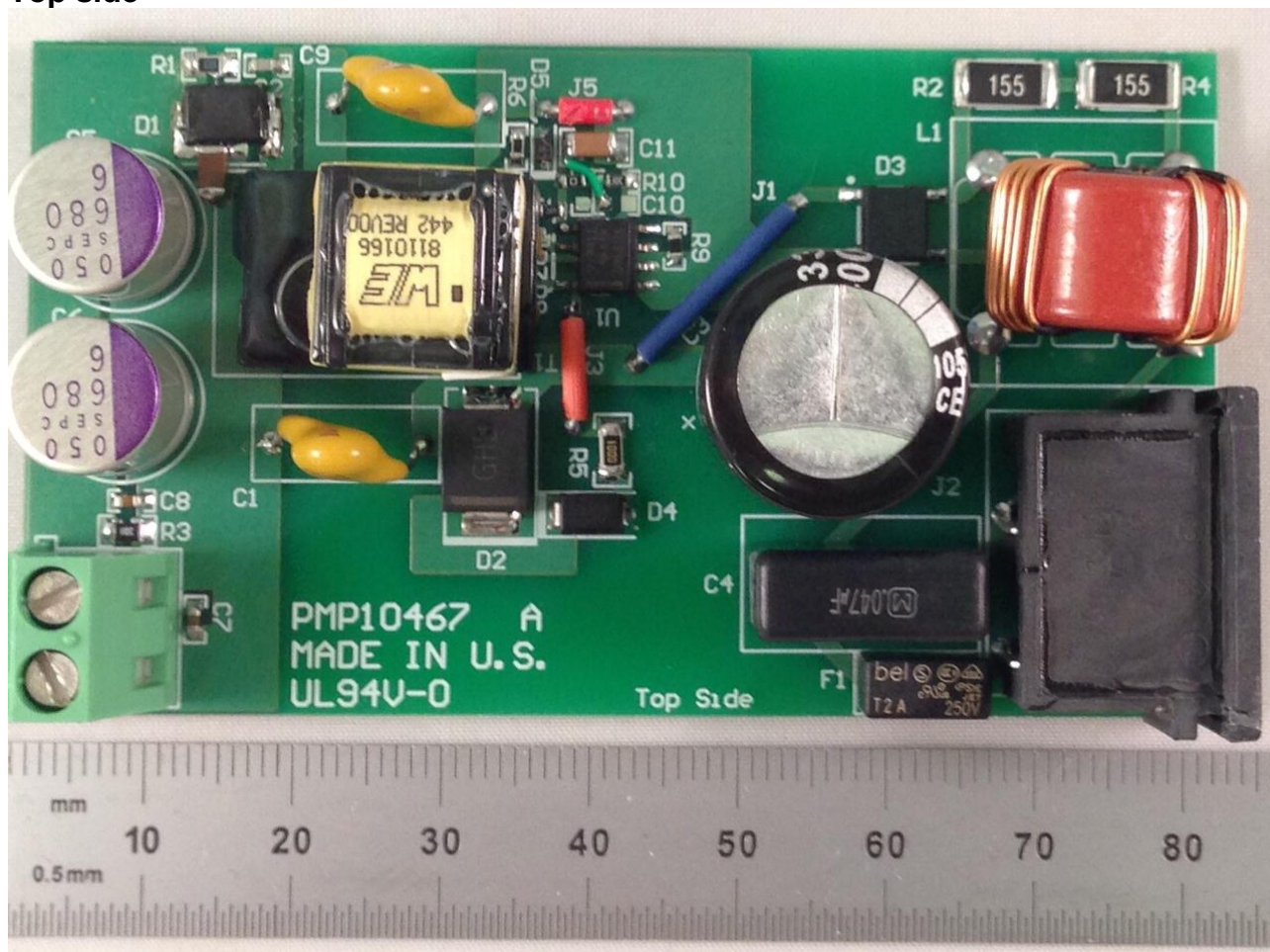


1 Photo

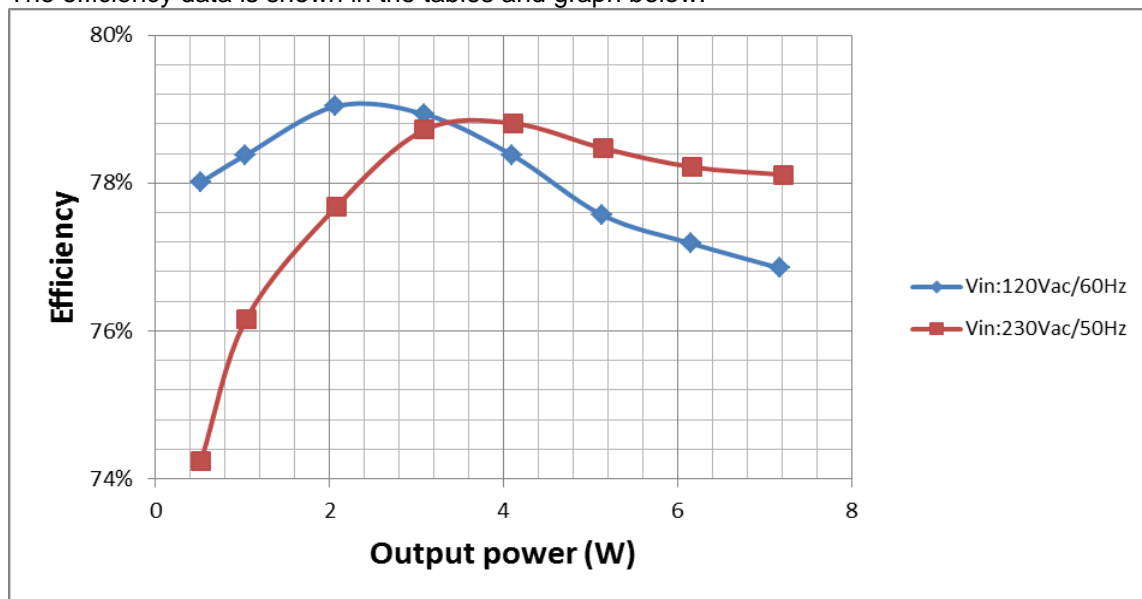
The photographs below show the PMP10467 Rev A assembly. This circuit was built on a PMP10467 Rev A PCB.

Top side



2 Converter Efficiency

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



V_{in}=120V_{AC}/60Hz

Vin(ac)	Iin(A)	Pin(W)	Vout(V)	Iout(A)	Pout(W)	Eff. (%)
120.10	0.16699	9.331	5.122	1.40	7.171	76.85%
120.11	0.14507	7.968	5.125	1.20	6.150	77.18%
120.16	0.12270	6.611	5.123	1.00	5.128	77.57%
120.18	0.09959	5.227	5.121	0.80	4.097	78.38%
120.20	0.07723	3.916	5.143	0.60	3.091	78.93%
120.24	0.05417	2.620	5.177	0.40	2.071	79.04%
120.27	0.02959	1.320	5.173	0.20	1.035	78.38%
120.27	0.01634	0.671	5.183	0.10	0.523	78.02%
120.28	0.00228	0.022	5.209	0.00	0.000	0.00%

