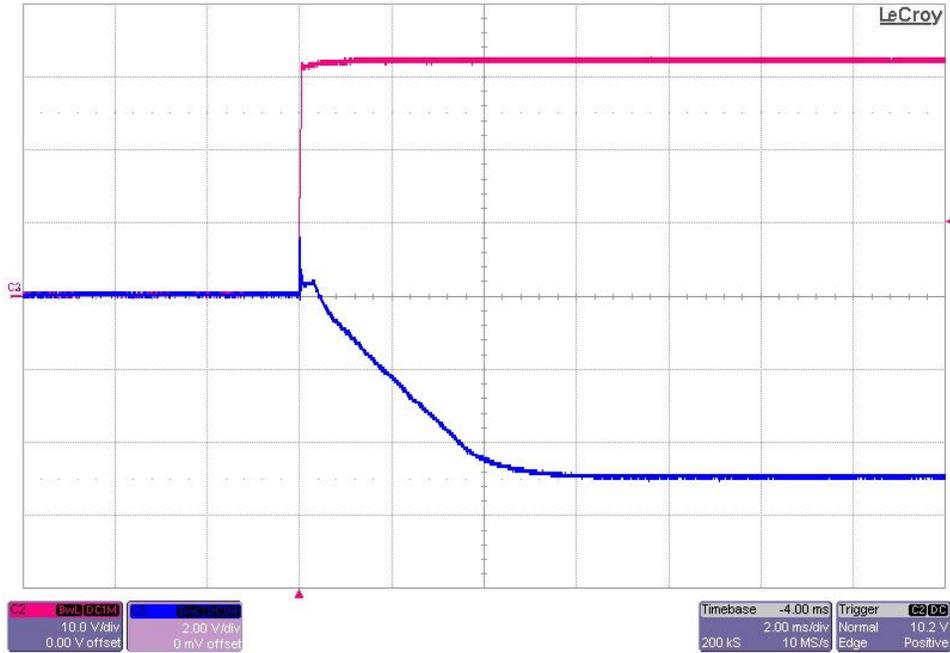
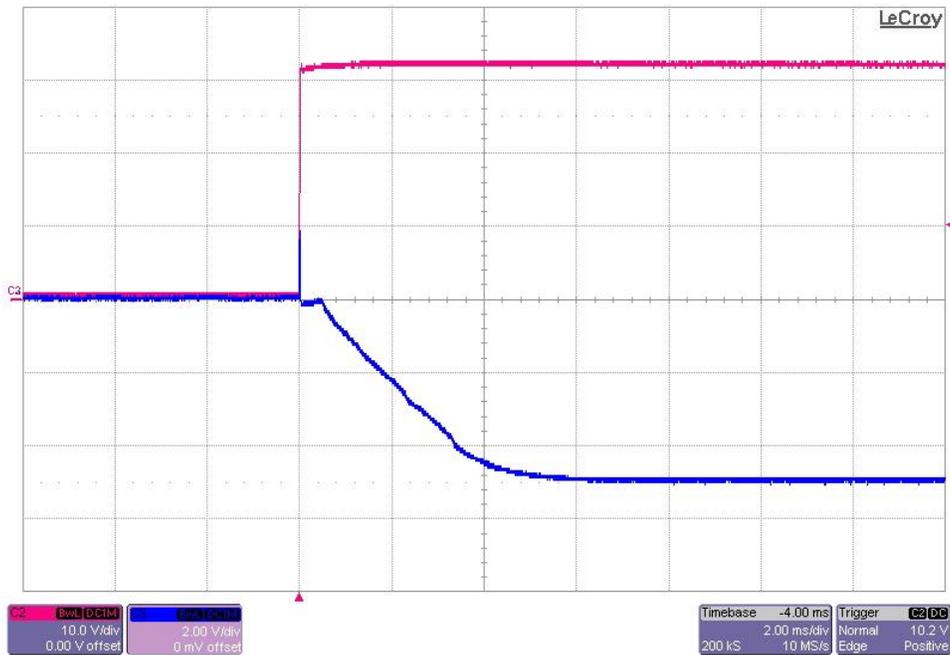


1 Startup

The photo below shows the -5V output voltage startup waveforms after the application of 32Vdc in. The output was loaded with a 0A load. (Vin is 10V/DIV, Vout is 2V, 2mS/DIV)

