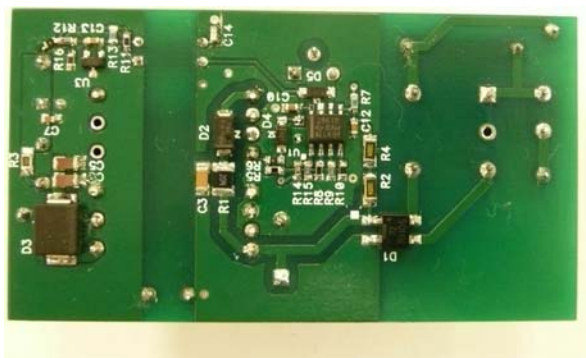


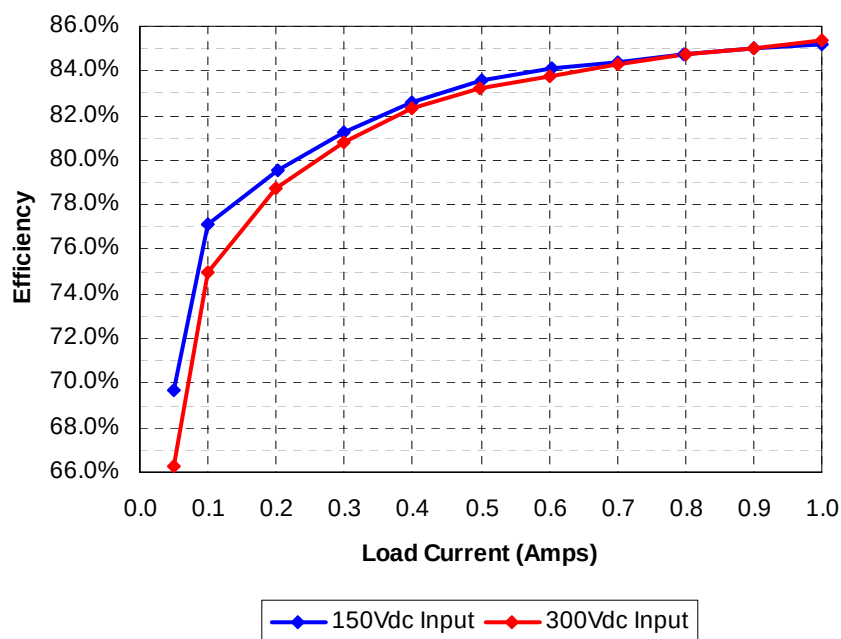
1 Photo

The photographs below show the top and bottom views of the PMP212 Rev A demo board.



2 Efficiency

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



150VDC							
Iout	Vout	Vin (Vdc)	Iin (mAdc)	Pin	Pout	Losses	Efficiency
0.050	11.99	149.6	5.75	0.86	0.60	0.26	69.7%
0.099	11.99	149.6	10.29	1.54	1.19	0.35	77.1%
0.201	11.99	149.6	20.25	3.03	2.41	0.62	79.6%
0.300	11.99	149.5	29.60	4.43	3.60	0.83	81.3%
0.399	11.99	149.5	38.73	5.79	4.78	1.01	82.6%
0.502	11.99	149.5	48.19	7.20	6.02	1.19	83.5%
0.604	11.99	149.5	57.61	8.61	7.24	1.37	84.1%
0.701	11.99	149.5	66.6	9.96	8.40	1.55	84.4%
0.799	11.99	149.4	75.7	11.31	9.58	1.73	84.7%
0.900	11.99	149.4	85.0	12.70	10.79	1.91	85.0%
1.000	11.99	149.4	94.2	14.07	11.99	2.08	85.2%

300VDC

I _{out}	V _{out}	V _{in} (V _{dc})	I _{in} (mA _{dc})	P _{in}	P _{out}	Losses	Efficiency
0.050	12.00	301.0	3.01	0.91	0.60	0.31	66.2%
0.100	12.00	300.9	5.32	1.60	1.20	0.40	75.0%
0.200	11.99	300.9	10.12	3.05	2.40	0.65	78.7%
0.300	11.99	300.9	14.80	4.45	3.60	0.86	80.8%
0.399	11.99	300.9	19.32	5.81	4.78	1.03	82.3%
0.499	11.99	300.9	23.90	7.19	5.98	1.21	83.2%
0.600	11.99	300.9	28.54	8.59	7.19	1.39	83.8%
0.700	11.99	300.9	33.10	9.96	8.39	1.57	84.3%
0.802	11.99	300.9	37.71	11.35	9.62	1.73	84.7%
0.901	11.99	300.9	42.22	12.70	10.80	1.90	85.0%
0.999	11.99	300.9	46.65	14.04	11.98	2.06	85.3%

3 Standby Mode Power Consumption

The tables below show the input power and efficiency during light load operation.

