

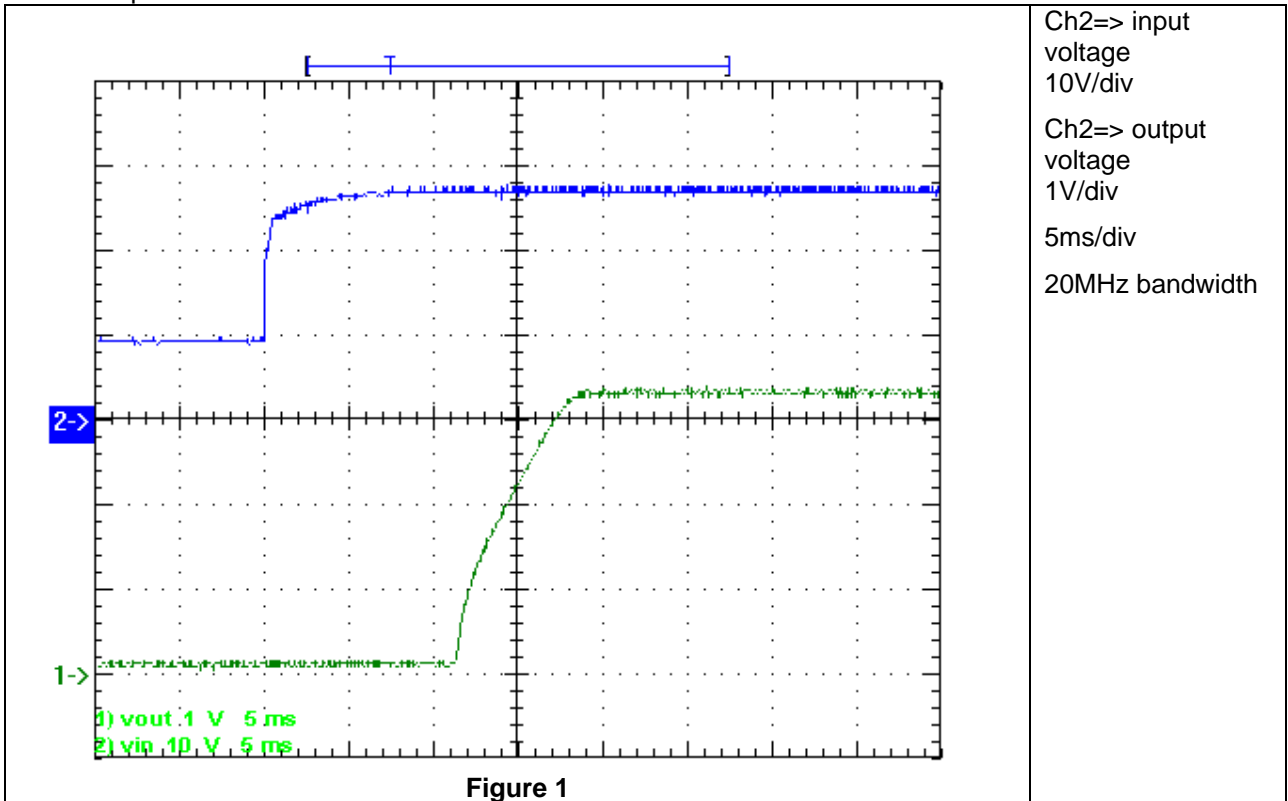
PMP5533RevC Test Results

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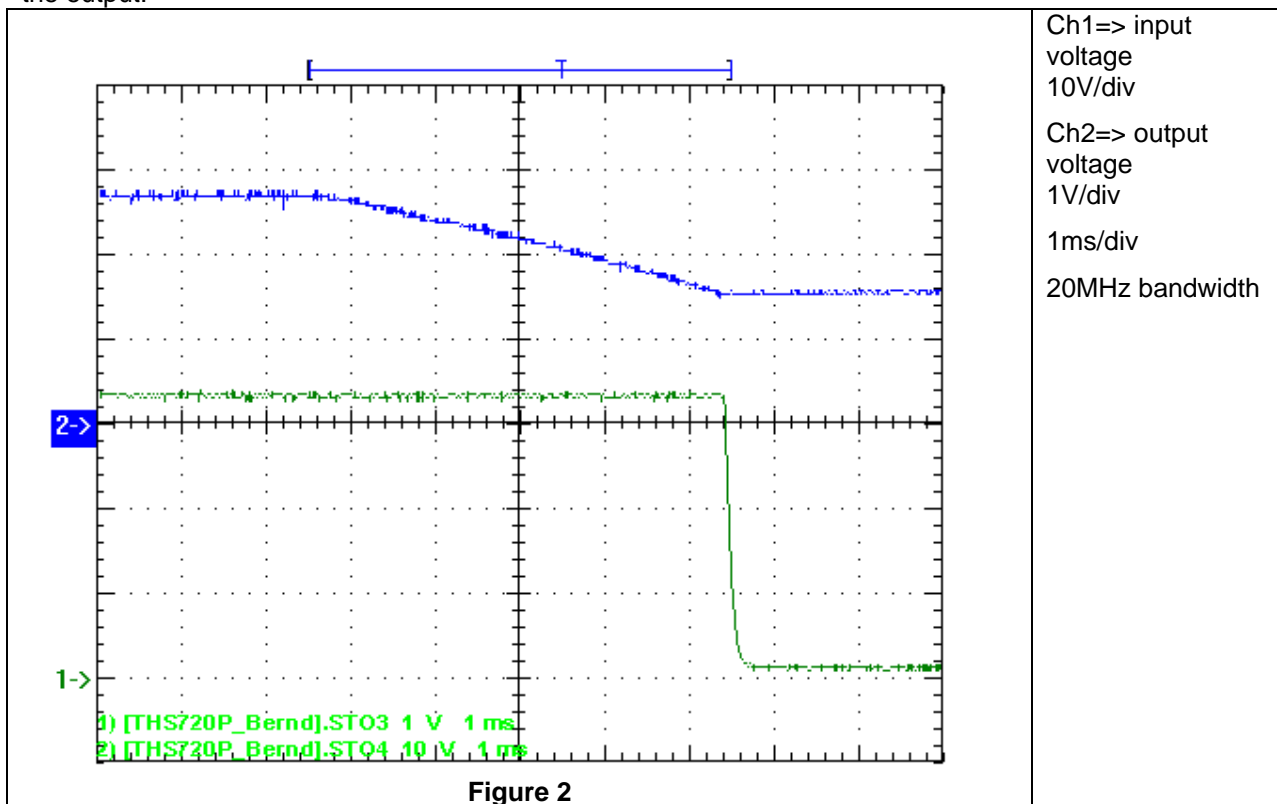
1 Startup

The startup waveform is shown in the Figure 1. The input voltage was set at 28V, with 12A load at the output.



2 Shutdown

The shutdown waveform is shown in the Figure 2 at 28V input voltage. With 12A load applied at the output.



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3 Efficiency

The efficiency is shown in the Figure 3 below. The output current measurements were taken directly from load (N3305A)