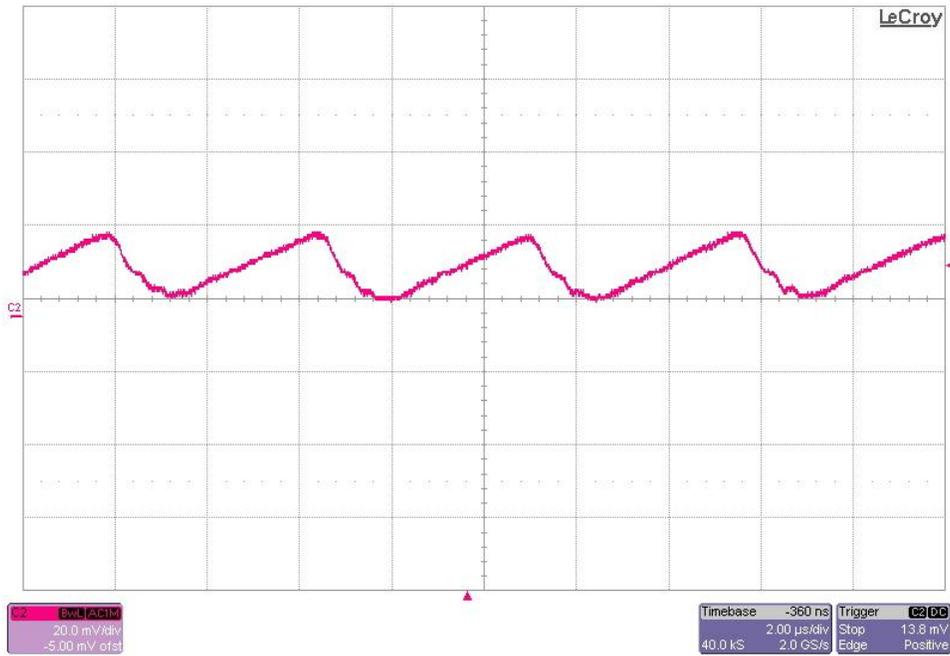


The photo below shows the -5V output voltage startup waveforms after the application of 32Vdc in. The output was loaded with a 100mA load. (Vin is 10V/DIV, Vout is 2V, 2mS/DIV)

