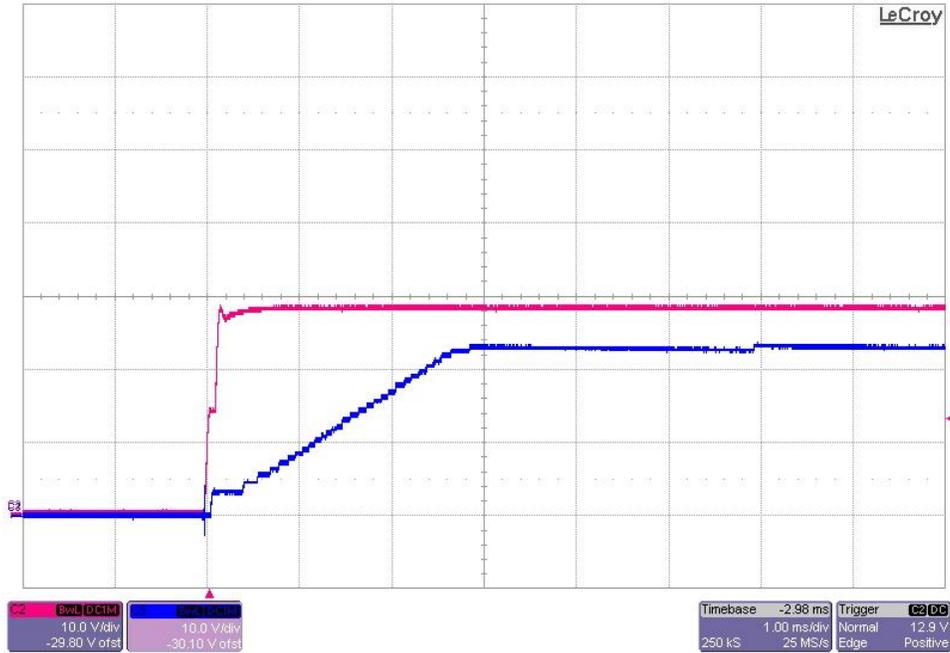
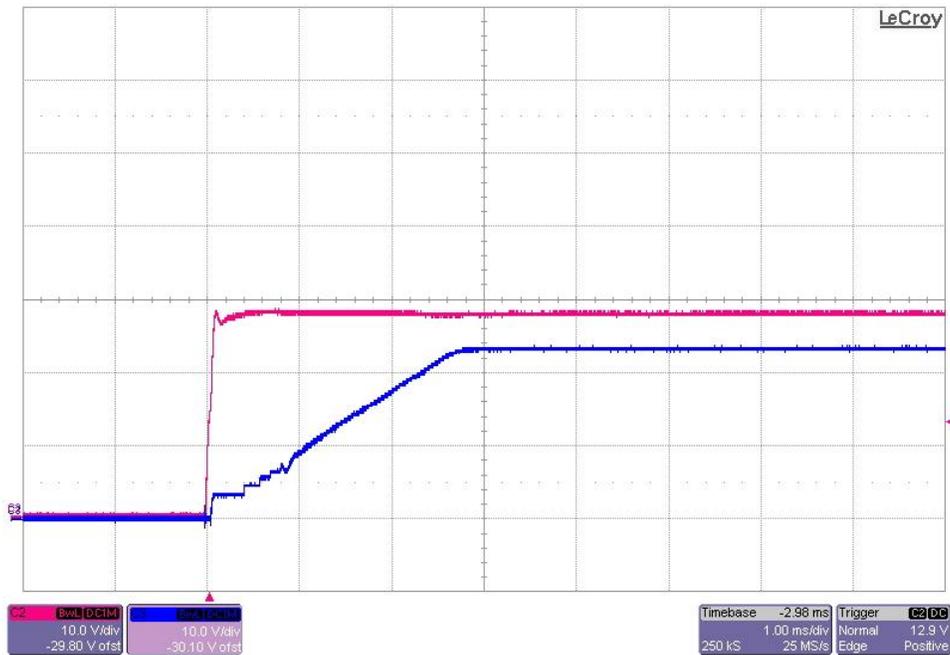


1 Startup

The photo below shows the output voltage startup waveform after the application of 28V in. The 24V output was loaded to 0A. (10V/DIV, 1mS/DIV)