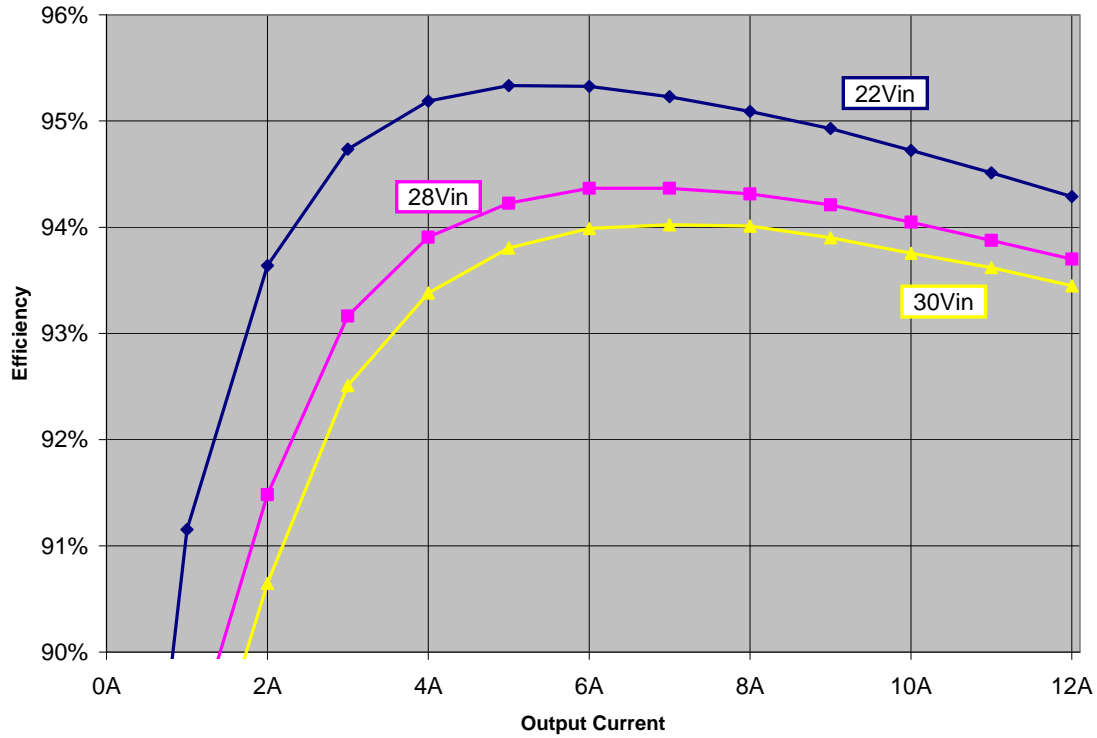


Figure 3

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4 Load regulation

The load regulation for different input voltage is shown in Figure 4. The output current measurements were taken directly from the load (N3305A)

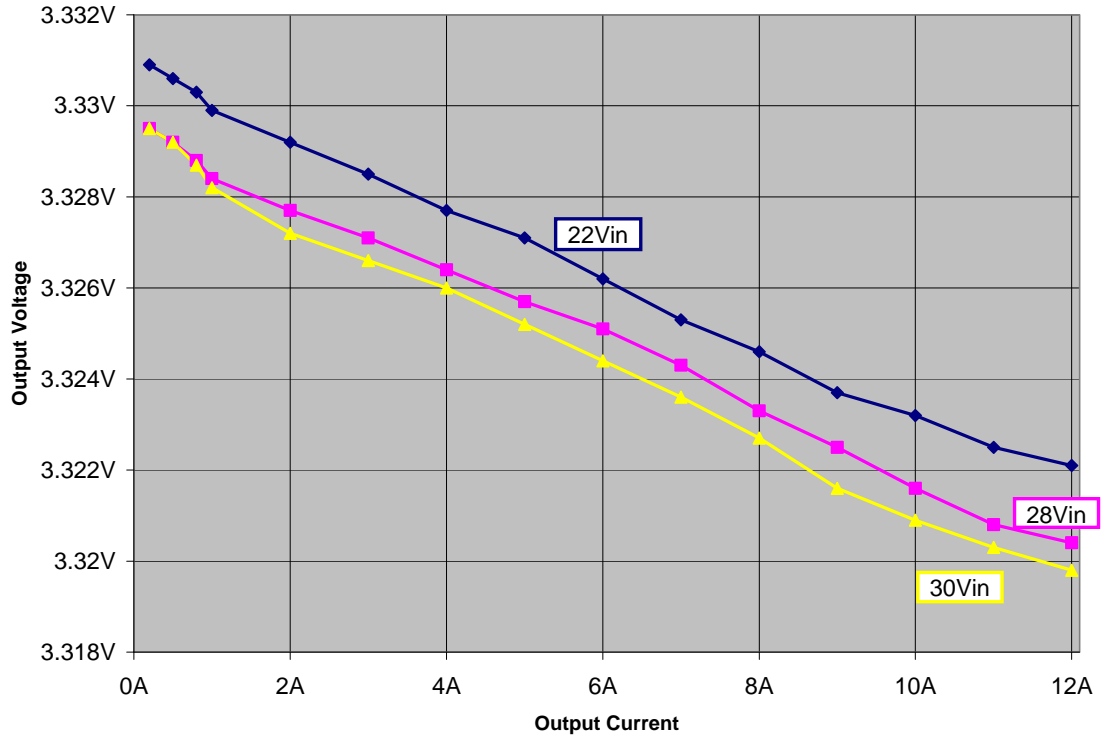


Figure 4

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5 Line Regulation

Figure 5 shows the line regulation at 12A load.