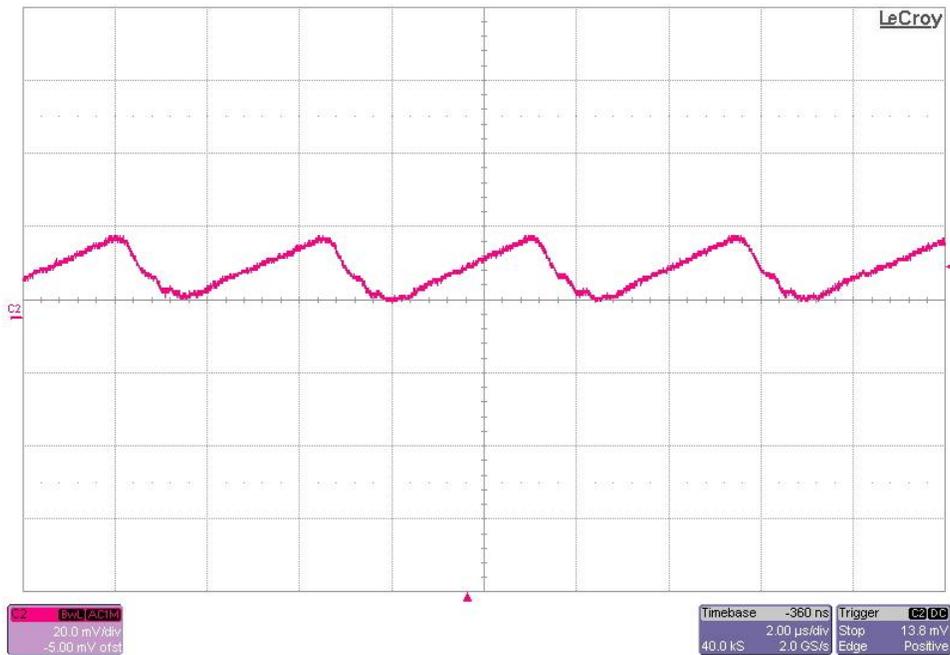


2 Output Ripple Voltage

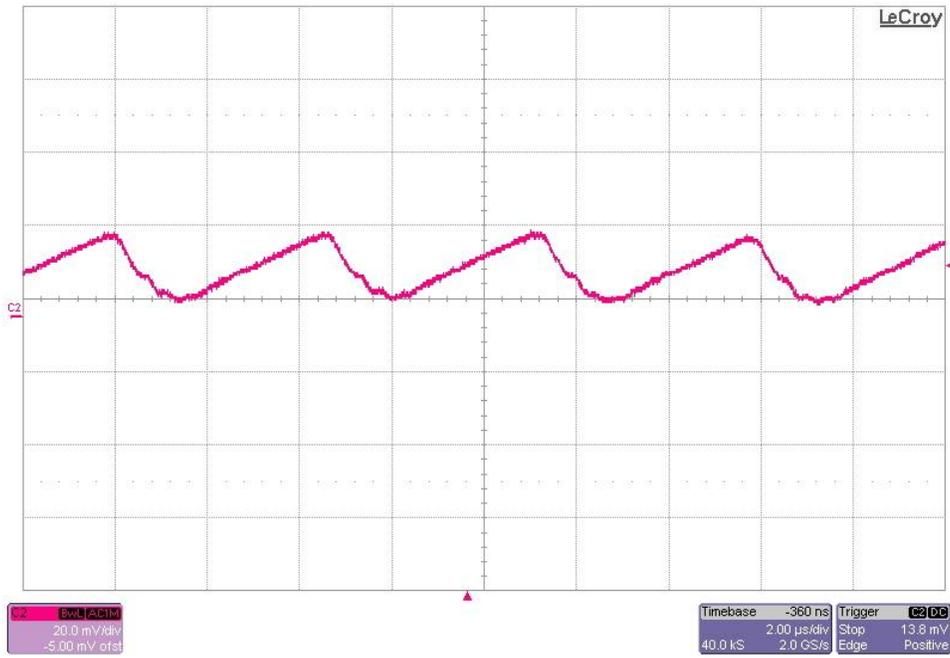
The -5V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 100mA and the input voltage set to 34Vdc. (20mV/DIV, 2uS/DIV)



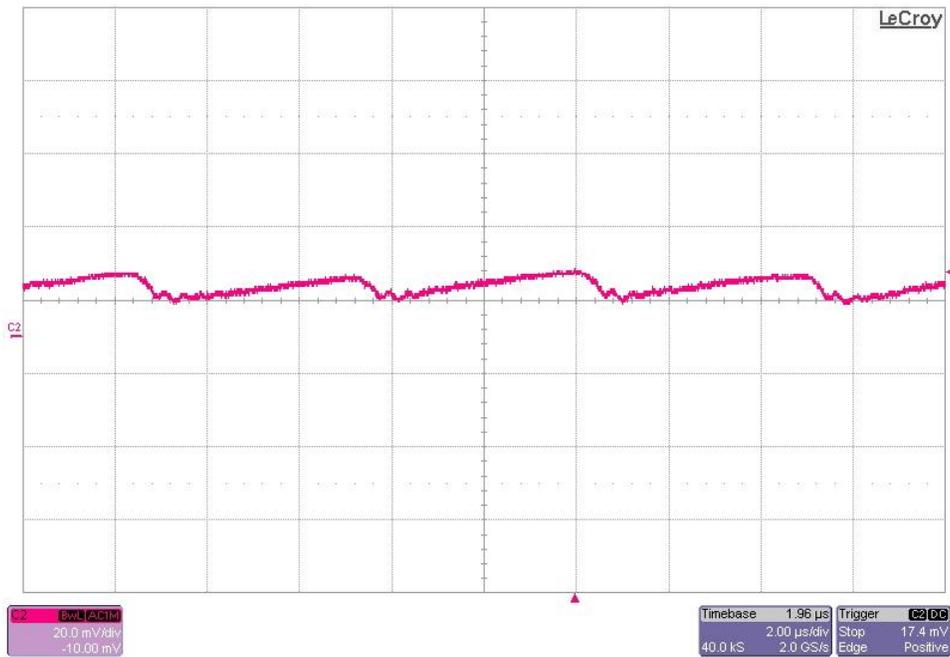
The -5V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 100mA and the input voltage set to 32Vdc. (20mV/DIV, 2uS/DIV)



The -5V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 100mA and the input voltage set to 28Vdc. (20mV/DIV, 2uS/DIV)

