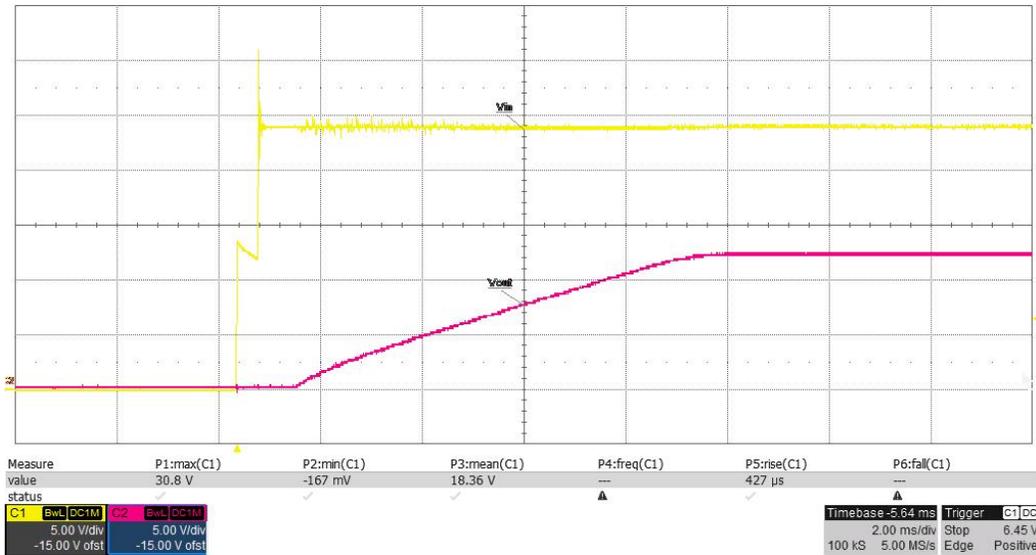


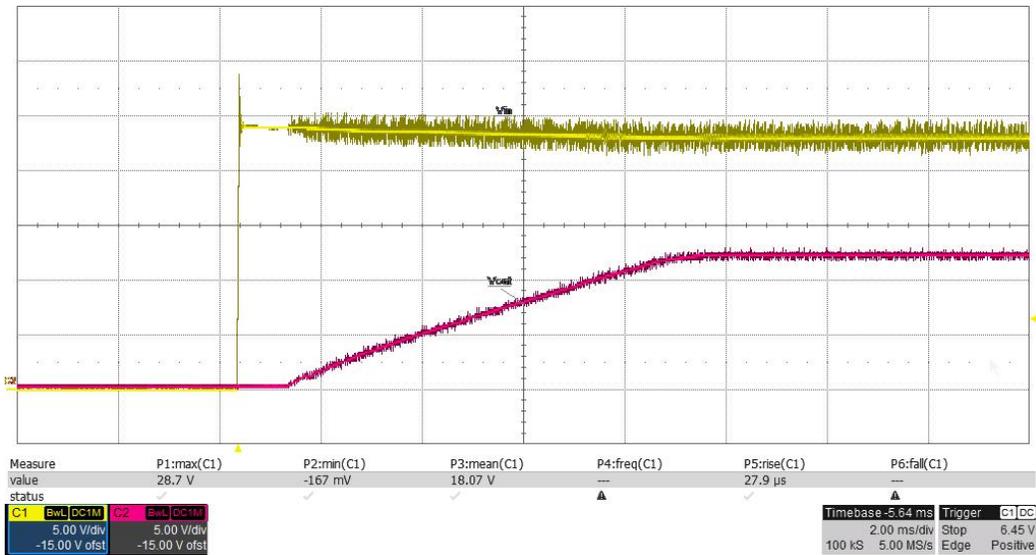
# PMP20021 REVA Test Results

## 1 Startup

The photo below shows the output voltage startup waveform after the application of 24V in. The 12V output was loaded to 0A. (5V/DIV, 2mS/DIV)



