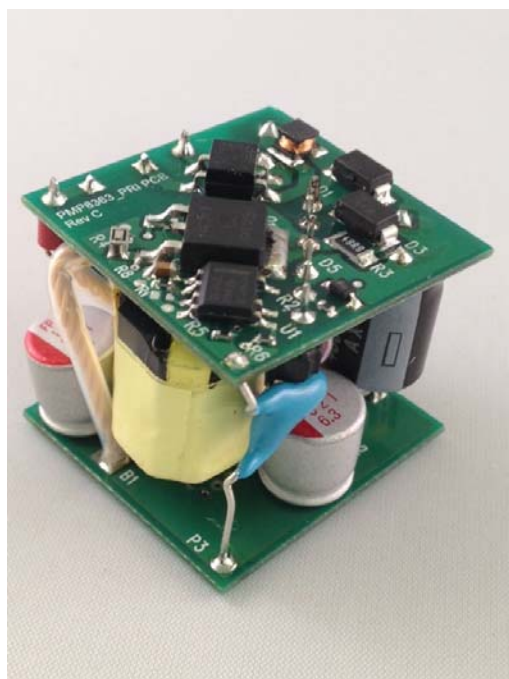
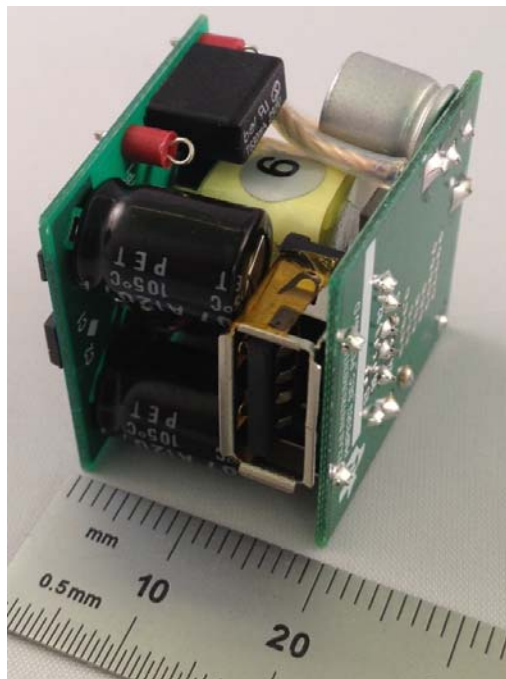
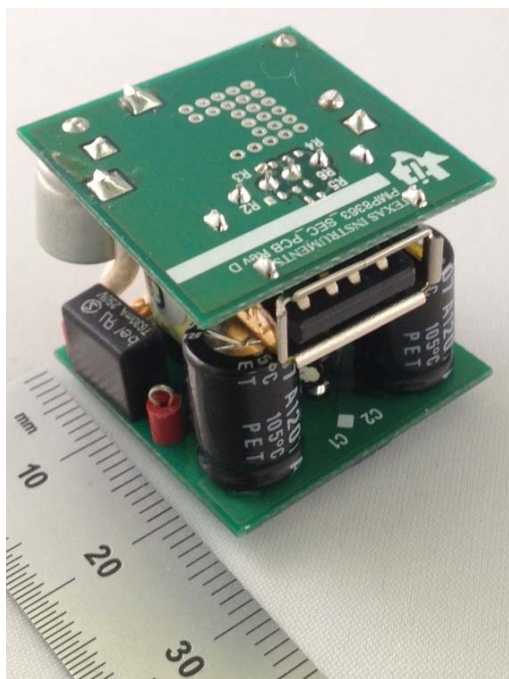


## 1 Photos

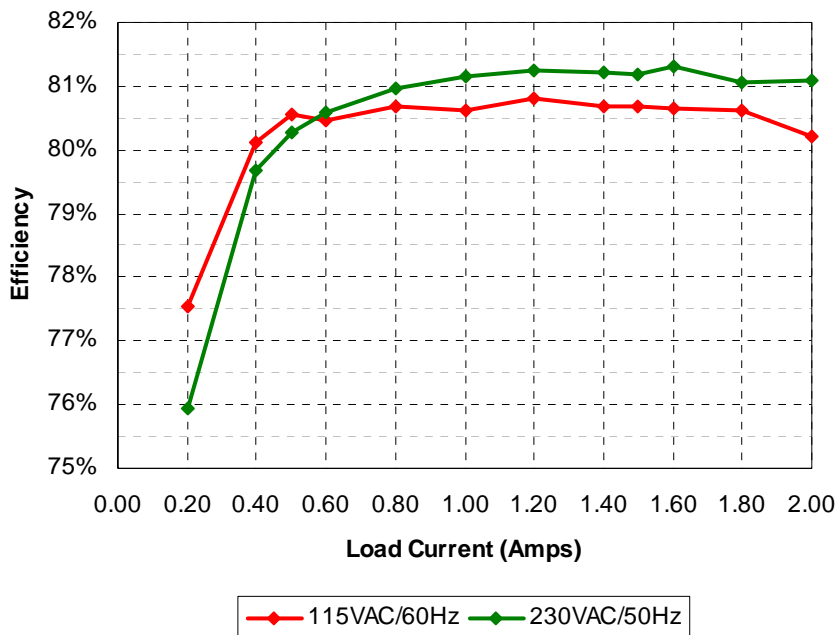
The photographs below show the PMP8363 Rev D prototype assembly.



## 2 Standby Power

With no load attached to the output of the supply, the unit draws 15mW of input power with a 115VAC/60Hz input, and 17mW of input power with a 230VAC/50Hz input.

