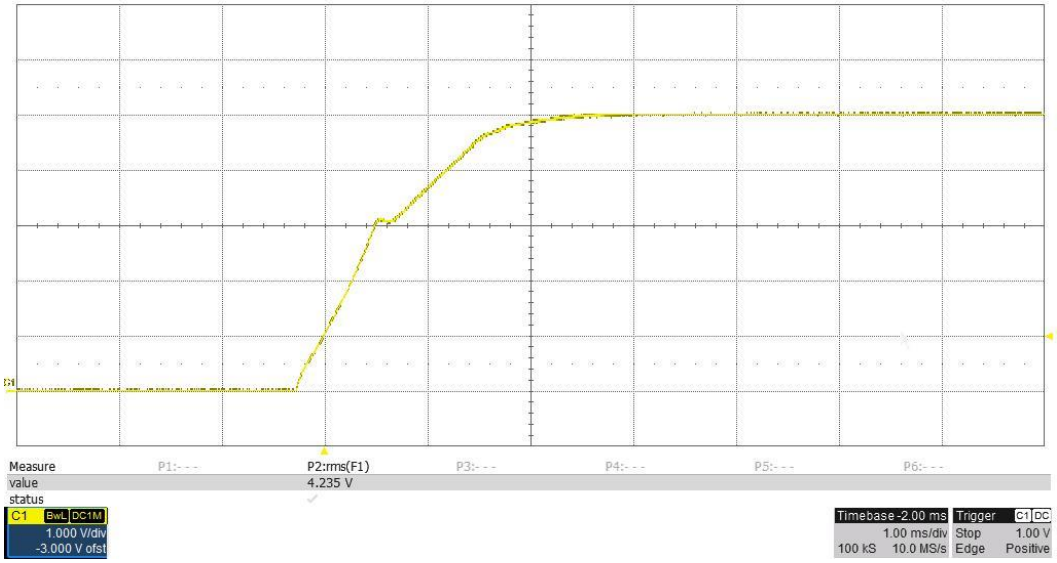
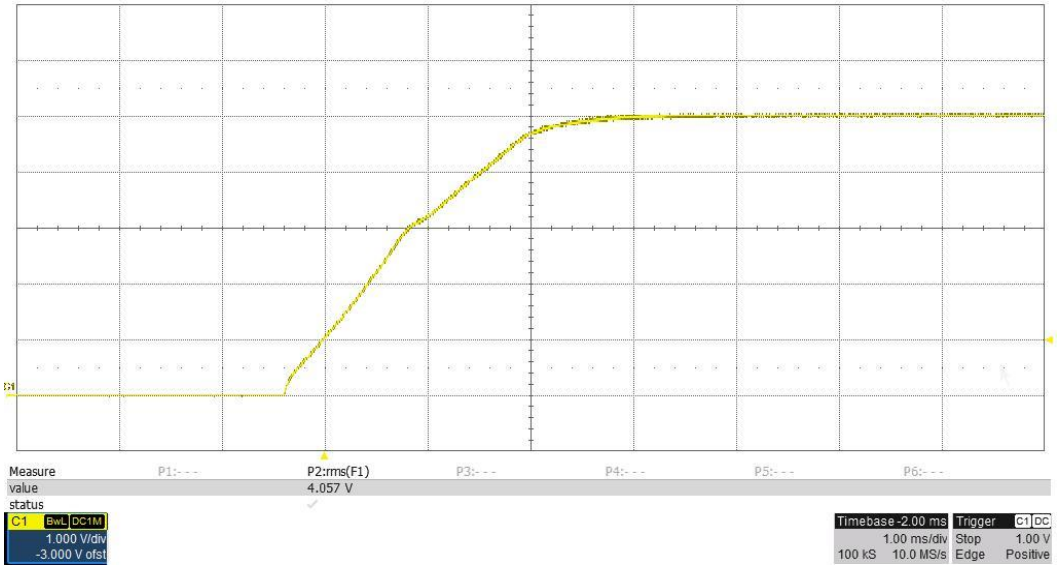
# 1 Startup