150VDC

I _{out}	V _{out}	V _{in} (V _{dc})	I _{in} (mA)	P _{in} (mW)	P _{out} (mW)	Losses	Efficiency
0.000	12.00	150.1	0.60	90	0	90	0.0%
0.010	12.00	150.1	1.87	281	120	161	42.8%

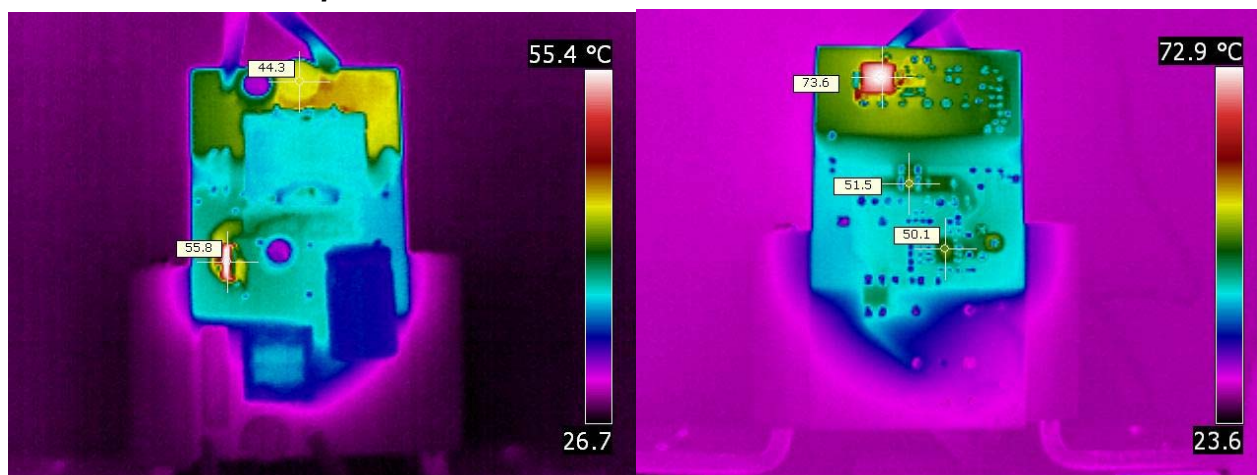
300VDC

I _{out}	V _{out}	V _{in} (V _{dc})	I _{in} (mA)	P _{in} (mW)	P _{out} (mW)	Losses	Efficiency
0.000	12.00	301.0	0.40	120	0	120	0.0%
0.010	12.00	301.0	1.12	337	120	217	35.6%