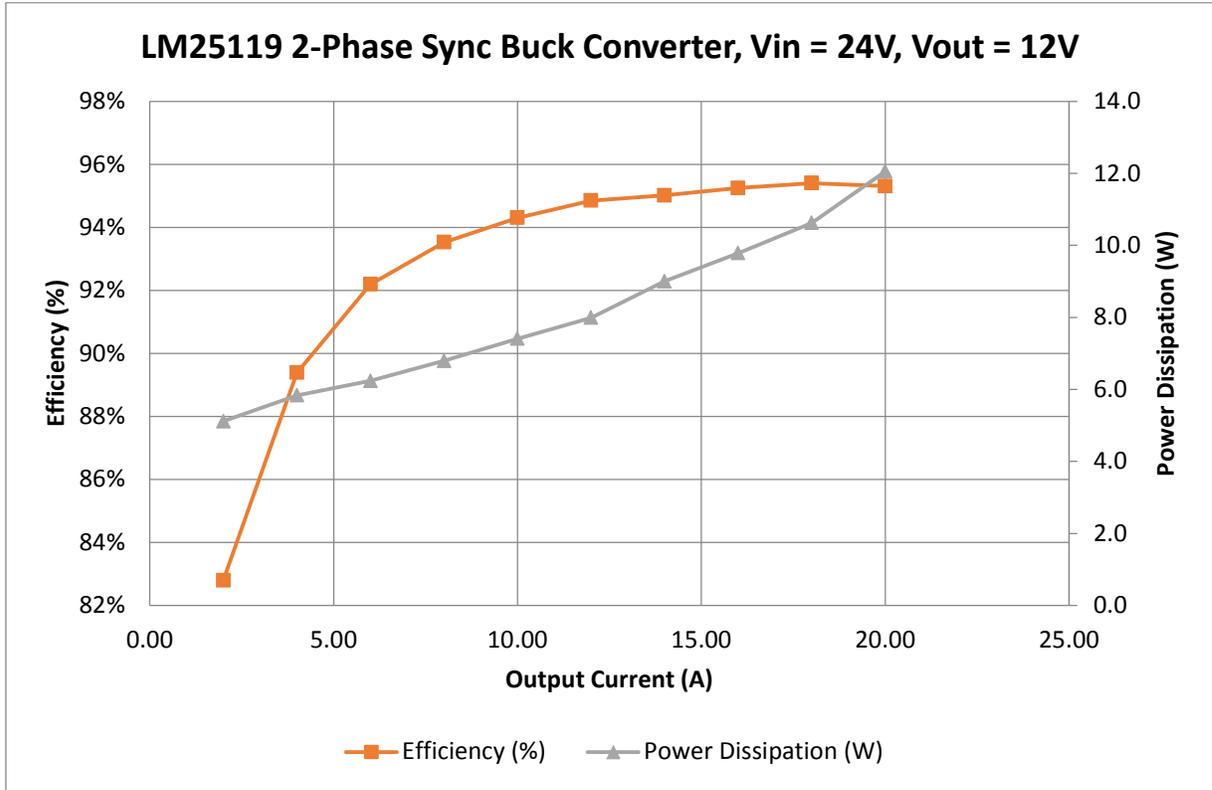
The photo below shows the output voltage startup waveform after the application of 24V in. The 12V output was loaded to 20A. (5V/DIV, 2mS/DIV)



# PMP20021 REVA Test Results

## 2 Efficiency

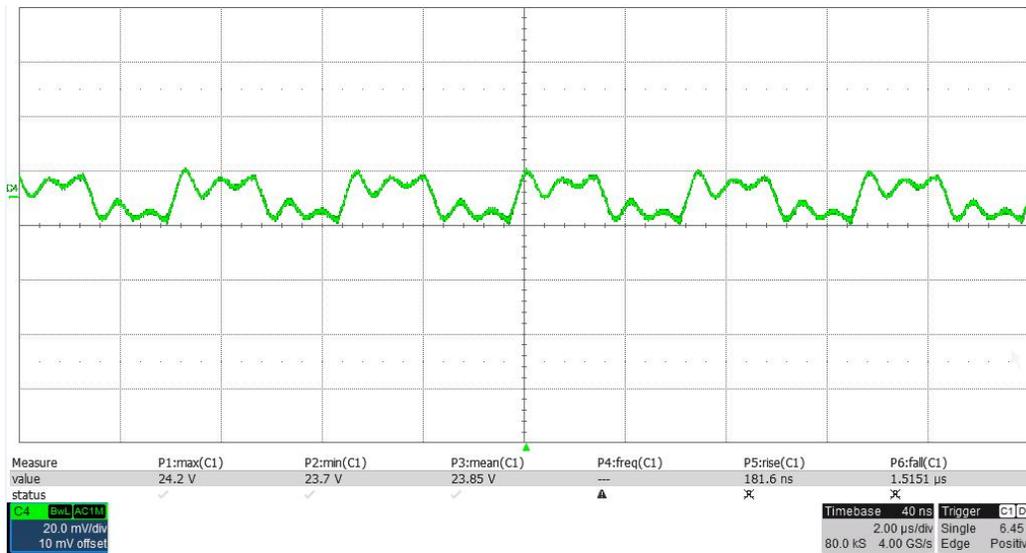
The converter efficiency is shown below.



