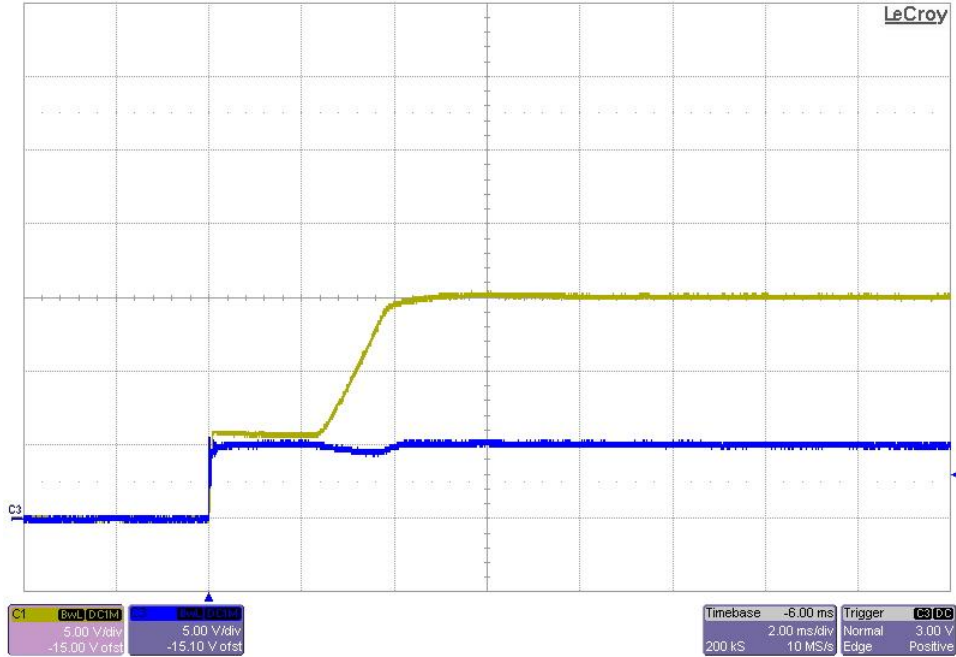
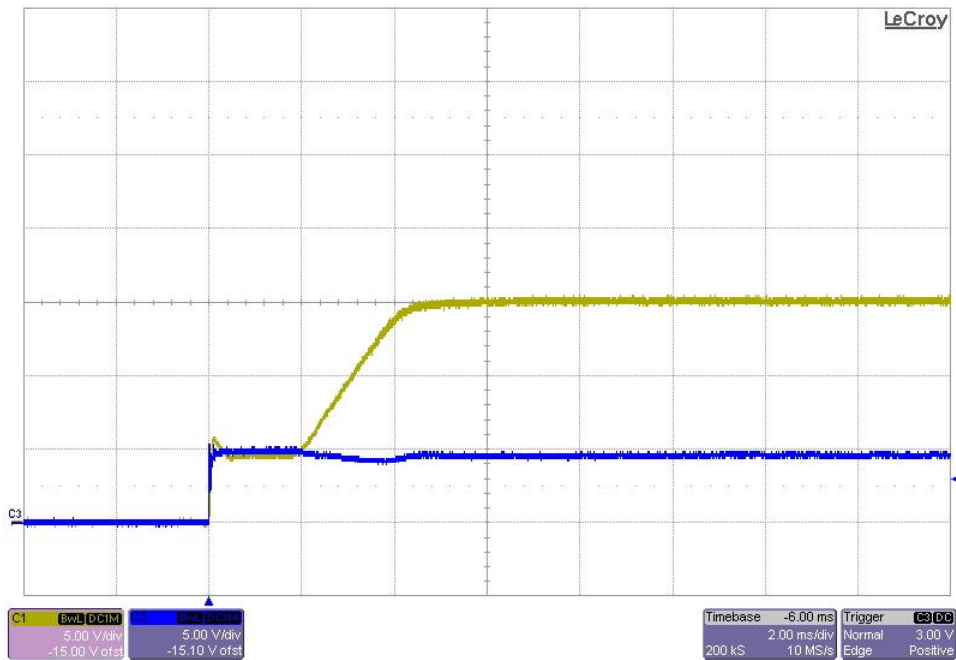


## 1 Startup

The photo below shows the output voltage startup waveform after the application of 5V in with the 15V output loaded to 0A. (5V/DIV, 2mS/DIV)