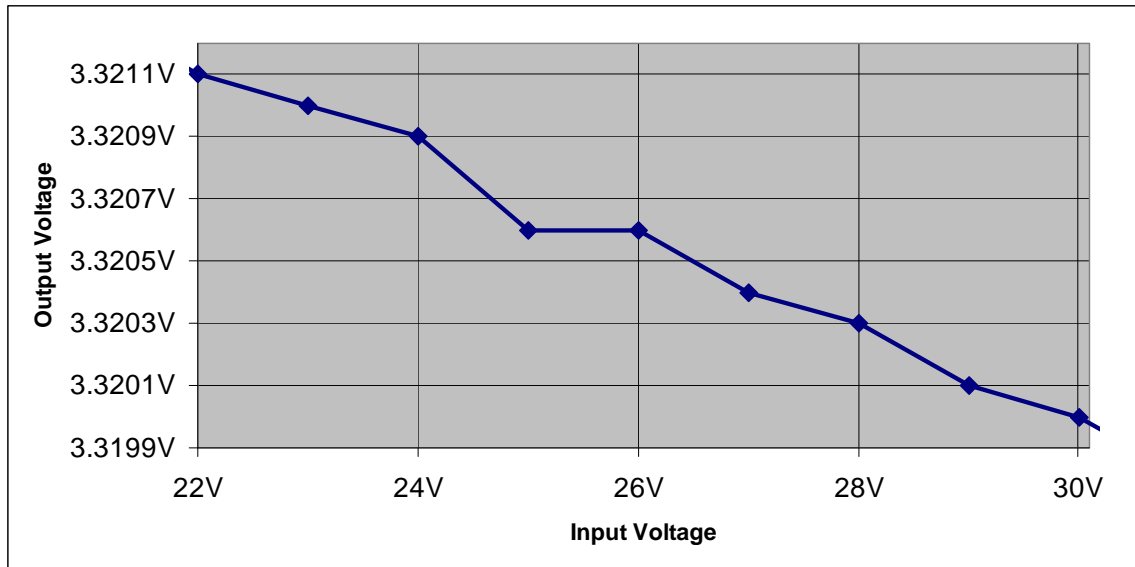


Figure 5

With this measurement also the efficiency-data were derived. This is shown in Figure 6. The output current measurements were taken directly from the load (N3305A)