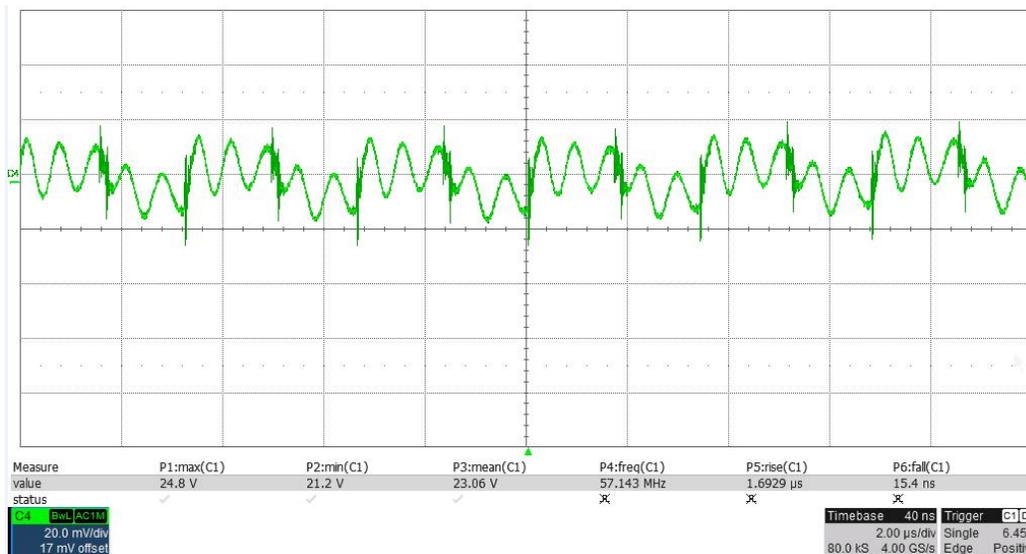
# PMP20021 REVA Test Results

## 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 0A. The input voltage is set to 24V. (20mV/DIV, 2uS/DIV)



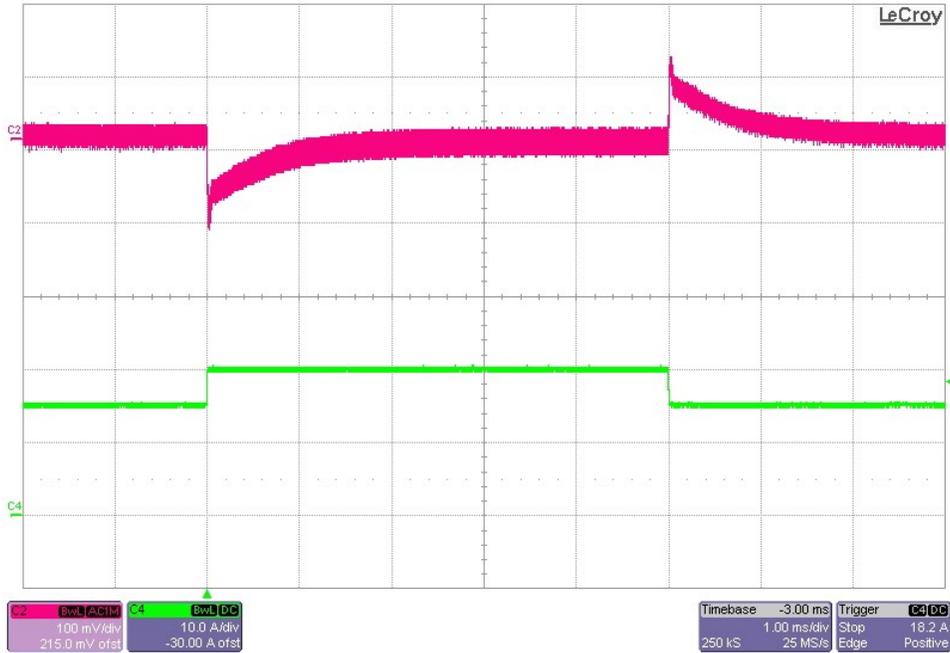
The 12V output ripple voltage (AC coupled) is shown in the figure below. The image was taken with the output loaded to 20A. The input voltage is set to 24V. (50mV/DIV, 1uS/DIV)



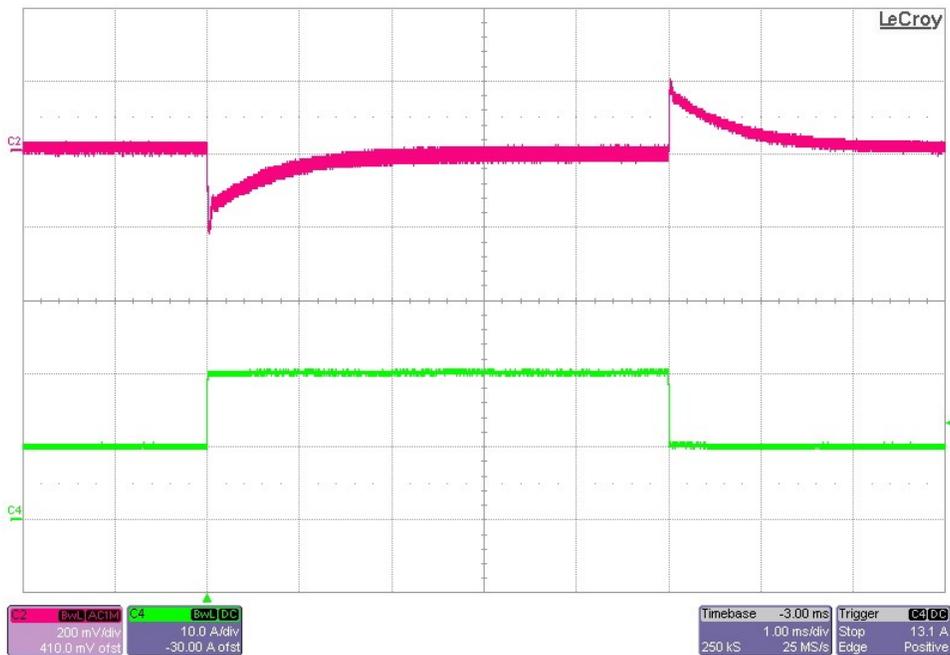
# PMP20021 REVA Test Results

## 4 Load Transients

The photo below shows the 12V output voltage (ac coupled) when the load current is stepped between 15A and 20A.  $V_{in} = 24V$ .  
 (100mV/DIV, 10A/DIV, 1mS/DIV)

