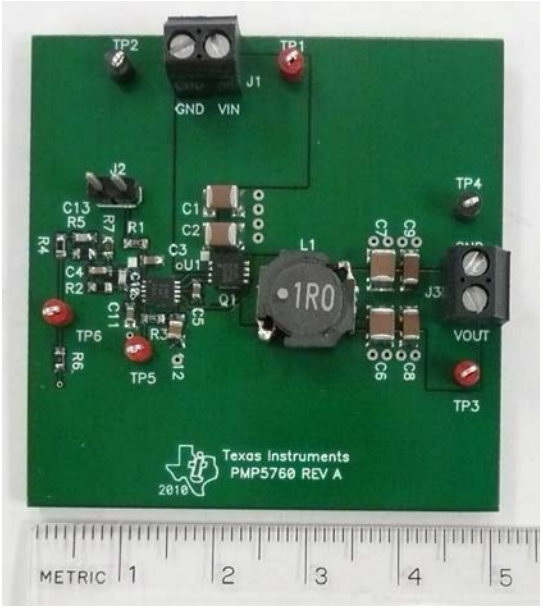
PMP5760 Rev A Test Results

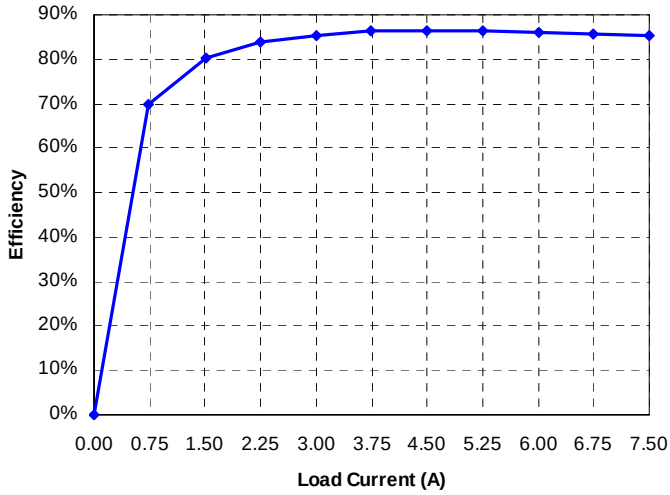
1 Photo

The photograph below shows the PMP5760 Rev A demo board.



2 Efficiency

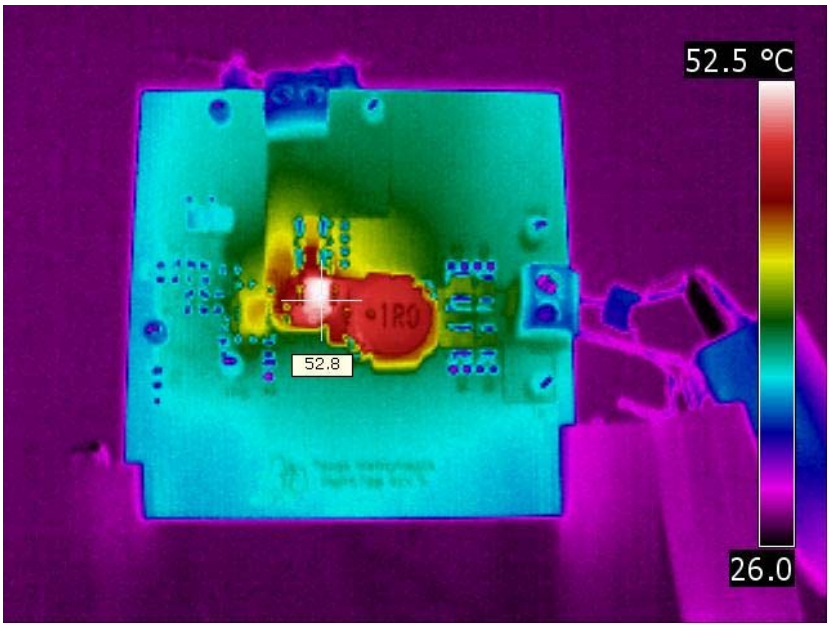
The efficiency is shown in the table and graph below.



