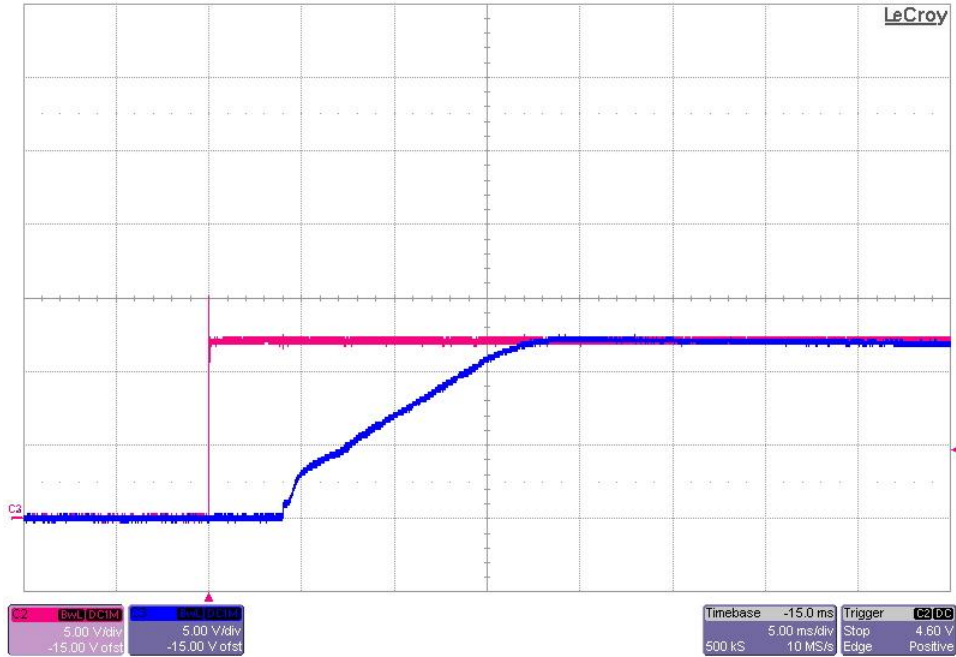
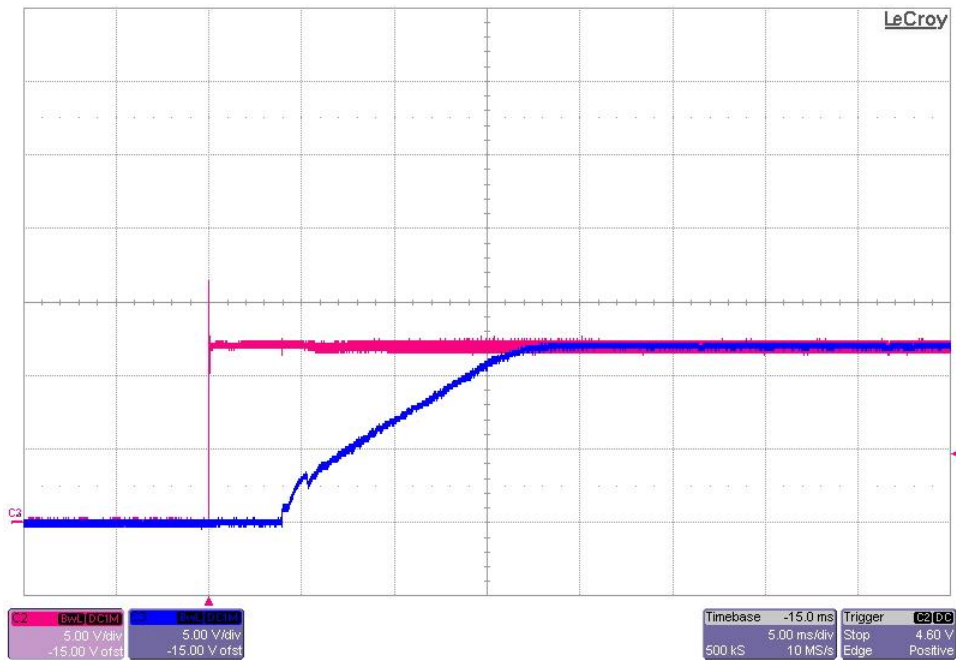


## 1 Startup

The photo below shows the 12V output voltage startup waveforms after the application of 12Vdc in. The output was loaded with a 0A load. (Vin is 5V/DIV, Vout is 5V/DIV, 5mS/DIV)

