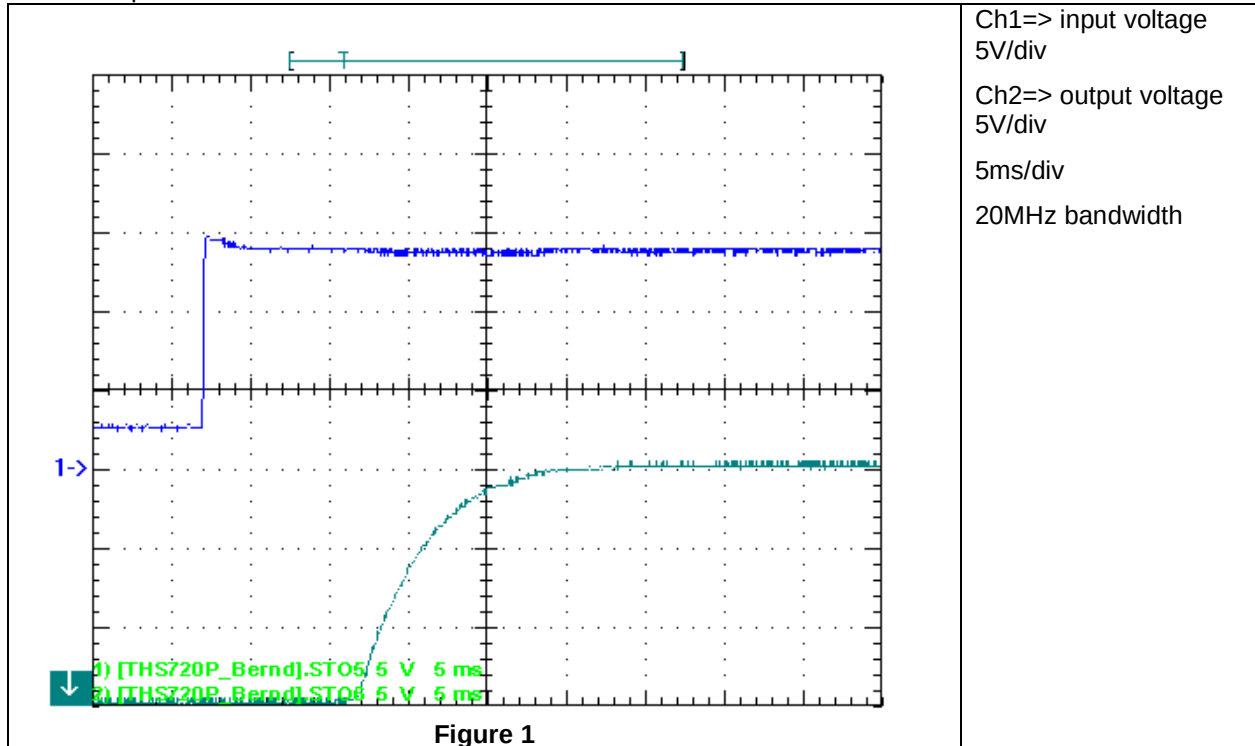


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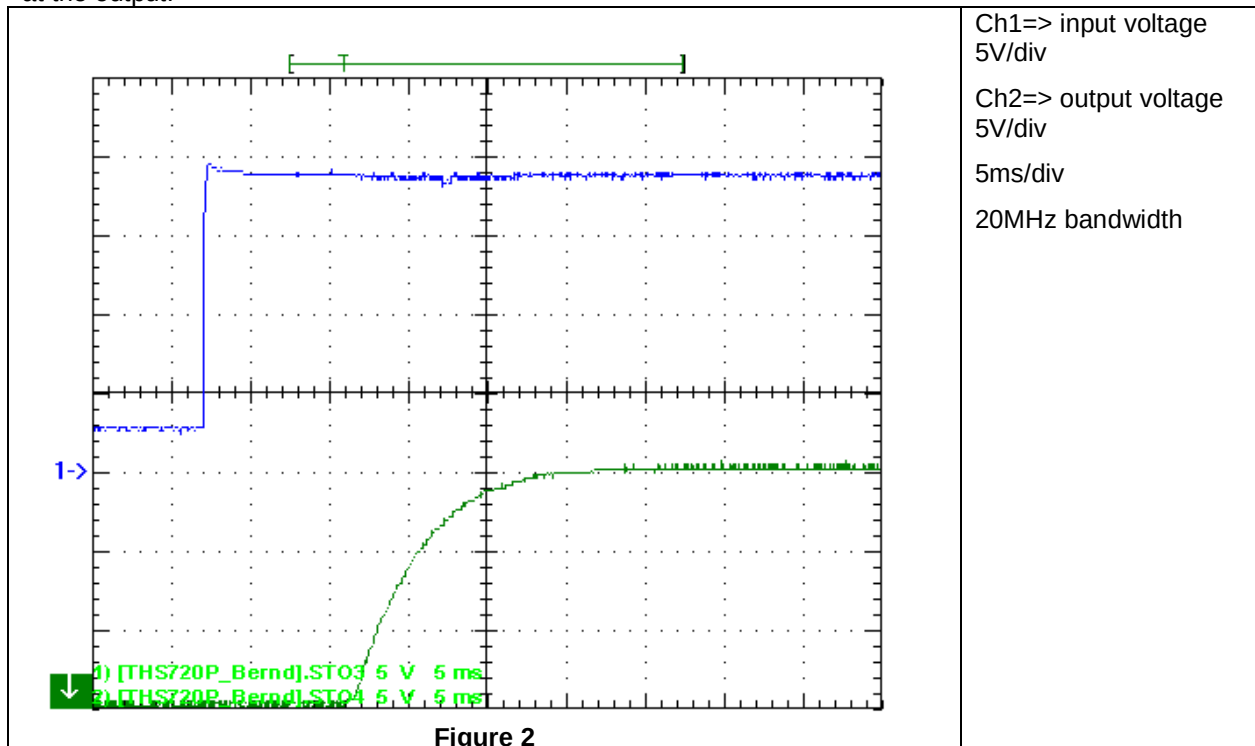
1	Startup.....	2
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3	Efficiency	6
4	Load regulation	7
5	Line Regulation.....	8
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9	Control Loop Frequency Response	18

1 Startup

The startup waveform is shown in the Figure 1. The input voltage was set to 14V, with 0.9A load at the output.

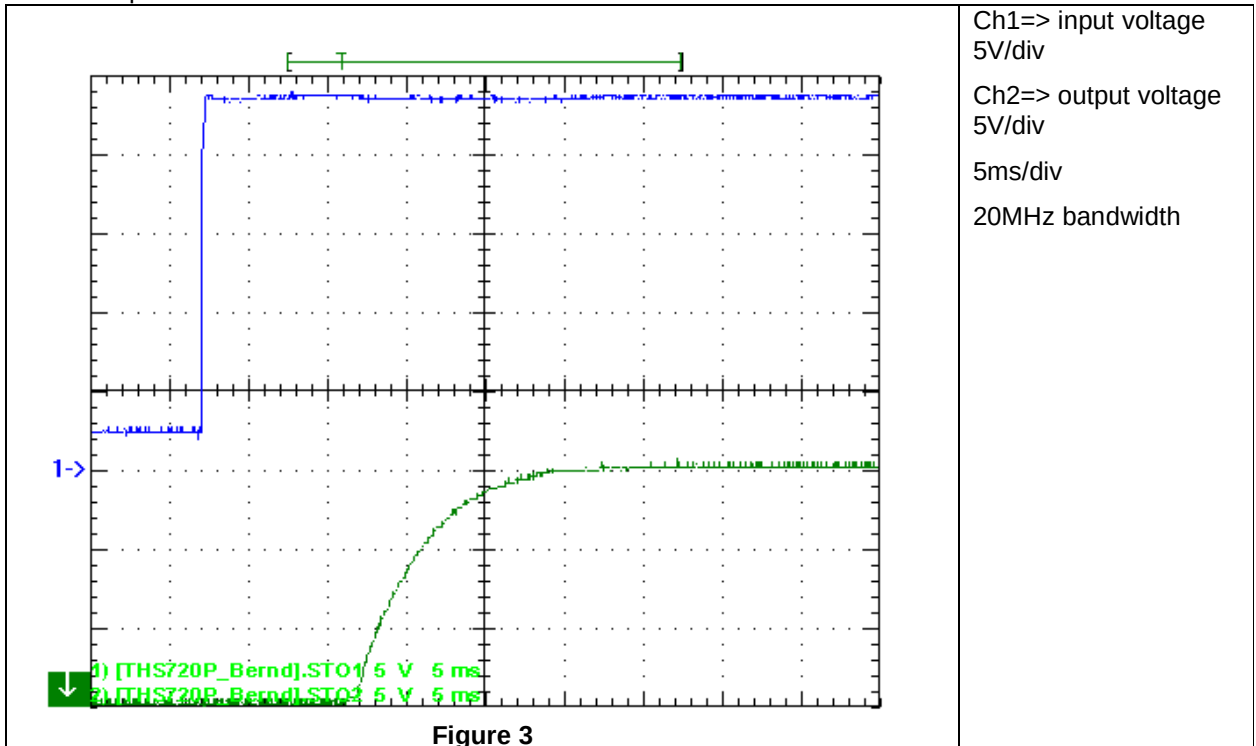


The startup waveform is shown in the Figure 2. The input voltage was set to 19V, with 0.9A load at the output.



