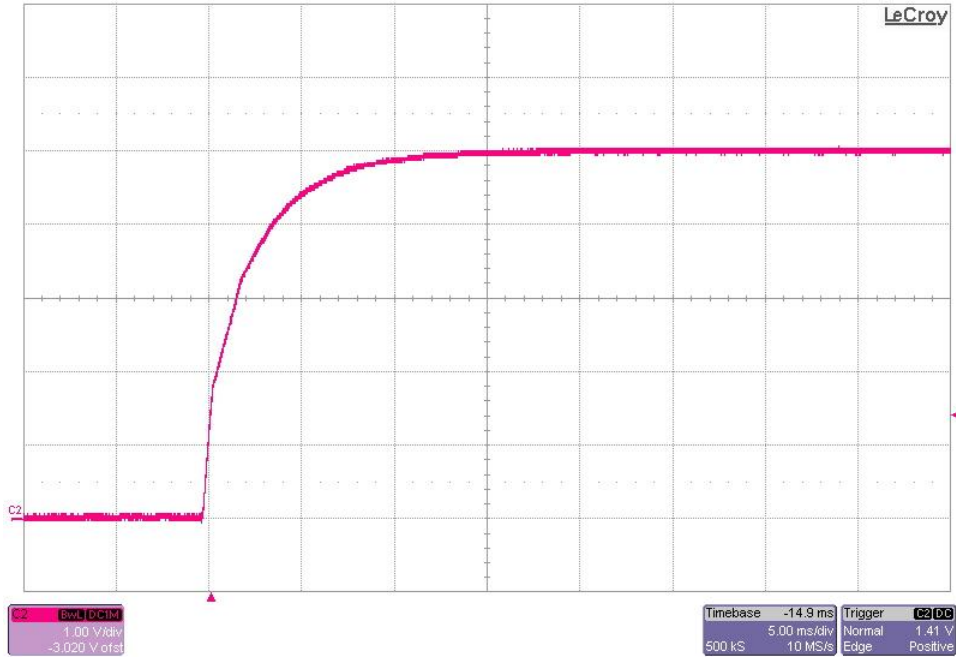
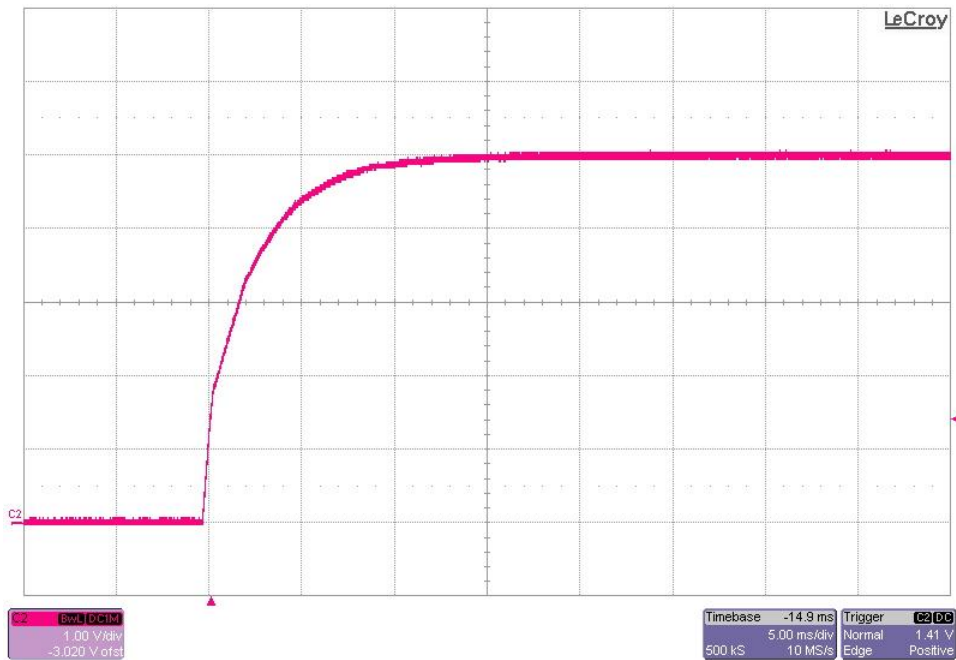