### 3 Efficiency



**115VAC/60Hz**

lout	Vout	Vin	Iin	Pin	PF	Pout	Losses	Efficiency
0.000	5.09	115.0	0.0009	0.015	0.15	0.00	0.02	0.0%
0.200	5.04	115.0	0.029	1.30	0.39	1.01	0.29	77.5%
0.399	5.02	115.0	0.050	2.50	0.44	2.00	0.50	80.1%
0.500	5.01	115.0	0.059	3.11	0.46	2.51	0.61	80.5%
0.599	5.01	115.0	0.069	3.73	0.47	3.00	0.73	80.5%
0.802	5.00	115.0	0.087	4.97	0.50	4.01	0.96	80.7%
1.000	4.99	115.0	0.104	6.19	0.52	4.99	1.20	80.6%
1.200	4.99	115.0	0.120	7.41	0.54	5.99	1.42	80.8%
1.400	4.98	115.0	0.137	8.64	0.55	6.97	1.67	80.7%
1.500	4.98	115.0	0.145	9.26	0.56	7.47	1.79	80.7%
1.600	4.98	115.0	0.153	9.88	0.56	7.97	1.91	80.6%
1.800	4.98	115.0	0.169	11.12	0.57	8.96	2.16	80.6%
2.000	4.97	115.0	0.185	12.39	0.58	9.94	2.45	80.2%

**230VAC/50Hz**

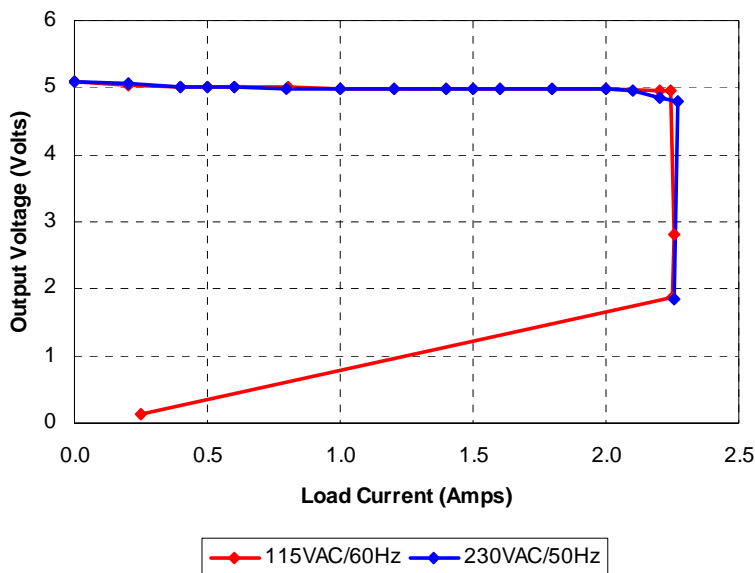
lout	Vout	Vin	Iin	Pin	PF	Pout	Losses	Efficiency
0.000	5.09	230.0	0.0006	0.017	0.12	0.00	0.02	0.0%
0.200	5.05	230.0	0.020	1.33	0.29	1.01	0.32	75.9%
0.400	5.02	230.0	0.033	2.52	0.33	2.01	0.51	79.7%
0.500	5.01	230.0	0.039	3.12	0.35	2.51	0.62	80.3%
0.600	5.01	229.9	0.045	3.73	0.36	3.01	0.72	80.6%
0.800	4.99	229.9	0.056	4.93	0.38	3.99	0.94	81.0%
1.000	4.99	229.9	0.067	6.15	0.40	4.99	1.16	81.1%
1.200	4.99	229.9	0.077	7.37	0.41	5.99	1.38	81.2%
1.399	4.98	229.9	0.087	8.58	0.43	6.97	1.61	81.2%
1.500	4.98	229.9	0.092	9.20	0.43	7.47	1.73	81.2%
1.600	4.98	229.9	0.097	9.80	0.44	7.97	1.83	81.3%
1.799	4.97	229.9	0.107	11.03	0.45	8.94	2.09	81.1%
2.000	4.97	229.9	0.116	12.26	0.46	9.94	2.32	81.1%

### 4 Average Efficiency

Vin	Pin	Vout	Iout	Load	Efficiency	Avg. Eff.
115VAC/60Hz	3.11	5.01	0.500	25%	80.55%	80.51%
	6.19	4.99	1.000	50%	80.61%	
	9.26	4.98	1.500	75%	80.67%	
	12.39	4.97	2.000	100%	80.23%	
230VAC/50Hz	3.12	5.01	0.500	25%	80.29%	80.92%
	6.15	4.99	1.000	50%	81.14%	
	9.20	4.98	1.500	75%	81.20%	
	12.26	4.97	2.000	100%	81.08%	

### 5 Current Limit

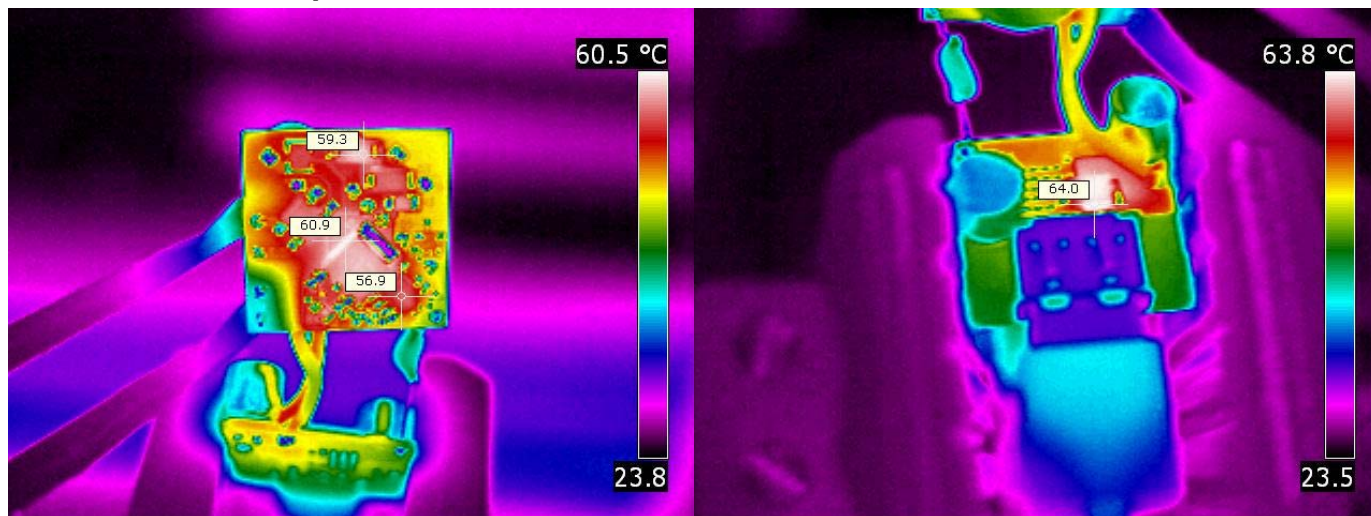
The plot below shows the output voltage versus output current as the load is increased into current limit.

