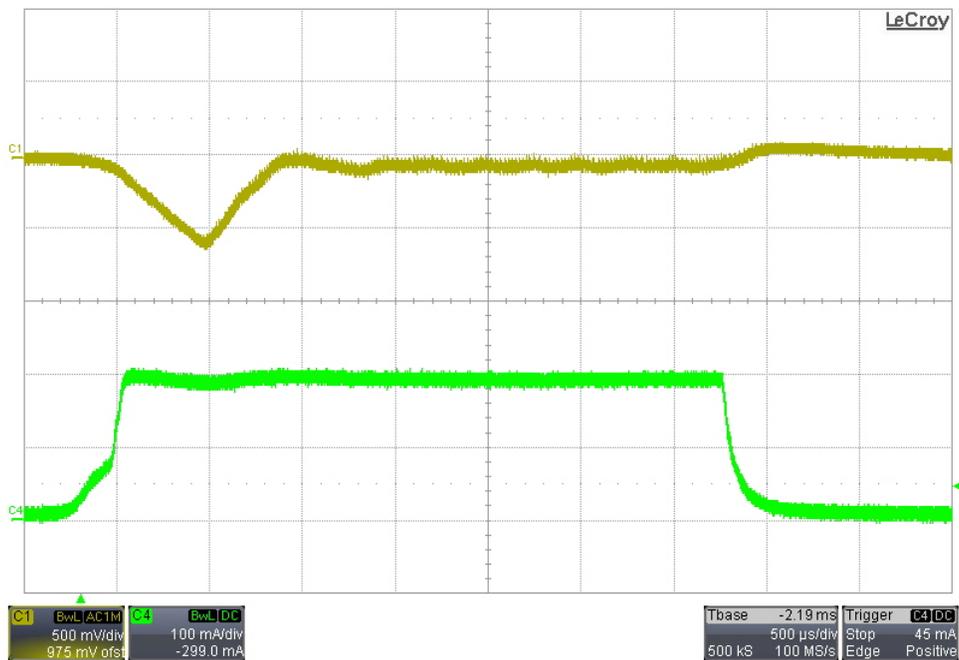


8 Load Transients

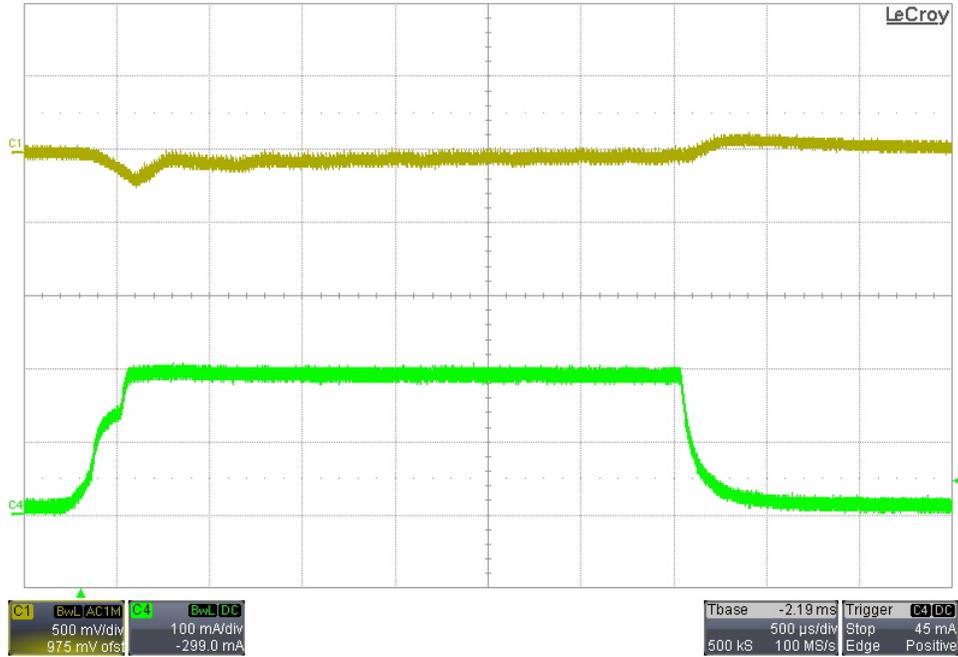
8.1 0A to 0.2A Transient – 115VAC/60Hz Input



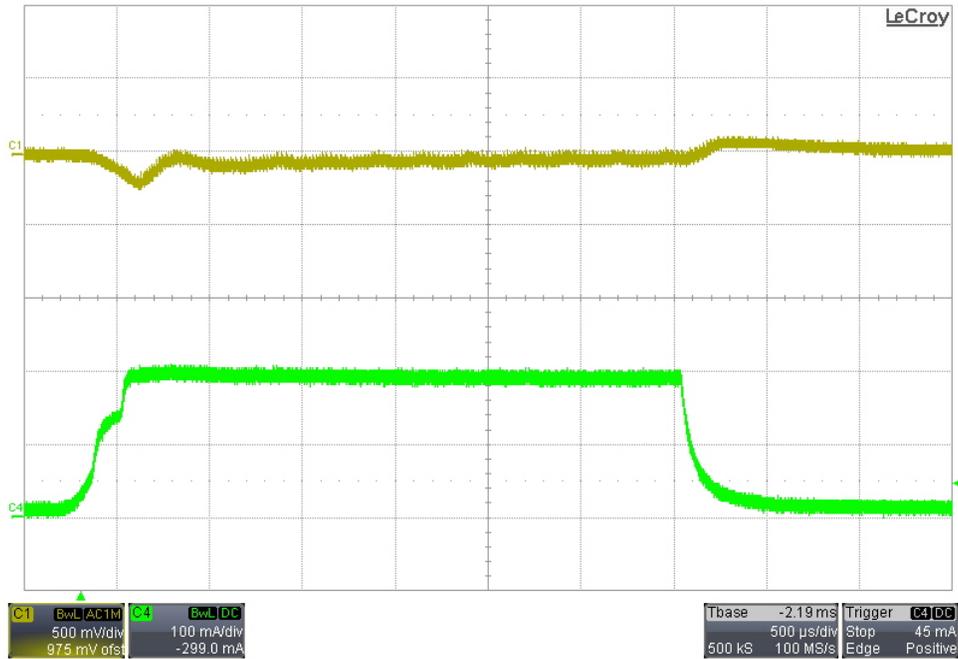
8.2 0A to 0.2A Transient – 230VAC/50Hz Input