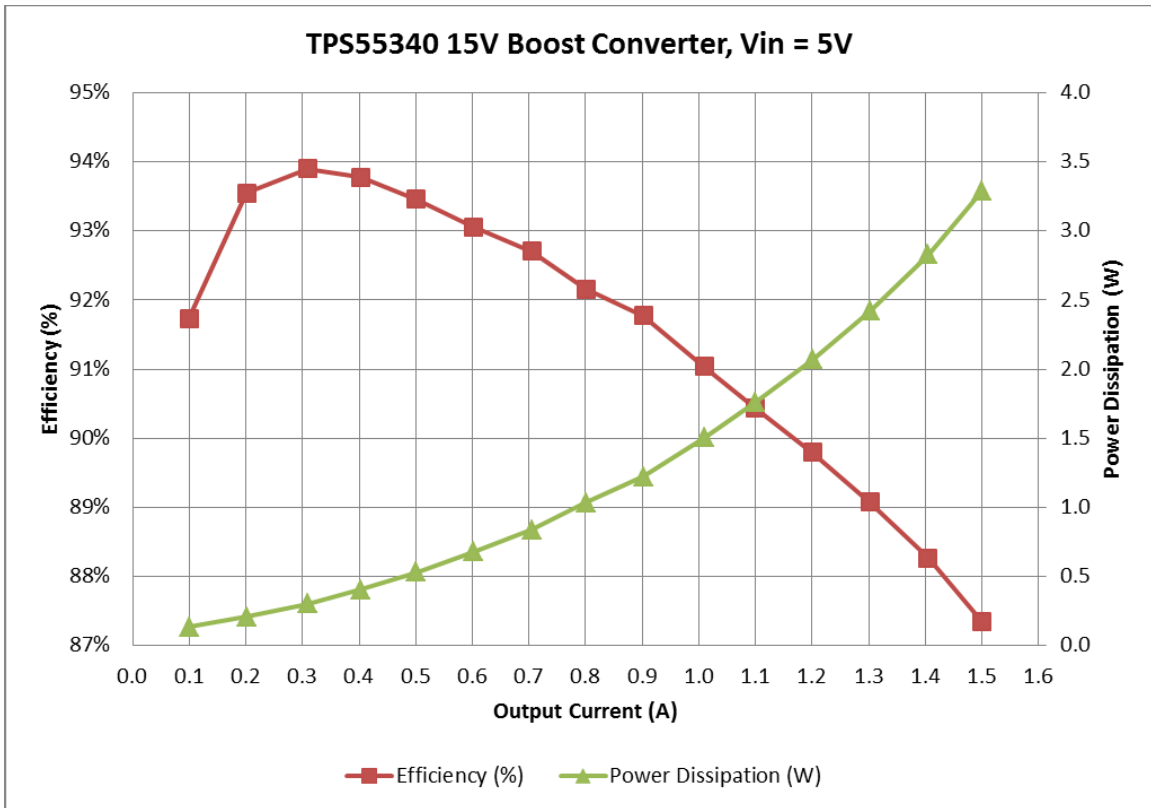


The photo below shows the output voltage startup waveform after the application of 5V in with the 15V output loaded to 1A. (5V/DIV, 2mS/DIV)