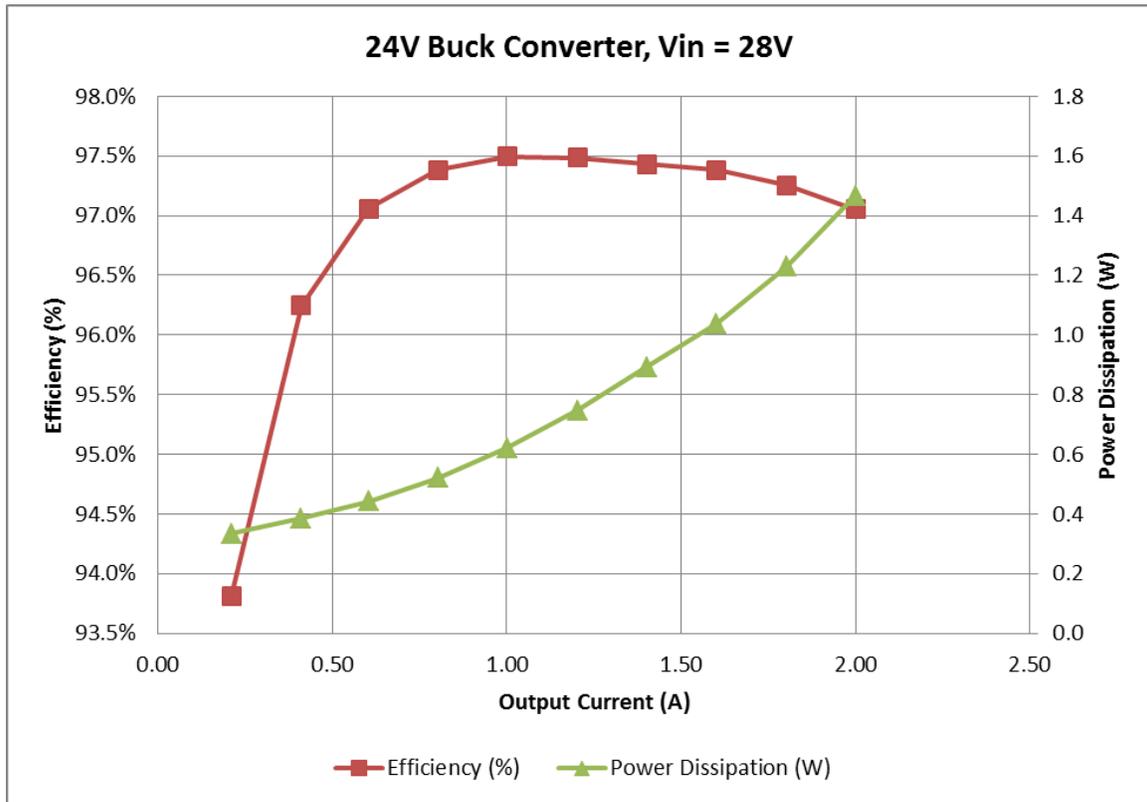


The photo below shows the output voltage startup waveform after the application of 28V in. The 24V output was loaded to 2A. (10V/DIV, 1mS/DIV)



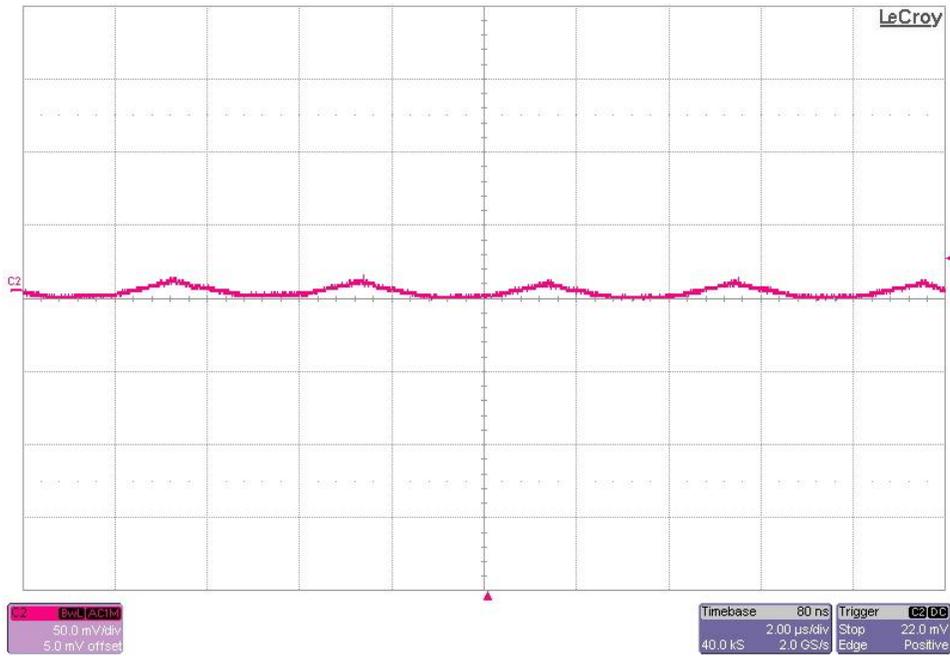
2 Efficiency

The LM5085 buck converter efficiency is shown below.

