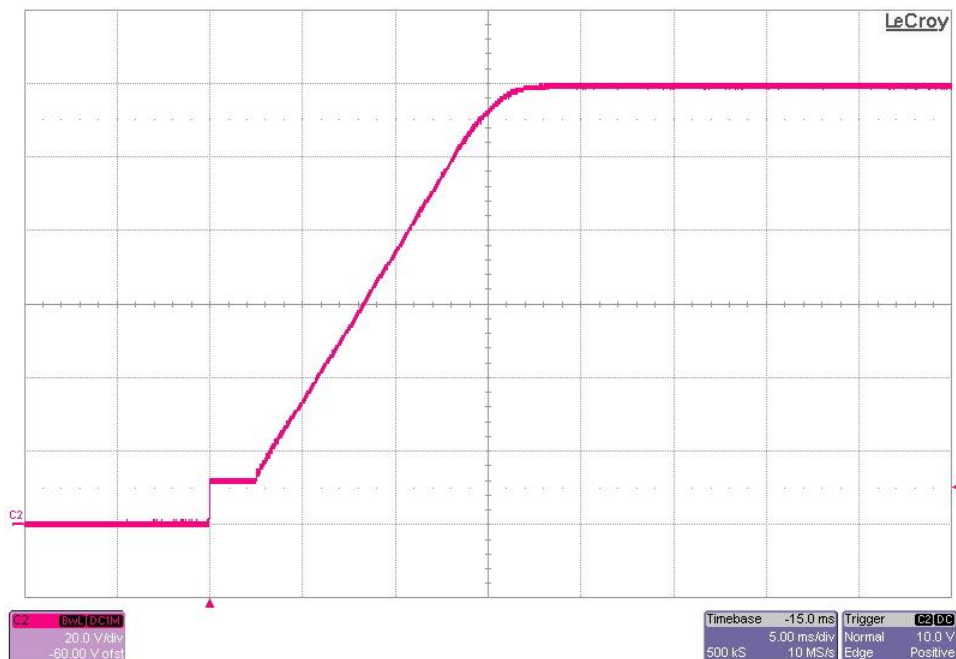
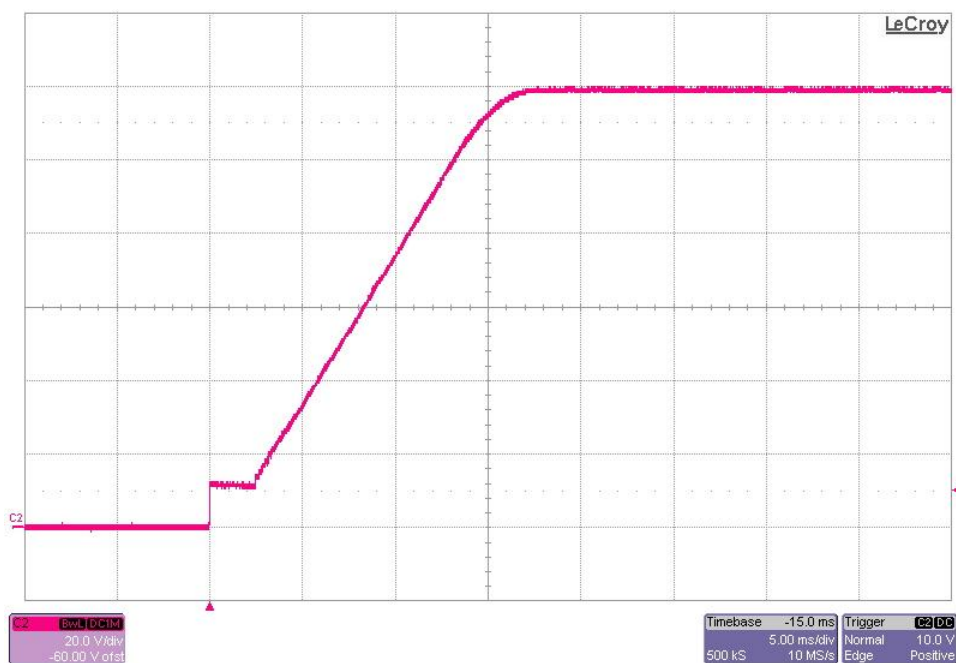


## 1 Startup

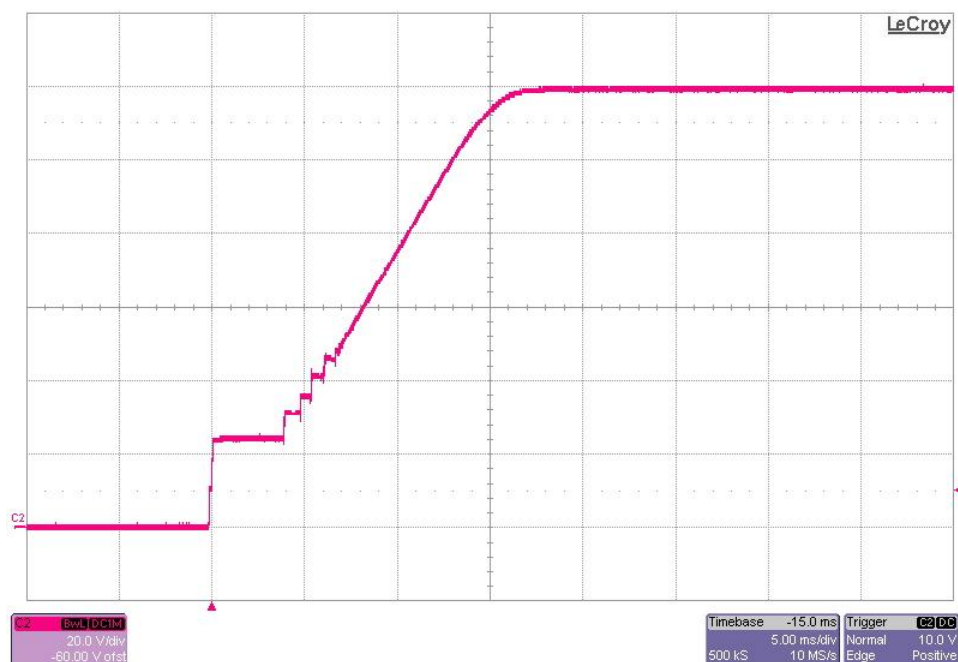
The photo below shows the 120V output voltage startup waveforms after the application of 12Vdc in. The output was loaded with a 0A load. (20V/DIV, 5mS/DIV)



