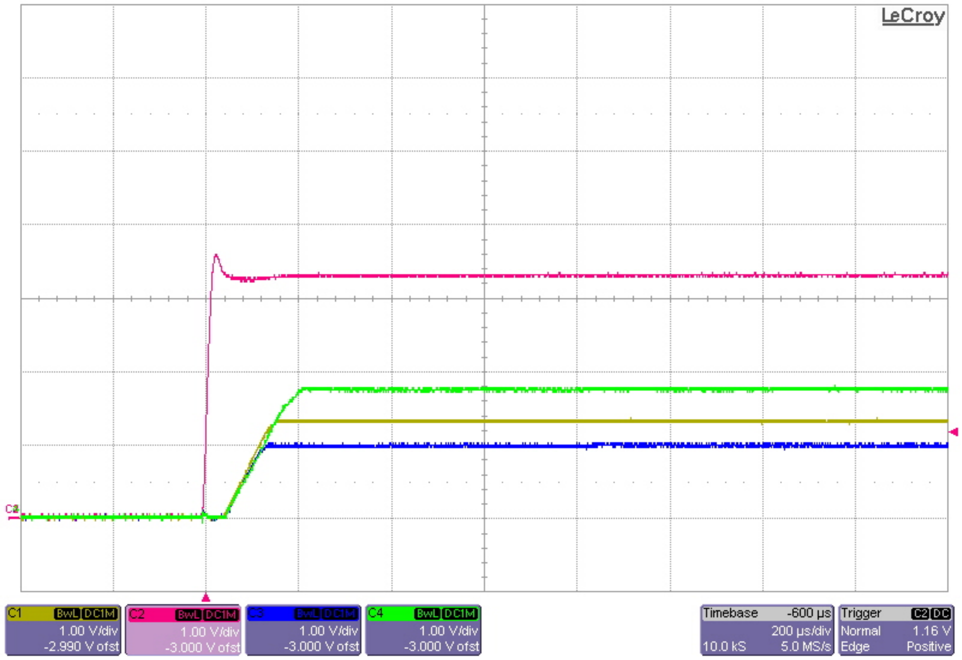
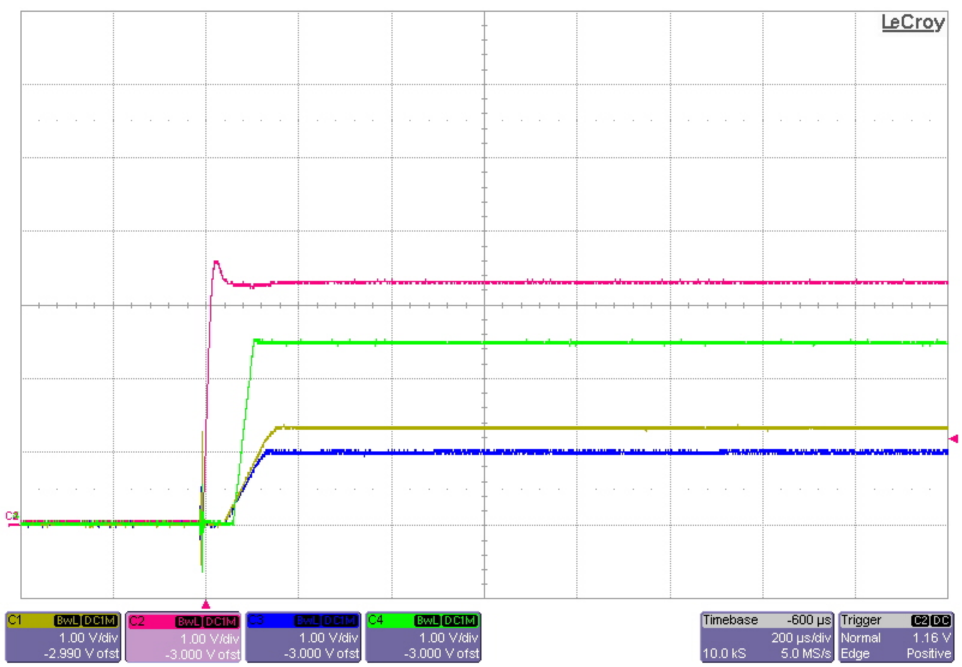
1 Startup

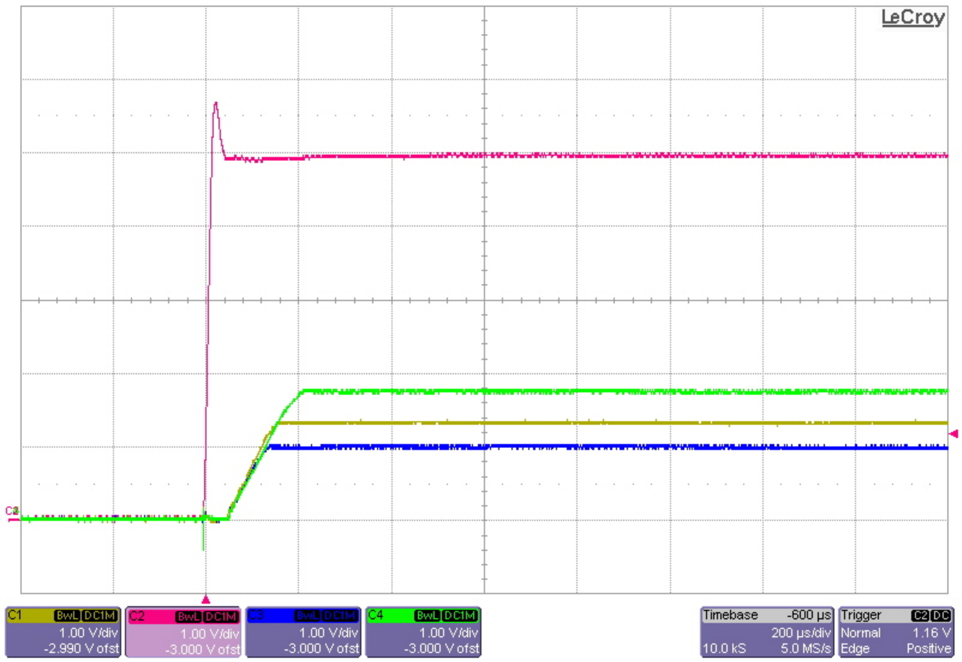
The photo below shows the output voltage startup waveforms (1V, 1.35V, 1.8V) after the application of 3.3V in. All outputs are unloaded. (1V/DIV, 200uS/DIV)