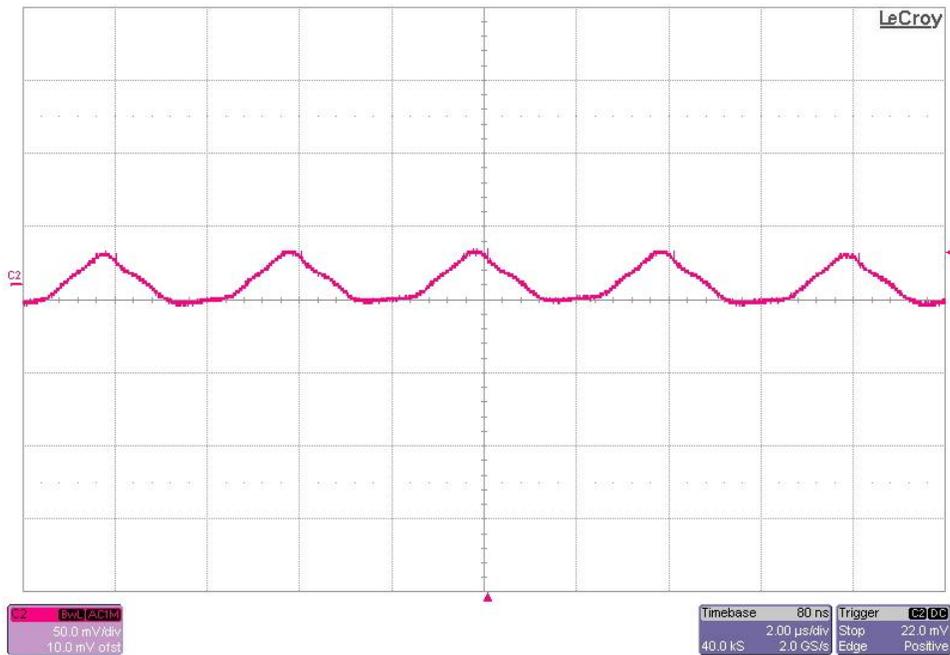


3 Output Ripple Voltage

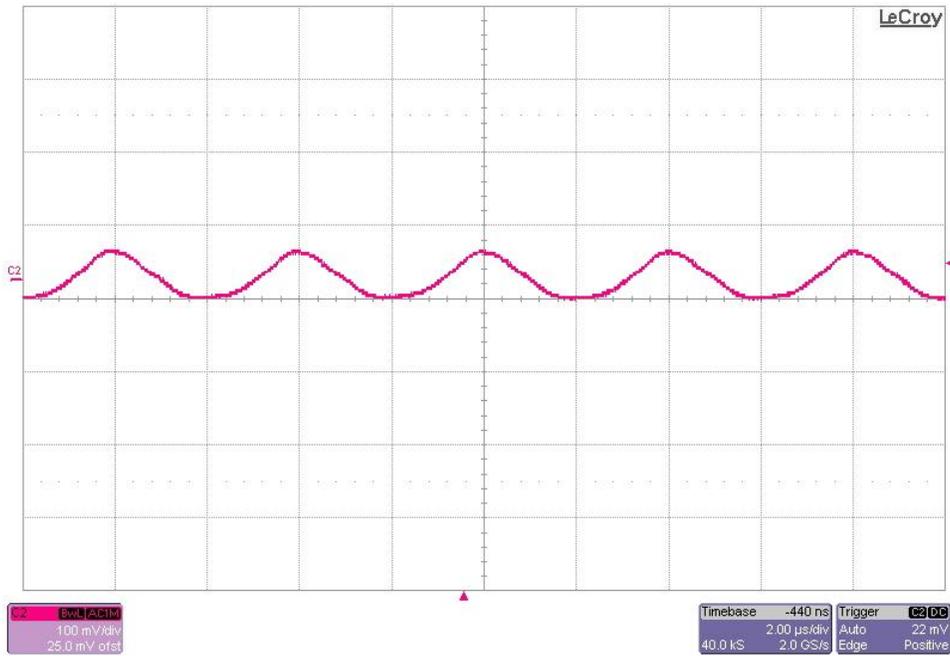
The 24V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 2A. The input voltage is set to 25V. (50mV/DIV, 2uS/DIV)



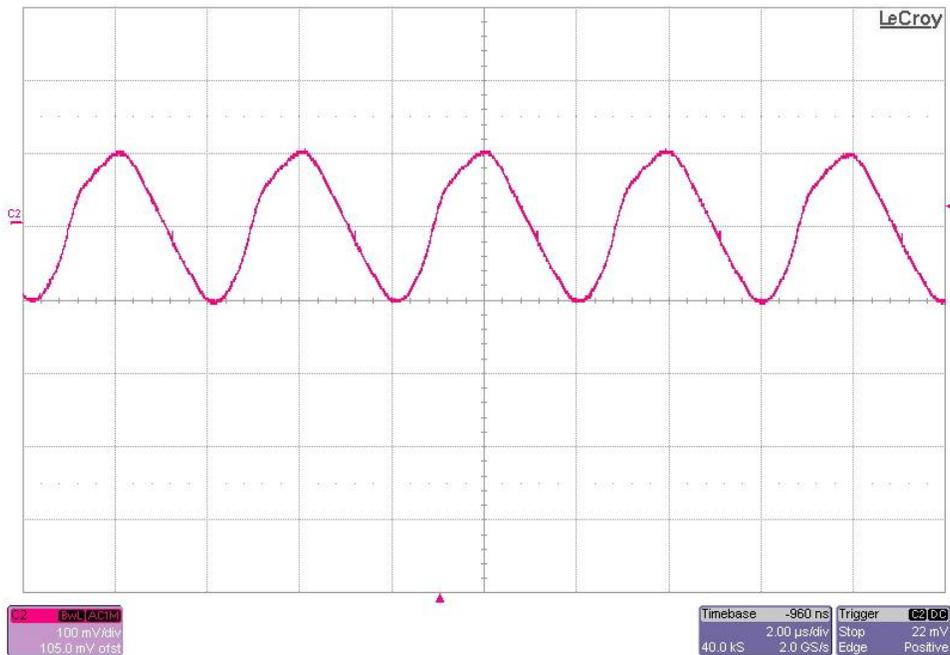
The 24V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 2A. The input voltage is set to 28V. (50mV/DIV, 2uS/DIV)