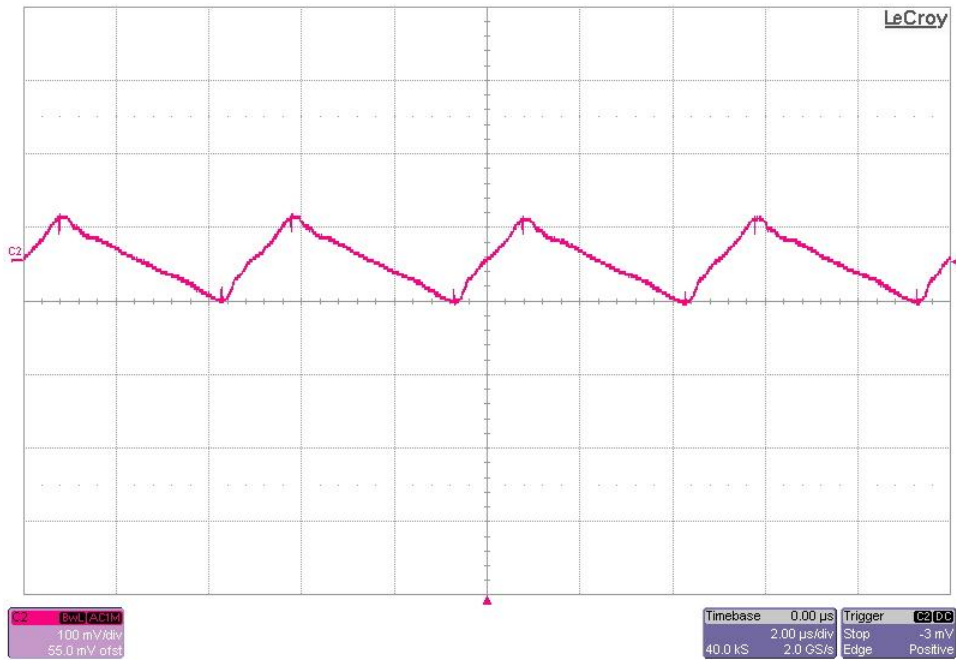


The photo below shows the 12V output voltage startup waveforms after the application of 12Vdc in. The output was loaded with a 1A load. (Vin is 5V/DIV, Vout is 5V/DIV, 5mS/DIV)

