

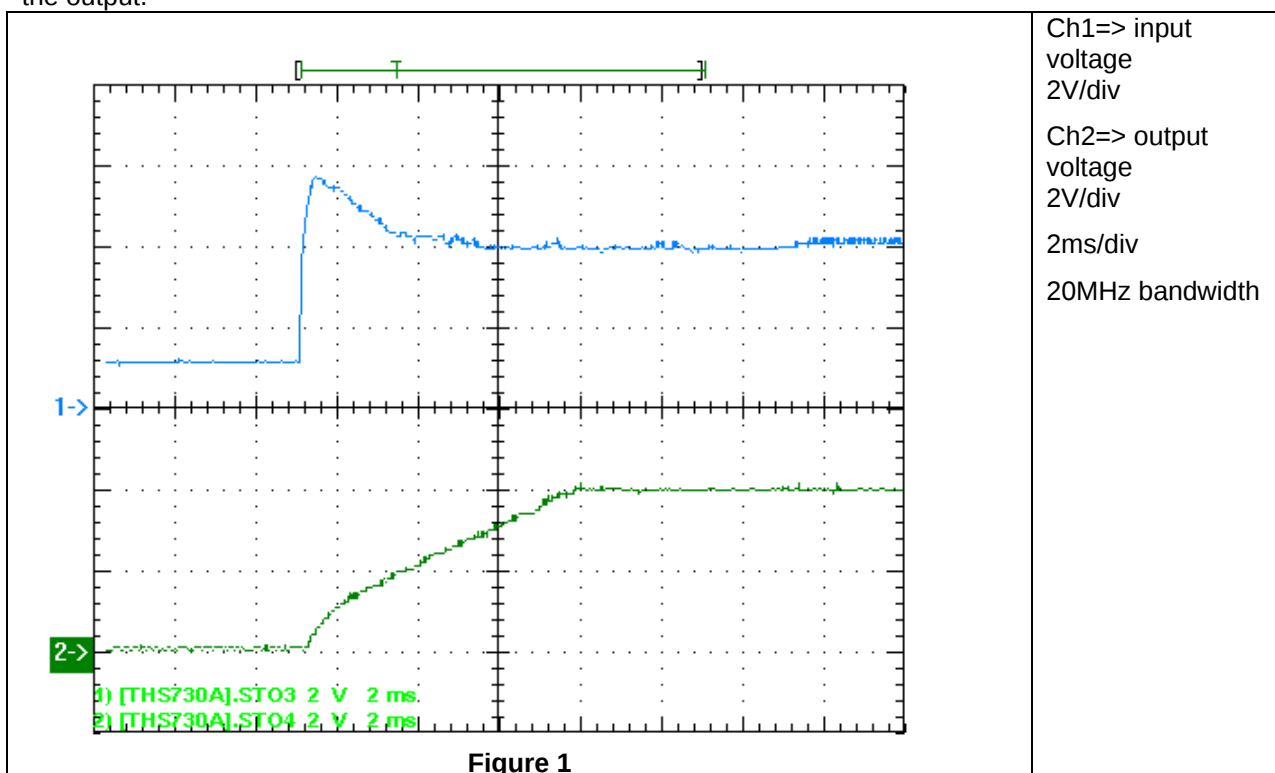
PMP5624RevB Test Results

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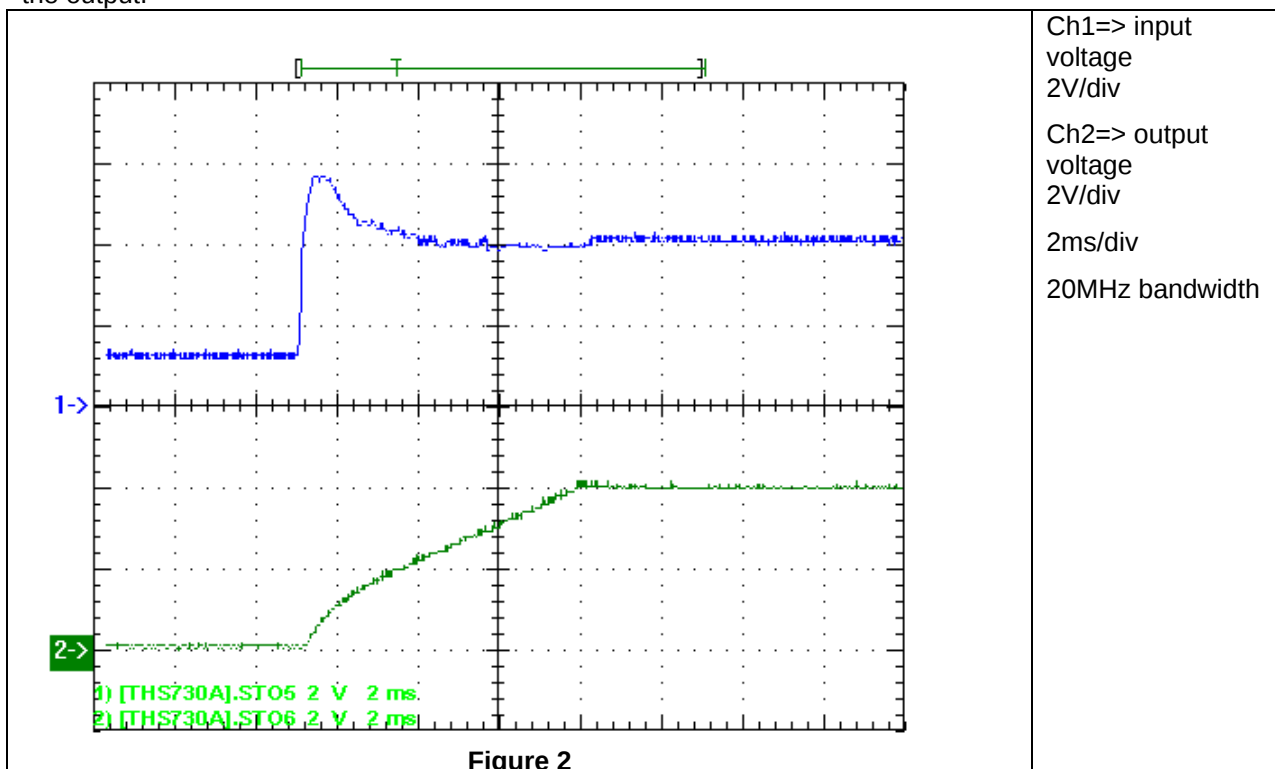
PMP5624RevB Test Results

1 Startup

The startup waveform is shown in the Figure 1. The input voltage was set to 4V, with 0.8A load at the output.

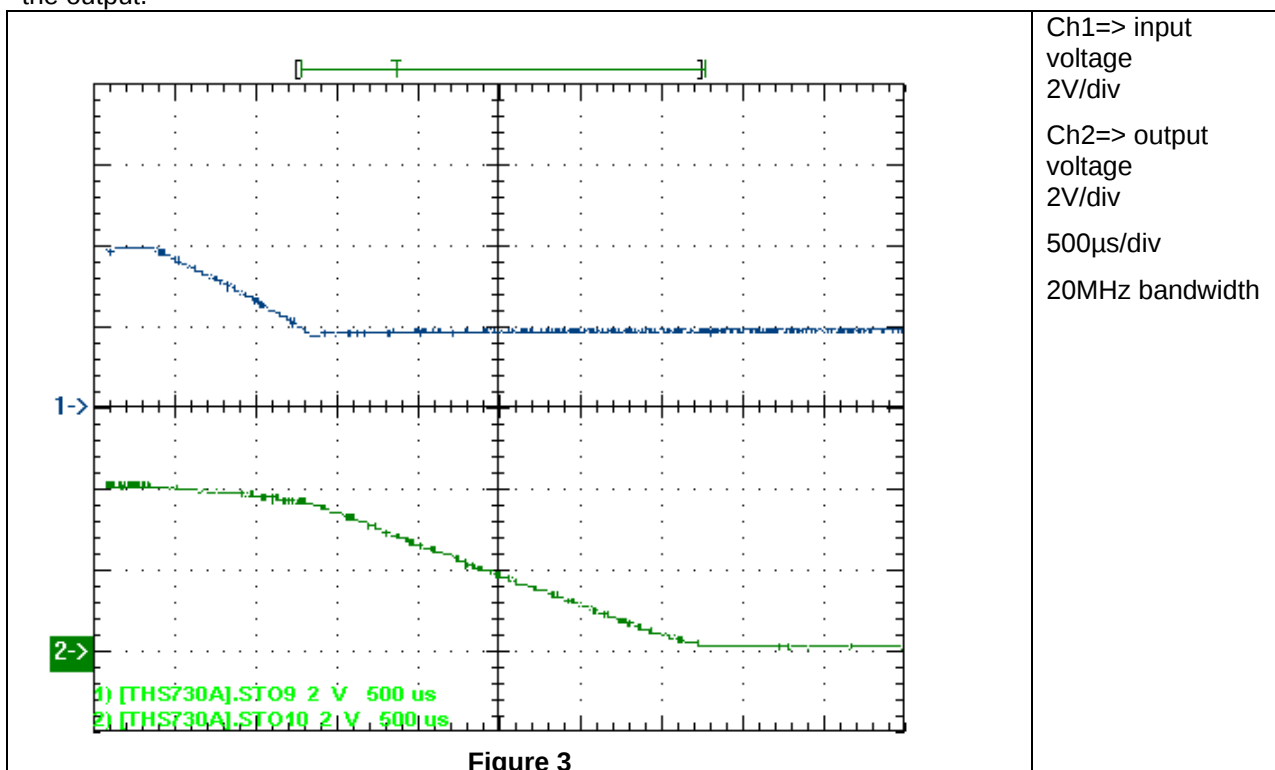


The startup waveform is shown in the Figure 2. The input voltage was set to 4V, with 2.5A load at the output.