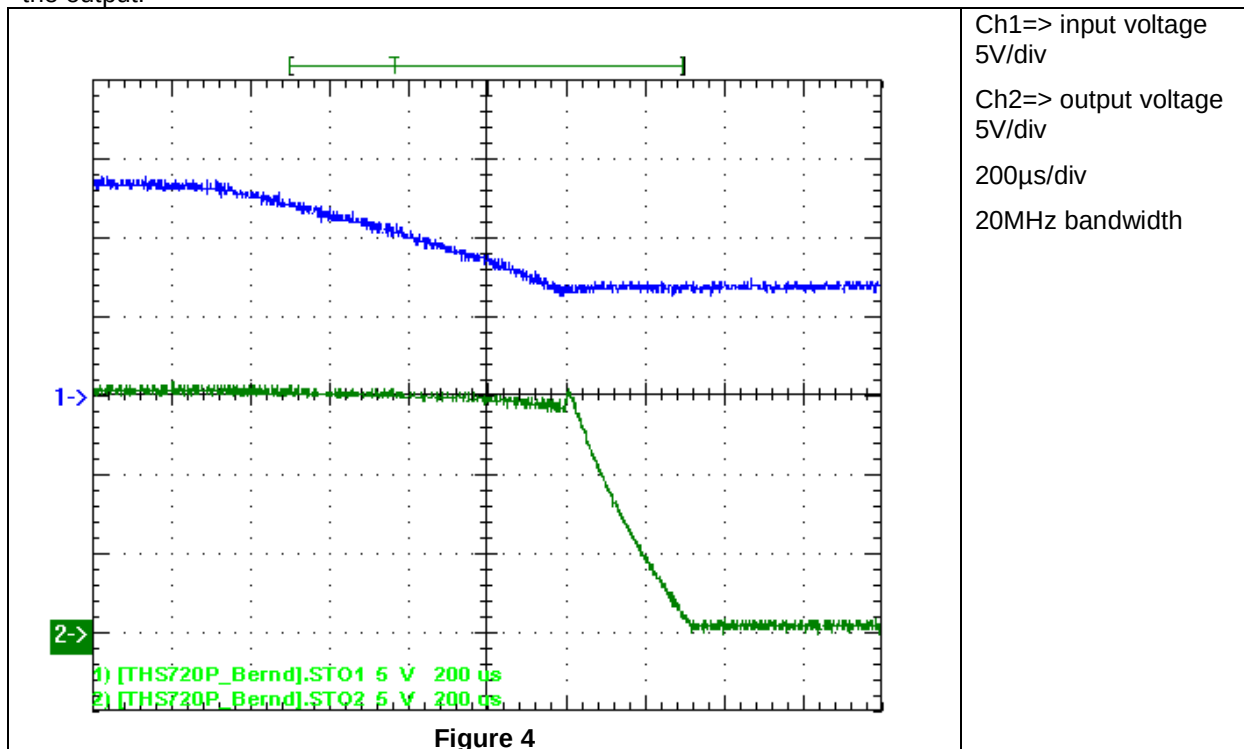
PMP5709RevA Test Results

The startup waveform is shown in the Figure 3. The input voltage was set to 24V, with 0.9A load at the output.

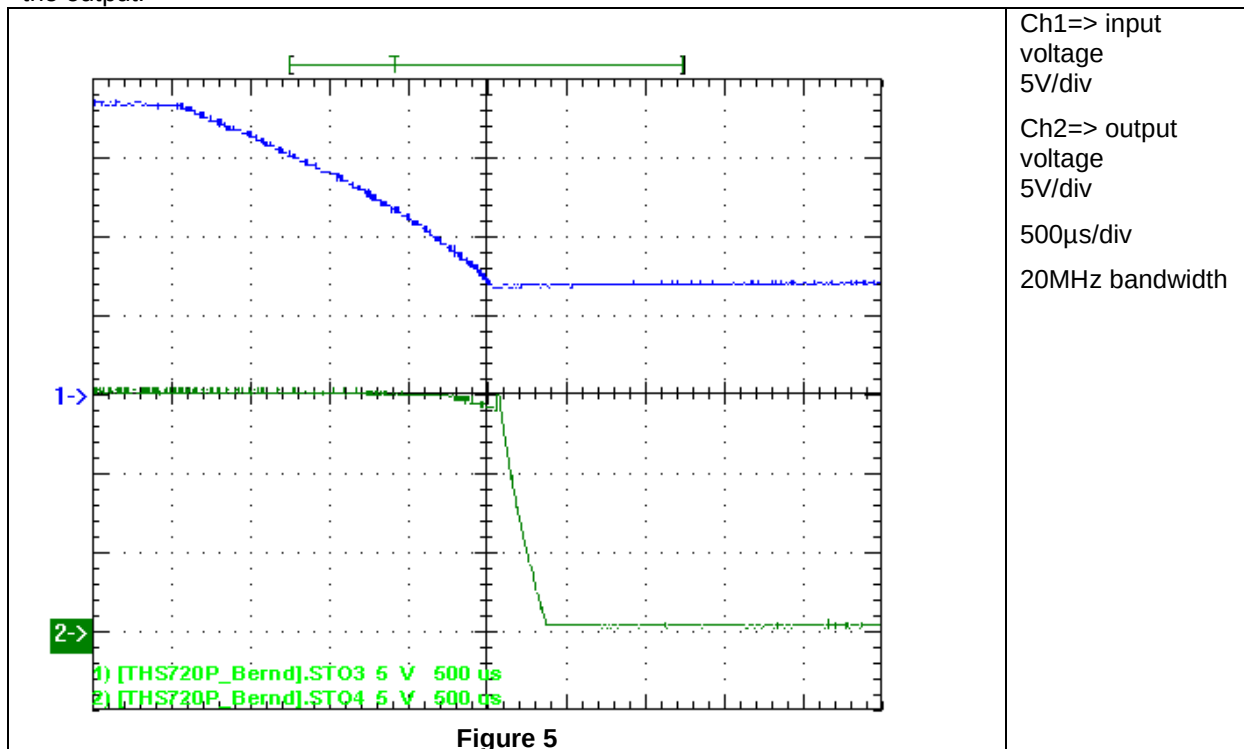


2 Shutdown

The shutdown waveform is shown in the Figure 4 at 14V input voltage. With 0.9A load applied at the output.

