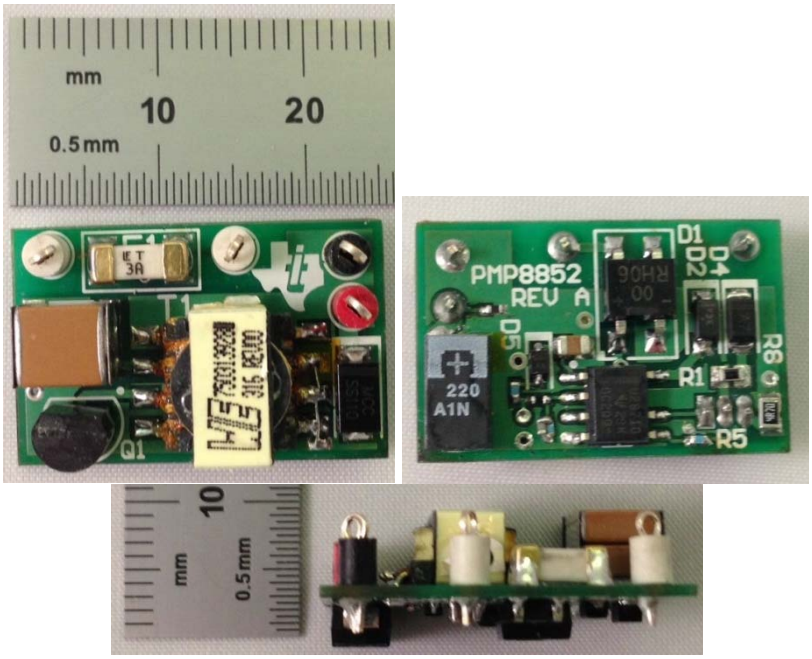
1 Photos

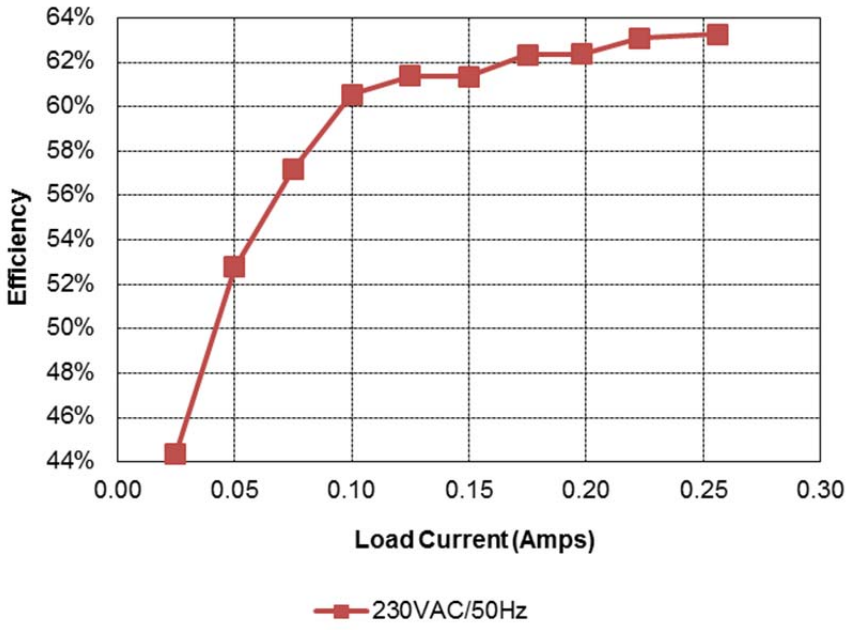
The photographs below show the PMP8968 Rev A prototype assembly. This circuit was built on a PMP8852 Rev A PCB.



2 Standby Power

With no load attached to the output of the supply, the unit draws less than 10mW of input power with a 230VAC/50Hz input.