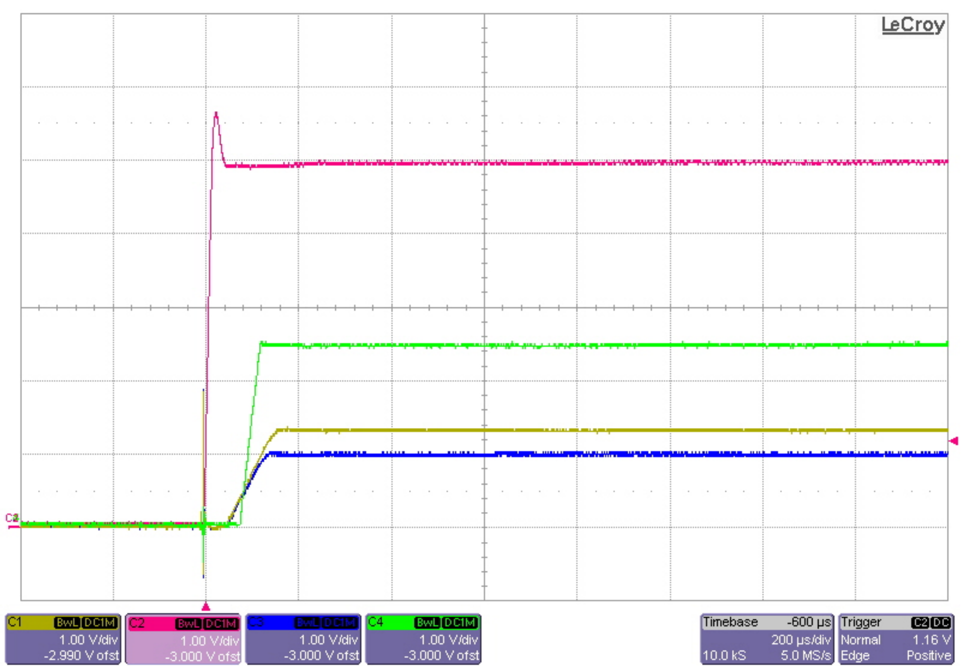
The photo below shows the output voltage startup waveforms (1V, 1.35V, 2.5V) after the application of 3.3V in. All outputs are unloaded. (1V/DIV, 200uS/DIV)



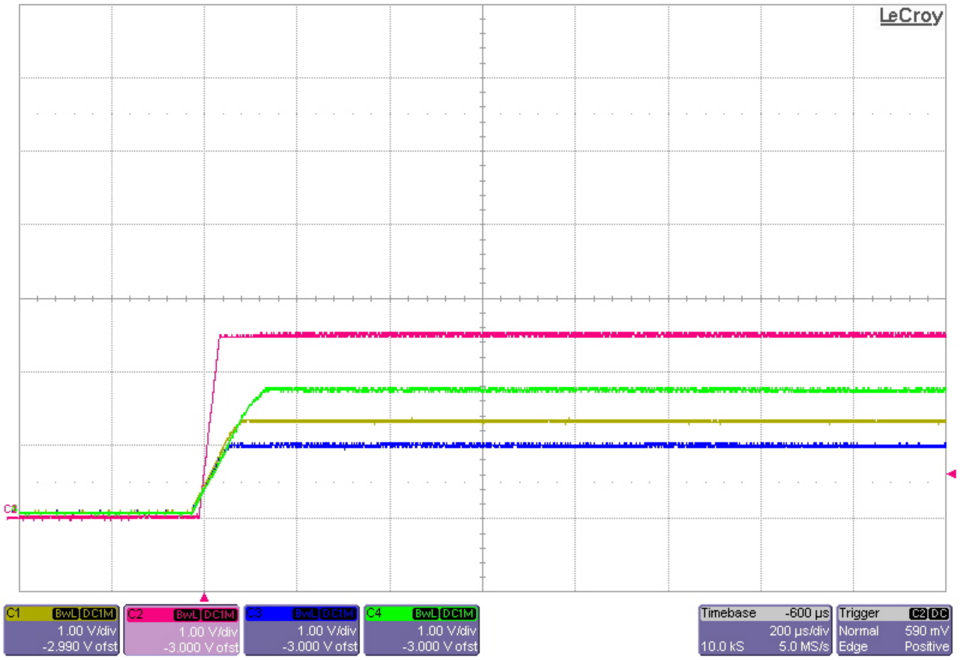
The photo below shows the output voltage startup waveforms (1V, 1.35V, 1.8V) after the application of 5V in. All outputs are unloaded. (1V/DIV, 200uS/DIV)



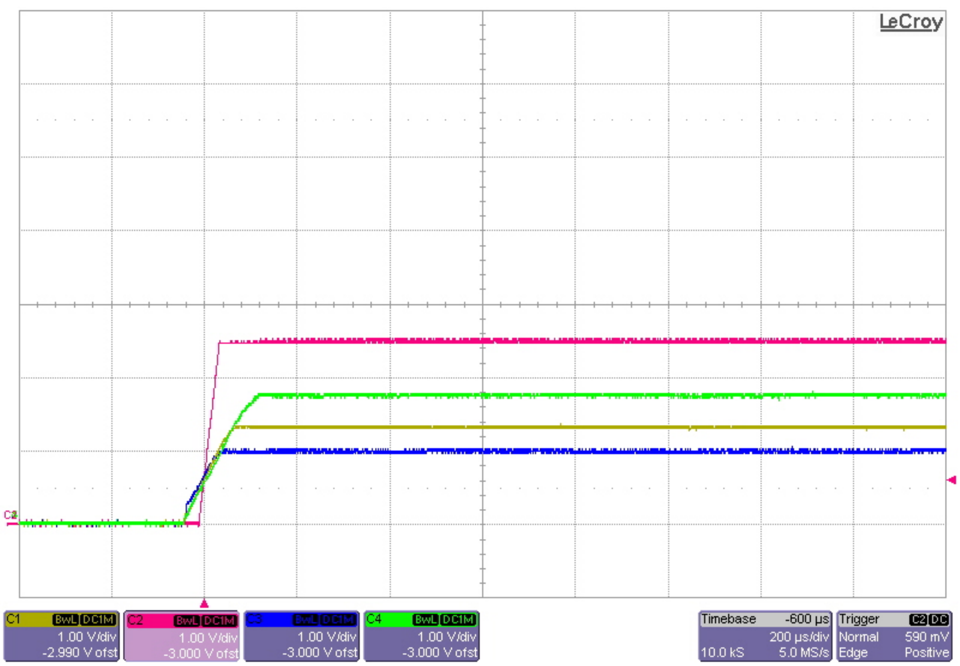
The photo below shows the output voltage startup waveforms (1V, 1.35V, 2.5V) after the application of 5V in. All outputs are unloaded. (1V/DIV, 200uS/DIV)