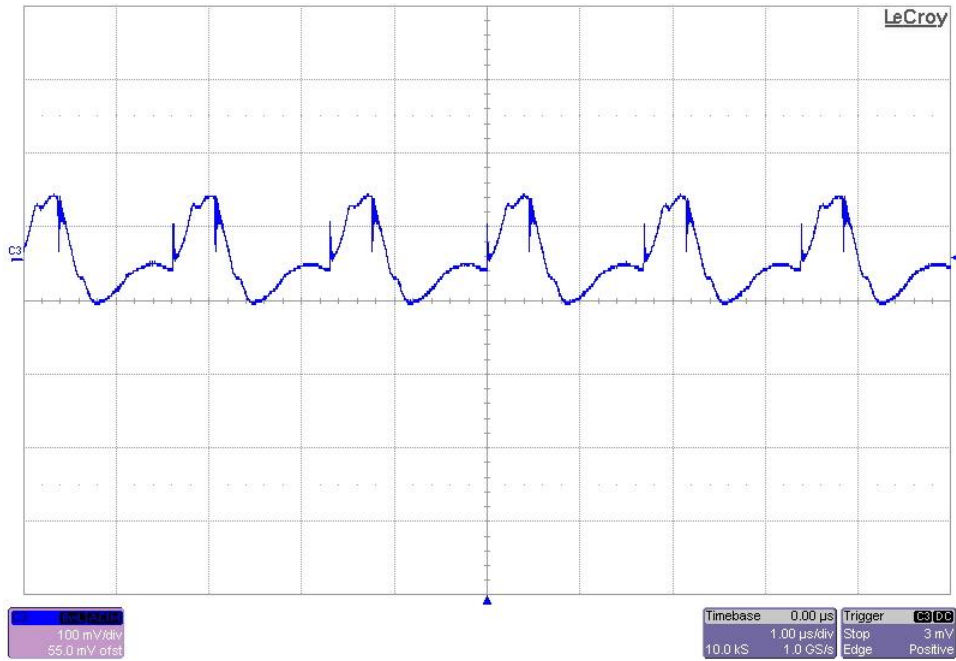
## 2 Efficiency

The converter efficiency is shown in the figures below.

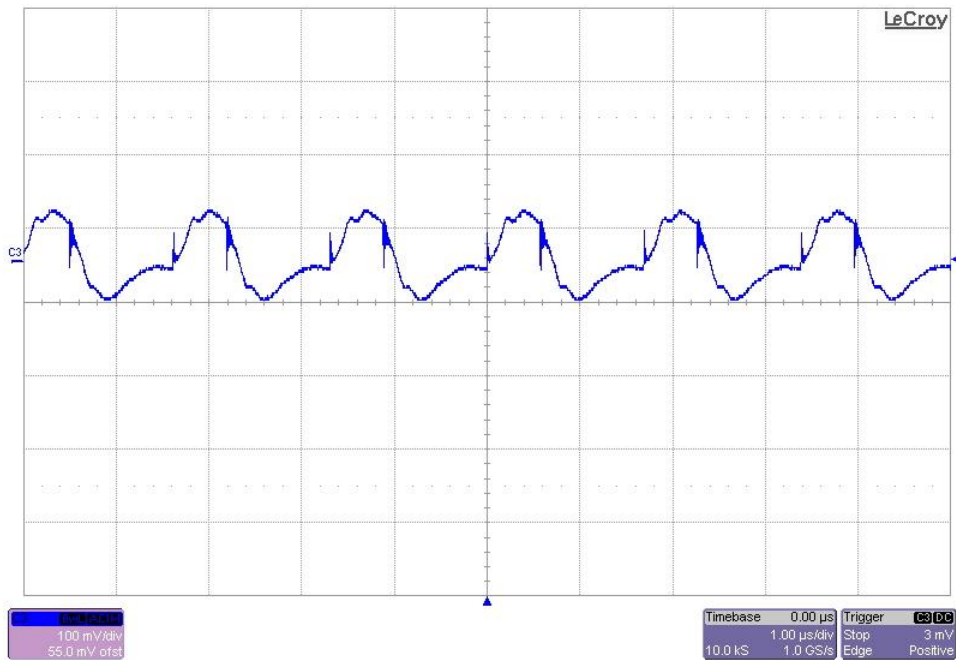


## 3 Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken with the 15V output loaded to 1A and the input voltage set to 4.5V. (100mV/DIV, 1uS/DIV)

