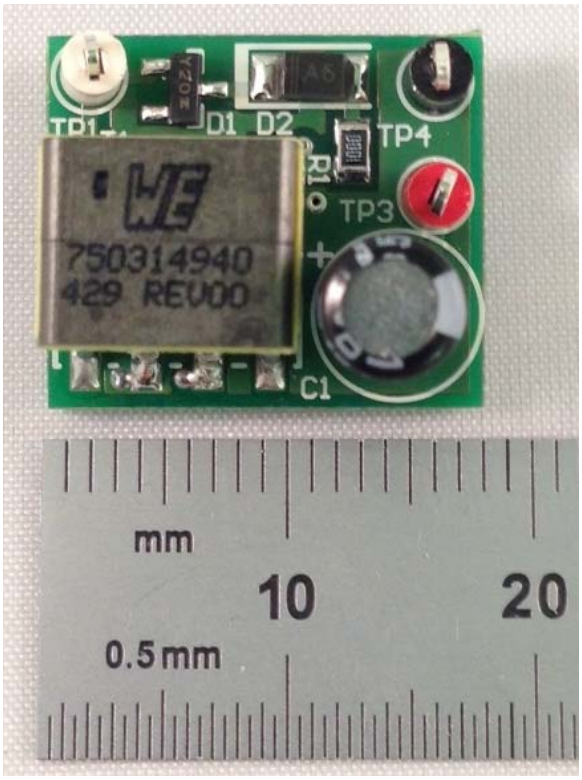
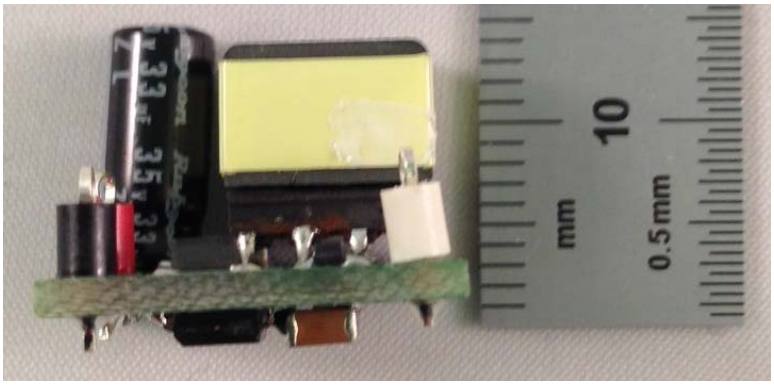
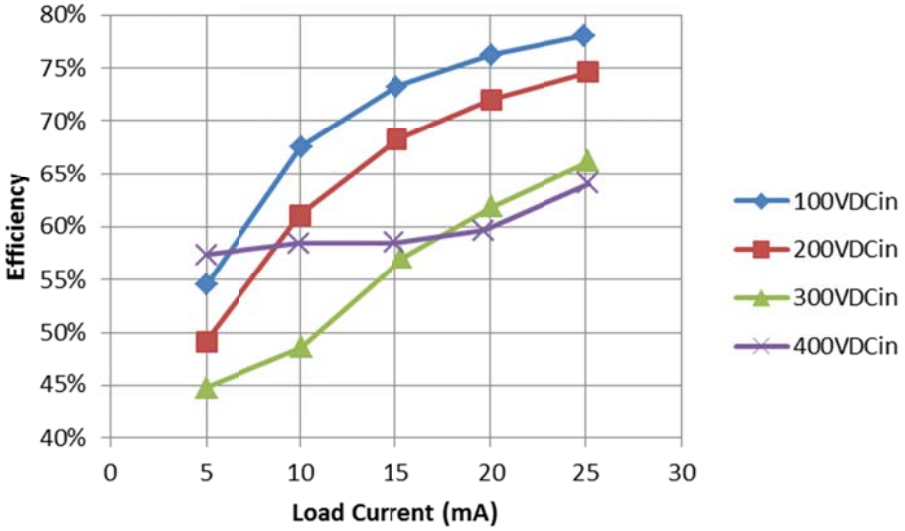
1 Photos

The photograph below shows the PMP10338 Rev B prototype assembly. This circuit was built on a PMP10338 Rev A PCB.