The 24V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 2A. The input voltage is set to 32V. (100mV/DIV, 2uS/DIV)

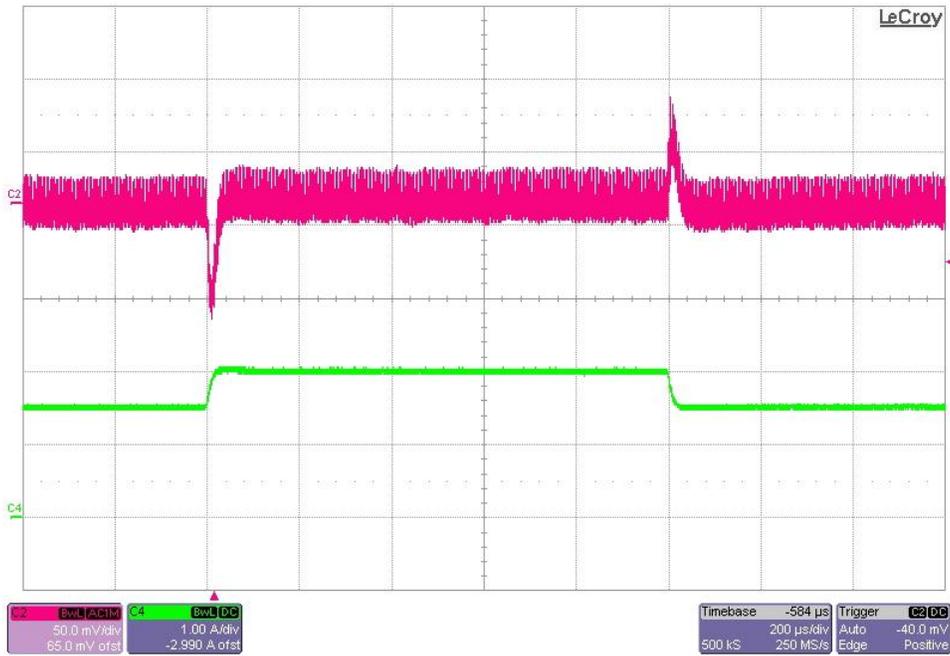


The 24V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 2A. The input voltage is set to 60V. (100mV/DIV, 2uS/DIV)