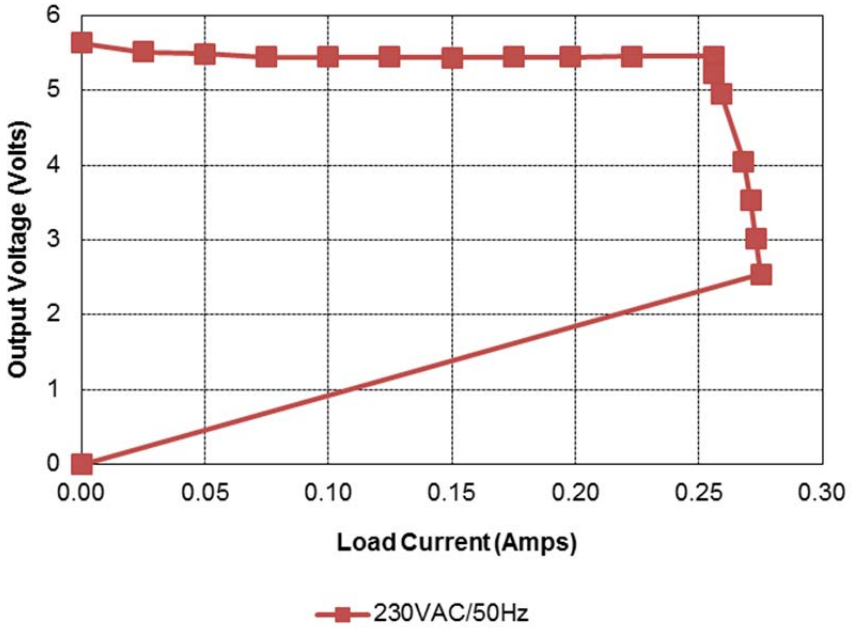
3 Efficiency



230VAC/50Hz								
Iout	Vout	Vin	Iin	Pin	PF	Pout	Losses	Efficiency
0.000	5.64	229.8	0.0004	0.009		0.00	0.01	0.0%
0.025	5.52	229.8	0.004	0.31	0.37	0.14	0.17	44.4%
0.050	5.49	229.8	0.006	0.52	0.40	0.27	0.25	52.8%
0.075	5.45	229.8	0.007	0.72	0.43	0.41	0.31	57.2%
0.100	5.45	229.8	0.009	0.90	0.45	0.55	0.36	60.6%
0.125	5.45	229.8	0.010	1.11	0.46	0.68	0.43	61.4%
0.150	5.44	229.8	0.012	1.33	0.48	0.82	0.51	61.4%
0.175	5.45	229.8	0.014	1.53	0.49	0.95	0.58	62.3%
0.198	5.45	229.8	0.015	1.73	0.50	1.08	0.65	62.4%
0.223	5.46	229.8	0.016	1.93	0.51	1.22	0.71	63.1%
0.256	5.46	229.8	0.018	2.21	0.52	1.40	0.81	63.2%