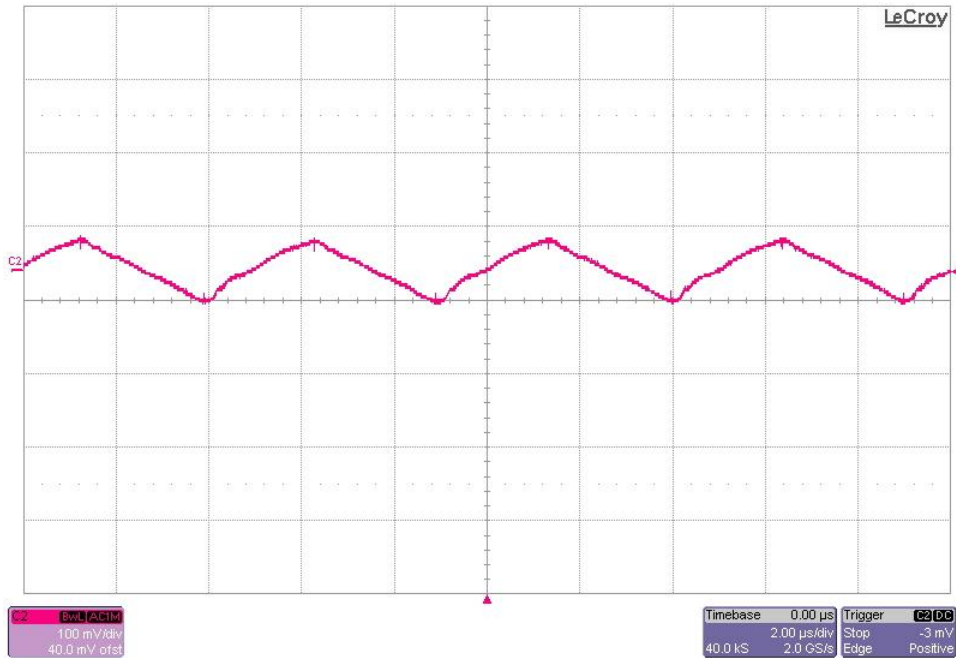


## 2 Output Ripple Voltage

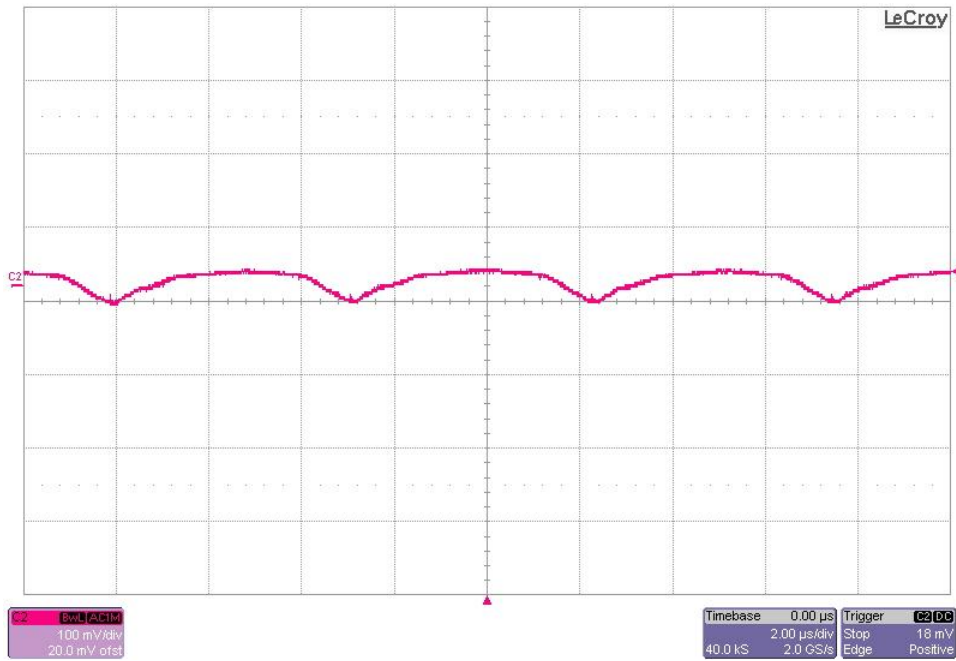
The 12V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 6Vdc. (100mV/DIV, 2uS/DIV)



The 12V 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 12Vdc. (100mV/DIV, 2uS/DIV)

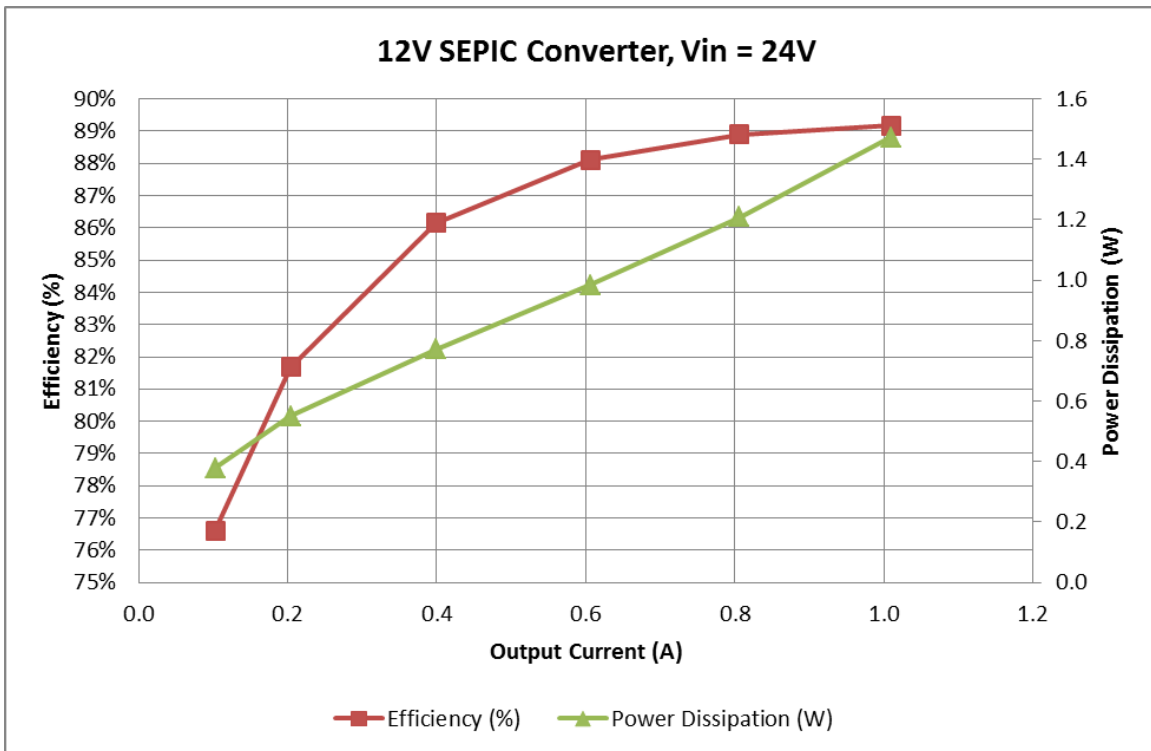
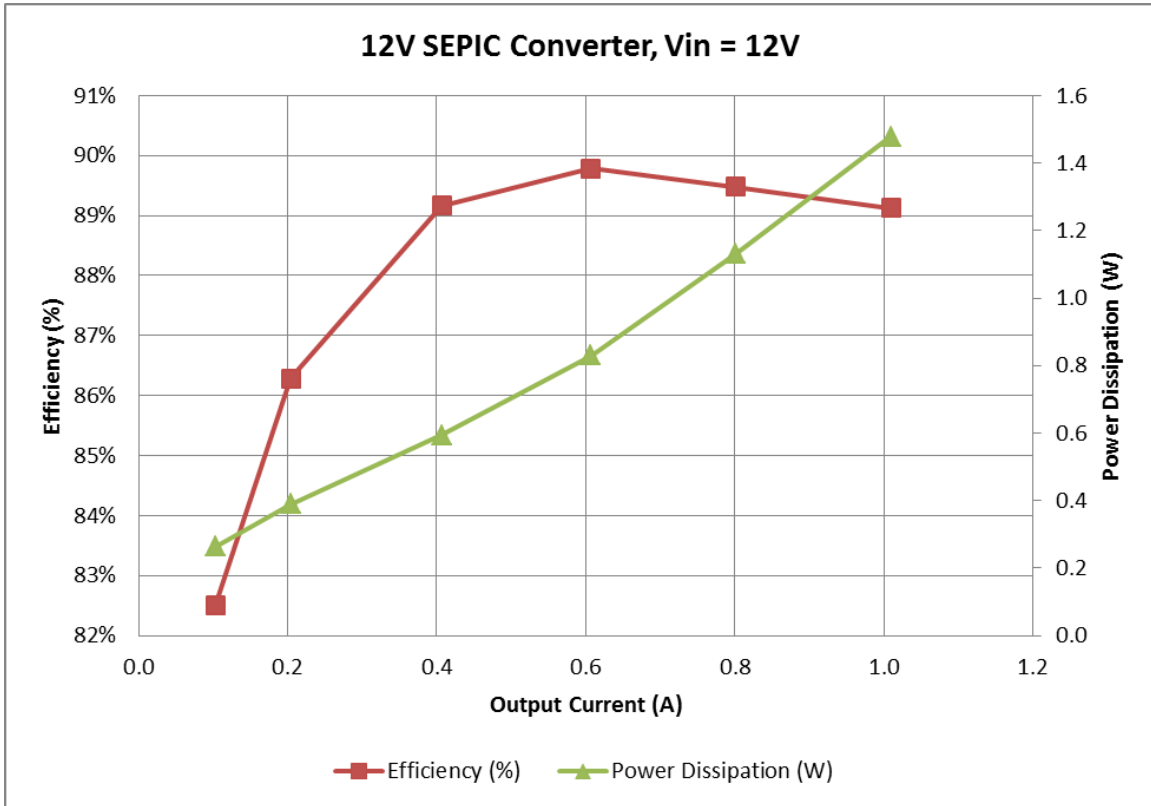


