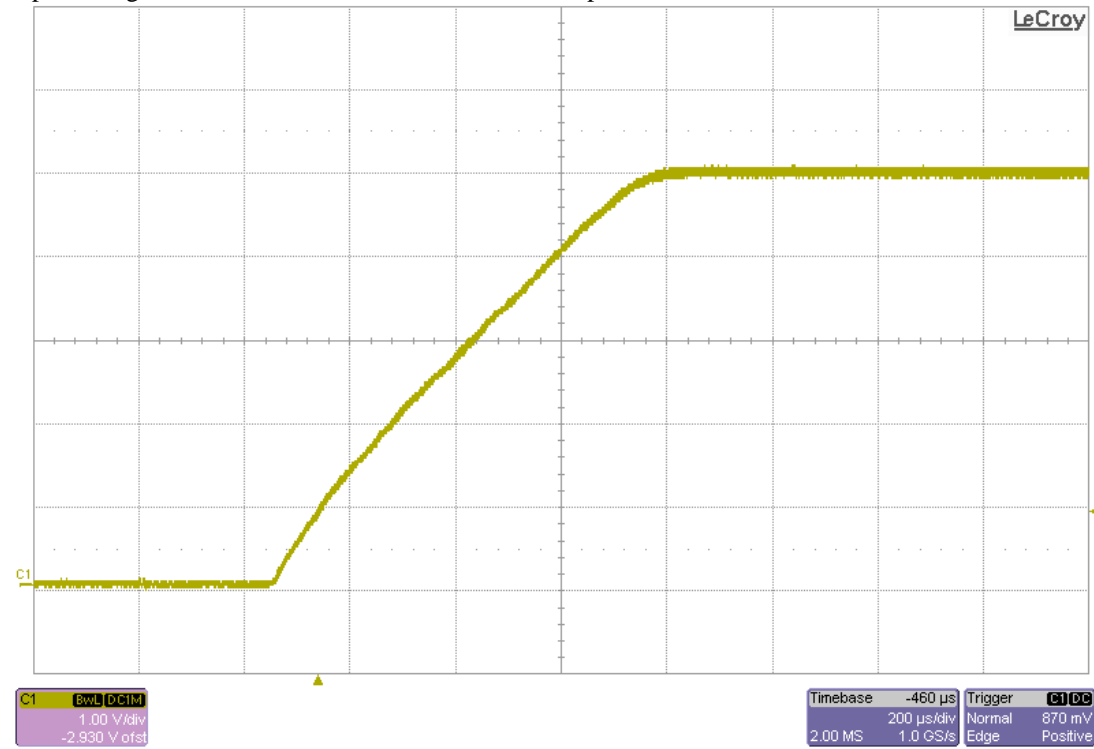


## 1 Startup

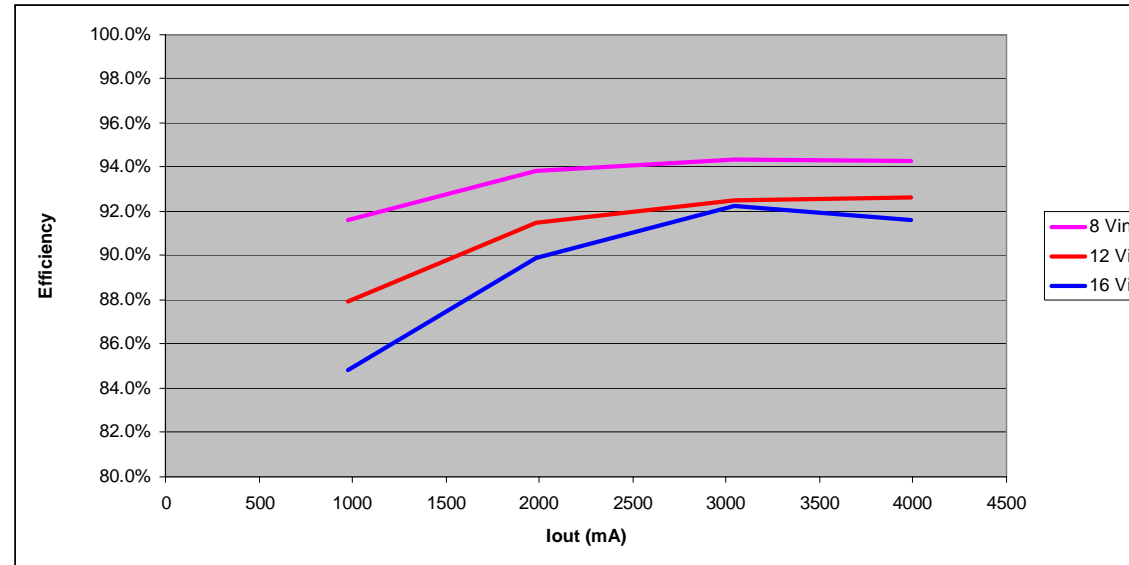
The startup waveform is shown in the figure below. The input voltage was set at 12V, with 3 A load on the output.