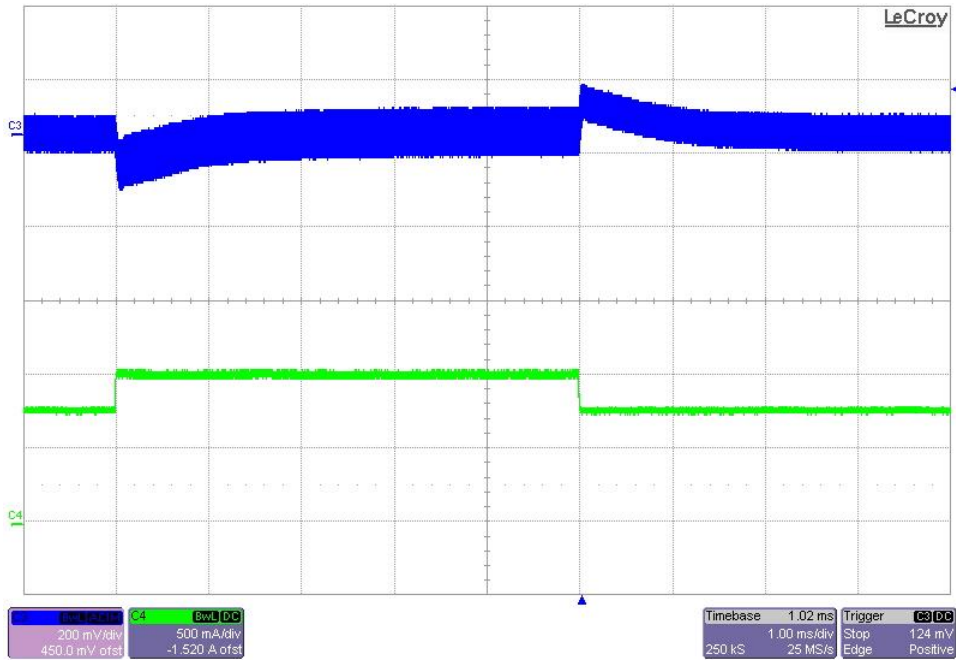


The output ripple voltage is shown in the figure below. The image was taken with the 15V output loaded to 1A and the input voltage set to 5.5V. (100mV/DIV, 1uS/DIV)

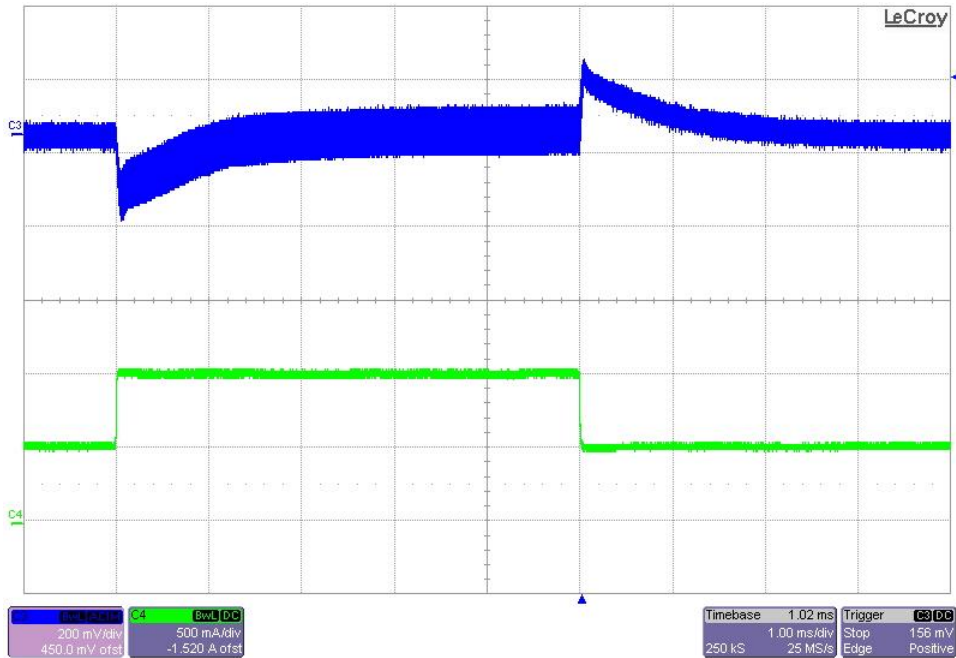


## 4 Load Transients

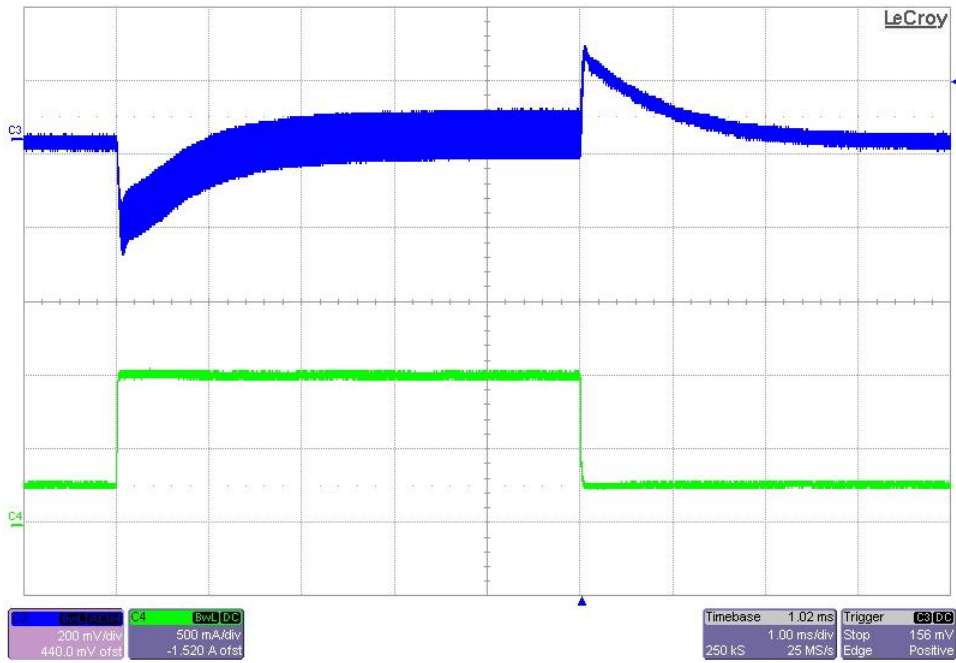
The photo below shows the 15V output voltage (ac coupled) when the load current is stepped between 0.75A and 1A.  $V_{in} = 5V$ . (200mV/DIV, 500mA/DIV, 1mS/DIV)