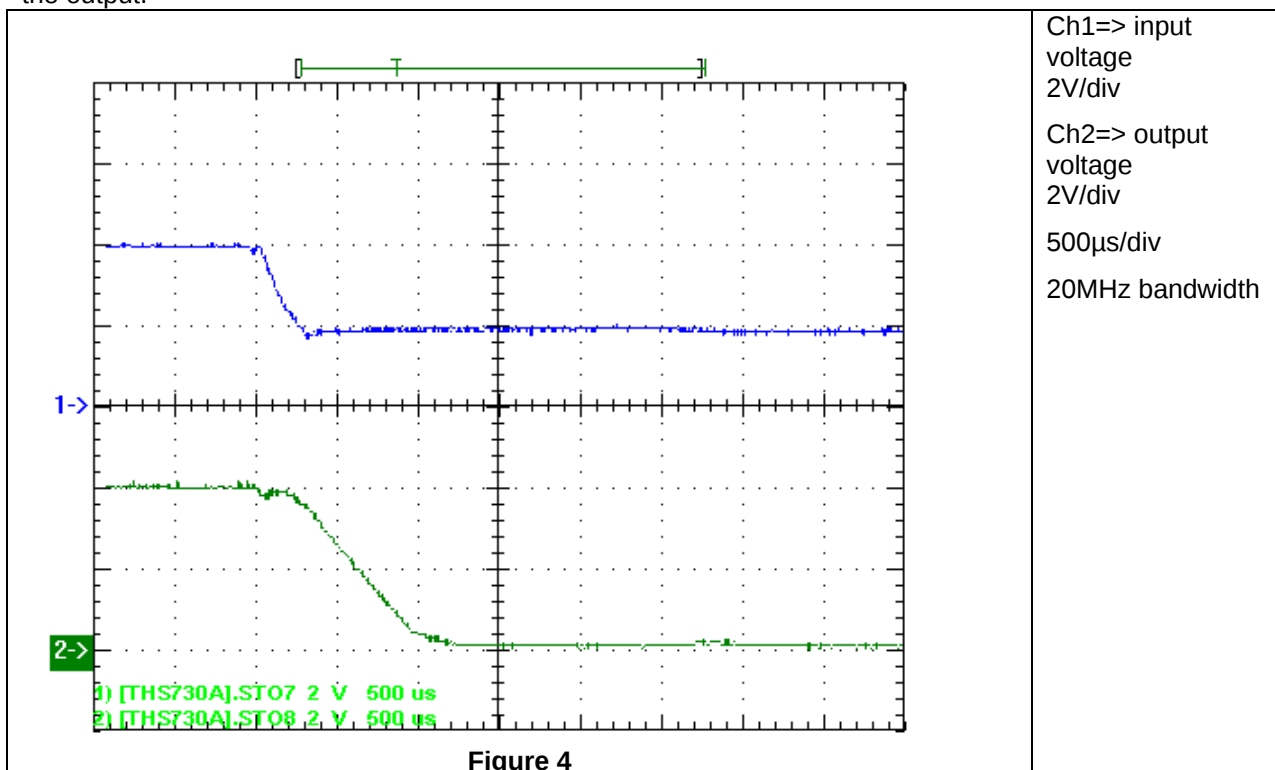


2 Shutdown

The shutdown waveform is shown in the Figure 3 at 4V input voltage. With 0.8A load applied at the output.



The shutdown waveform is shown in the Figure 4 at 4V input voltage. With 2.5A load applied at the output.



3 Efficiency

The efficiencies with different input voltages are shown in the Figure 5 below.

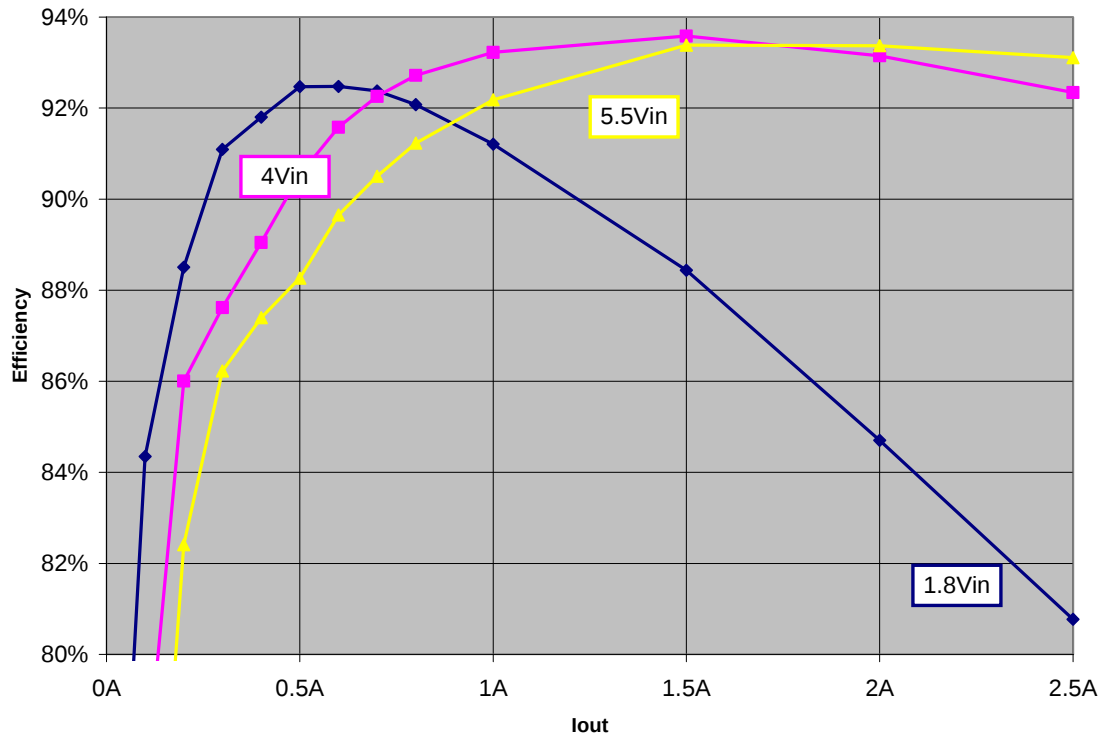


Figure 5

PMP5624RevB Test Results

4 Load regulation

The load regulation at different input voltages are shown in Figure 6.

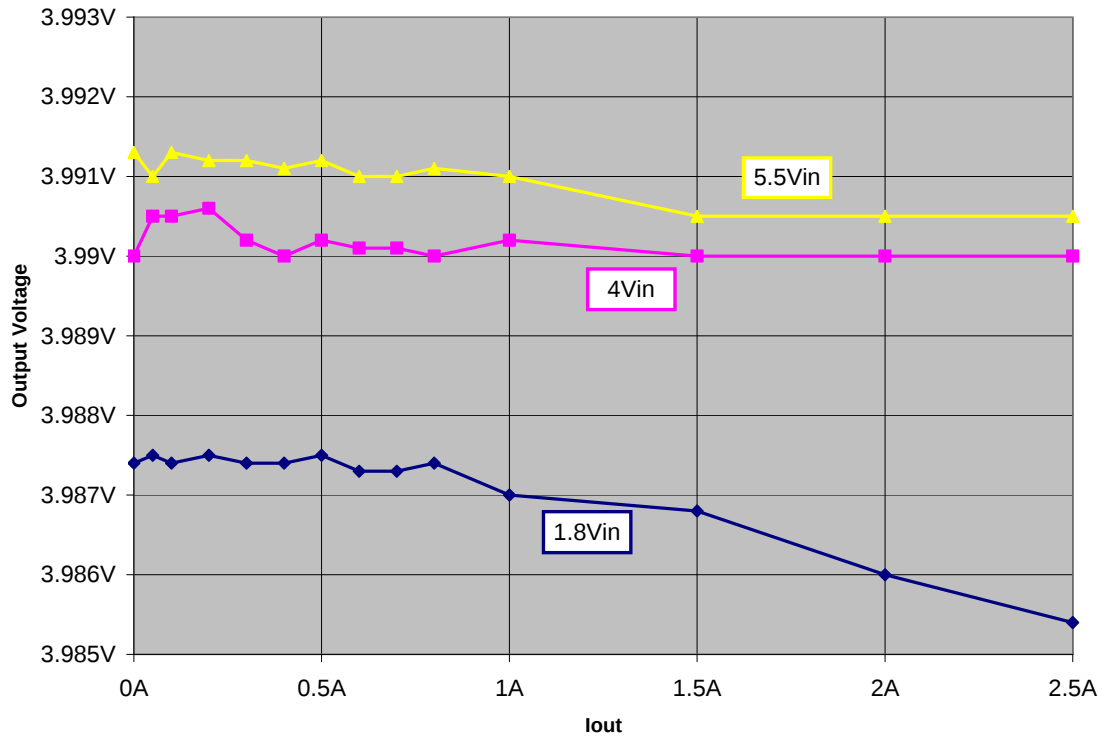


Figure 6

5 Line Regulation

The line regulation at 0.8A and 2.5A output current is shown in Figure 7.