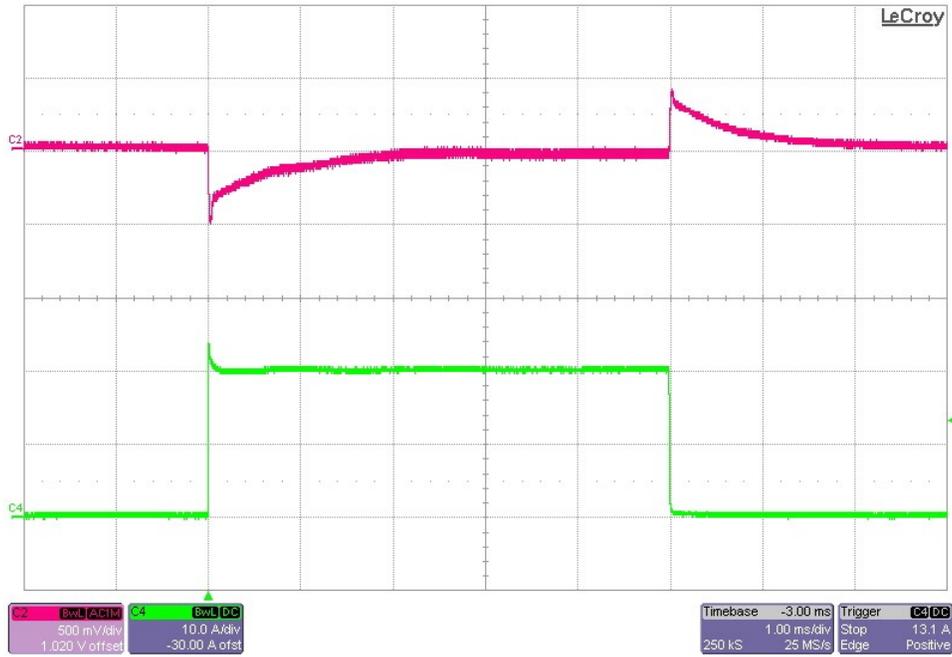


The photo below shows the 12V output voltage (ac coupled) when the load current is stepped between 10A and 20A.  $V_{in} = 24V$ .  
 (200mV/DIV, 10A/DIV, 1mS/DIV)



# PMP20021 REVA Test Results

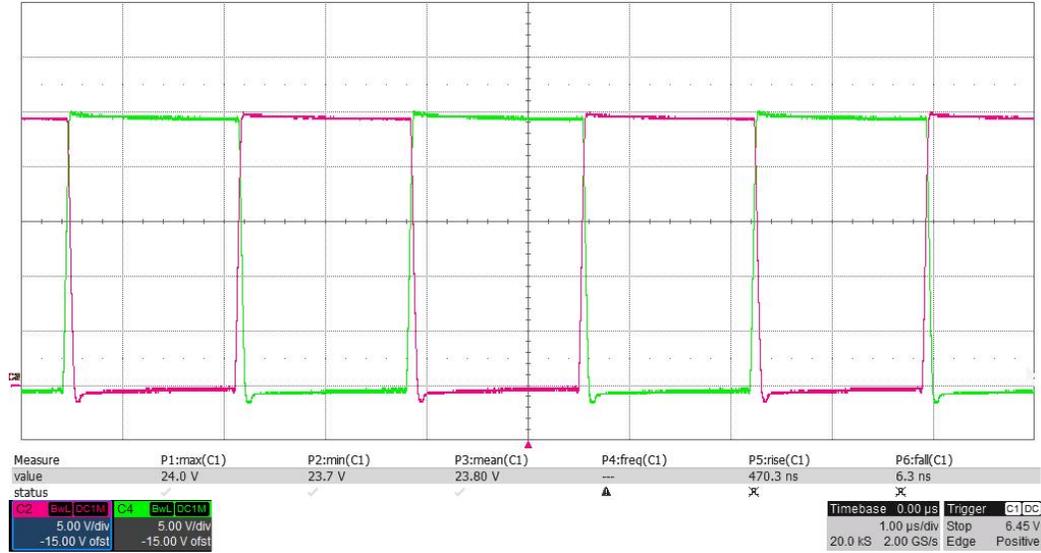
The photo below shows the 12V output voltage (ac coupled) when the load current is stepped between 0A and 20A.  $V_{in} = 24V$ . (500mV/DIV, 10A/DIV, 1mS/DIV)



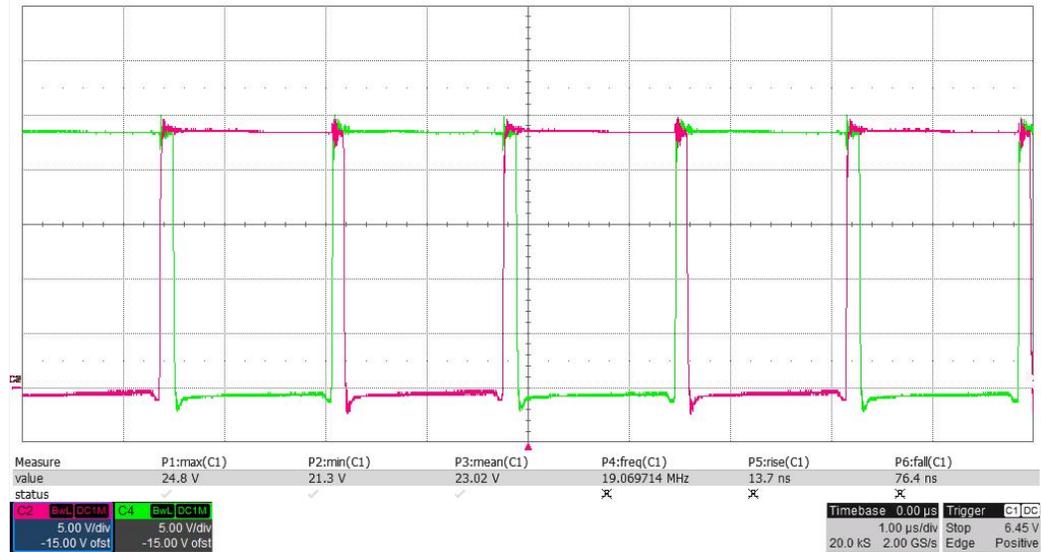
# PMP20021 REVA Test Results

## 5 Switch Node Waveforms

The photo below shows the FET switching voltages of each phase for an input voltage of 24V and a 0A load. (5V/DIV, 1uS/DIV)