2 Efficiency

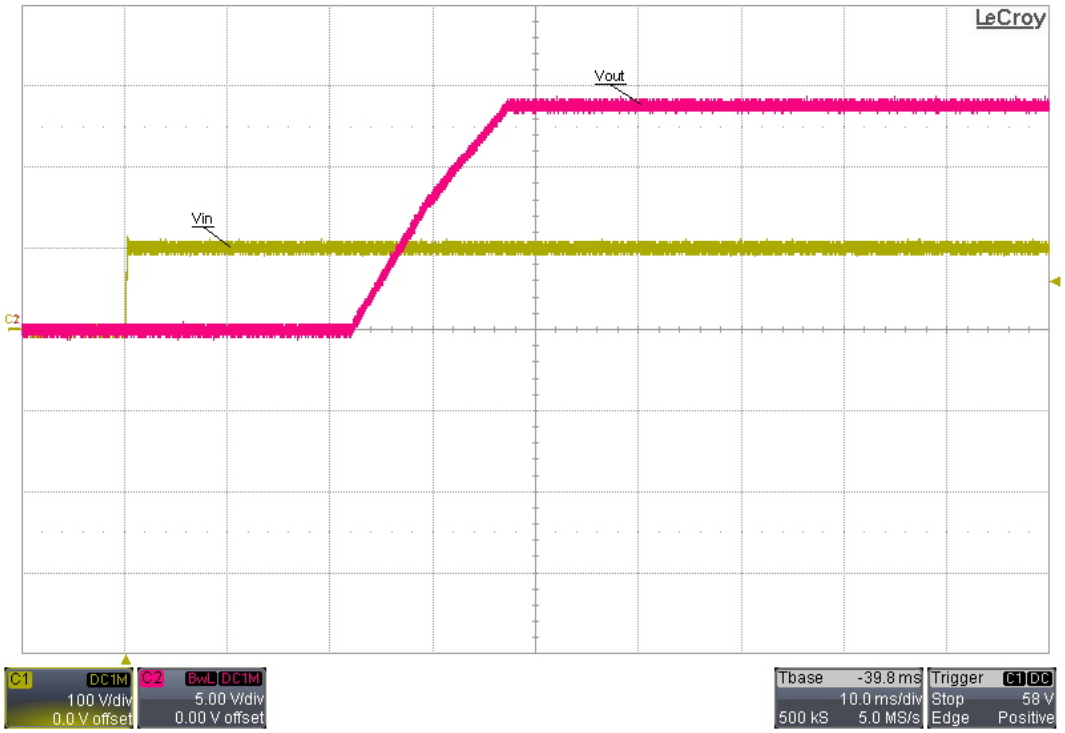


100VDCin						
Iout (mA)	Vout	Vin	Pin (mW)	Pout (mW)	Losses (mW)	Efficiency
0.04	13.78	99.74	7.48	0.55	6.9	7.4%
5.03	13.76	99.74	126.8	69.21	57.6	54.6%
10.05	13.77	99.74	204.9	138.39	66.5	67.5%
15.04	13.78	99.74	283.1	207.25	75.8	73.2%
20.05	13.78	99.74	362.5	276.29	86.2	76.2%
24.96	13.79	99.73	440.9	344.20	96.7	78.1%
200VDCin						
Iout (mA)	Vout	Vin	Pin (mW)	Pout (mW)	Losses (mW)	Efficiency
0.03	13.80	199.55	7.24	0.41	6.8	5.7%
5.01	13.76	199.55	140.4	68.94	71.5	49.1%
9.98	13.77	199.55	224.8	137.42	87.4	61.1%
15.03	13.77	199.55	303.4	206.96	96.4	68.2%
20.04	13.78	199.55	383.4	276.15	107.2	72.0%
25.16	13.79	199.55	465.0	346.96	118.0	74.6%
300VDCin						
Iout (mA)	Vout	Vin	Pin (mW)	Pout (mW)	Losses (mW)	Efficiency
0.04	13.80	299.5	34.55	0.55	34.0	1.6%
5.00	13.77	299.5	153.8	68.85	85.0	44.8%
10.05	13.76	299.5	284.7	138.29	146.4	48.6%
15.34	13.77	299.5	370.4	211.23	159.2	57.0%
20.04	13.78	299.5	446.4	276.15	170.2	61.9%
25.18	13.78	299.5	524.6	346.98	177.6	66.1%