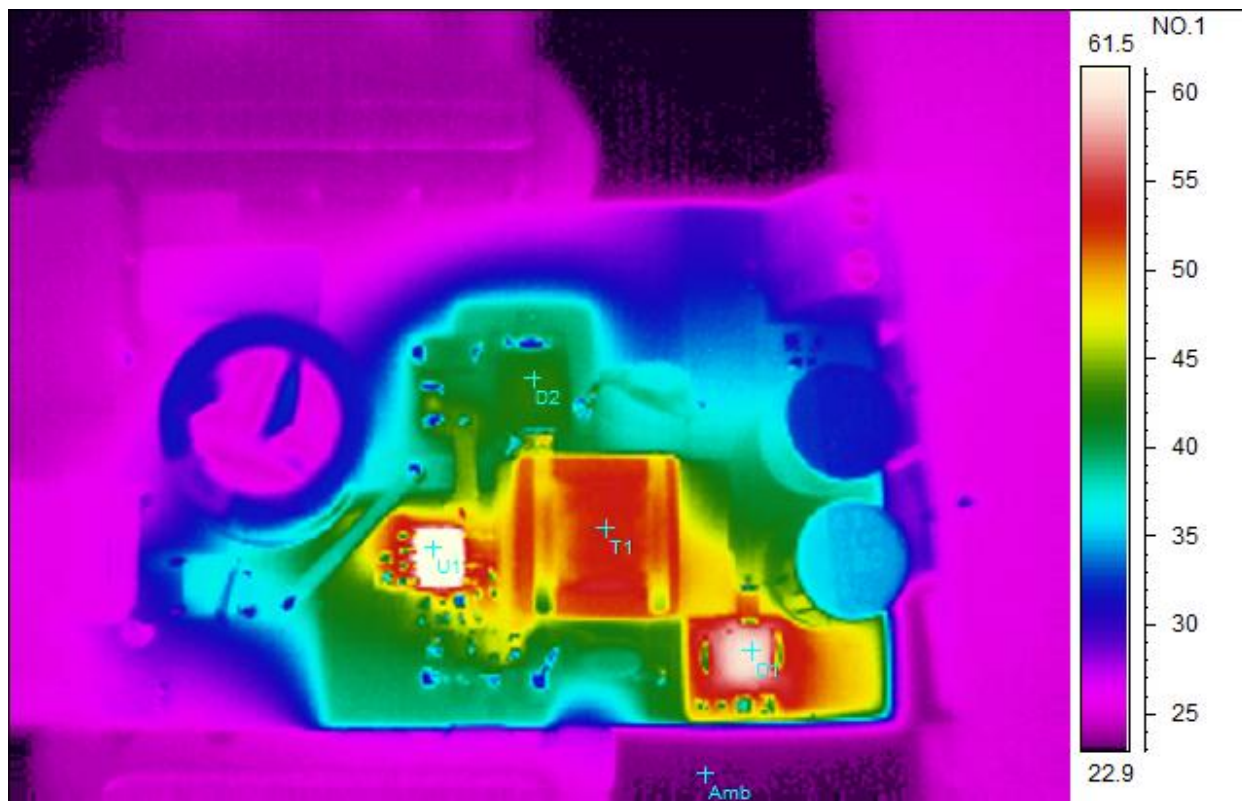
V_{in}=230V_{AC}/50Hz

Vin(ac)	Iin(A)	Pin(W)	Vo1(V)	Io1(A)	Pout(W)	Eff. (%)
230.00	0.10322	9.226	5.144	1.40	7.207	78.11%
230.00	0.08993	7.889	5.142	1.20	6.170	78.22%
230.10	0.07623	6.545	5.136	1.00	5.136	78.47%
230.10	0.06235	5.209	5.125	0.80	4.105	78.81%
230.10	0.04873	3.928	5.145	0.60	3.092	78.72%
230.10	0.03469	2.668	5.181	0.40	2.072	77.68%
230.10	0.01944	1.363	5.190	0.20	1.038	76.16%
230.10	0.01125	0.700	5.199	0.10	0.520	74.24%
230.10	0.00333	0.035	5.216	0.00	0.000	0.00%