1 Startup

The photo below shows the 5V output voltage startup waveforms after the application of 4Vdc in. The output was loaded to 50mA. (1V/DIV, 5mS/DIV)

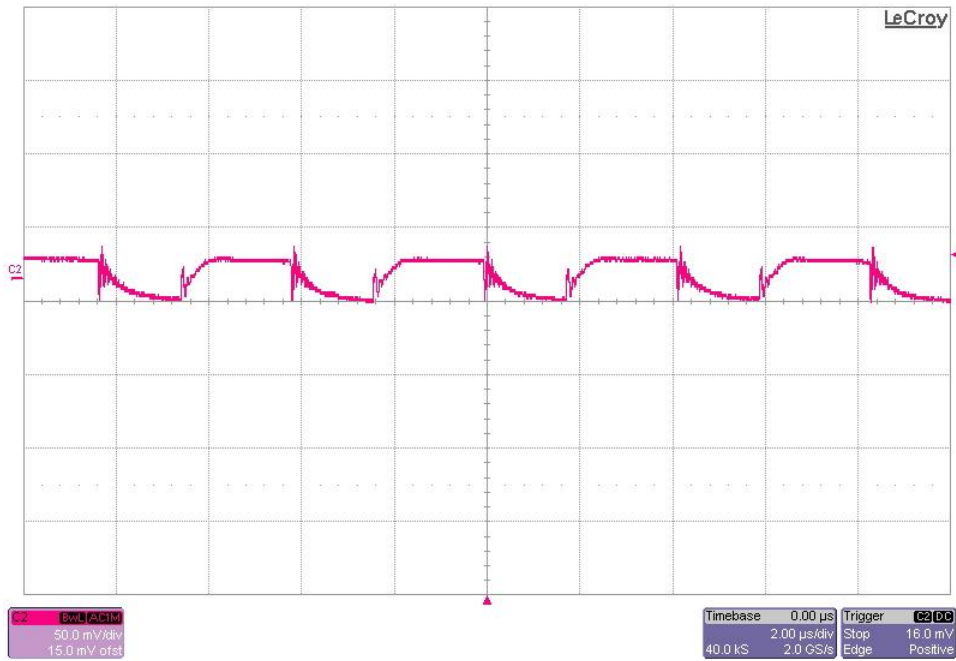


The photo below shows the 5V output voltage startup waveforms after the application of 4Vdc in. The output was loaded to 1A. (1V/DIV, 5mS/DIV)

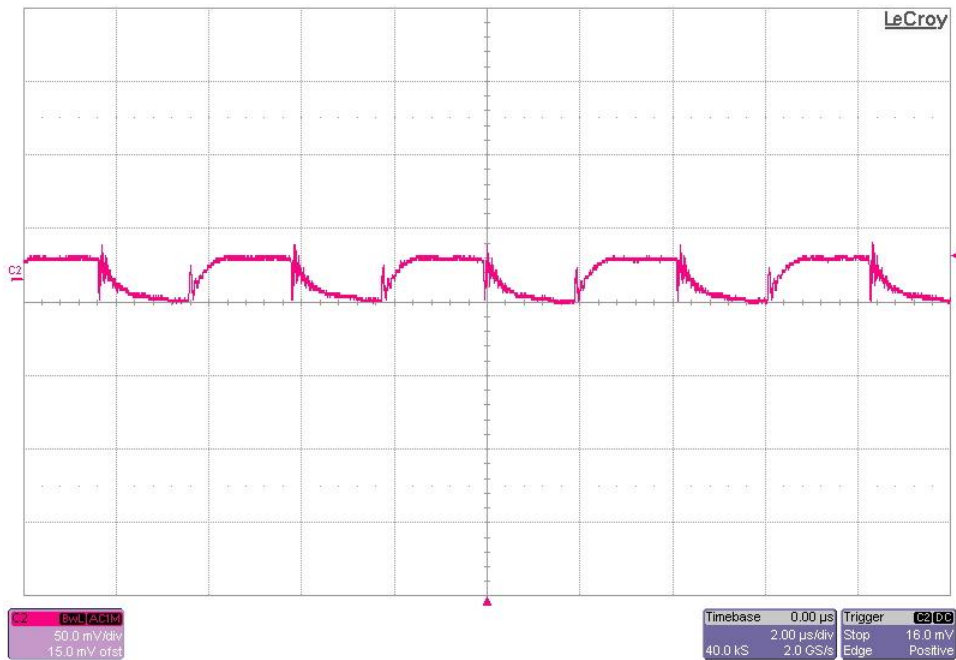


2 Output Ripple Voltage

The 5V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 4Vdc. (50mV/DIV, 2uS/DIV)