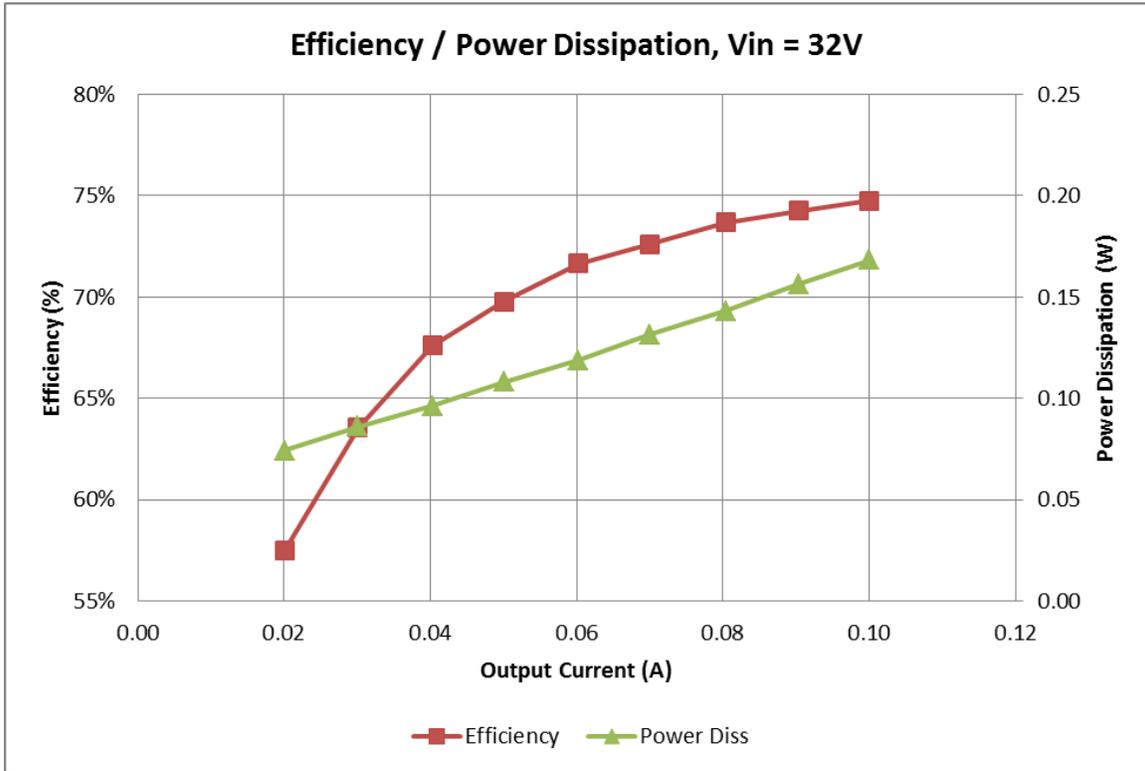


The -5V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 25mA and the input voltage set to 28Vdc. (20mV/DIV, 2uS/DIV)



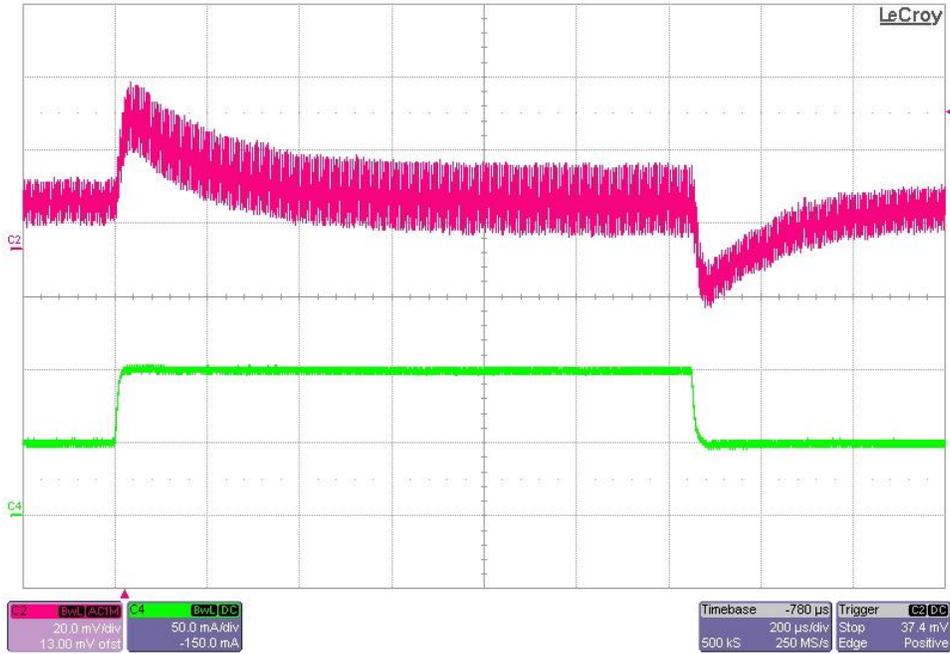
3 Efficiency

The converter efficiency is shown in the figure below.