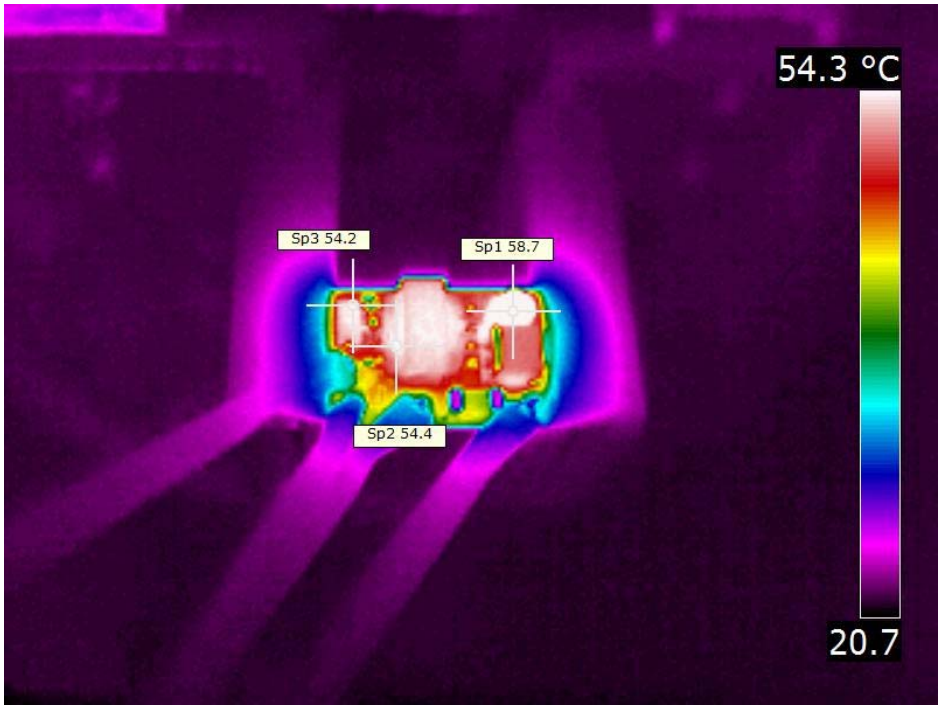
4 Current Limit

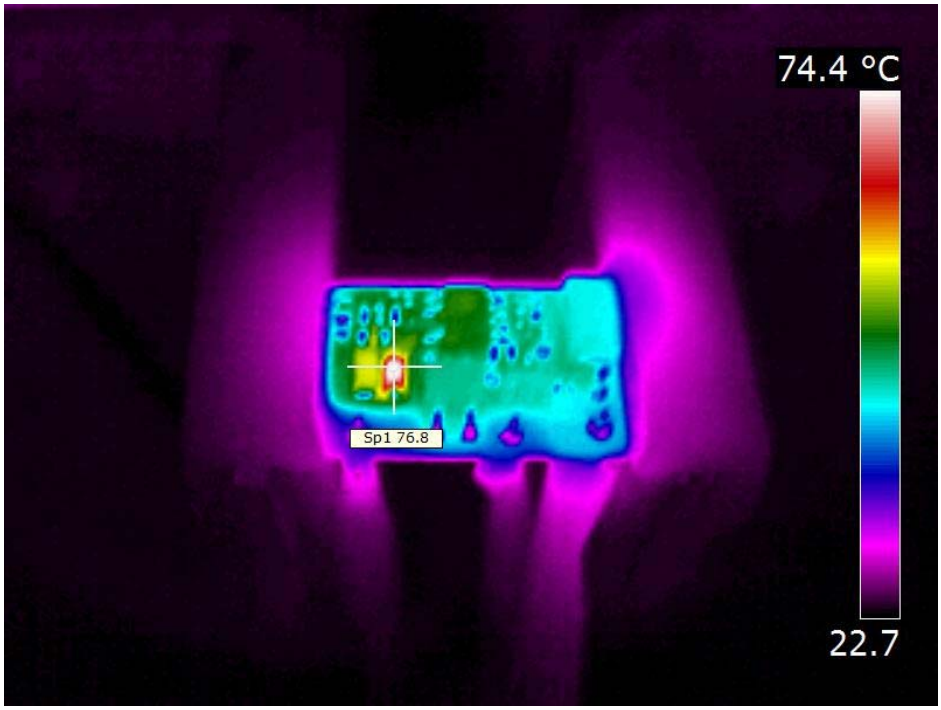
A plot of the output voltage versus load current is shown below.