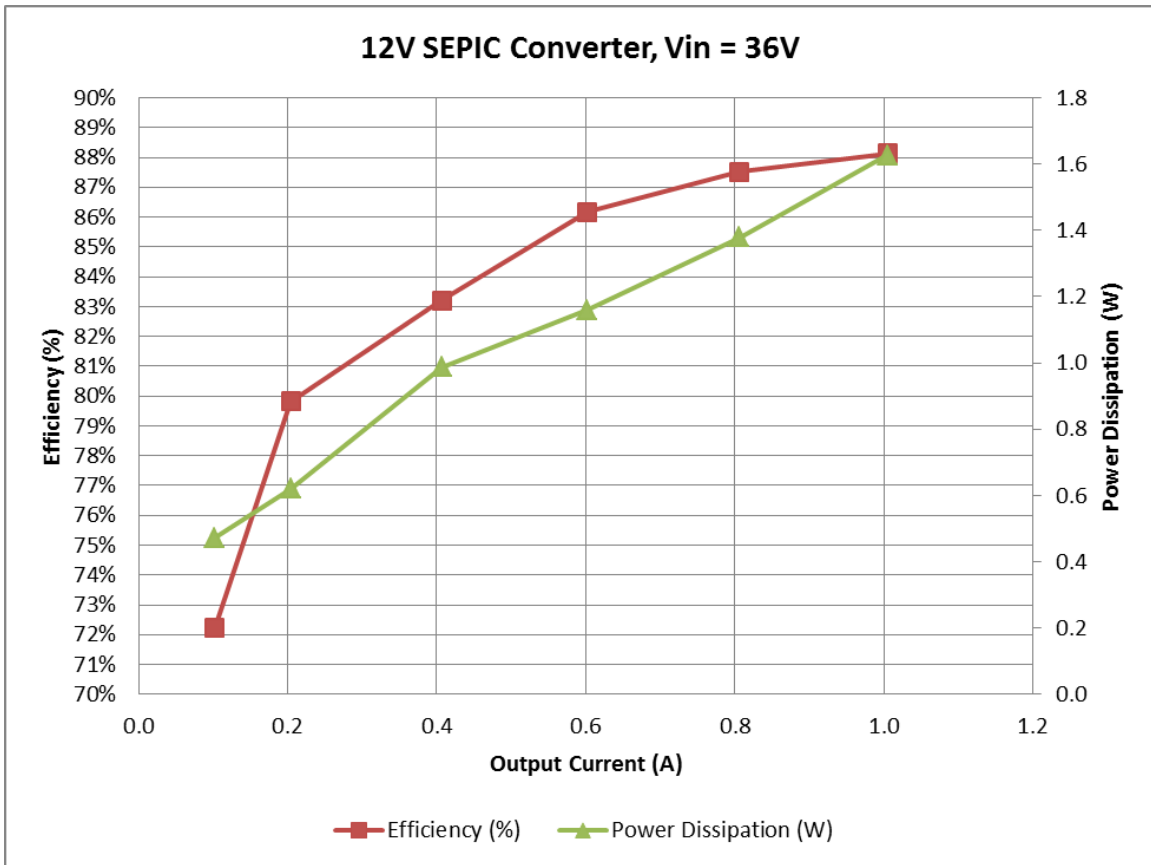
The 12V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 1A and the input voltage set to 48Vdc. (100mV/DIV, 2uS/DIV)