## 2 Efficiency

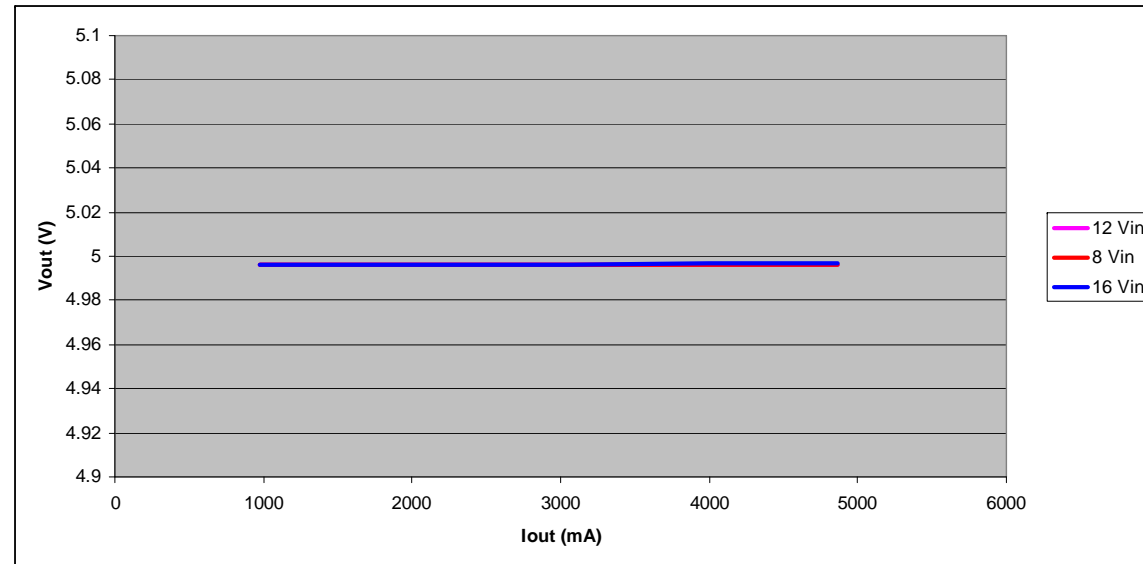


The efficiency is shown in the figure below.



