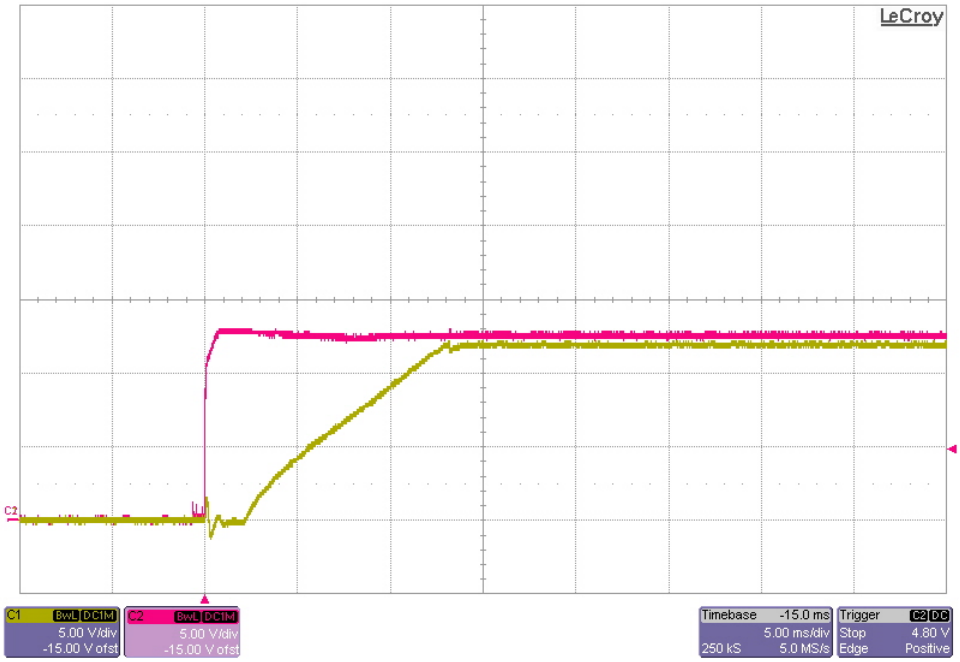
1 Startup

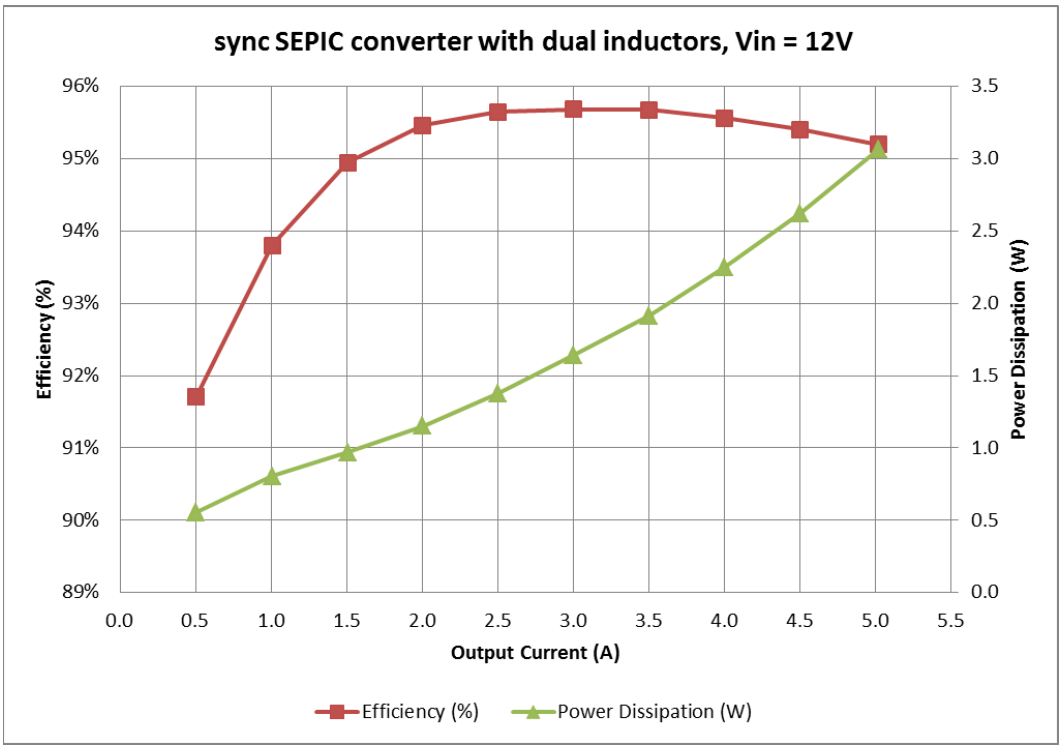
The photo below shows the output voltage startup waveform after the application of 12V in. The 12V output was loaded to 0A. (5V/DIV, 5mS/DIV)