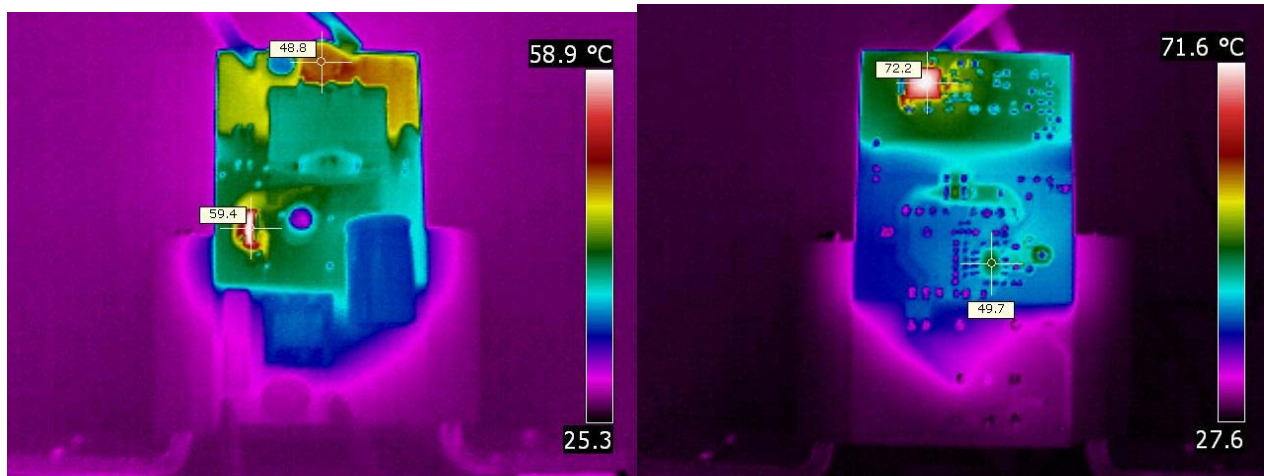
4 Thermal Images

The thermal images below show a top view (left) and bottom view (right) of the board. The ambient temperature was 26°C with no forced air flow. The output was loaded with 1A.