Output voltage startup waveform, 0A load
1V/ div, 1mS/ div




Output voltage startup waveform, 3A load
1V/ div, 1mS/ div

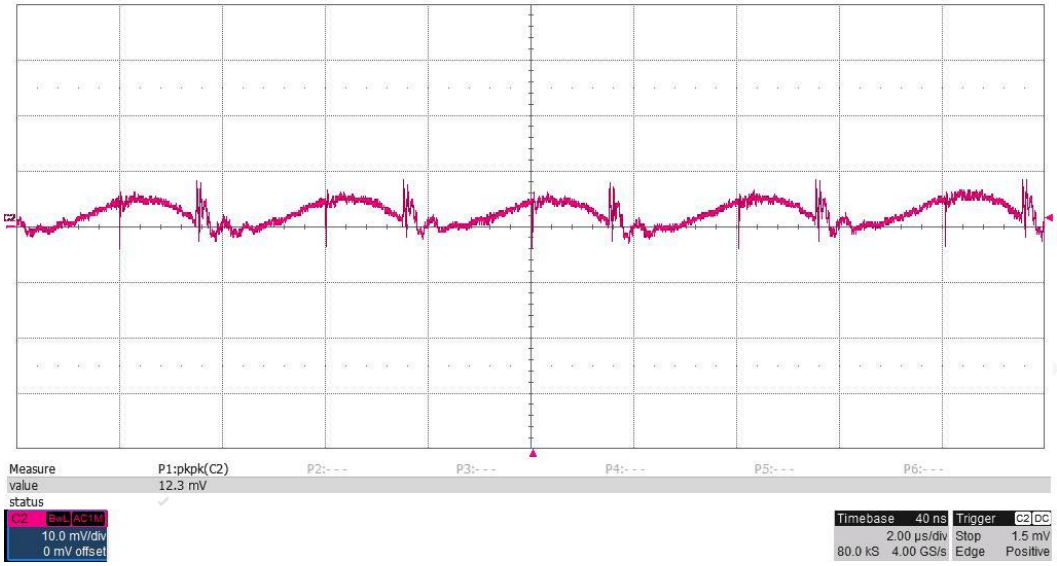


## 2 Efficiency

The converter efficiency is shown below with a 48V input.