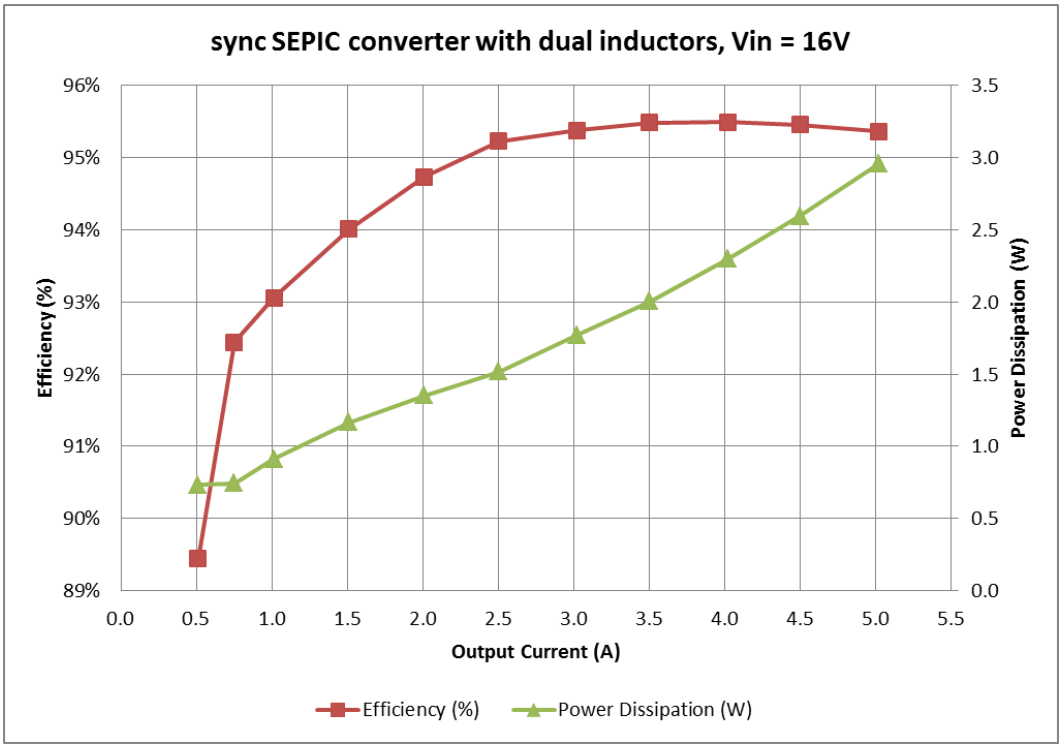
The photo below shows the output voltage startup waveform after the application of 12V in. The 12V output was loaded to 5A. (5V/DIV, 5mS/DIV)

2 Efficiency

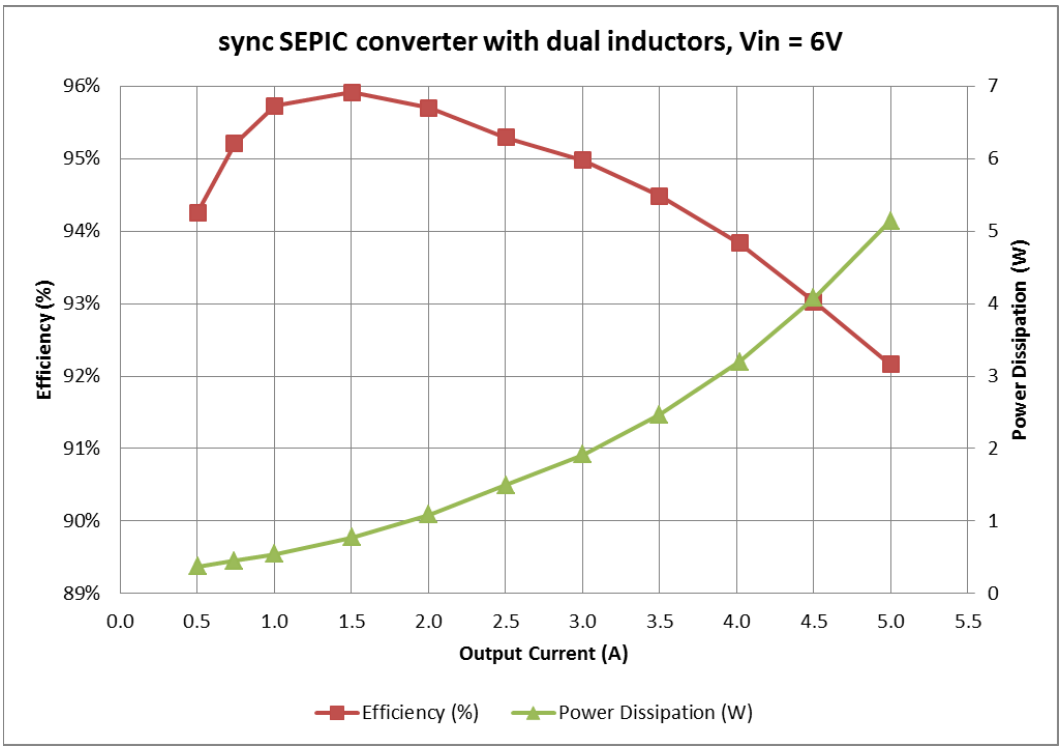
The converter efficiency is shown below for Vin = 12V and Vout = 12V.



The converter efficiency is shown below for Vin = 16V and Vout = 12V.