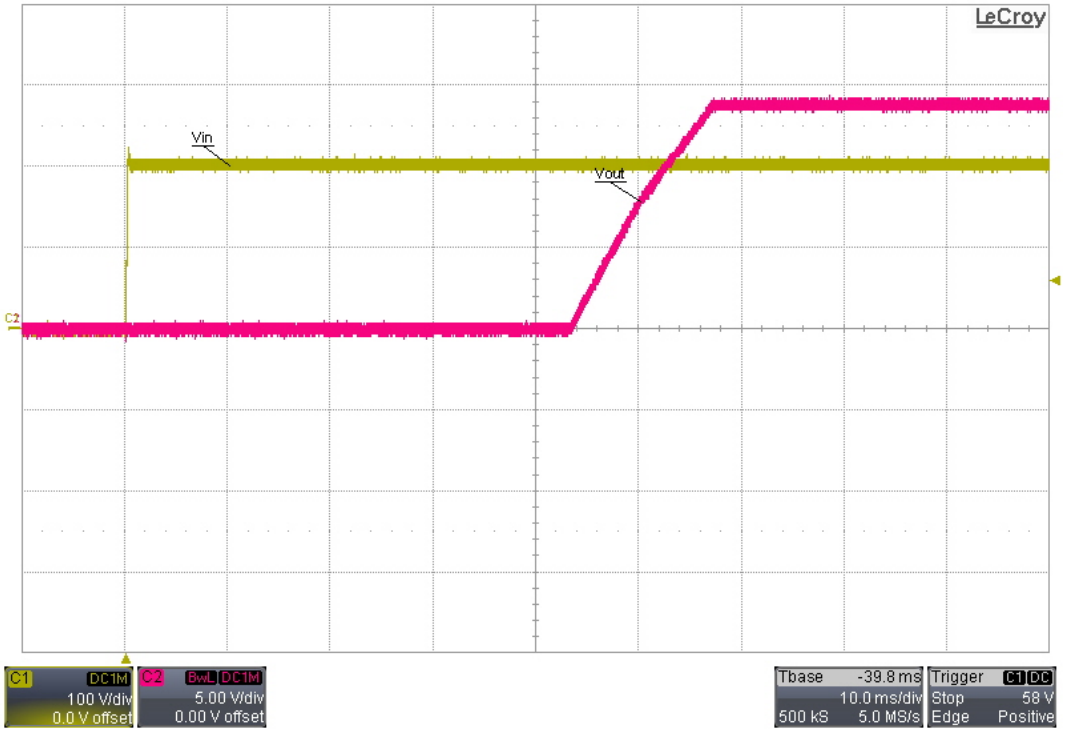
400VDCin						
Iout (mA)	Vout	Vin	Pin (mW)	Pout (mW)	Losses (mW)	Efficiency
0.03	13.82	387.2	6.87	0.41	6.5	6.0%
4.99	13.88	387.2	120.8	69.26	51.5	57.3%
9.95	13.86	387.2	236.0	137.91	98.1	58.4%
14.95	13.77	387.2	351.7	205.86	145.8	58.5%
19.66	13.77	387.2	453.6	270.72	182.9	59.7%
25.17	13.78	387.2	541.4	346.84	194.6	64.1%

