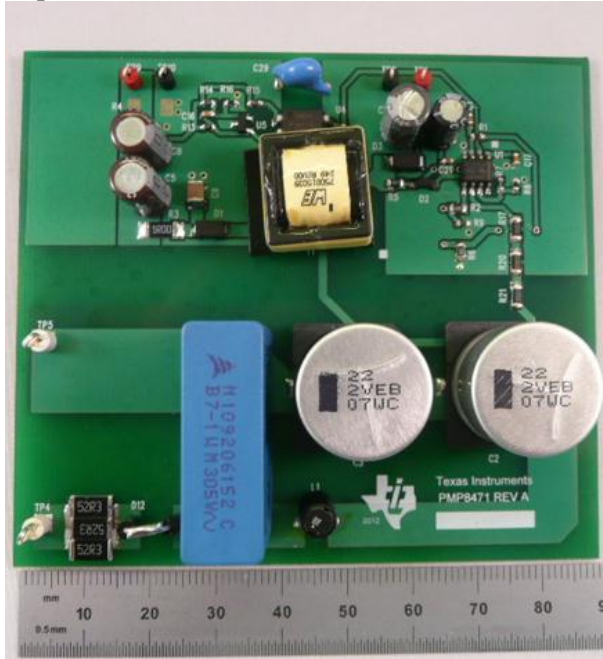


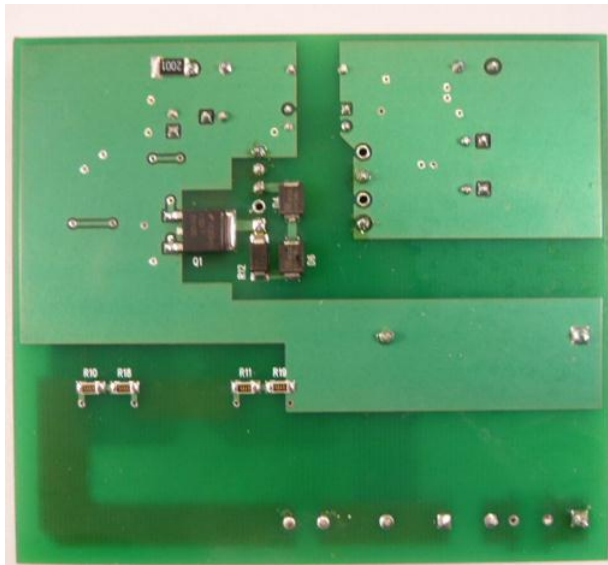
1 Photo

The photographs below show the top and bottom views of the PMP8471 Rev CB demo board. The circuit is built on PMP8471 Rev A PCB board.