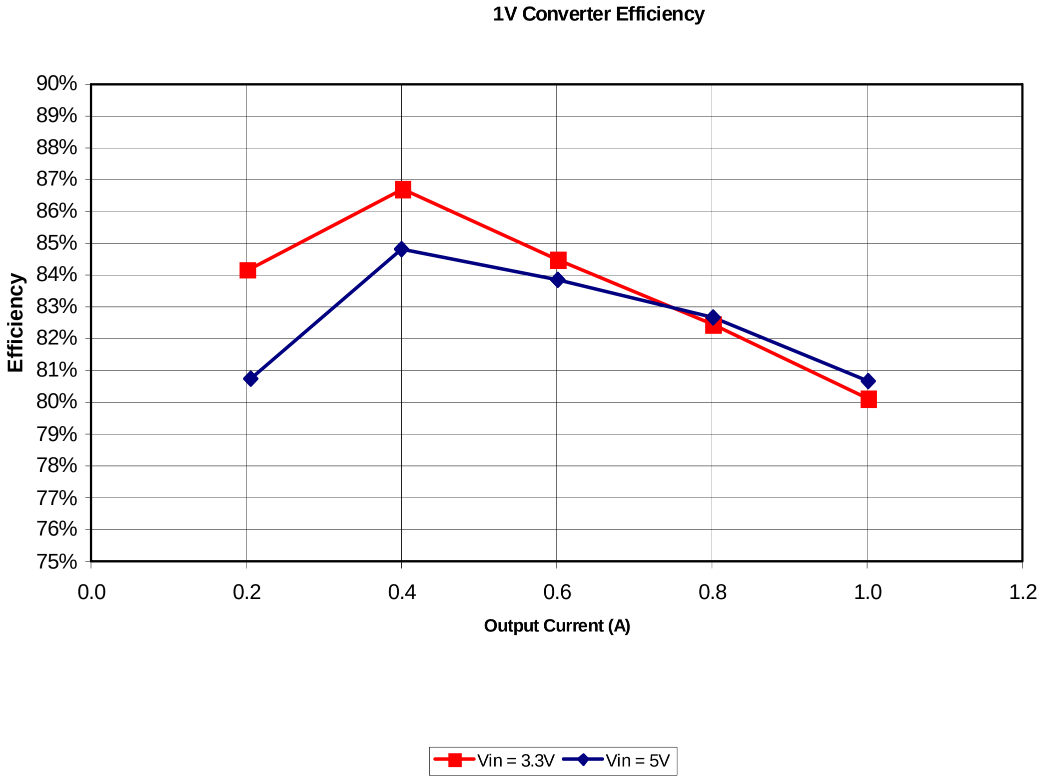
The photo below shows the output voltage startup waveforms (1V, 1.35V, 1.8V, 2.5V) after an ENABLE high is applied. The input voltage is 3.3V and all outputs are unloaded. (1V/DIV, 200uS/DIV)

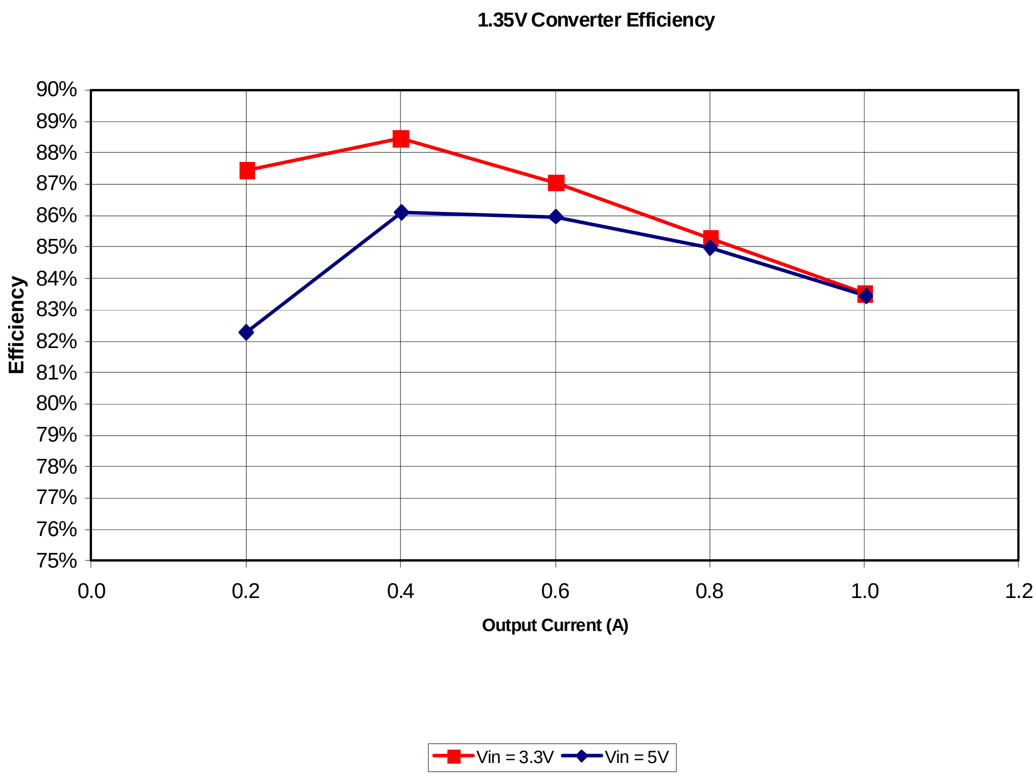


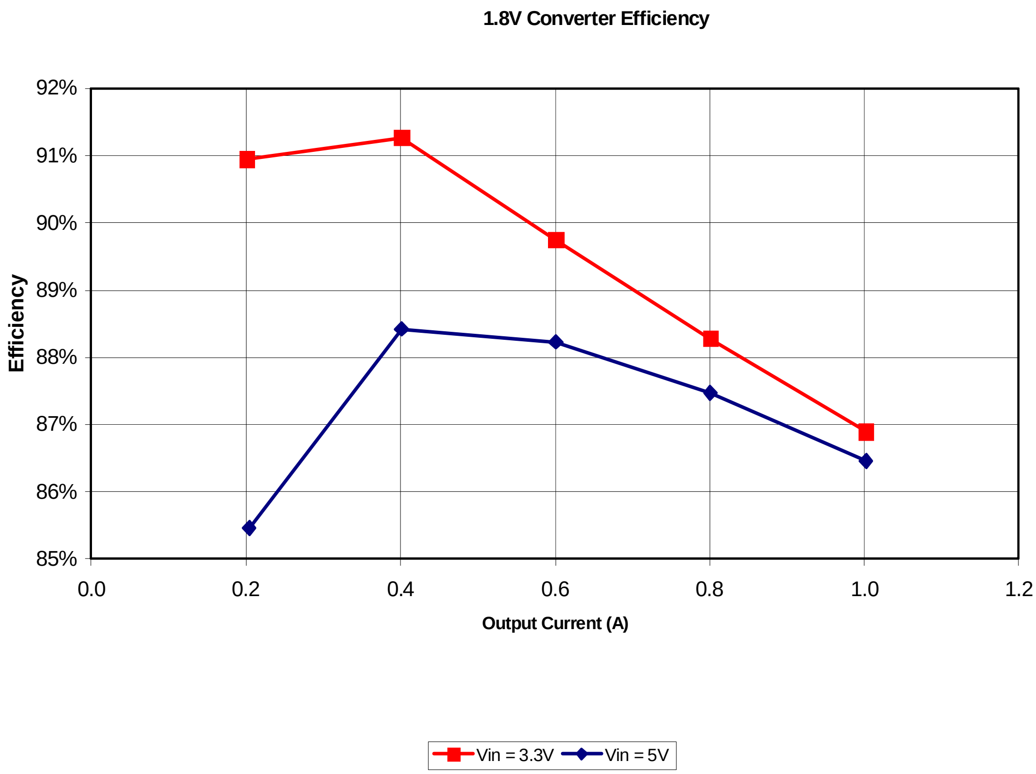
The photo below shows the output voltage startup waveforms (1V, 1.35V, 1.8V, 2.5V) after an ENABLE high is applied. The input voltage is 5V and all outputs are unloaded. (1V/DIV, 200uS/DIV)