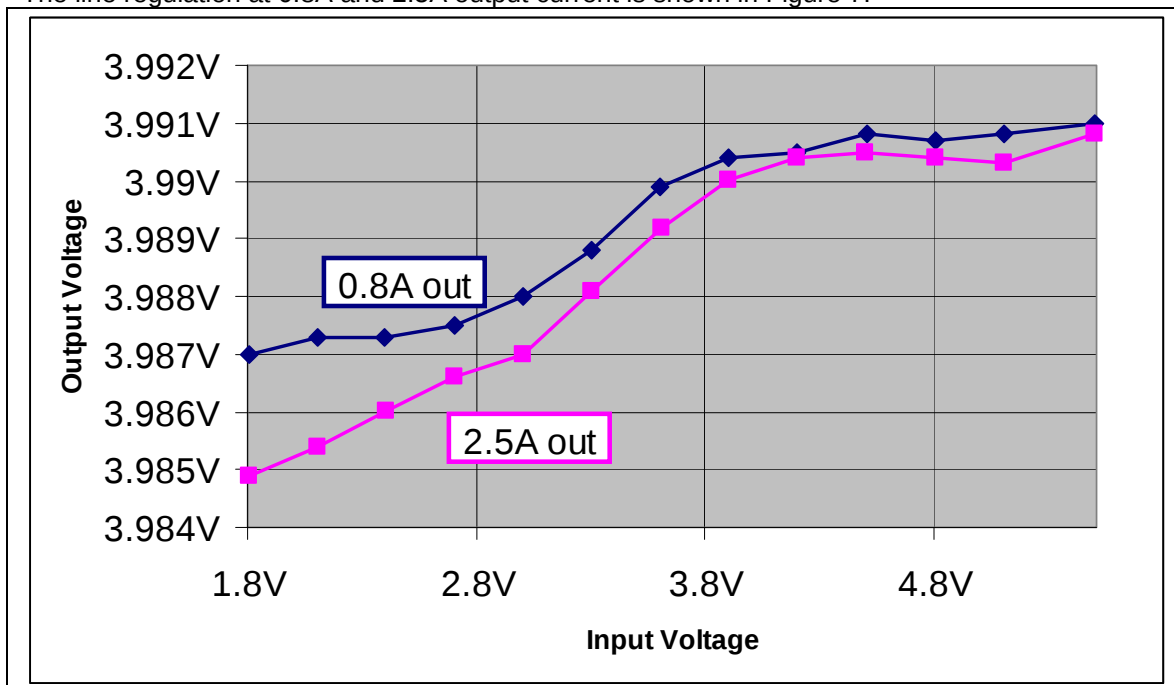


Figure 7

With the same measurement setup the efficiencies are shown in Figure 8.

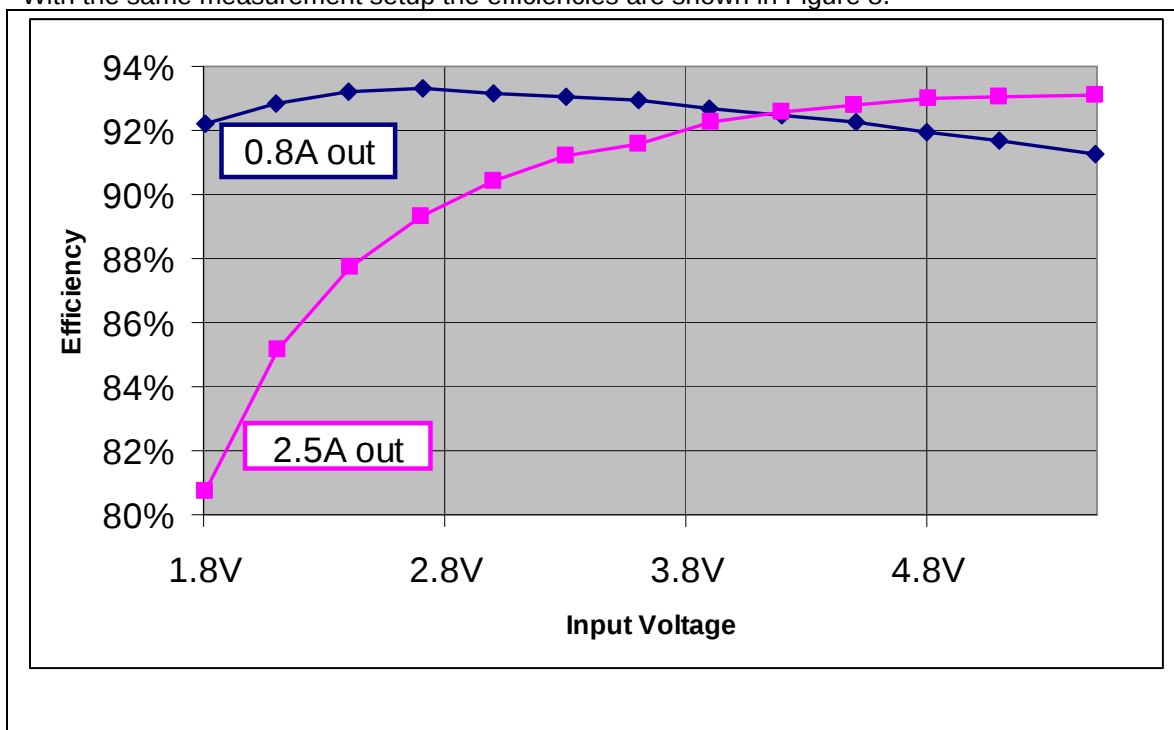
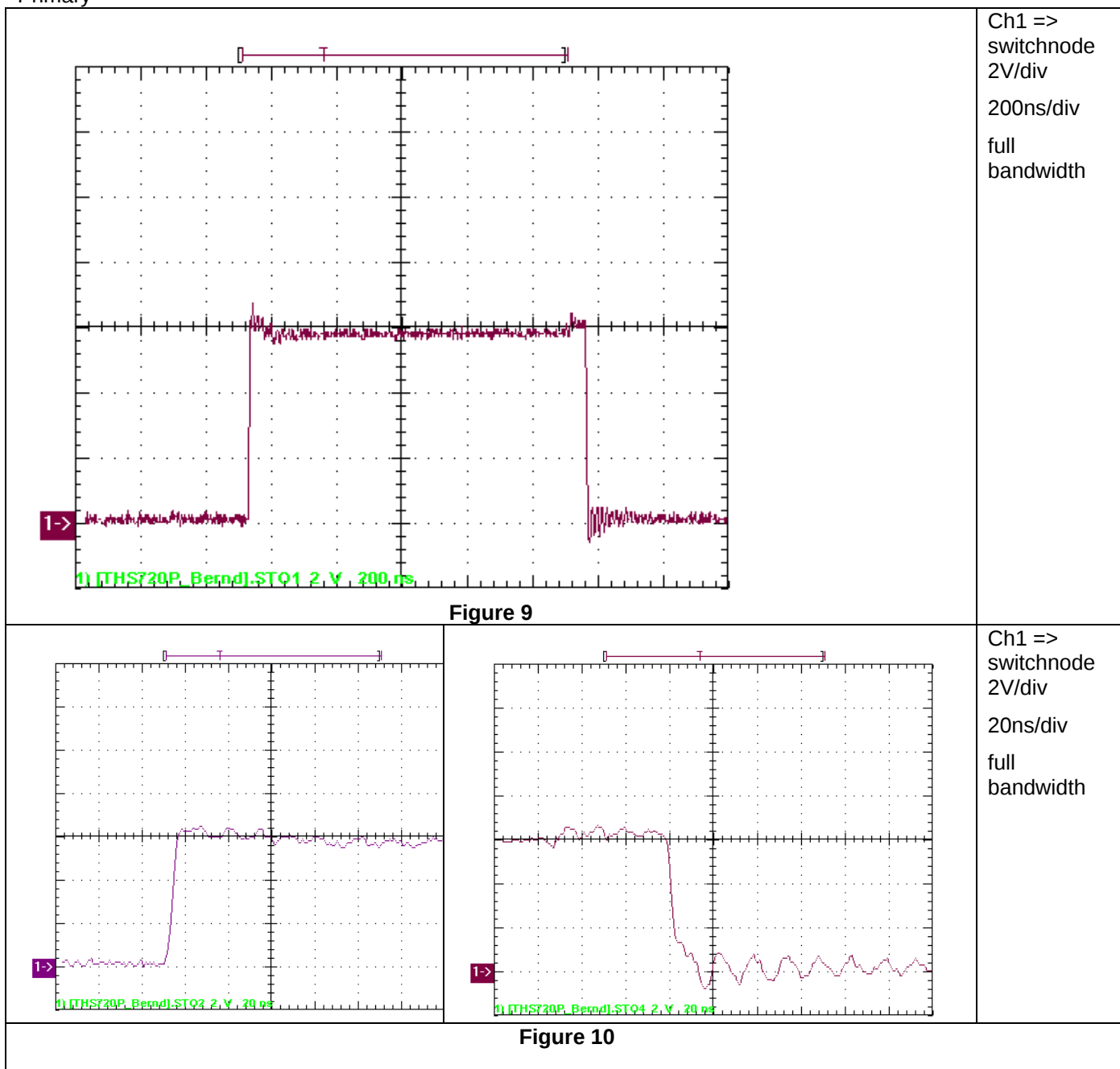


Figure 8

PMP5624RevB Test Results

6 Switch Node Waveform

With 0.8A load results in the waveforms shown in Figure 9. 1.8V were applied to the input.
Primary



PMP5624RevB Test Results

With 0.8A load results in the waveforms shown in Figure 11. 1.8V were applied to the input.
Secondary referenced to +VOUT