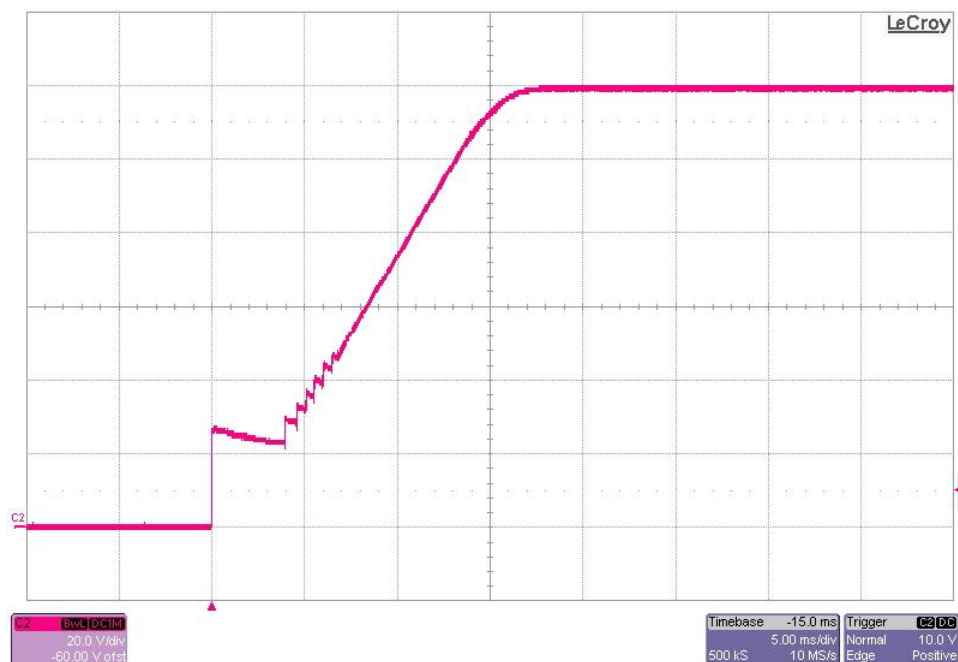
The photo below shows the 120V output voltage startup waveforms after the application of 12Vdc in. The output was loaded with a 10mA load. (20V/DIV, 5mS/DIV)



The photo below shows the 120V output voltage startup waveforms after the application of 24Vdc in. The output was loaded with a 0A load. (20V/DIV, 5mS/DIV)

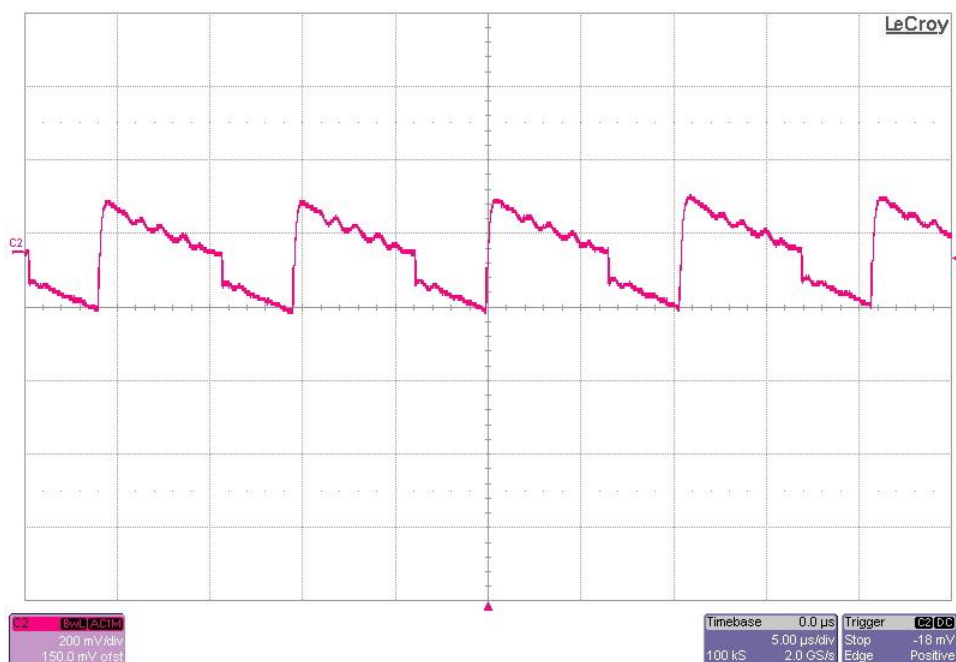


The photo below shows the 120V output voltage startup waveforms after the application of 24Vdc in. The output was loaded with a 10mA load. (20V/DIV, 5mS/DIV)