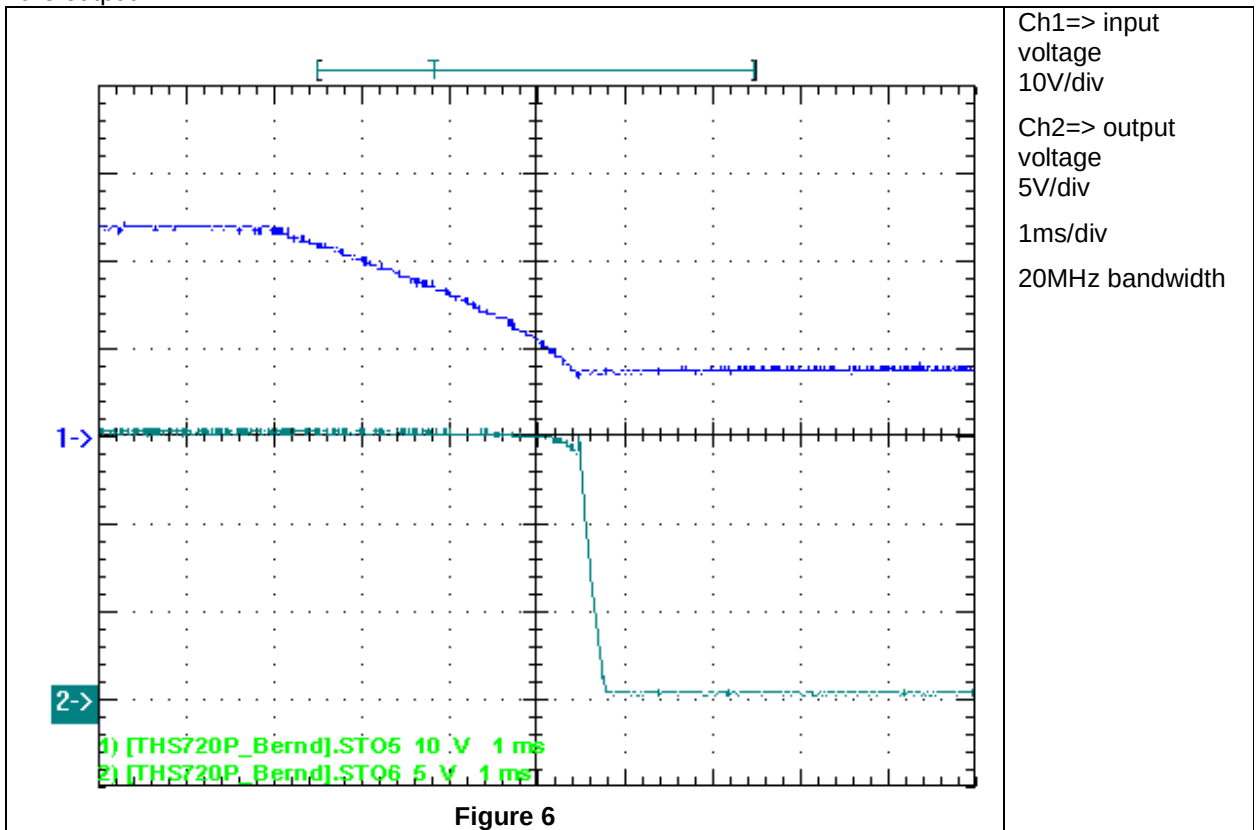


The shutdown waveform is shown in the Figure 5 at 19V input voltage. With 0.9A load applied at the output.



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The shutdown waveform is shown in the Figure 6 at 24V input voltage. With 0.9A load applied at the output.



3 Efficiency

The efficiencies with different input voltages are shown in the Figure 7 below.

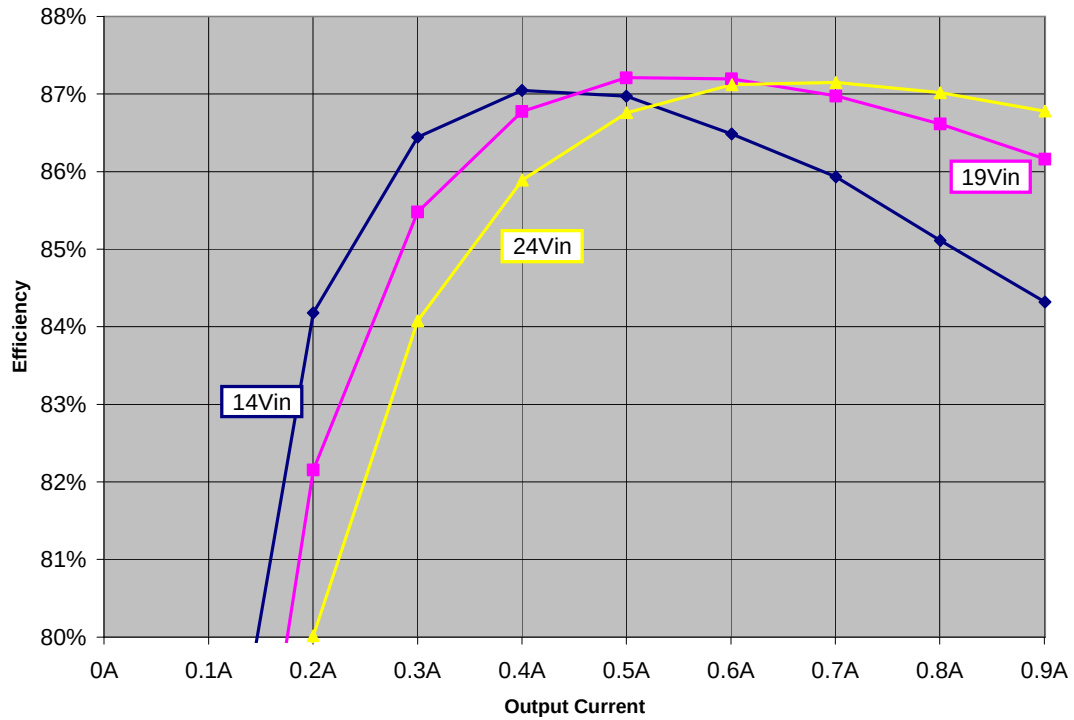


Figure 7

4 Load regulation

The load regulation at different input voltages are shown in Figure 8.

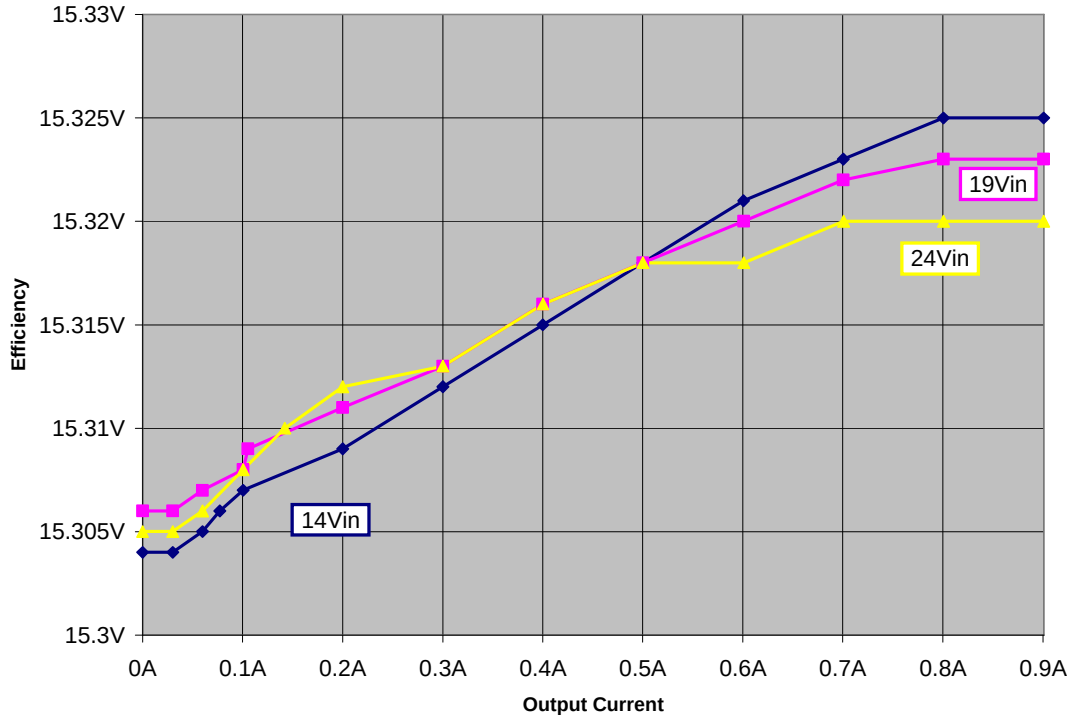


Figure 8

5 Line Regulation

The line regulation at 0.9A output current is shown in Figure 9.