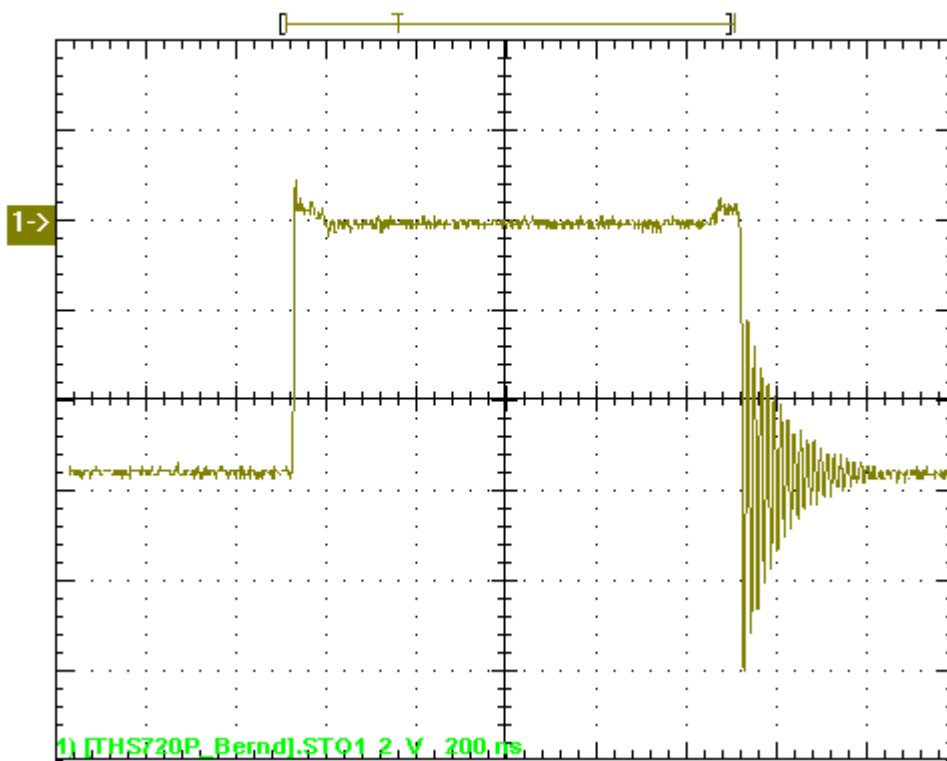


Figure 11

Ch1 =>
switchnode
2V/div
200ns/div
full
bandwidth

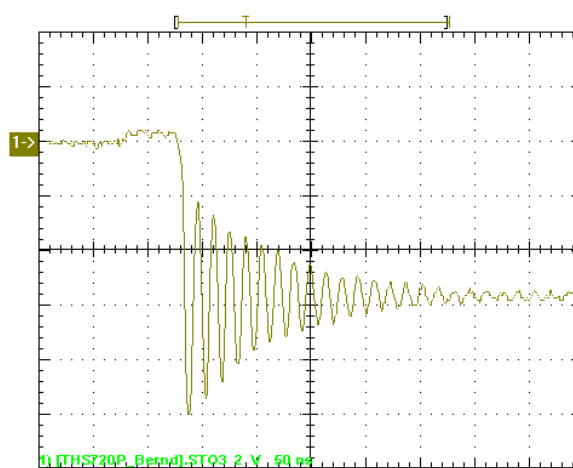
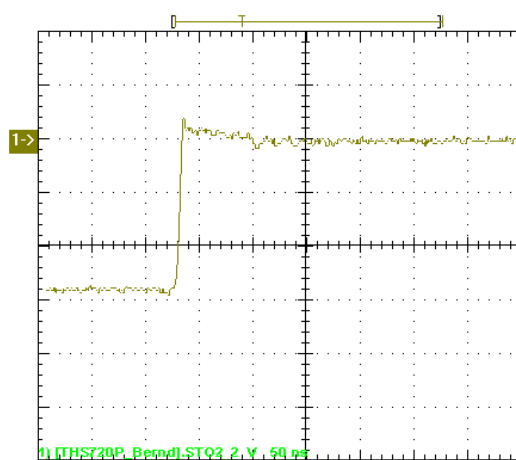
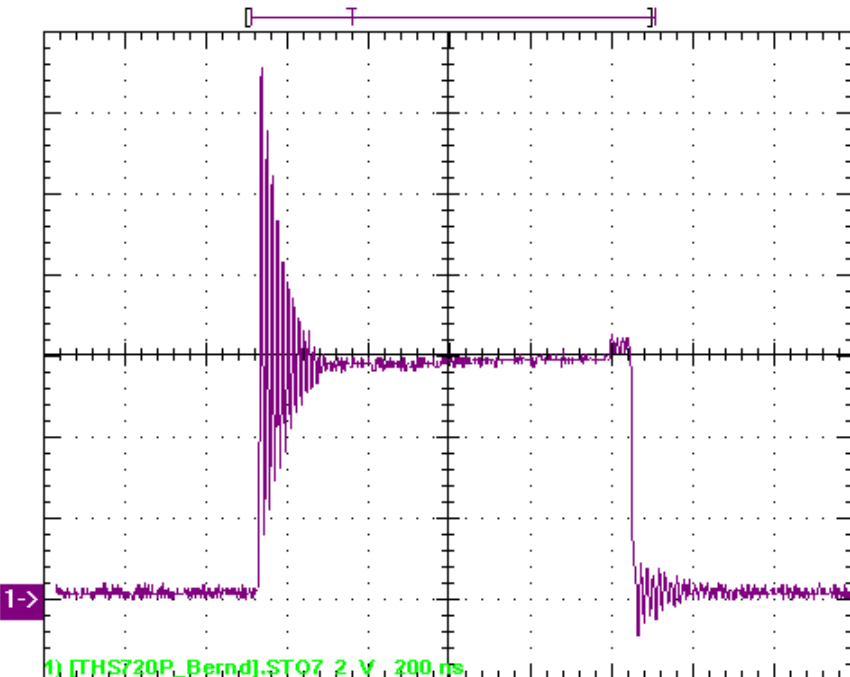
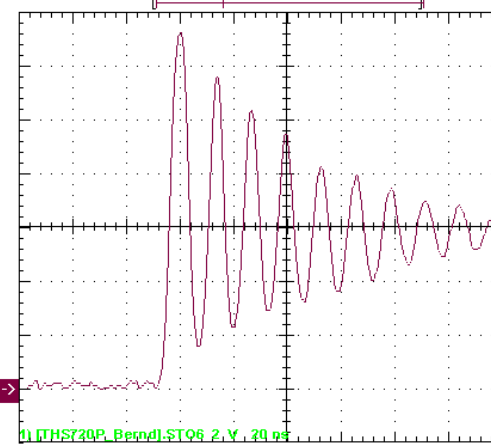
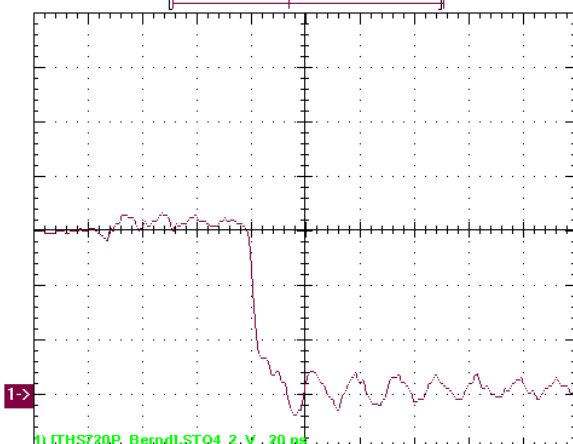


Figure 12

Ch1 =>
switchnode
2V/div
50ns/div
full
bandwidth

PMP5624RevB Test Results

With 2.5A load results in the waveforms shown in Figure 13. 1.8V were applied to the input.
Primary

	Ch1 => switchnode 2V/div 200ns/div full bandwidth
Figure 13	
	
Figure 14	
Ch1 => switchnode 2V/div 20ns/div full bandwidth	

PMP5624RevB Test Results

With 2.5A load results in the waveforms shown in Figure 15. 1.8V were applied to the input.
Secondary referenced to +VOUT