## 3 Efficiency

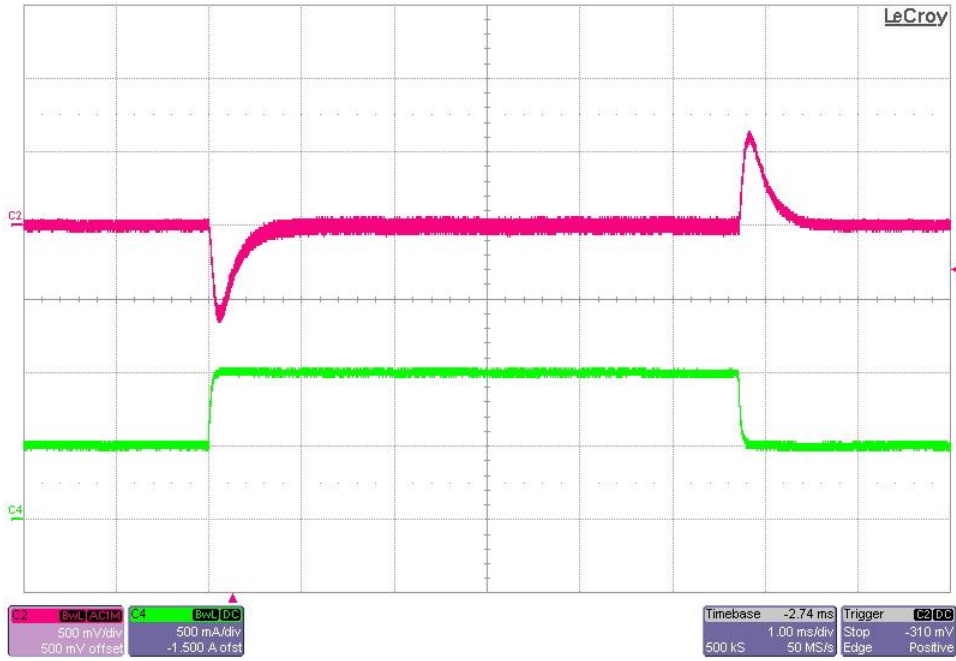
The converter efficiency is shown in the figure below.  $V_{out} = 12V$