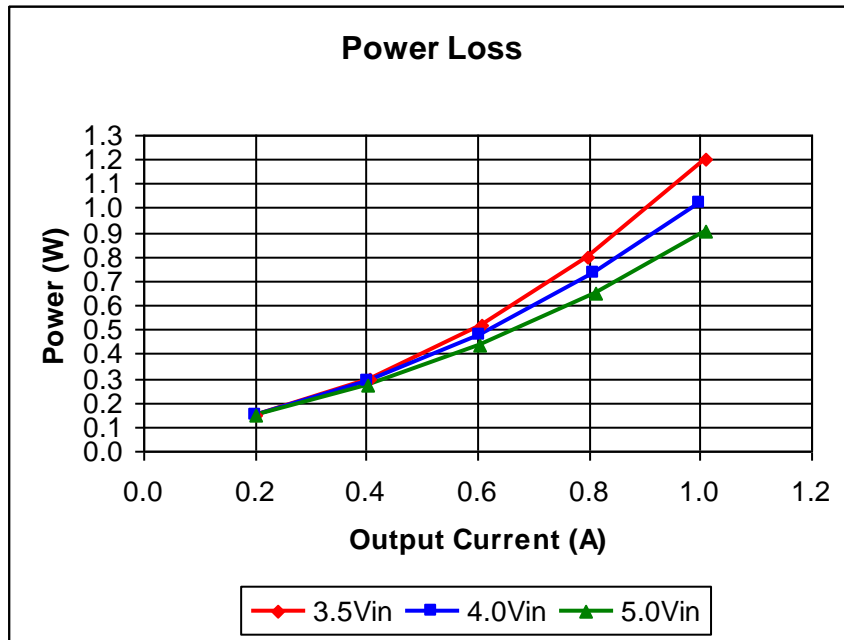
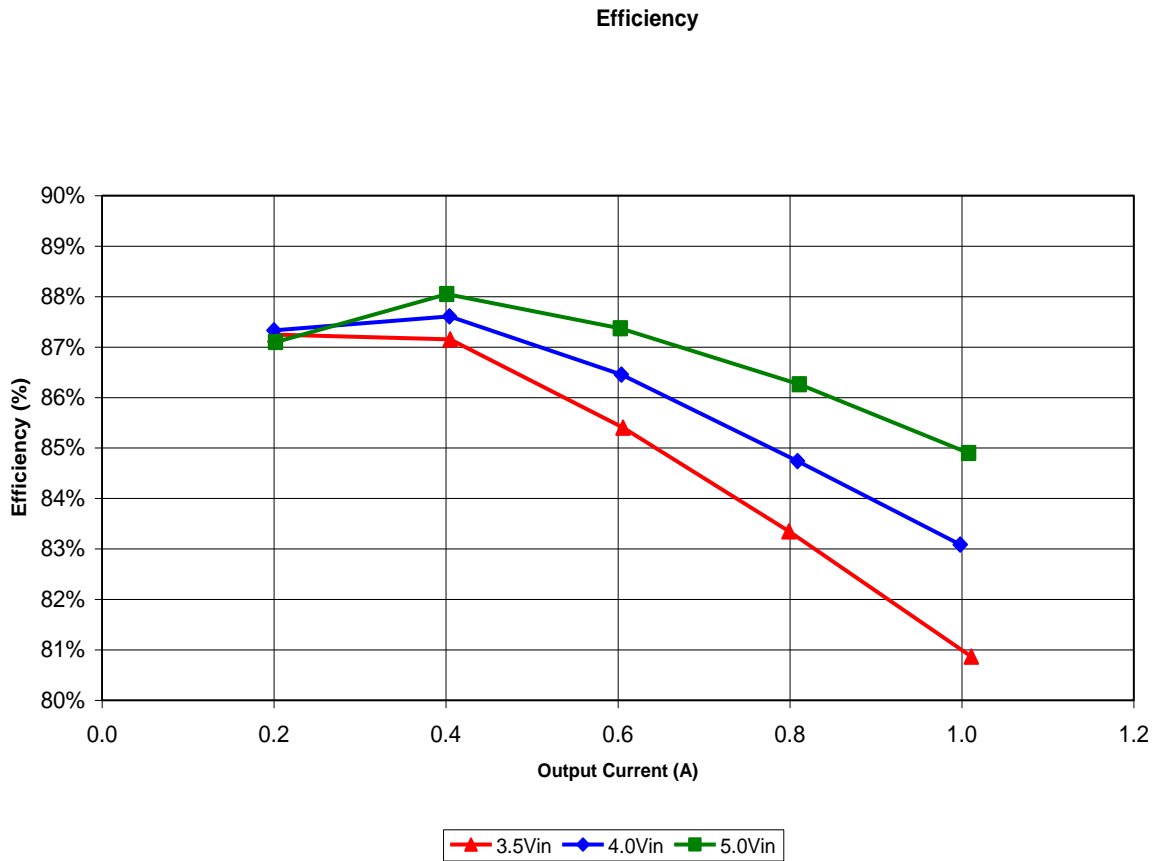