Vout	Iout	Pout	Vin	Iin	Pin	Losses	Efficiency
0.903	0.000	0.00	12.00	0.017	0.20	0.20	0.0%
0.903	0.743	0.67	11.99	0.080	0.96	0.29	69.9%
0.903	1.504	1.36	11.98	0.141	1.69	0.33	80.4%
0.903	2.250	2.03	11.97	0.202	2.42	0.39	84.0%
0.903	2.999	2.71	11.96	0.265	3.17	0.46	85.4%
0.903	3.747	3.38	11.95	0.328	3.92	0.54	86.3%
0.903	4.506	4.07	12.04	0.391	4.71	0.64	86.4%
0.903	5.254	4.74	12.03	0.456	5.49	0.74	86.5%
0.903	6.001	5.42	12.02	0.523	6.29	0.87	86.2%
0.903	6.74	6.09	12.01	0.591	7.10	1.01	85.7%
0.903	7.50	6.77	12.00	0.661	7.93	1.16	85.4%

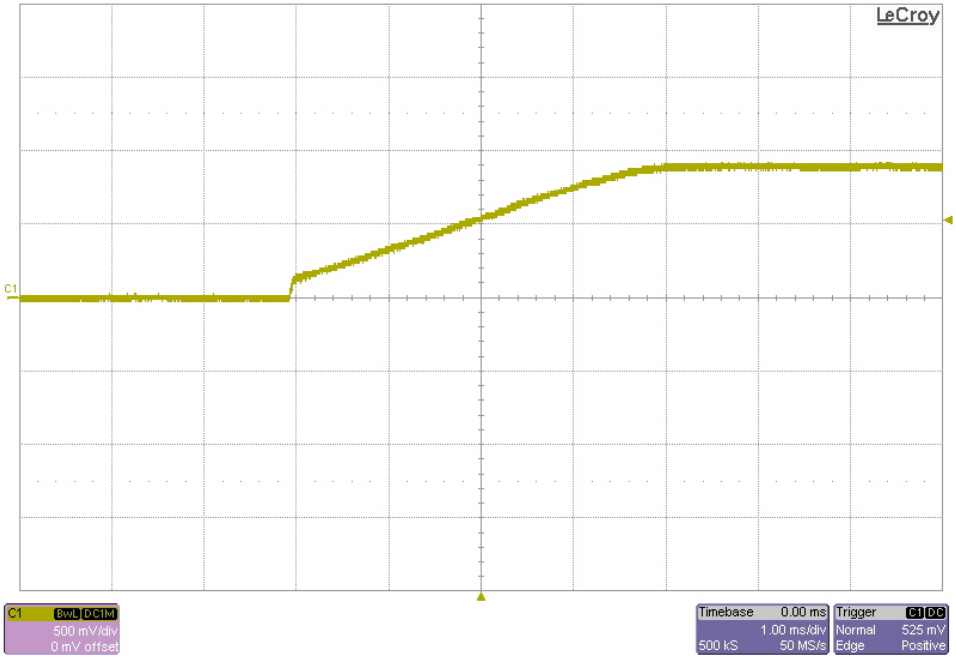
3 Thermal Image

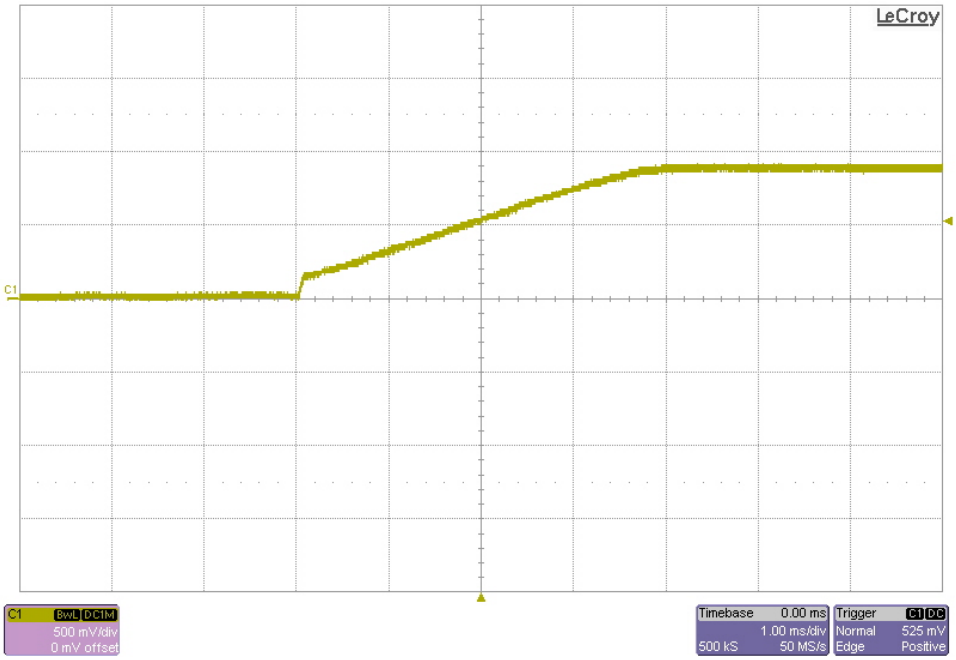
The thermal image below shows a top view of the board. The ambient temperature was 26ºC with no forced air flow. The output was loaded with 7.4A, and the input was 12V.



4 Startup

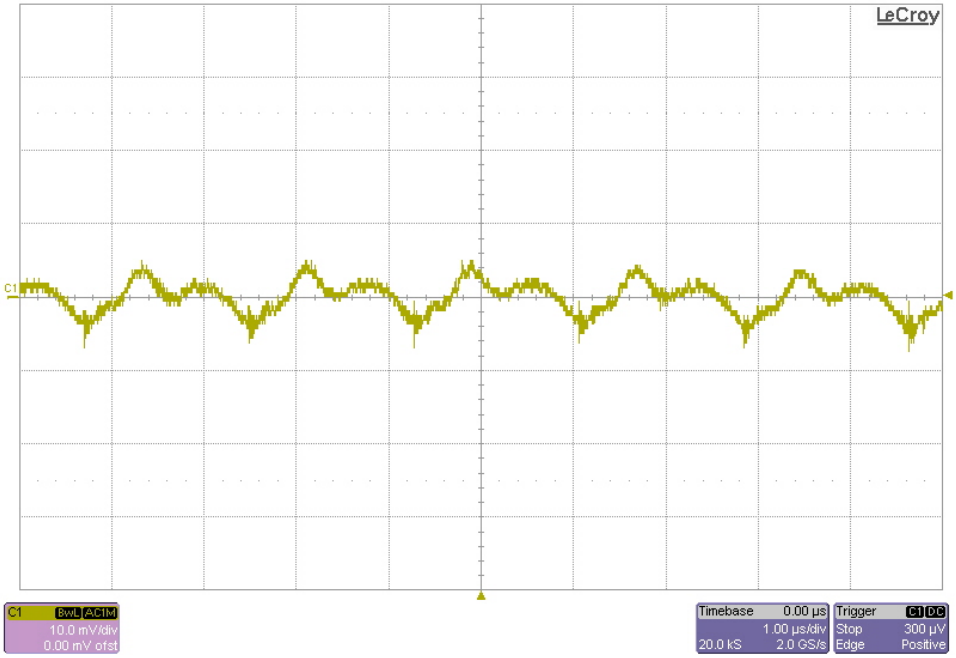
The output voltage at startup is shown in the images below. The input was 12V. For the top image, the output was unloaded. For the bottom image, the output was loaded with 7.4A.