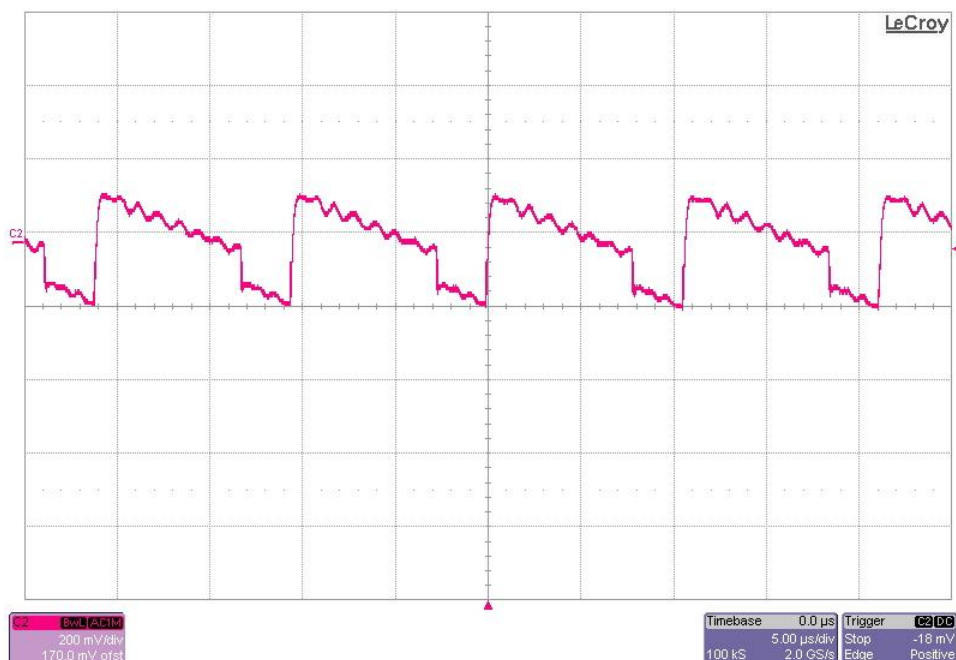


## 2 Output Ripple Voltage

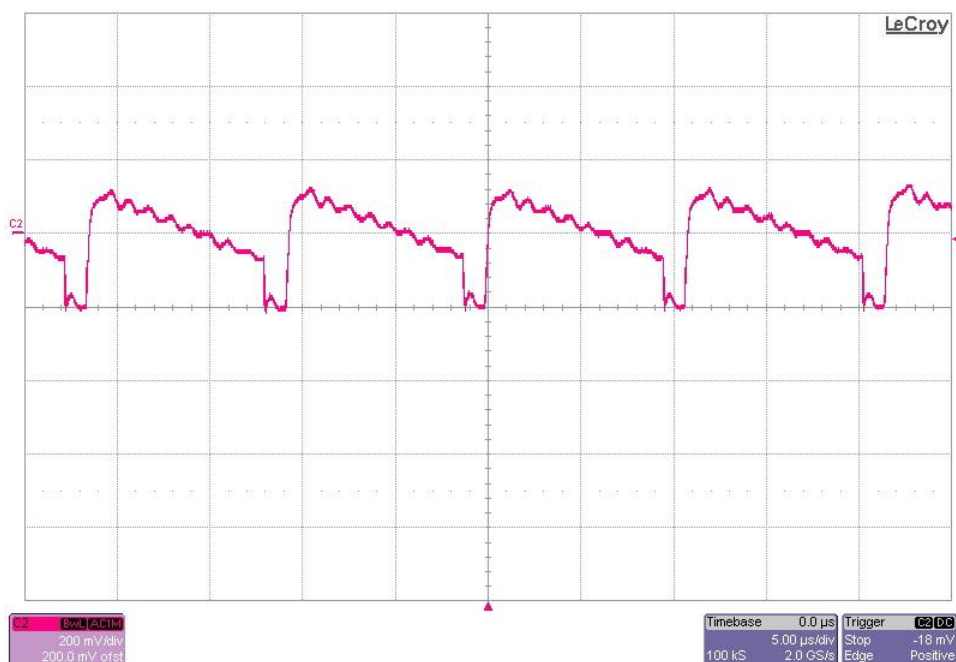
The 120V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 10mA and the input voltage set to 9Vdc. (200mV/DIV, 5uS/DIV)



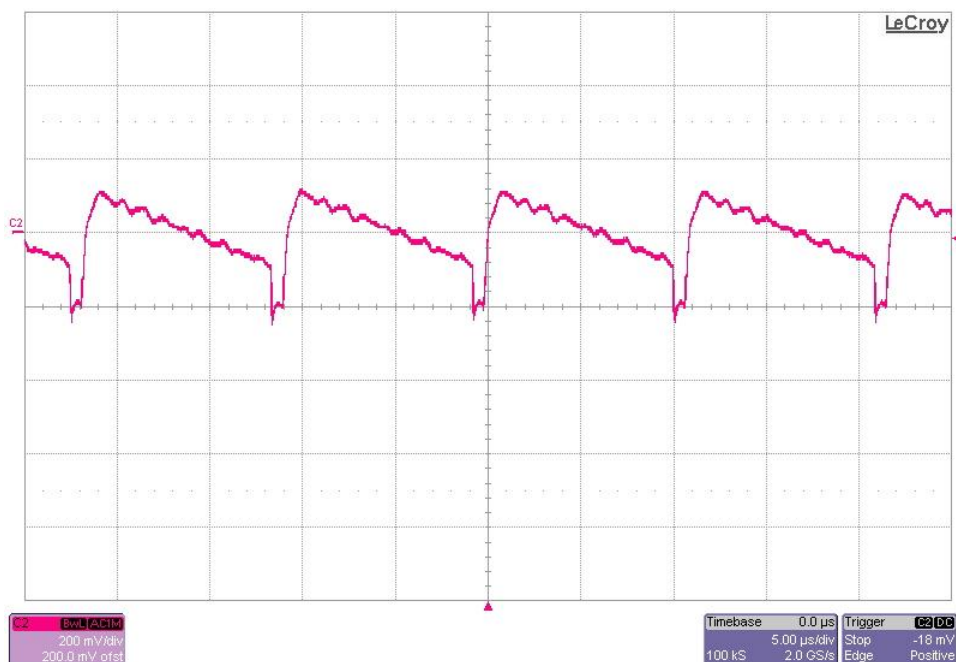
The 120V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 10mA and the input voltage set to 12Vdc. (200mV/DIV, 5uS/DIV)



The 120V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 10mA and the input voltage set to 24Vdc. (200mV/DIV, 5uS/DIV)