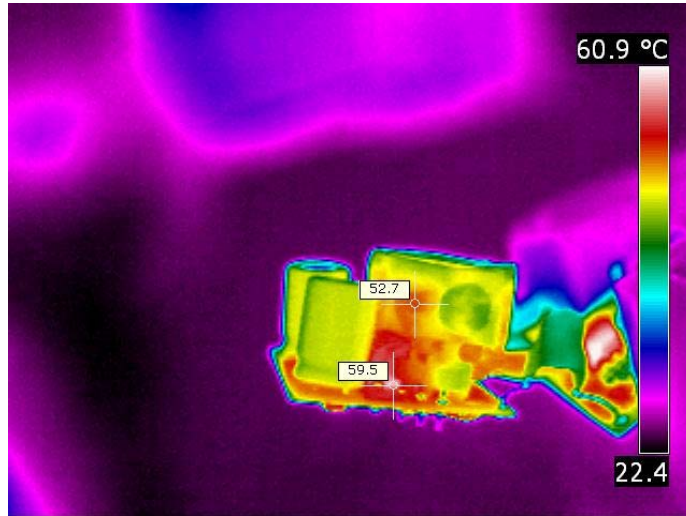


### 6 Thermal Images

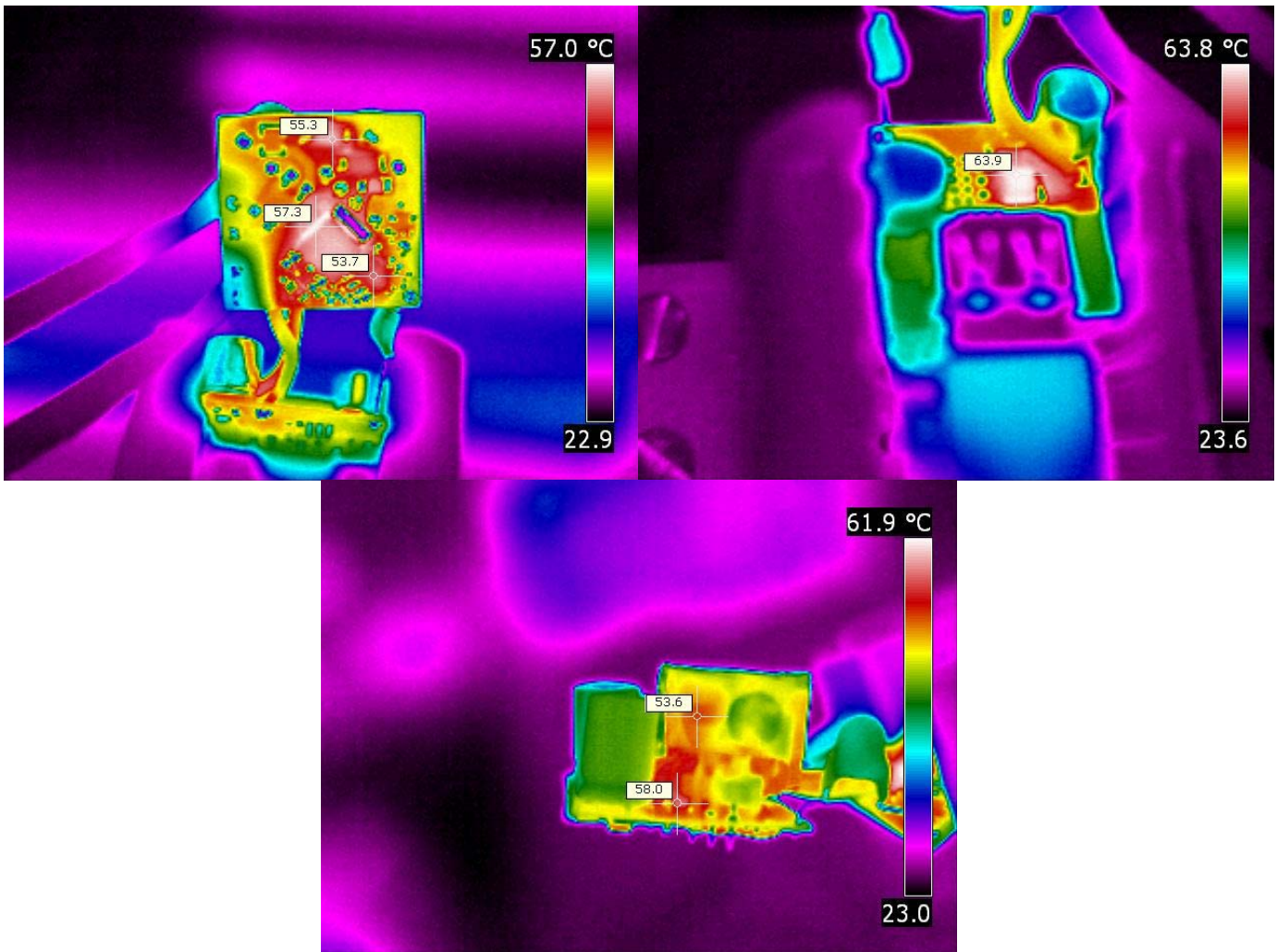
The thermal images below show the primary and secondary boards with a 2A load. The ambient temperature was 25°C.