The photo below shows the 15V output voltage (ac coupled) when the load current is stepped between 0.5A and 1A.  $V_{in} = 5V$ . (200mV/DIV, 500mA/DIV, 1mS/DIV)

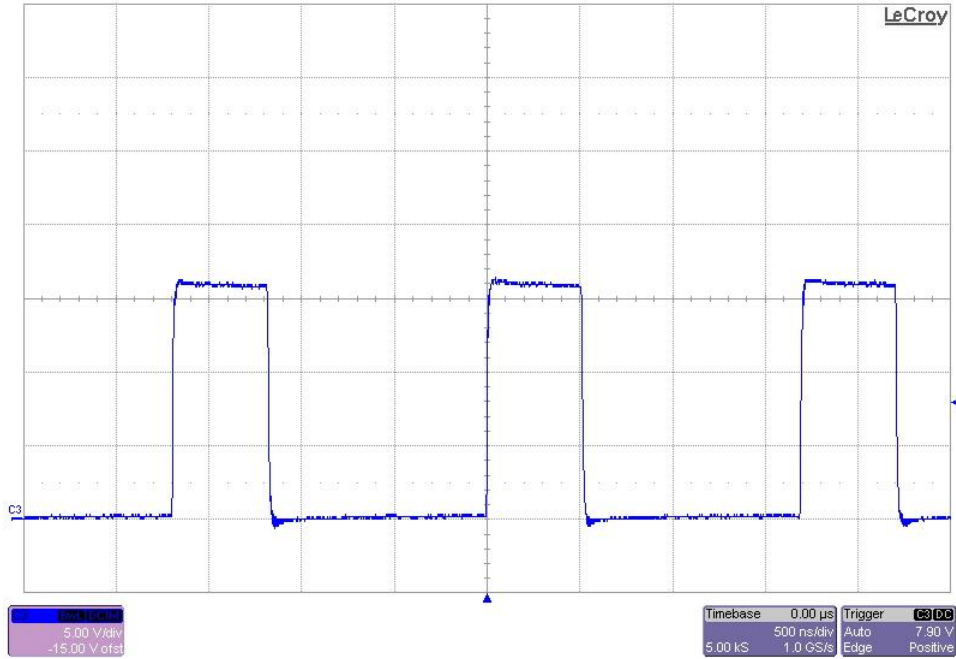


The photo below shows the 15V output voltage (ac coupled) when the load current is stepped between 0.25A and 1A.  $V_{in} = 5V$ . (200mV/DIV, 500mA/DIV, 1mS/DIV)

