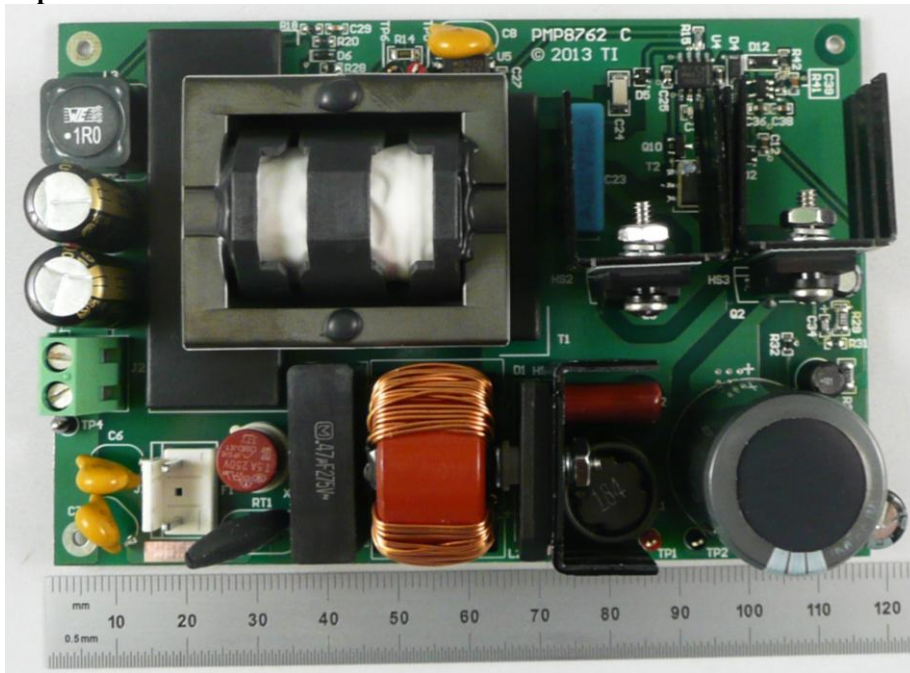


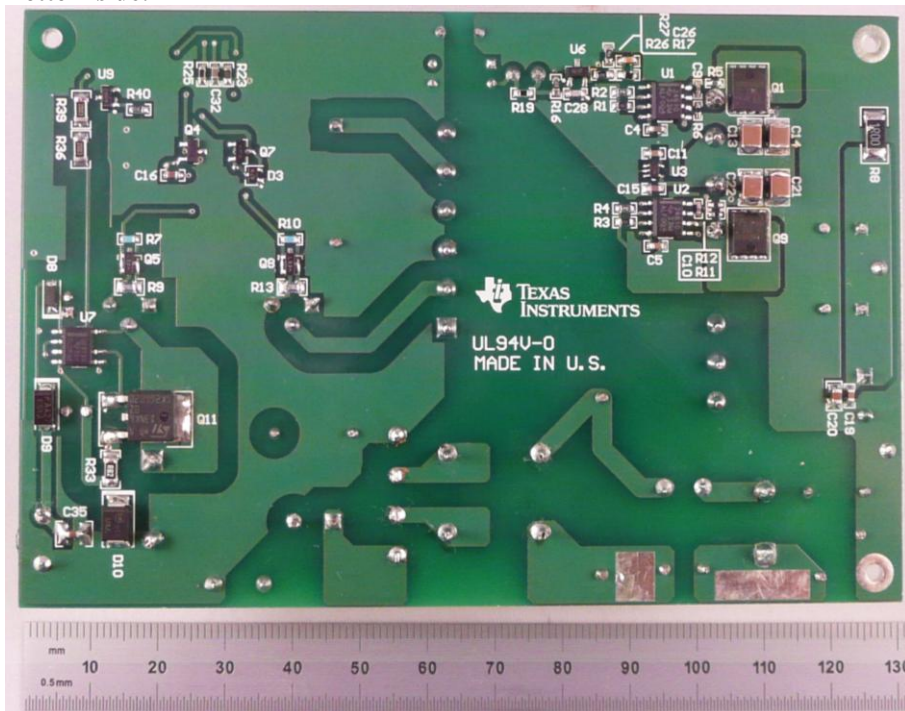
1 Photo

The photographs below show the PMP8762 Rev C assembly. This circuit was built on a PMP8762 Rev C PCB.

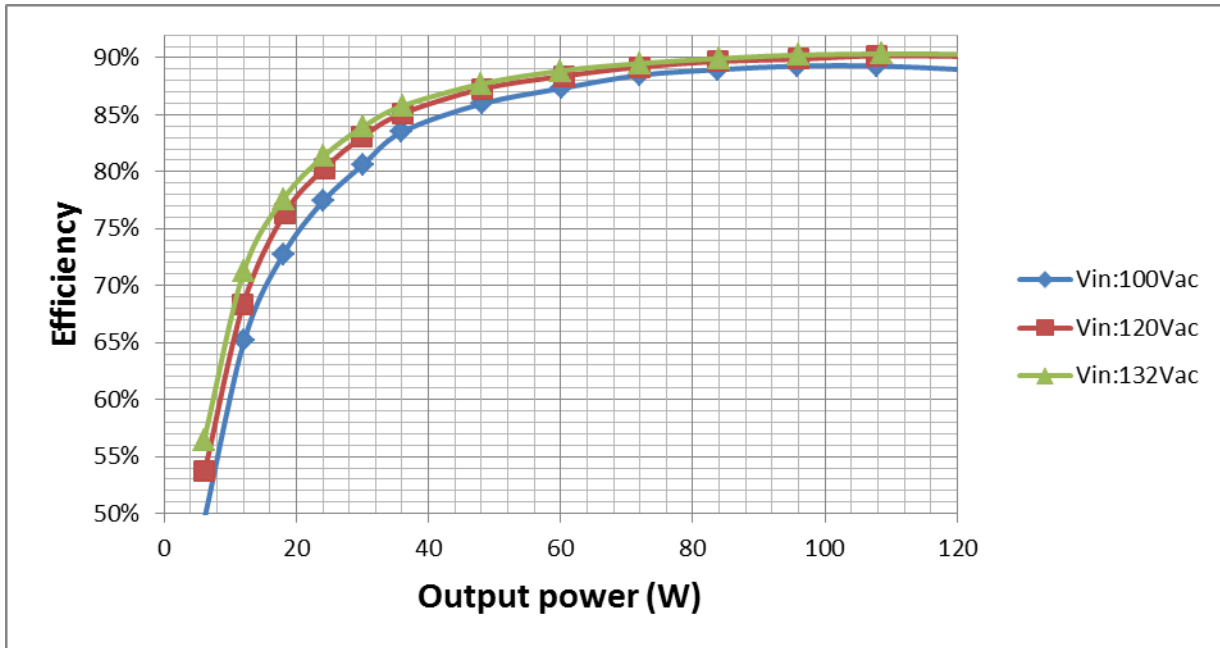
Top side:



Bottom side:



2 Efficiency



100V_{AC}/60Hz

Vin(ac)	Iin(A)	Pin(W)	PF	Vout(V)	Iout(A)	Pout(W)	Losses(W)	Efficiency (%)
100.01	1.948	134.89	0.692	11.98	10.02	120.0396	14.8504	88.99%
100.38	1.755	120.74	0.685	11.98	9	107.82	12.92	89.30%
100.66	1.573	107.35	0.678	11.98	8	95.84	11.51	89.28%
100.92	1.393	94.27	0.67	11.98	7	83.86	10.41	88.96%
101.2	1.215	81.25	0.661	11.98	6	71.88	9.37	88.47%
100.22	1.055	68.87	0.651	11.98	5.02	60.1396	8.7304	87.32%
100.49	0.873	55.93	0.637	11.99	4.01	48.0799	7.8501	85.96%
100.76	0.6913	43.11	0.619	11.99	3.002	35.99398	7.11602	83.49%
100.88	0.6054	37.24	0.61	11.99	2.503	30.01097	7.22903	80.59%
101.01	0.5142	31.03	0.597	11.99	2.003	24.01597	7.01403	77.40%
101.1	0.419	24.75	0.584	11.99	1.501	17.99699	6.75301	72.72%
101.29	0.3254	18.593	0.564	11.99	1.011	12.12189	6.47111	65.20%
101.53	0.2237	12.148	0.535	11.99	0.499	5.98301	6.16499	49.25%
101.87	0.05561	2.377	0.42	12.02	0	0	2.377	0.00%

120V_{AC}/60Hz

Vin(ac)	Iin(A)	Pin(W)	PF	Vout(V)	Iout(A)	Pout(W)	Losses(W)	Efficiency (%)
120.05	1.665	133.32	0.667	11.98	10.03	120.1594	13.1606	90.13%
120.31	1.507	119.56	0.66	11.98	9	107.82	11.74	90.18%
120.03	1.363	106.76	0.653	11.98	8.01	95.9598	10.8002	89.88%
120.27	1.208	93.5	0.643	11.98	7	83.86	9.64	89.69%
120.5	1.057	80.66	0.633	11.99	6	71.94	8.72	89.19%
120.08	0.914	68.36	0.623	11.99	5.04	60.4296	7.9304	88.40%
120.31	0.7551	55.22	0.608	11.99	4.02	48.1998	7.0202	87.29%
120.51	0.5949	42.32	0.59	11.99	3.004	36.01796	6.30204	85.11%
120.02	0.5188	36.09	0.58	11.99	2.5	29.975	6.115	83.06%
120.14	0.4423	30.13	0.567	11.99	2.017	24.18383	5.94617	80.26%
120.28	0.3603	23.89	0.551	11.99	1.521	18.23679	5.65321	76.34%
120.44	0.2737	17.47	0.53	11.99	0.995	11.93005	5.53995	68.29%
120.61	0.18863	11.415	0.502	12	0.511	6.132	5.283	53.72%
120.75	0.09232	4.98	0.447	12	0	0	4.98	0.00%

132V_{AC}/60Hz

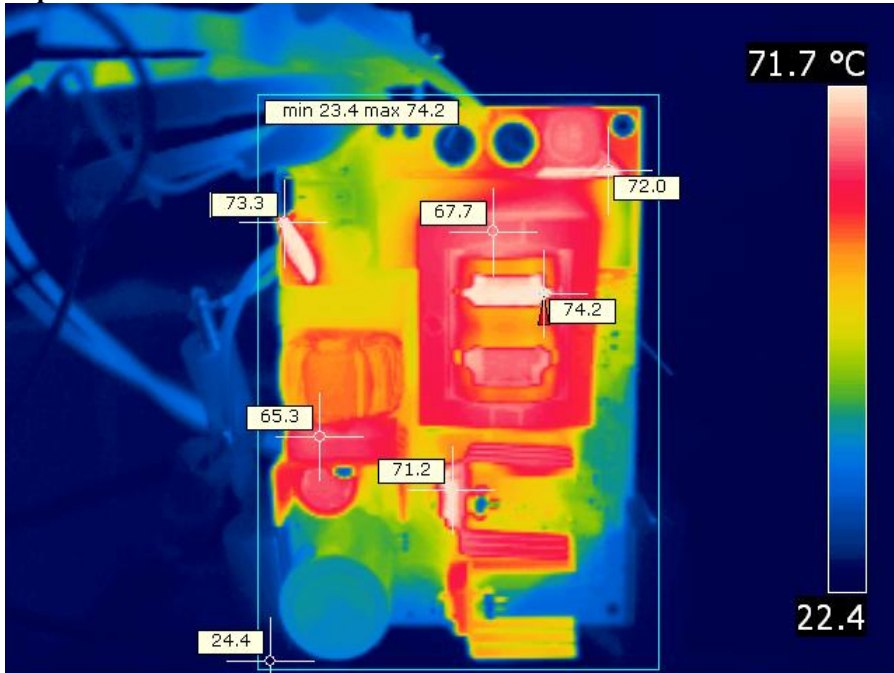
Vin(ac)	Iin(A)	Pin(W)	PF	Vout(V)	Iout(A)	Pout(W)	Losses(W)	Efficiency (%)
131.8	1.541	132.9	0.654	11.98	10.02	120.0396	12.8604	90.32%
132.04	1.407	120.27	0.647	11.98	9.07	108.6586	11.6114	90.35%
132.29	1.258	106.34	0.639	11.98	8.01	95.9598	10.3802	90.24%
132.08	1.122	93.45	0.631	11.99	7.01	84.0499	9.4001	89.94%
132.31	0.979	80.37	0.62	11.99	6	71.94	8.43	89.51%
132.55	0.837	67.47	0.608	11.99	5	59.95	7.52	88.85%
132.8	0.6937	54.68	0.594	11.99	4	47.96	6.72	87.71%
132.03	0.5506	42.02	0.578	11.99	3.006	36.04194	5.97806	85.77%
132.14	0.4775	35.8	0.567	11.99	2.506	30.04694	5.75306	83.93%
132.25	0.4033	29.58	0.555	12	2.005	24.06	5.52	81.34%
132.37	0.3258	23.24	0.539	12	1.503	18.036	5.204	77.61%
132.5	0.2461	16.891	0.518	12	1.003	12.036	4.855	71.26%
132.6	0.1647	10.659	0.488	12	0.501	6.012	4.647	56.40%
132.75	0.07025	3.891	0.417	12	0	0	3.891	0.00%