The 5V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 3.5Vdc. (50mV/DIV, 2uS/DIV)



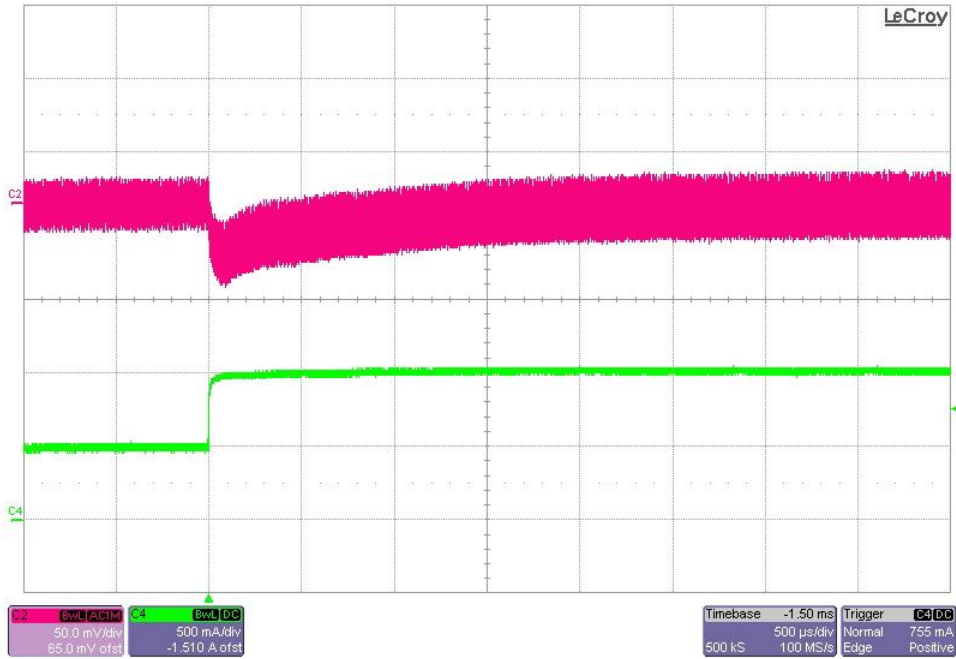
3 Efficiency

The converter efficiency is shown in the figure below. $V_{out} = 5V$

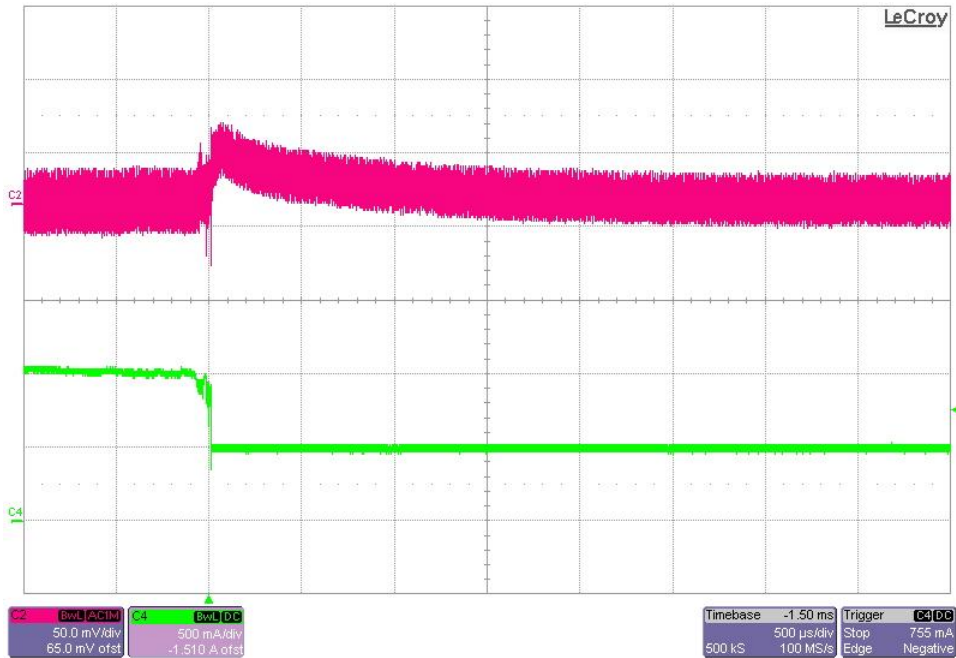


4 Load Transients

The photo below shows the 5V output voltage (top, ac coupled) when the load current is stepped between 0.5A and 1A. $V_{in} = 4.0V_{dc}$ (50mV/DIV, 500mA/DIV, 500uS/DIV)



The photo below shows the 5V output voltage (top, ac coupled) when the load current is stepped between 1A and 0.5A. $V_{in} = 4.0V_{dc}$ (50mV/DIV, 500mA/DIV, 500uS/DIV)