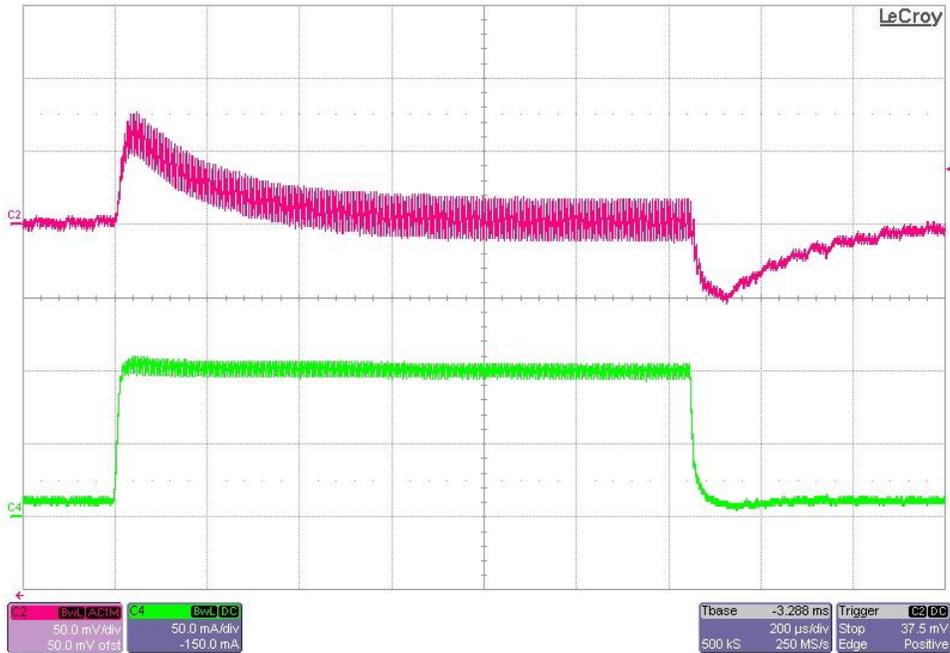


4 Load Transients

The photo below shows the -5V output voltage (AC coupled) when the load current is stepped from 50mA to 100mA. $V_{in} = 32V_{dc}$ (20mV/DIV, 50mA/DIV, 200uS/DIV)

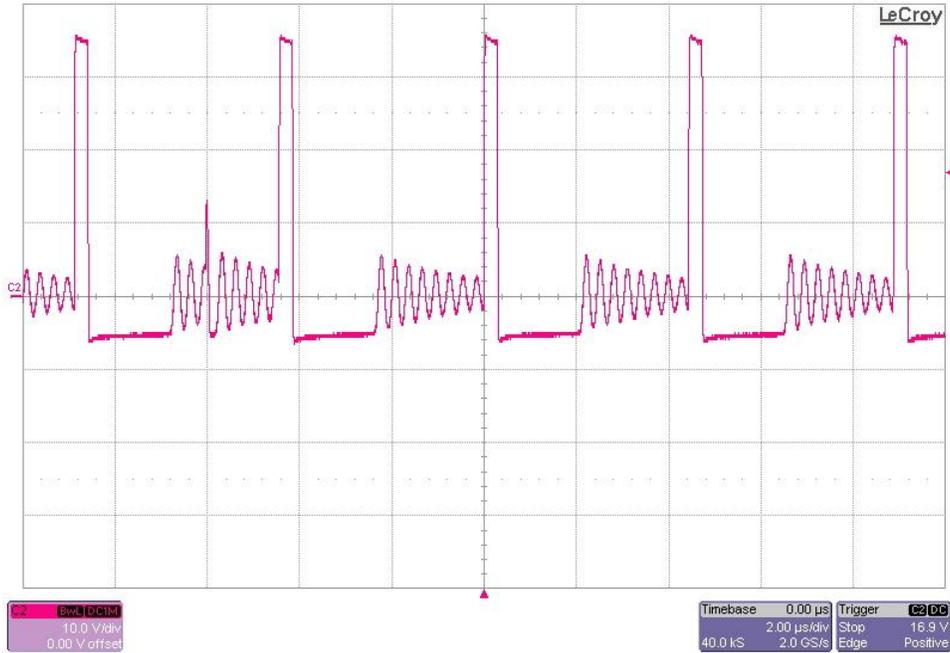


The photo below shows the -5V output voltage (AC coupled) when the load current is stepped from 10mA to 100mA. $V_{in} = 32V_{dc}$ (50mV/DIV, 50mA/DIV, 200uS/DIV)