#### 6.1 115VAC/60Hz Input





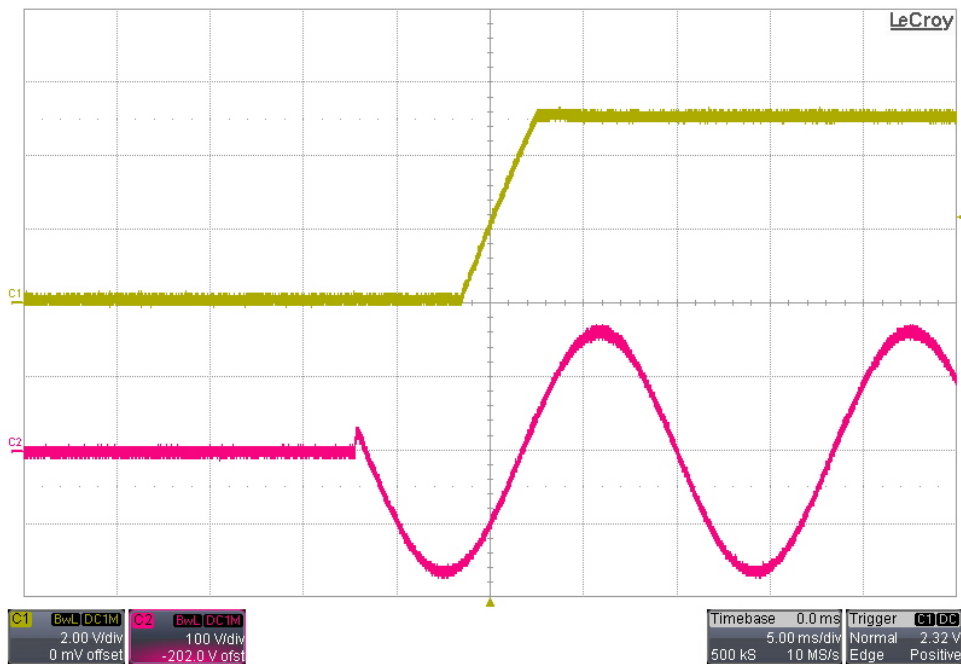
**6.2 230VAC/50Hz Input**



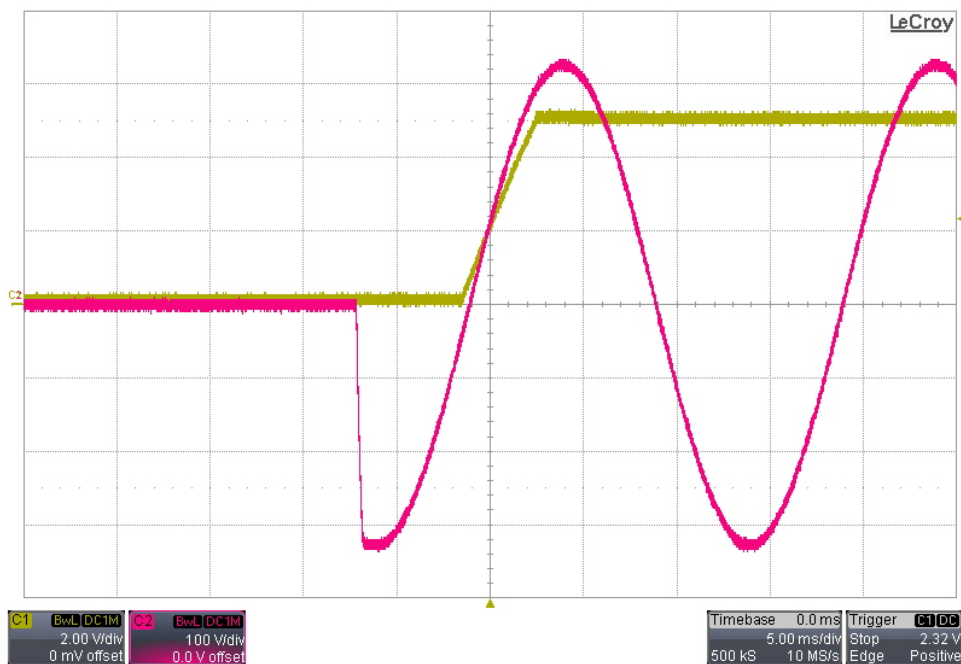
## 7 Startup

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

### 7.1 115VAC/60Hz Input – No Load



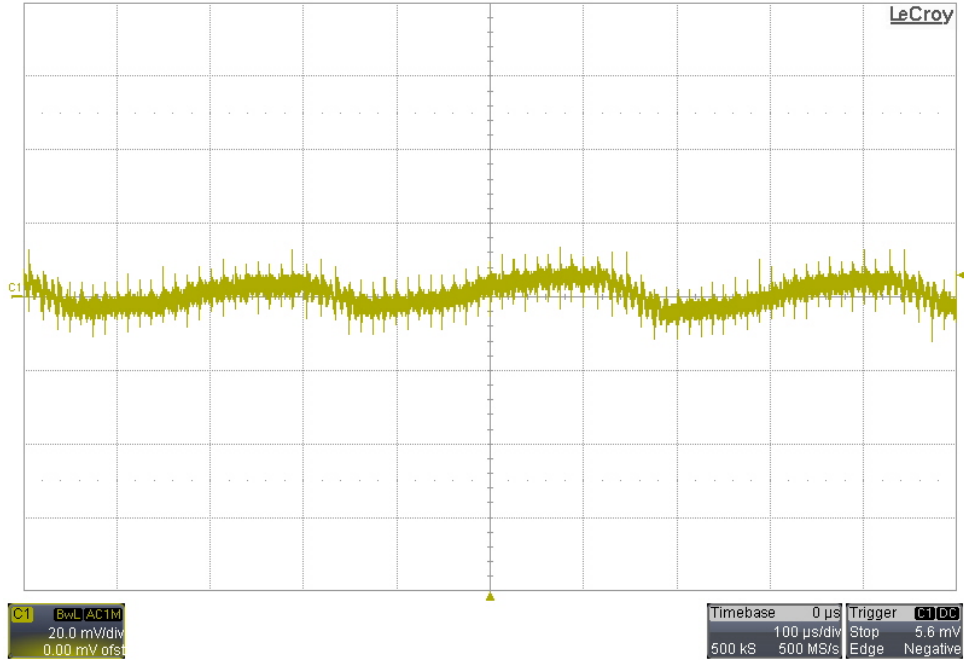
### 7.2 230VAC/50Hz Input – No Load



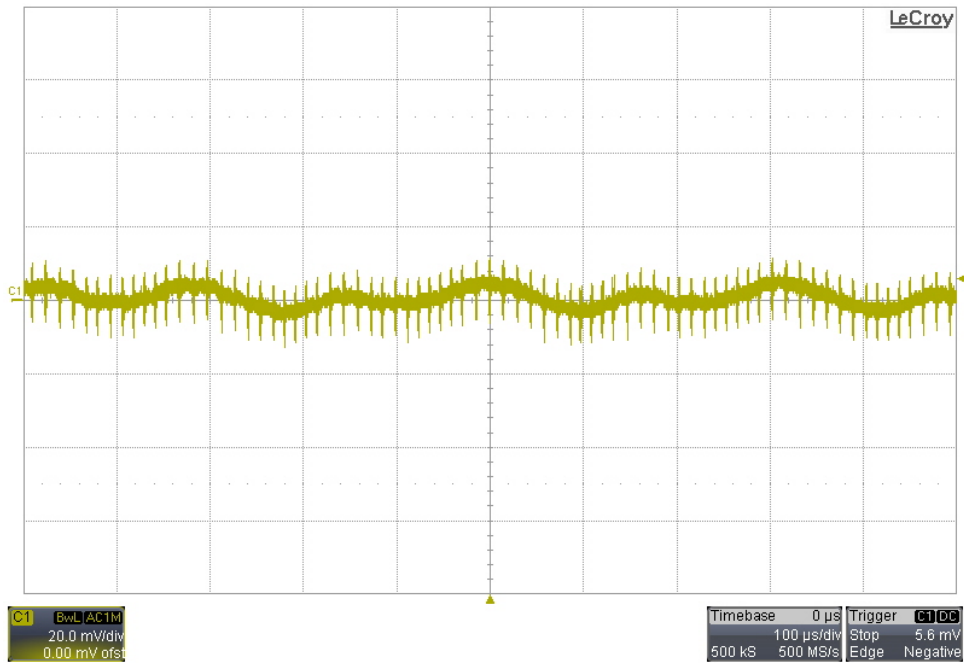
## 8 Output Ripple Voltage

The output ripple voltage was measured across C2 on the PMP8363\_SEC board.

### 8.1 2A Load – 115VAC/60Hz Input



### 8.2 2A Load – 230VAC/50Hz Input



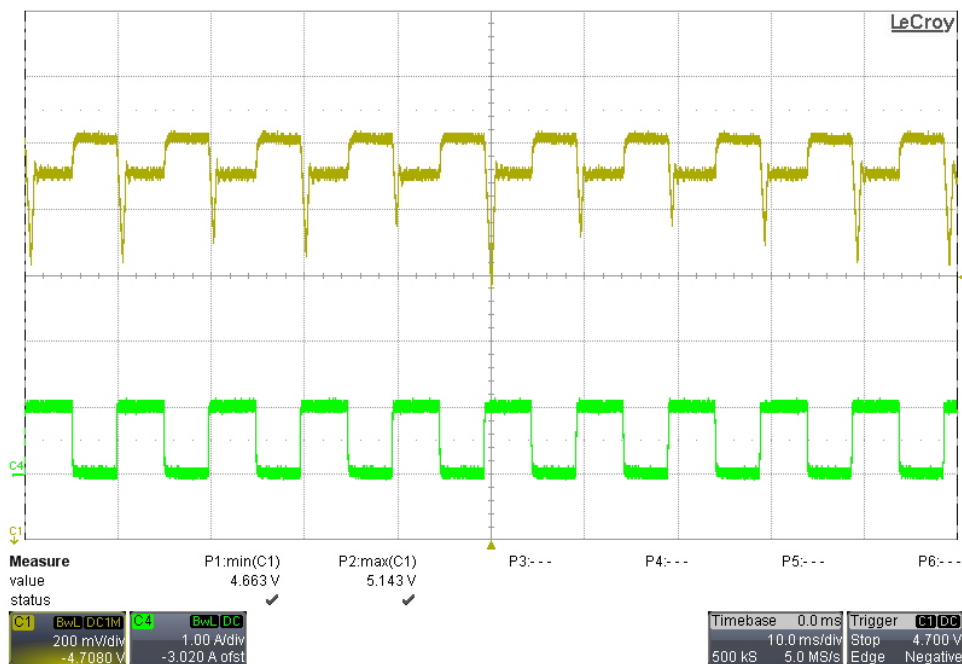