3 Startup

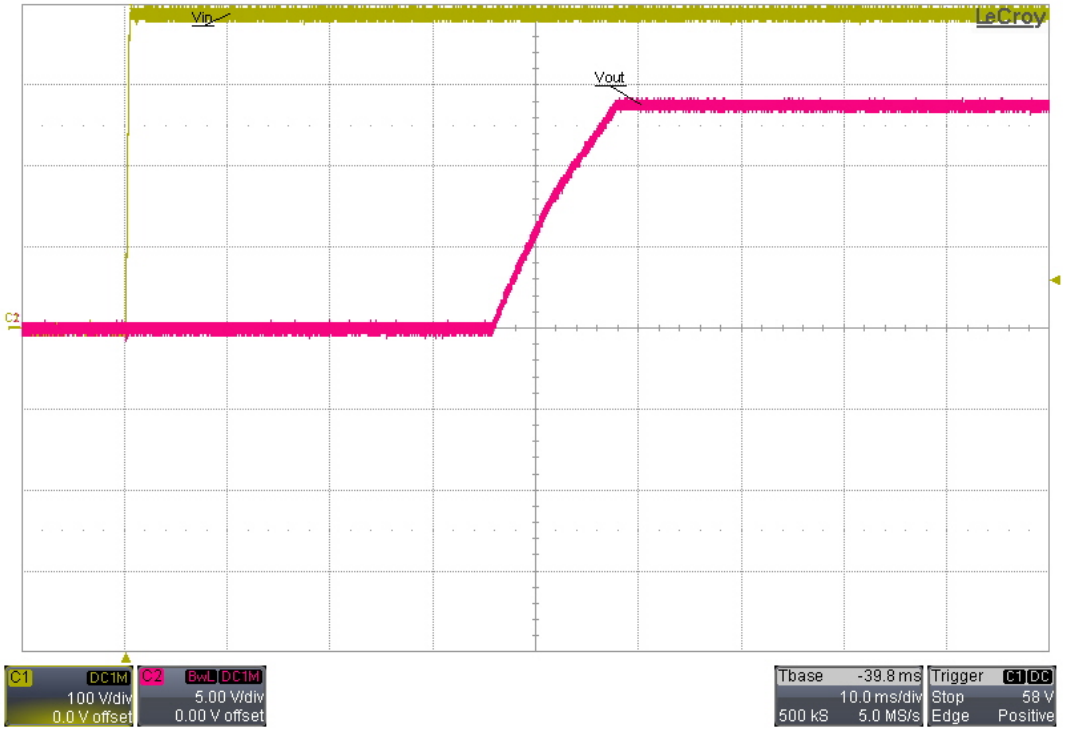
3.1 100VDCin Startup – 0A Load



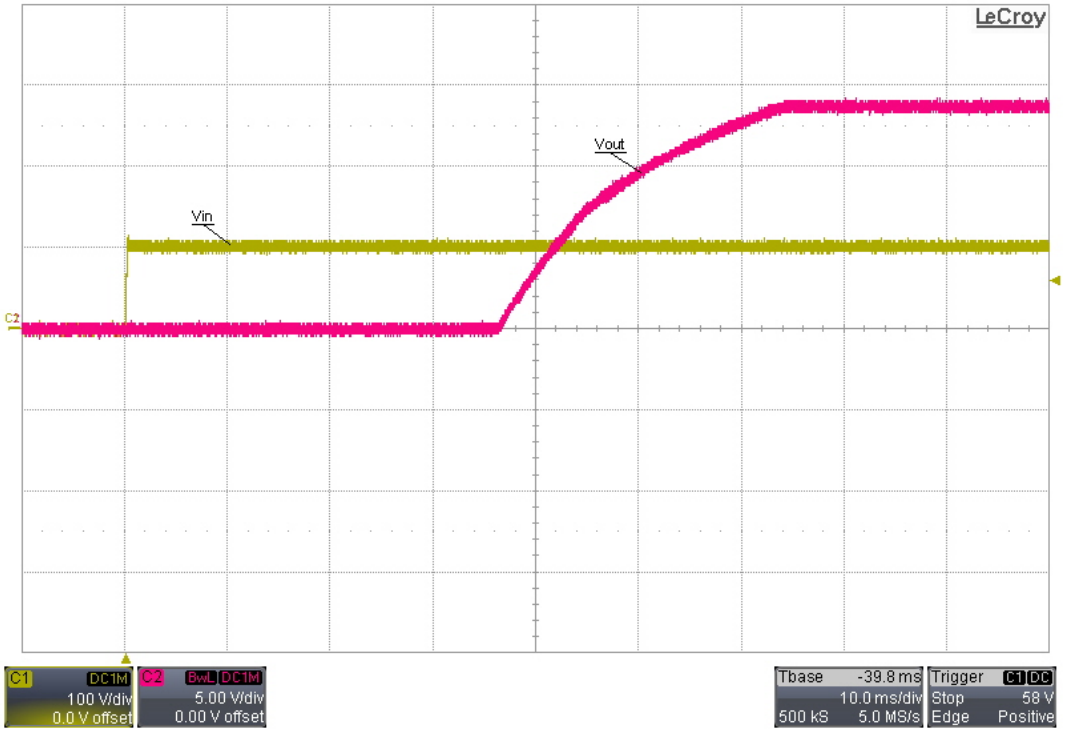
3.2 200VDCin Startup – 0A Load