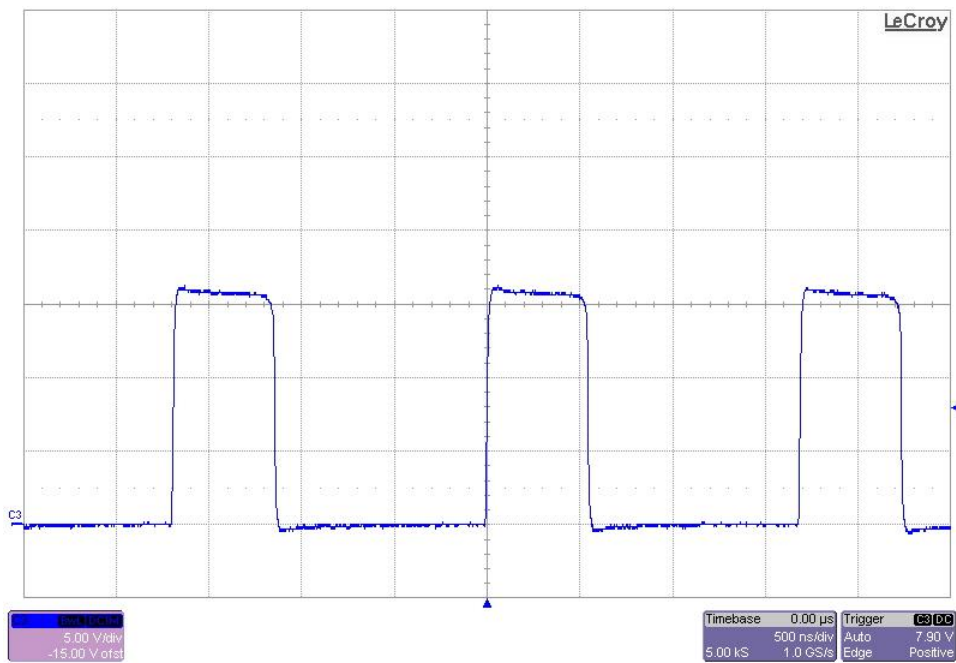


## 5 Switch Node Waveforms

The photo below shows the switch node voltage. The input voltage is 5V and the 15V output is loaded to 1A. (5V/DIV, 500nS/DIV)



The photo below shows the switch node voltage. The input voltage is 5V and the 15V output is loaded to 80mA. The converter has entered Discontinuous Conduction Mode. (5V/DIV, 500nS/DIV)



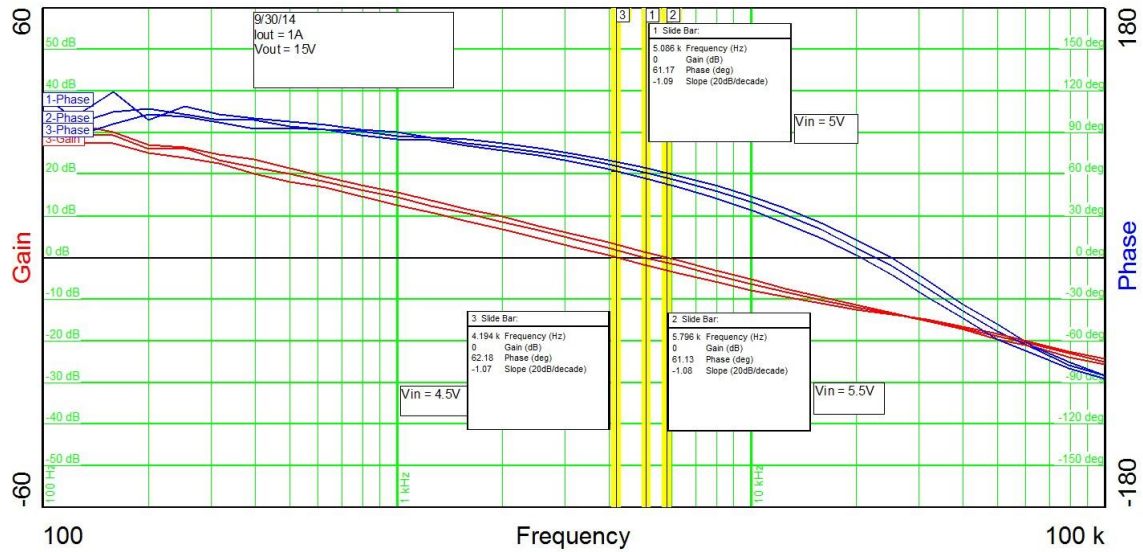
## 6 Control Loop Gain / Stability

The plot below shows the converter's loop gain and phase margin when loaded to 15V @ 1A.