5 Thermal Images

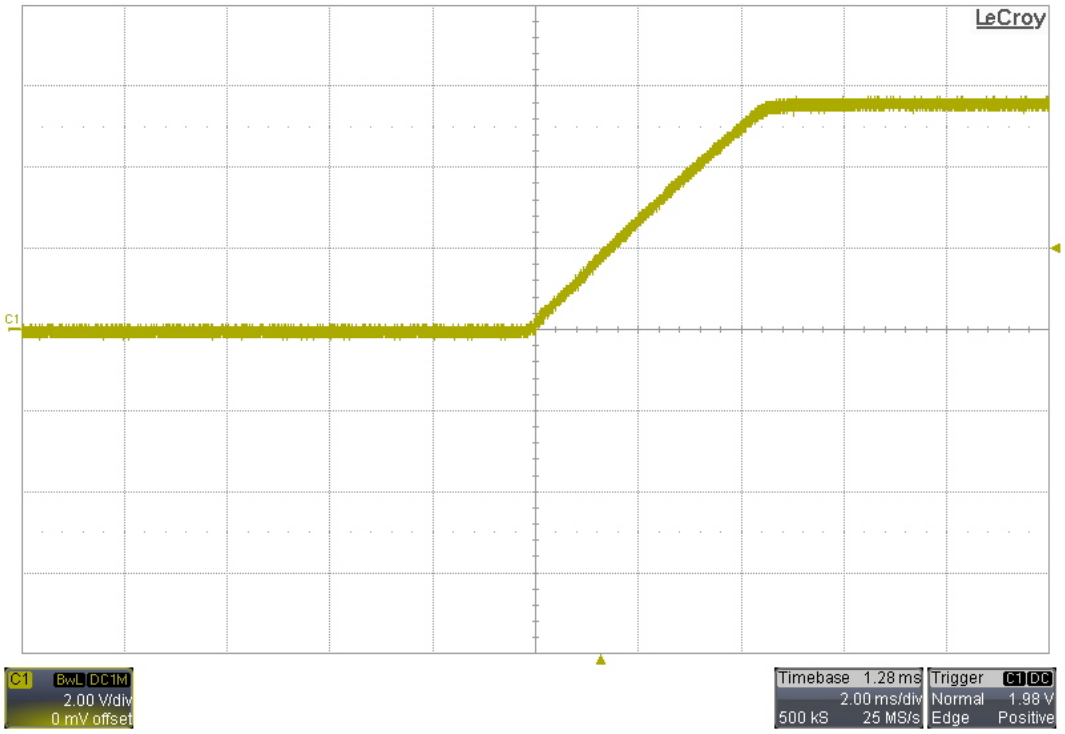
The ambient temperature was 25ºC. The output was loaded with 250mA. The input was 230VAC/50Hz.