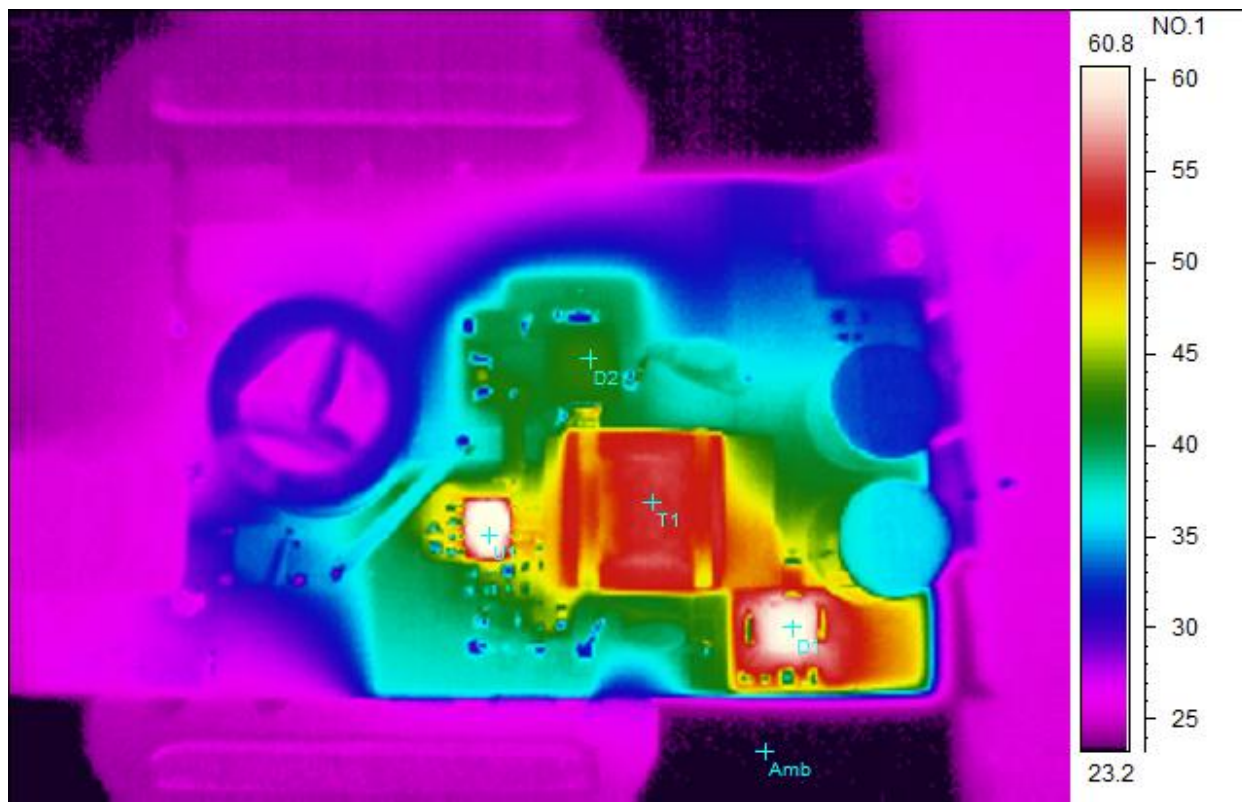
3 Thermal Images

The thermal images below show a top view and bottom view of the board. The ambient temperature was 20°C with no forced air flow. The output was at full load: 5V/1.4A.

3.1 $V_{in}=120V_{AC}/60Hz$



Spot analysis	Value
U1Temperature	73.4°C
T1Temperature	53.8°C
D1Temperature	60.4°C
D2Temperature	43.6°C
Amb Temperature	23.3°C

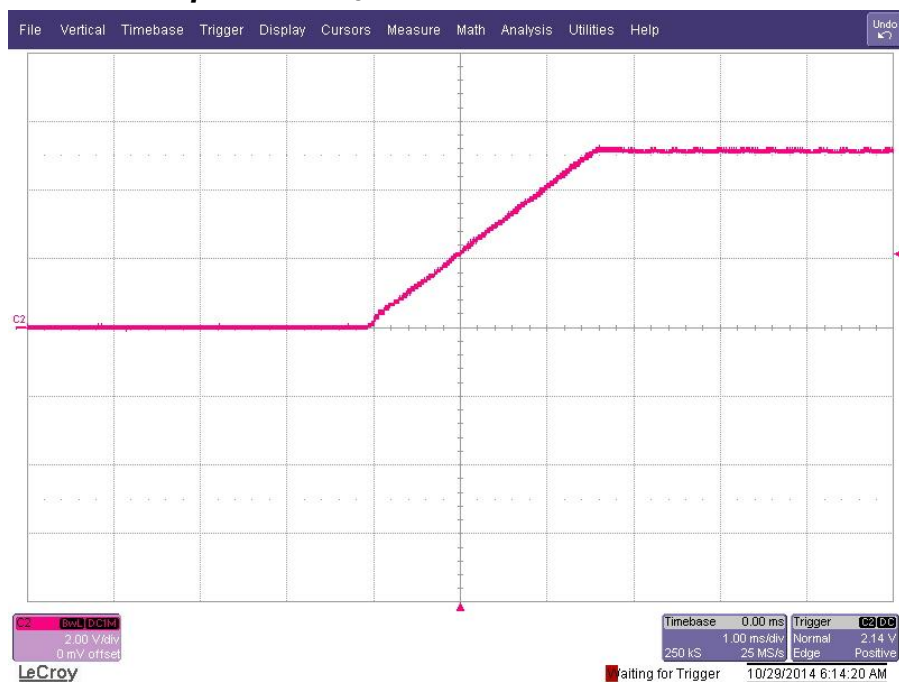
3.2 $V_{in}=230V_{AC}/50Hz$ 

Spot analysis	Value
U1Temperature	62.6°C
T1Temperature	54.7°C
D1Temperature	61.2°C
D2Temperature	43.6°C
Amb Temperature	23.2°C