Vin = 5.5V  
 Vin = 5.0V  
 Vin = 4.5V

Band Width = 5.80KHz  
 Band Width = 5.09KHz  
 Band Width = 4.19KHz

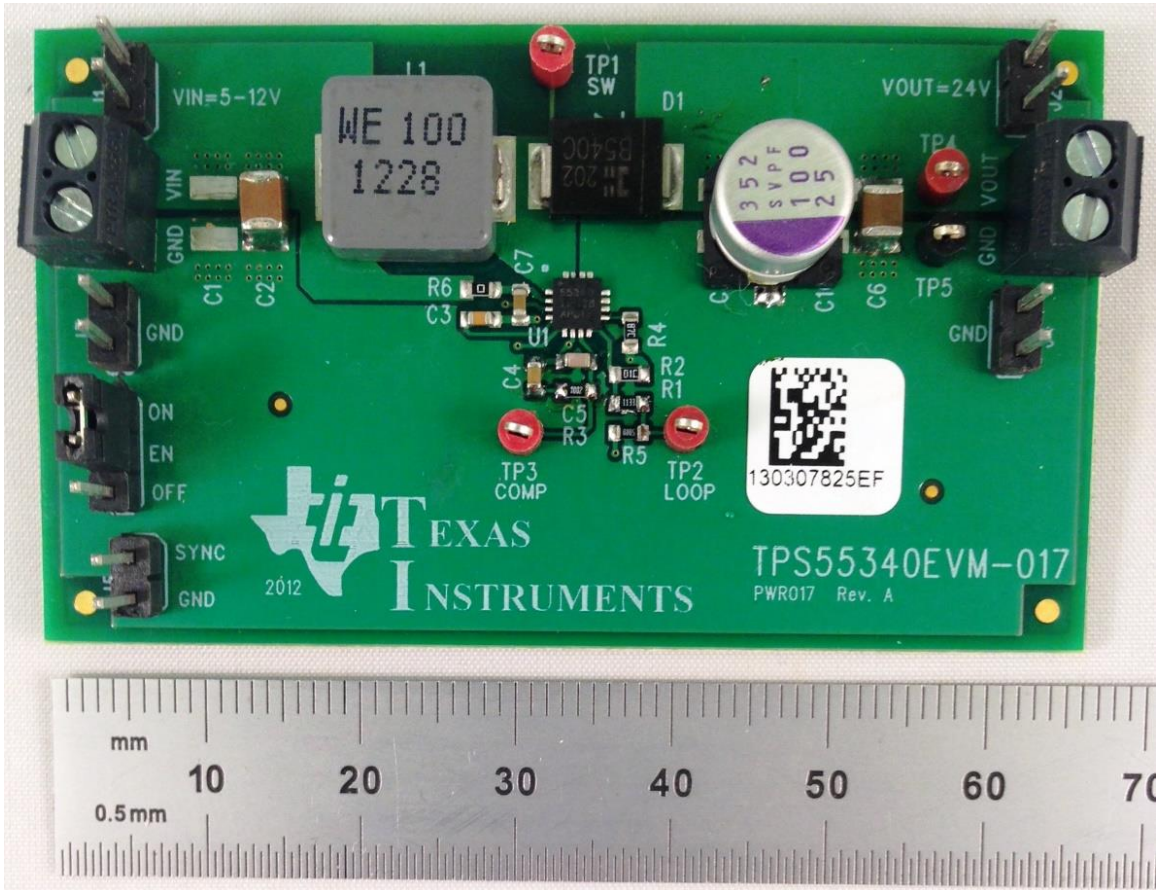
Phase Margin = 61 degrees  
 Phase Margin = 61 degrees  
 Phase Margin = 62 degrees





## 7 Photo

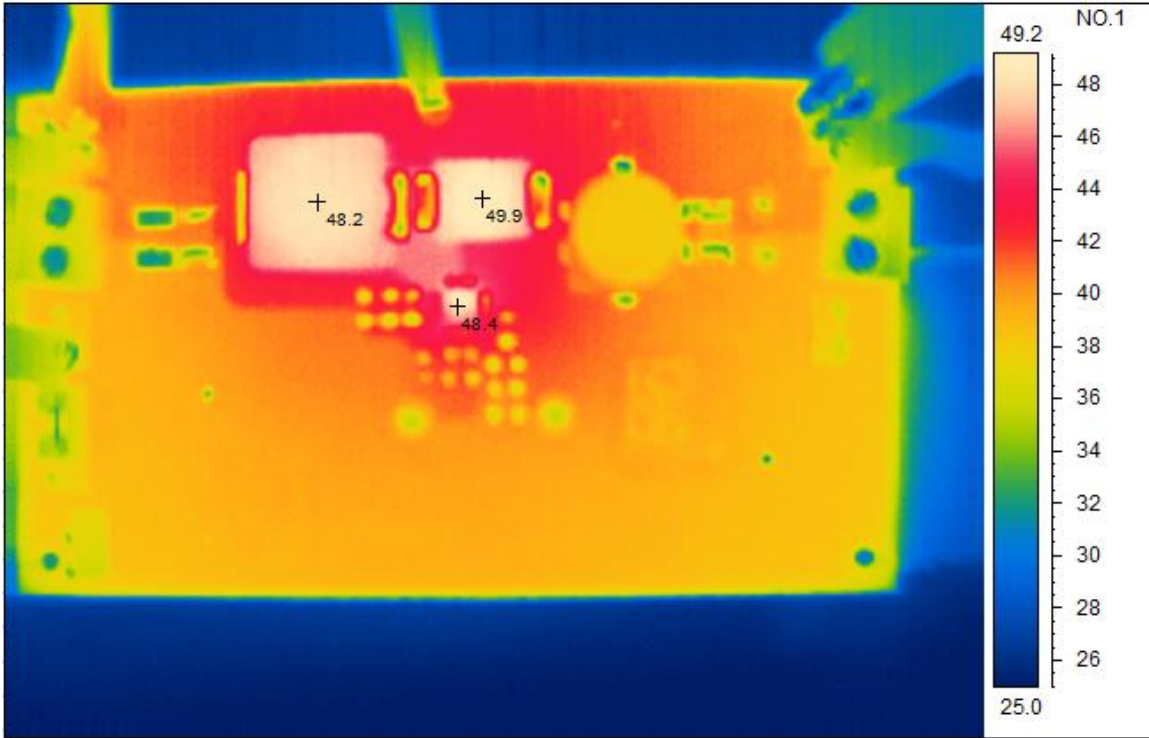
The photo below shows the PMP10486 REVA assy built on the TPS55340 EVM (PWR017).