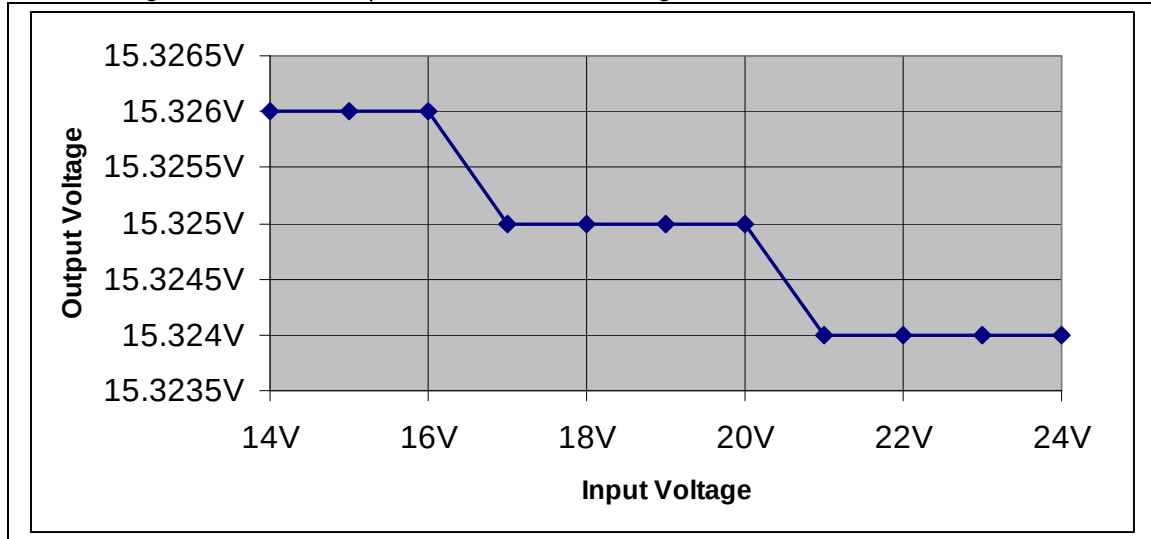


Figure 9

With the same measurement setup the efficiencies are shown in Figure 10.

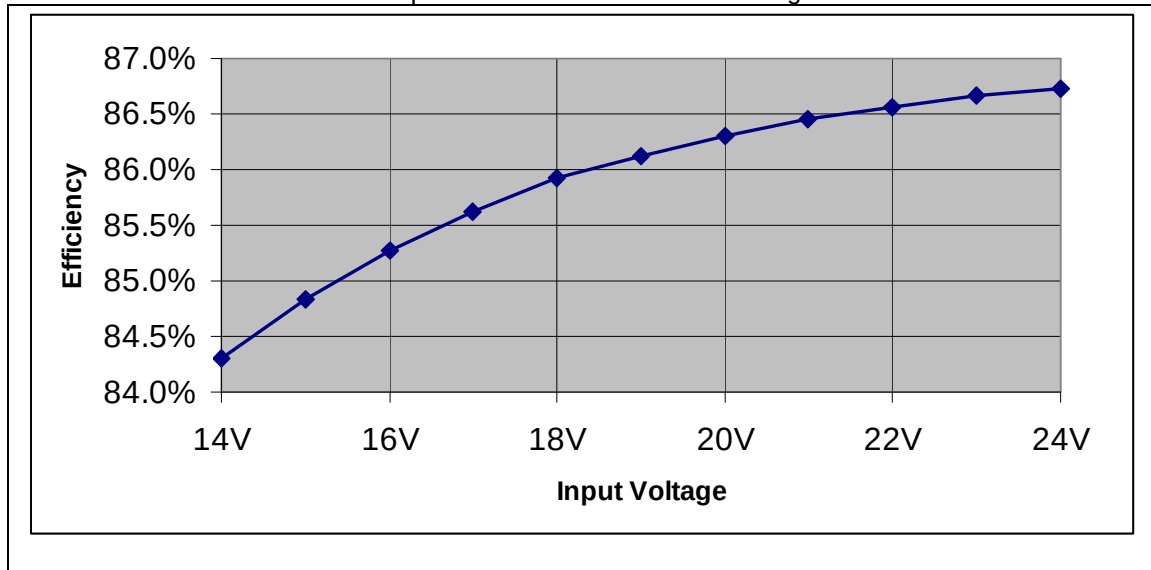
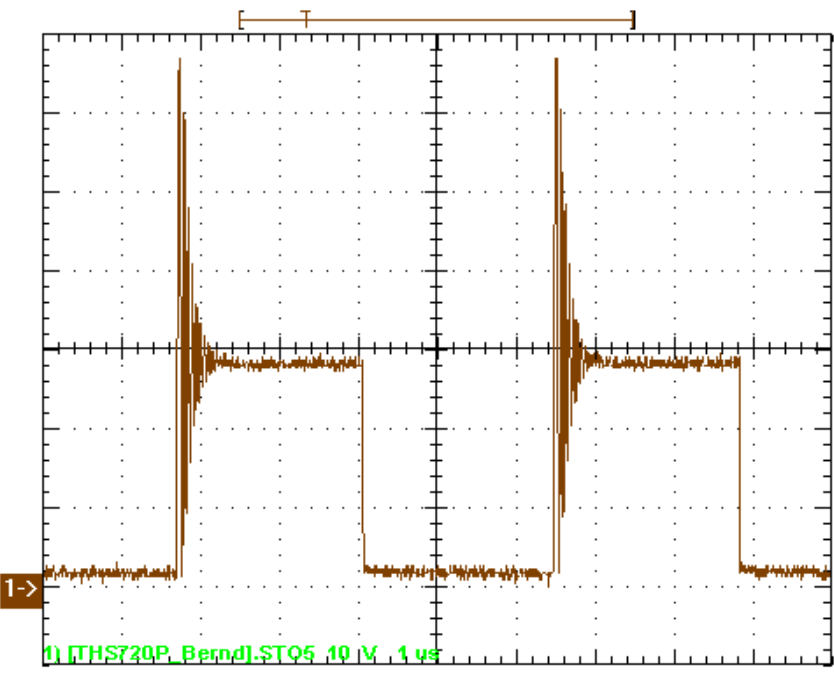
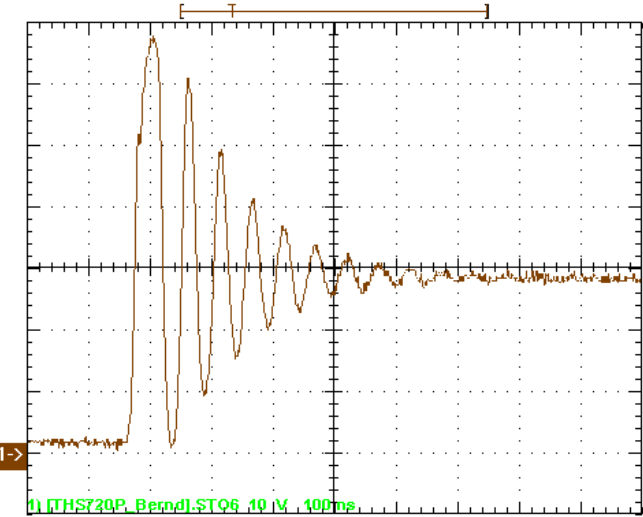