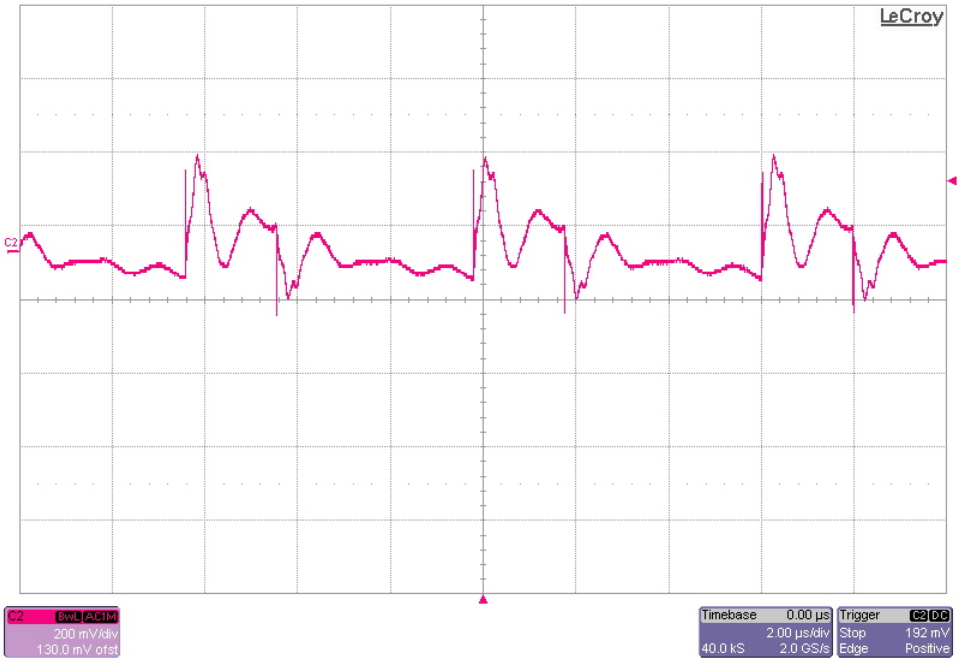


The converter efficiency is shown below for Vin = 6V and Vout = 12V.

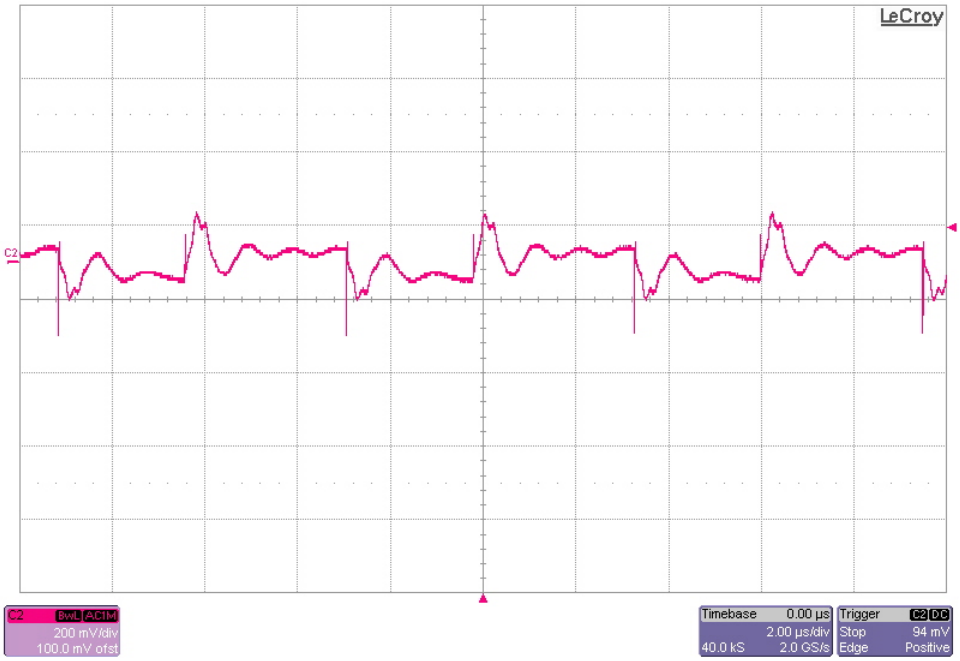


3 Output Ripple Voltage

The 12V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 5A. The input voltage is set to 6V. (200mV/DIV, 2uS/DIV)

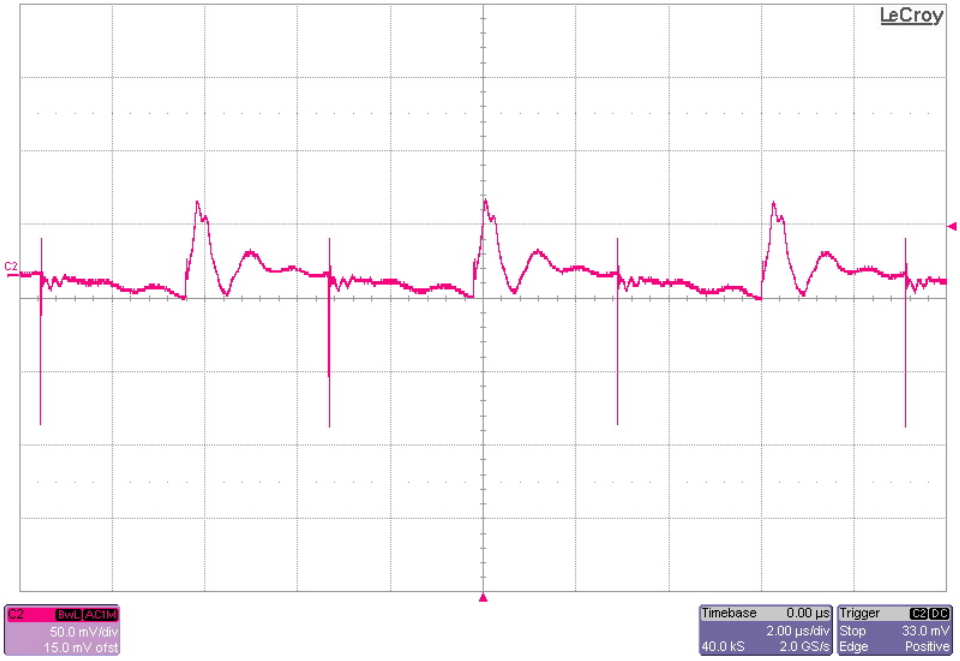


The 12V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 5A. The input voltage is set to 16V. (200mV/DIV, 2uS/DIV)