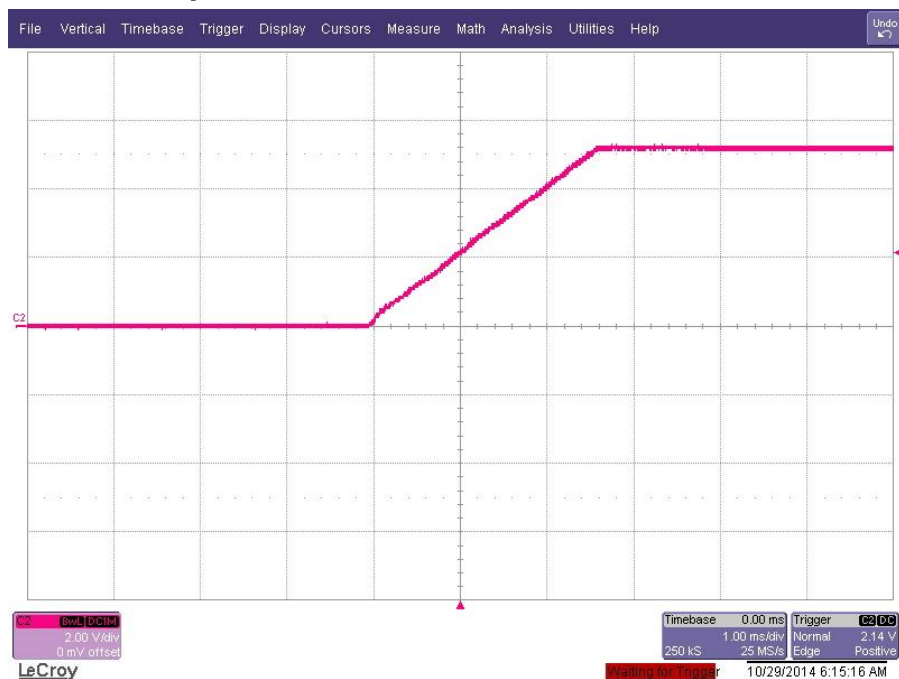
4 Startup

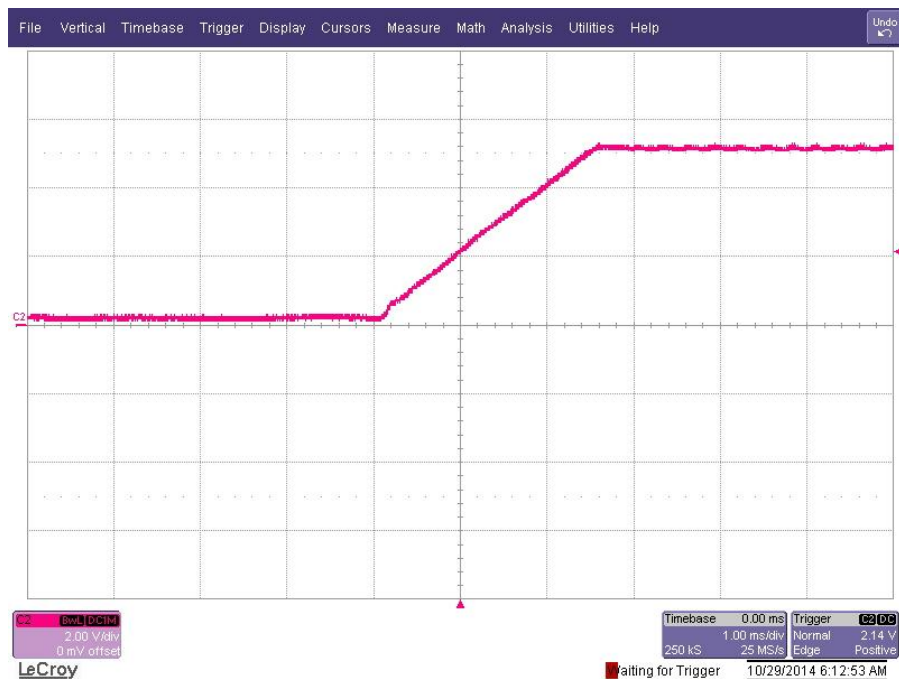
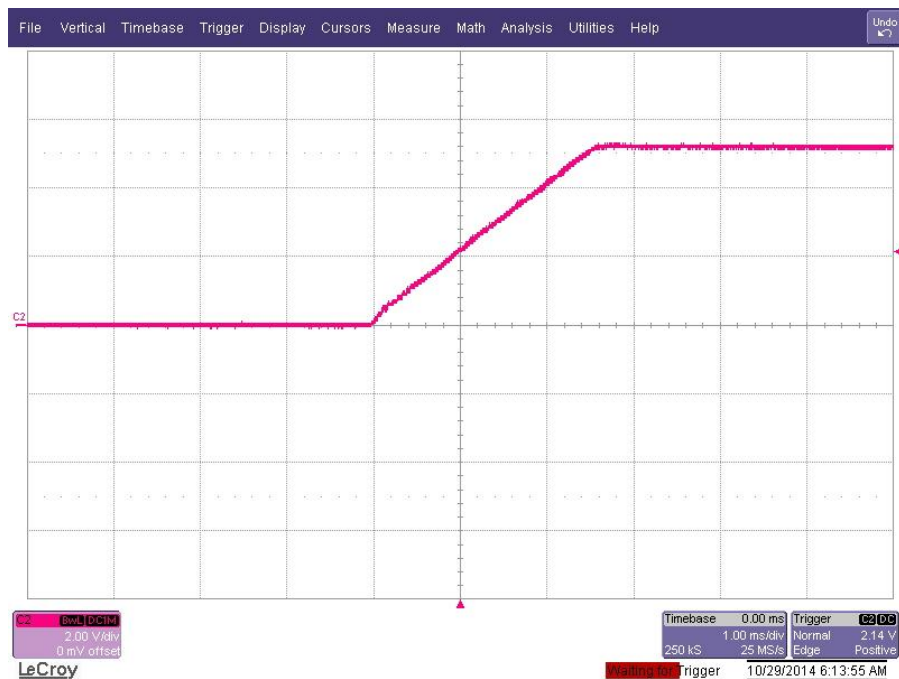
The output voltages at startup are shown in the images below.