Figure 10

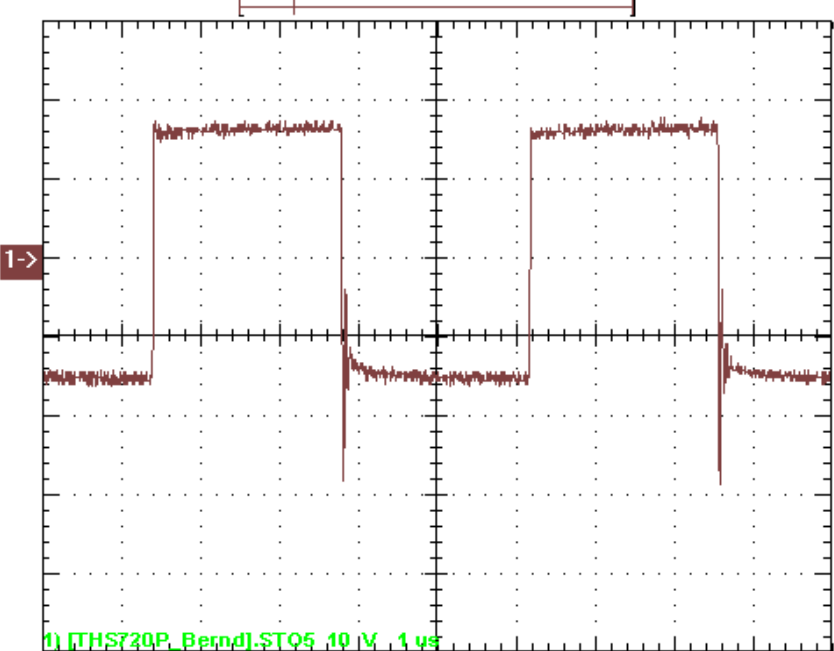
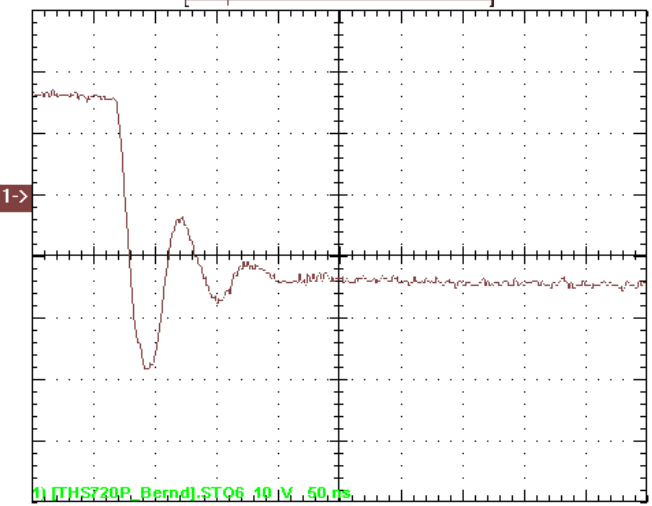
6 Switch Node Waveform

With 0.9A load results in the waveforms shown in Figure 11. 14V were applied to the input (Primary).

 Figure 11	Ch1 => switchnode 10V/div 1μs/div full bandwidth
 Figure 12	Ch1 => switchnode 10V/div 100ns/div full bandwidth

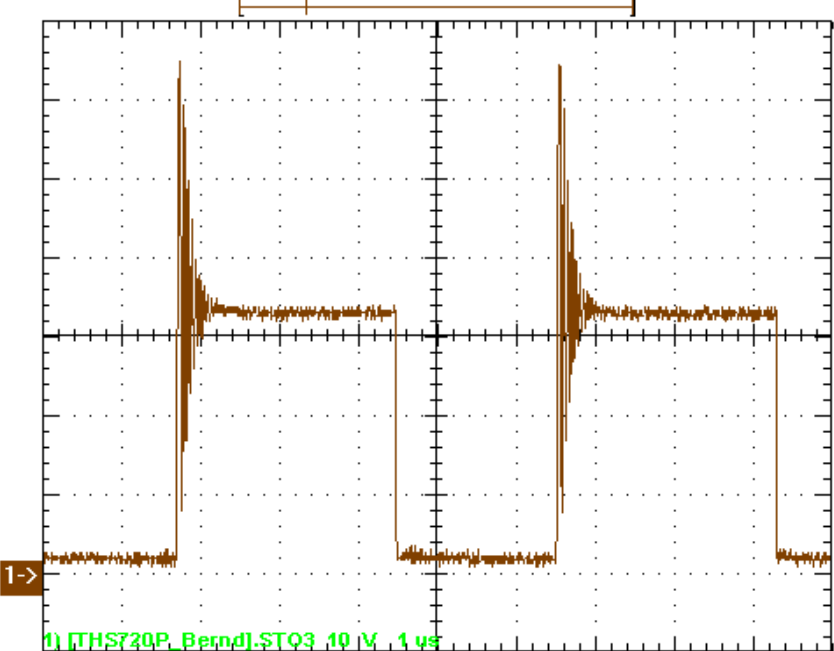
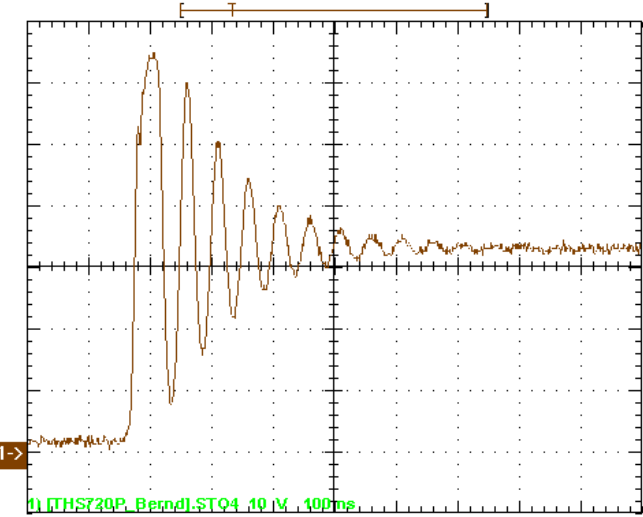
PMP5709RevA Test Results

With 0.9A load results in the waveforms shown in Figure 13. 14V were applied to the input (Secondary).

 Figure 13	Ch1 => switchnode 10V/div 1µs/div full bandwidth
 Figure 14	Ch1 => switchnode 10V/div 50ns/div full bandwidth

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With 0.9A load results in the waveforms shown in Figure 15. 19V were applied to the input (Primary).

 Figure 15	Ch1 => switchnode 10V/div 1µs/div full bandwidth
 Figure 16	Ch1 => switchnode 10V/div 100ns/div full bandwidth

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With 0.9A load results in the waveforms shown in Figure 17. 19V were applied to the input (secondary).

