1 Switching node

The switching node at 12.0V input and 2.5A load is shown in Figure 1.

Channel C2: **switching node**, -1.68V minimum voltage, 12.59V maximum voltage
2V/div, 1us/div

Figure 1

2 Frequency response

Figure 2 shows the loop response with 12.0V input and 4.0A load.

56.9 deg phase margin @ crossover frequency 33.0 kHz

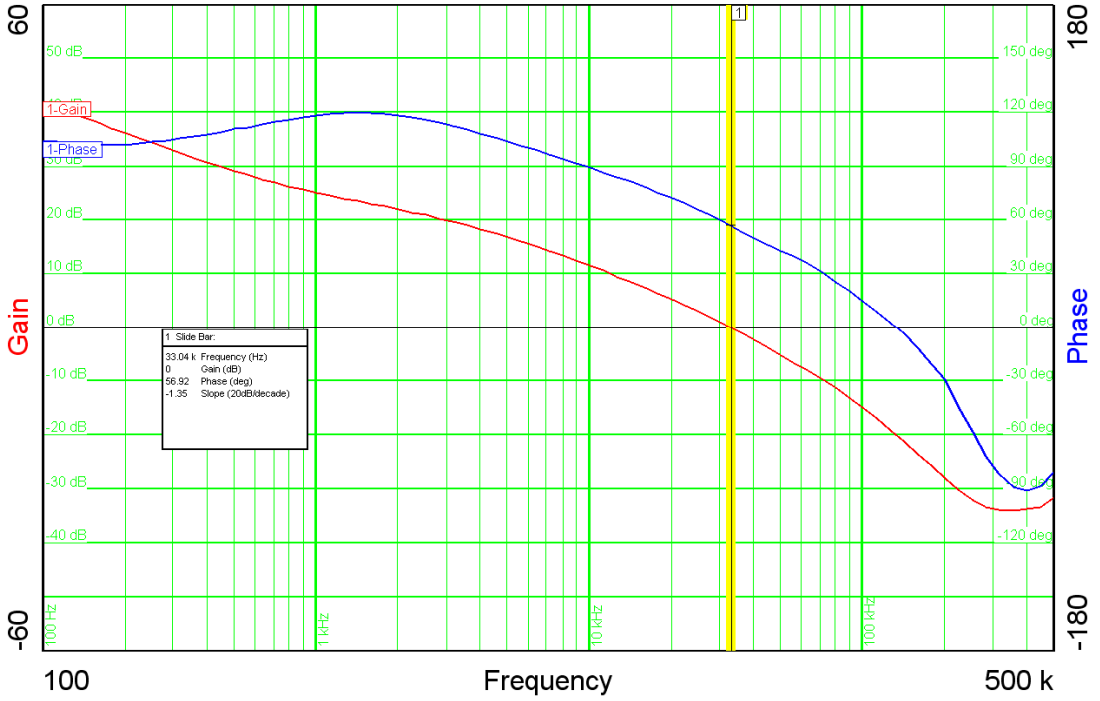
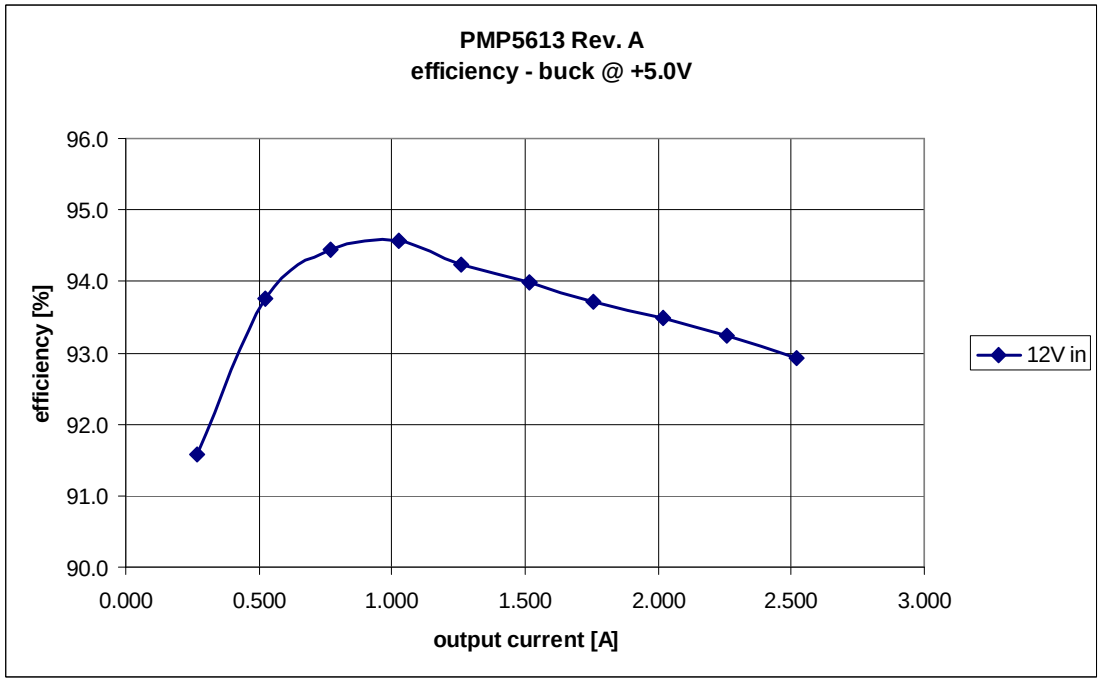