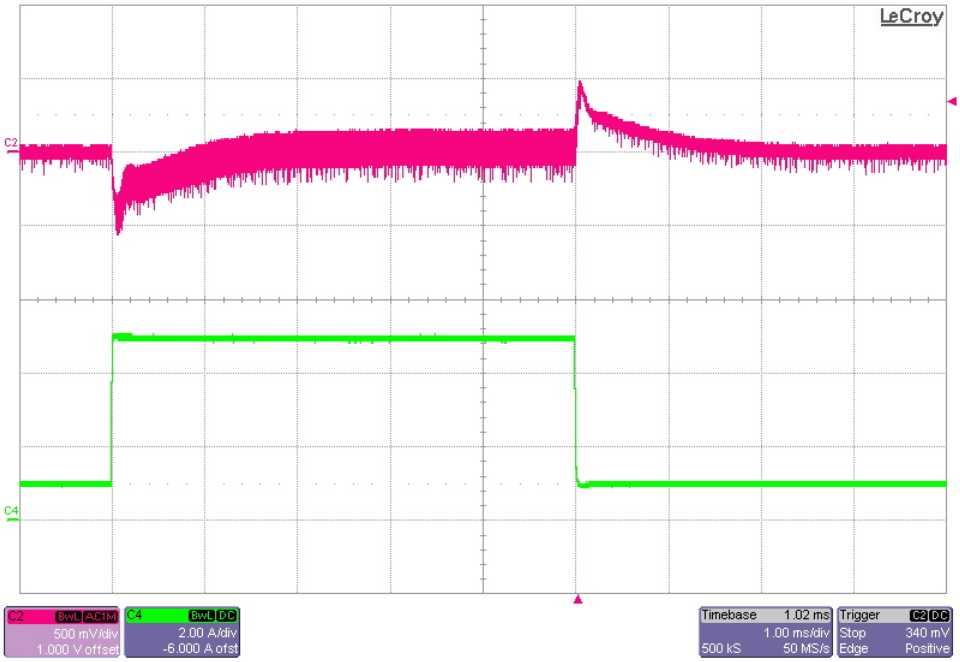
The 12V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 5A. The input voltage is set to 12V. (200mV/DIV, 2uS/DIV)

The 12V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 1A. The input voltage is set to 12V. (50mV/DIV, 2uS/DIV)

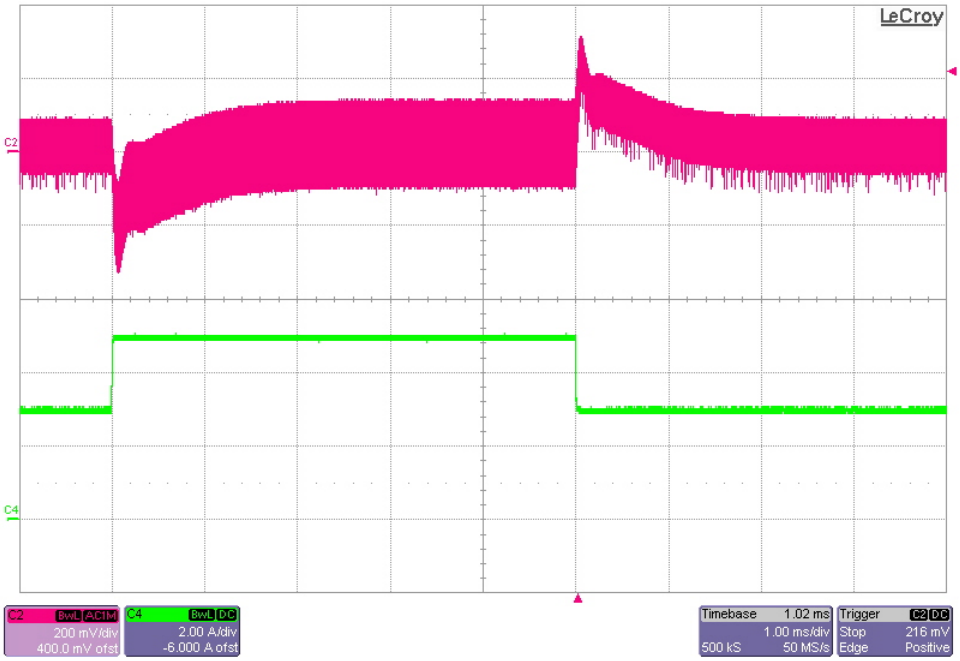


4 Load Transients

The photo below shows the 12V output voltage (ac coupled) when the load current is stepped between 1A and 5A. Vin = 12V. (500mV/DIV, 2A/DIV, 1mS/DIV)

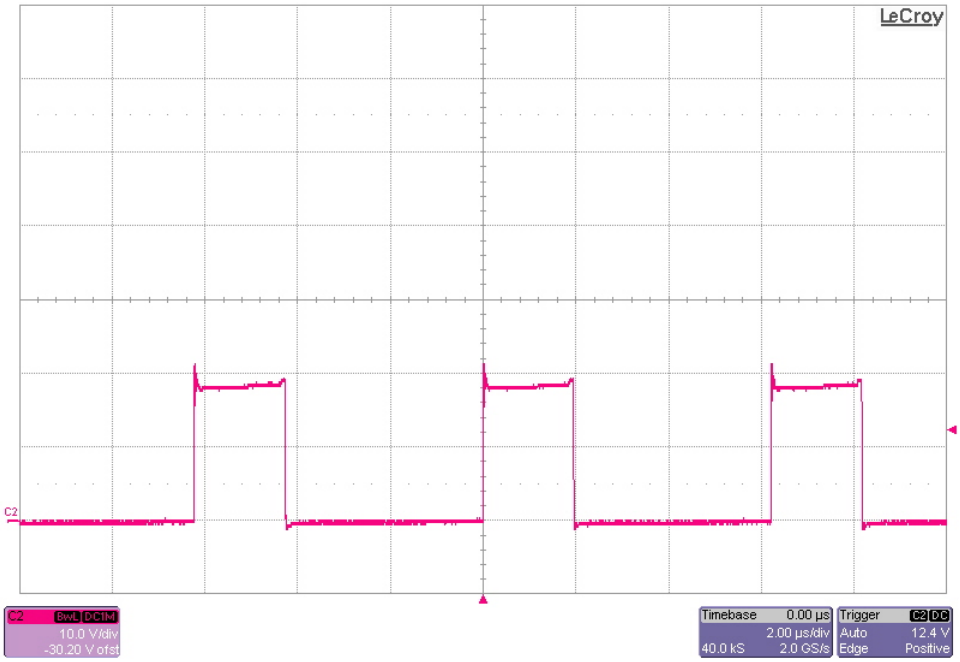


The photo below shows the 12V output voltage (ac coupled) when the load current is stepped between 3A and 5A. Vin = 12V. (200mV/DIV, 2A/DIV, 1mS/DIV)