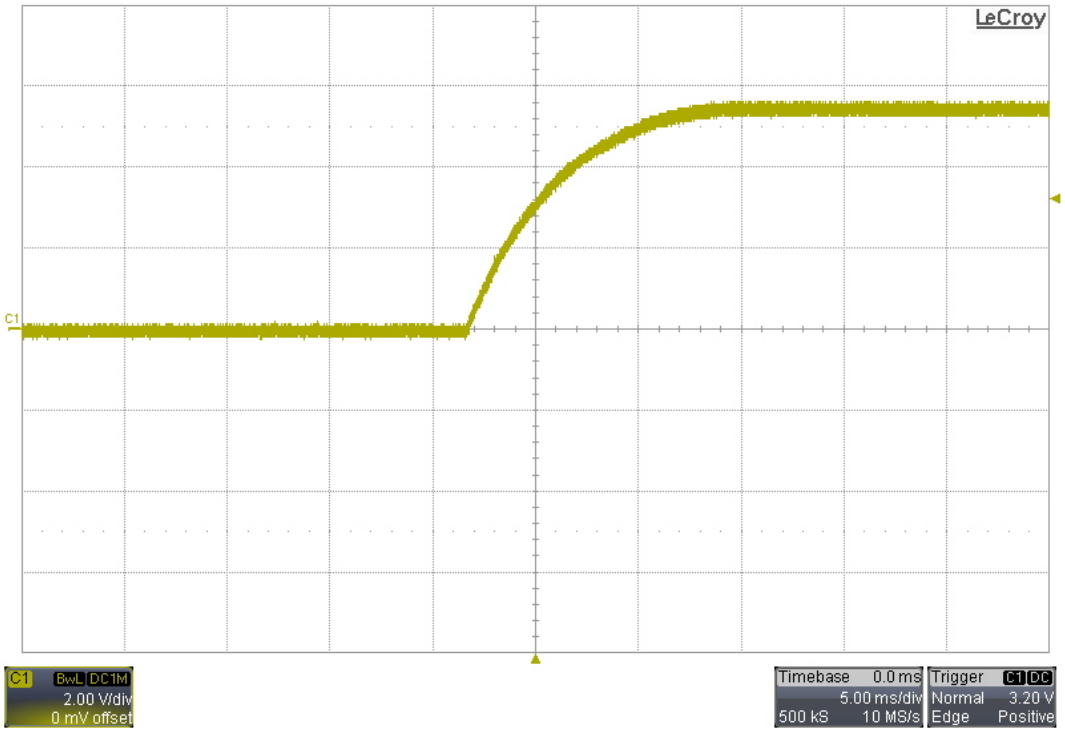


6 Startup

6.1 230VAC/50Hz Startup – 0A Load

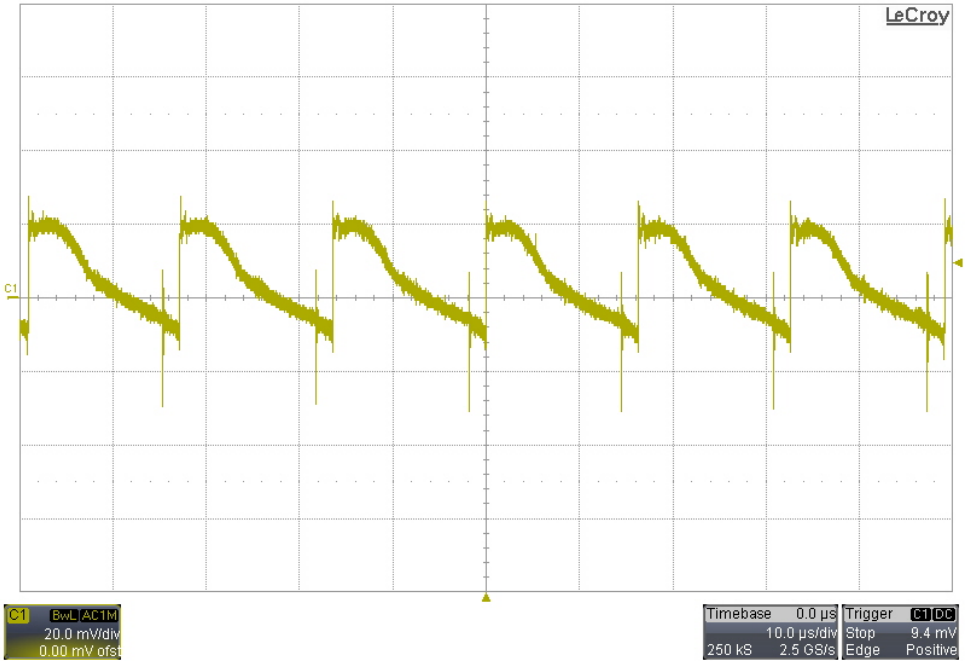