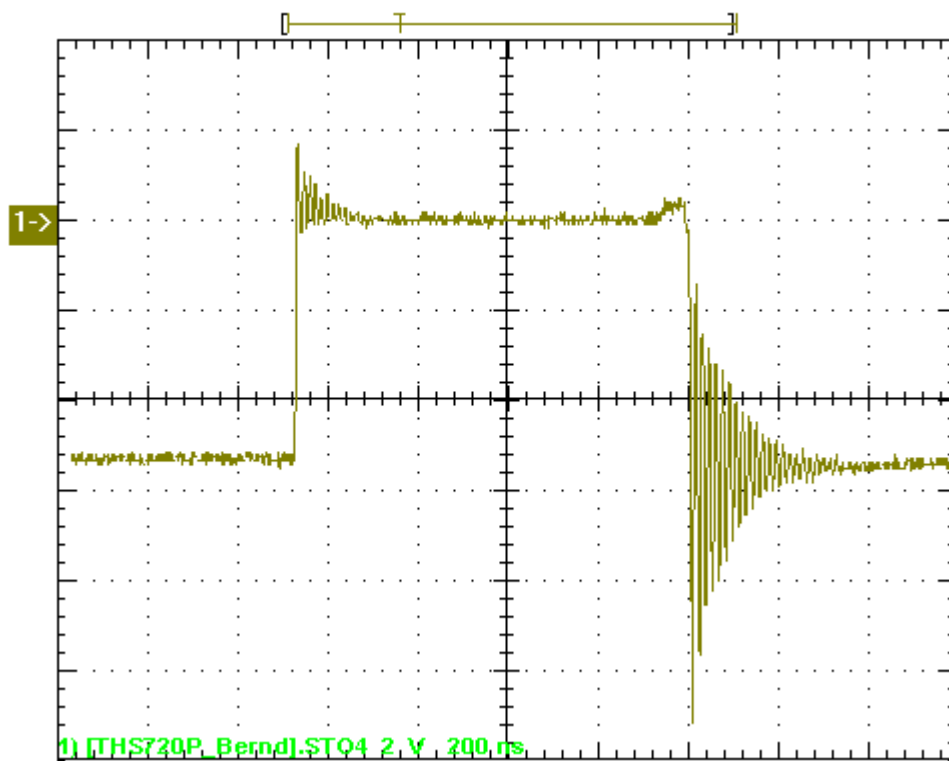


Figure 15

Ch1 =>
switchnode
2V/div
200ns/div
full
bandwidth

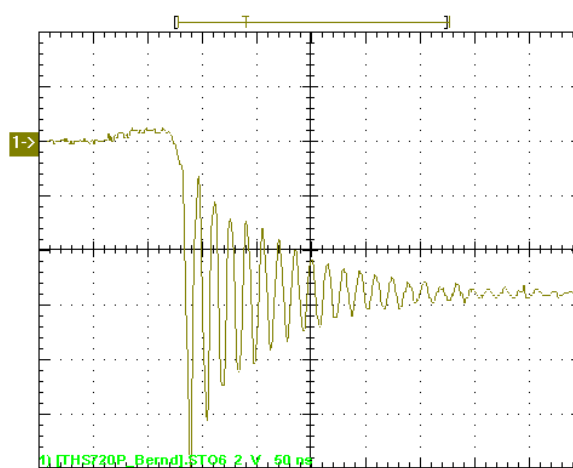
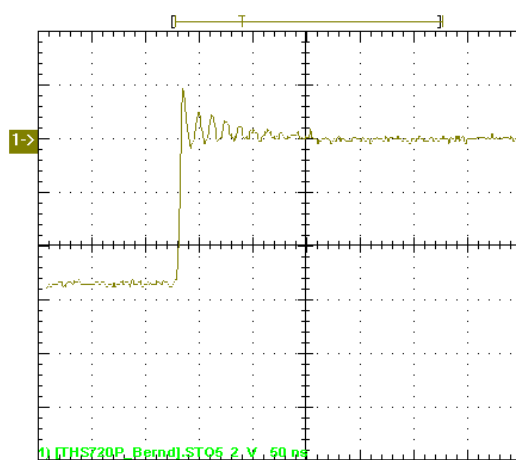


Figure 16

Ch1 =>
switchnode
2V/div
50ns/div
full
bandwidth

PMP5624RevB Test Results

With 0.8A load results in the waveforms shown in Figure 17. 5.5V were applied to the input.
Primary

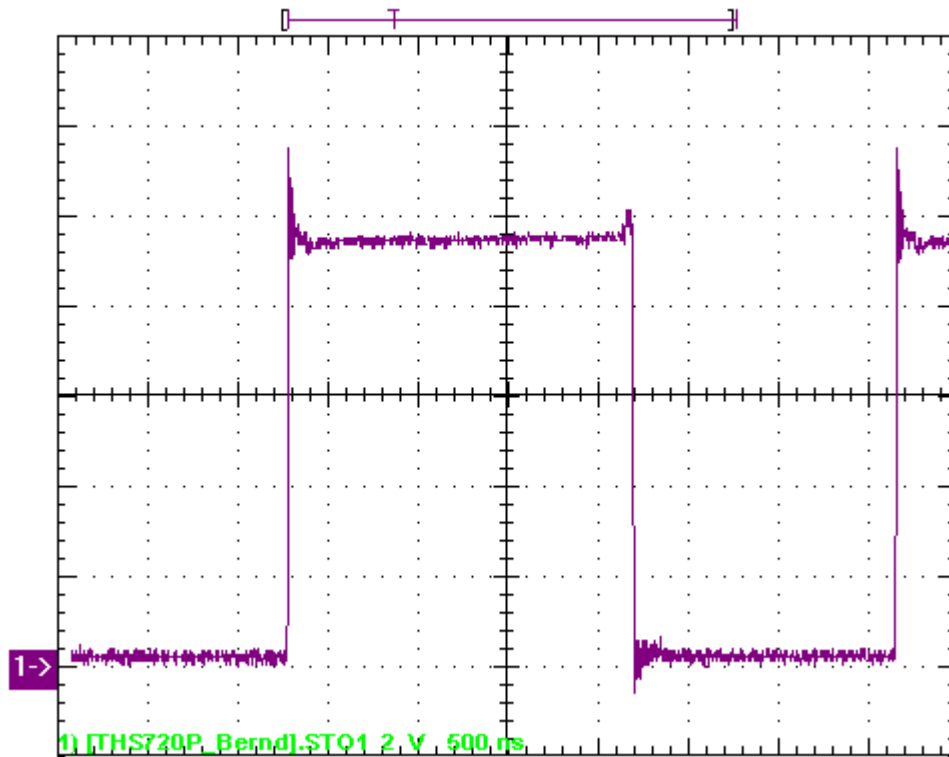


Figure 17

Ch1 =>
switchnode
2V/div
500ns/div
full
bandwidth

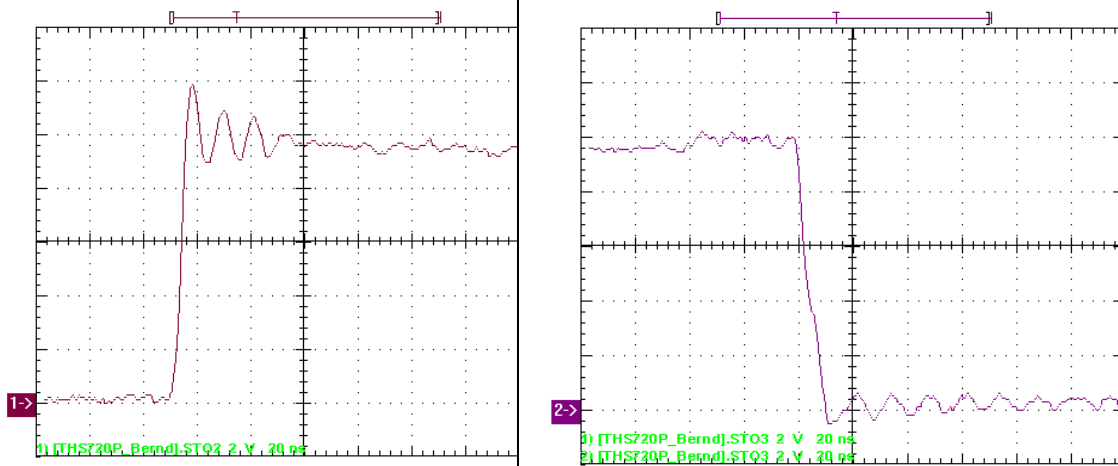
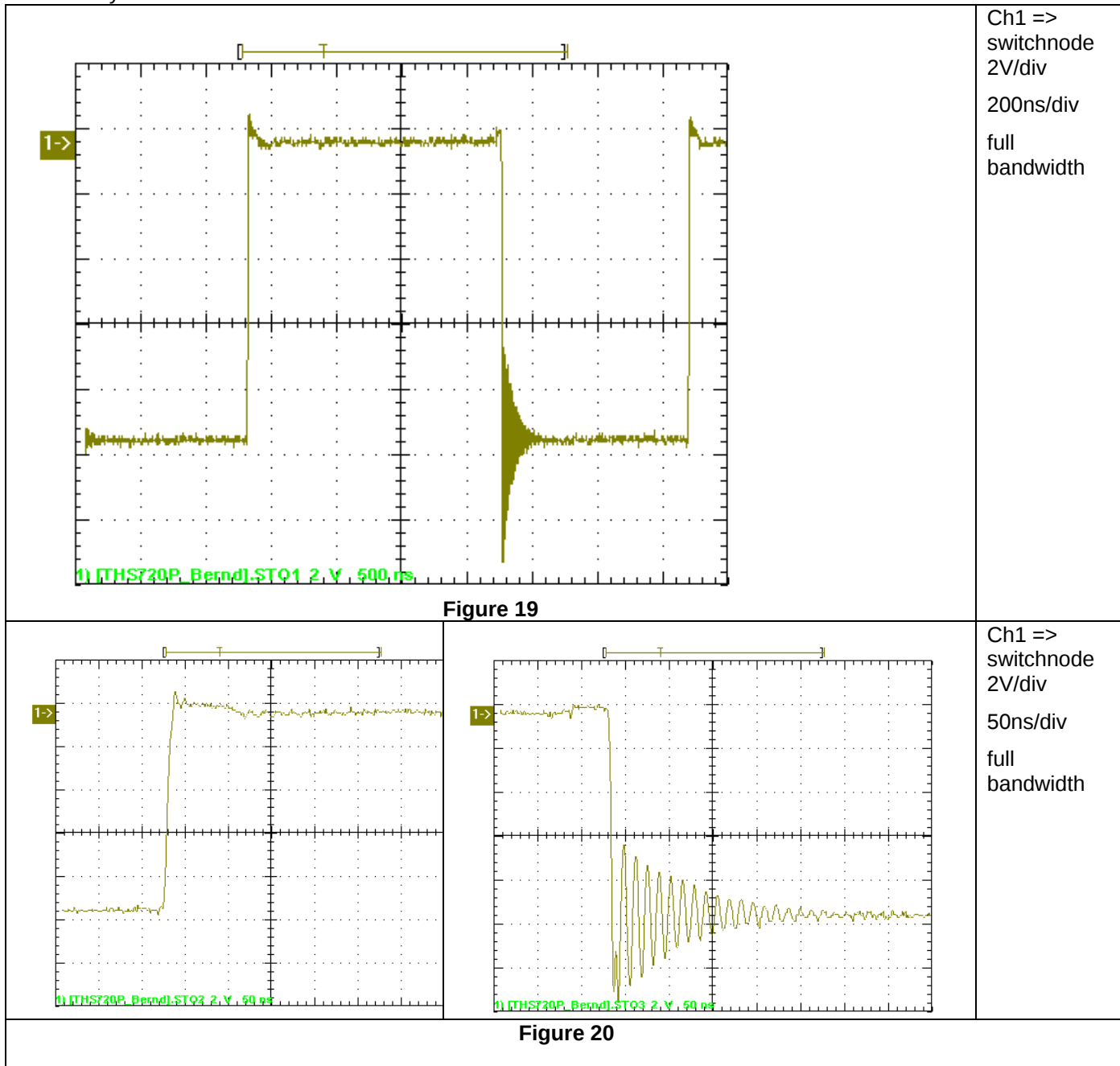