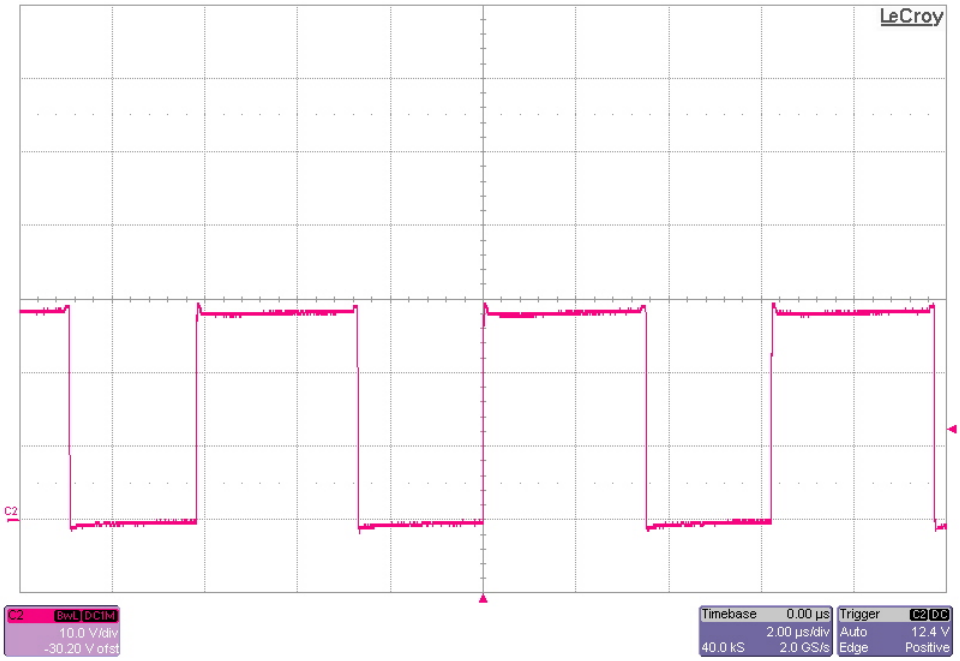


5 Switch Node Waveforms

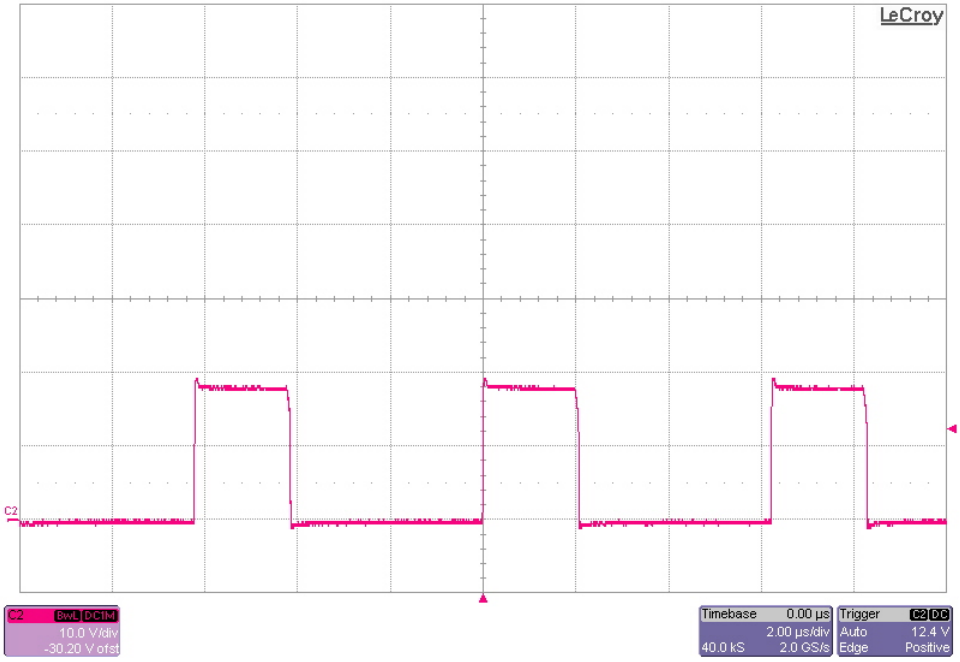
The photo below shows the FET switching voltage (TP2) for an input voltage of 6V and a 5A load. (10V/DIV, 2uS/DIV)