4.1 115VAC, 60Hz Input

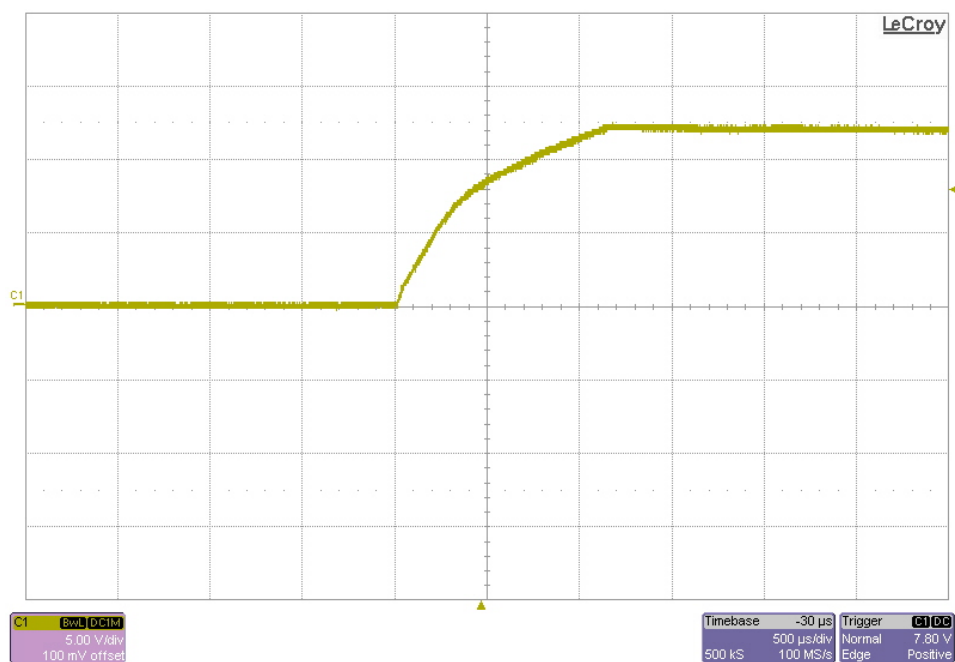


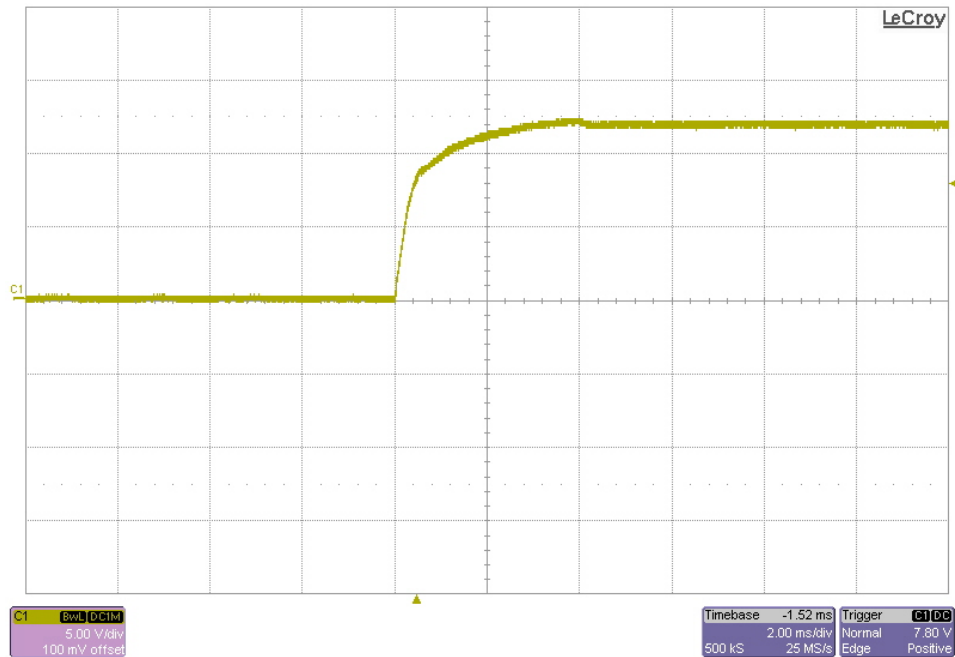
4.2 220VAC, 50Hz Input



5 Startup

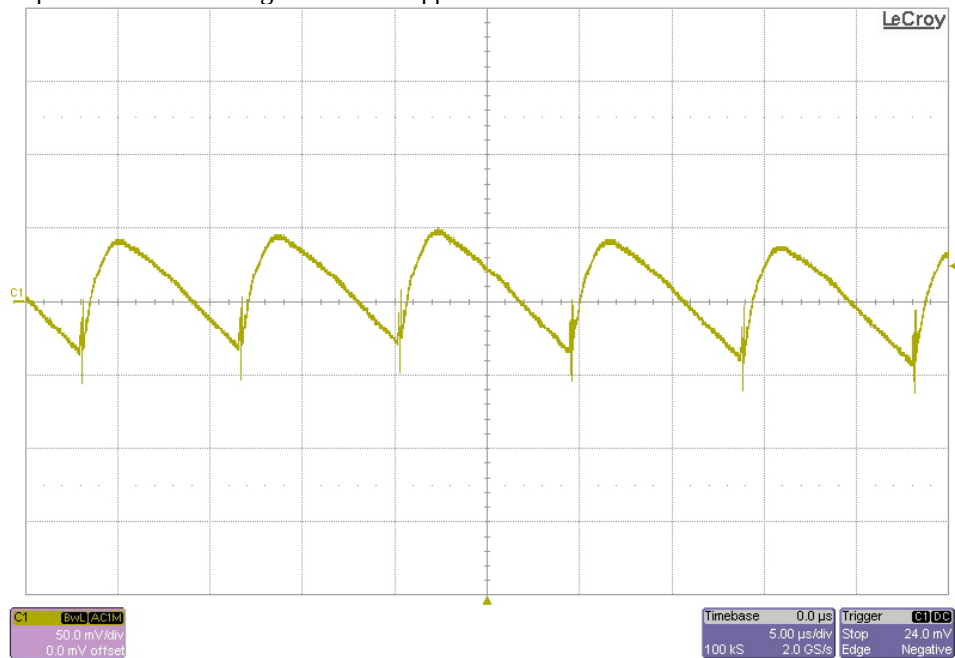
The output voltage at startup is shown in the images below. The input was 150VDC. For the top image, the output was unloaded. For the bottom image, the output was loaded with 1A.