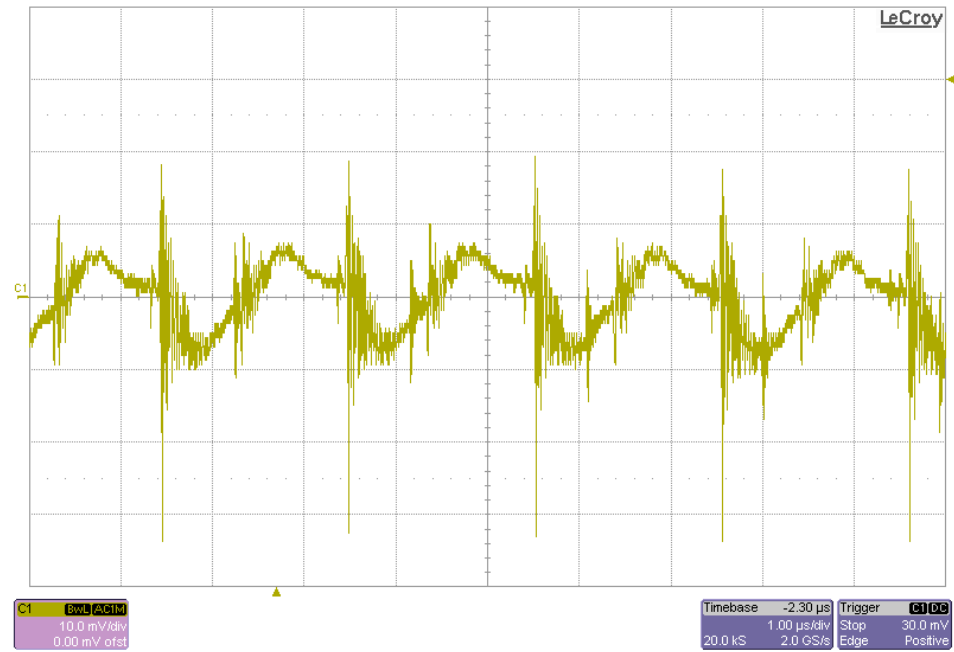
### 3 Load Regulation

The load regulation of the output is shown in the graph below.



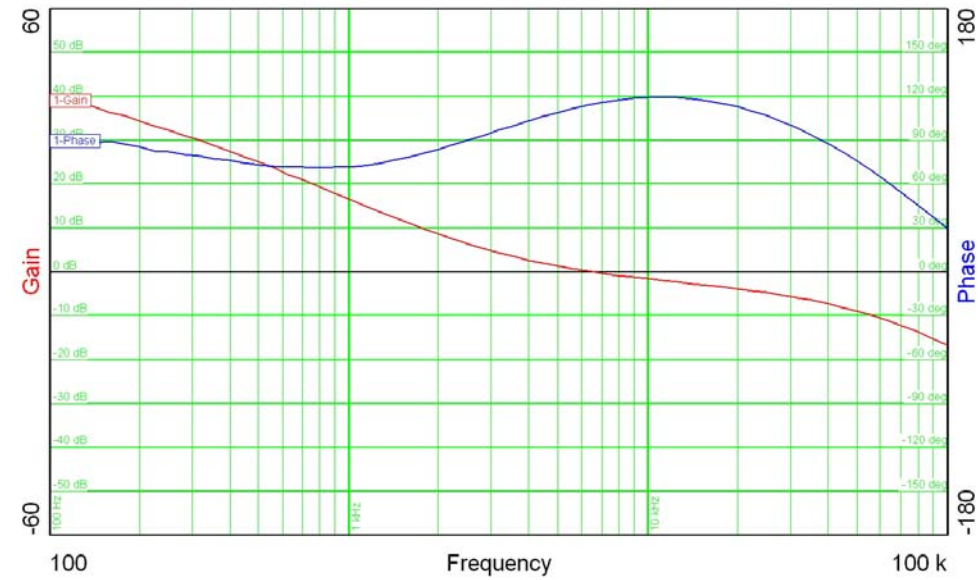
### 4 Output Ripple Voltage

The output ripple voltage is shown in the figure below. The image was taken at Full Load (5A). 10 mV/div Vertical and 1  $\mu$ S/div Horizontal.



## 5 Control Loop

The following figure is the control loop response at 12 volts in and 5 amps out. The power supply is stable with 120 degrees phase margin and 20 dB gain margin.