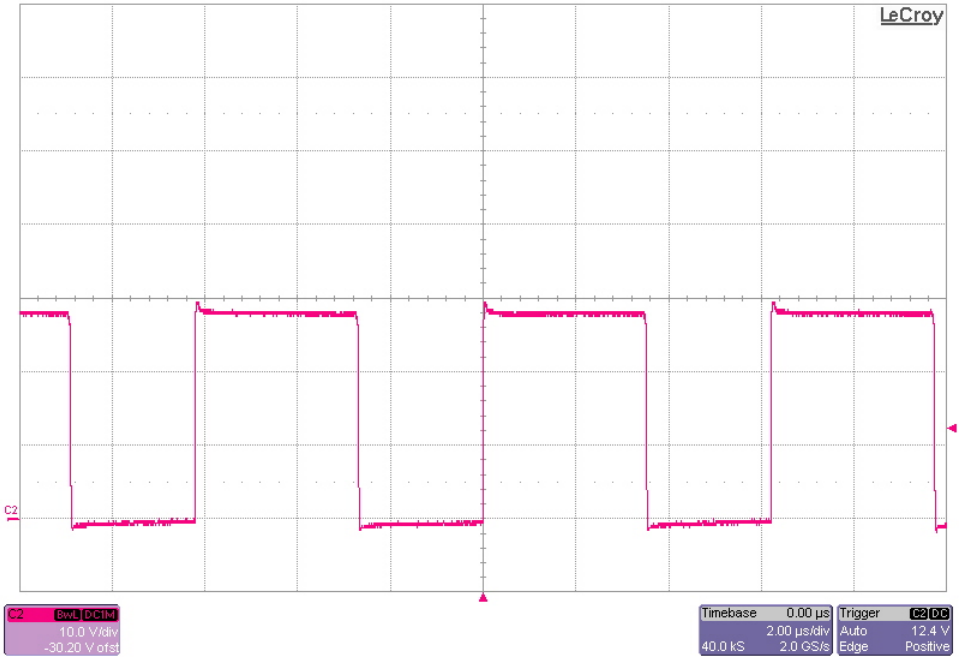
The photo below shows the FET switching voltage (TP2) for an input voltage of 16V and a 5A load. (10V/DIV, 2uS/DIV)



The photo below shows the FET switching voltage (TP2) for an input voltage of 6V and a 0.32A load. The converter is operating in DCM. (10V/DIV, 2uS/DIV)



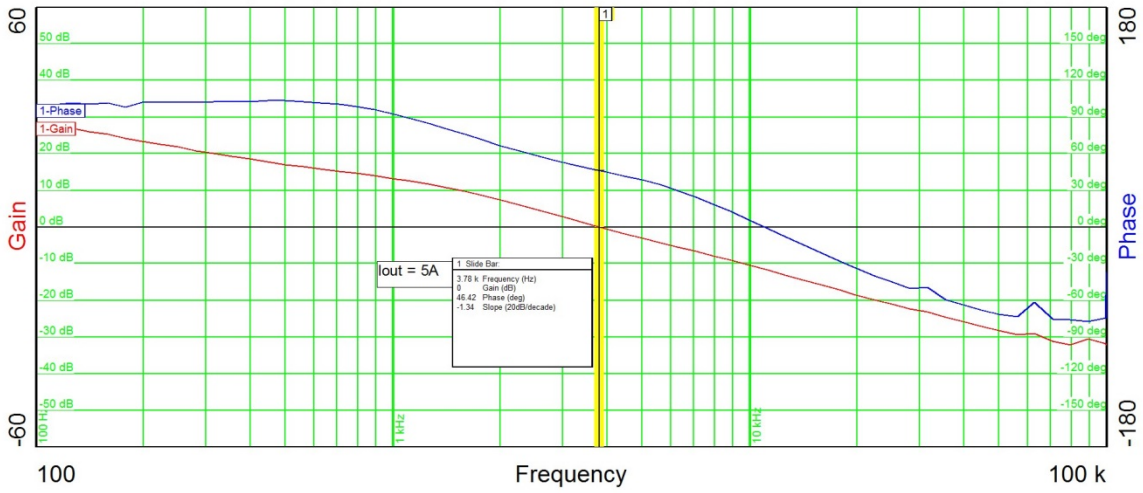
The photo below shows the FET switching voltage (TP2) for an input voltage of 16V and a 1.05A load. The converter is operating in DCM. (10V/DIV, 2uS/DIV)



6 Loop Gain

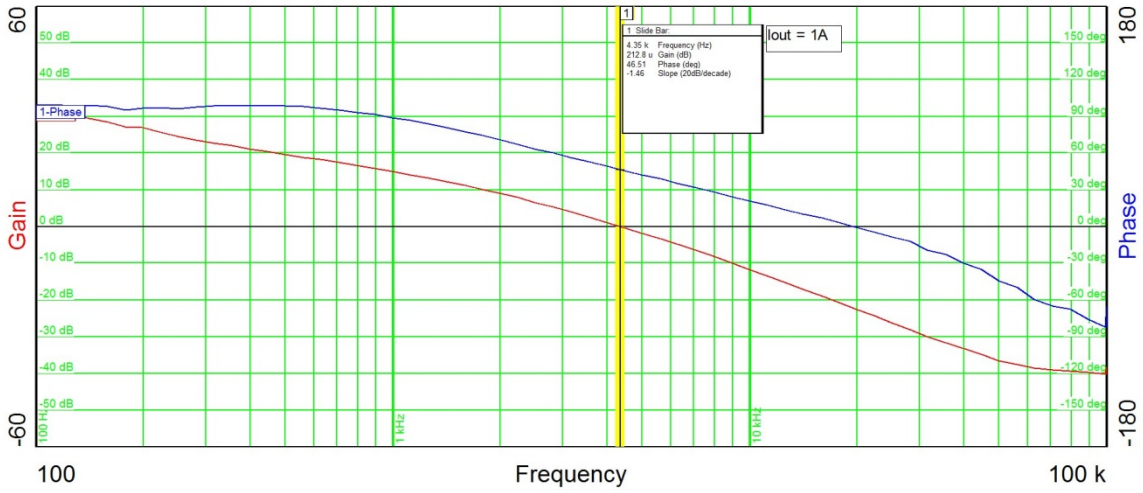
The plot below shows the loop gain with the input voltage set to 12V and the output set to 5A.