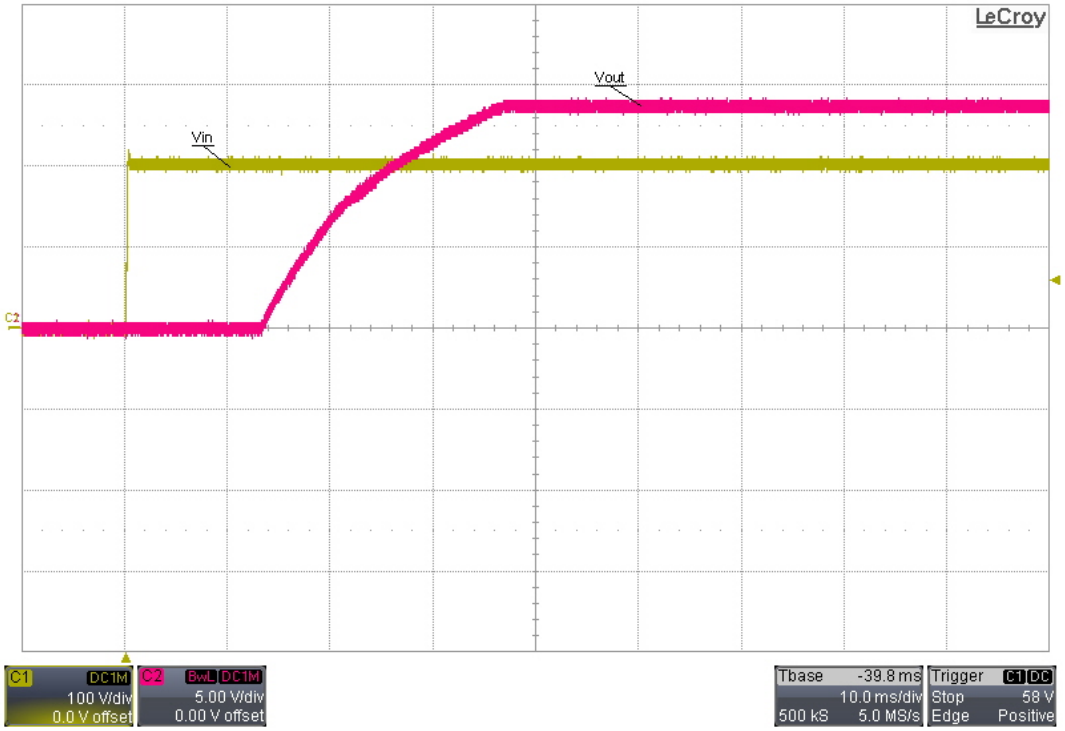
3.3 400VDCin Startup – 0A Load



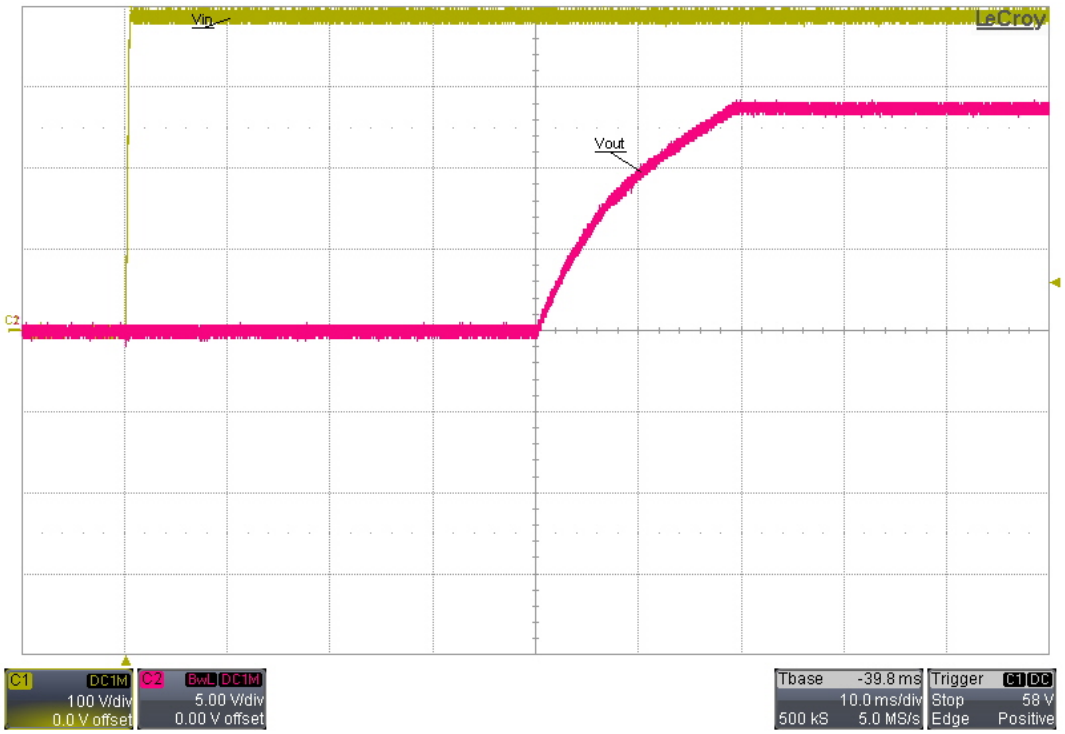
3.4 100VDCin Startup – 550Ω Load



3.5 200VDCin Startup – 550Ω Load