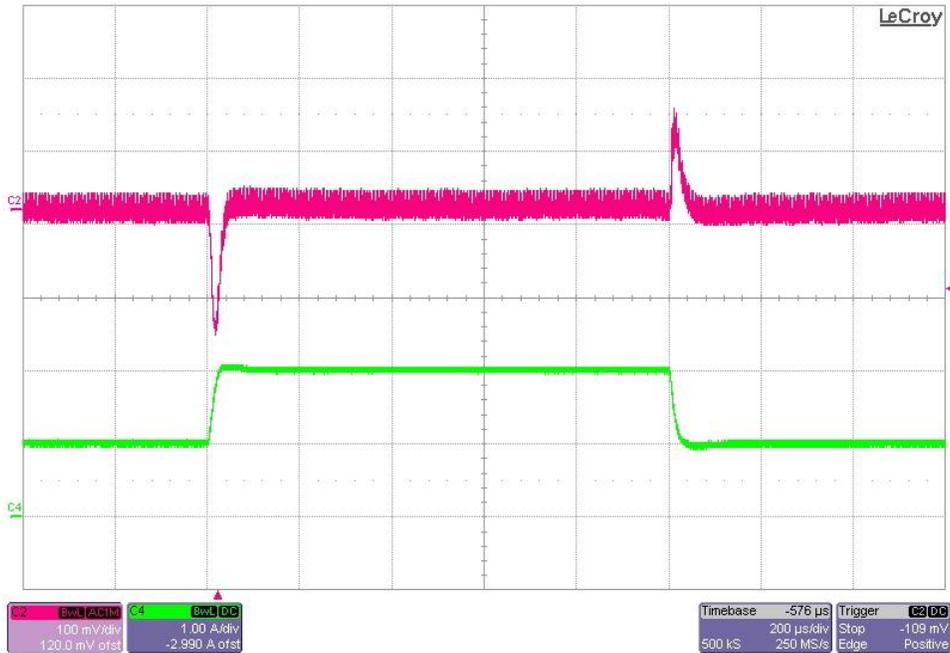


4 Load Transients

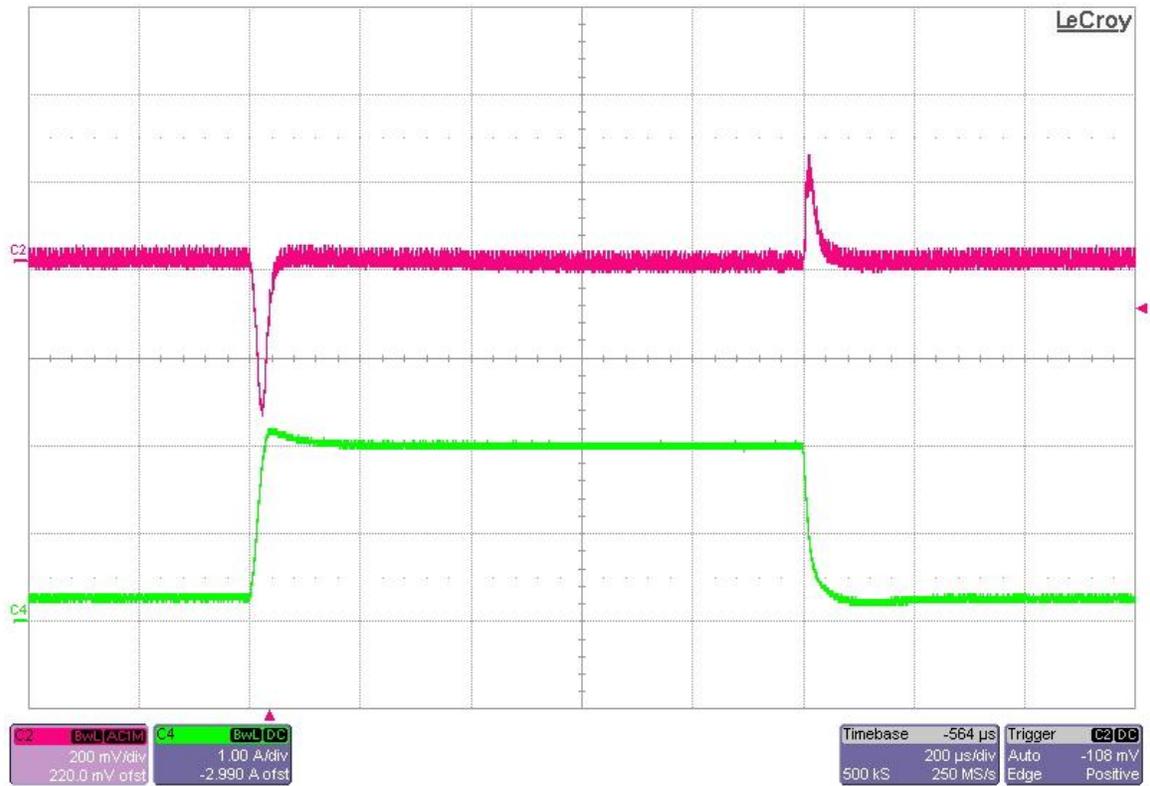
The photo below shows the output voltage (ac coupled) when the load current is stepped between 1.5A and 2A. $V_{in} = 28V$. (50mV/DIV, 1A/DIV, 200uS/DIV)



The photo below shows the output voltage (ac coupled) when the load current is stepped between 1A and 2A. $V_{in} = 28V$. (100mV/DIV, 1A/DIV, 200uS/DIV)