Loop Gain (Vin = 12V) BW: 3.78KHz PM: 46 degrees



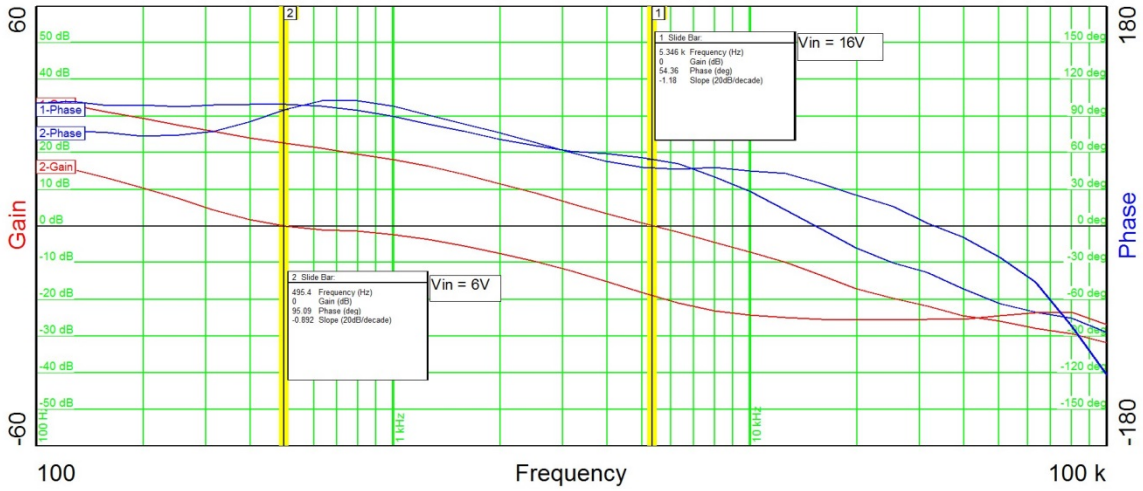
The plot below shows the loop gain with the input voltage set to 12V and the output set to 1A.

Loop Gain (Vin = 12V) BW: 4.35KHz PM: 47 degrees



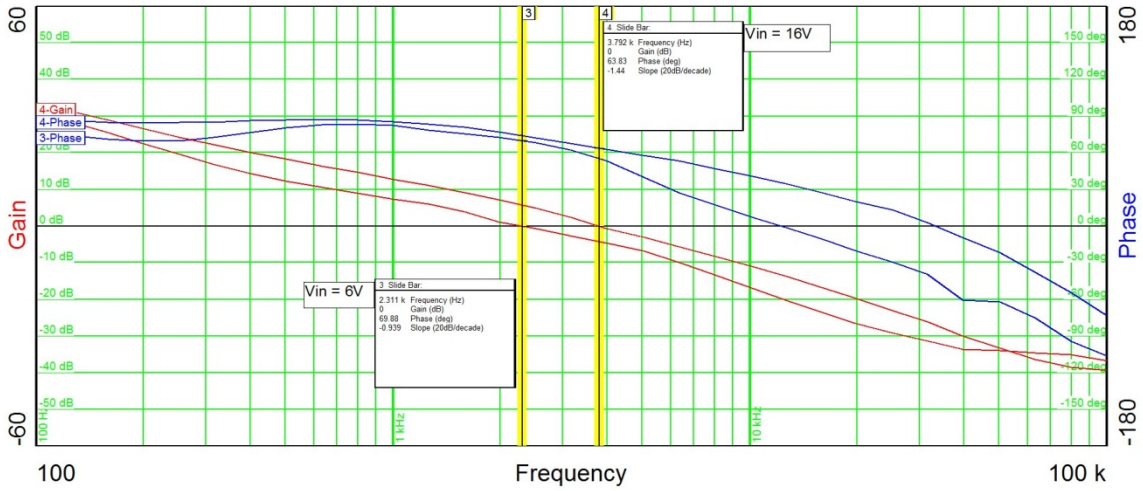
The plot below shows the loop gain with the input voltage set to 6V and 16V and the output set to 5A.

Loop Gain (Vin = 6V)	BW: 495Hz	PM: 95 degrees
Loop Gain (Vin = 16V)	BW: 5.37KHz	PM: 54 degrees