## 9 Load Transients

The output voltage was measured across C2 on the PMP8363\_SEC board.

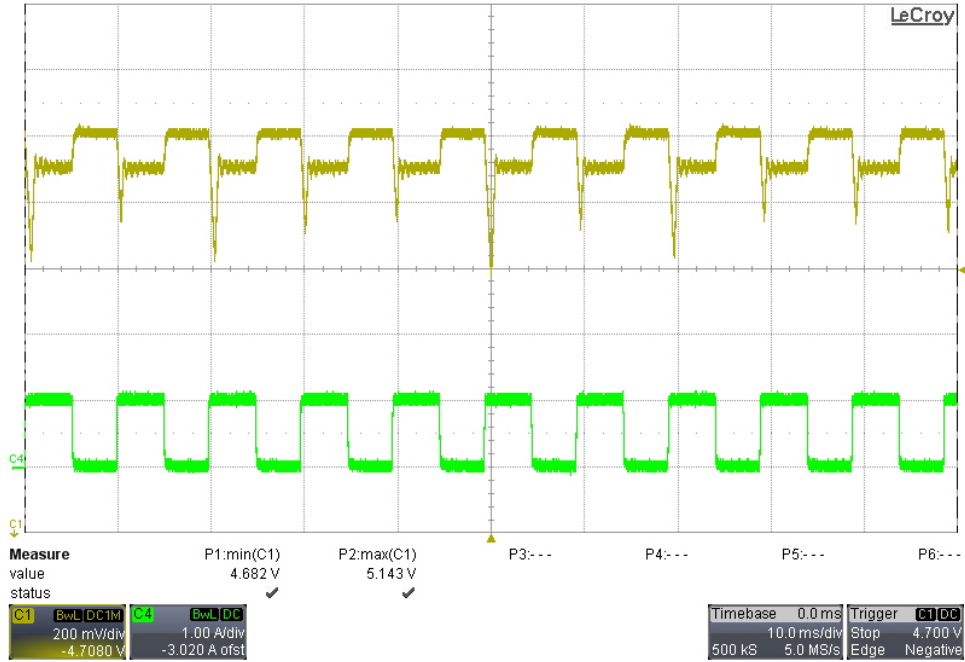
### 9.1 Summary of Transient Tests

Test Waveform	Input Voltage	Min. Output Voltage
0A to 1A Transient, 100Hz	115VAC/60Hz	4.66V
	230VAC/50Hz	4.68V
0A to 1A Transient, 1kHz	115VAC/60Hz	4.89V
	230VAC/50Hz	4.89V
0A to 1A Transient, Single Pulse	115VAC/60Hz	4.36V
	230VAC/50Hz	4.29V
100mA to 2A Transient, Single Pulse	115VAC/60Hz	4.82V
	230VAC/50Hz	4.78V