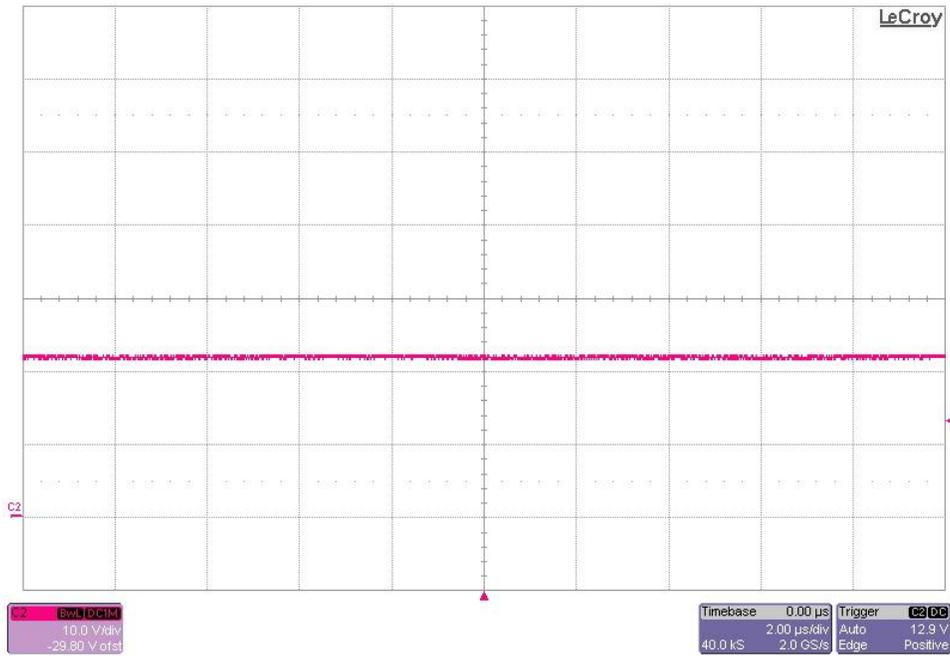


The photo below shows the output voltage (ac coupled) when the load current is stepped between 0.25A and 2A. $V_{in} = 28V$.
(200mV/DIV, 1A/DIV, 200uS/DIV)

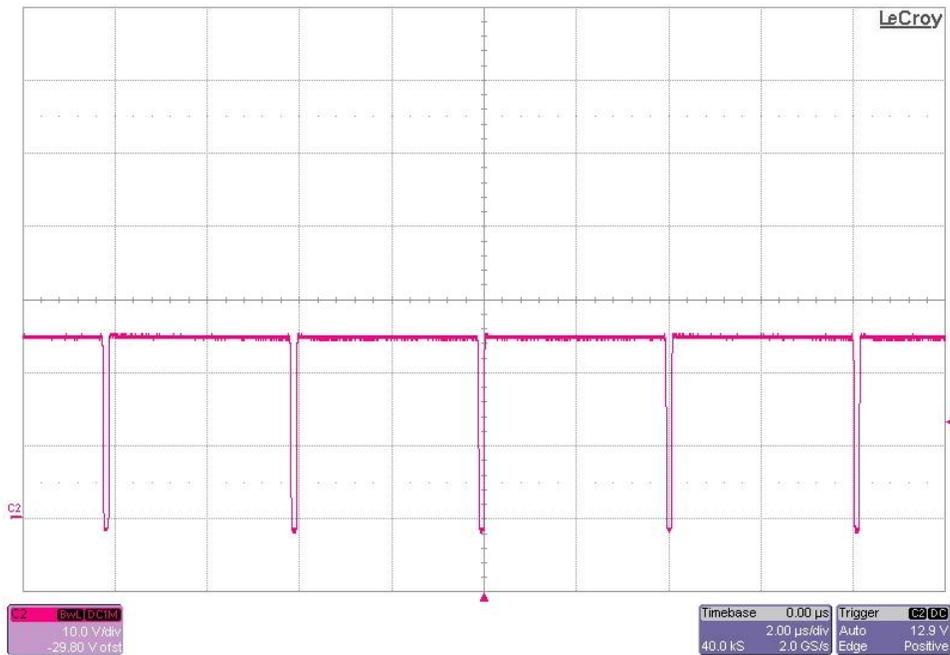


5 Switch Node Waveforms

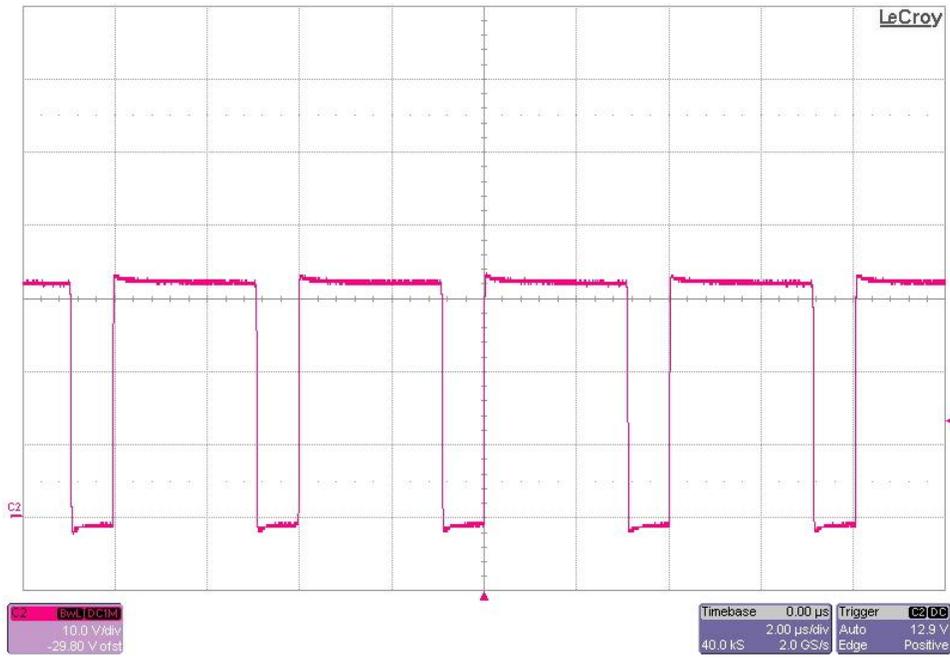
The photo below shows the FET switching voltage. The input voltage is 22V and the output is loaded to 2A. The FET is fully on. (10V/DIV, 2uS/DIV)