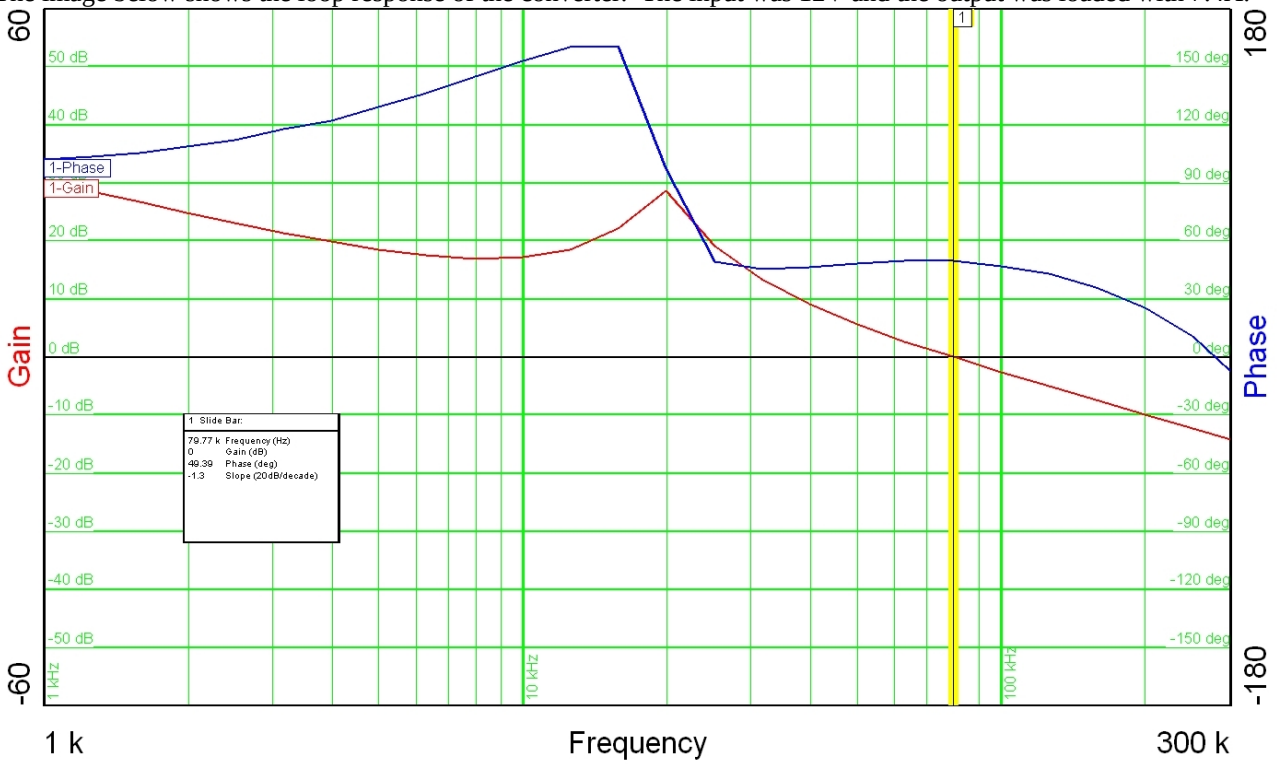
5 Output Ripple Voltage

The output ripple voltage during full load operation (7.4A load) is shown in the plot below. The input voltage was 12V.