8.3 10mA to 0.2A Transient – 115VAC/60Hz Input



8.4 10mA to 0.2A Transient – 230VAC/50Hz Input

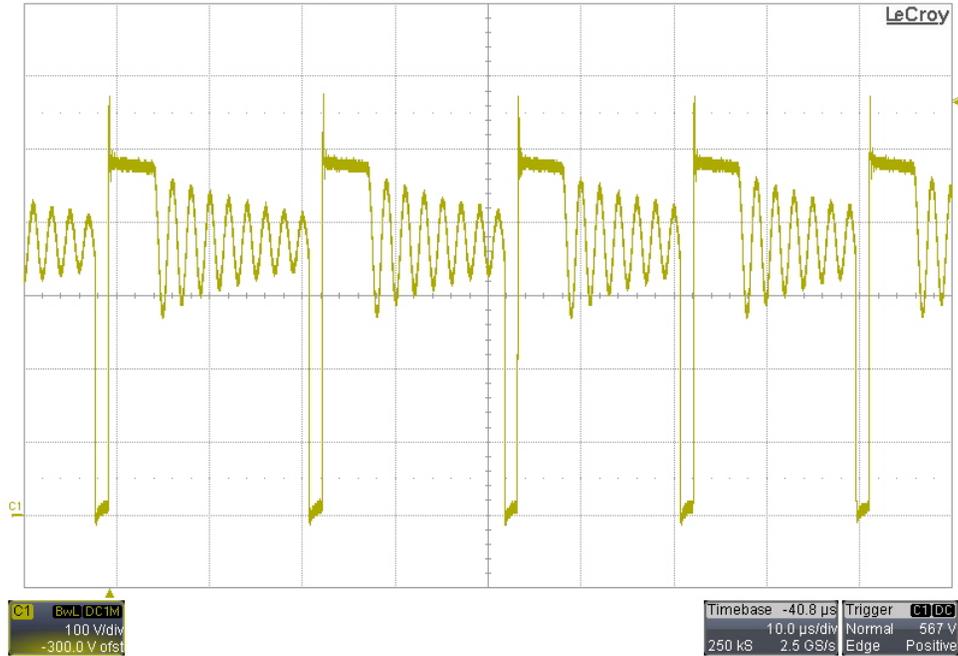


9 Switching Waveforms

The images below show the voltage waveforms on the switching devices within the supply. The input was 265VAC/50Hz. The output was loaded 0.25A.

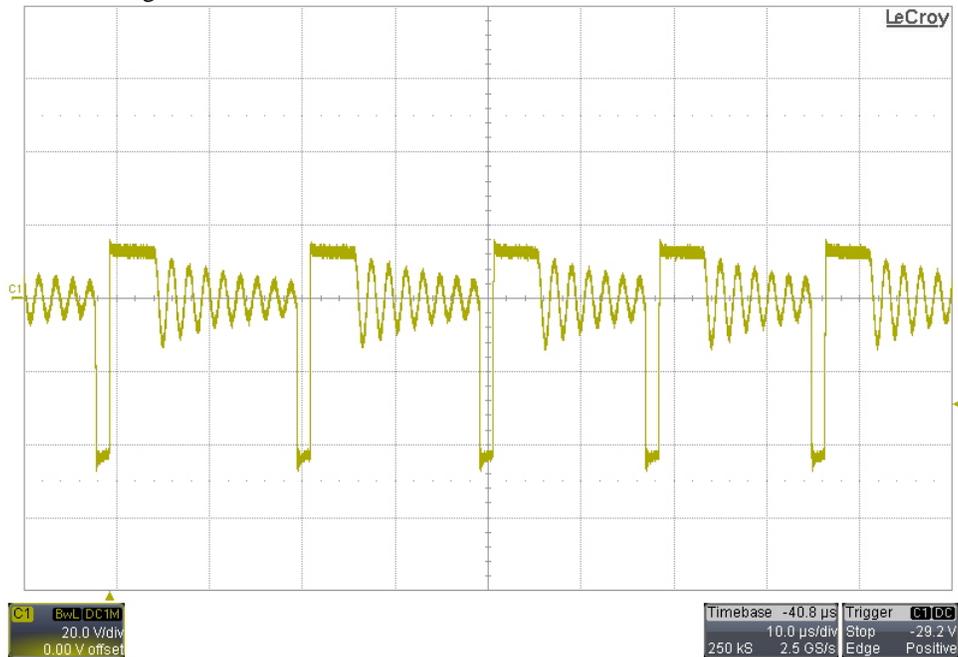
9.1 Primary Waveforms

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 D4.



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