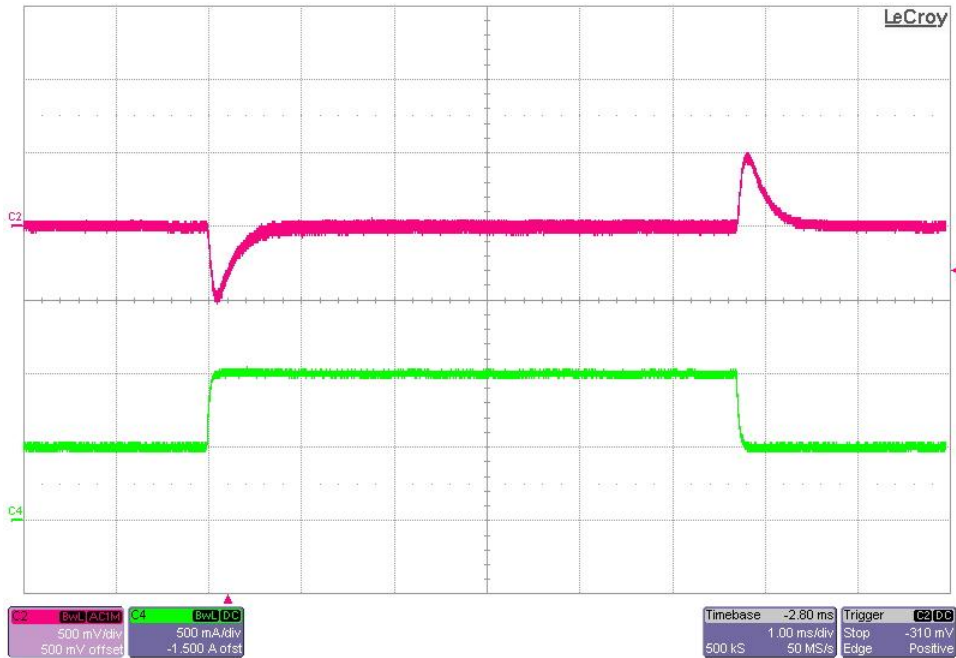


## 4 Load Transients

The photo below shows the 12V output voltage (top, ac coupled) when the load current is stepped between 0.5A to 1A.  $V_{in} = 12V_{dc}$  (500mV/DIV, 500mA/DIV, 1mS/DIV)

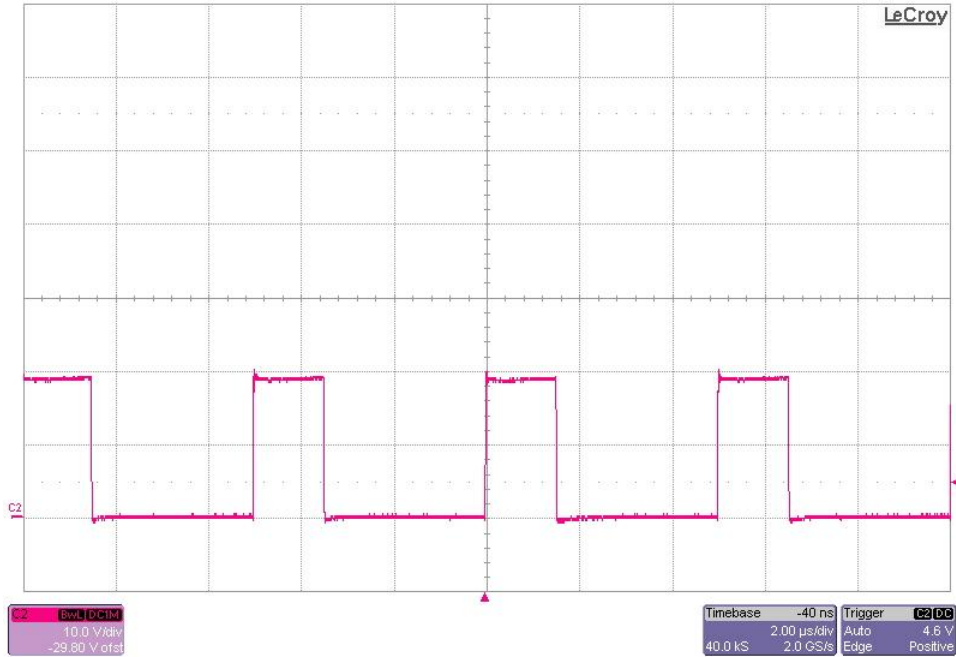


The photo below shows the 12V output voltage (top, ac coupled) when the load current is stepped between 0.5A to 1A.  $V_{in} = 24V_{dc}$  (500mV/DIV, 500mA/DIV, 1mS/DIV)



## 5 Switching Waveforms

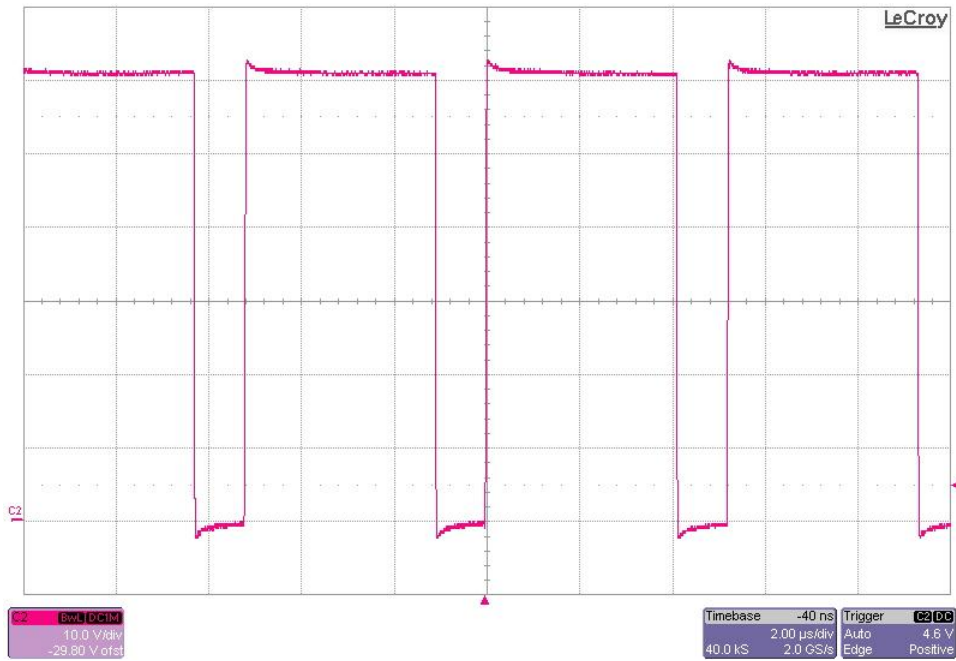
The photo below is the N-ch FET drain waveform. The input voltage is 6V and the output is loaded to 1A. (10V/DIV, 2uS/DIV)