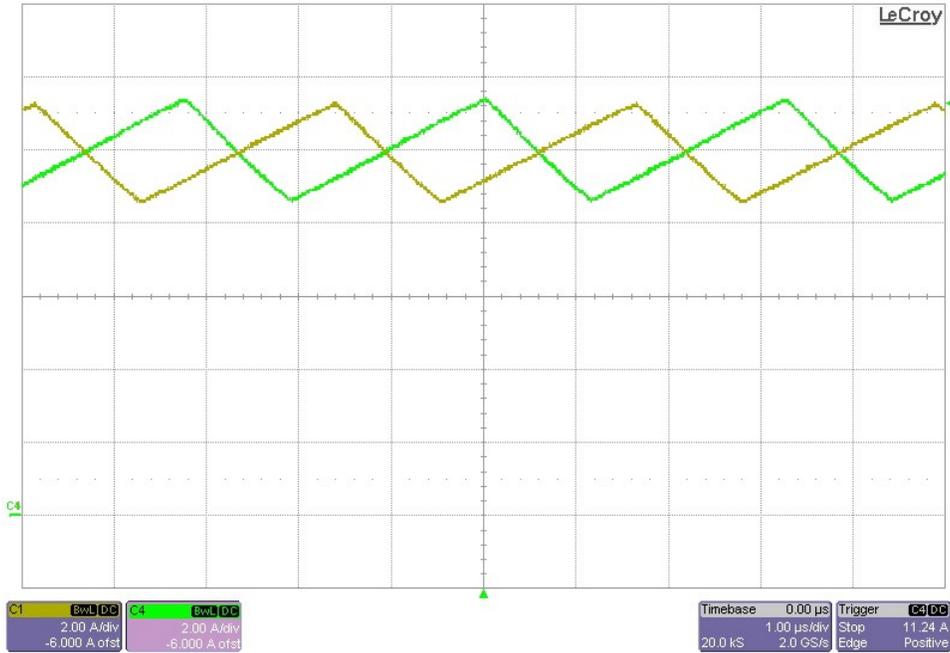
The photo below shows the FET switching voltages of each phase for an input voltage of 24V and a 20A load. (5V/DIV, 1uS/DIV)



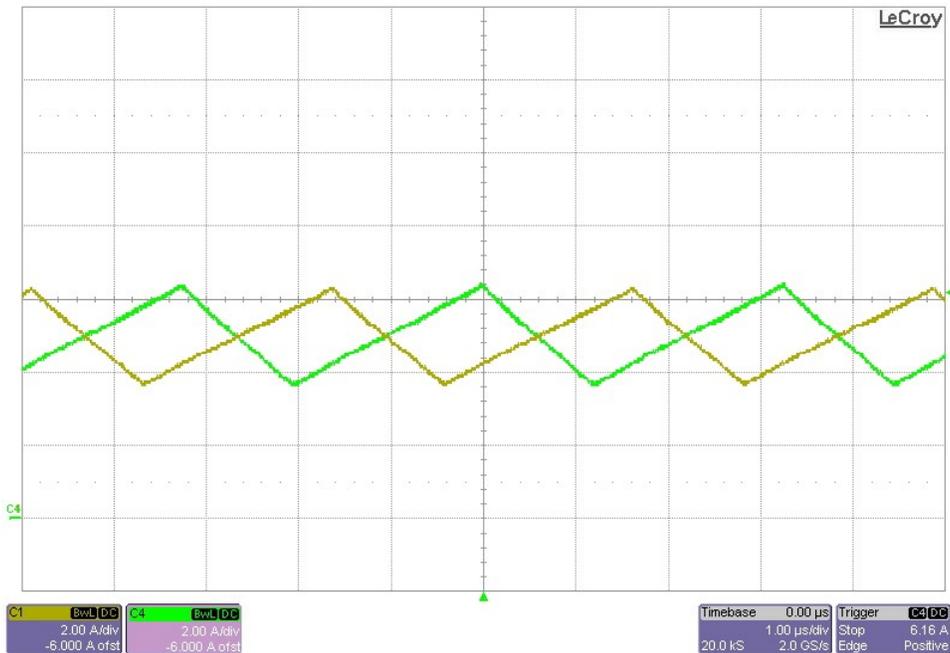
# PMP20021 REVA Test Results

## 6 Current Balance Waveforms

The photo below shows the measured inductor current in each phase. The input voltage was set to 24V with a 20A load. (2A/DIV, 1uS/DIV)