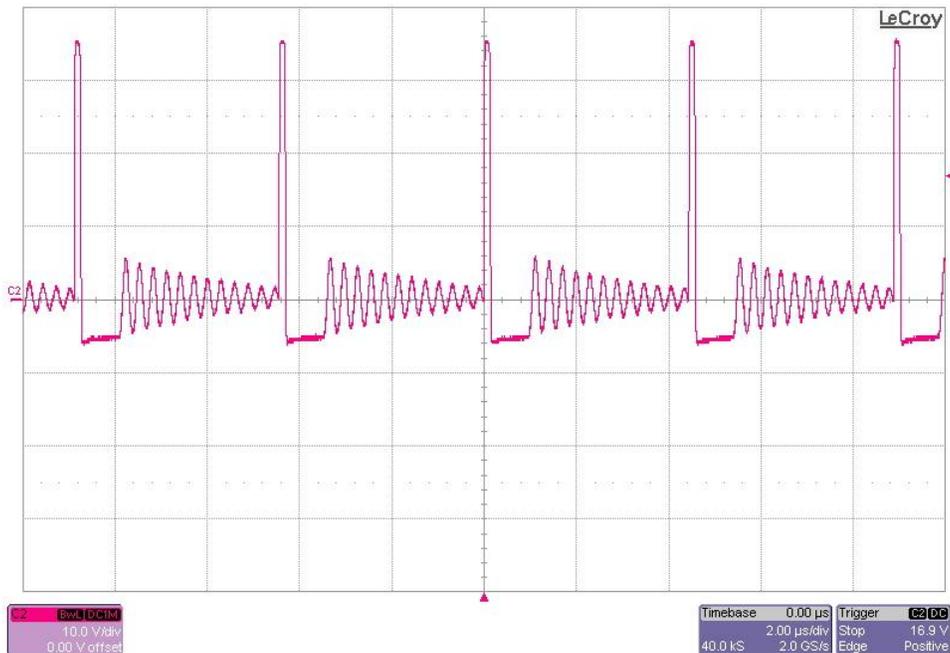


5 Switching Waveforms

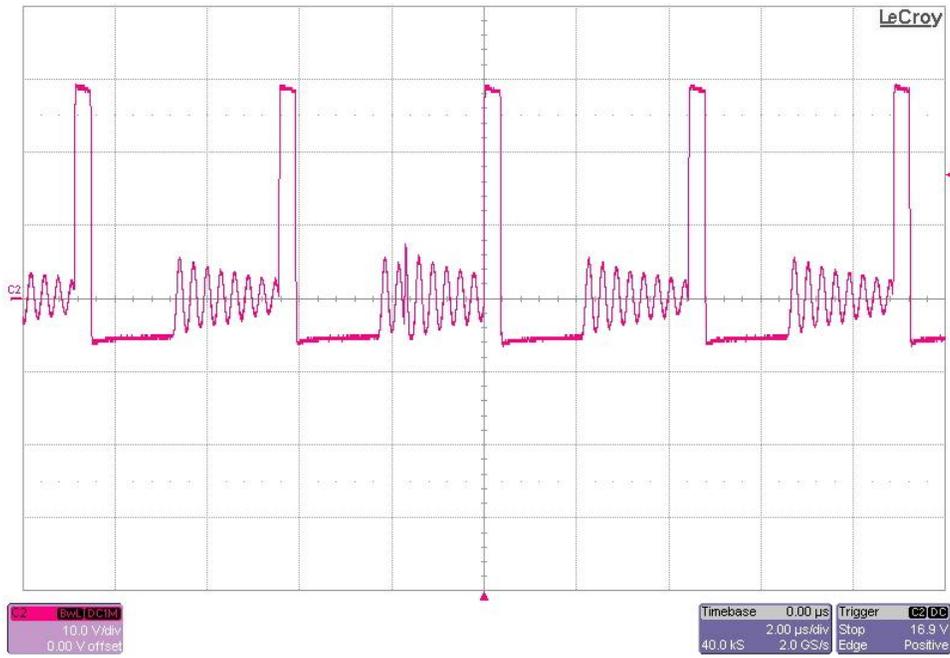
The photo below is the switch-node waveform (TP2). The input voltage is 34V and the output is loaded to 100mA. (10V/DIV, 2uS/DIV)