3 Thermal Images

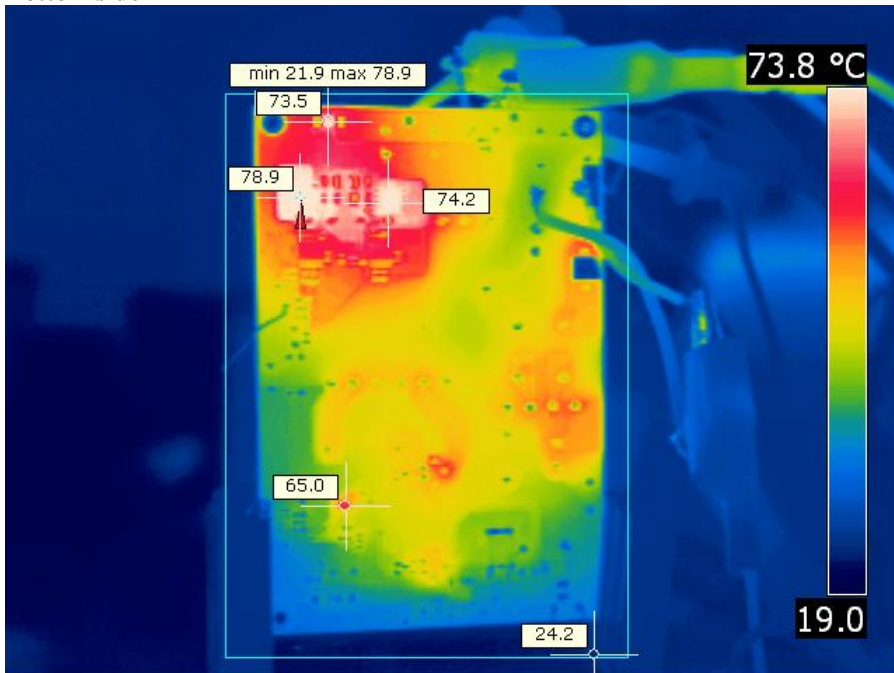
The ambient temperature was 25°C with no forced air flow. The output was loaded with 12V/10A.