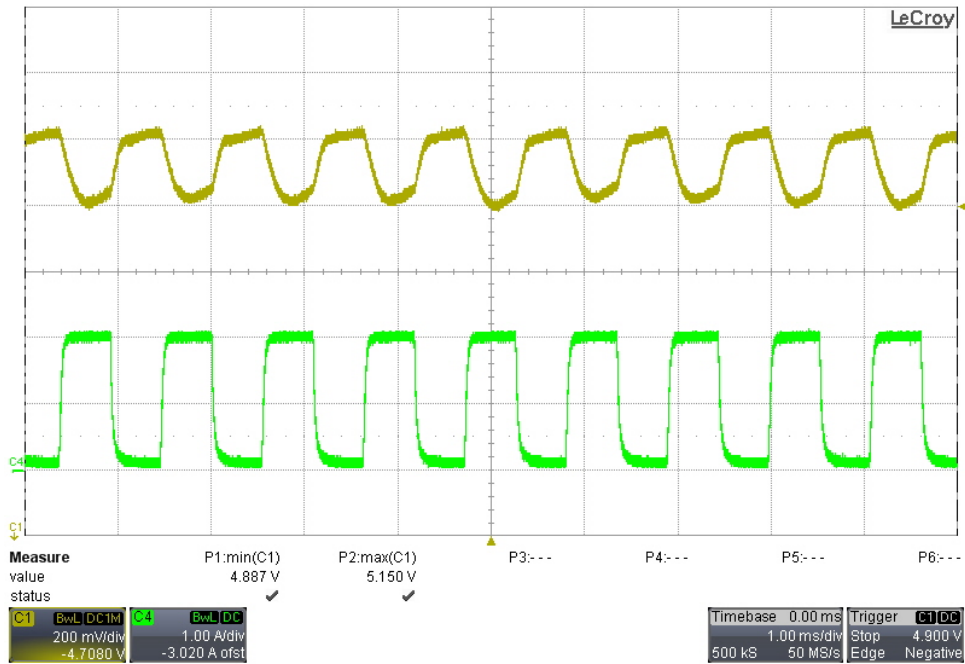
### 9.2 0A to 1A Transient, 100Hz – 115VAC/60Hz Input