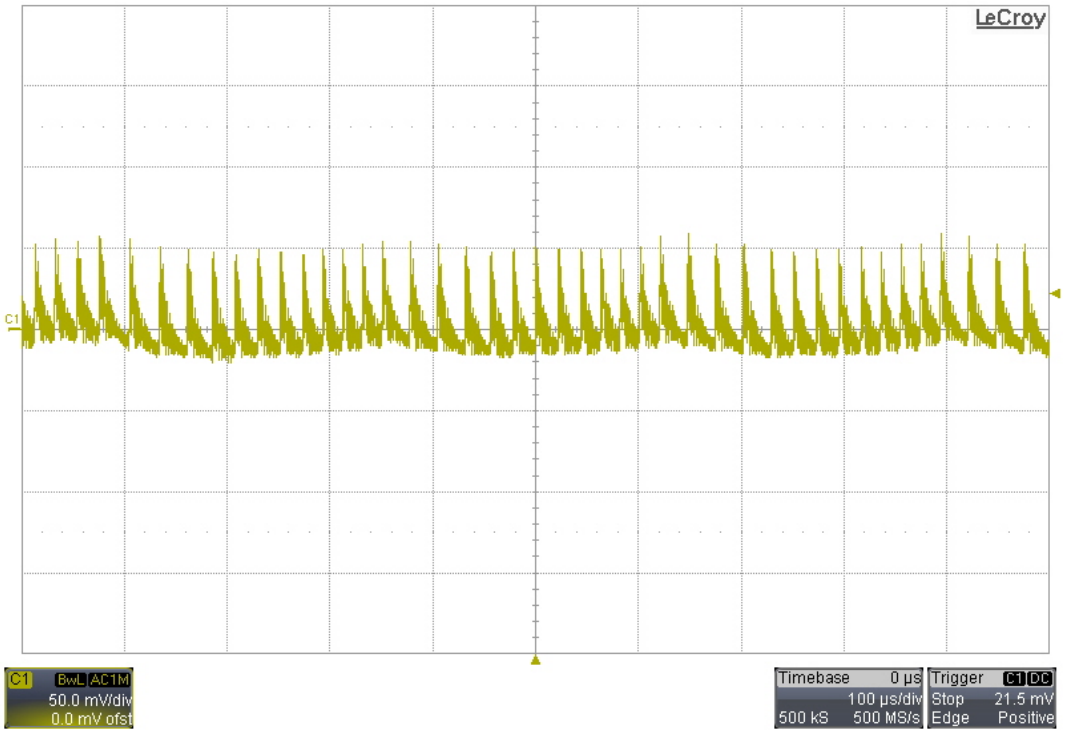
3.6 400VDCin Startup – 550Ω Load



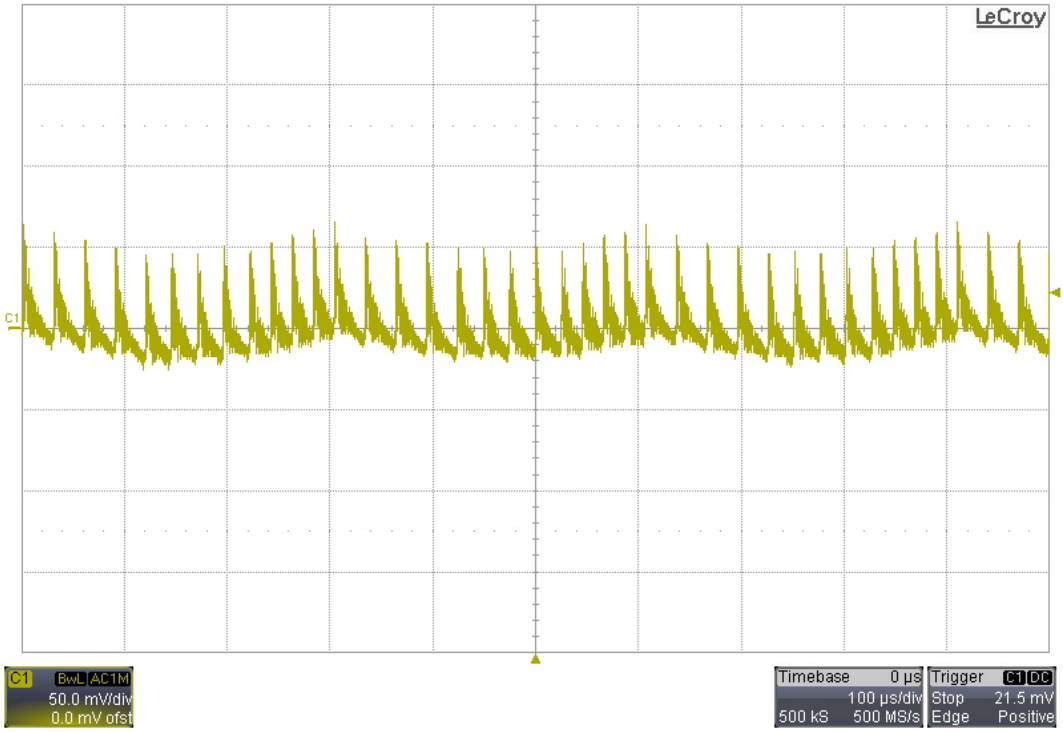
4 Output Ripple Voltage

The output was loaded with 25mA.