3.1 100Vac/60Hz

Top side

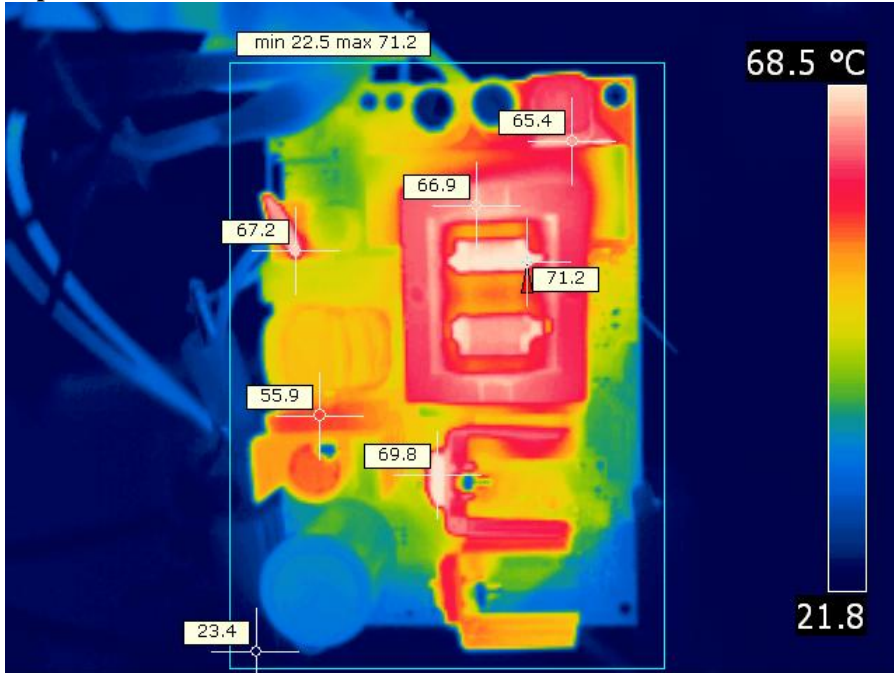


Bottom side

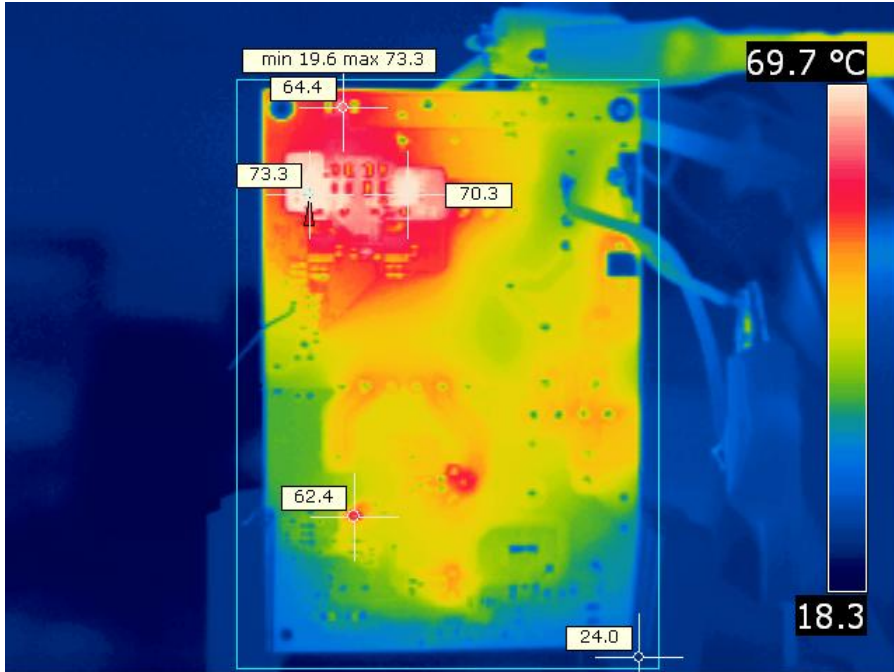


3.2 120Vac/60Hz

Top side

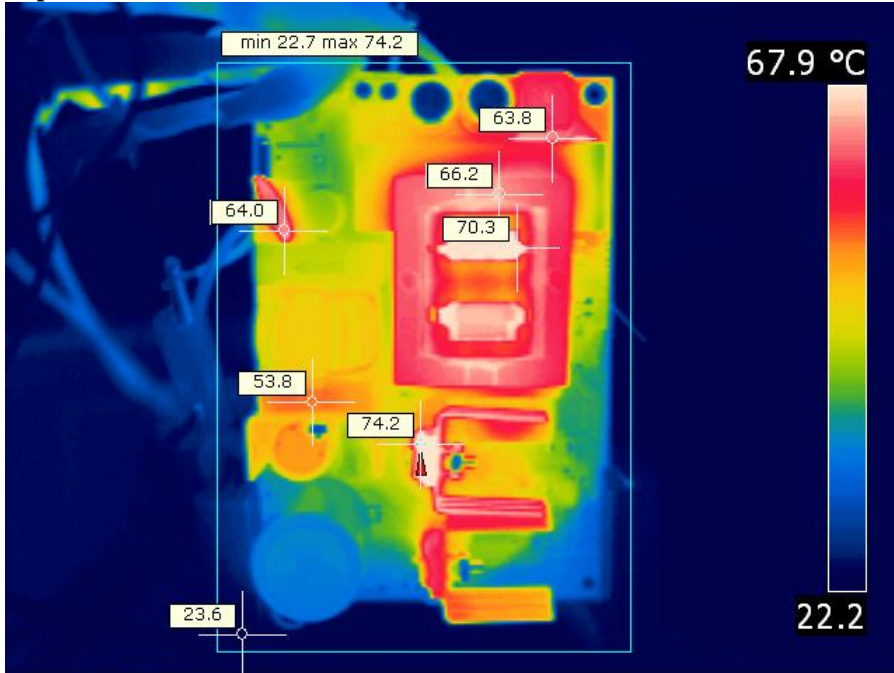


Bottom side

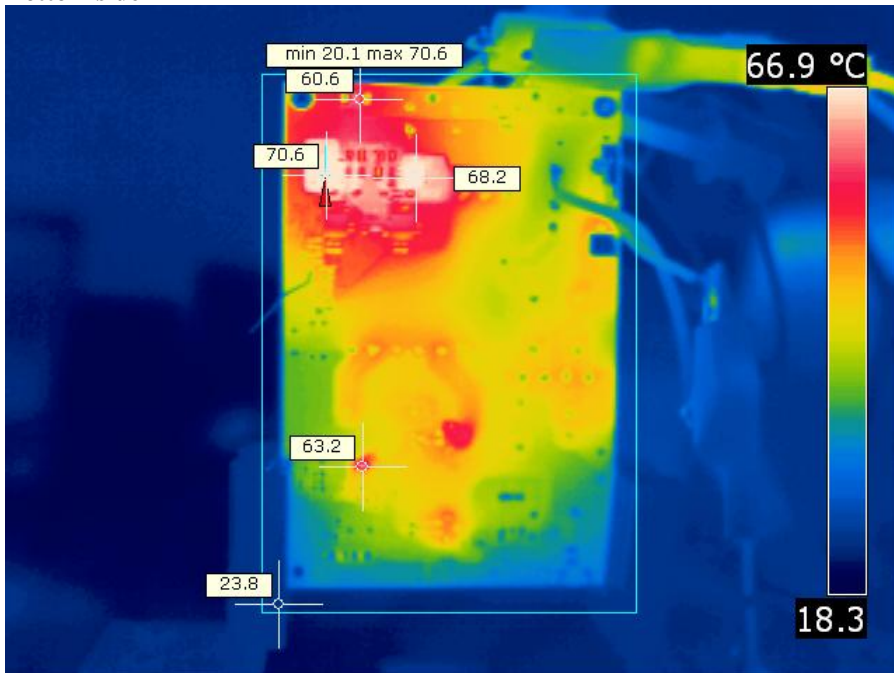


3.3 132Vac/60Hz

Top side



Bottom side



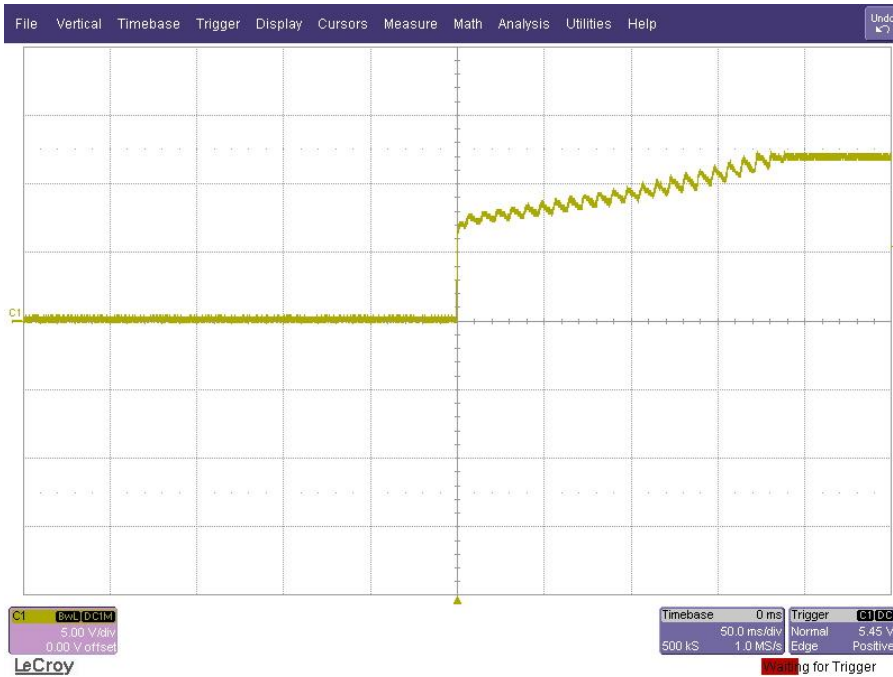
4 Startup