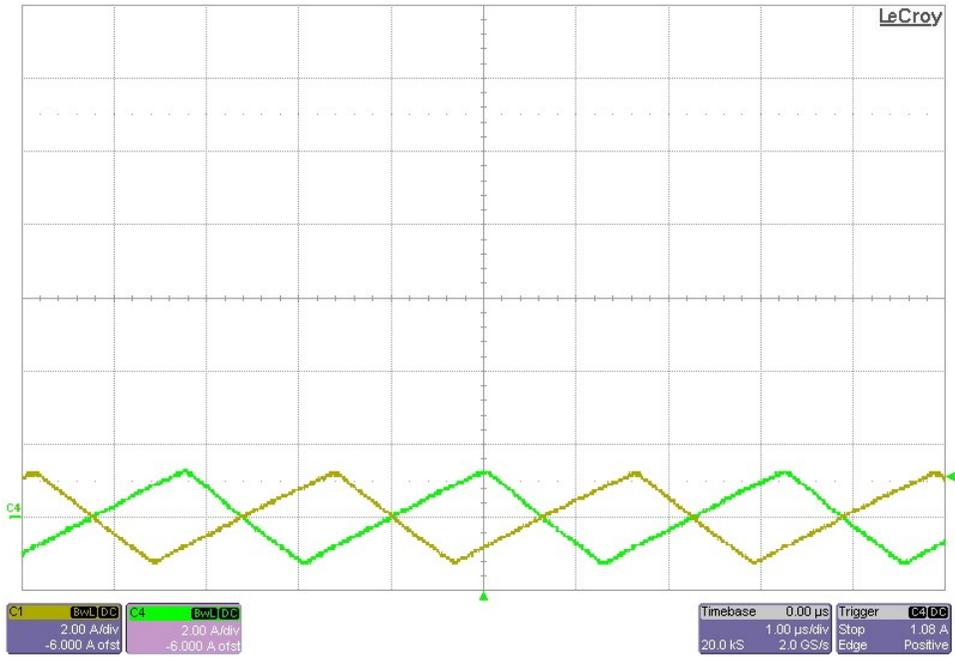


The photo below shows the measured inductor current in each phase. The input voltage was set to 24V with a 10A load. (2A/DIV, 1uS/DIV)



# PMP20021 REVA Test Results

The photo below shows the measured inductor current in each phase. The input voltage was set to 24V with a 0A load. (2A/DIV, 1uS/DIV)



# PMP20021 REVA Test Results

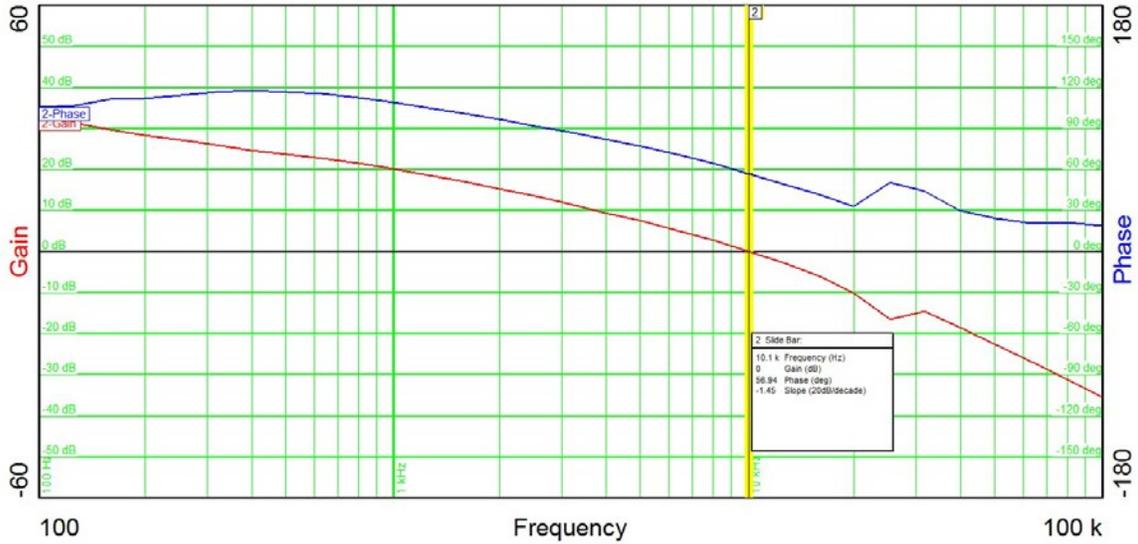
## 7 Loop Gain

The plot below shows the loop gain with the input voltage set to 24V and for an output load of 20A.

Loop Gain (Vin = 24V)

BW: 10.1KHz

PM: 57 degrees

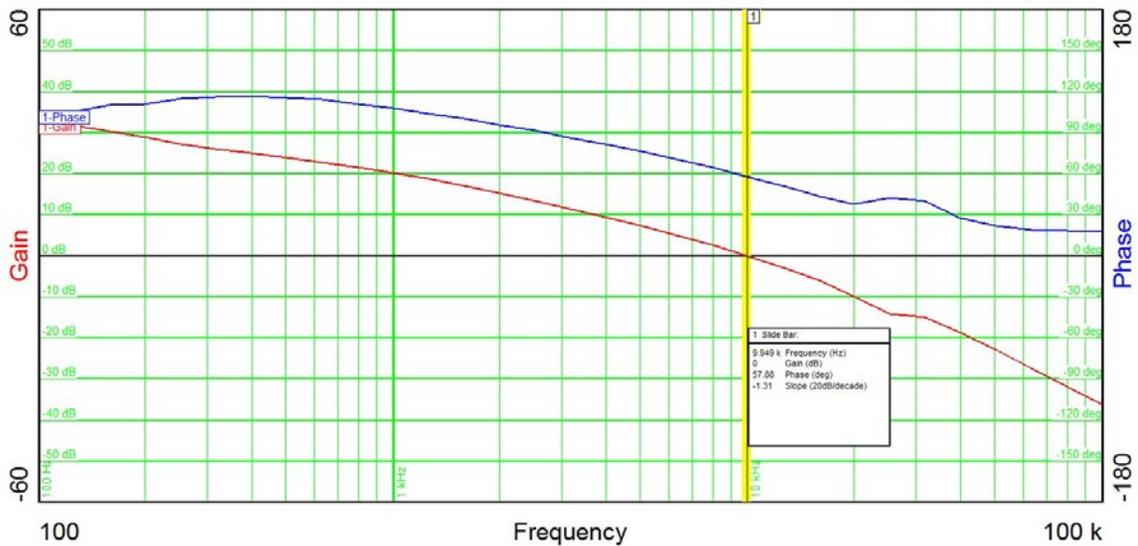


The plot below shows the loop gain with the input voltage set to 24V and for an output load of 10A.