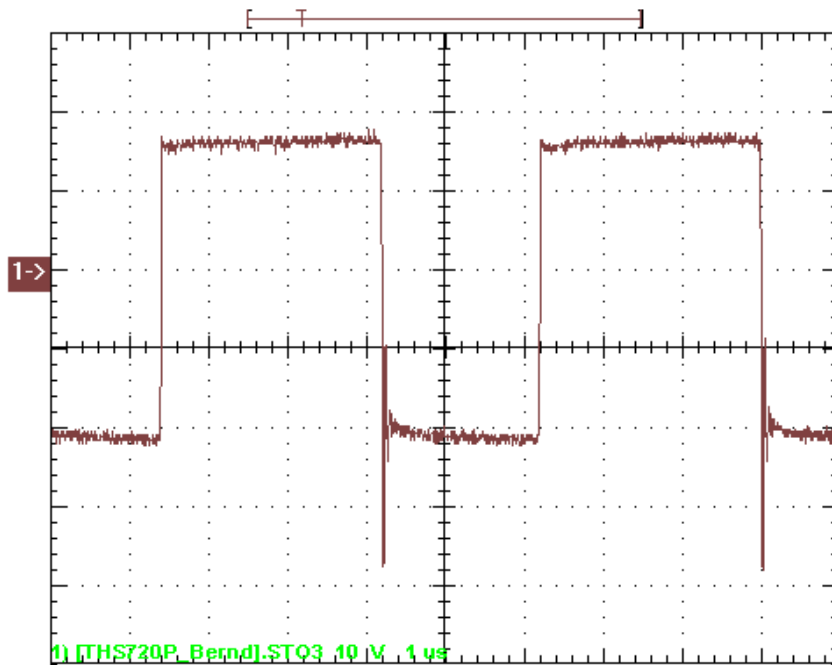


Figure 17

Ch1 =>
switchnode
10V/div
1 μ s/div
full
bandwidth

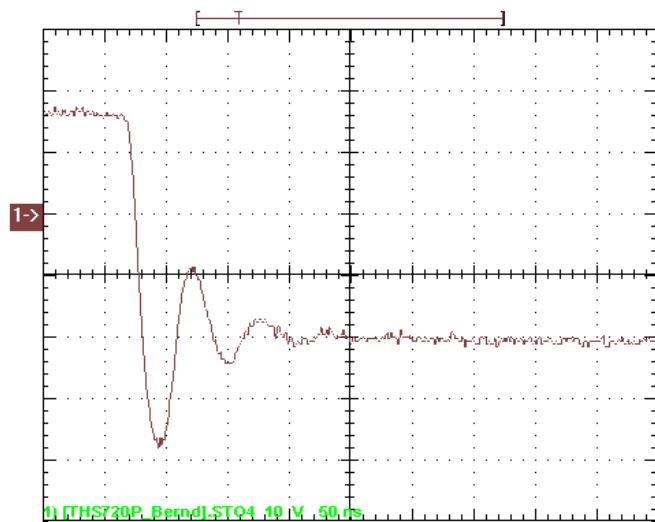
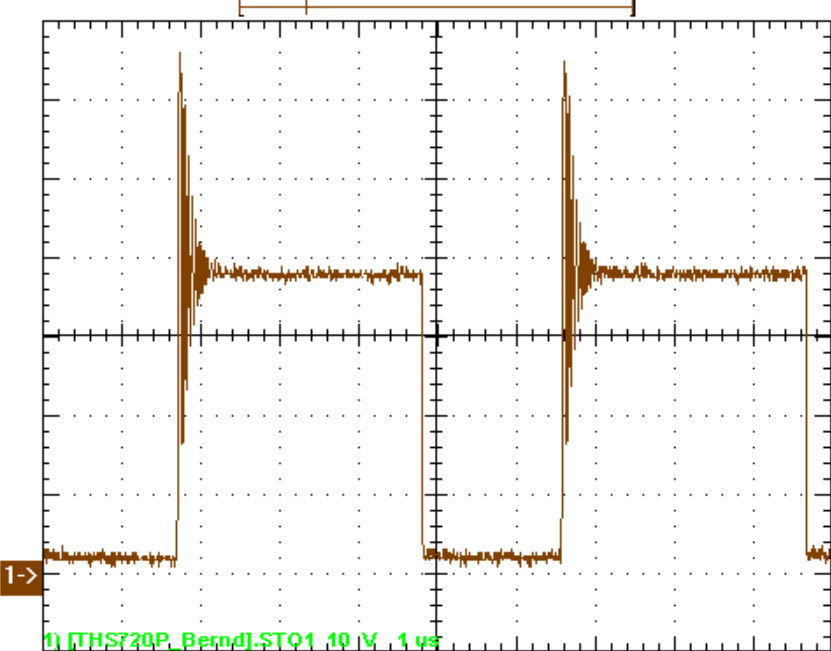
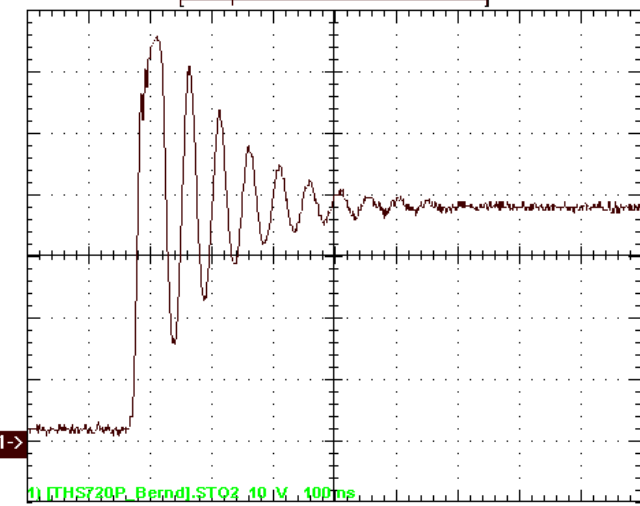


Figure 18

Ch1 =>
switchnode
10V/div
50ns/div
full
bandwidth

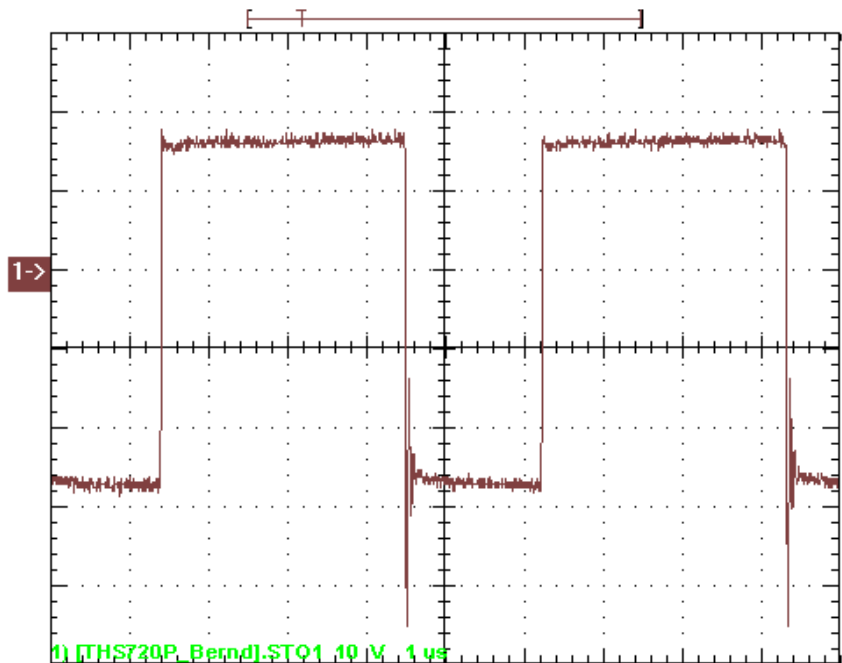
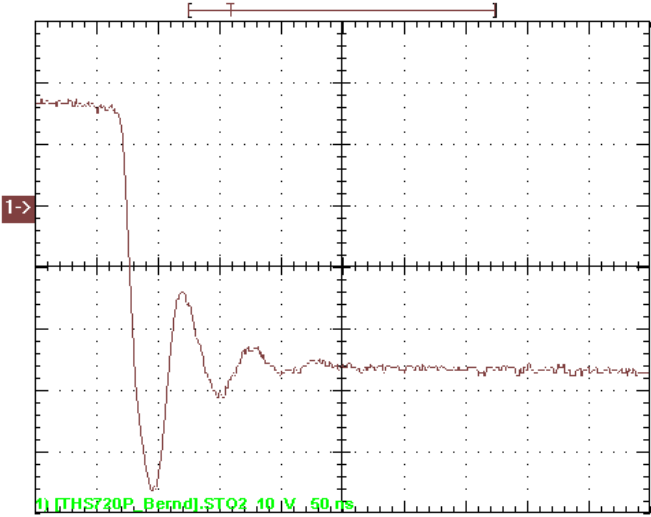
PMP5709RevA Test Results

With 0.9A load results in the waveforms shown in Figure 19. 24V were applied to the input (Primary).

 1 [THS730P_Bernd].STQ1 10 V 1 μs	Ch1 => switchnode 10V/div 1μs/div full bandwidth
 1 [THS730P_Bernd].STQ2 10 V 100 ns	Ch1 => switchnode 10V/div 100ns/div full bandwidth

PMP5709RevA Test Results

With 0.9A load results in the waveforms shown in Figure 19. 24V were applied to the input (Secondary).

 Figure 21	Ch1 => switchnode 10V/div 1µs/div full bandwidth
 Figure 22	Ch1 => switchnode 10V/div 50ns/div full bandwidth

7 Ripple Voltages

The output ripple voltage is displayed in Figure 23. The input voltage was set to 14V, 19V and 24V with output current 0.9A.