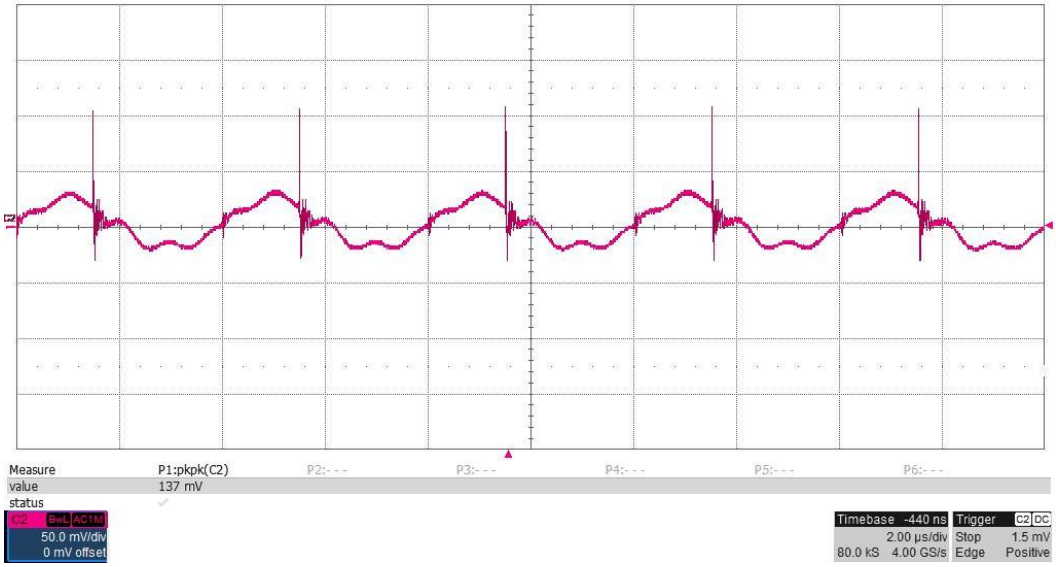

## 3 Output Ripple Voltage

Output ripple voltage across C18
10mV/div, 2uS/div
Measured 12.3mVpp



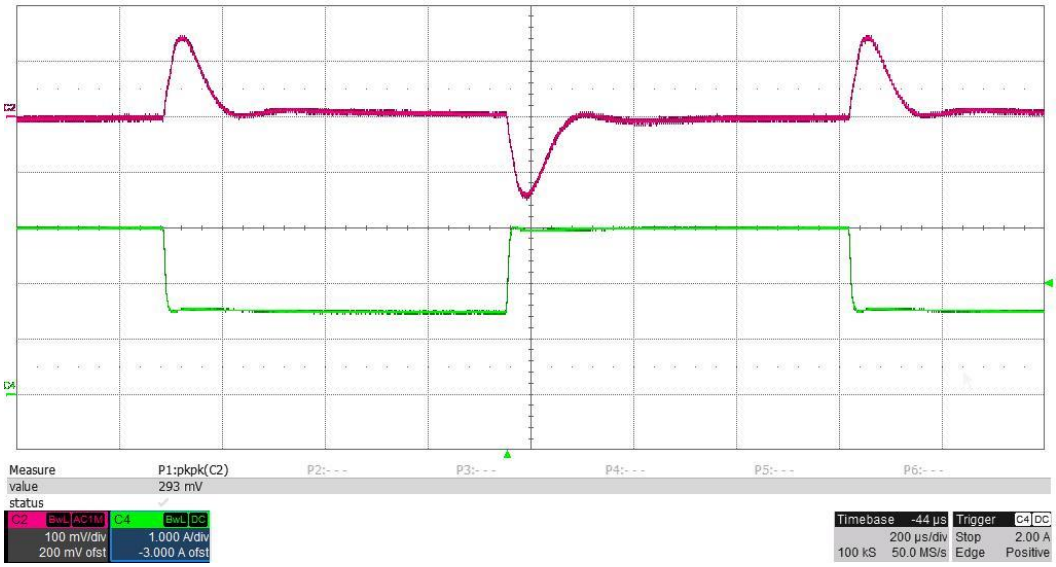
## 4 Input Ripple Voltage

Input ripple voltage across C12
50mV/div, 2uS/div
Measured 137mVpp




## 5 Load Transients

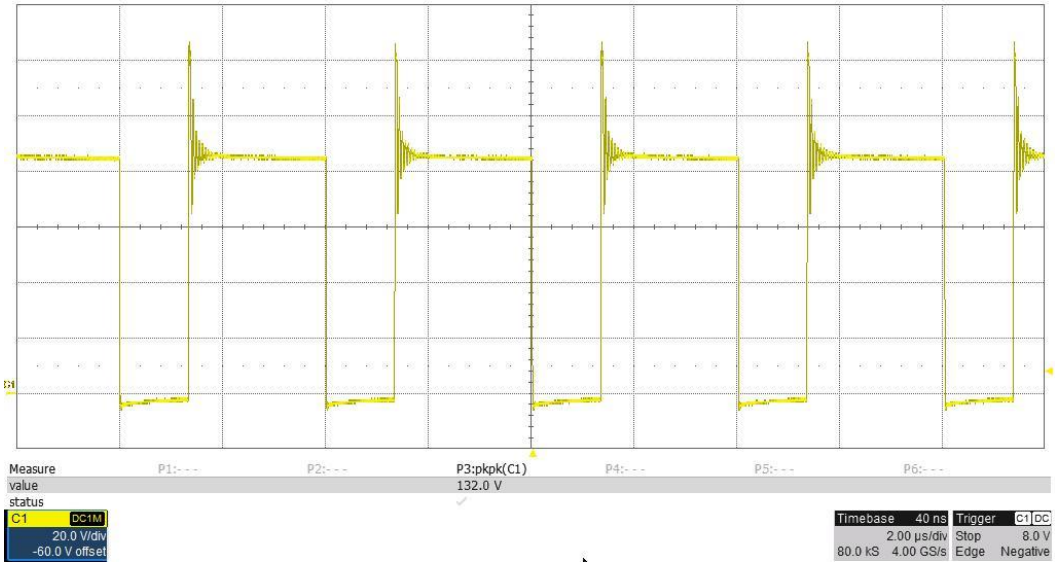
Output voltage response (ac coupled)
1.5A to 3Aload step, 250mA/usec slew rate
100mV/div, 1A/ div, 200uS/ div
Measured 293mVpp