Loop Gain (Vin = 24V)

BW: 9.95KHz

PM: 58 degrees



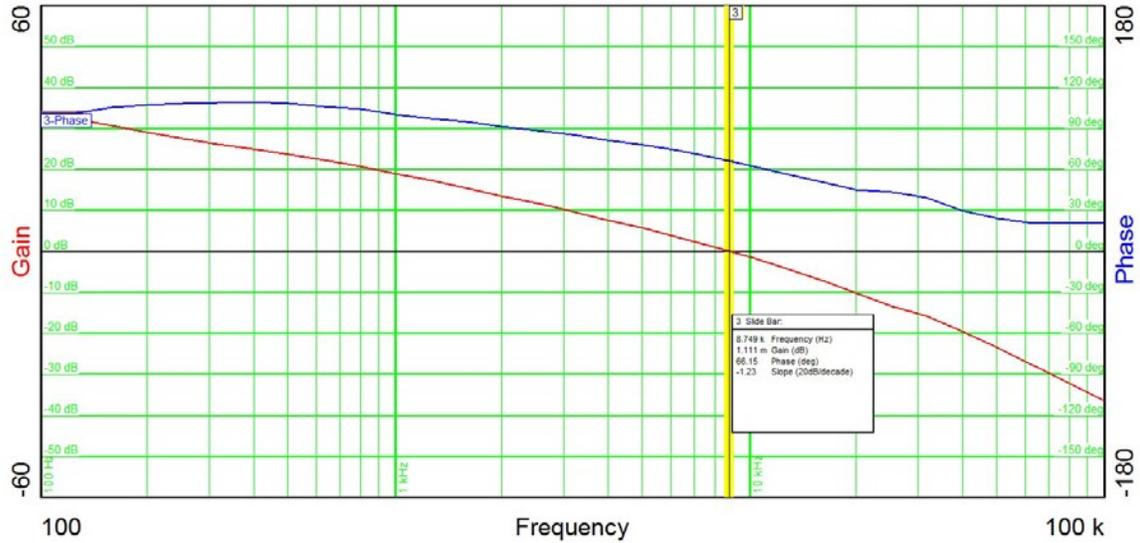
# PMP20021 REVA Test Results

The plot below shows the loop gain with the input voltage set to 24V and for an output load of 0A.

Loop Gain (Vin = 24V)

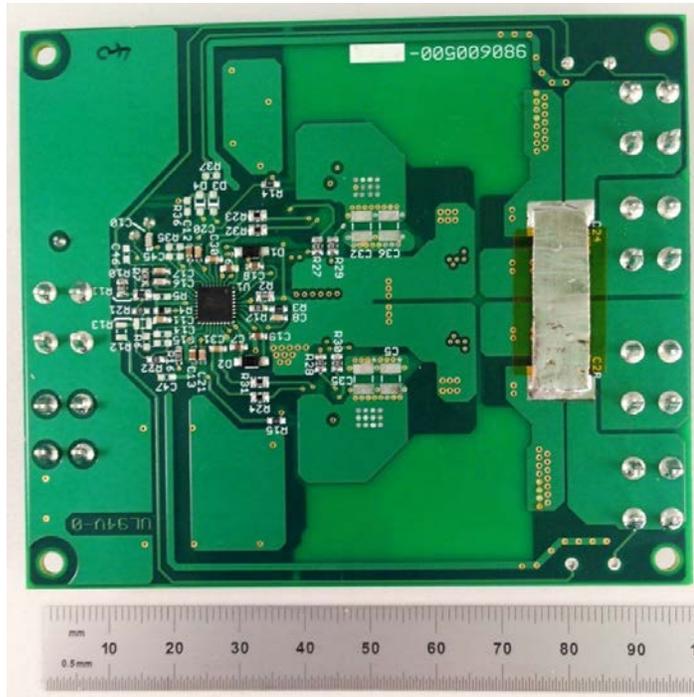
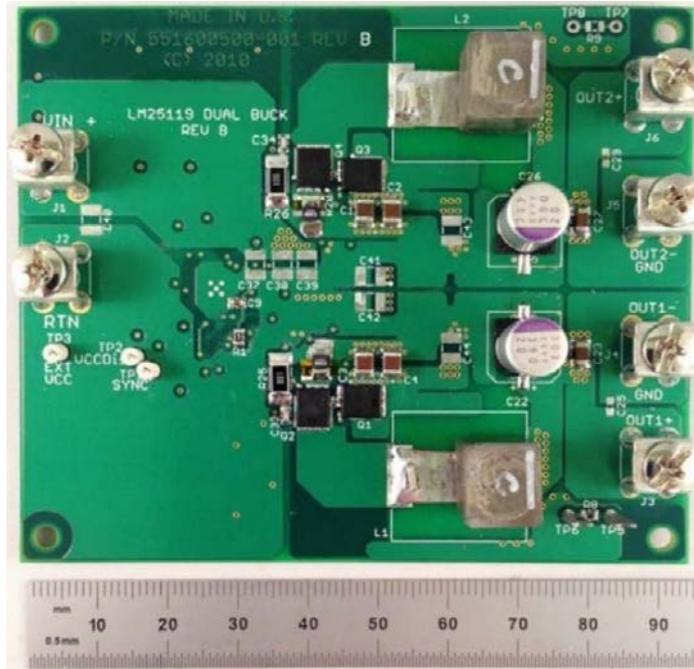
BW: 8.75KHz