The output voltages at startup are shown in the images below. The input was 120VAC/60Hz.

4.1 No Load @ 120Vac



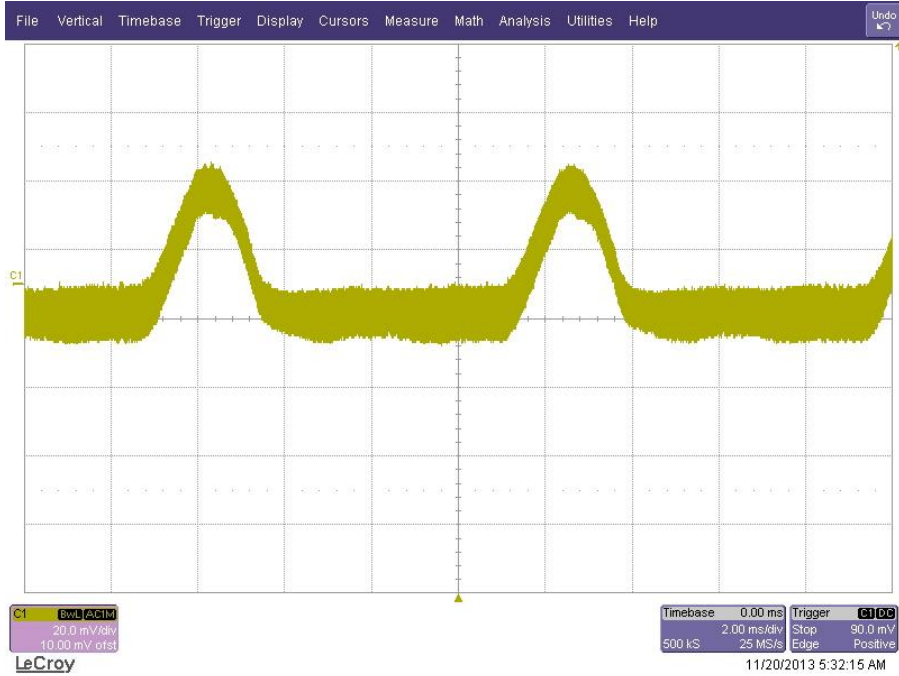
4.2 12V/10A @ 120Vac



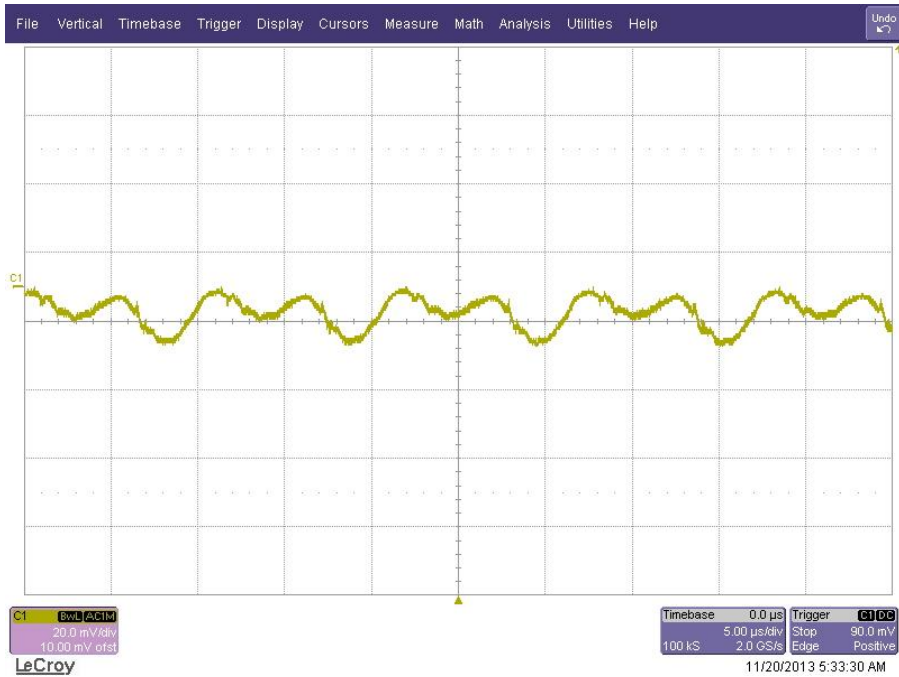
5 Output Ripple Voltage

The output ripple voltage at 10A load current is shown in the plots below. The input voltage is 120Vac/60Hz