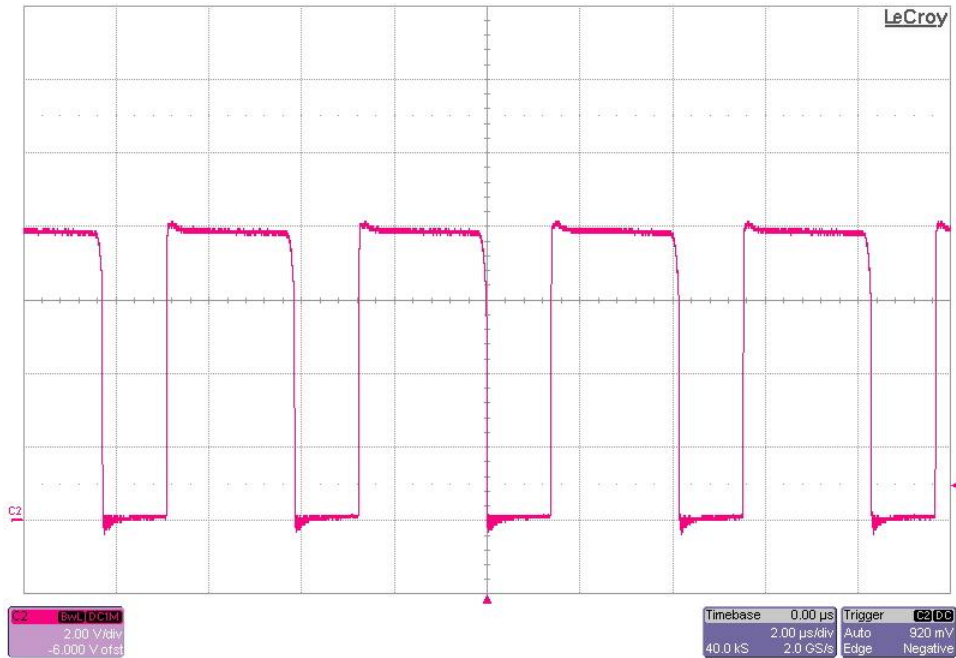


5 Waveforms

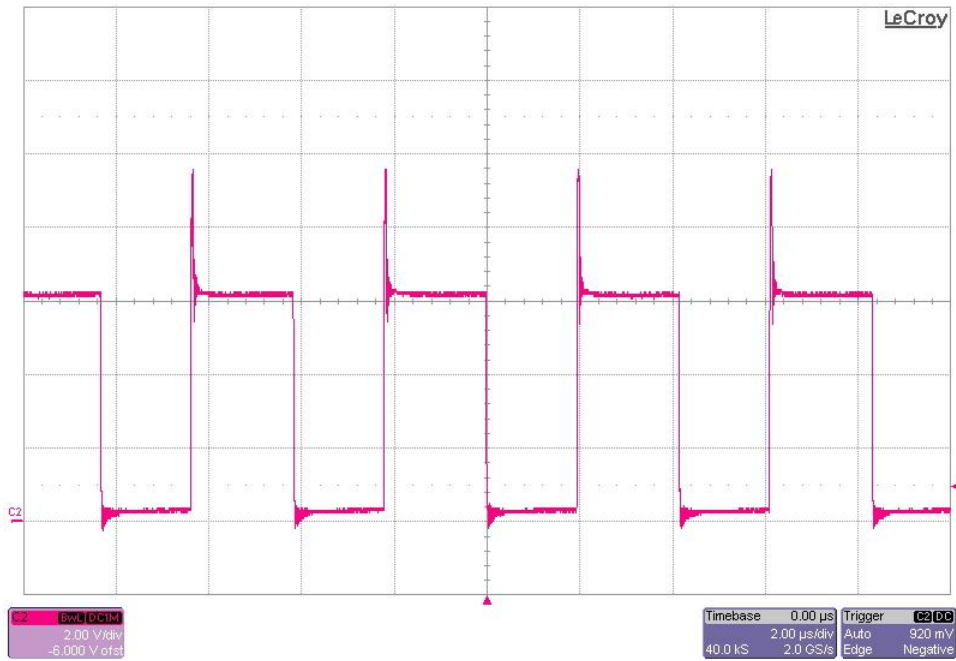
The photo below is the N-ch FET drain waveform. The input voltage is 5.25V and the output is loaded to 1A. (2V/DIV, 2uS/DIV)