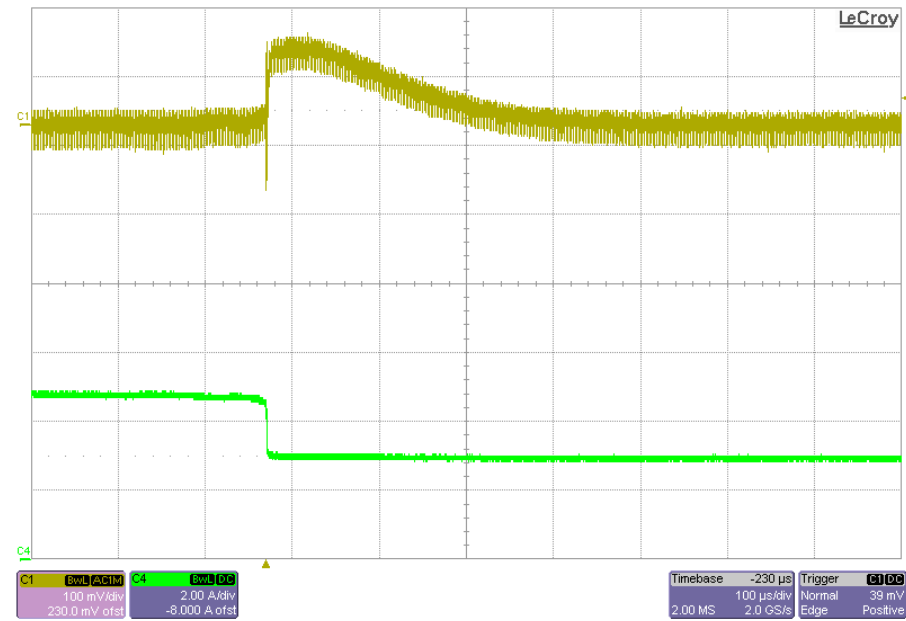


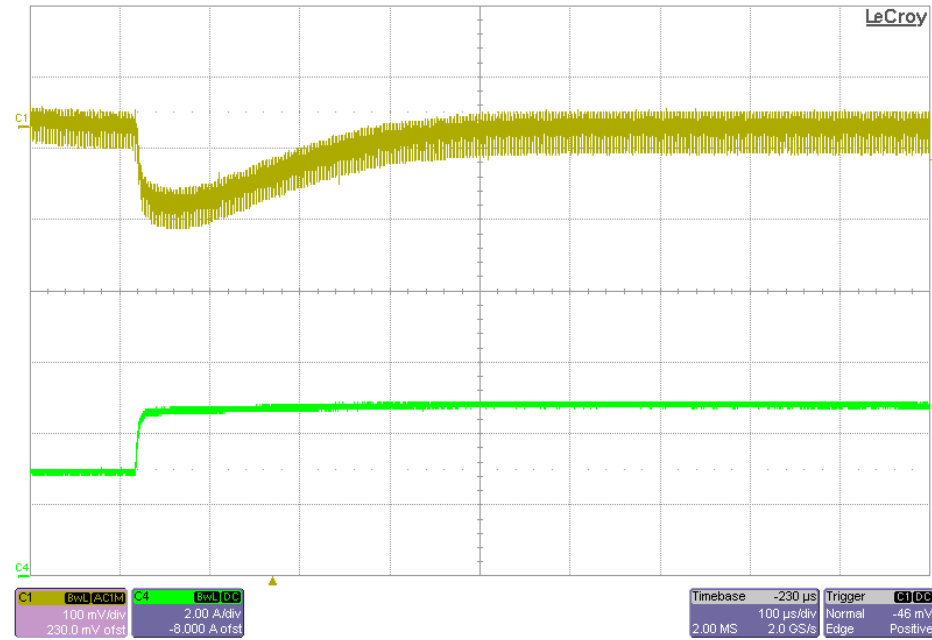
## 6 Load Transients

The figures below show the 5 volt output response to load transients. The input voltage was set to 12V.

Channel 1 : Vout (AC coupled)