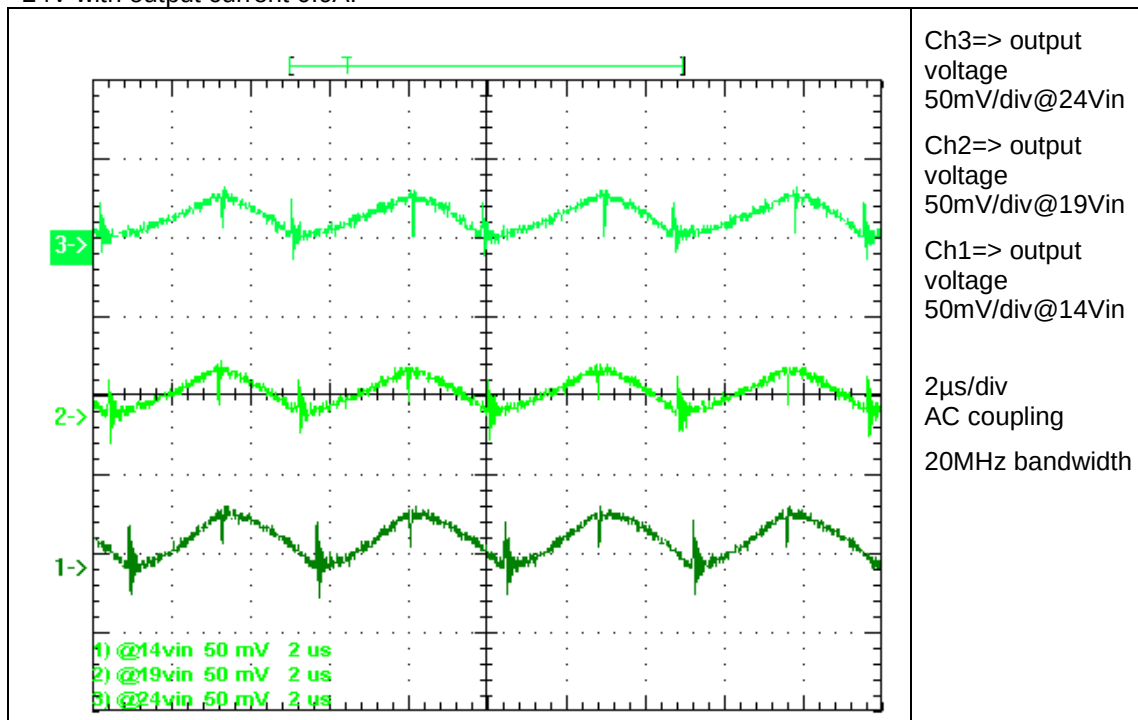


Figure 23

The input ripple voltage is displayed in Figure 24. The input voltage was set to 14V, 19V and 24V with output current 0.9A.

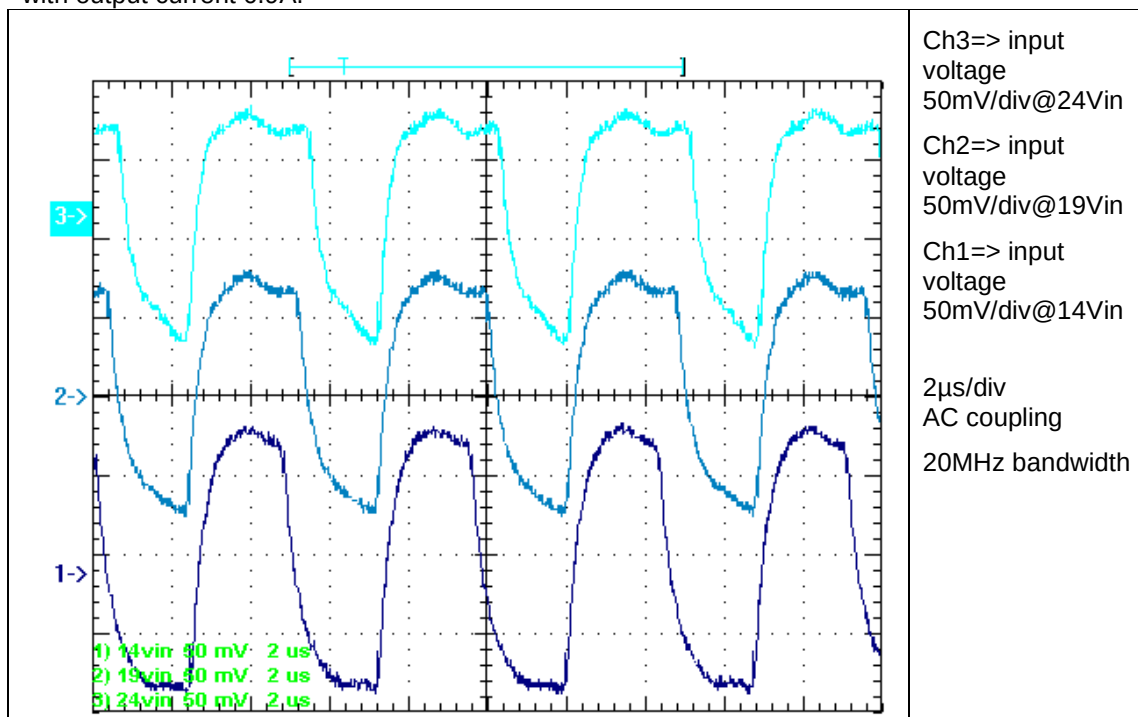
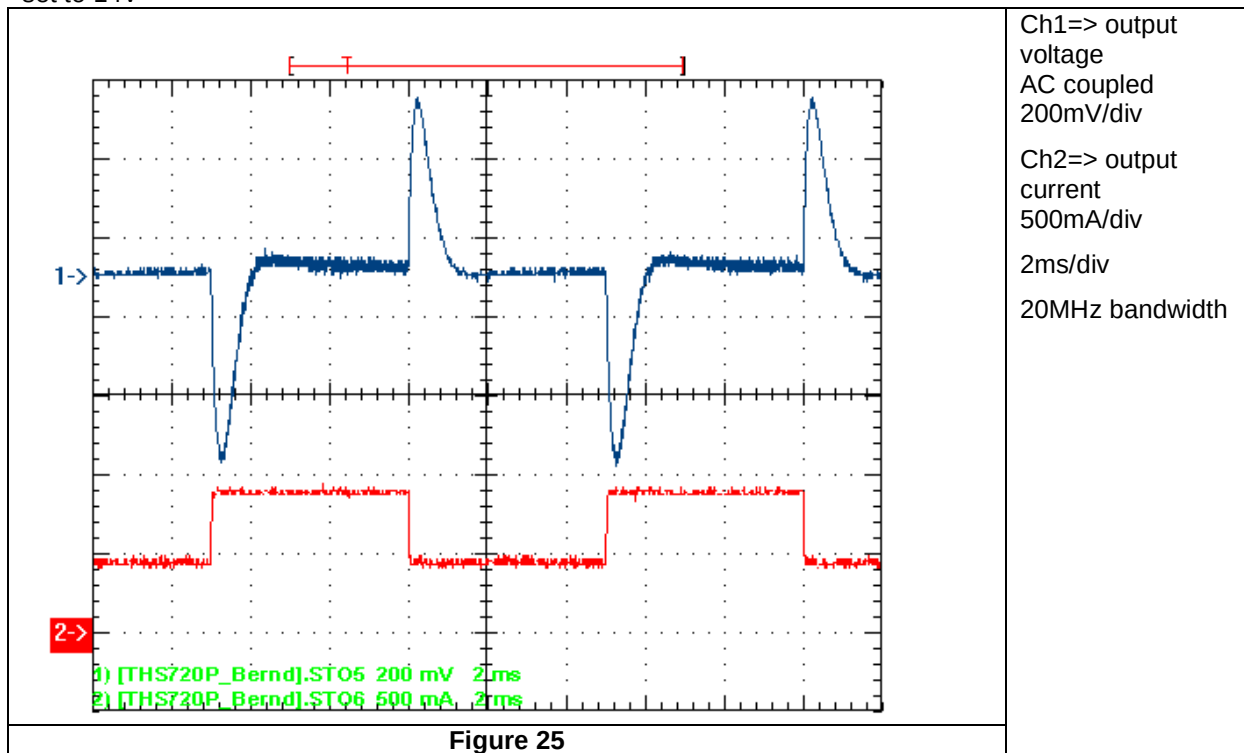