PM: 66 degrees



## 8 Photo

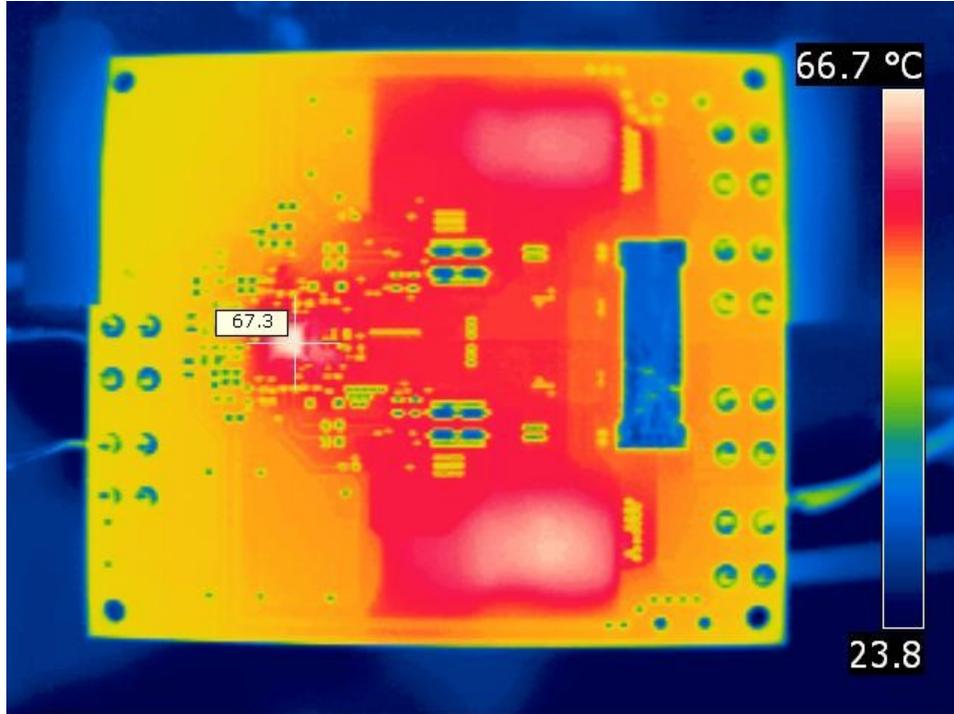
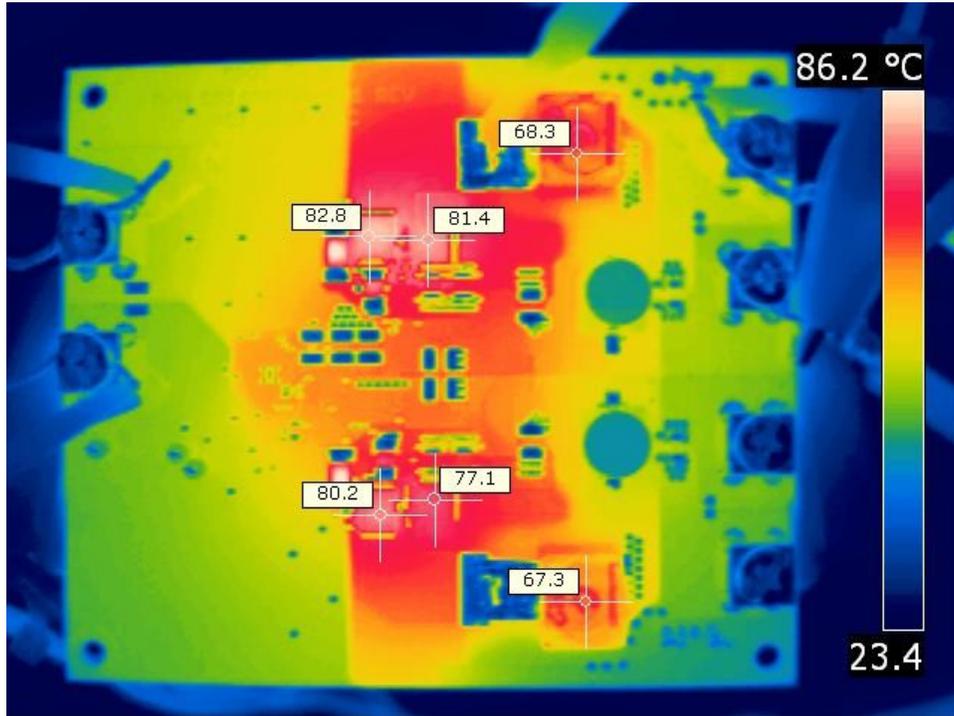
The photo below shows the PMP20021 REVA assy built on the LM25119 EVM.



# PMP20021 REVA Test Results

## 9 Thermal Image

A thermal image is shown below operating at 24V input and 12V@20A output (room temp, no airflow).



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