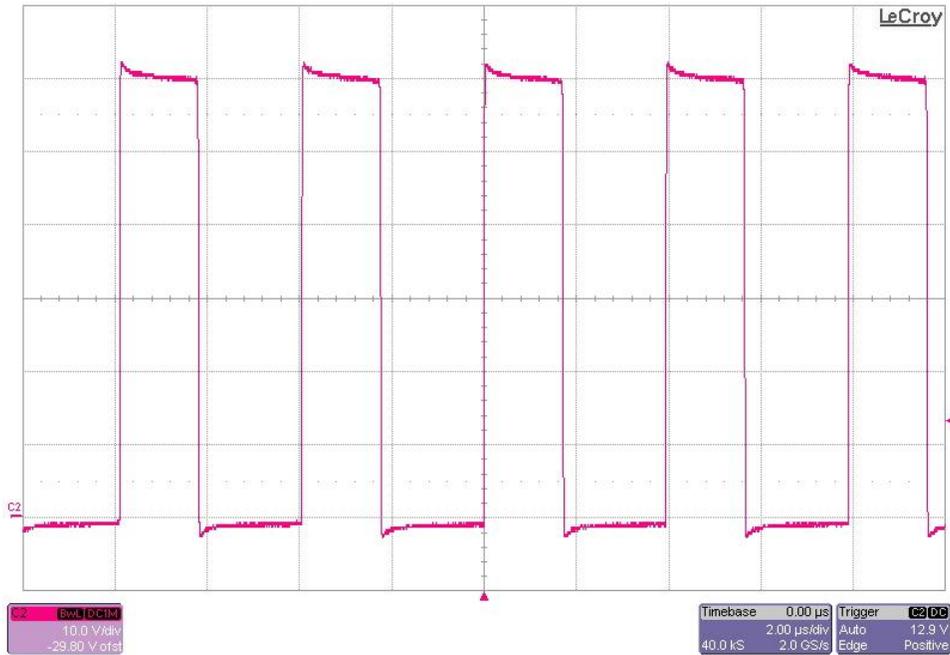
The photo below shows the FET switching voltage. The input voltage is 25V and the output is loaded to 2A. (10V/DIV, 2uS/DIV)



The photo below shows the FET switching voltage. The input voltage is 32V and the output is loaded to 2A. (10V/DIV, 2uS/DIV)