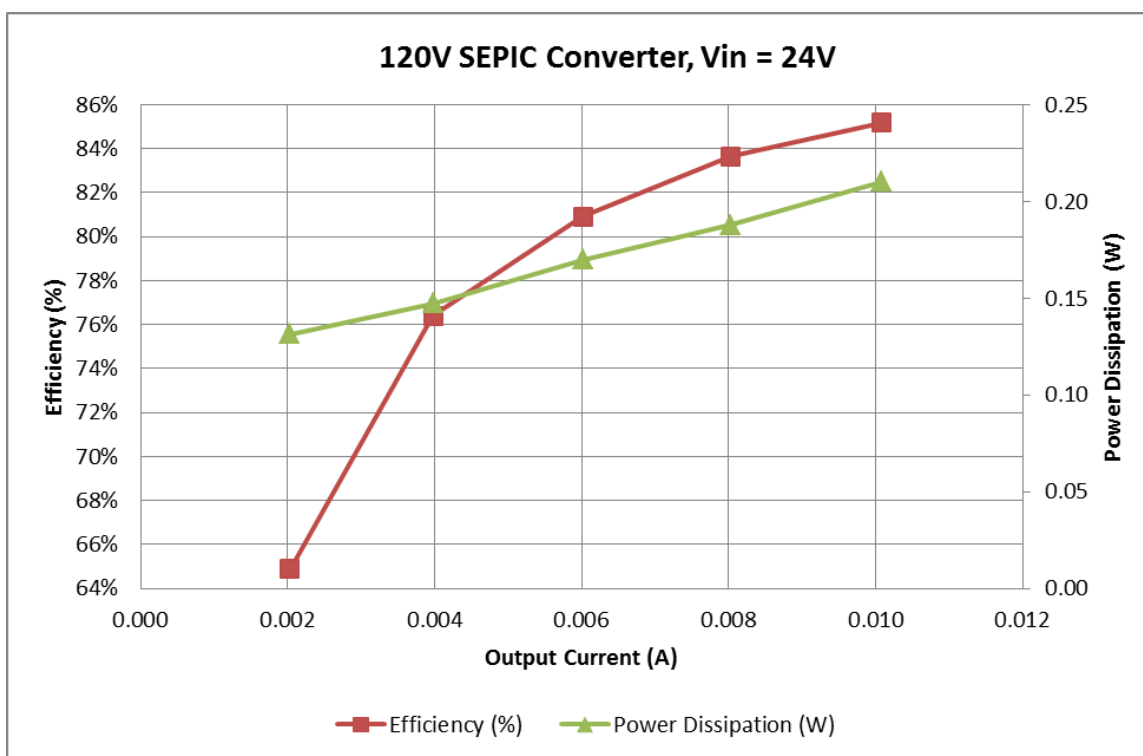
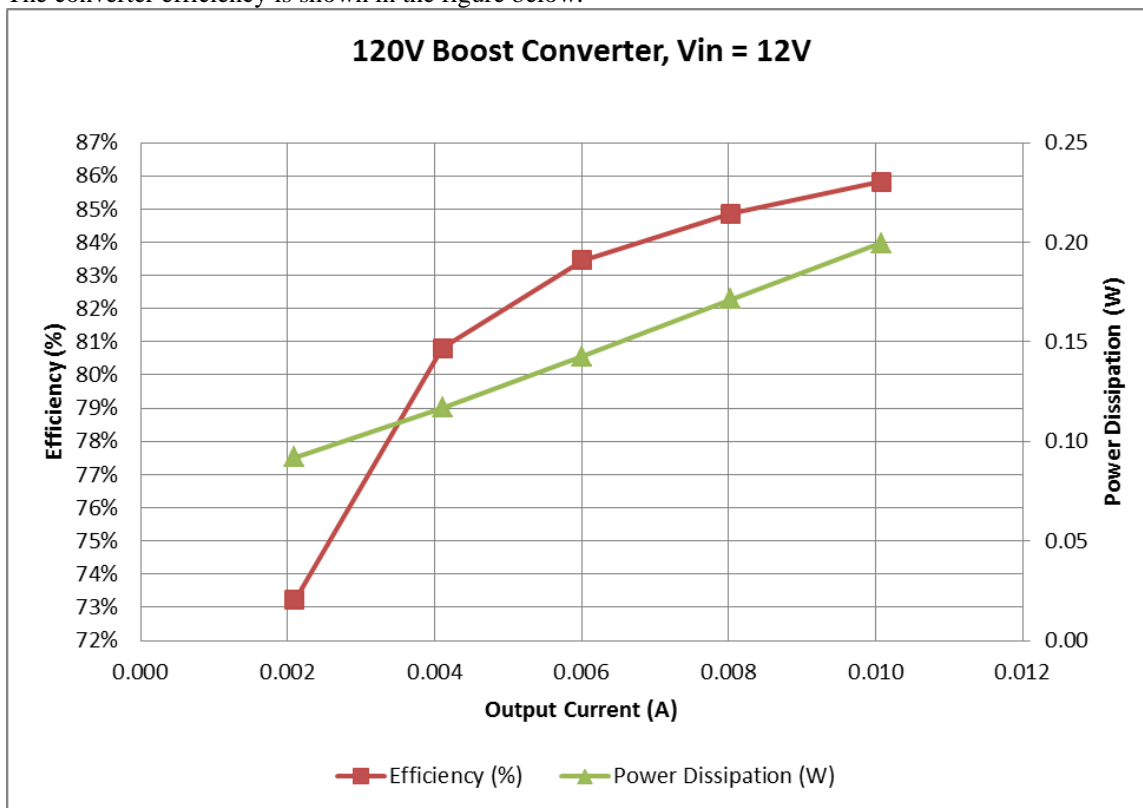


The 120V output ripple voltage is shown in the figure below. The image was taken with the output loaded to 10mA and the input voltage set to 36Vdc. (200mV/DIV, 5uS/DIV)



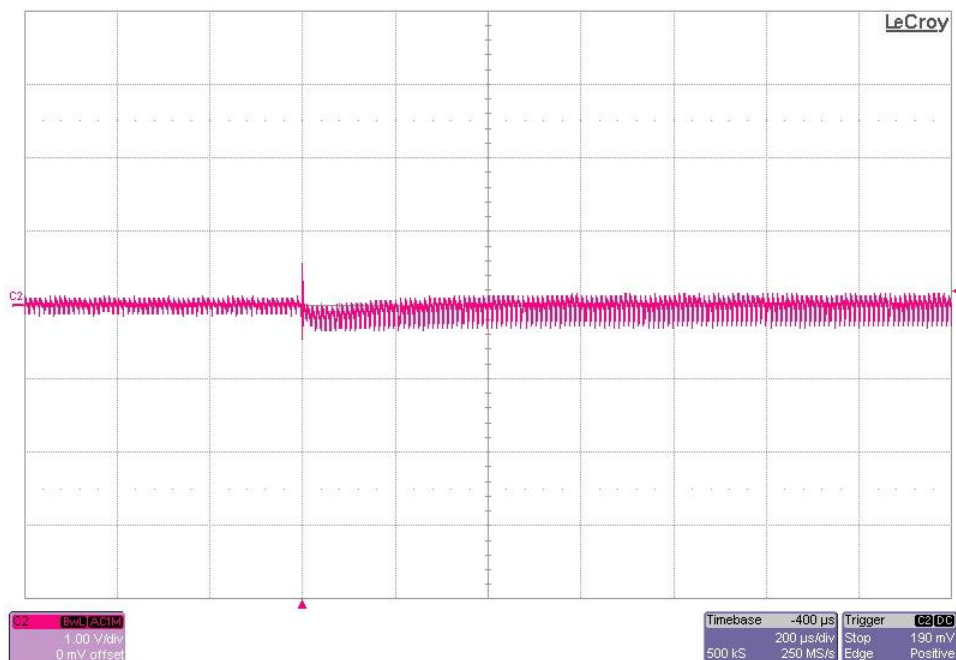
### 3 Efficiency

The converter efficiency is shown in the figure below.