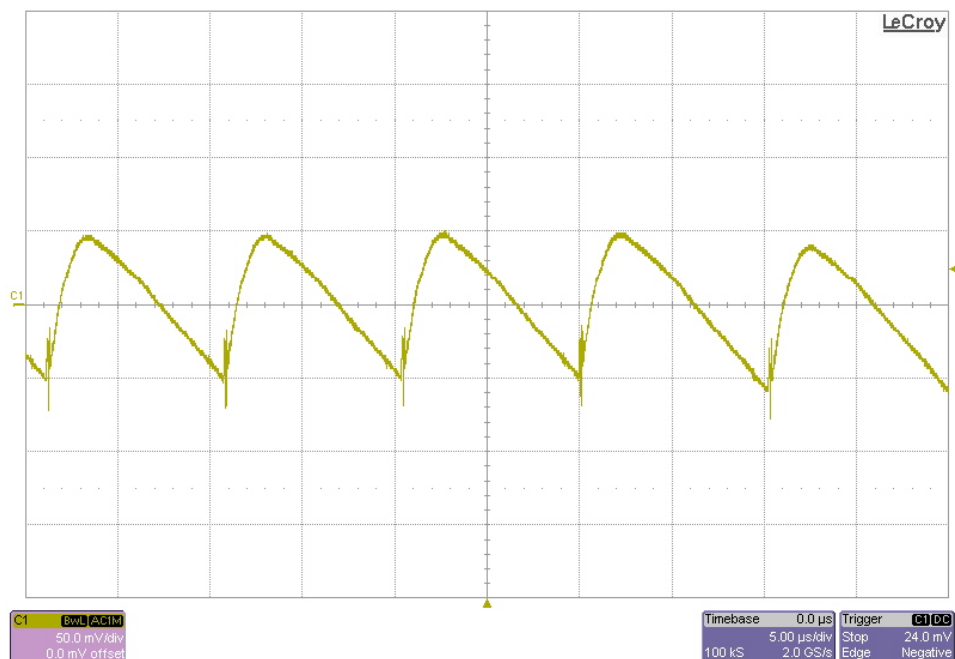




6 Output Ripple Voltage – Full Load

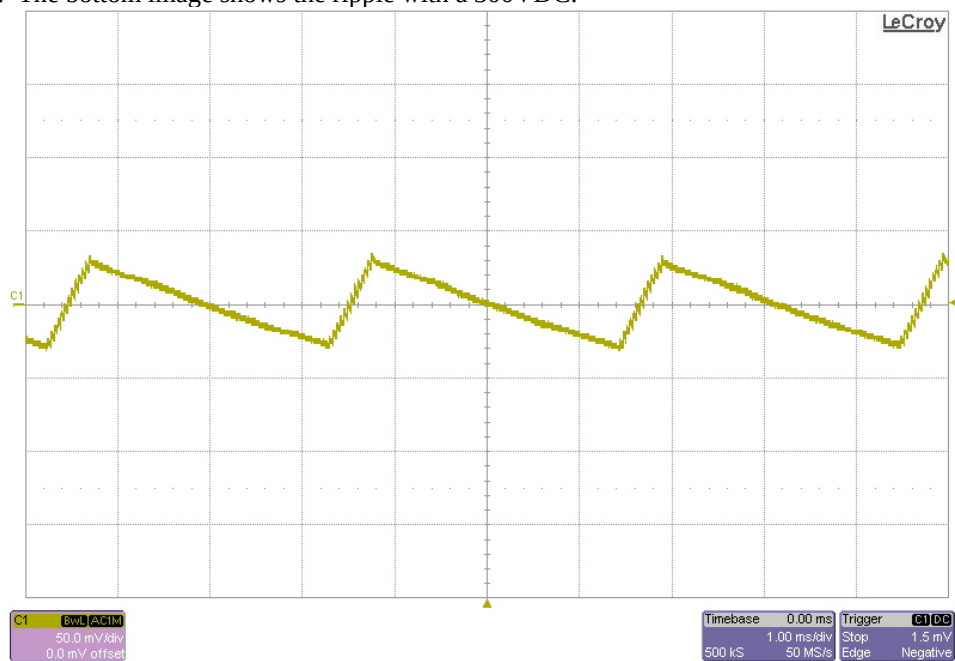
The output ripple voltage during full load (1A) operation is shown in the plots below. The top image shows the ripple with a 150VDC input. The bottom image shows the ripple with a 300VDC.