Figure 18

Ch1 =>
switchnode
2V/div
20ns/div
full
bandwidth

PMP5624RevB Test Results

With 0.8A load results in the waveforms shown in Figure 19. 5.5V were applied to the input.
Secondary referenced to +VOUT



PMP5624RevB Test Results

With 2.5A load results in the waveforms shown in Figure 21. 5.5V were applied to the input.
Primary

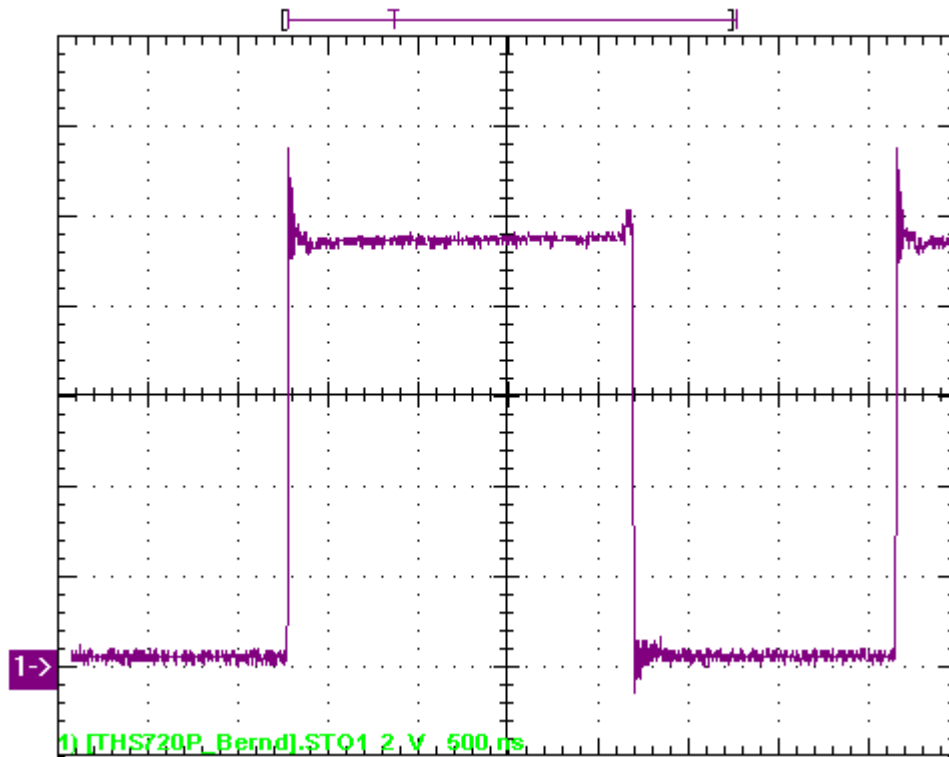


Figure 21

Ch1 =>
switchnode
2V/div
500ns/div
full
bandwidth

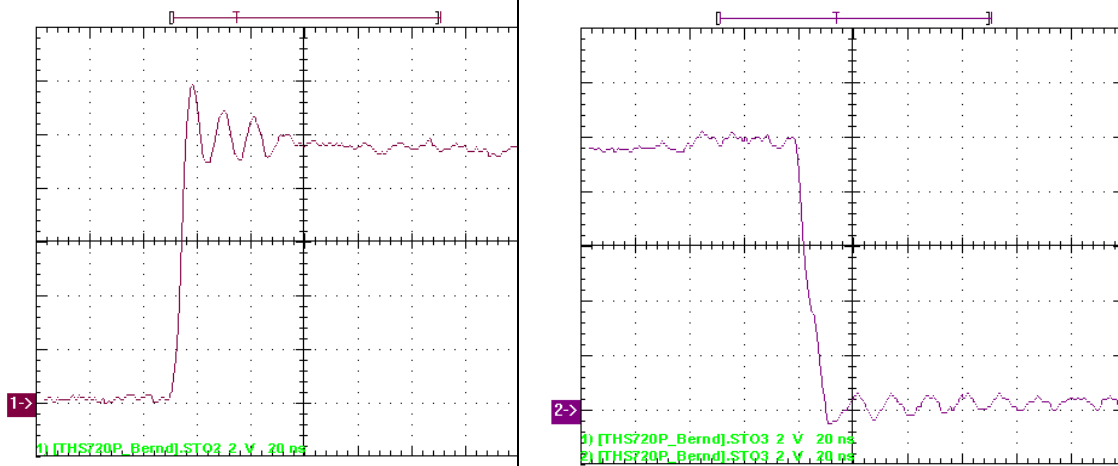
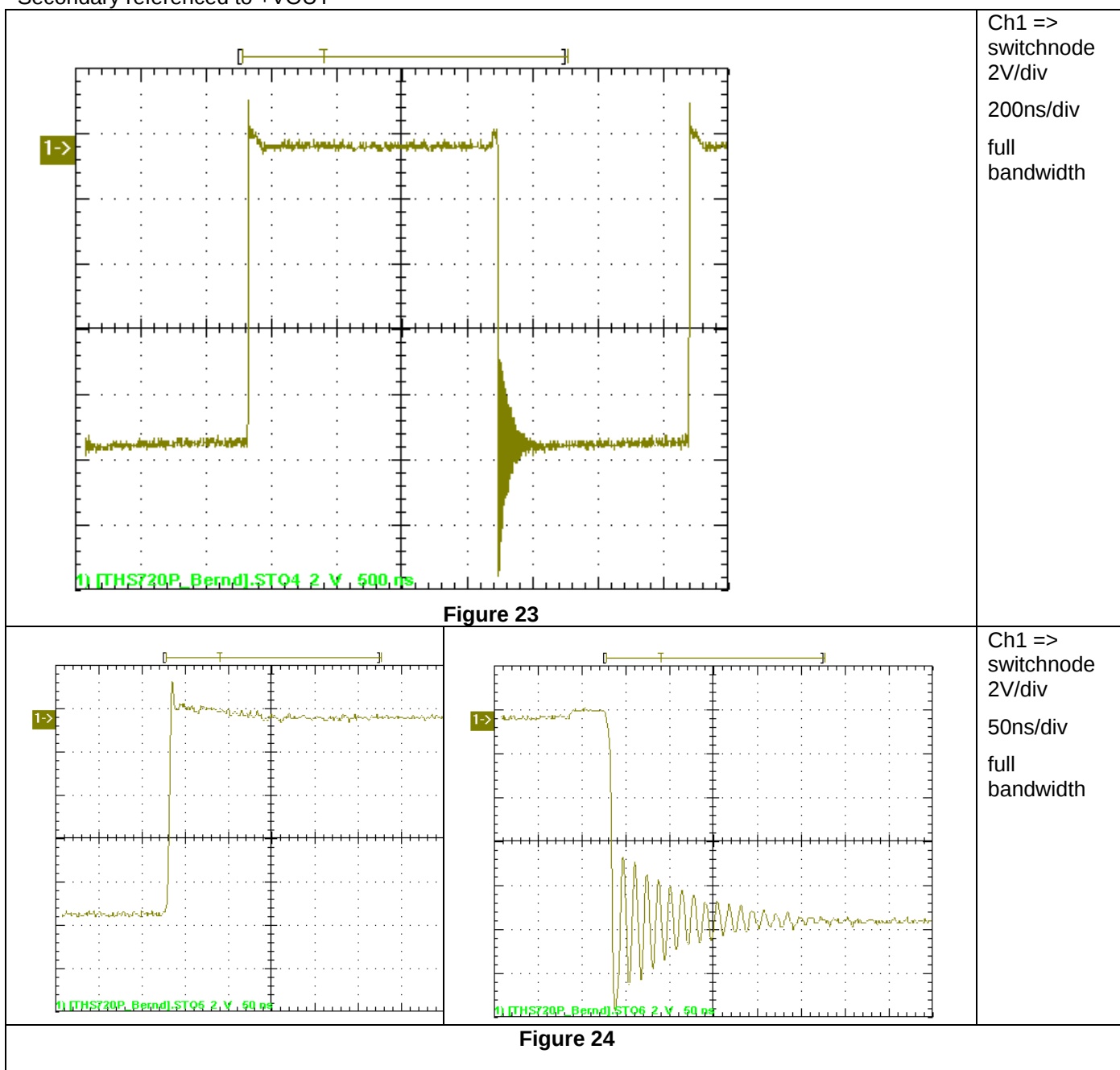


Figure 22

Ch1 =>
switchnode
2V/div
20ns/div
full
bandwidth

PMP5624RevB Test Results

With 2.5A load results in the waveforms shown in Figure 15. 1.8V were applied to the input.
Secondary referenced to +VOUT



7 Ripple Voltages

The output ripple voltage is displayed in Figure 25. The input voltage was set to 1.8V and 5.5V with output current 0.8A.