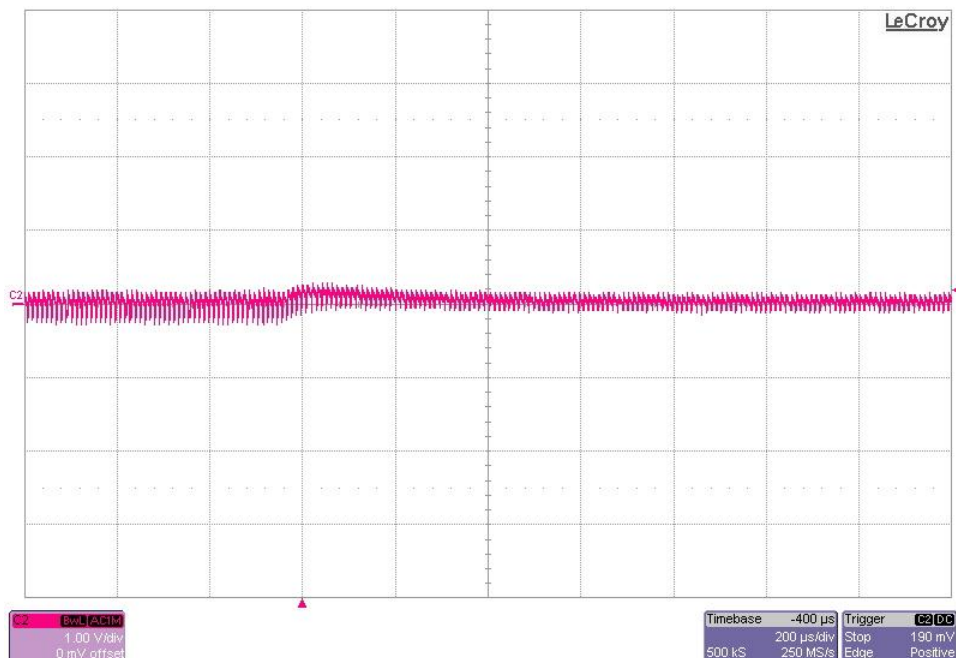


## 4 Load Transients

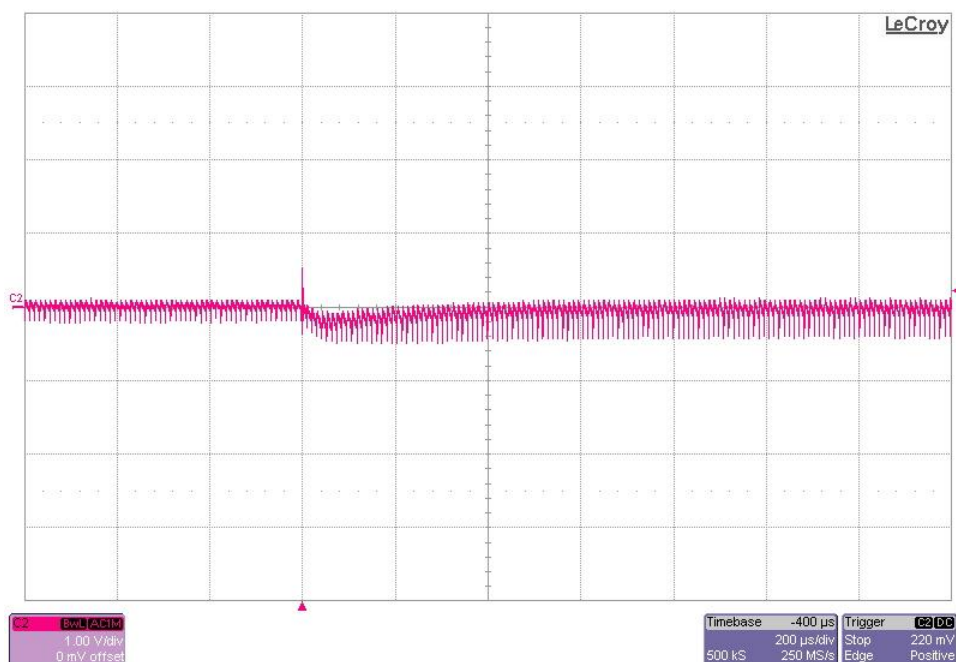
The photo below shows the 120V output voltage (ac coupled) when the load current is stepped from 5mA to 10mA.  $V_{in} = 12V_{dc}$  (1V/DIV, 200uS/DIV)



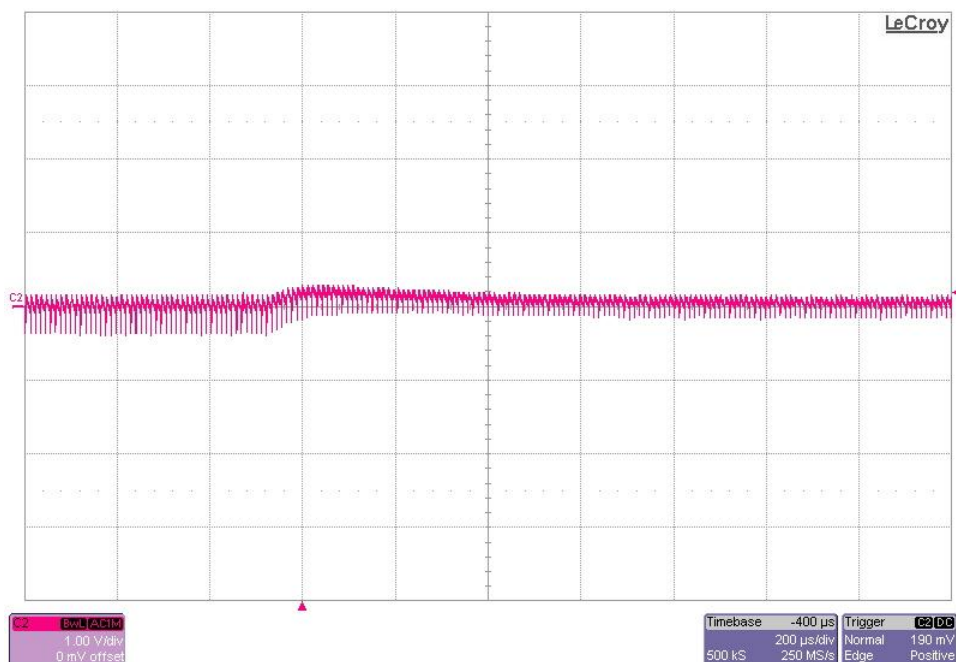
The photo below shows the 120V output voltage (ac coupled) when the load current is stepped from 10mA to 5mA.  $V_{in} = 12V_{dc}$  (1V/DIV, 200uS/DIV)



The photo below shows the 120V output voltage (ac coupled) when the load current is stepped from 5mA to 10mA.  $V_{in} = 36V_{dc}$  (1V/DIV, 200uS/DIV)