5.1 Low Frequency Ripple

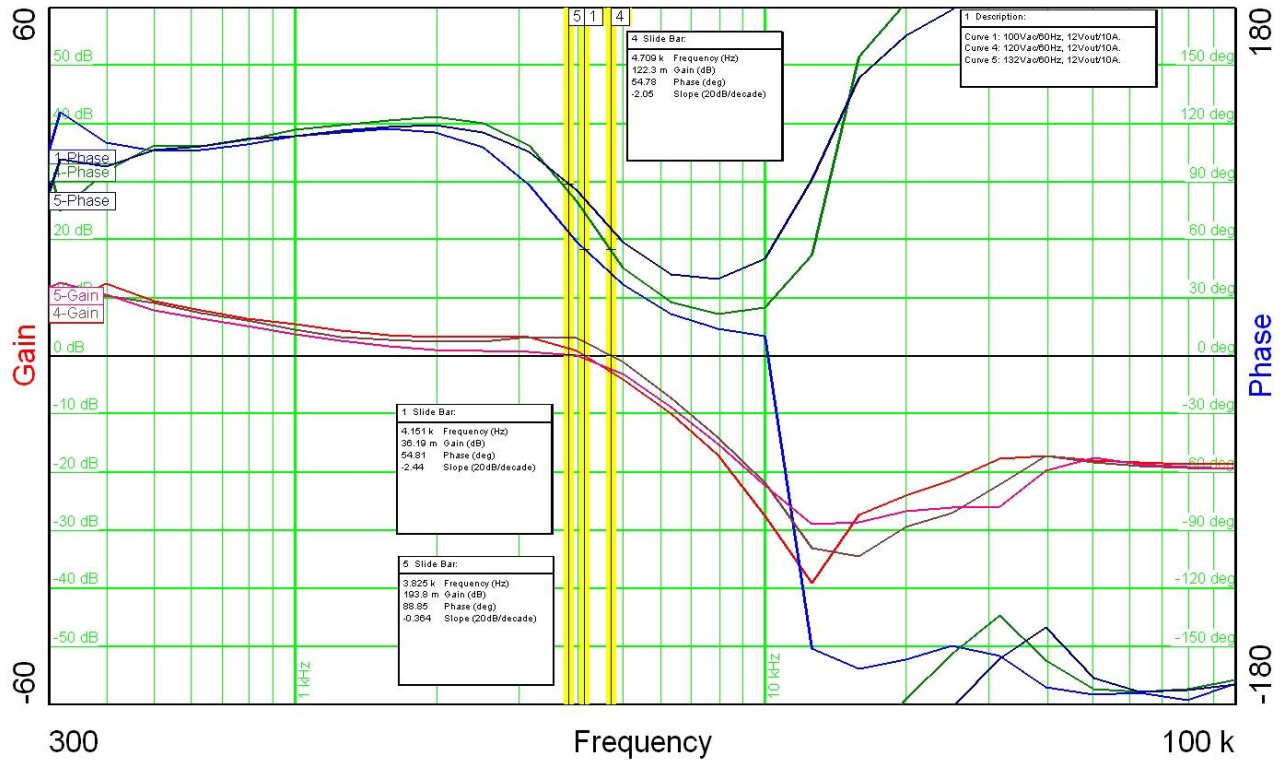


5.2 High Frequency Ripple



6 Loop Response

The frequency response of the feedback loop is shown in the image below. The frequency response was measured by inserting small signal from TP5 and TP6. The output was loaded with 12V/10A. The input voltages are 100Vac, 120Vac, and 132Vac for curves 1, 4, and 5.



7 Load Transients

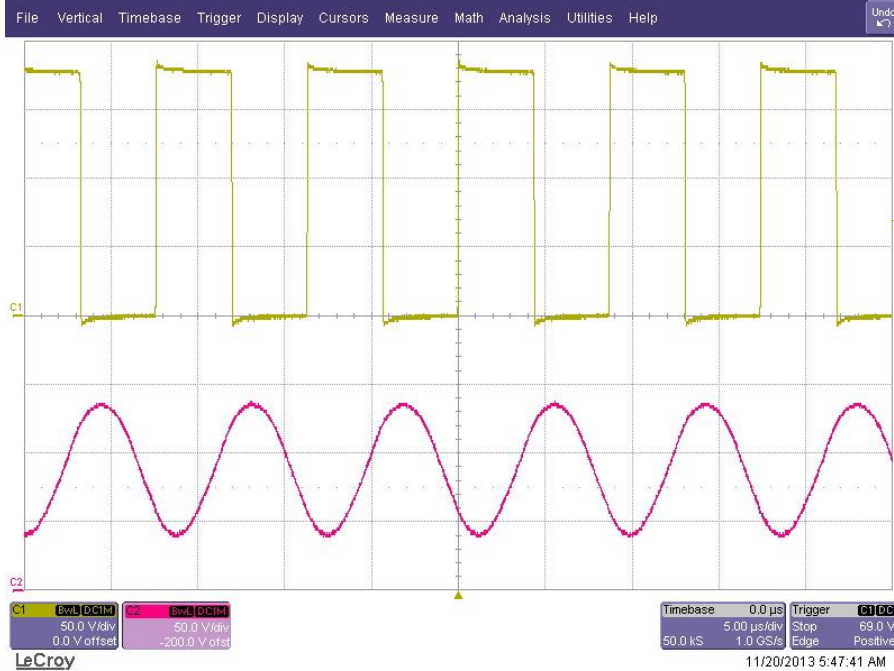
The image below shows the output voltage response to a 5A to 10A load transient. The input voltage was set to 120VAC/60Hz. Channel 1 shows the 12V output voltage (ac coupled). Channel 4 shows the output load current.