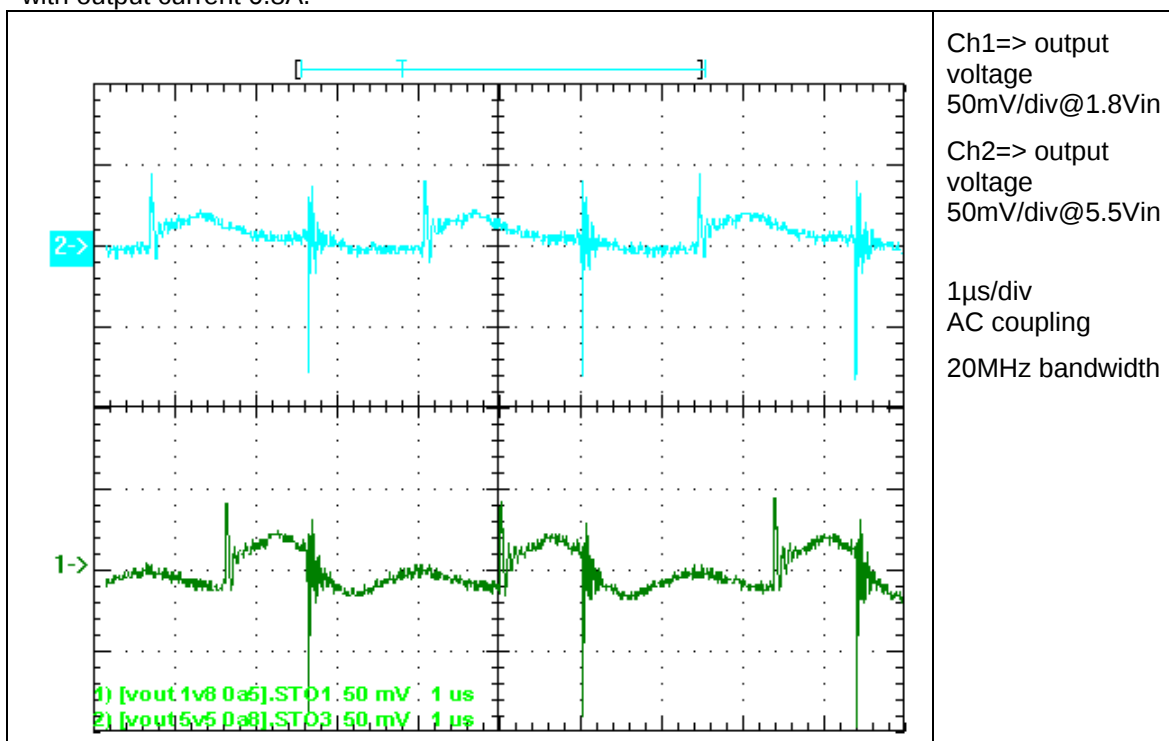


Figure 25

The output ripple voltage is displayed in Figure 26. The input voltage was set to 1.8V and 5.5 with output current 2.5A.

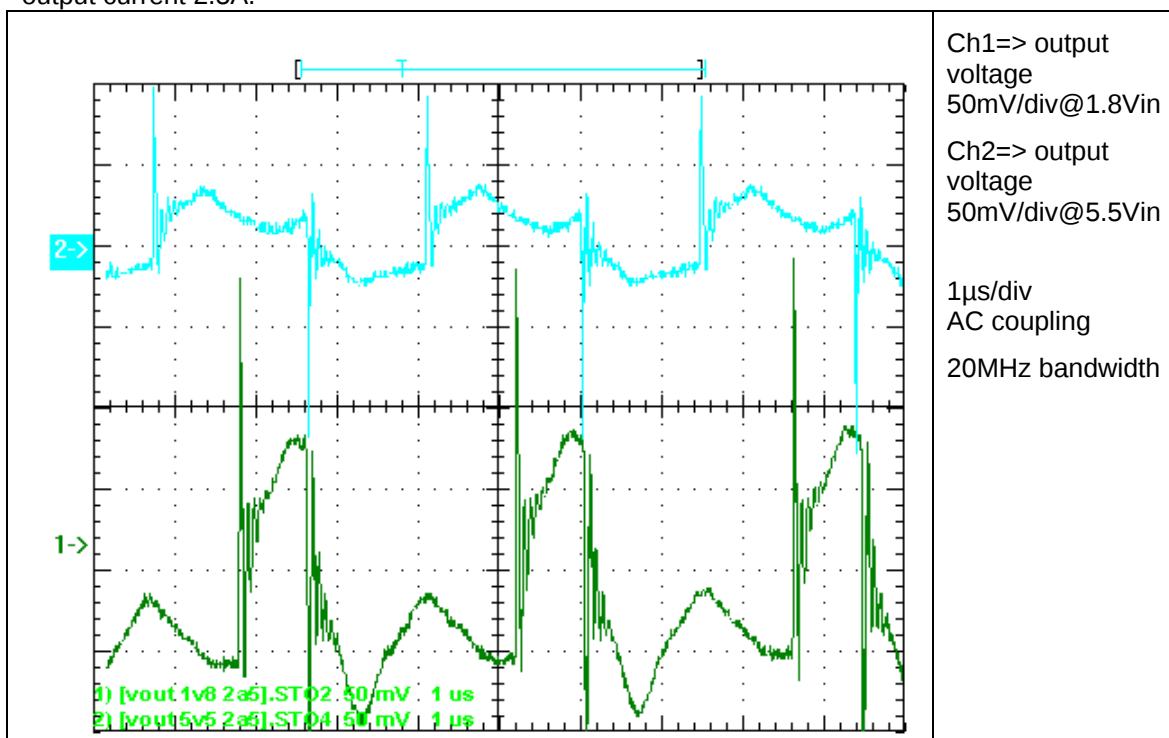
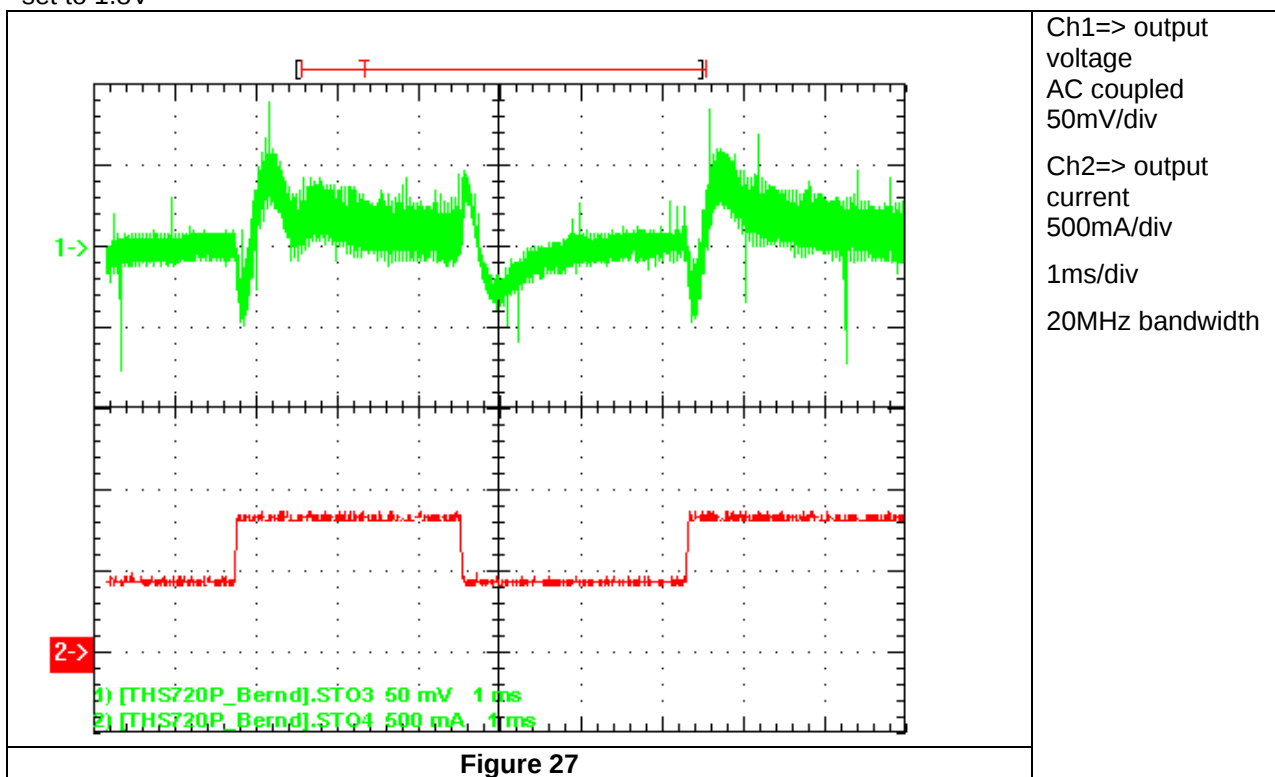