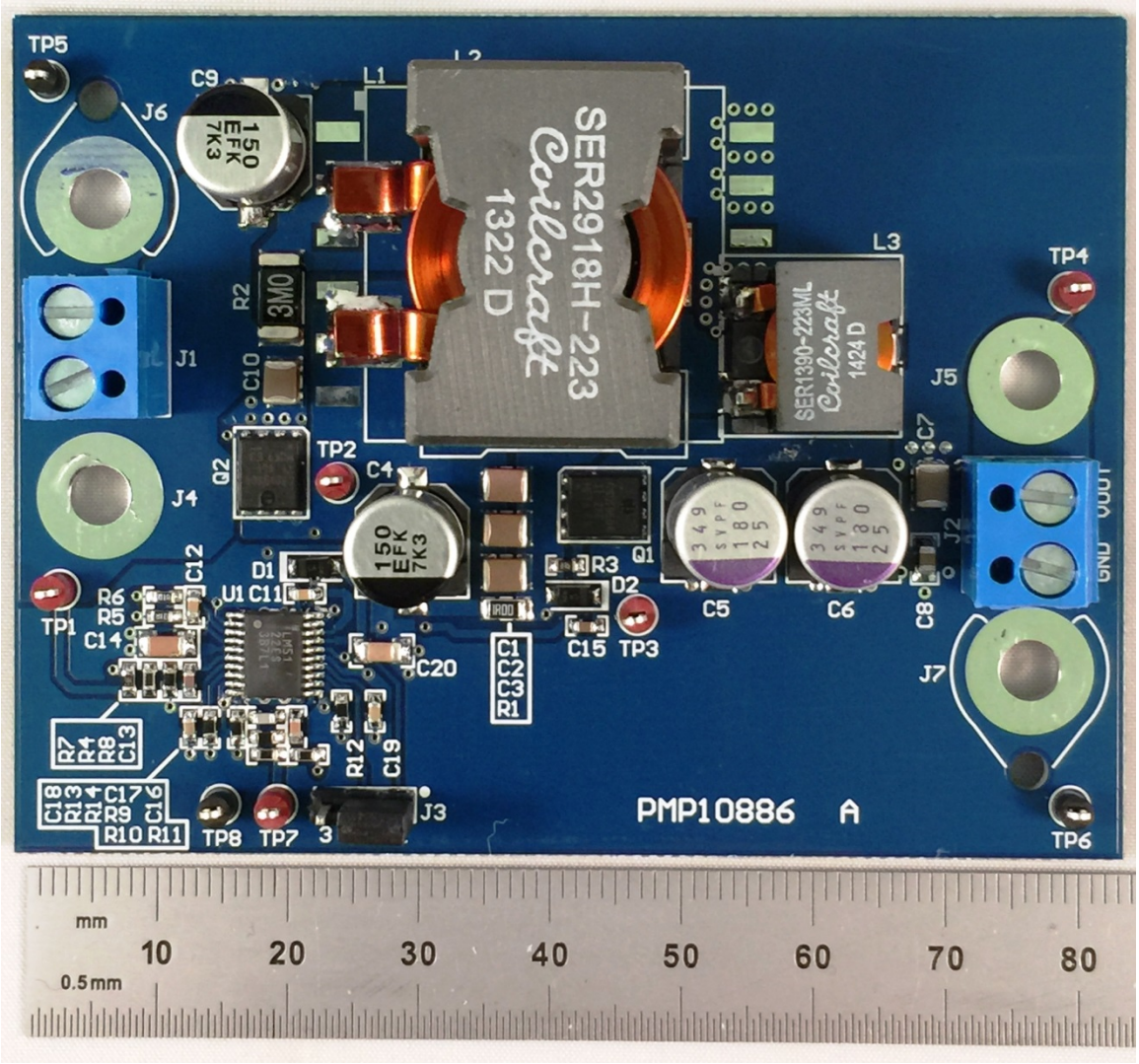
The plot below shows the loop gain with the input voltage set to 6V and 16V and the output set to 1A.

Loop Gain (Vin = 6V)	BW: 2.31KHz	PM: 70 degrees
Loop Gain (Vin = 16V)	BW: 3.79KHz	PM: 64 degrees



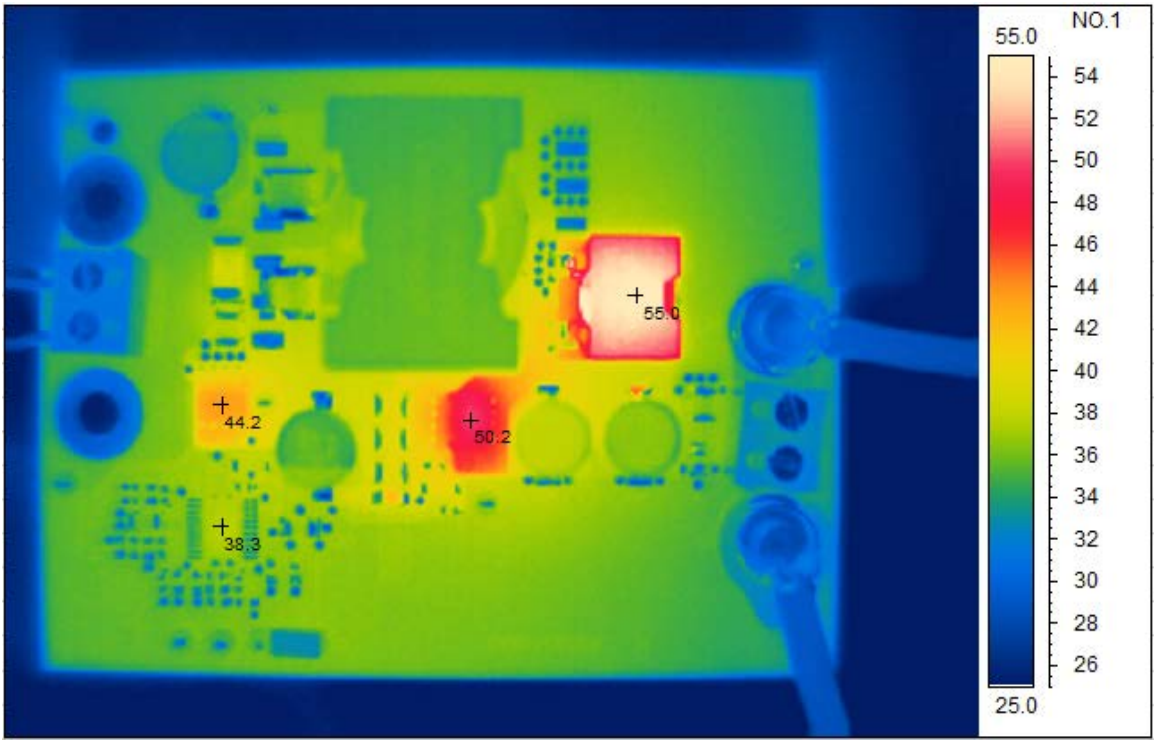
7 Photo

The photo below shows the PMP10886 REVA assy.



8 Thermal Image

A thermal image is shown below operating at 12V input and 12V@5A output (room temp, no airflow).



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