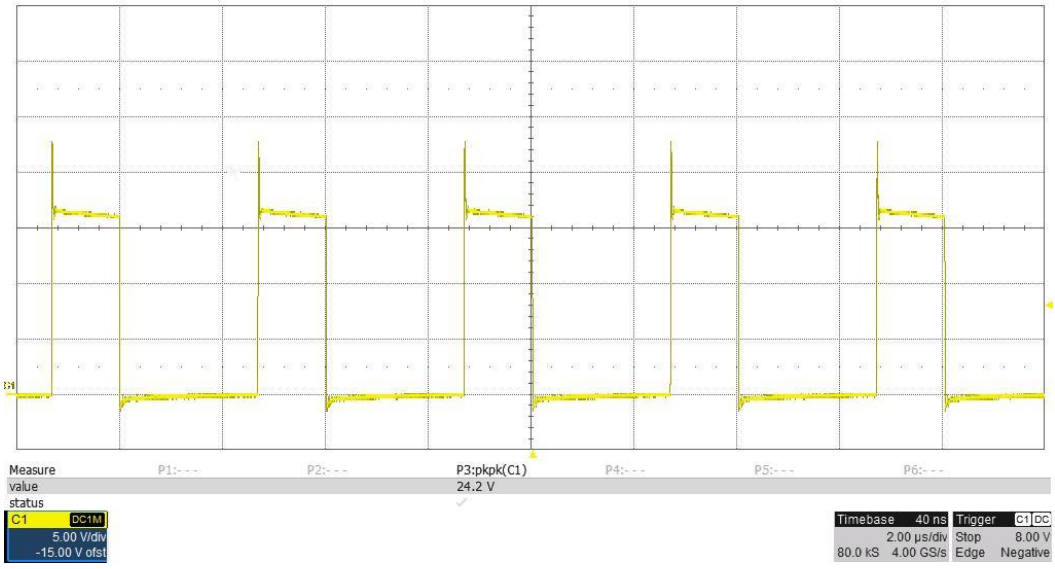

## 6 Switch Node Waveforms

Drain voltage of Q1, 57V input and 3A load.