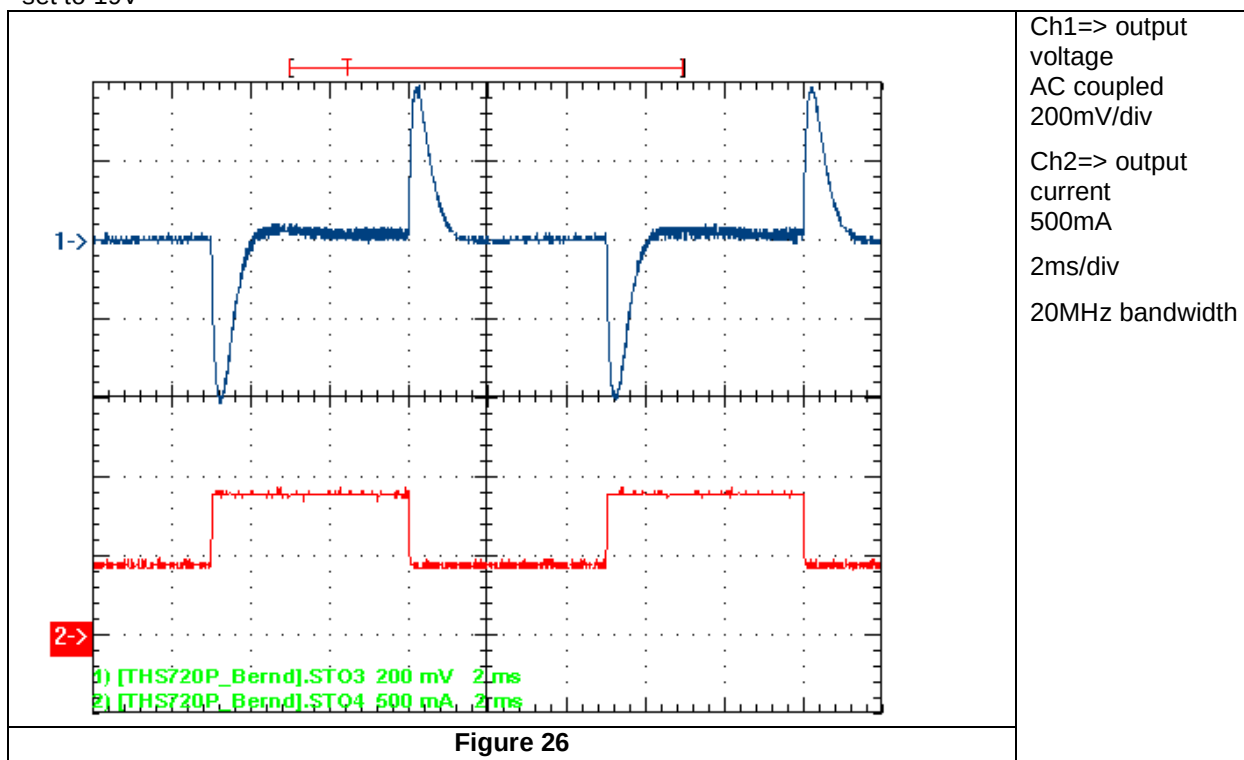
Figure 24

8 Load Transients

A output current change from 0.45A to 0.9A results in following Figure 25. The input voltage was set to 14V

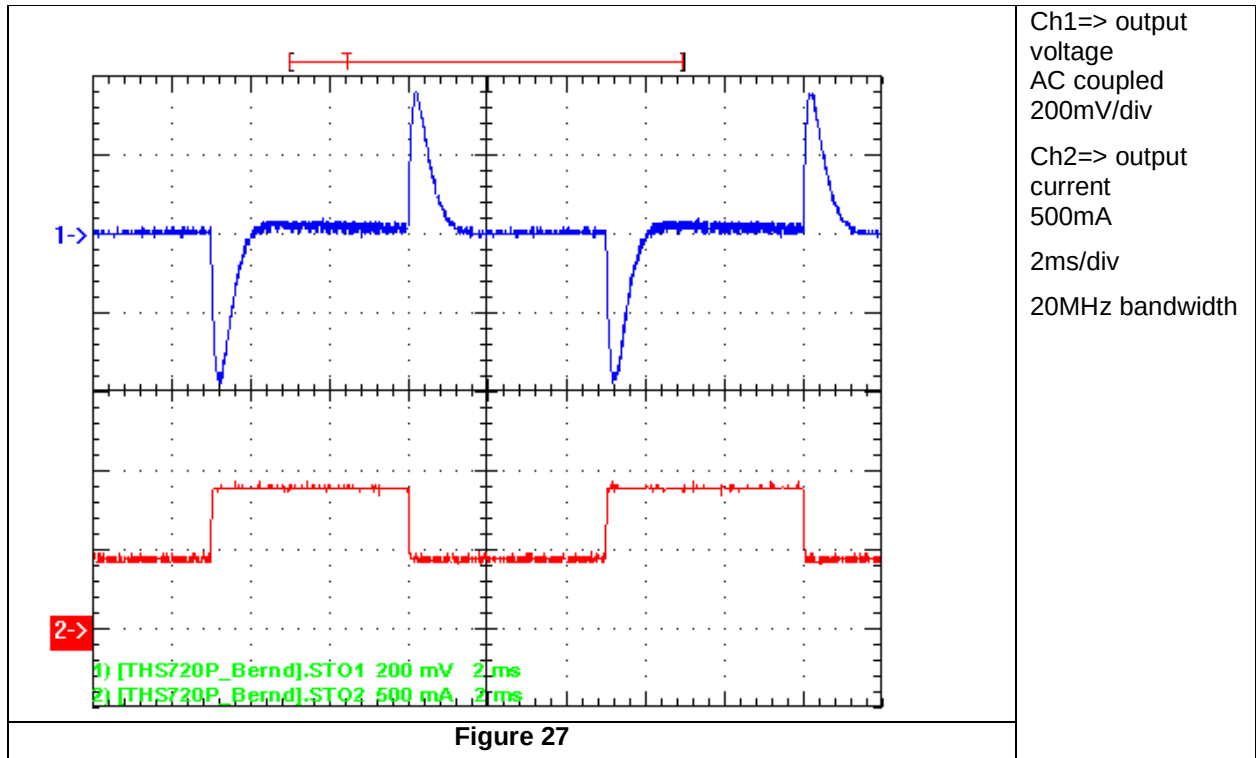


A output current change from 0.45A to 0.9A results in following Figure 26. The input voltage was set to 19V



PMP5709RevA Test Results

A output current change from 0.45A to 0.9A results in following Figure 27. The input voltage was set to 24V



9 Control Loop Frequency Response

The control loop frequency response with 0.9A load and 14V, 19V and 24V input voltage is shown in Figure 28

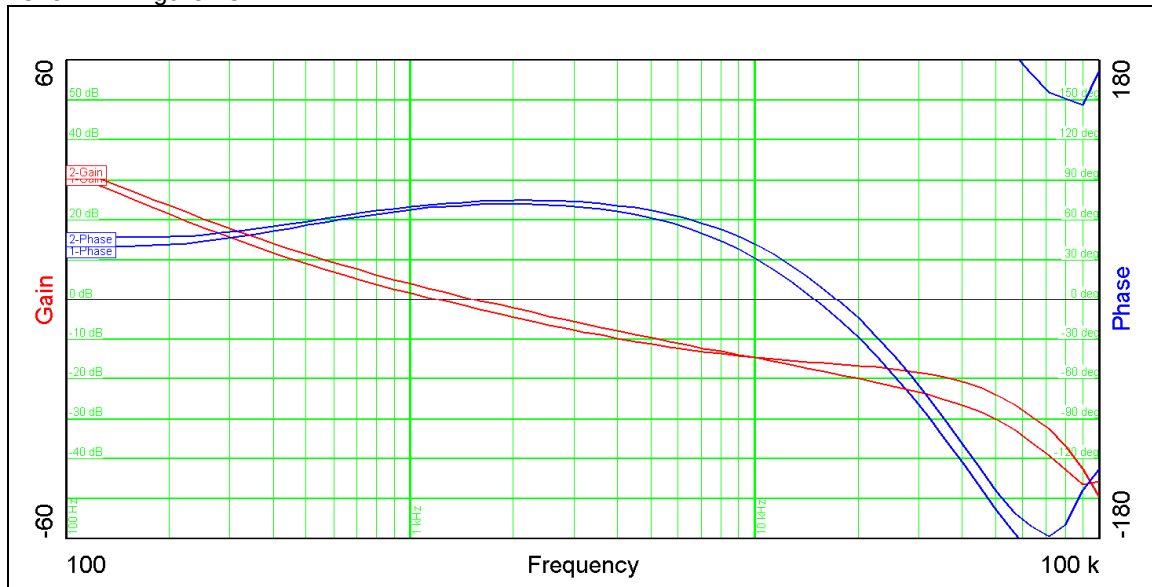


Figure 28

Table 1 summarizes the results.

Vin	14V	24V
Bandwidth (kHz)	1.19	1.54
Phase margin	69.5°	73.7°
slope (20dB/decade)	-1	-1
gain margin (dB)	-15.9	-18.8
slope (20dB/decade)	-0.318	-0.906
freq (kHz)	15	17.3

Table 1

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