Top side



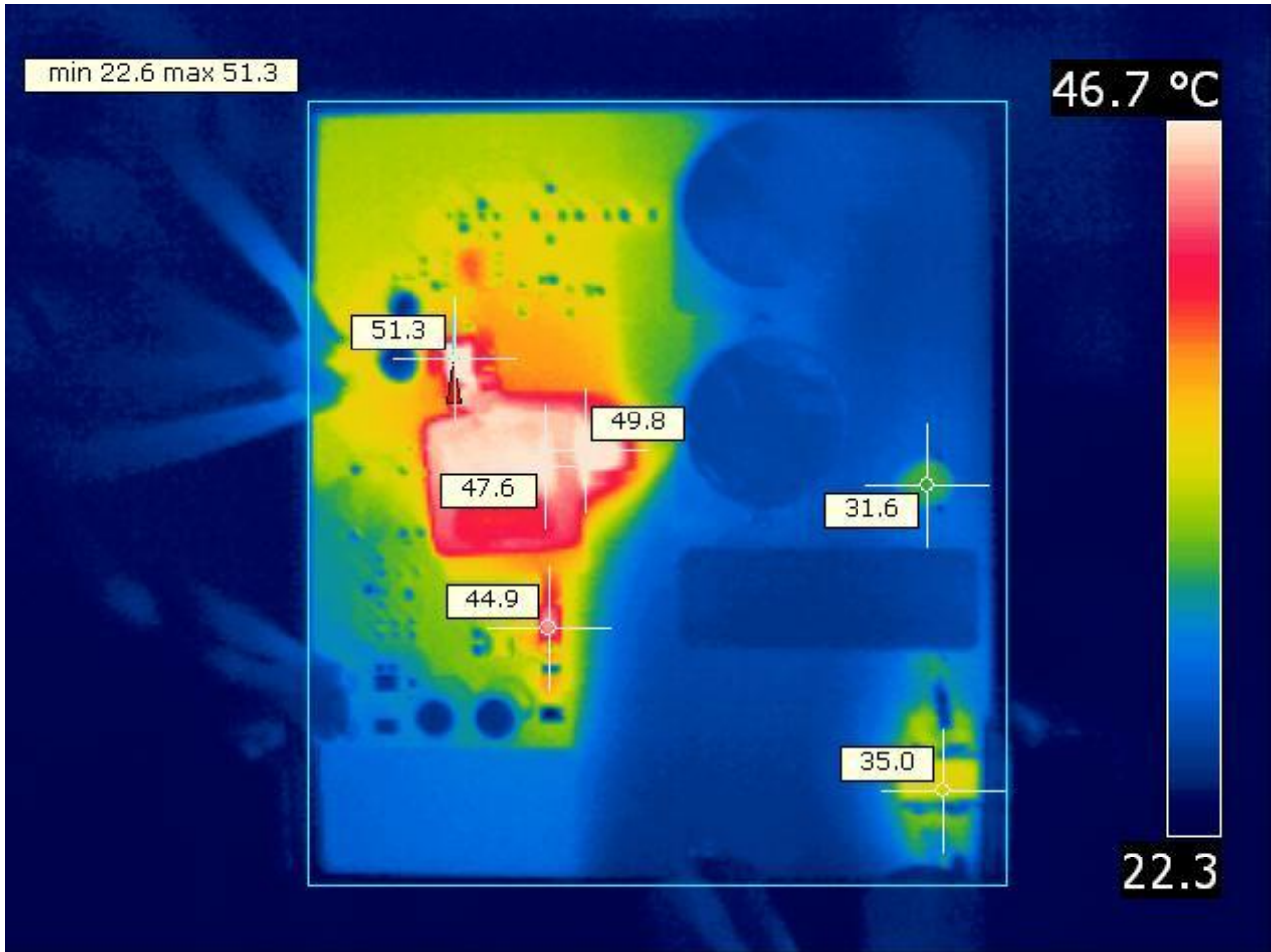
Bottom side



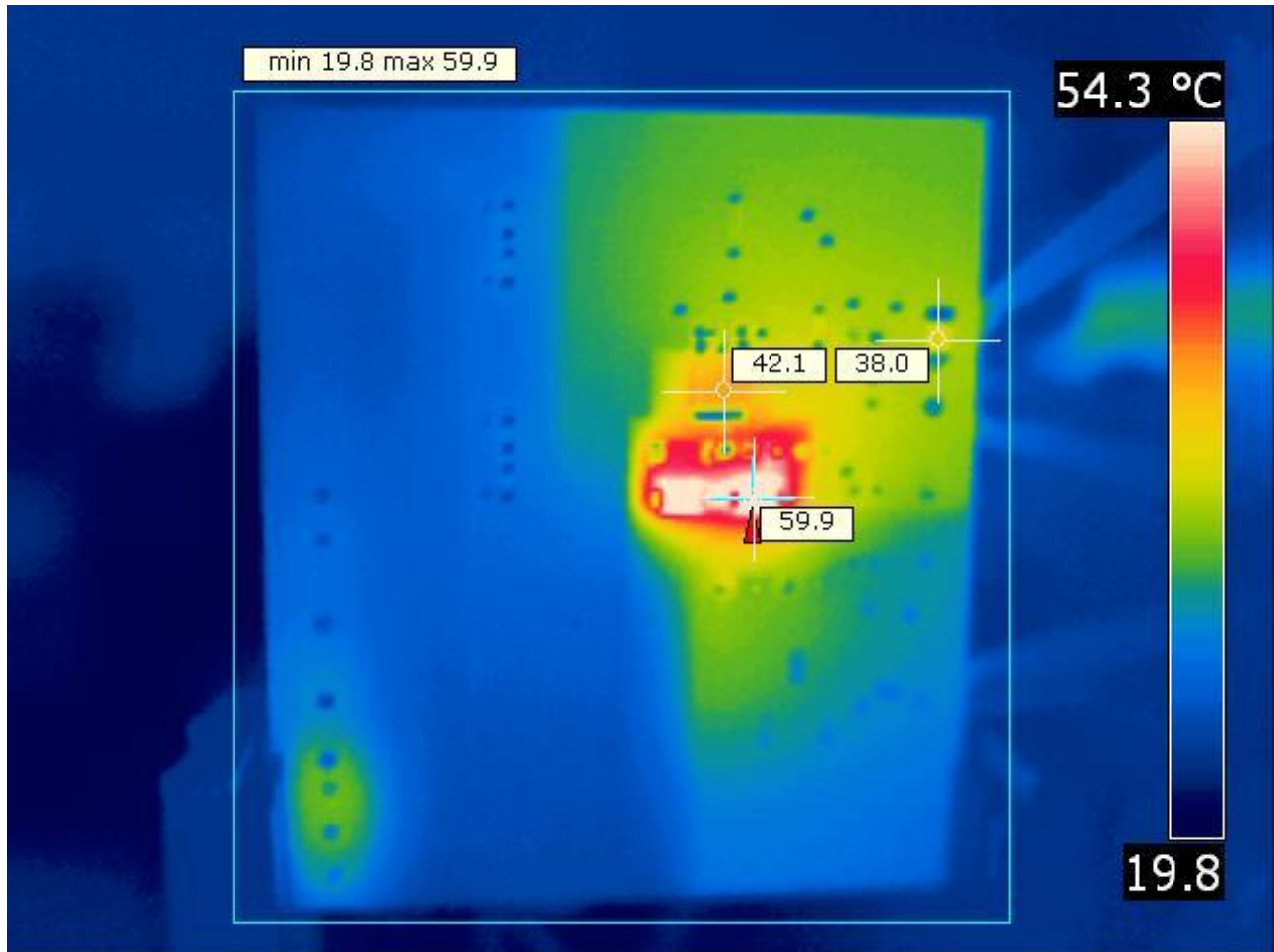
2 Thermal Images

The thermal images below show the top and bottom of the board with peak load at input voltage as 230Vac: 12V(primary side)/0.3A and 12V(secondary side)/0.3A. There is no forced air flow and the ambient temperature was 25 °C.

2.1 Top side

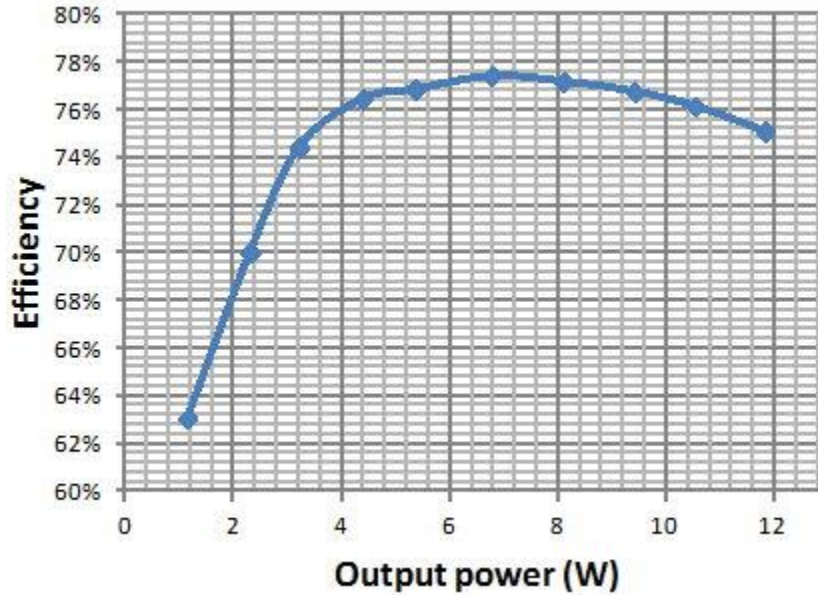


2.2 Bottom side



3 Converter Efficiency

Converter efficiency is shown in the tables and graph below. During this test, ICs U4 and U6 are removed.



Vin(ac)	Pin(W)	Vout_pri(V)	Iout_pri(A)	Vout_sec(V)	Iout_sec(A)	Pout(W)	Losses(W)	Efficiency (%)
230	15.757	13.26	0.302	12.03	0.651	11.83605	3.92095	75.12%
230	13.827	13.19	0.264	12.03	0.586	10.53174	3.29526	76.17%
230	12.267	13.26	0.224	12.03	0.536	9.41832	2.84868	76.78%
230	10.496	13.13	0.181	12.03	0.476	8.10281	2.39319	77.20%
230	8.757	13.12	0.14	12.03	0.411	6.78113	1.97587	77.44%
230	6.968	13.01	0.114	12.03	0.322	5.3568	1.6112	76.88%
230	5.73	12.81	0.112	12.03	0.245	4.38207	1.34793	76.48%
230	4.312	12.69	0.088	12.03	0.174	3.20994	1.10206	74.44%
230	3.288	12.82	0.065	12.04	0.122	2.30218	0.98582	70.02%
230	1.81	12.73	0.032	12.04	0.061	1.1418	0.6682	63.08%
230	0.336	11.35	0	12.04	0	0	0.336	0.00%

4 Startup

The voltages at startup are shown in the images below.