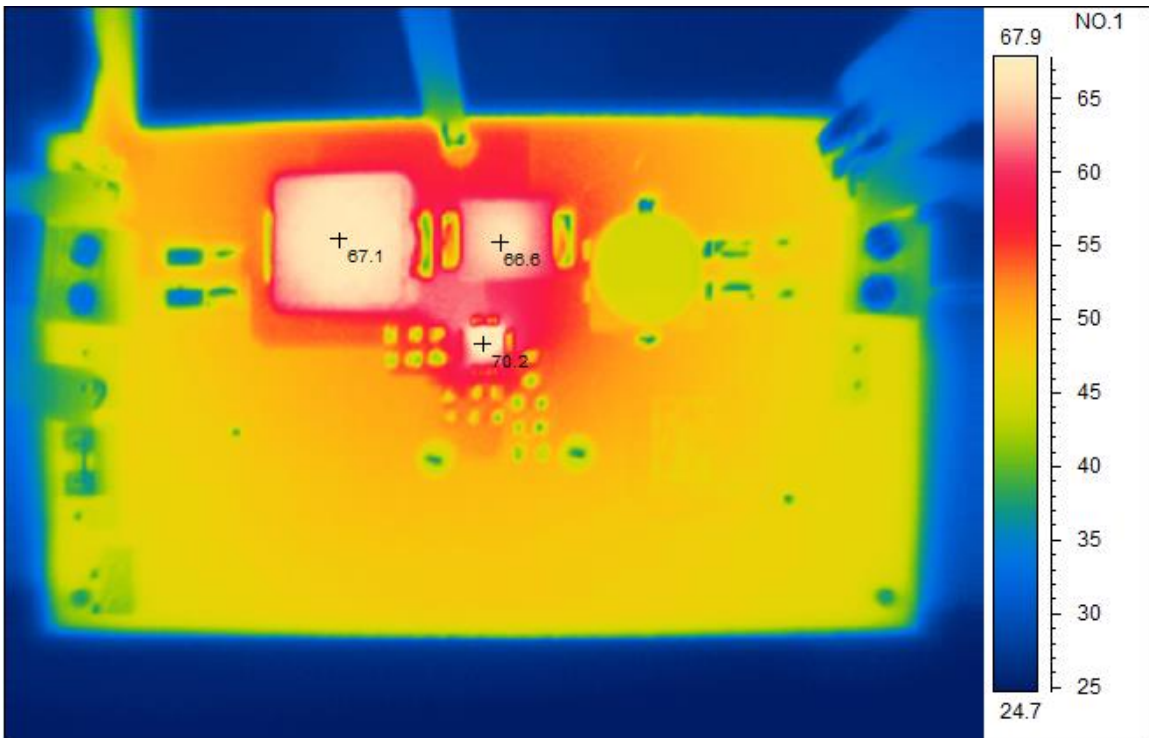


## 8 Thermal Image

The thermal image below shows operation at 5V input and 15V@1A output, with no airflow.



The thermal image below shows operation at 5V input and 15V@1.5A output, with no airflow.



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