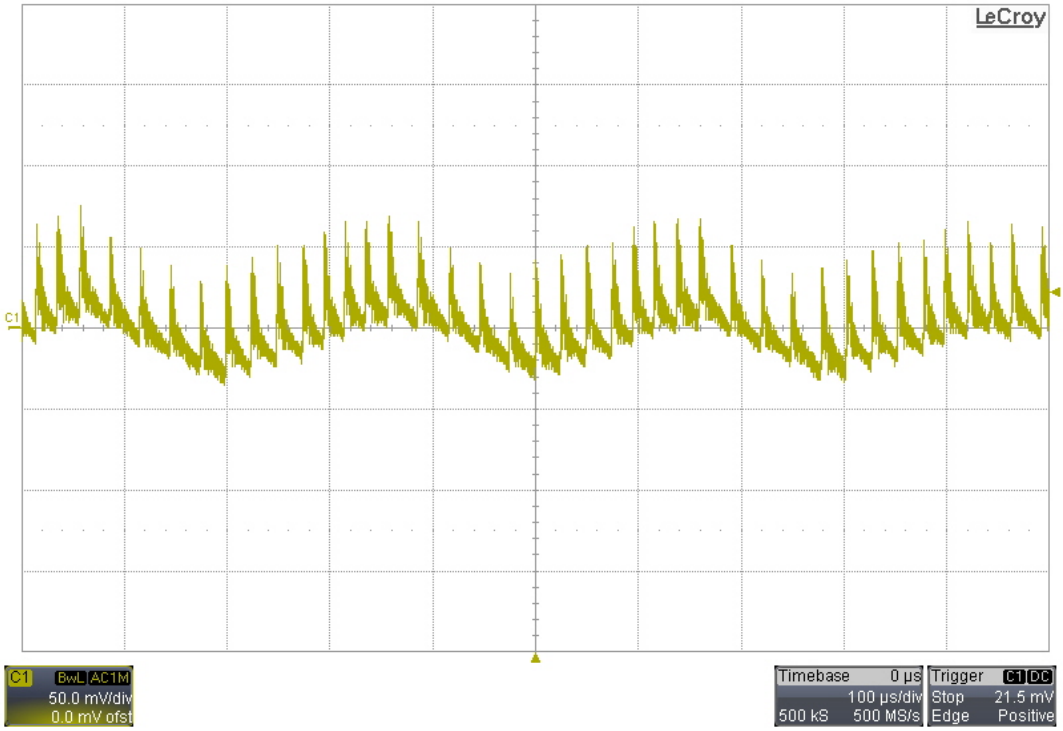
4.1 100VDCin Output Ripple Voltage



4.2 200VDCin Output Ripple Voltage



4.3 400VDCin Output Ripple Voltage

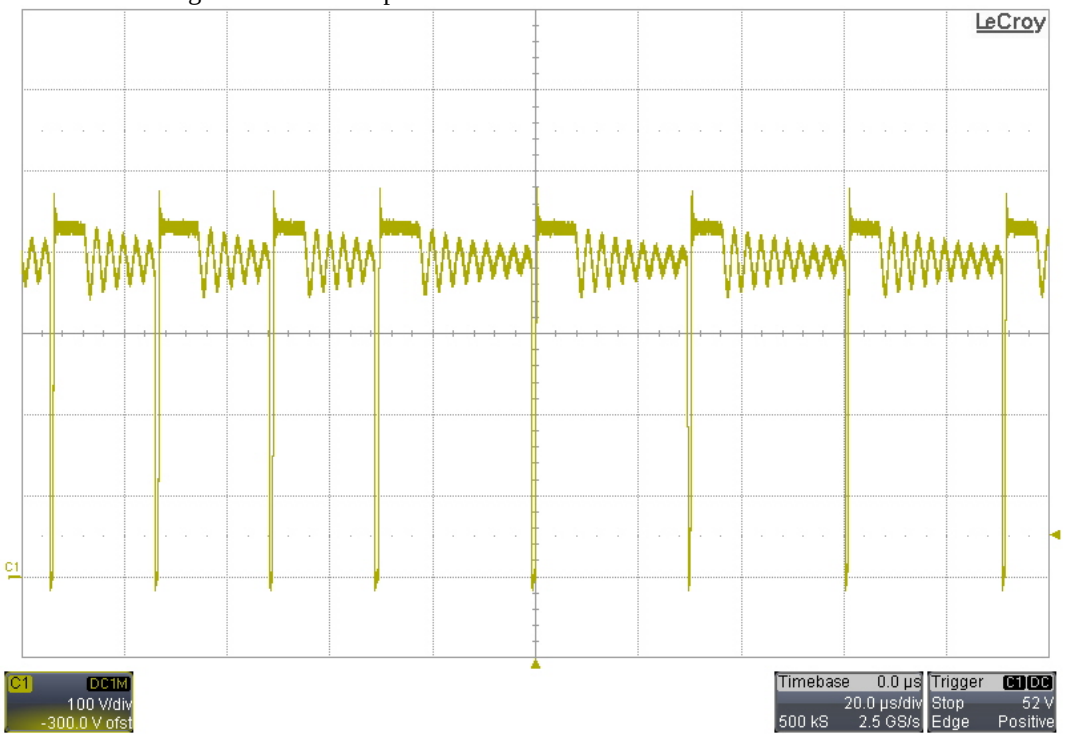


5 Switching Waveforms

The images below show the voltage waveforms on the switching devices within the supply. The