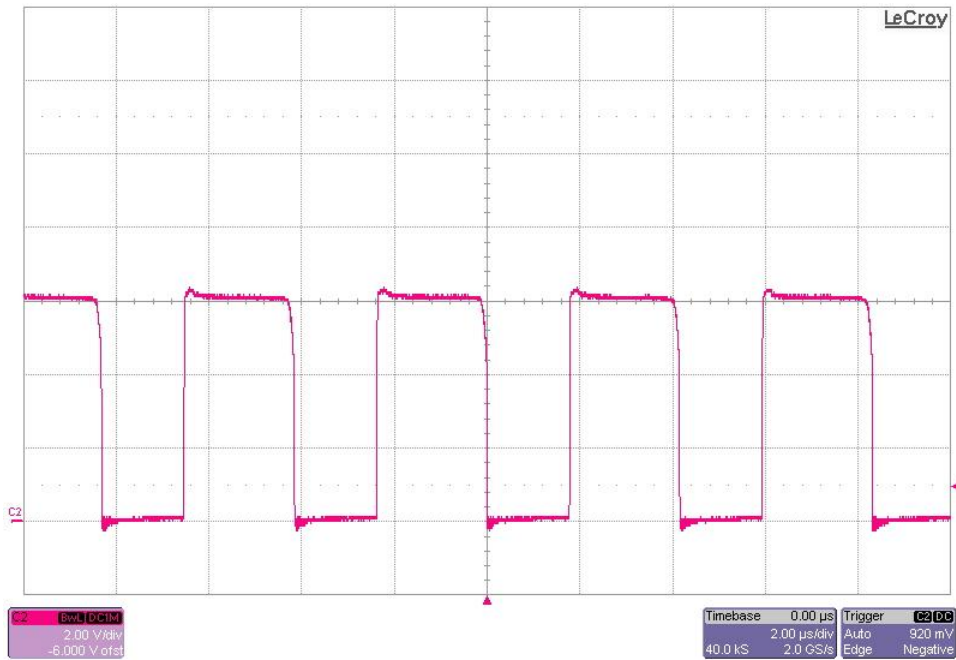
The photo below is the N-ch FET drain waveform. The input voltage is 5.25V and the output is loaded to 140mA. The converter has started discontinuous operation. (2V/DIV, 2uS/DIV)