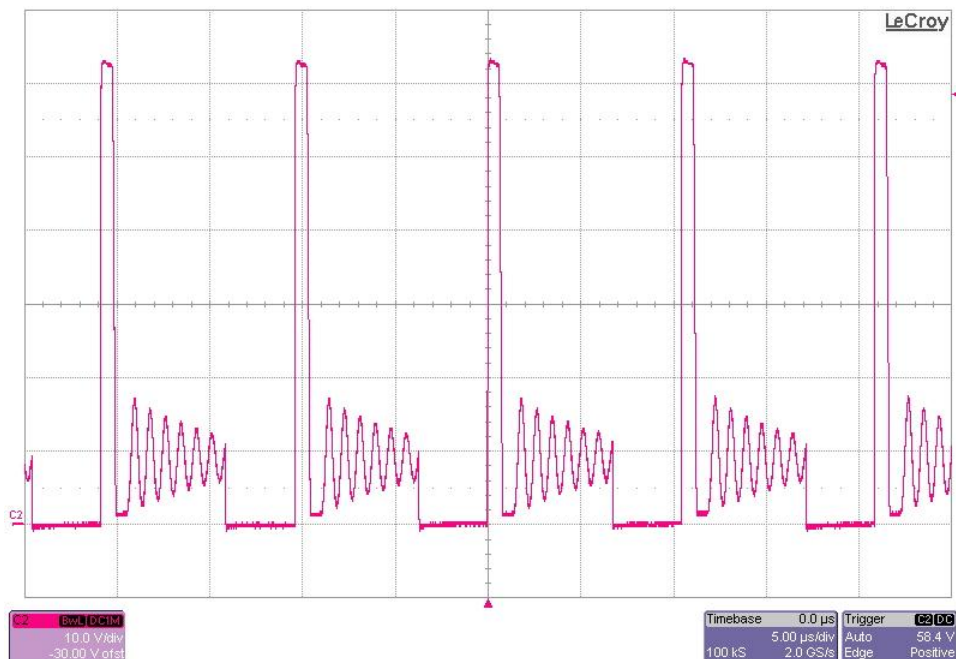
The photo below shows the 120V output voltage (ac coupled) when the load current is stepped from 10mA to 5mA.  $V_{in} = 36V_{dc}$  (1V/DIV, 200uS/DIV)



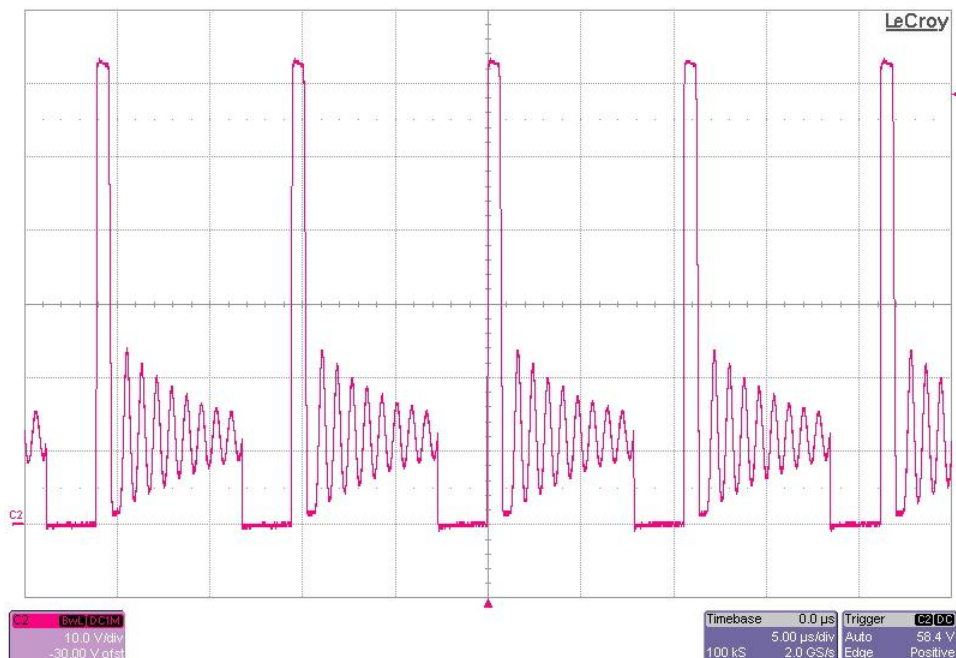


## 5 Switching Waveforms

The photo below is the N-ch FET (Q1) drain waveform. The input voltage is 9V and the output is loaded to 10mA. (10V/DIV, 5uS/DIV)

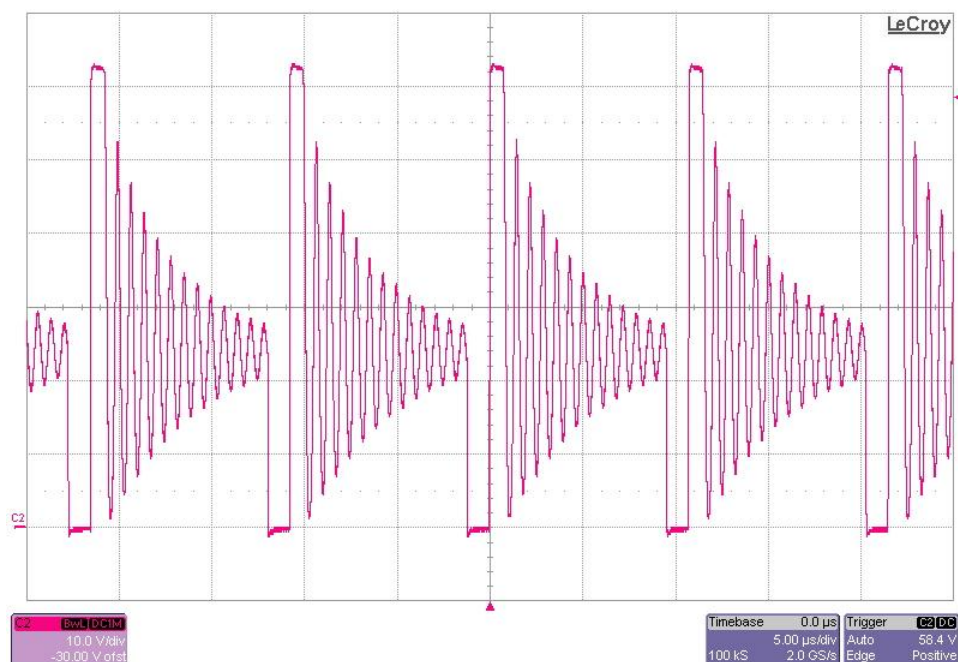


The photo below is the N-ch FET (Q1) drain waveform. The input voltage is 12V and the output is loaded to 10mA. (10V/DIV, 5uS/DIV)