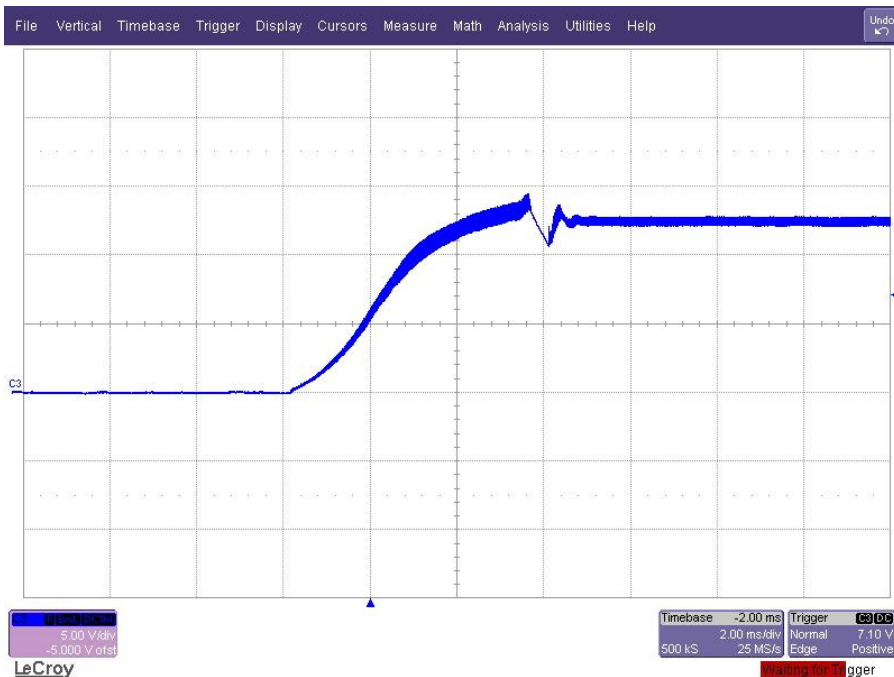
4.1 $12V_{out}$ at secondary side- Maximum load.

The input was 230Vac and the outputs, $12V_{primary}$ and $12V_{secondary}$, were loaded with 0.3A and 0.3A, respectively.



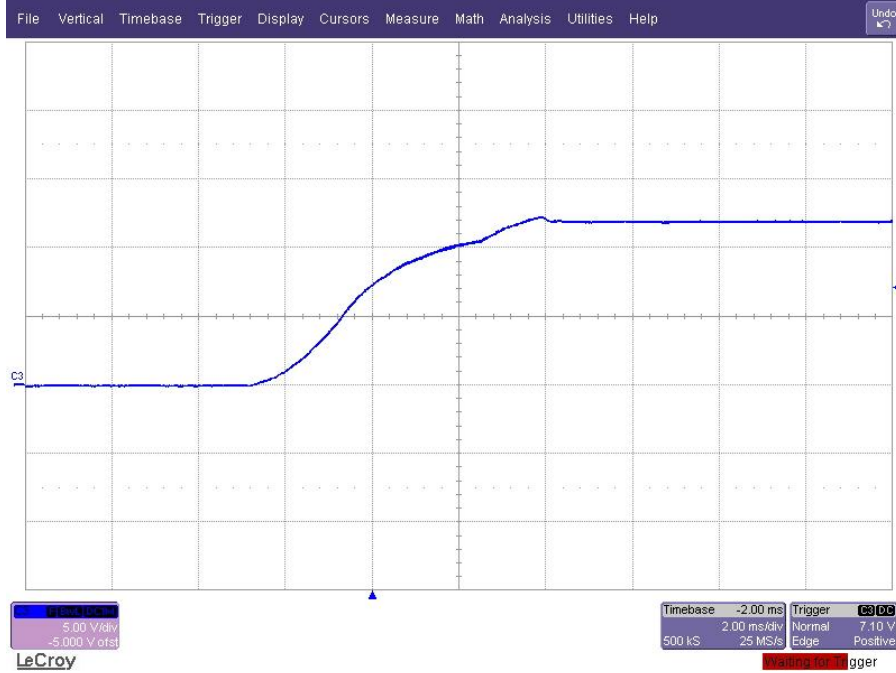
4.2 $12V_{out}$ at primary side - Maximum load.

The input was 230Vac and the outputs, $12V_{primary}$ and $12V_{secondary}$, were loaded with 0.3A and 0.3A, respectively.