4.1 Start Up @ 120V_{AC}/60Hz: 5V/1.4A.



4.2 Start Up @ 120 V_{AC} /60Hz: no load.



4.3 Start Up @ 230 V_{AC} /50Hz: 5V/1.4A.**4.4 Start Up @ 230 V_{AC} /50Hz: no load.**

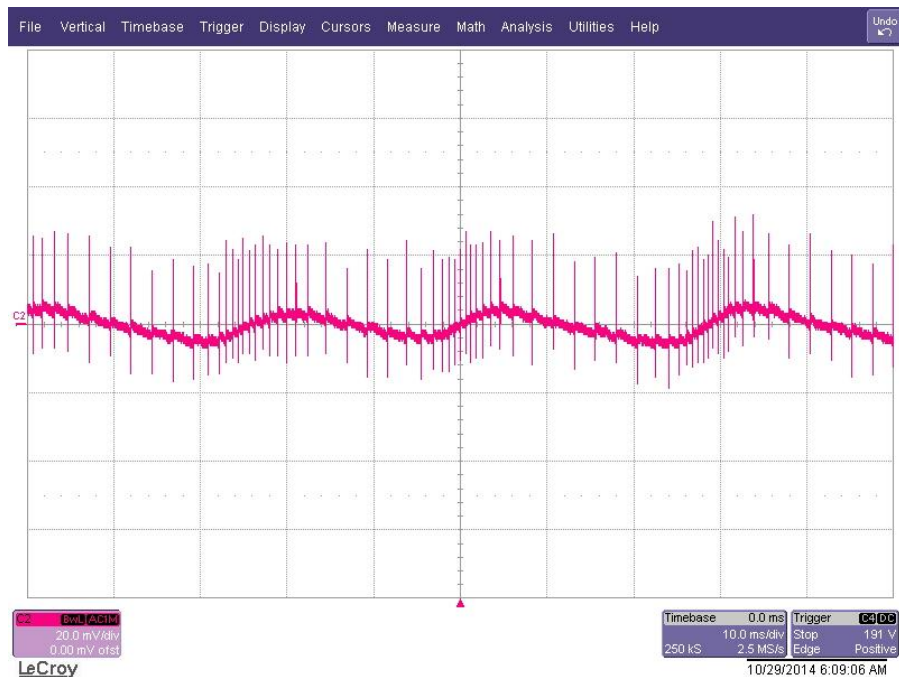
5 Output Ripple Voltages

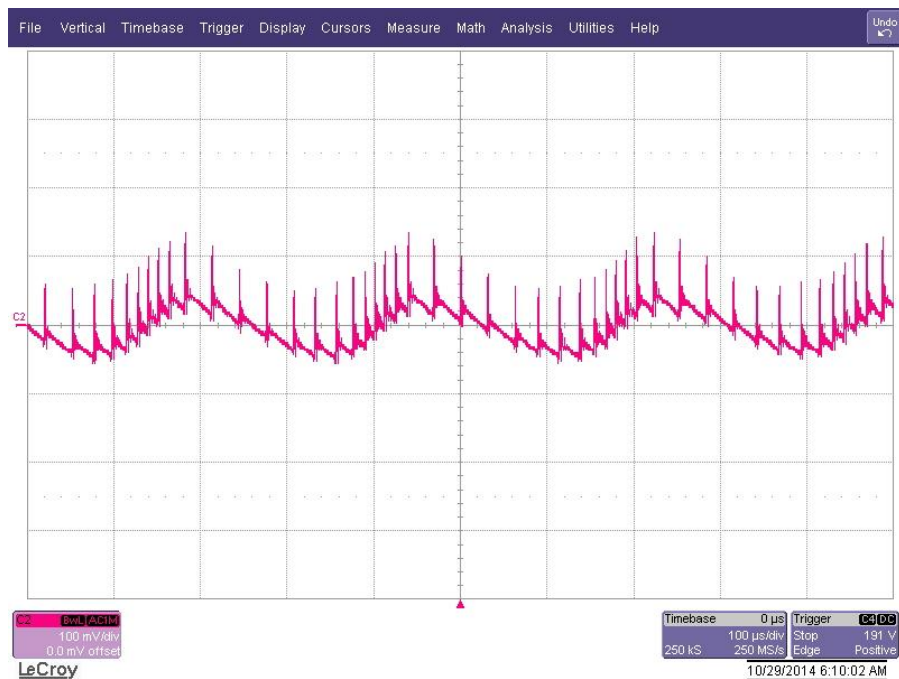
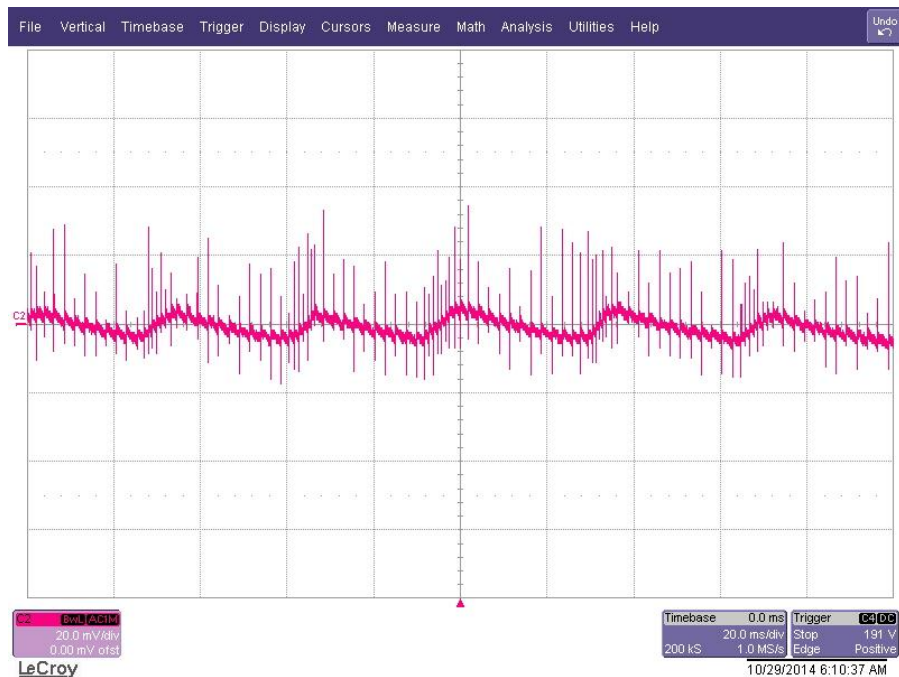
The output ripple voltages are shown in the plots below.