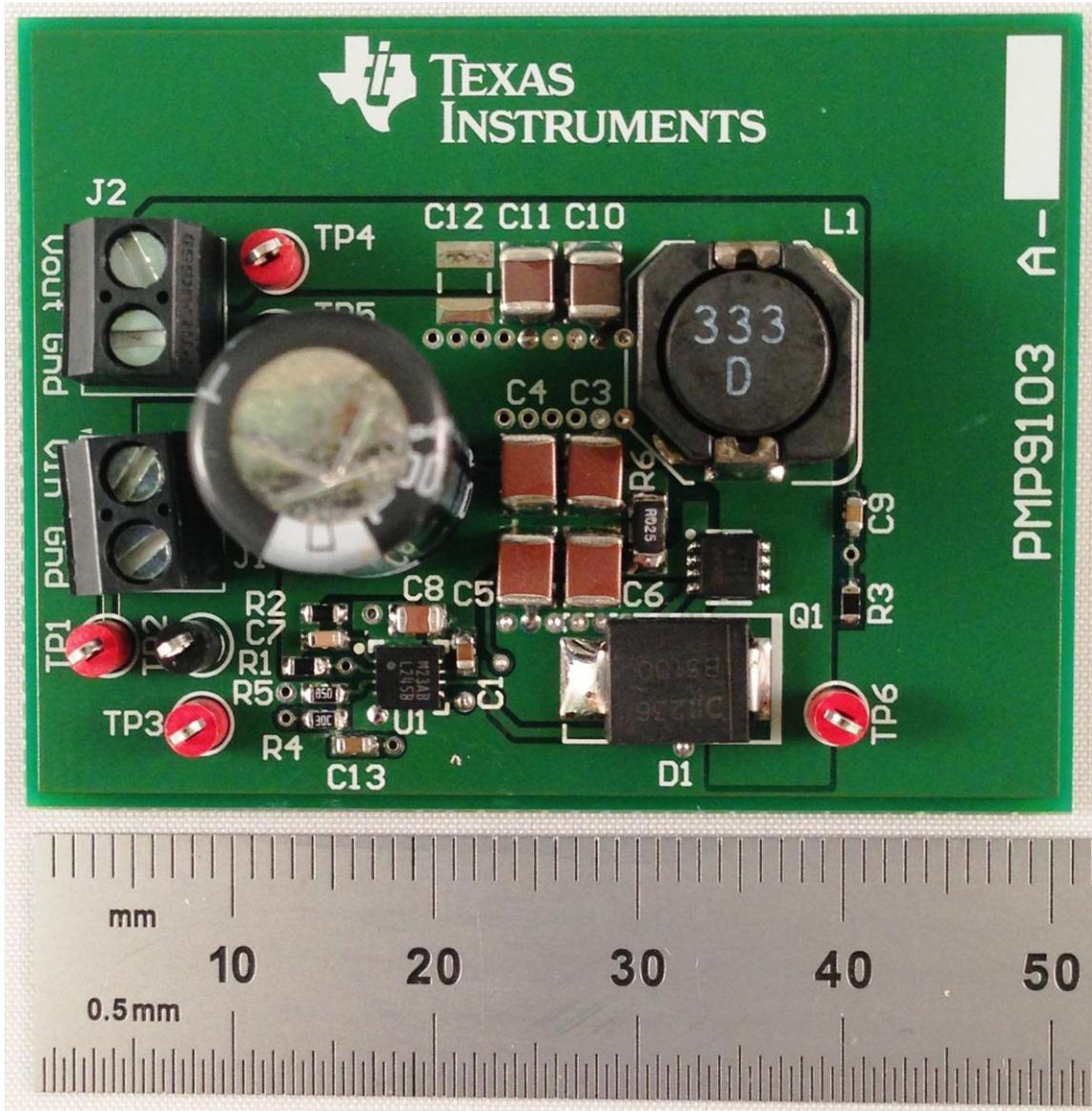


The photo below shows the FET switching voltage. The input voltage is 60V and the output is loaded to 2A. (10V/DIV, 2uS/DIV)



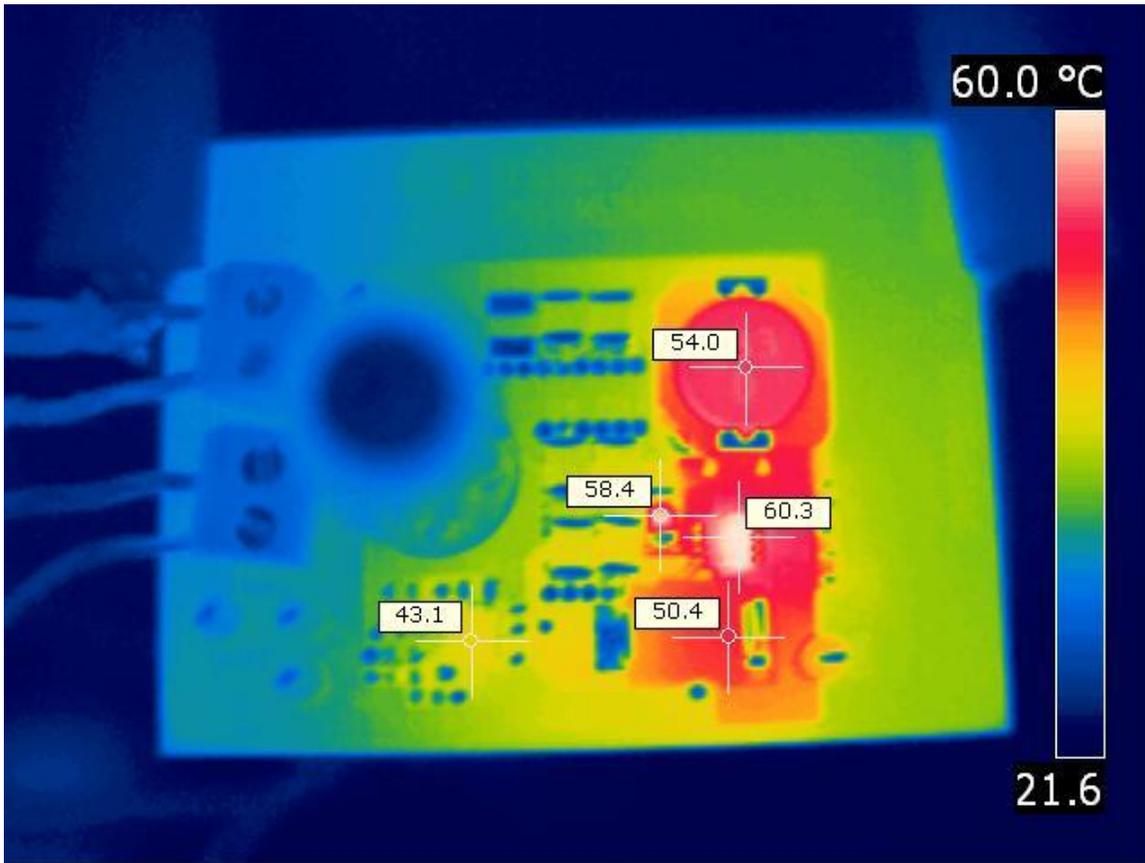
6 Photo

The photo below shows the PMP9103 REVB assy.



7 Thermal Image

A thermal image is shown below operating at 28V input and 24V@2A output (room temp and no airflow).



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