input was 400VDC. The output was loaded 25mA.

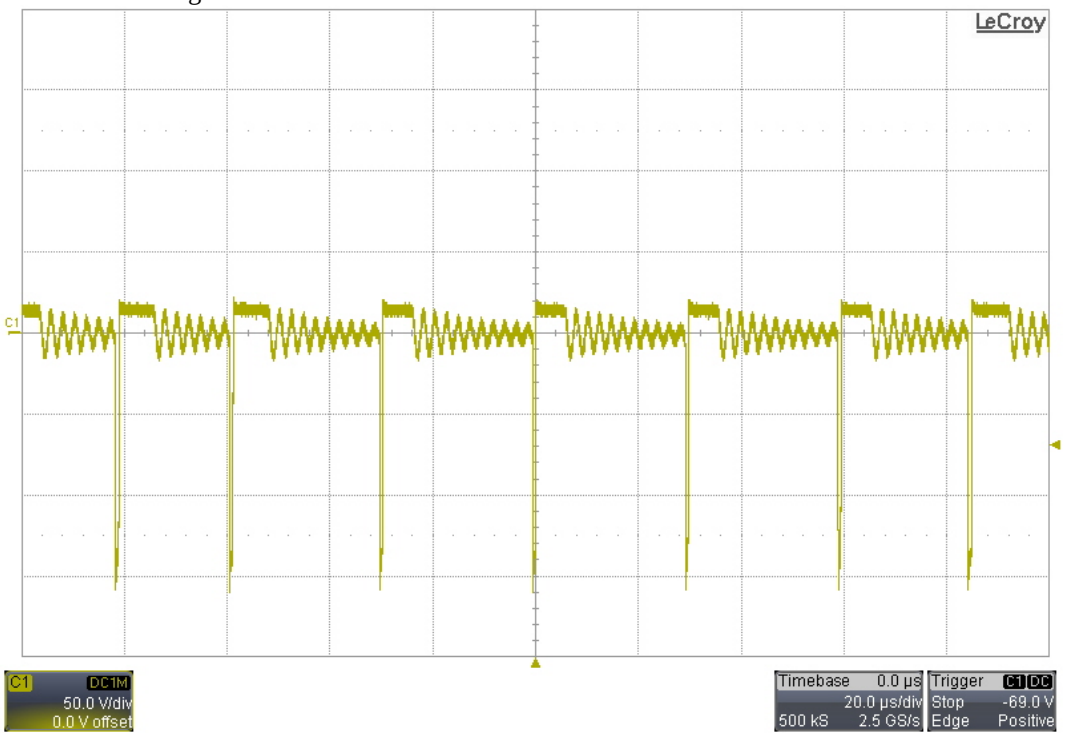
5.1 Primary Waveforms

The image below shows the voltage on the DRAIN pin of U1.



5.2 Secondary Waveforms

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



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