6.2 230VAC/50Hz Startup – 22Ω Load



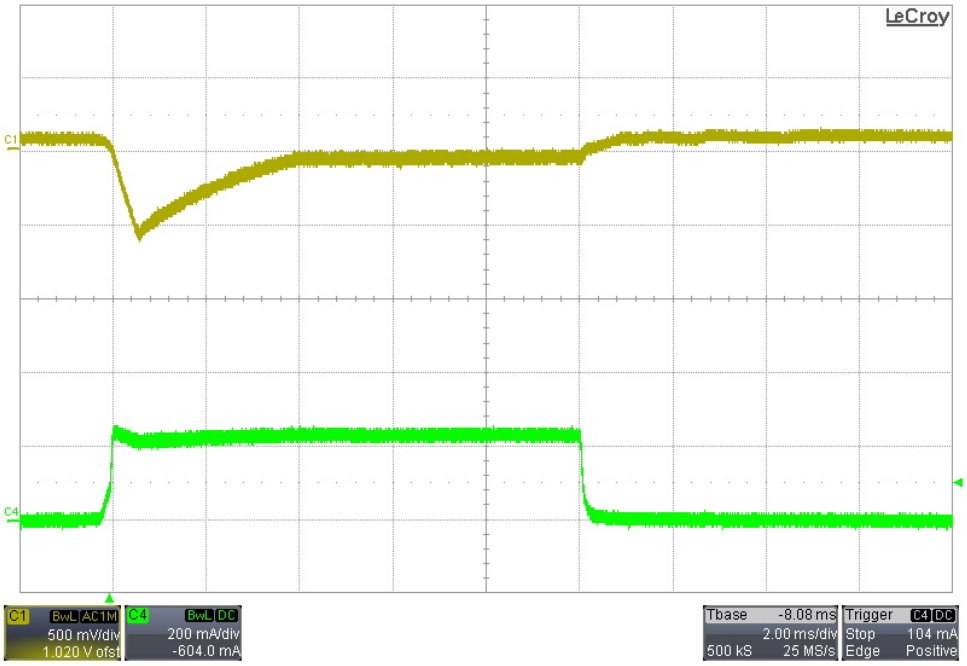
7 Output Ripple Voltage

The output was loaded with 250mA. The input was 230VAC/50Hz.