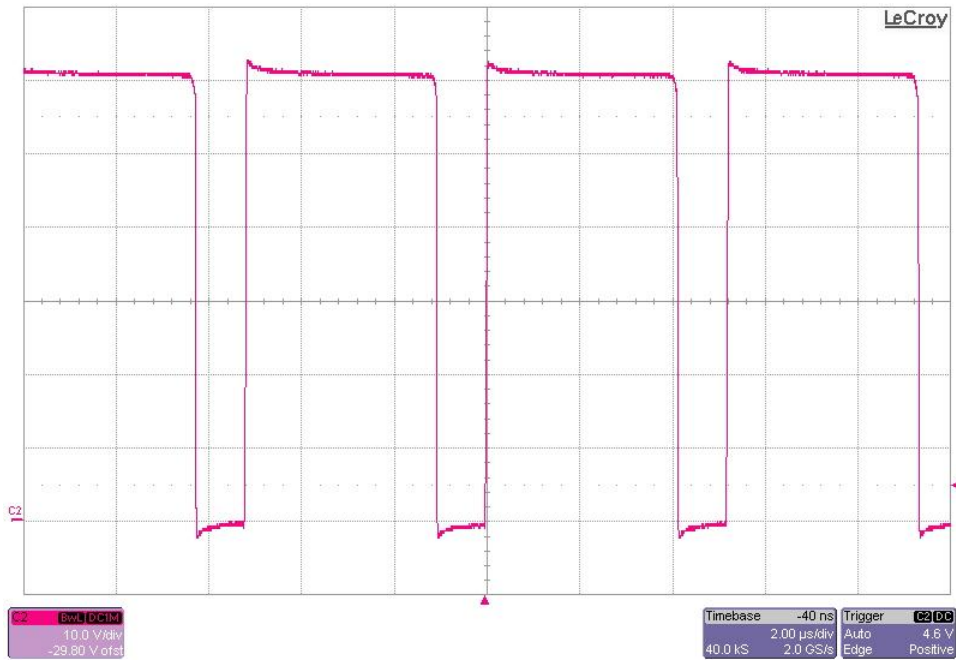
The photo below is the N-ch FET drain waveform. The input voltage is 6V and the output is loaded to 0.067A (the converter is entering discontinuous operation). (10V/DIV, 2uS/DIV)



The photo below is the N-ch FET drain waveform. The input voltage is 48V and the output is loaded to 1A. (10V/DIV, 2uS/DIV)



The photo below is the N-ch FET drain waveform. The input voltage is 48V and the output is loaded to 0.45A (the converter is entering discontinuous operation). (10V/DIV, 2uS/DIV)