## 9.3 0A to 1A Transient, 100Hz – 230VAC/50Hz Input

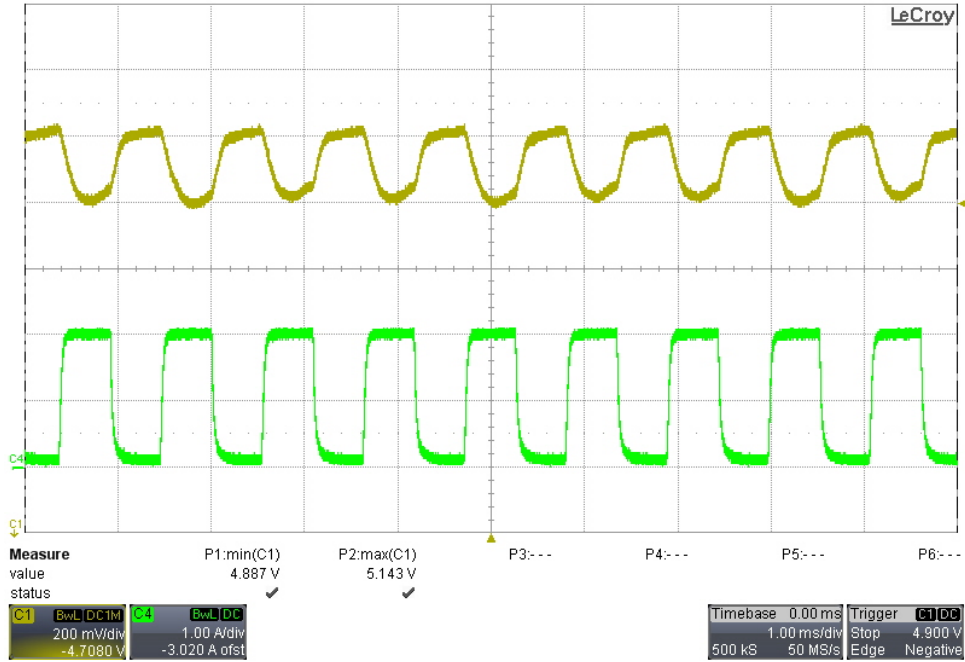


## 9.4 0A to 1A Transient, 1kHz – 115VAC/60Hz Input

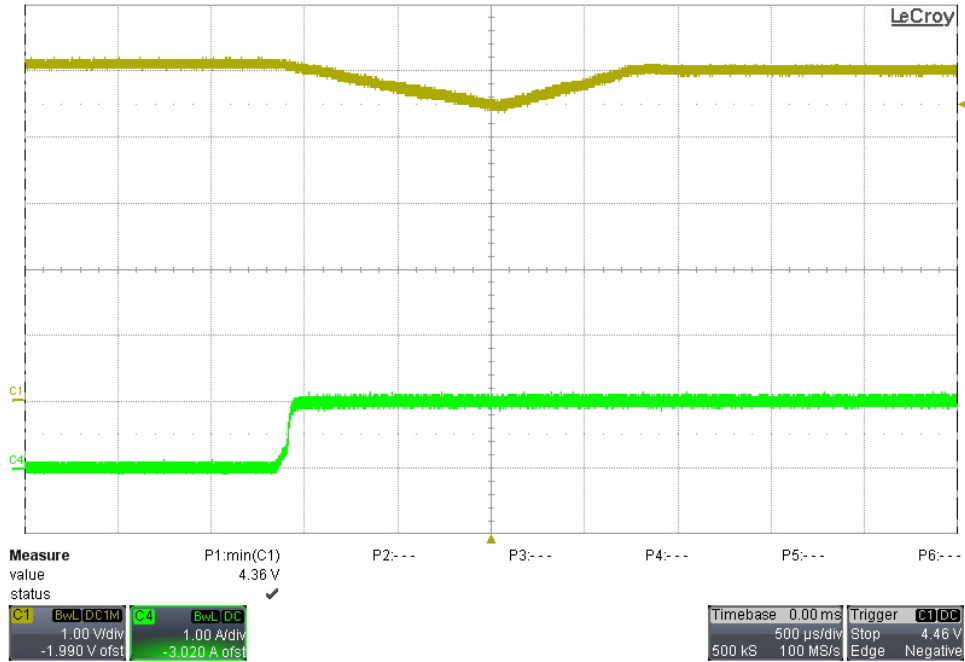




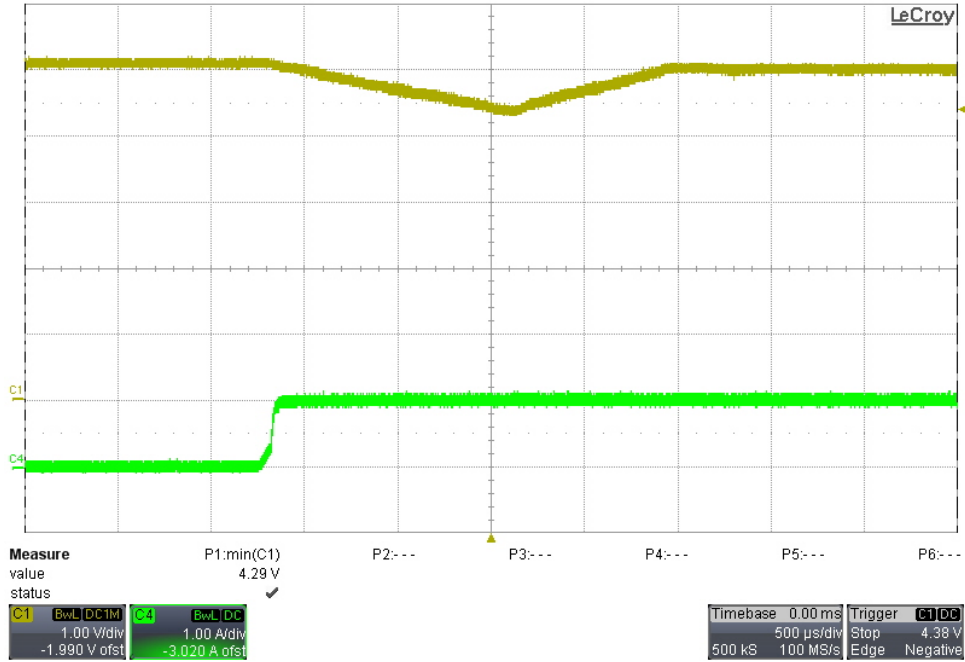
## 9.5 0A to 1A Transient, 1 kHz – 230VAC/50Hz Input



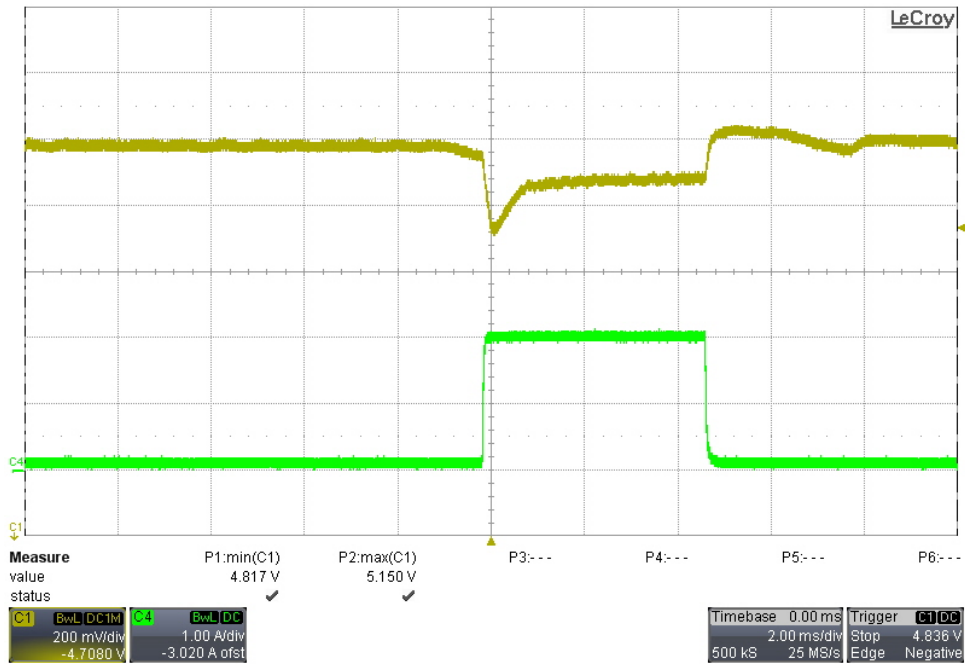
## 9.6 0A to 1A Transient, Single Pulse, Worst Case – 115VAC/60Hz Input