2 Efficiency

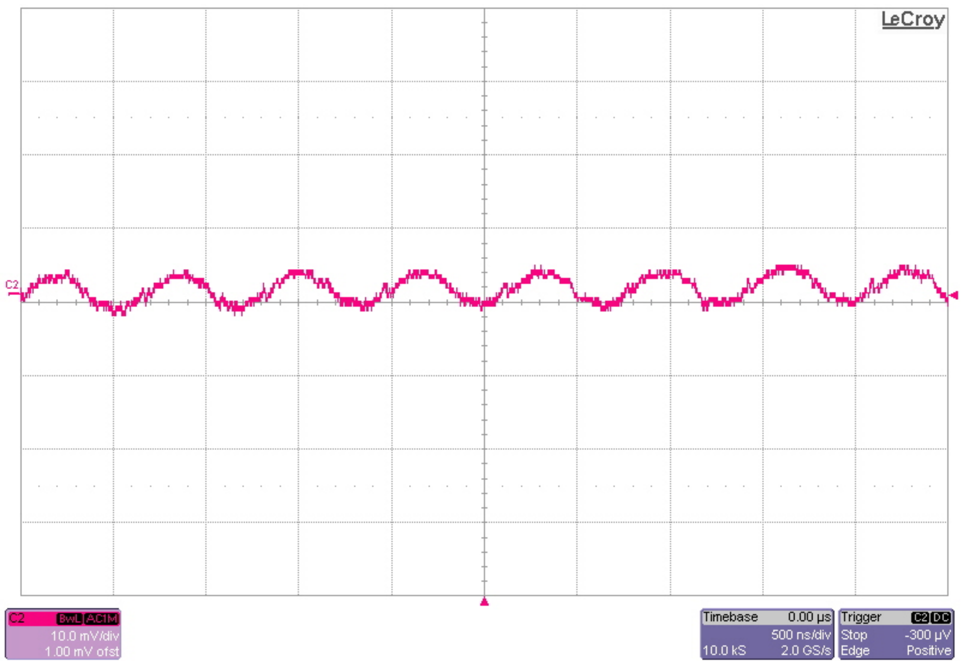




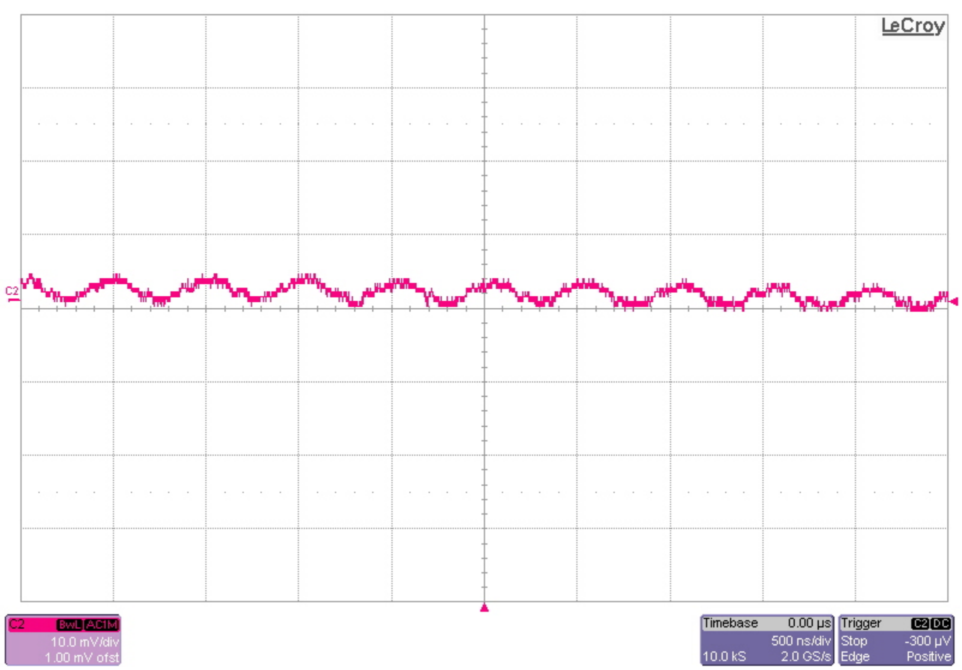

1.8V Converter Efficiency
92%
91%
90%
89%
88%
87%
86%
85%
Efficiency
0.0
0.2
0.4
0.6
0.8
1.0
1.2
Output Current (A)
Vin = 3.3V
Vin = 5V

3 Output Ripple Voltage

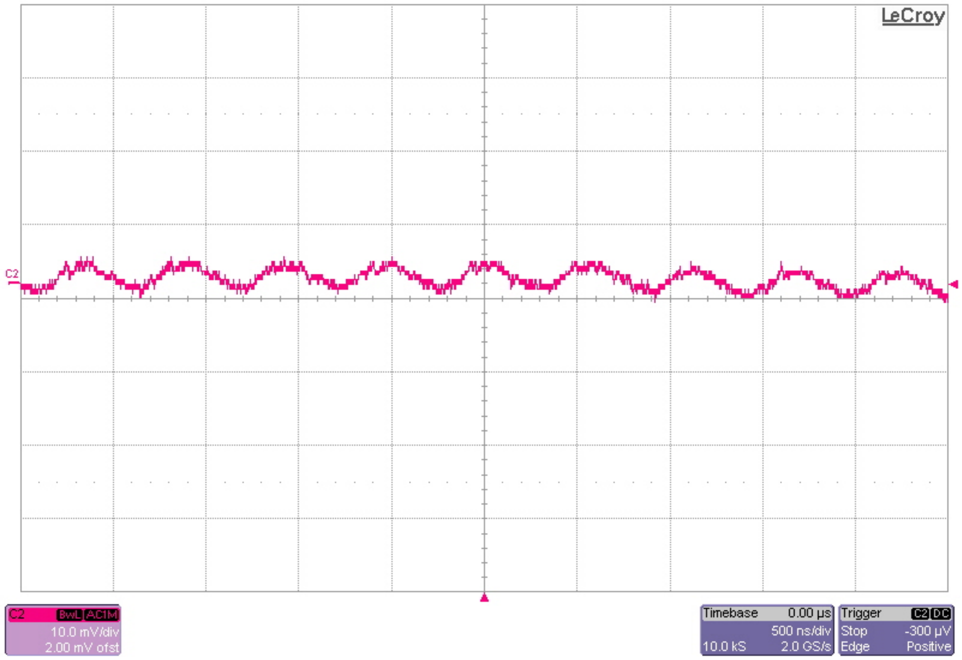
The 1V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 3.3V. (10mV/DIV, 500nS/DIV)