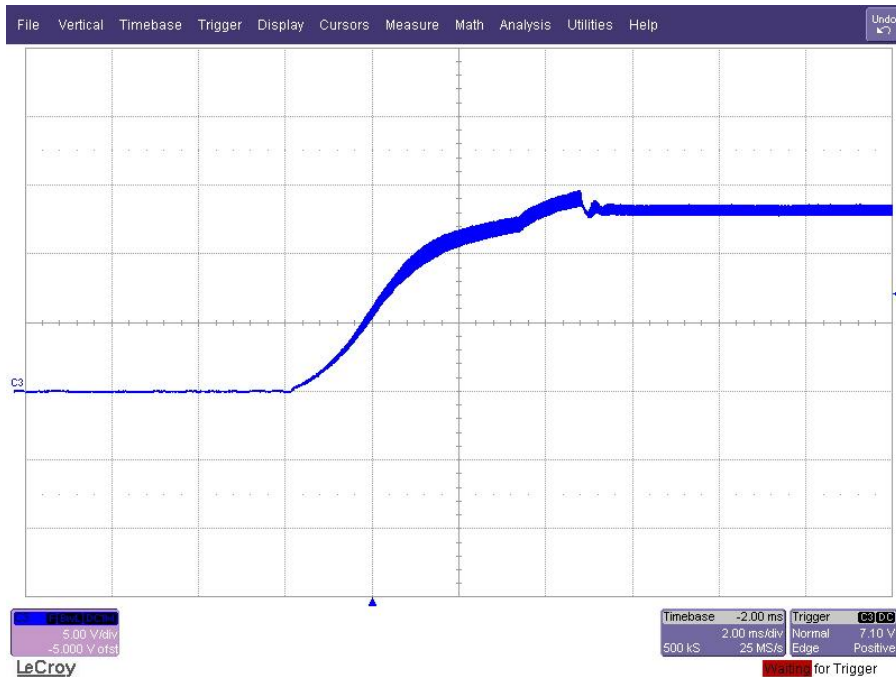
4.3 12V_{out} at secondary side- Peak load.

The input was 230Vac and the outputs, 12V_{primary} and 12V_{secondary}, were loaded with 0.315A and 0.65A, respectively.



4.4 12V_{out} at primary side - Peak load.

The input was 230Vac and the outputs, 12V_{primary} and 12V_{secondary}, were loaded with 0.315A and 0.65A, respectively.

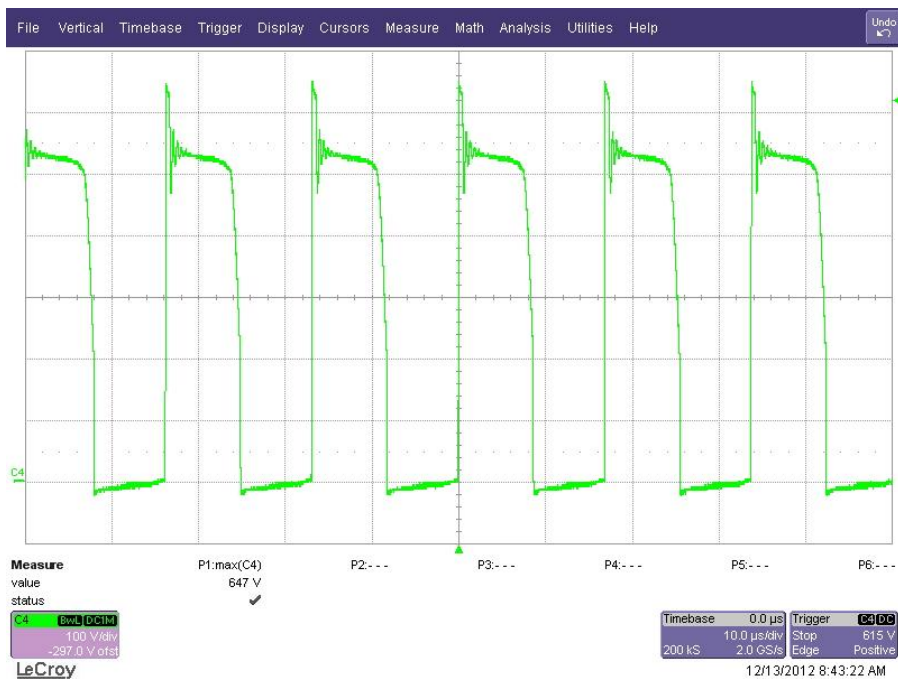


5 Switching waveforms

5.1 Q1 @ 230Vac, 12V_{primary}/0.3A, 12V_{secondary}/0.3A



5.2 Q1 @ 230Vac, 12V_{primary}/0.3A, 12V_{secondary}/0.65A



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