Figure 26

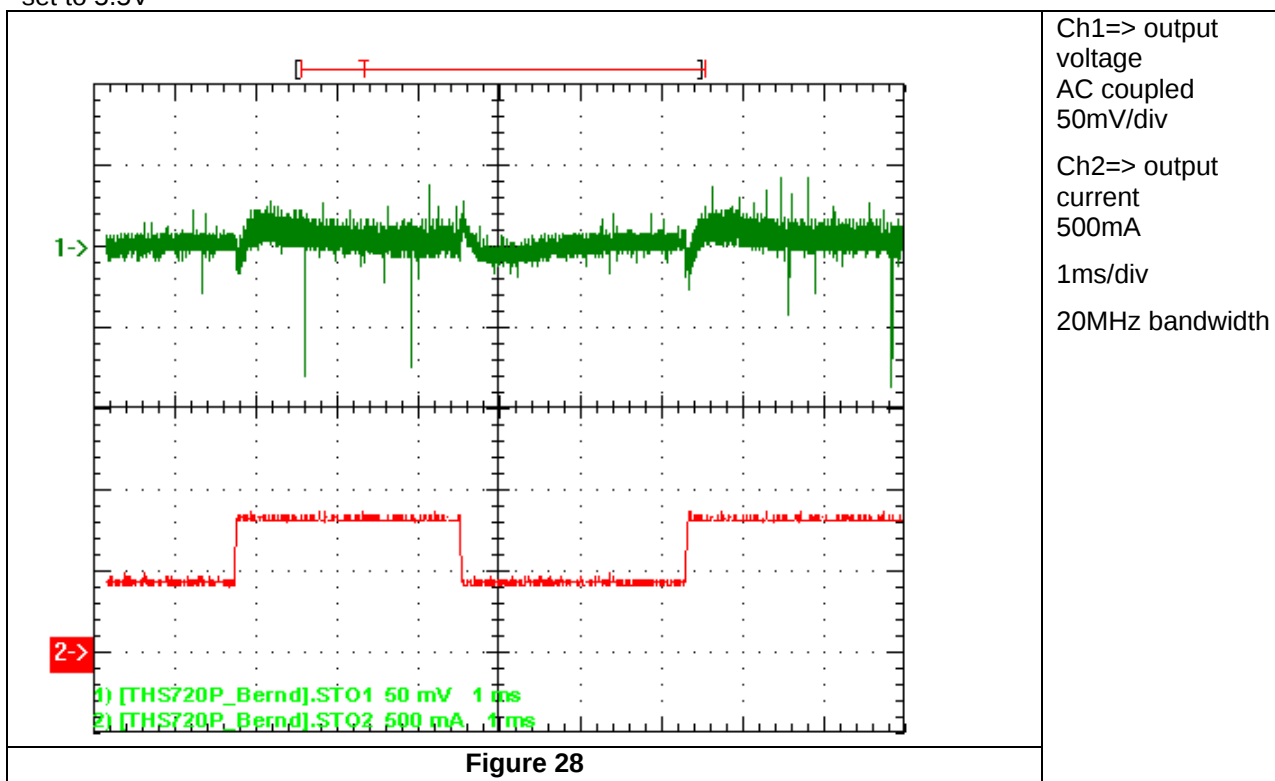
PMP5624RevB Test Results

8 Load Transients

A output current change from 0.4A to 0.8A results in following Figure 27. The input voltage was set to 1.8V



A output current change from 0.4A to 0.8A results in following Figure 28. The input voltage was set to 5.5V



9 Control Loop Frequency Response

The control loop frequency response with 2.5A load and 1.8V input voltage is shown in Figure 29

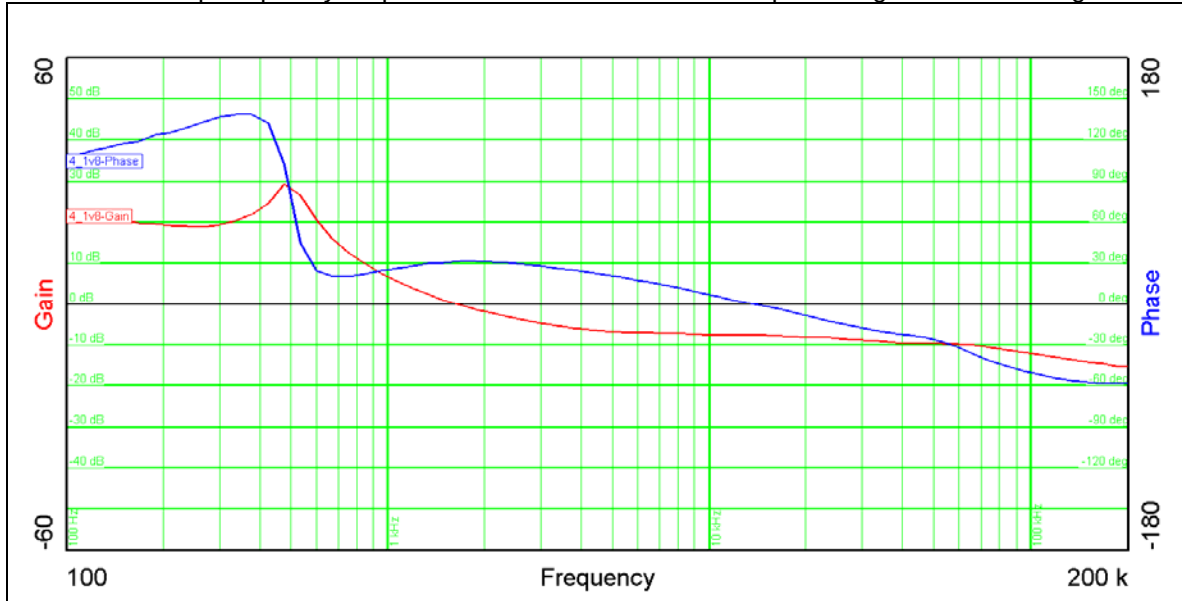


Figure 29

The control loop frequency response with 2.5A load and 3.3V input voltage is shown in Figure 30

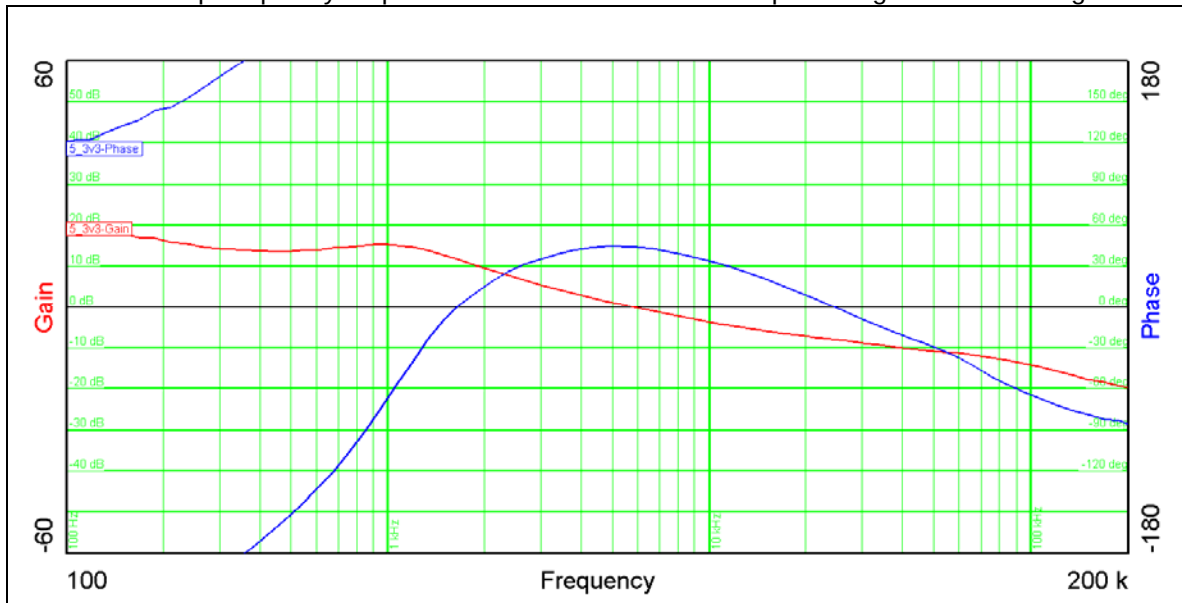


Figure 30

The control loop frequency response with 2.5A load and 5.5V input voltage is shown in Figure 31

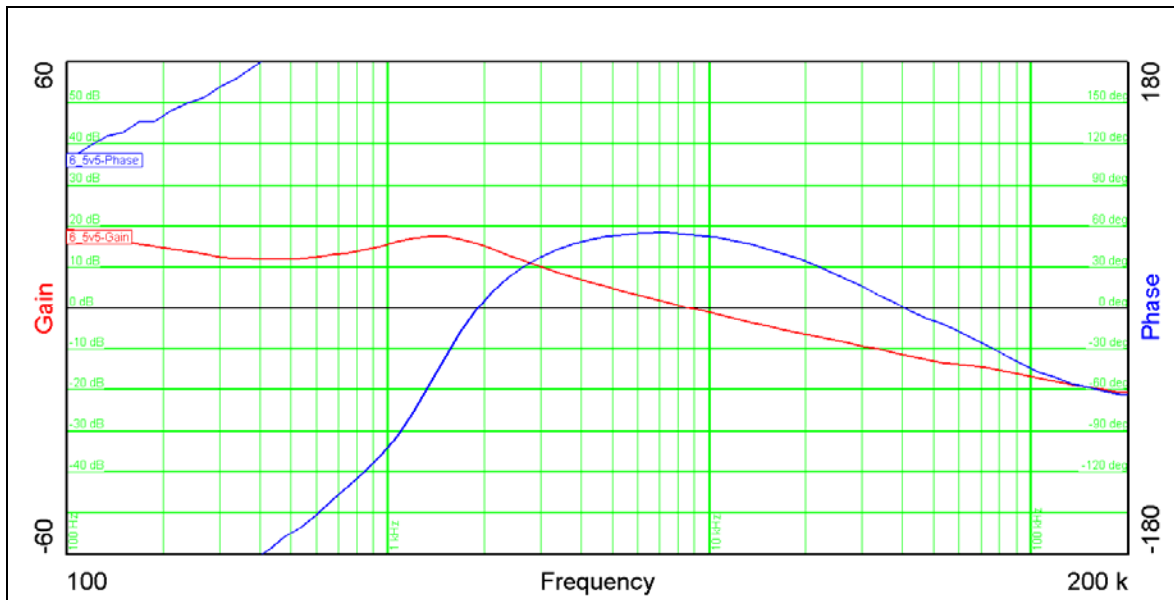


Figure 31

Table 1 summarizes the results.

Vin	1.8V	3.3V	5.5V
Bandwidth (kHz)	1.65	5.8	8.7
Phase margin	31°	44°	53.9°
slope (20dB/decade)	-1.22	-0.86	-1
gain margin (dB)	-7.8	-8	-11.5
slope (20dB/decade)	-0.06	-0.45	-0.8
freq (kHz)	13.6	24	40.7

Table 1

PMP5624RevB Test Results

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