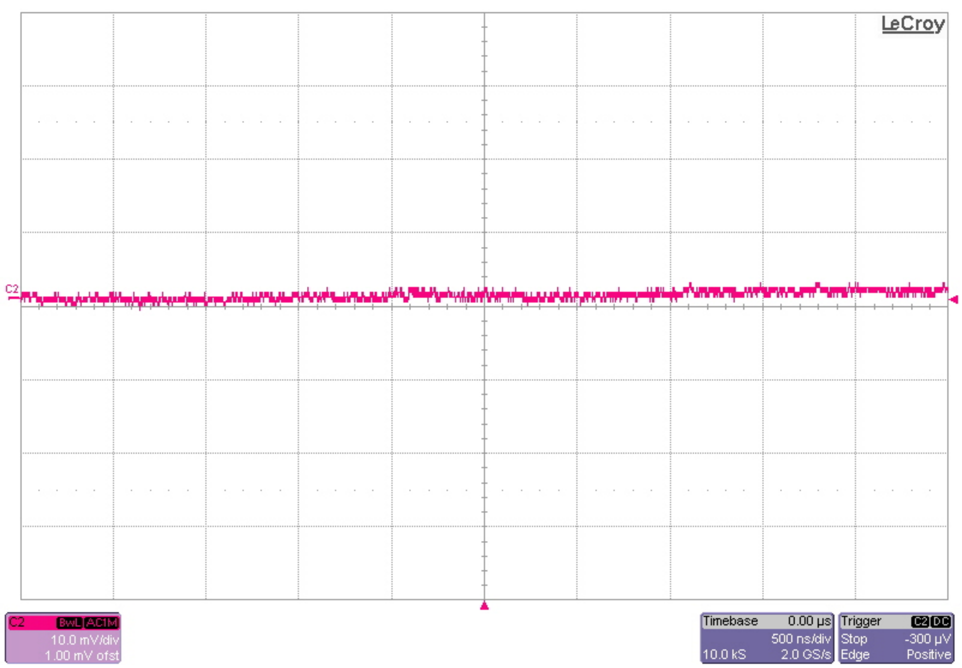
The 1.35V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 3.3V. (10mV/DIV, 500nS/DIV)



The 1.8V 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 3.3V. (10mV/DIV, 500nS/DIV)

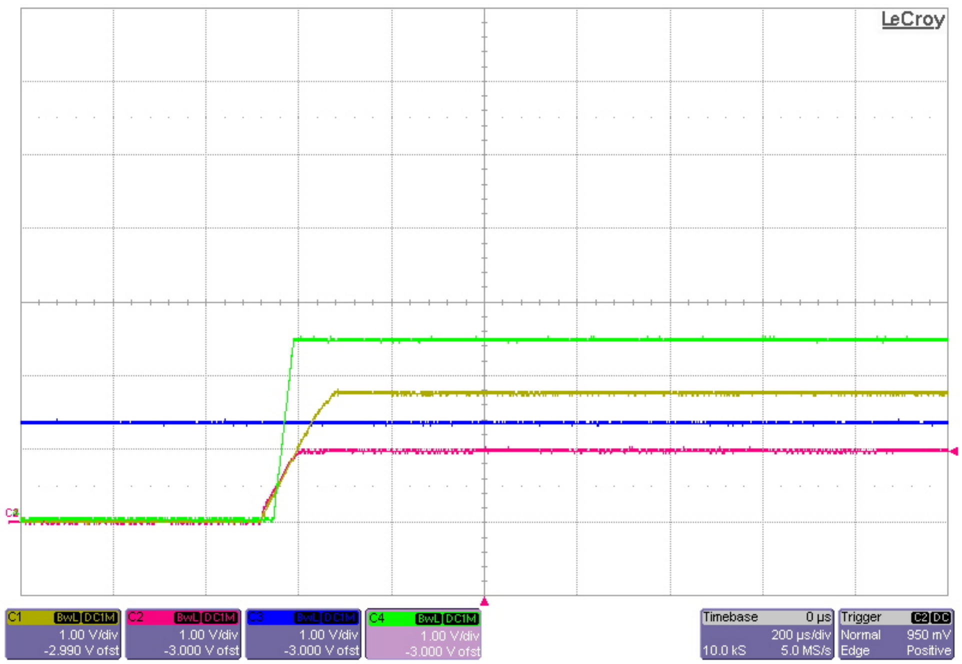


The 2.5V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 0.07A and the input voltage set to 3.3V. (10mV/DIV, 500nS/DIV)

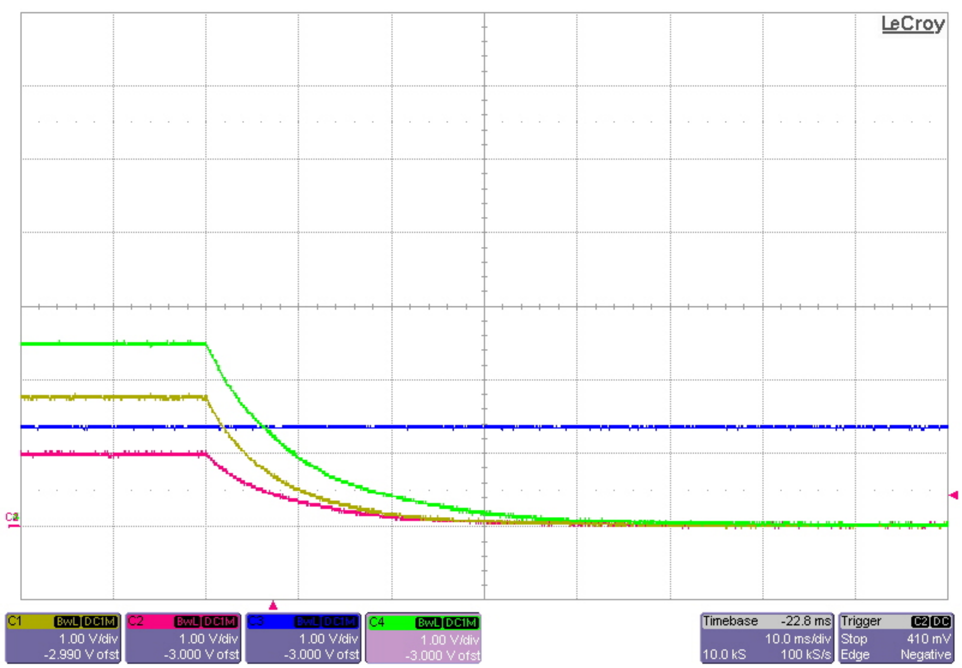


4 FET ENABLE (Power Save)

The output voltages are shown in the figure below as the FET_EN control changes from 5V to open. The outputs were unloaded and the input voltage was 5V. (1V/DIV, 200uS/DIV)