20V/ div, 2.00uS/ div, 750MHz bandwidth
Measured 132Vpeak



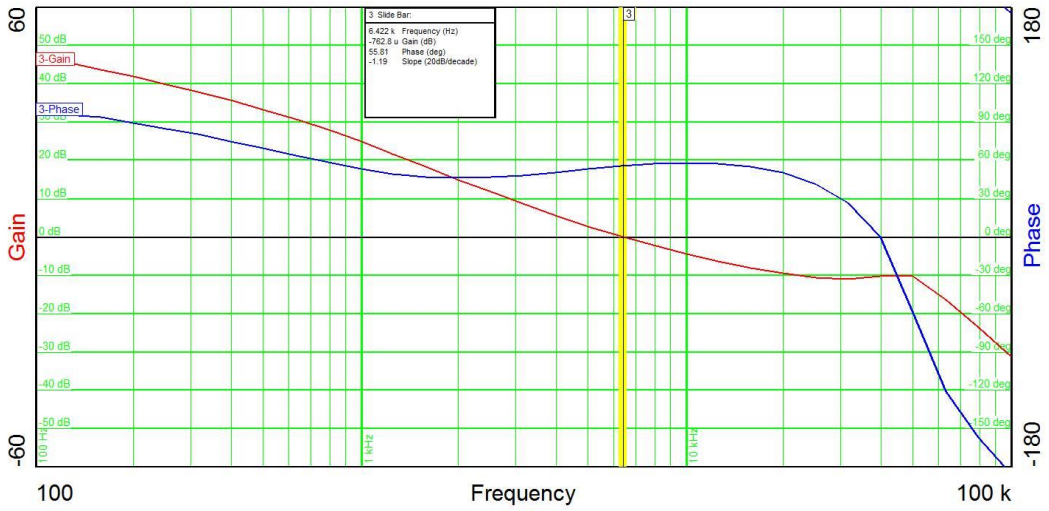

Drain voltage of Q1, 57V input and 3A load.
5V/ div, 2.00uS/ div, 750MHz bandwidth
Measured 24.2Vpeak



## 7 Control Loop Gain / Stability

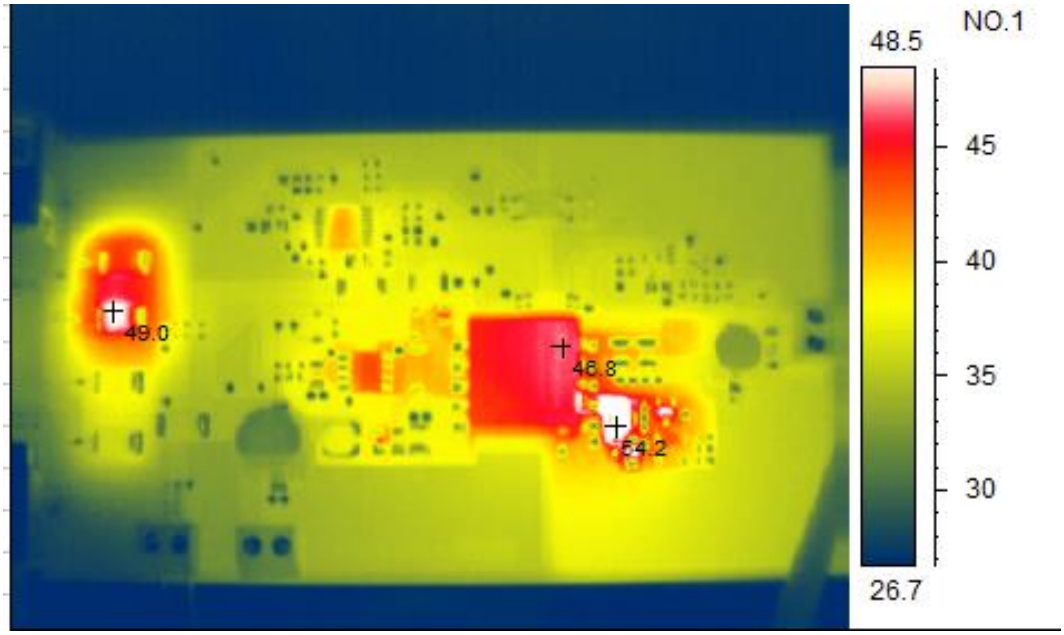
The converter's loop response with a 48V input and 5V/3A output is shown below.