6 Loop Response

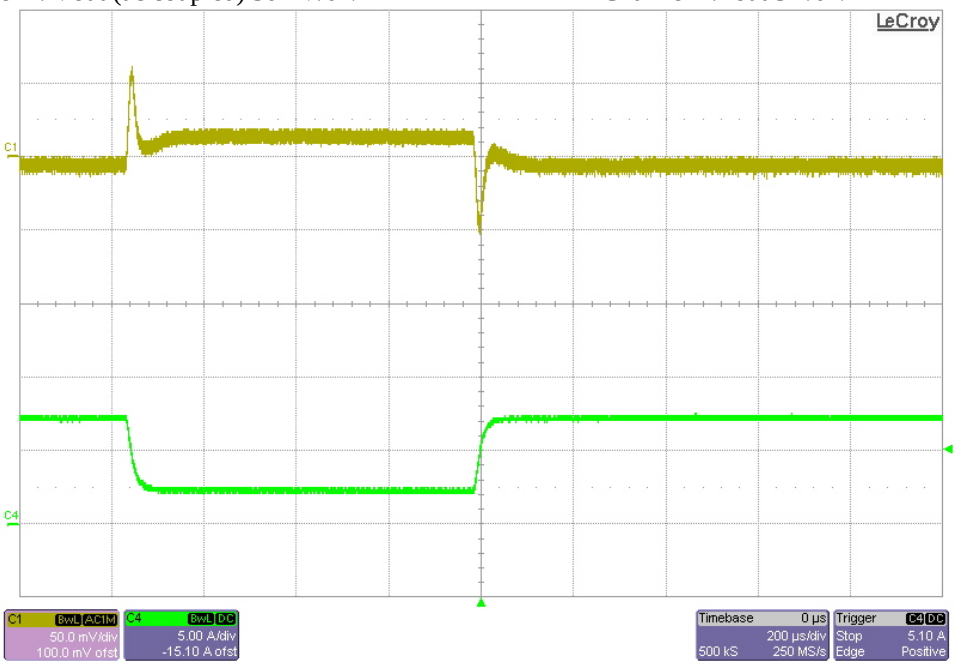
The image below shows the loop response of the converter. The input was 12V and the output was loaded with 7.4A.



7 Load Transients

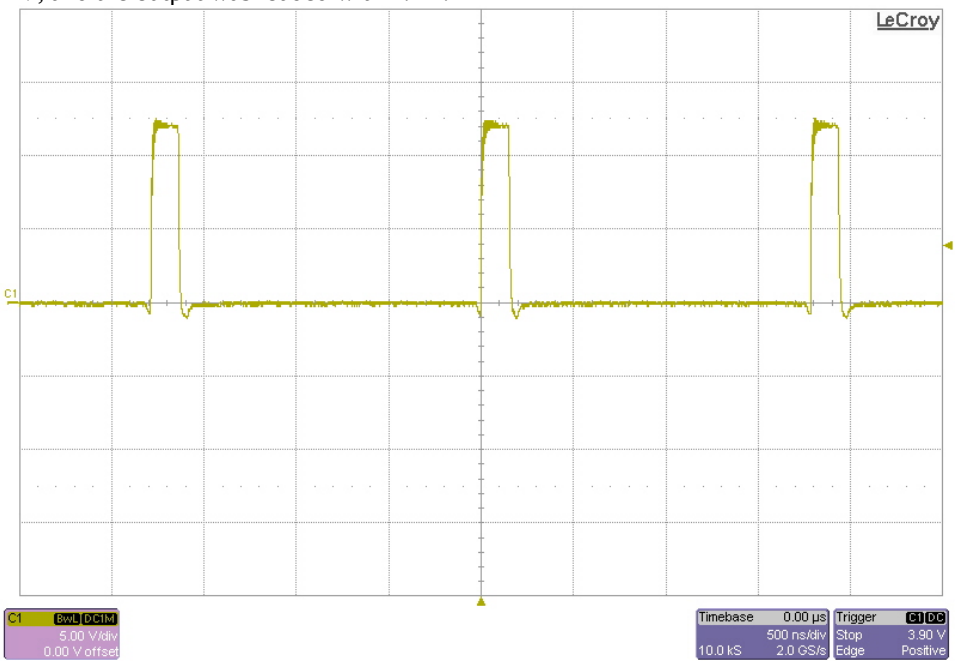
The image below shows the response to a 2.4A to 7.4A load transient. The input voltage was set to 12V.

Channel 1: Vout (ac coupled) 50mV/div Channel 4: Iout 5A/div



8 Switching Waveforms

The image below shows the switching voltage waveform on the converters. Channel 1 shows the switch node voltage. The input was 12V, and the output was loaded with 7.4A.



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