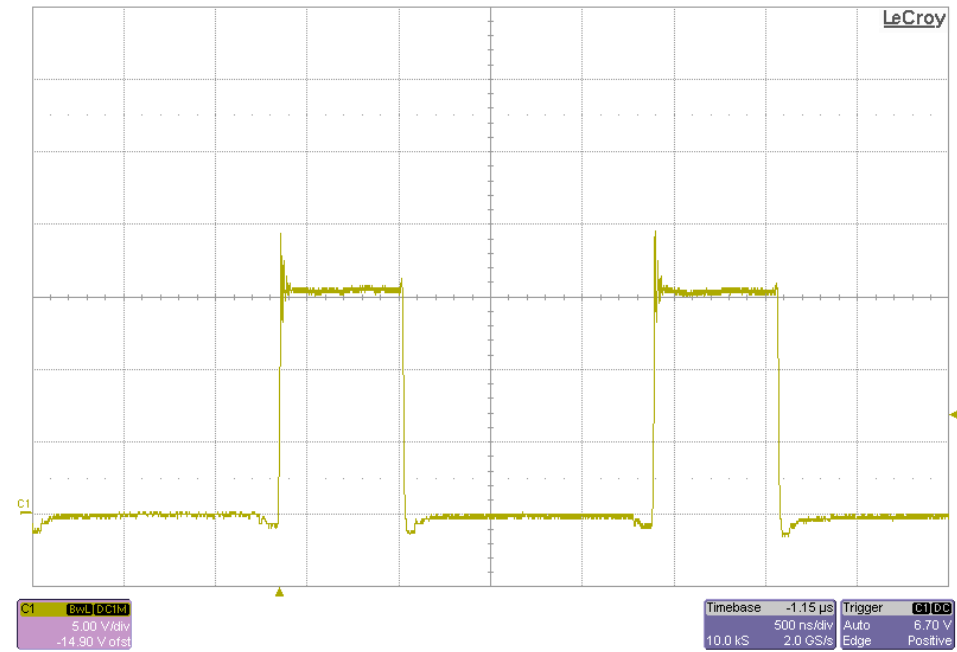
Channel 2 : Load current





## 7 Switch Node Waveforms

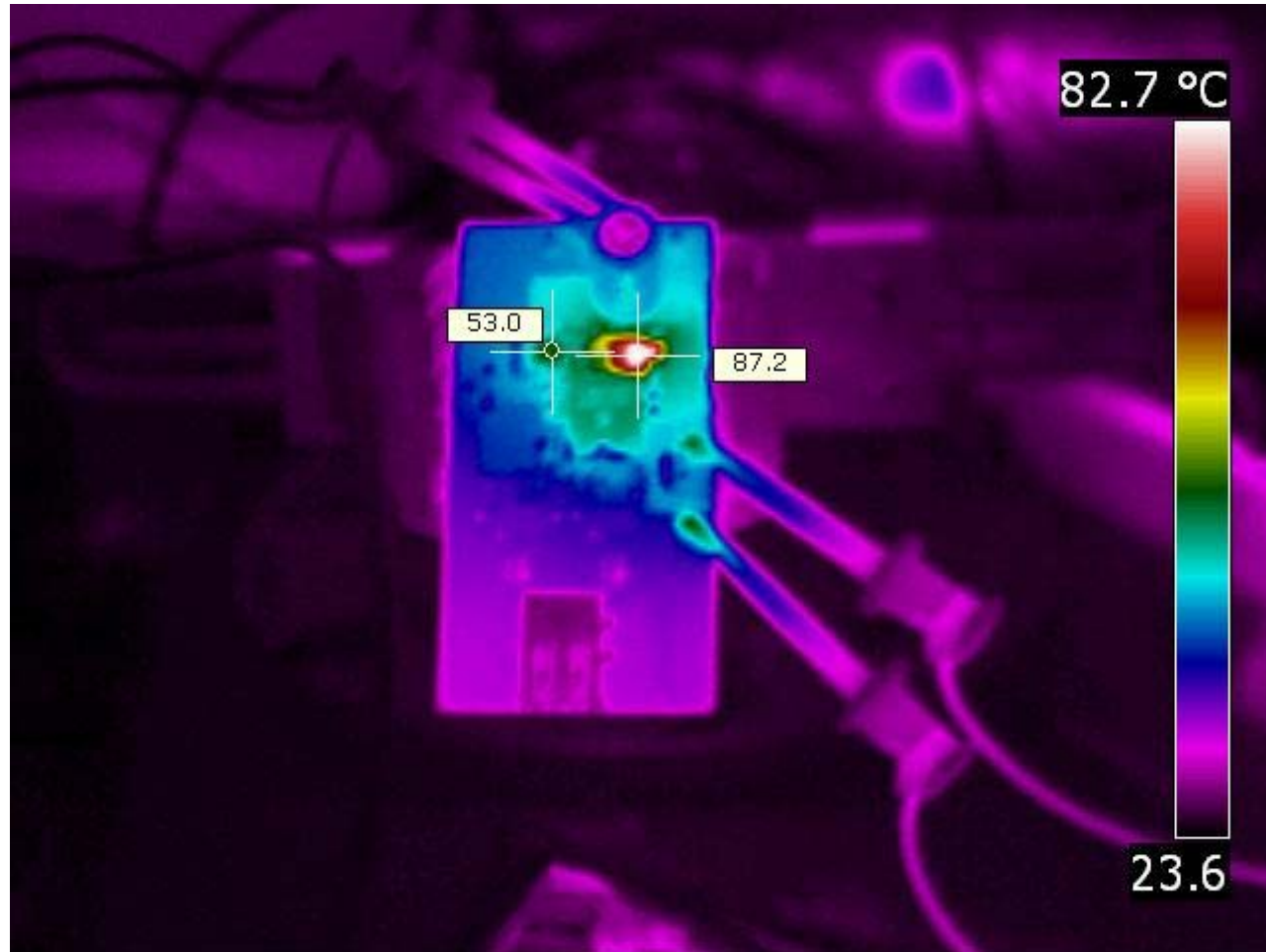
The following figures show the switch node waveform at 5A load and 16 volts in.