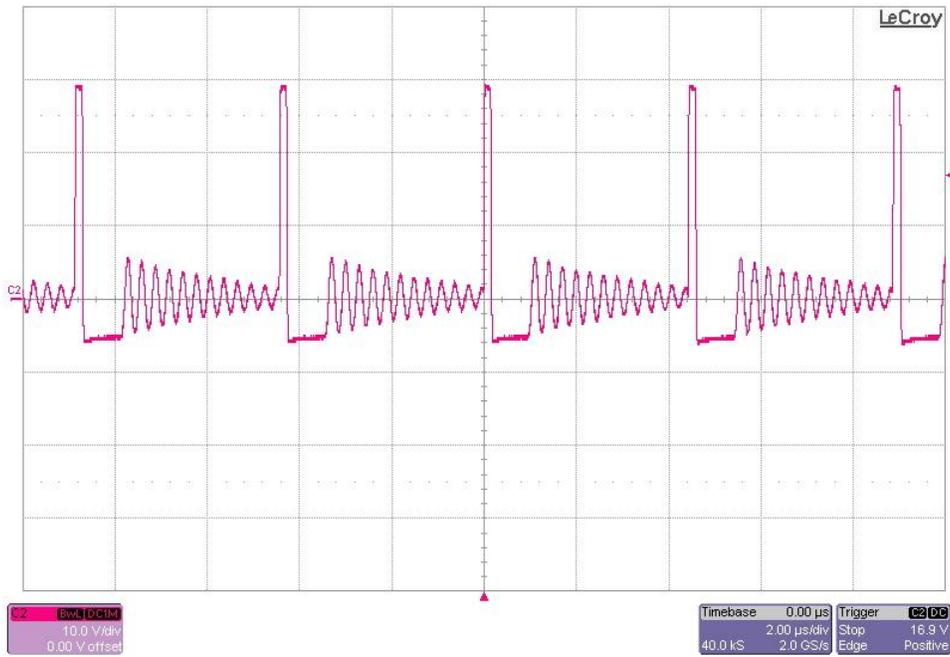
The photo below is the switch-node waveform (TP2). The input voltage is 34V and the output is loaded to 20mA. (10V/DIV, 2uS/DIV)



The photo below is the switch-node waveform (TP2). The input voltage is 28V and the output is loaded to 100mA. (10V/DIV, 2uS/DIV)



The photo below is the switch-node waveform (TP2). The input voltage is 28V and the output is loaded to 20mA. (10V/DIV, 2uS/DIV)



6 Loop Gain

The plot below shows the loop gain with the input voltage set to 32V and the output loaded to 50mA and 100mA.

Loop Gain (Iout = 100mA)

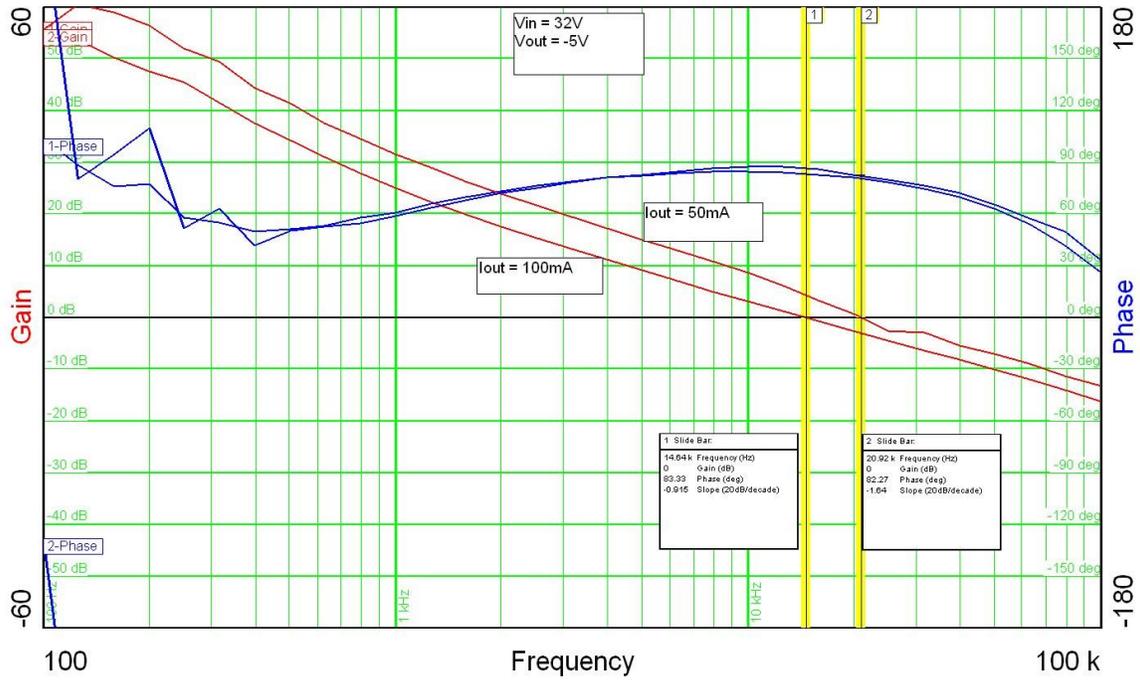
BW: 14.6KHz

PM: 83 degrees

Loop Gain (Iout = 50mA)