Figure 2

3 Efficiency

Figure 3 shows the efficiency and the load regulation of the converter at 12.0V input voltage.



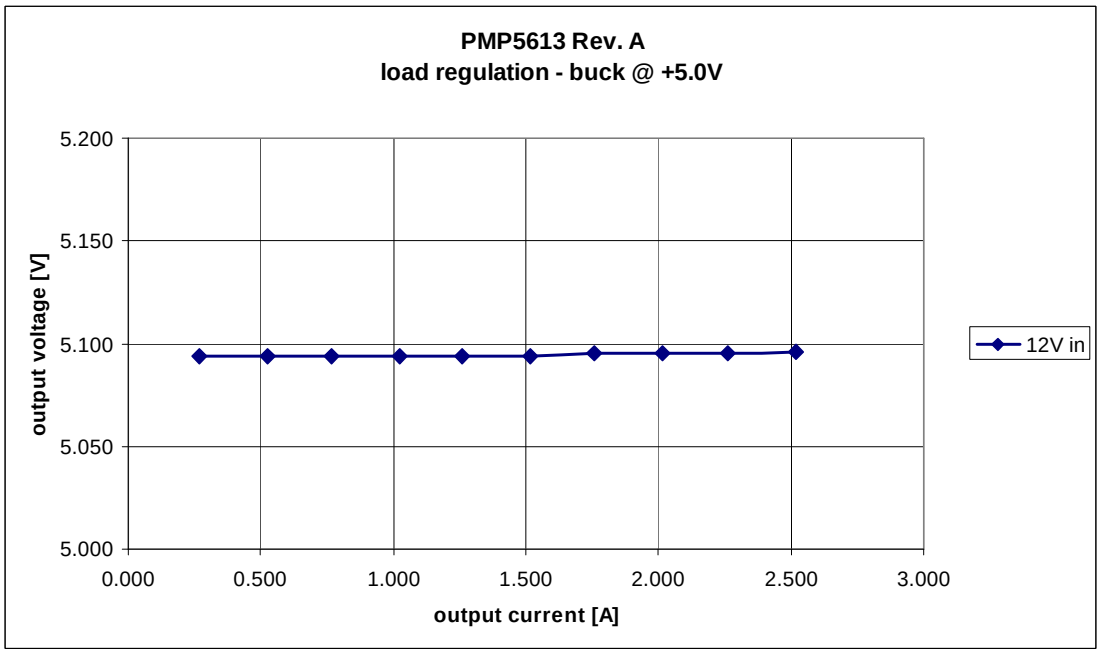


Figure 3

4 Output ripple

Figure 4 shows the output ripple at 12.0V input voltage and a load of 2.5A.

Channel C2: **output ripple voltage,** -12.2mV minimum, 7.7mV maximum
20mV/div, 5us/div, AC coupled