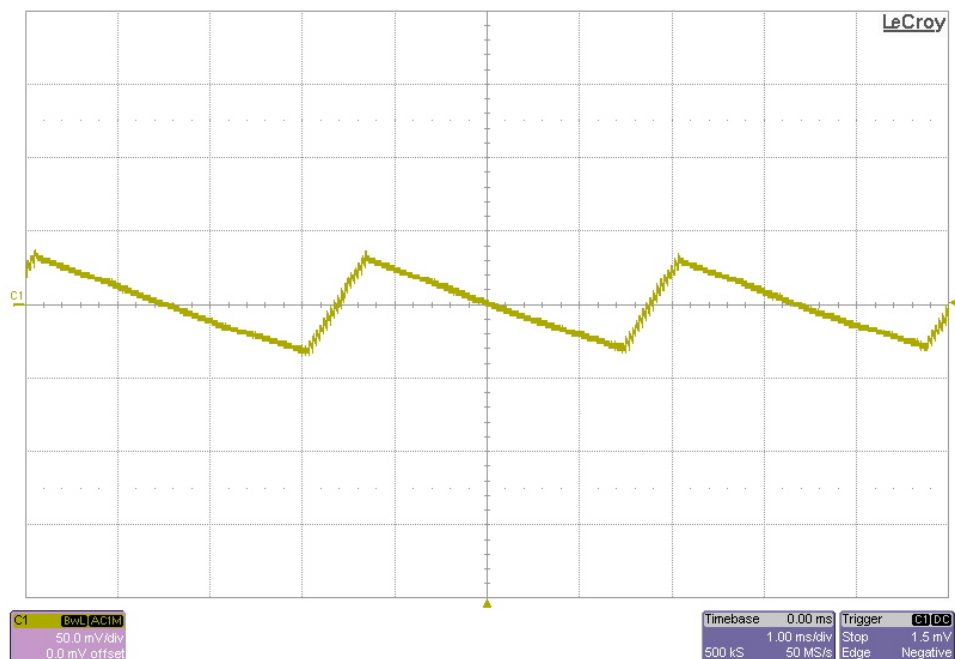




7 Output Ripple Voltage – No Load

The output ripple voltage during no load operation is shown in the plots below. The top image shows the ripple with a 150VDC input. The bottom image shows the ripple with a 300VDC.