Band Width = 6.422KHz  Phase Margin = 55.81 degrees  Gain Margin=10dB



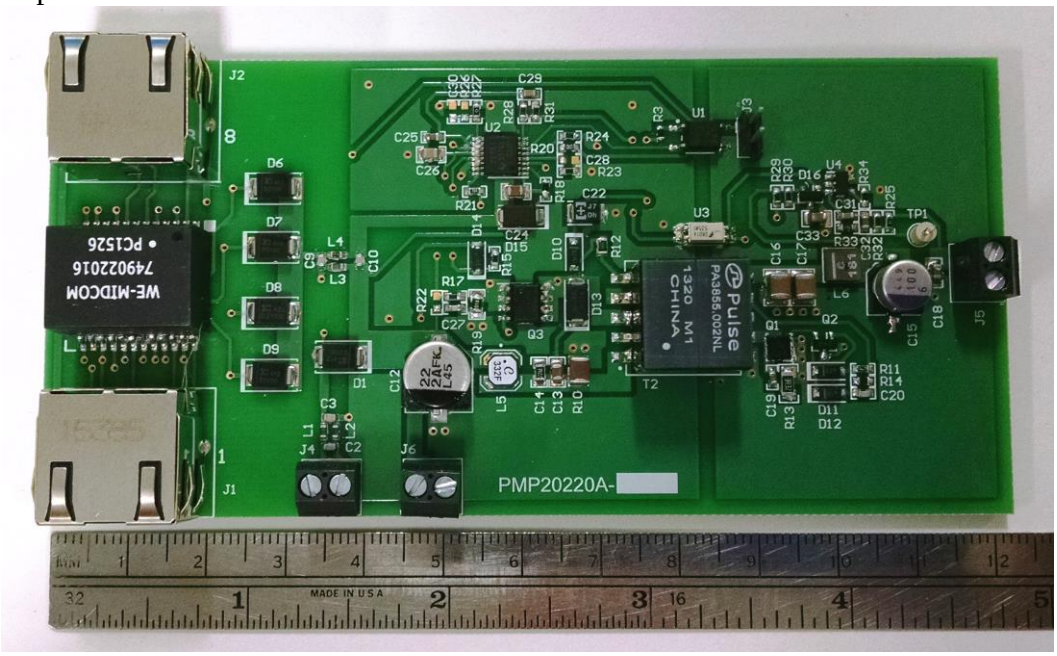

## 8 Thermal Image

The thermal image below shows operation at 48V input and 5V/3A output with no airflow

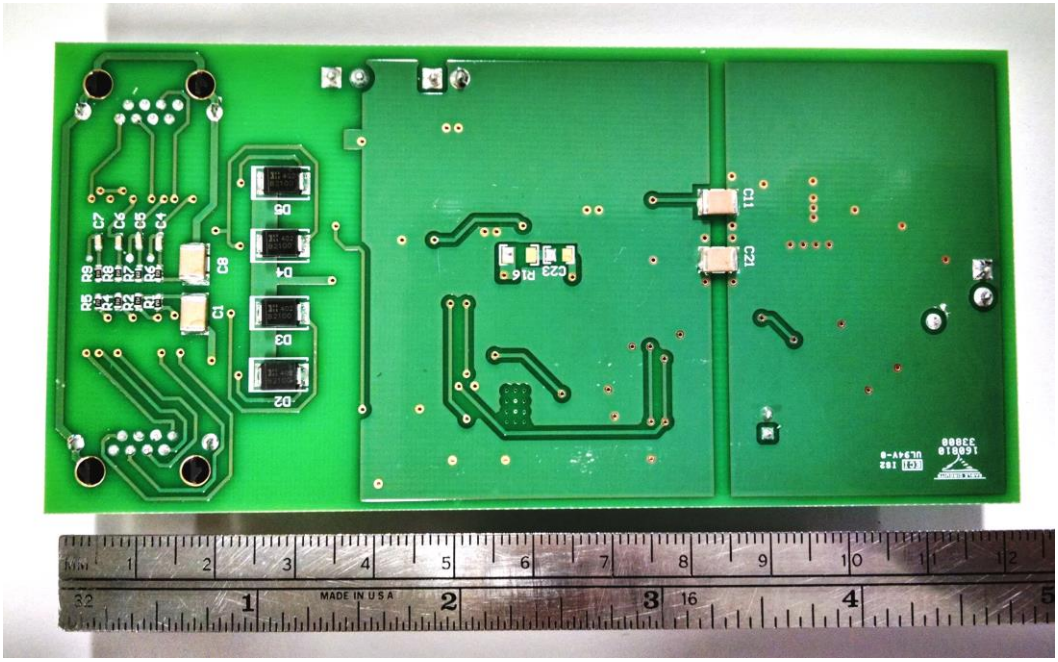


# 9 Photo

Top:




Bottom:



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