5.1 120 V_{AC} /60Hz – 5V/1.4A



5.2 120 V_{AC} /60Hz – 5V/ No load



5.3 230 V_{AC}/50Hz – 5V/1.4A**5.4 230 V_{AC}/50Hz – 5V/ No load**

6 Load Transient

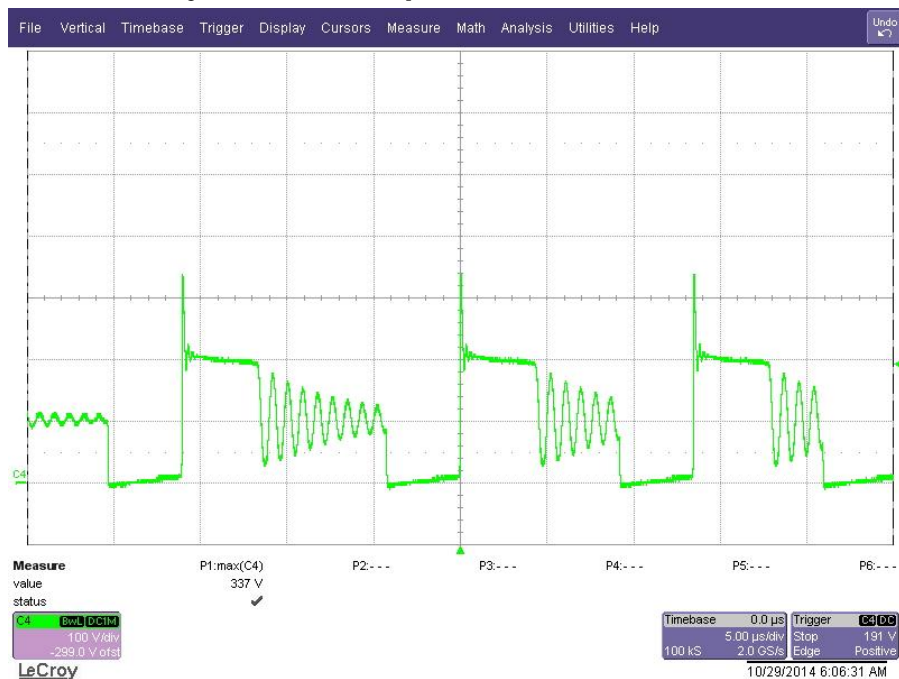
The image below shows $5V_{out}$ voltage response to a **0.7A** to **1.4A** load transient at a $120V_{AC}/60Hz$ input.



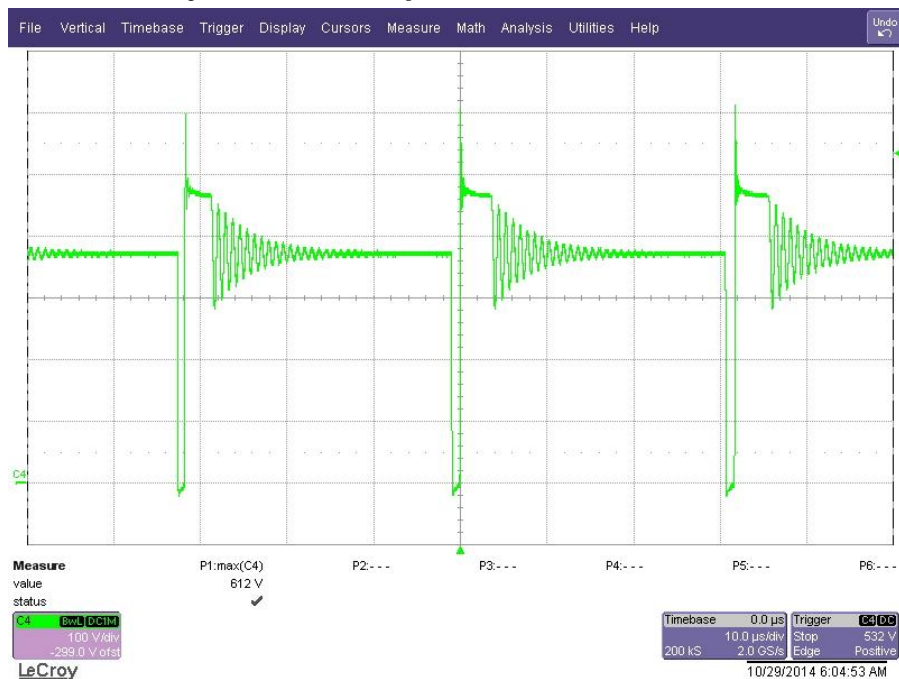
7 Switching Waveforms

The images below show key switching waveforms of PMP10467RevA. The waveforms are measured with 5V/1.4A full load.

7.1 Primary MOSFET U1 pin8 @ 85 V_{AC} /60Hz



7.2 Primary MOSFET U1 pin8 @ 265 V_{AC} /50Hz



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