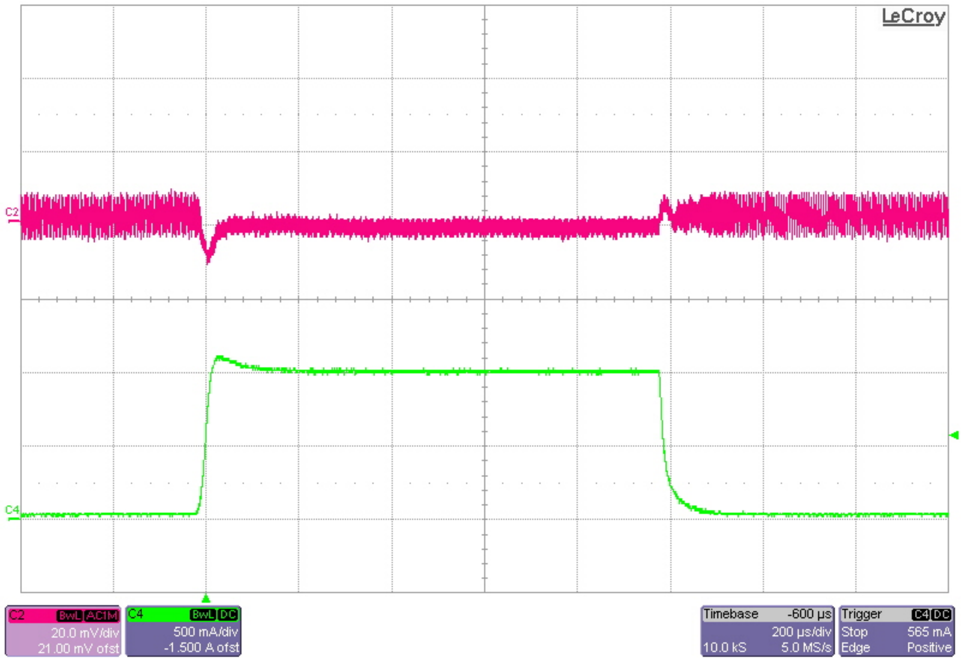


The output voltages are shown in the figure below as the FET_EN control changes from open to 5V. The outputs were unloaded and the input voltage was 5V. (1V/DIV, 200uS/DIV)

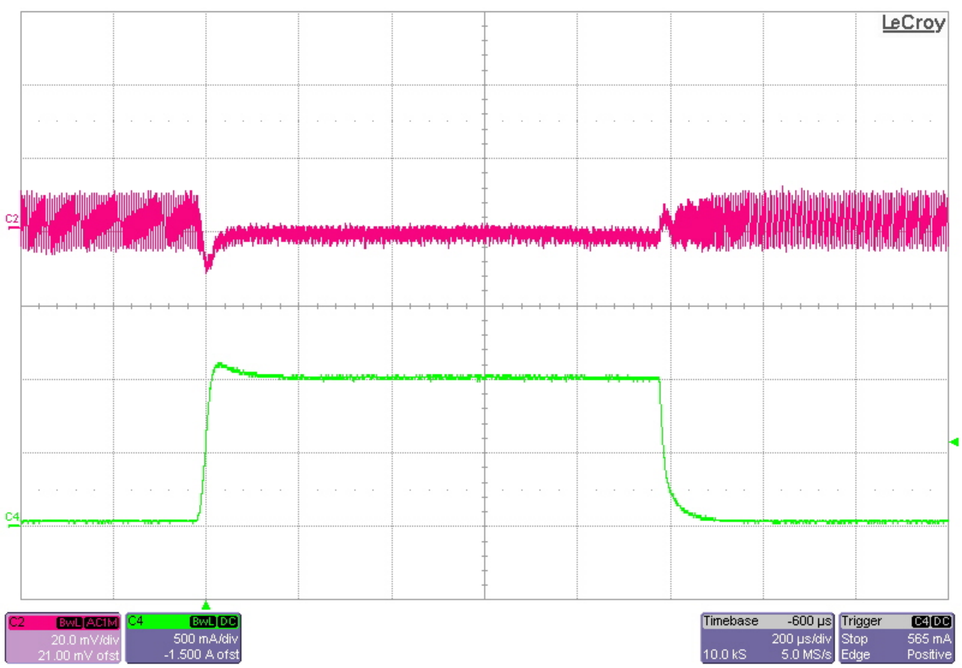


5 Load Transients

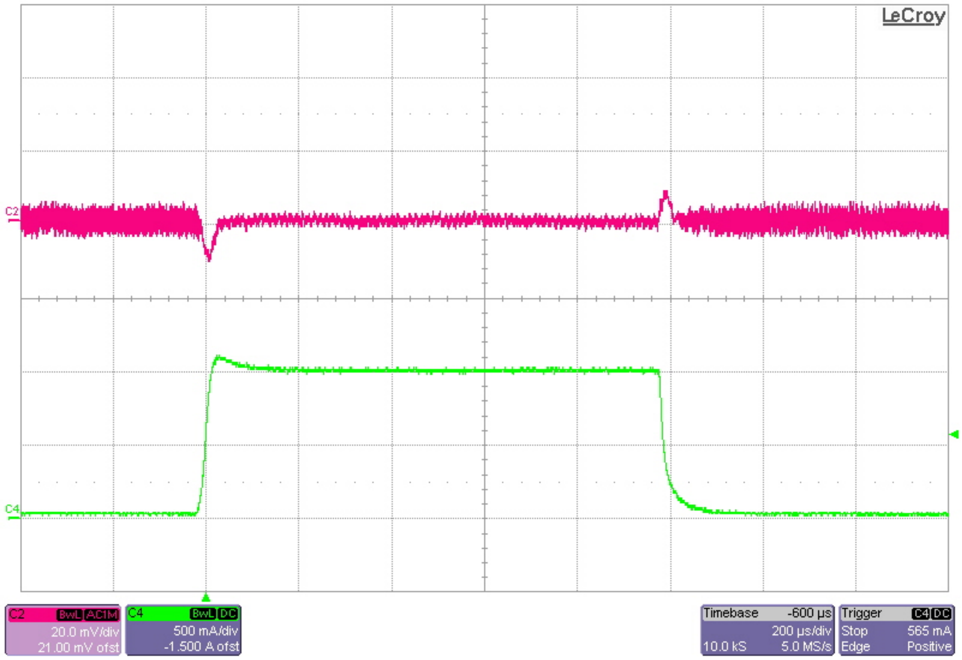
The photo below shows the 1V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 3.3V. (20mV/DIV, 500mA/DIV, 200uS/DIV)