## 7 Thermal Survey

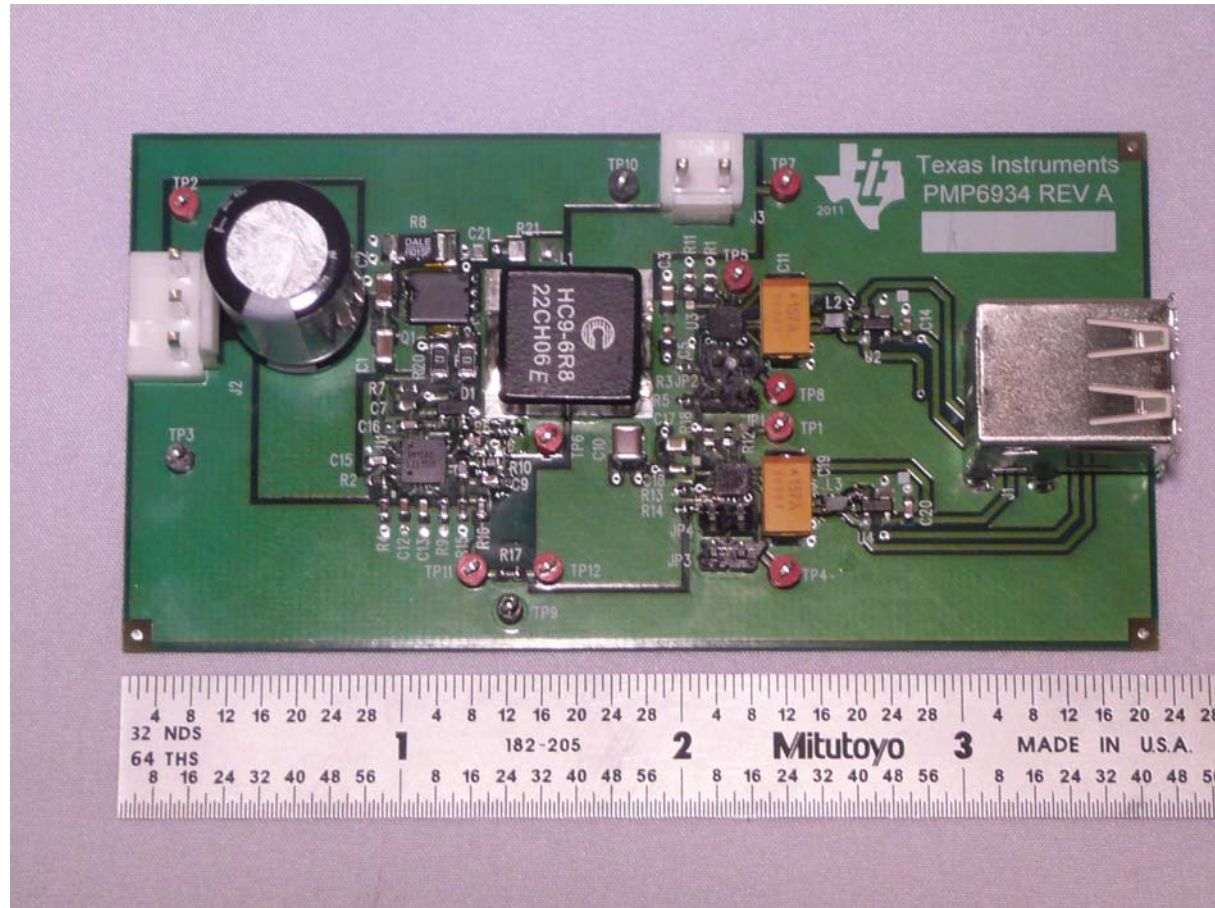
The following is a thermal scan of the board operating at 16 volts in and 5 amps out at 25 degree ambient. The hot spot is the FET temperature. The control IC is 53 degrees or 28 degree rise





## **8 Photo**

The following is a photo of the board.



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