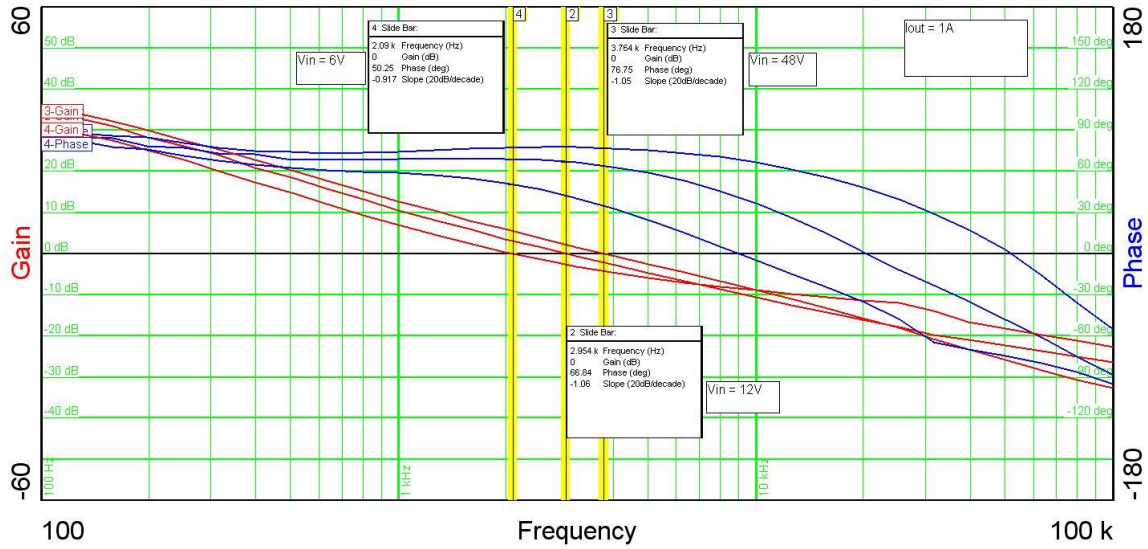




## 6 Loop Gain

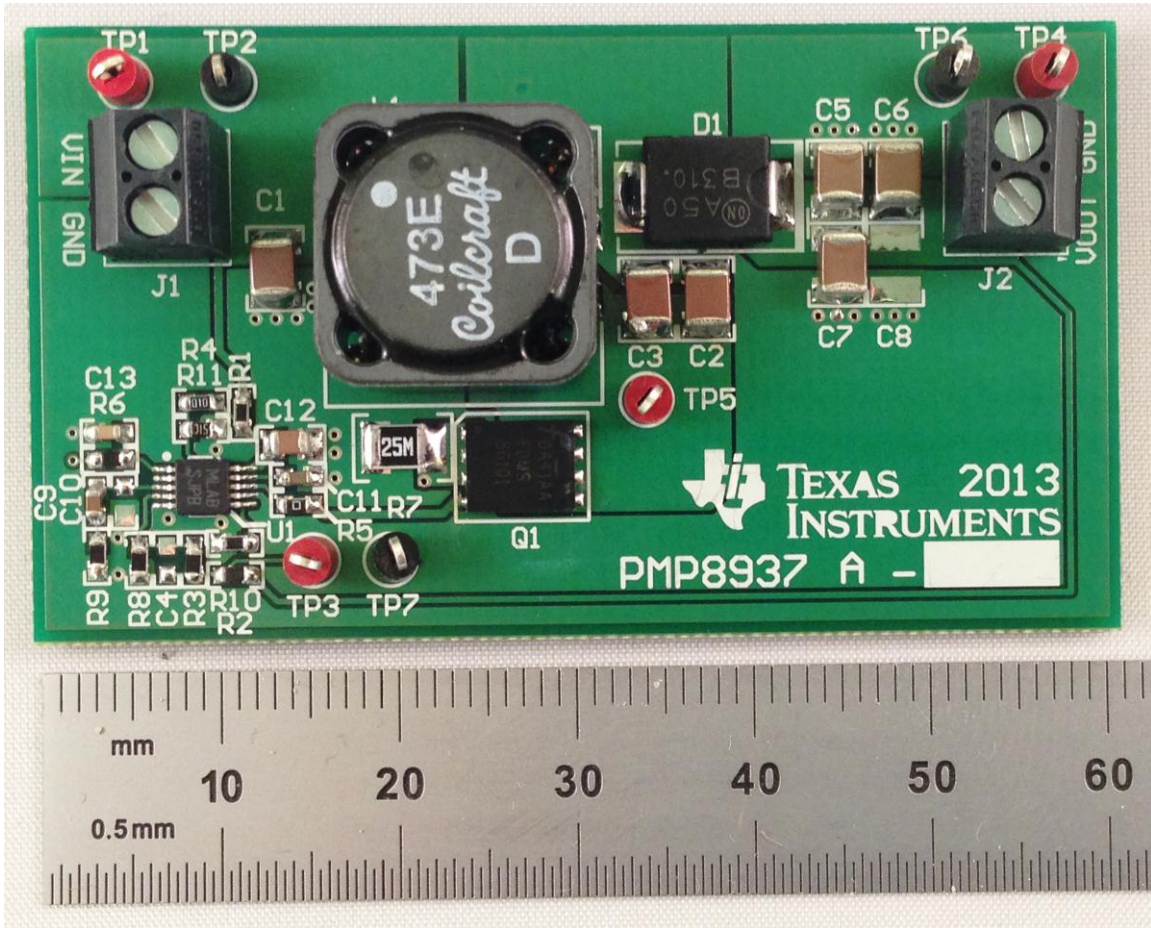
The plot below shows the loop gain with the input voltage at 6V, 12V and 48V with the output loaded to 1A.

Loop Gain (Vin = 6V)	BW: 2.09KHz	PM: 50 degrees
Loop Gain (Vin = 12V)	BW: 2.95KHz	PM: 67 degrees
Loop Gain (Vin = 48V)	BW: 3.76KHz	PM: 77 degrees



## 7 Photo

The photo below shows the PMP8937 REVA assembly.



## 8 Thermal Image

A thermal image is shown below when operating at 12Vin and 1A output, no air flow.



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