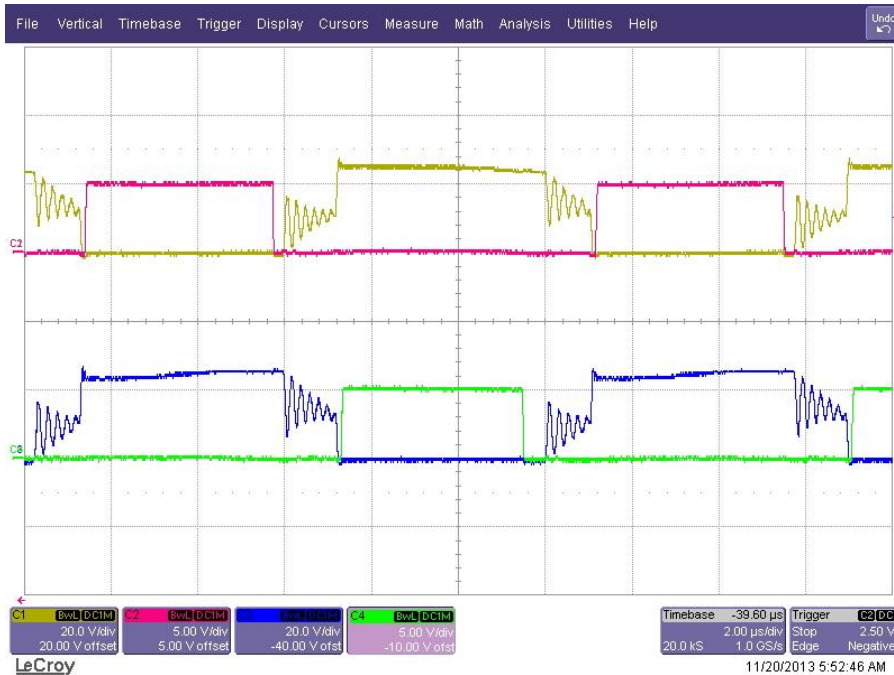
8 Switching Waveforms

8.1 Q6 Vds and C23 voltage @ 132Vac/60Hz, 12Vout/10A

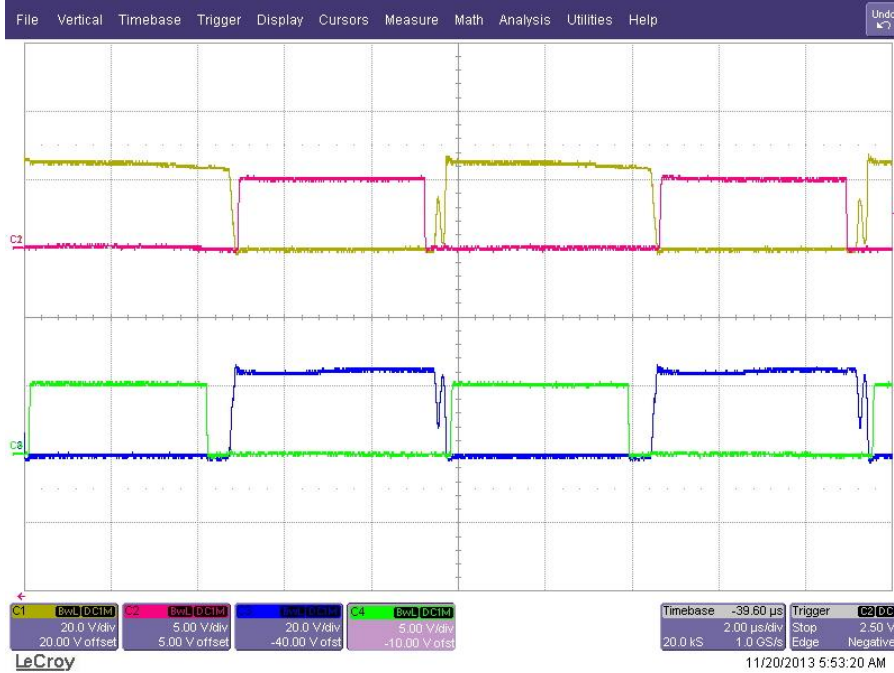
Channel 1: Q6 Vds, Channel 2: C23 Voltage



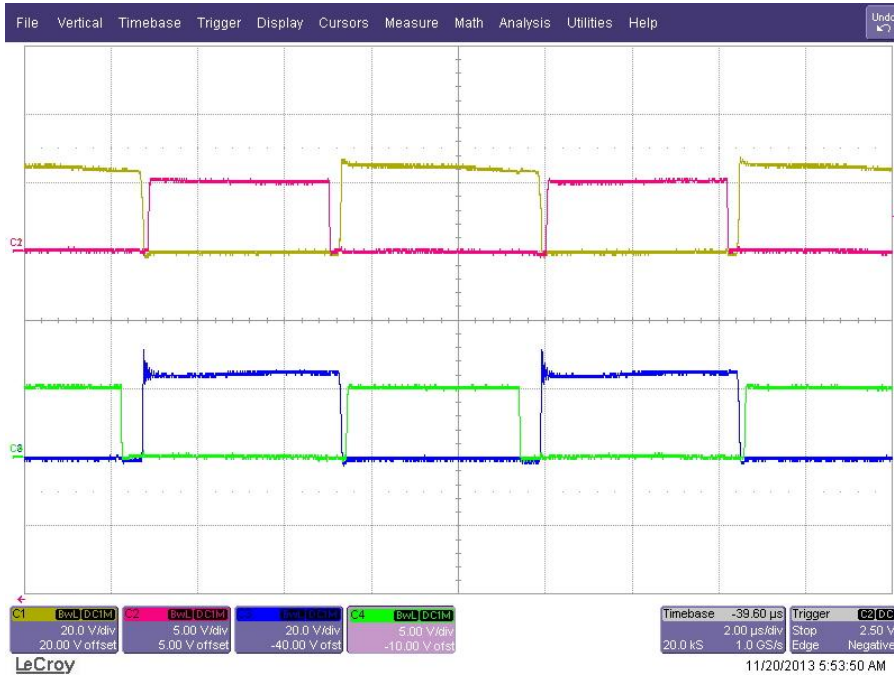
8.2 Synchronous rectifier waveforms @ 100Vac/60Hz, 12Vout/10A