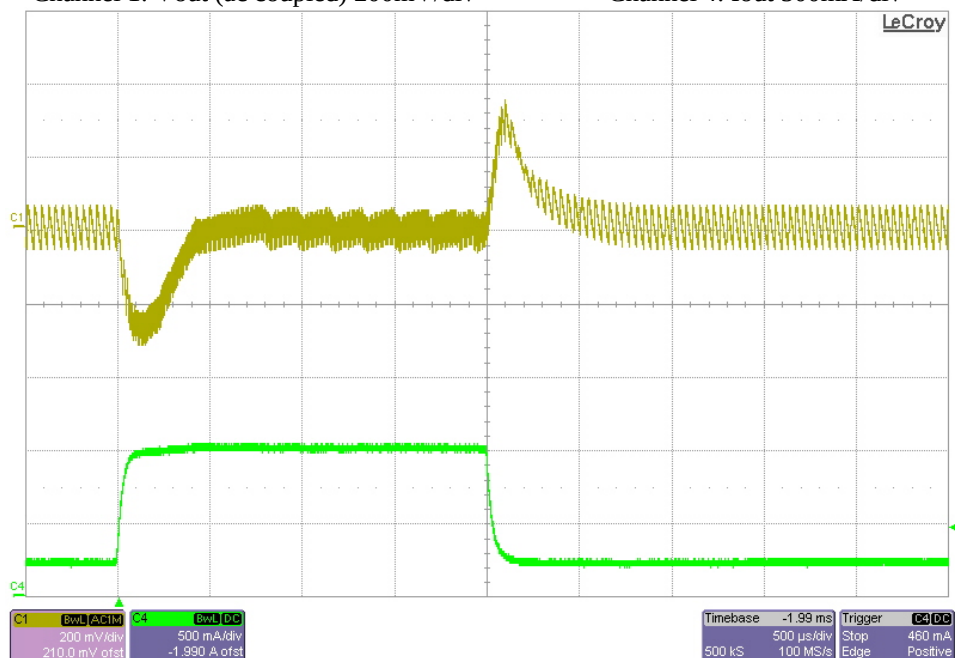


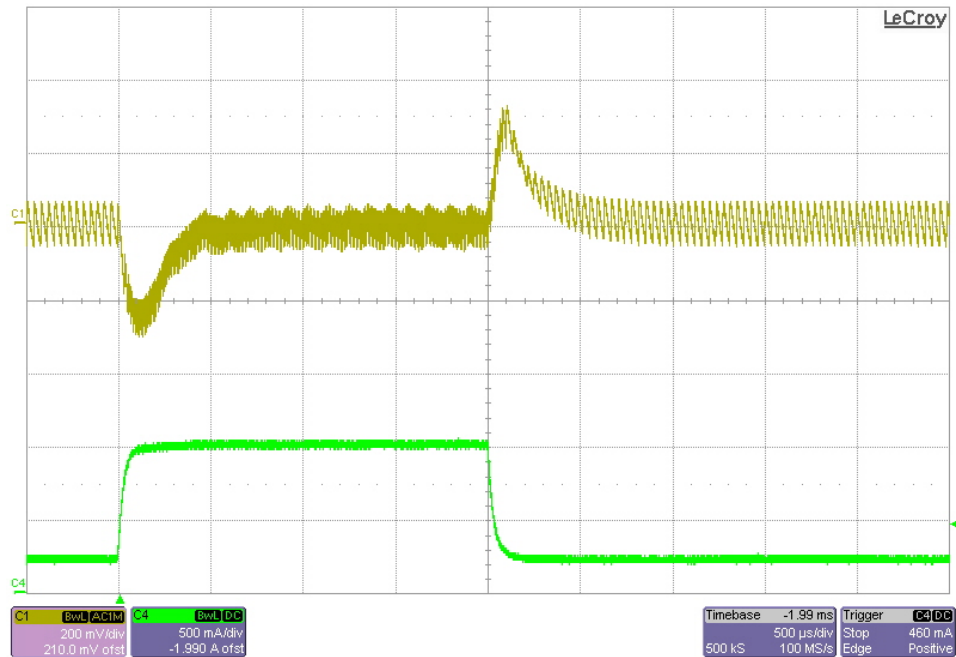
8 Load Transients

The images below show the response to a 0.25A to 1A load transient. For the top image, the input voltage was set to 150VDC. For the bottom image, the input was set to 300VDC.

Channel 1: Vout (ac coupled) 200mV/div

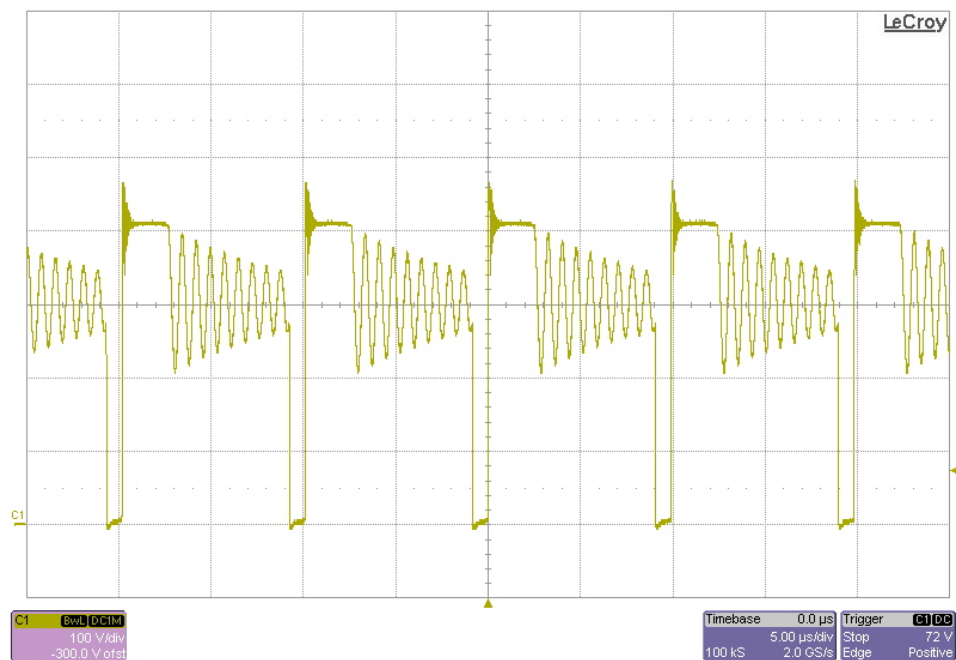
Channel 4: Iout 500mA/div





9 Switching Waveforms

The image below shows the drain-to-source voltage waveform on the primary MOSFET (Q1). The load was 1A and the input was set to 300VDC.



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