The photo below is the N-ch FET drain waveform. The input voltage is 3.5V and the output is loaded to 1A. (2V/DIV, 2uS/DIV)



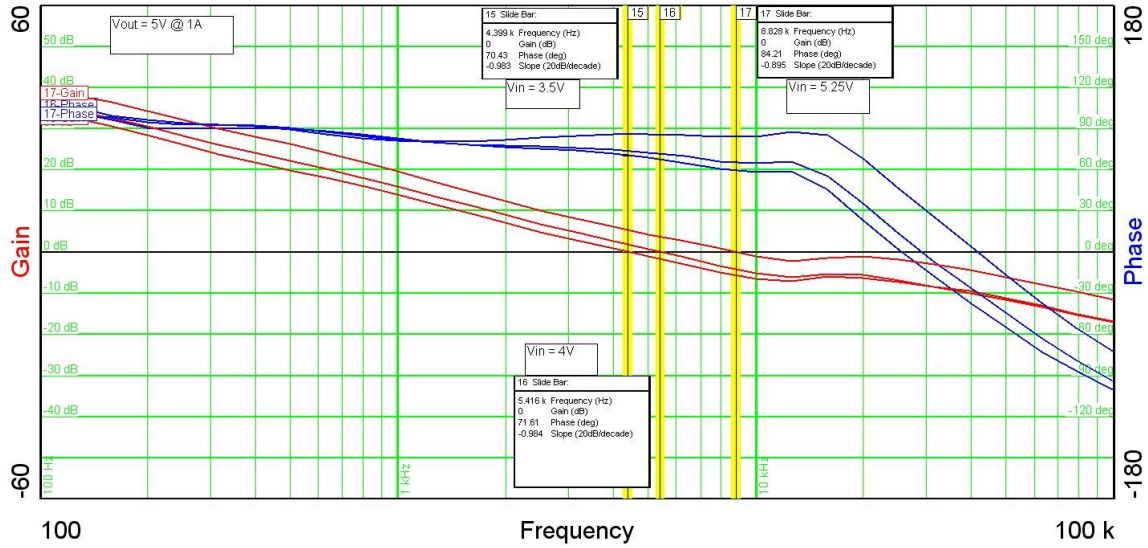
The photo below is the N-ch FET drain waveform. The input voltage is 3.5V and the output is loaded to 100mA. The converter has started discontinuous operation. (2V/DIV, 2uS/DIV)



6 Loop Gain

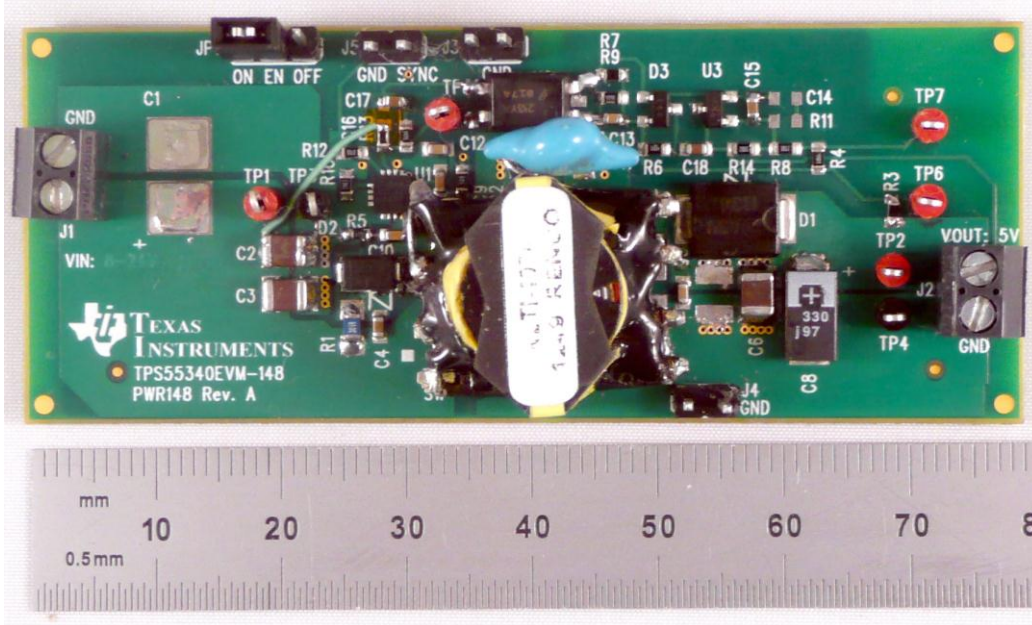
The plot below shows the loop gain with the output loaded at 1A.