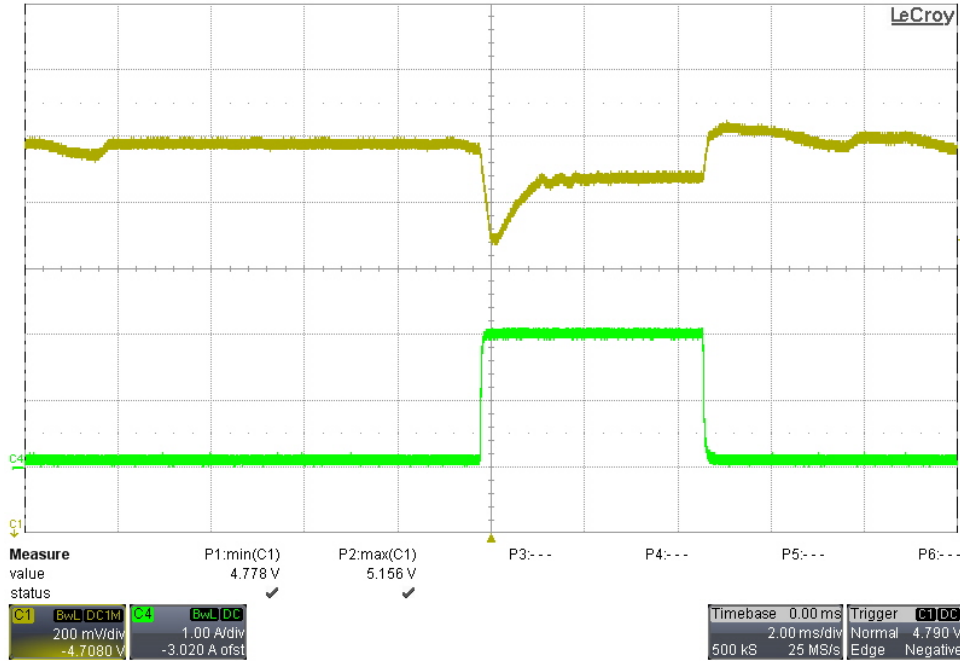
## 9.7 0A to 1A Transient, Single Pulse, Worst Case – 230VAC/60Hz Input



## 9.8 100mA to 2A Transient, Single Pulse, Worst Case – 115VAC/60Hz Input



## 9.9 100mA to 2A Transient, Single Pulse, Worst Case – 230VAC/60Hz Input

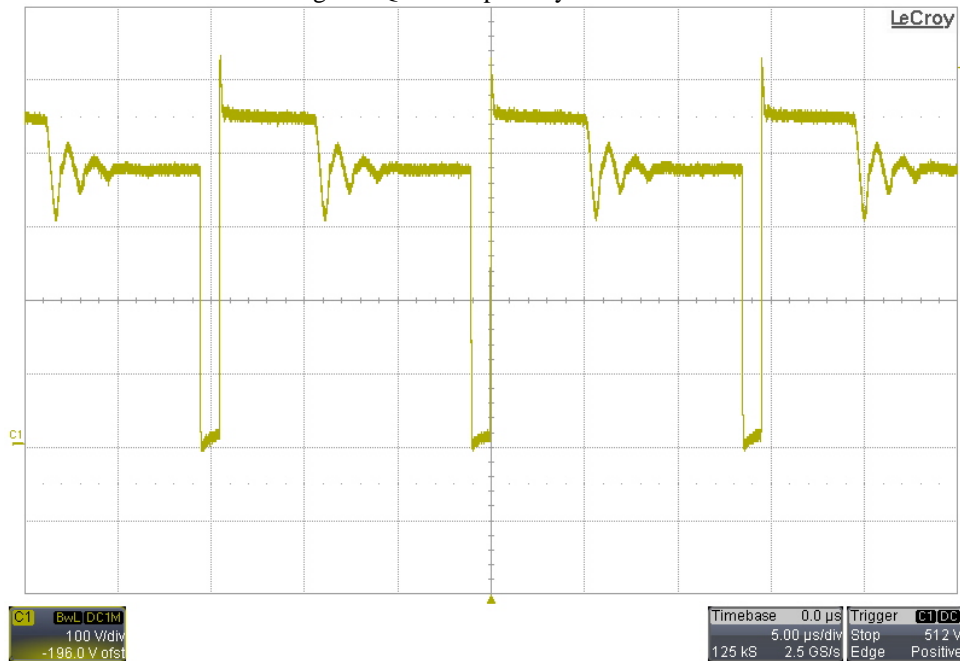


## 10 Switching Waveforms

The images below show the voltage waveforms on the switching devices within the supply. The input was 265VAC/50Hz. The output was loaded 2A.

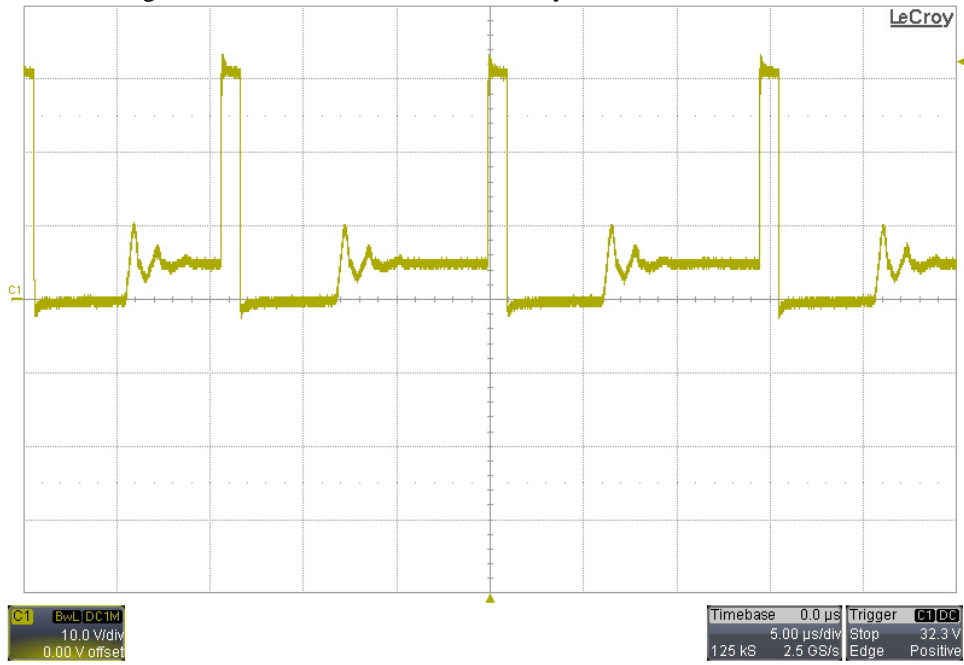
### 10.1 Primary Waveforms

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



## 10.2 Secondary Waveforms

The image below shows the voltage on the anode of D1 on the secondary board.



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