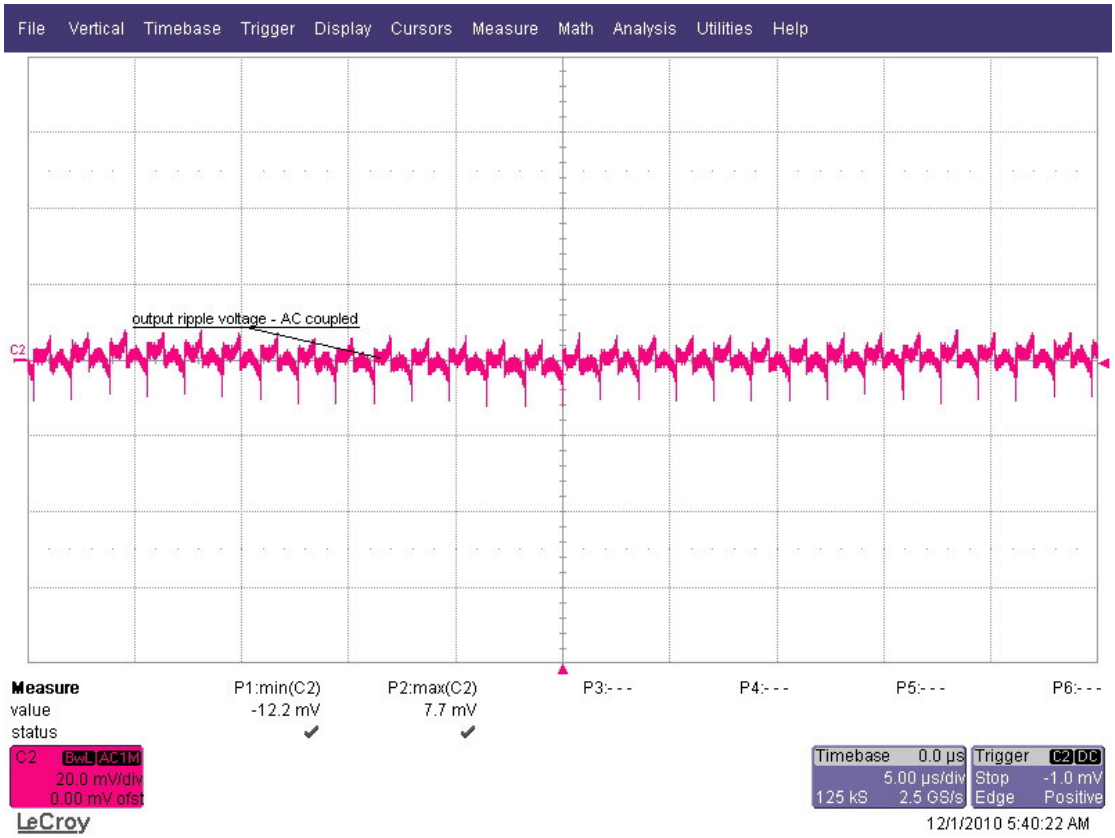


Figure 4

5 Transient response

The response to a load step and a load dump at an input voltage of 12.0V is shown in Figure 5.

Channel C2: **output voltage**, -208mV undershoot, 202mV overshoot
100mV/div, 1ms/div, AC coupled

Channel C1: **load current**, load step 1.25A to 2.5A
1A/div, 1ms/div

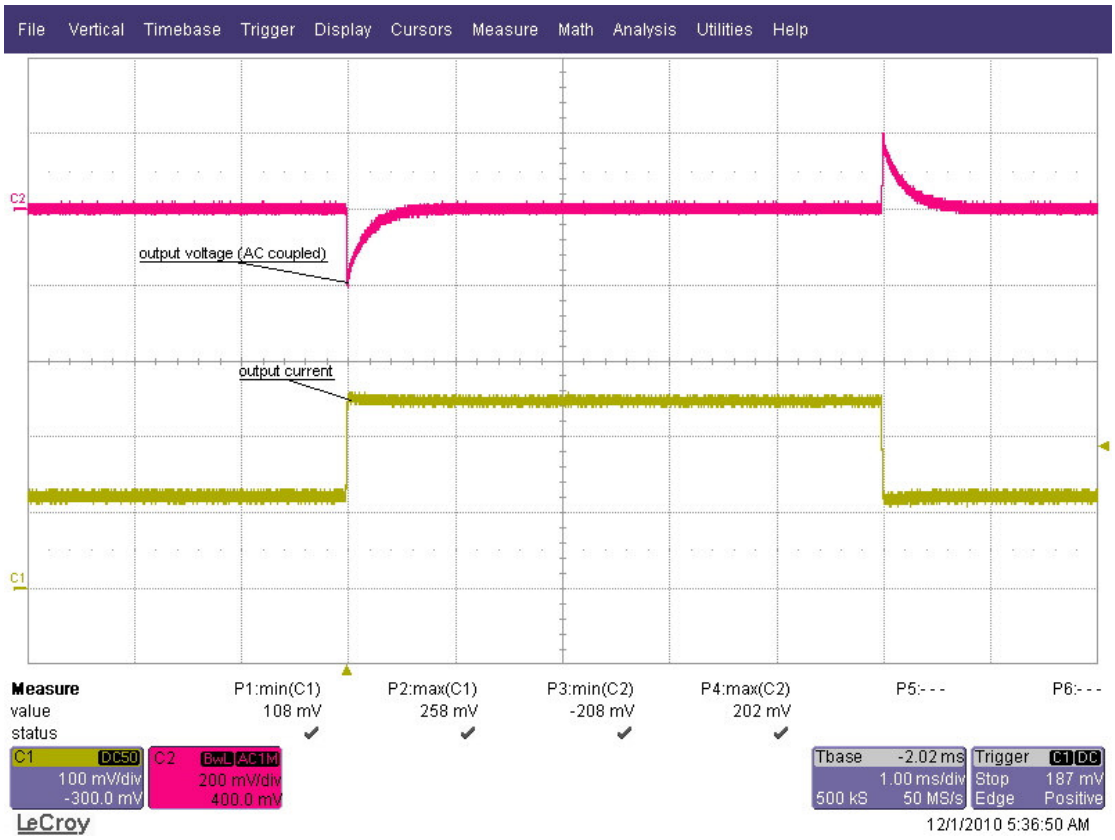


Figure 5

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