Loop Gain (Vin = 3.5V)	BW: 4.40KHz	PM: 70 degrees
Loop Gain (Vin = 4.0V)	BW: 5.42KHz	PM: 72 degrees
Loop Gain (Vin = 5.25V)	BW: 8.83KHz	PM: 84 degrees



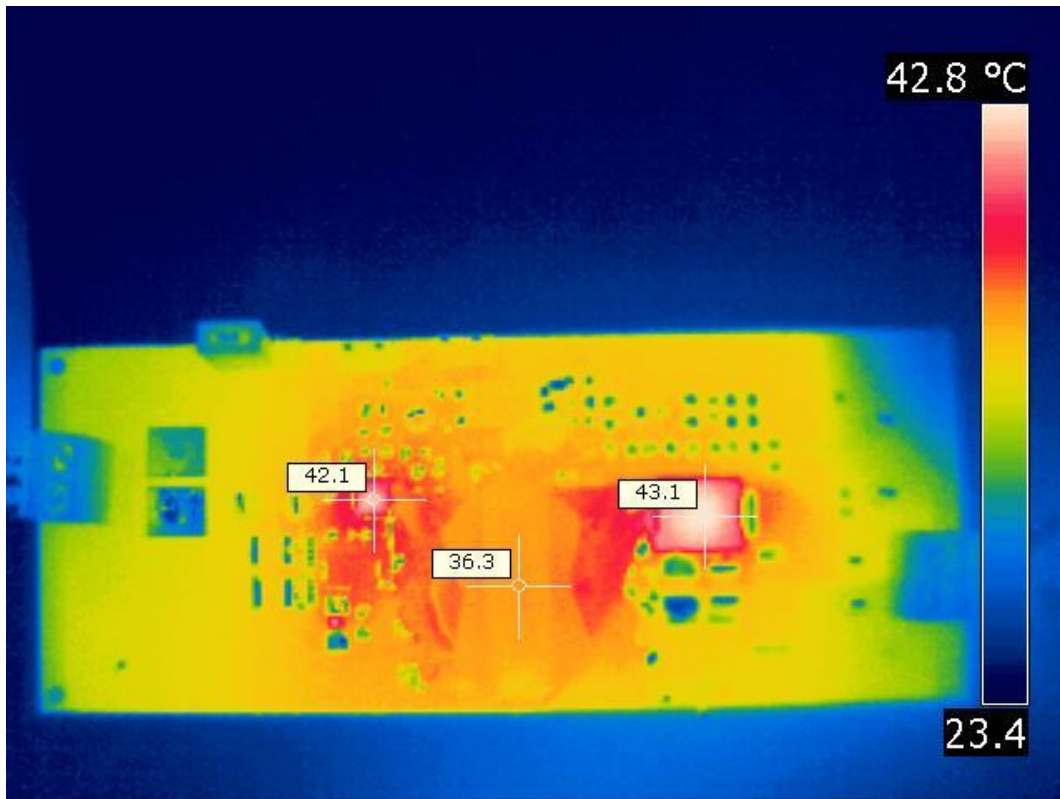
7 Photo

The photo below shows the PMP8871 REVB assembly built on the TPS55340 EVM.



8 Thermal Image

The thermal image below shows sustained operation while at a 4V input and 1A output, with no airflow.



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