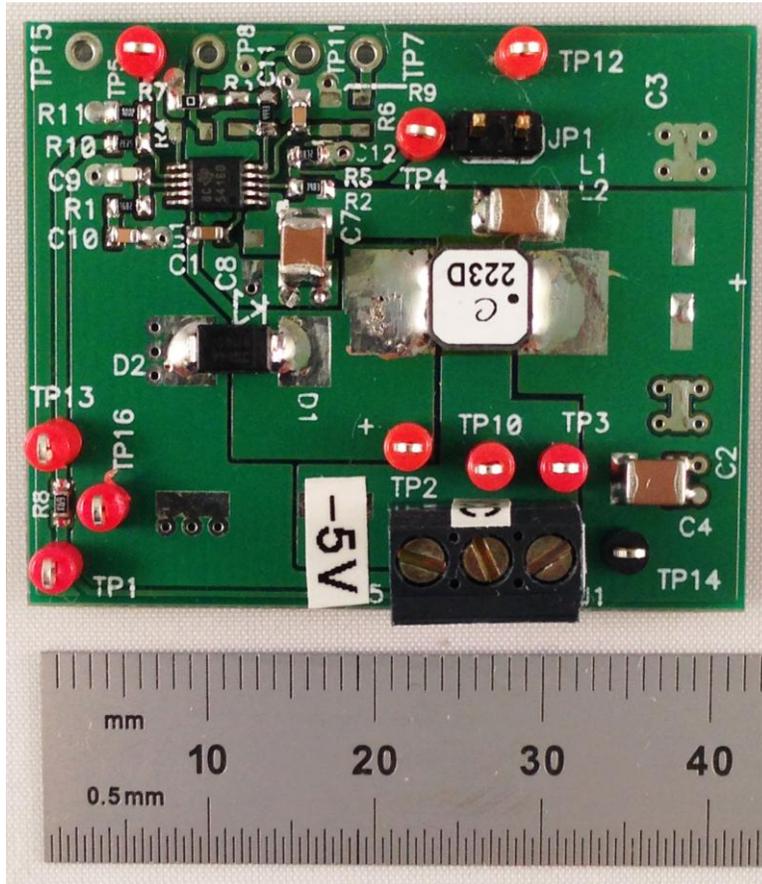
BW: 20.1KHz

PM: 82 degrees



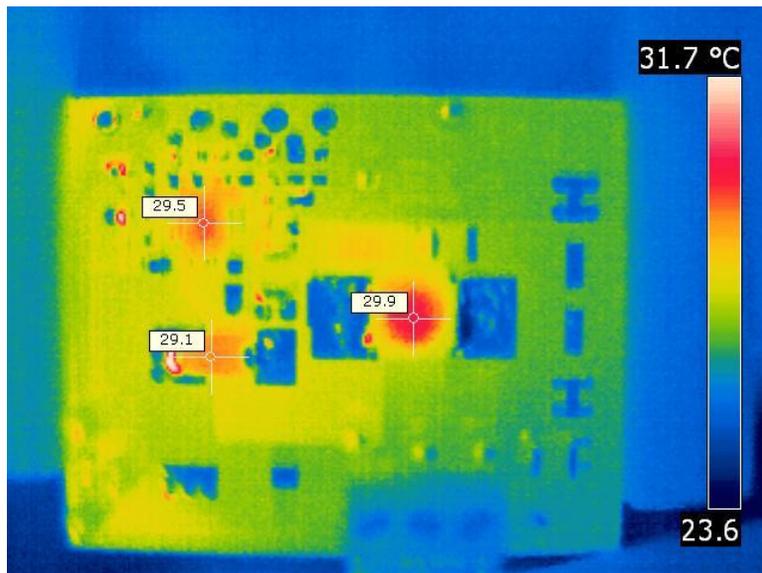
7 Photo

The photo below shows the PMP9097 REVB assembly built on the PMP2763 REVA PWB.



8 Thermal Image

A thermal image is shown below when operating at 32V_{in} and 100mA output, no air flow.



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