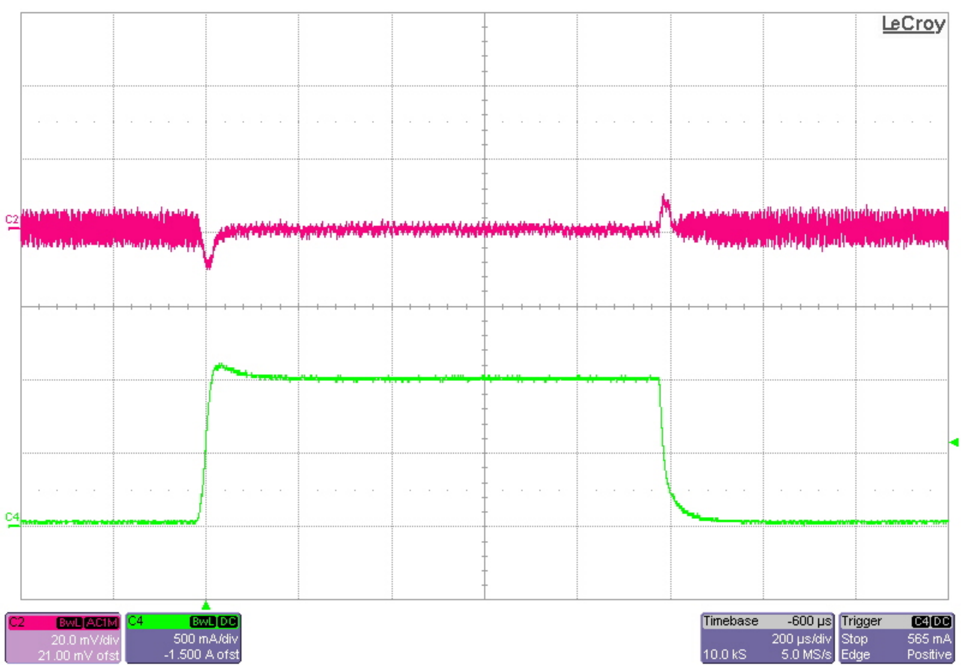
The photo below shows the 1V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 5V. (20mV/DIV, 500mA/DIV, 200uS/DIV)



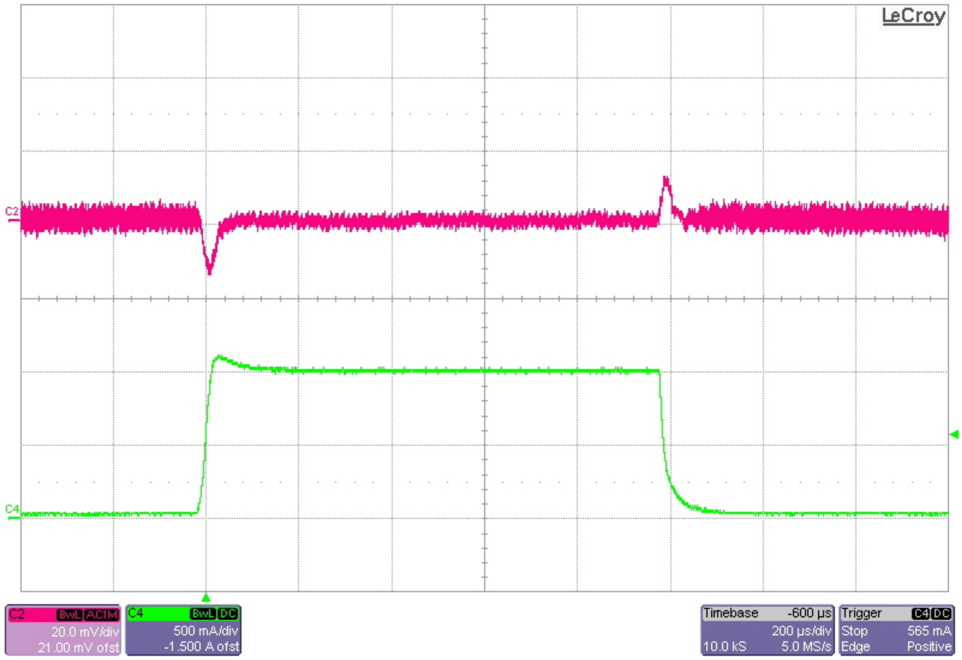
The photo below shows the 1.35V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 3.3V. (20mV/DIV, 500mA/DIV, 200uS/DIV)



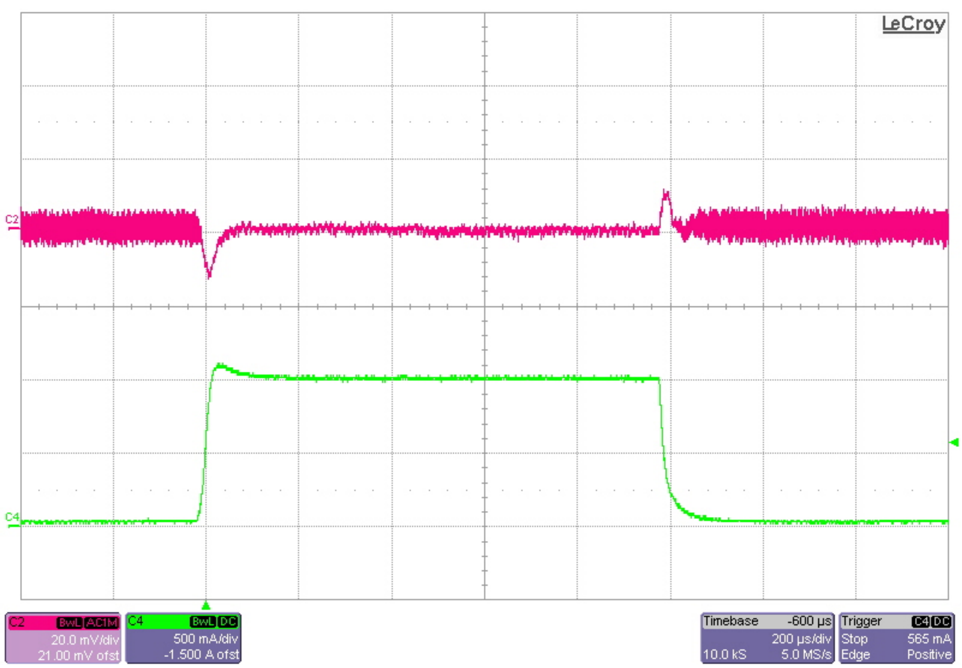
The photo below shows the 1.35V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 5V. (20mV/DIV, 500mA/DIV, 200uS/DIV)



The photo below shows the 1.8V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 3.3V. (20mV/DIV, 500mA/DIV, 200uS/DIV)