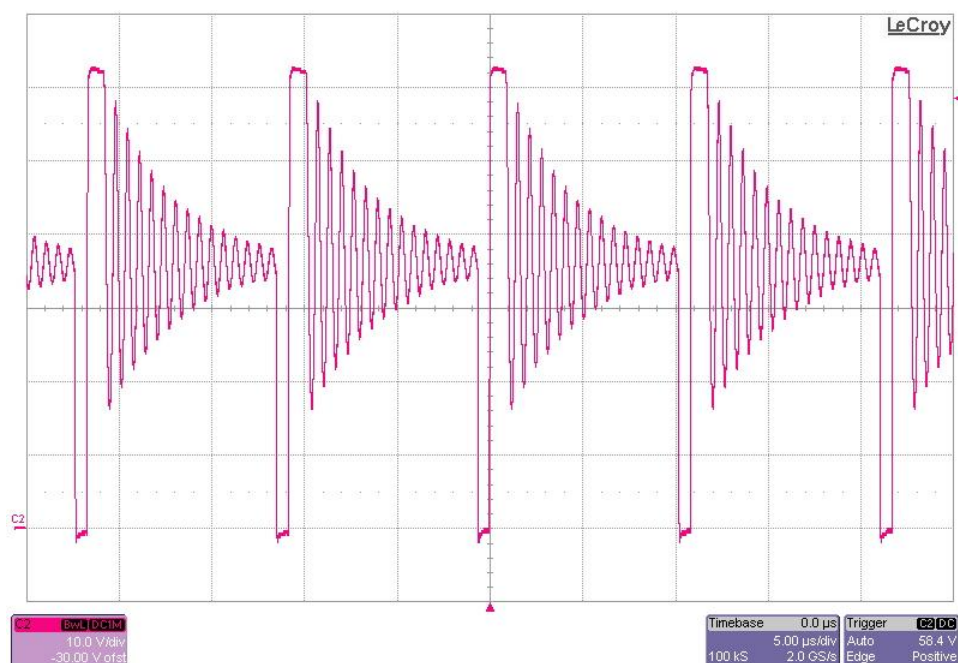




The photo below is the N-ch FET (Q1) drain waveform. The input voltage is 24V and the output is loaded to 10mA. (10V/DIV, 5uS/DIV)



The photo below is the N-ch FET (Q1) drain waveform. The input voltage is 36V and the output is loaded to 10mA. (10V/DIV, 5uS/DIV)



## 6 Loop Gain

The plot below shows the loop gain with the input voltage at 12V and 24V with the output loaded to 10mA.

Loop Gain (Vin = 12V)

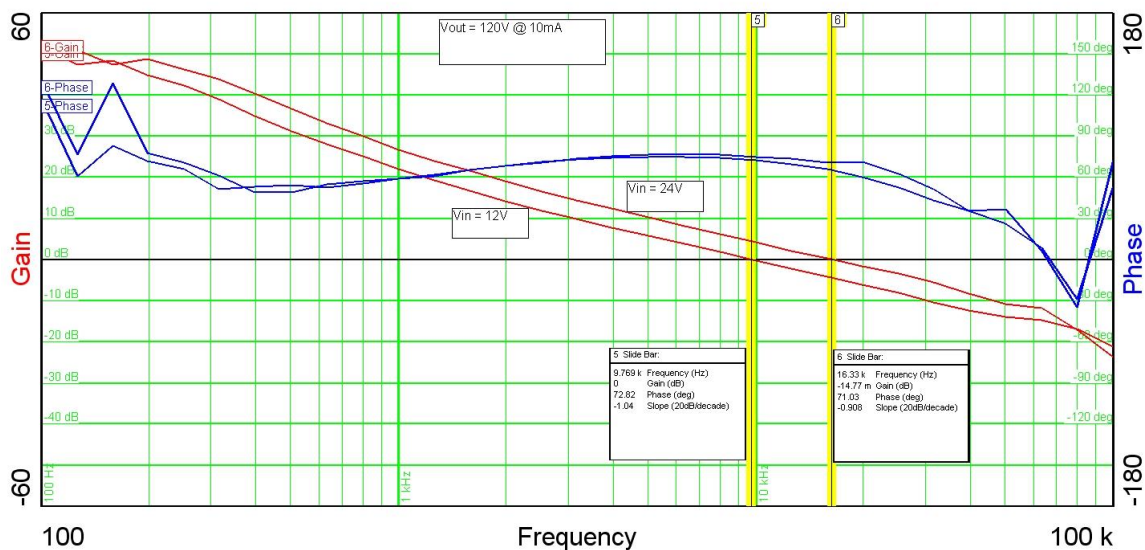
BW: 9.77KHz

PM: 73 degrees

Loop Gain (Vin = 24V)

BW: 16.3KHz

PM: 71 degrees



The plot below shows the loop gain with the input voltage at 12V and 24V with the output loaded to 5mA.

Loop Gain (Vin = 12V)

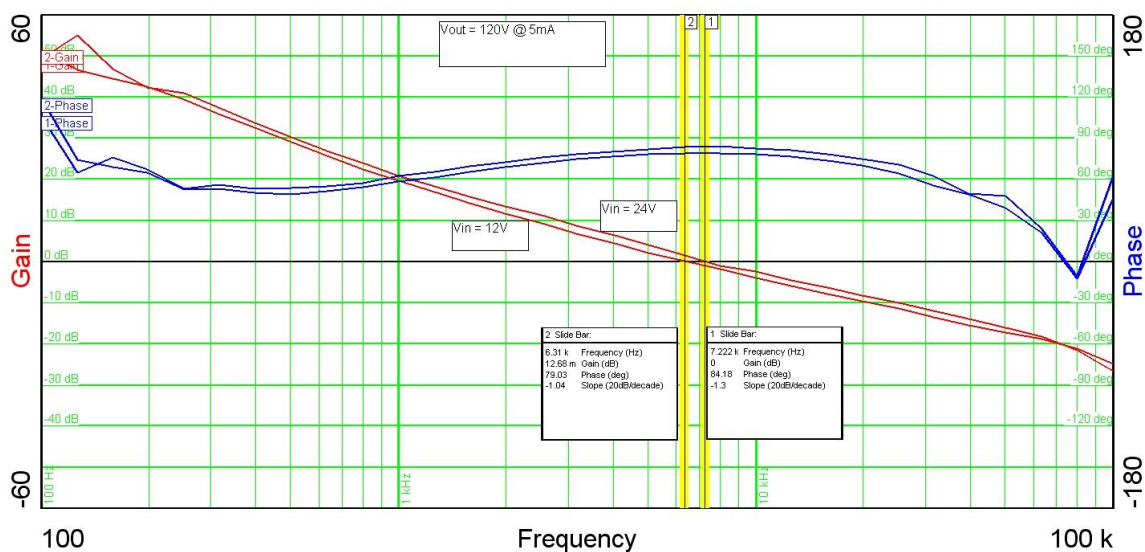
BW: 6.31KHz

PM: 79 degrees

Loop Gain (Vin = 24V)