8.3 Synchronous rectifier waveforms @ 120Vac/60Hz, 12Vout/10A



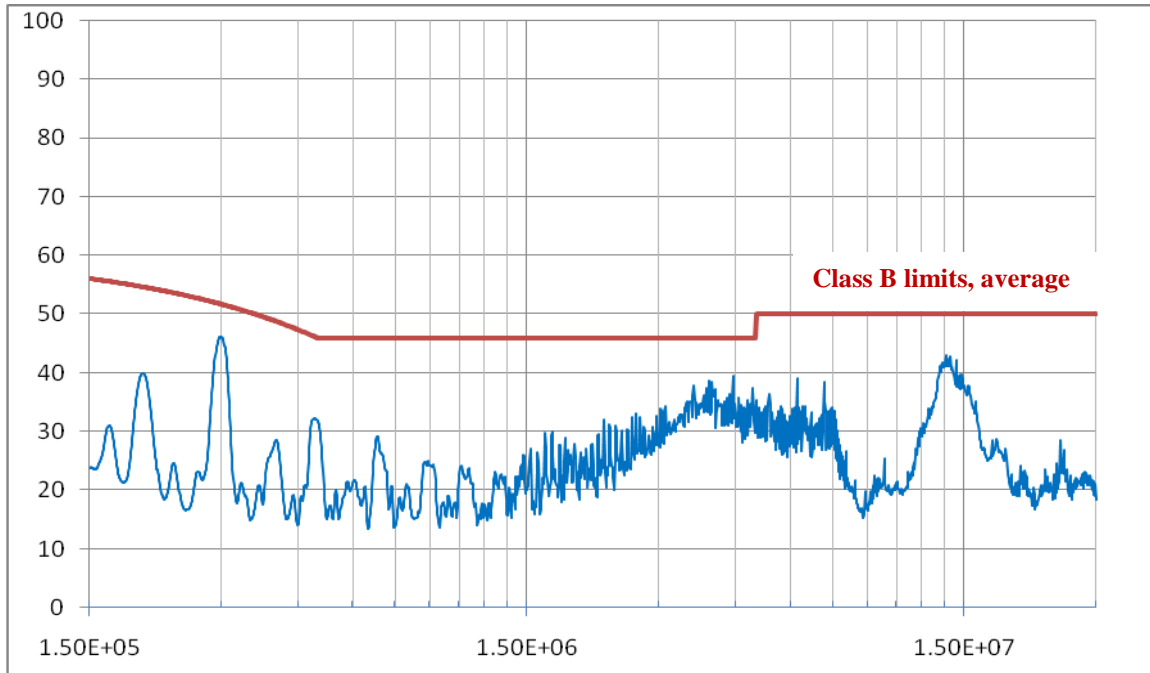
8.4 Synchronous rectifier waveforms @ 132Vac/60Hz, 12Vout/10A



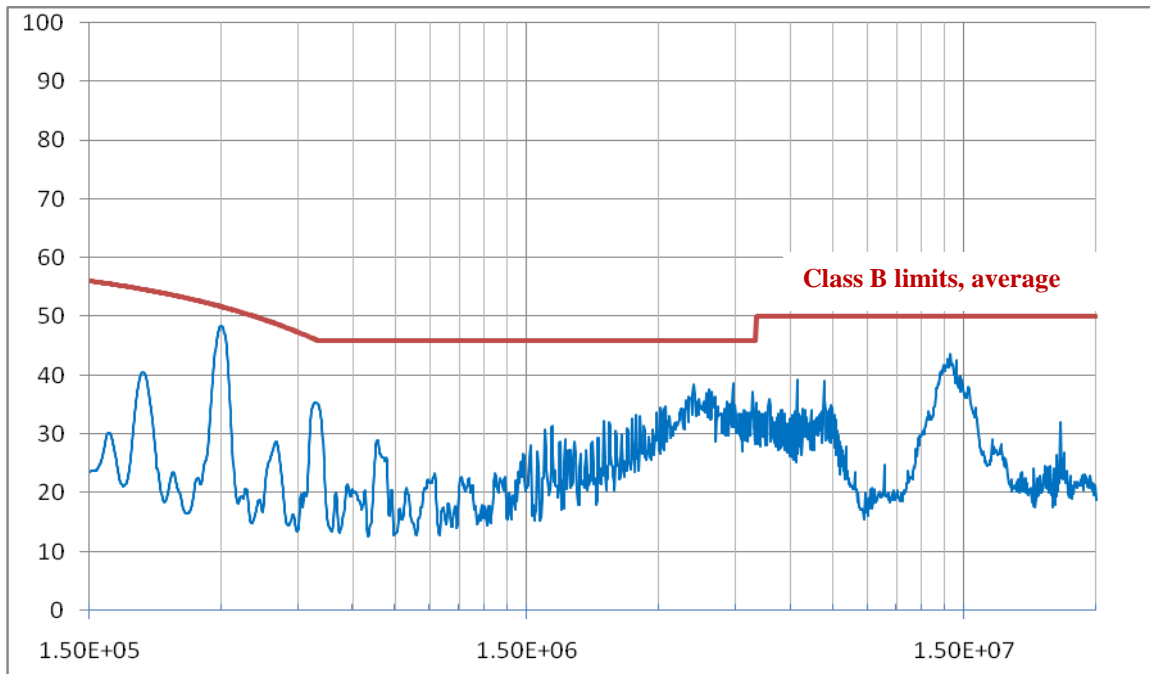
9 Conducted EMI:

Conducted EMI of PMP8762 Rev C was tested at the condition of $V_{IN}=120V_{AC}$ and $P_{IN}=80W$. The following curves show the average scan results.

9.1 Line



9.2 Neutral



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