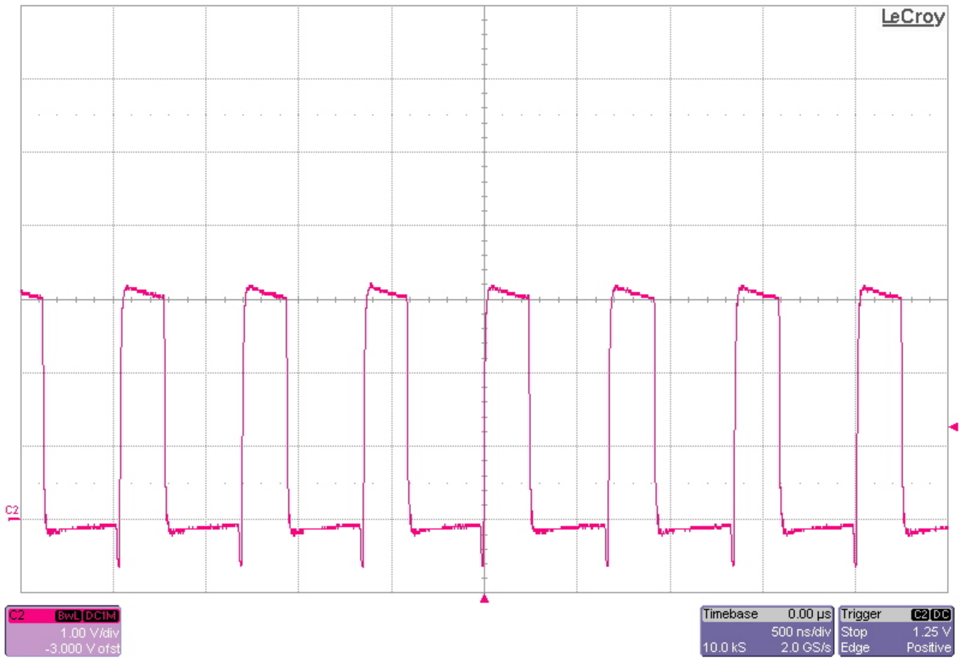


The photo below shows the 1.8V output voltage (ac coupled) when the load current is stepped between 0A and 1A. Vin = 5V. (20mV/DIV, 500mA/DIV, 200uS/DIV)

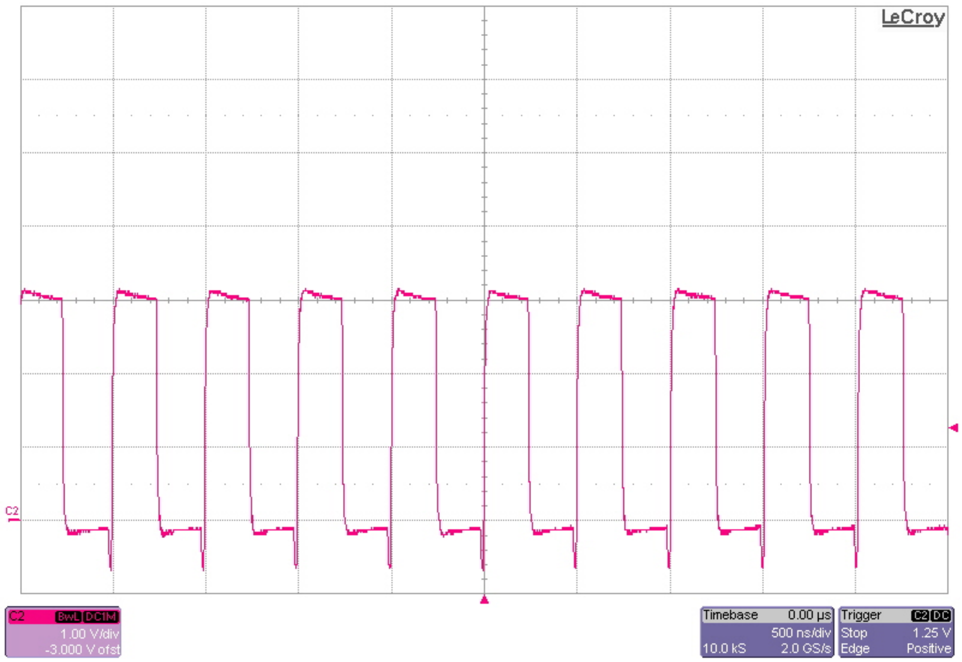


6 Switch Node Waveforms

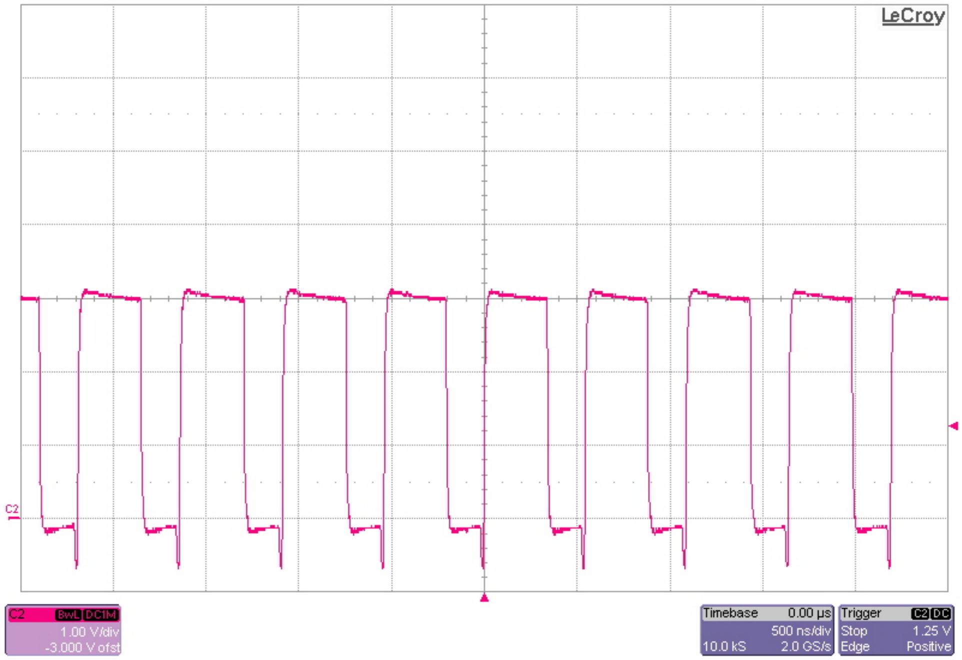
The photo below shows the 1V switch node. The input voltage is 3.3V and the output is loaded to 1A. (1V/DIV, 500nS/DIV)



The photo below shows the 1.35V switch node. The input voltage is 3.3V and the output is loaded to 1A. (1V/DIV, 500nS/DIV)



The photo below shows the 1.8V switch node. The input voltage is 3.3V and the output is loaded to 1A. (1V/DIV, 500nS/DIV)



7 Photo

The photo below shows the PMP8274 REVA assy.