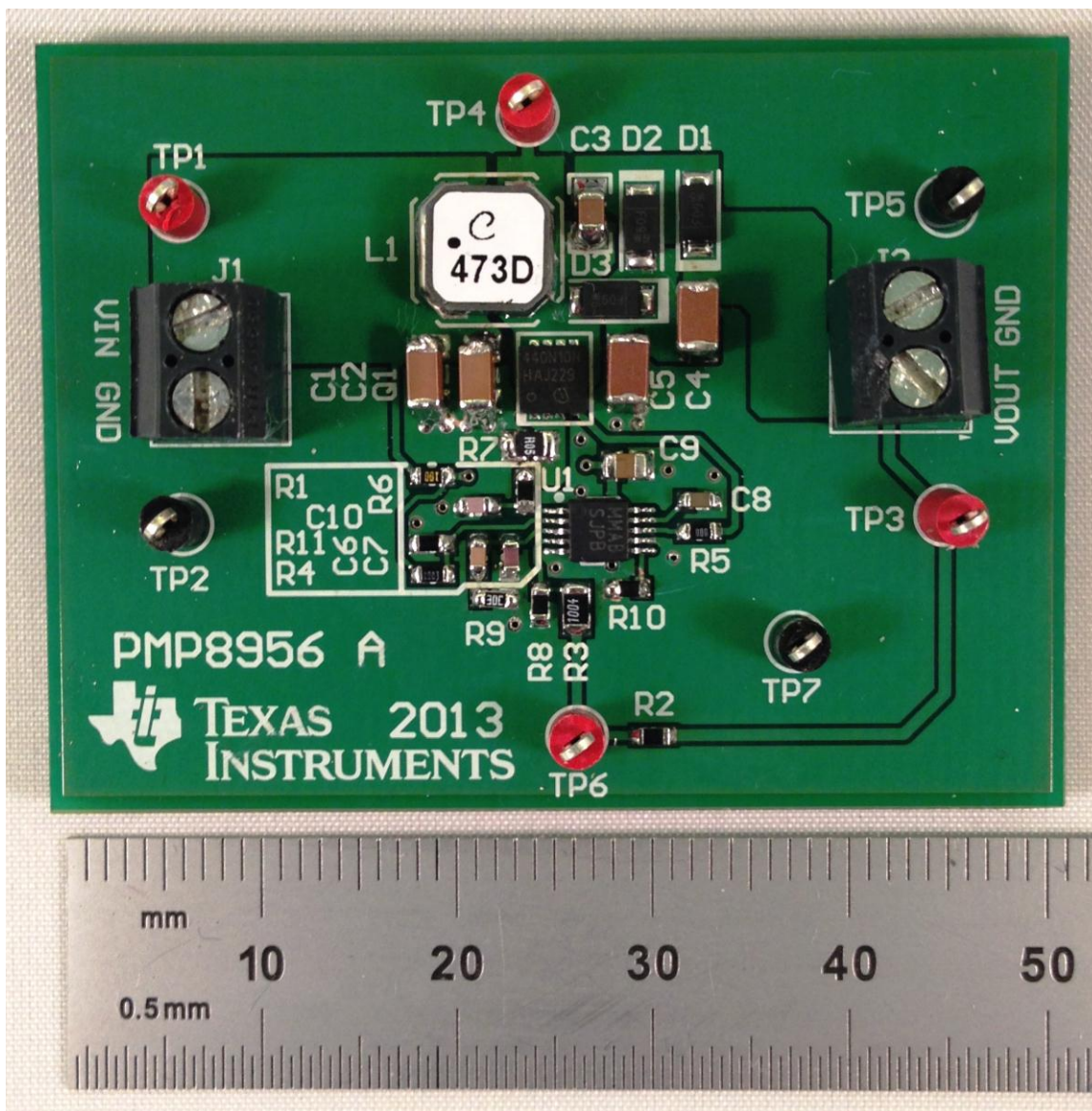
BW: 7.22KHz

PM: 84 degrees



## 7 Photo

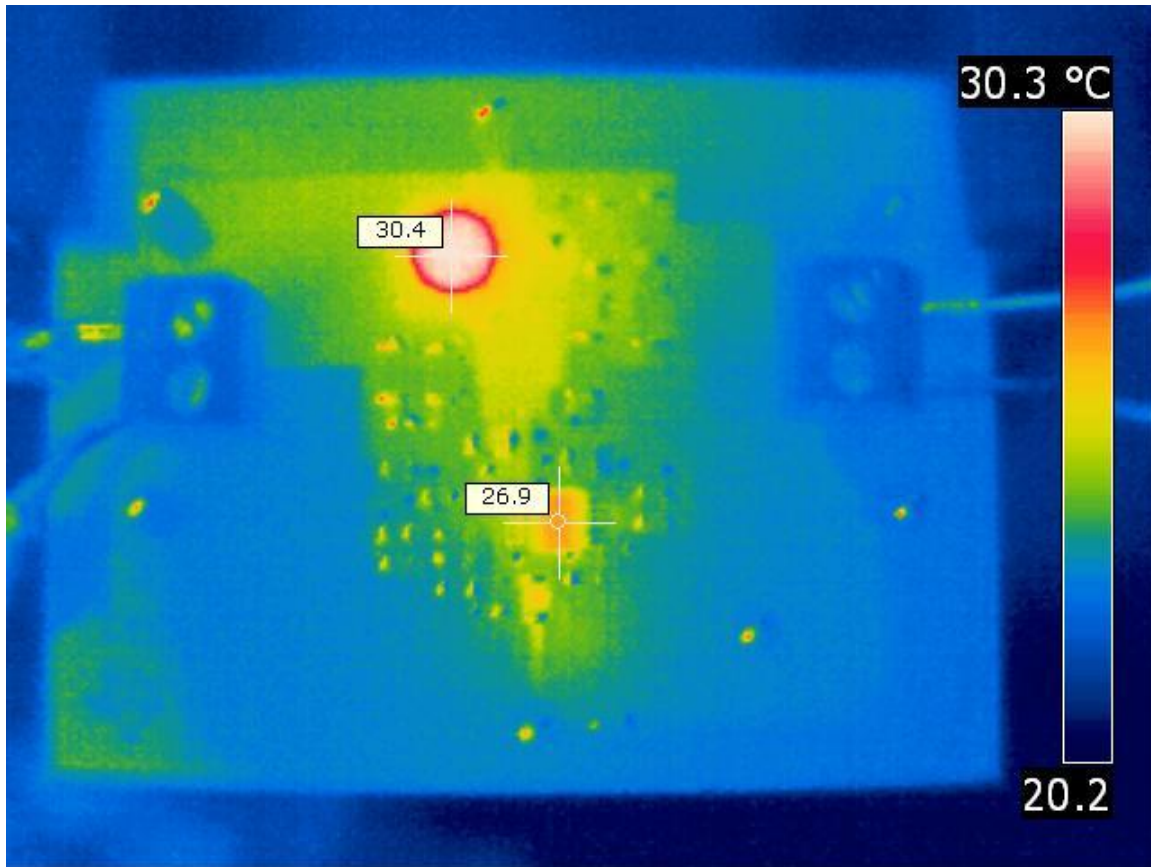
The photo below shows the PMP8956 REVB assembly.





## 8 Thermal Image

A thermal image is shown below when operating at 12V<sub>in</sub> and 10mA output, no air flow.



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