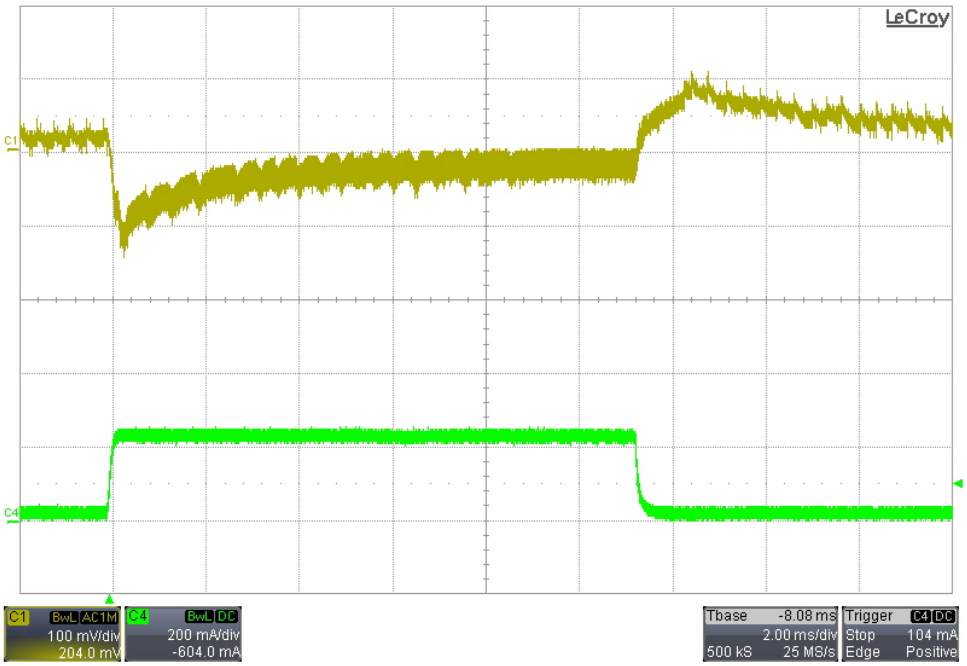


8 Load Transients

8.1 0A to 250mA Transient – 230VAC/50Hz Input



8.2 30mA to 250mA Transient – 230VAC/50Hz Input

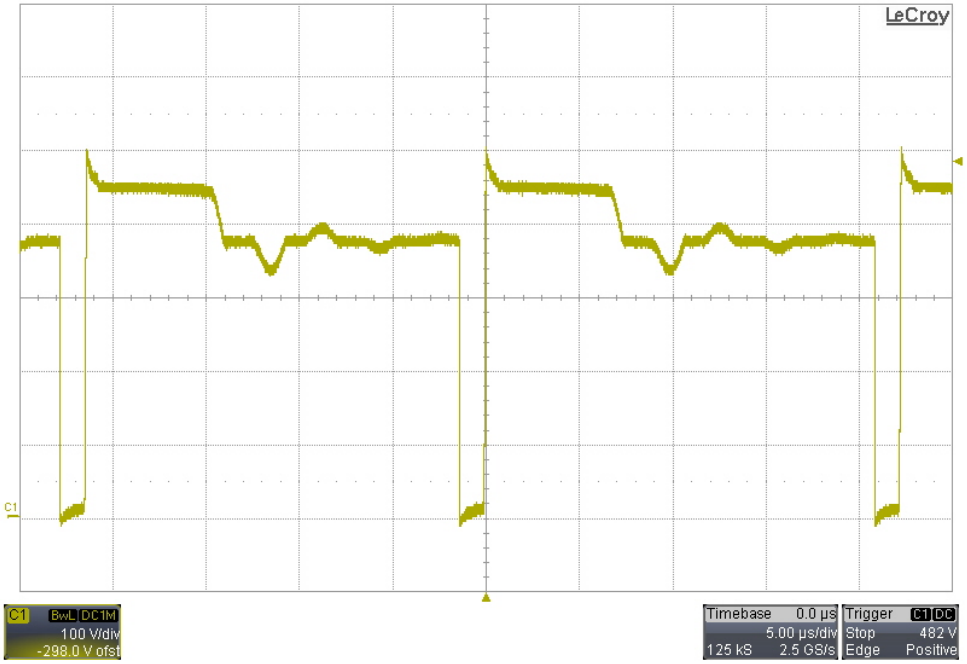


9 Switching Waveforms

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.

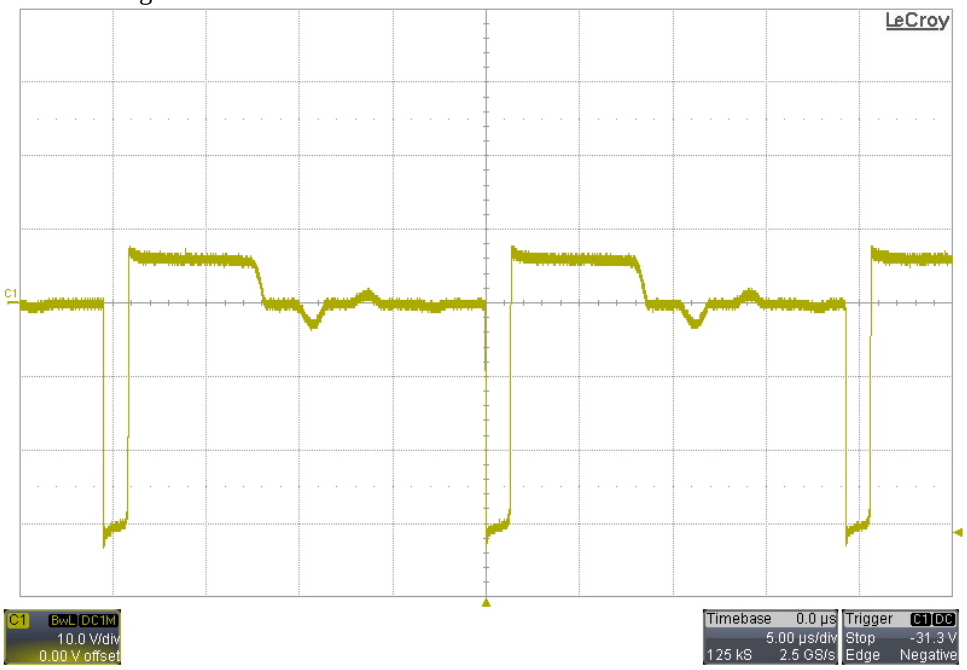
9.1 Primary Waveforms

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 D3.



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