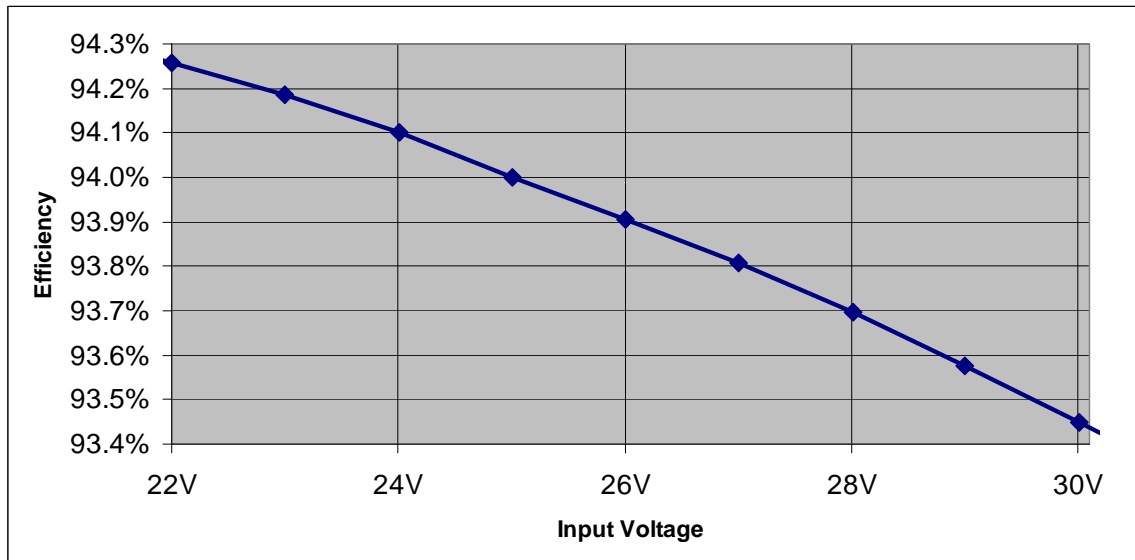


Figure 6

6 Control Loop Frequency Response

Figure 7 shows the loop response. 12A-load applied. The input voltage was set to 28V.

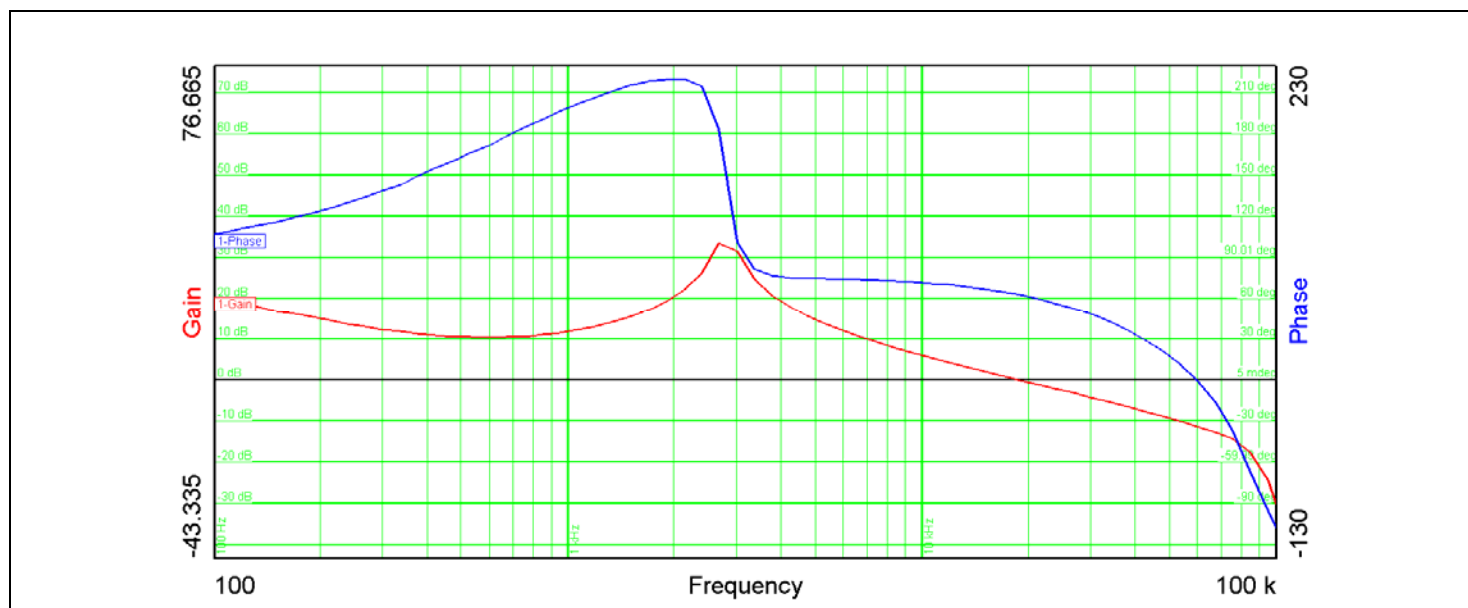


Figure 7

Table 1 summarizes the results from Figure 7

Vin	28V
Bandwidth (kHz)	18.9
Phase margin	62.6°
slope (20dB/decade)	-1.07
gain margin (dB)	-11.3
slope (20dB/decade)	-1.23
freq (kHz)	59.8

Table 1

7 Switch Node Waveform

With 12A load results in the waveforms shown in Figure 8 and Figure 9. 30V were applied to the input.

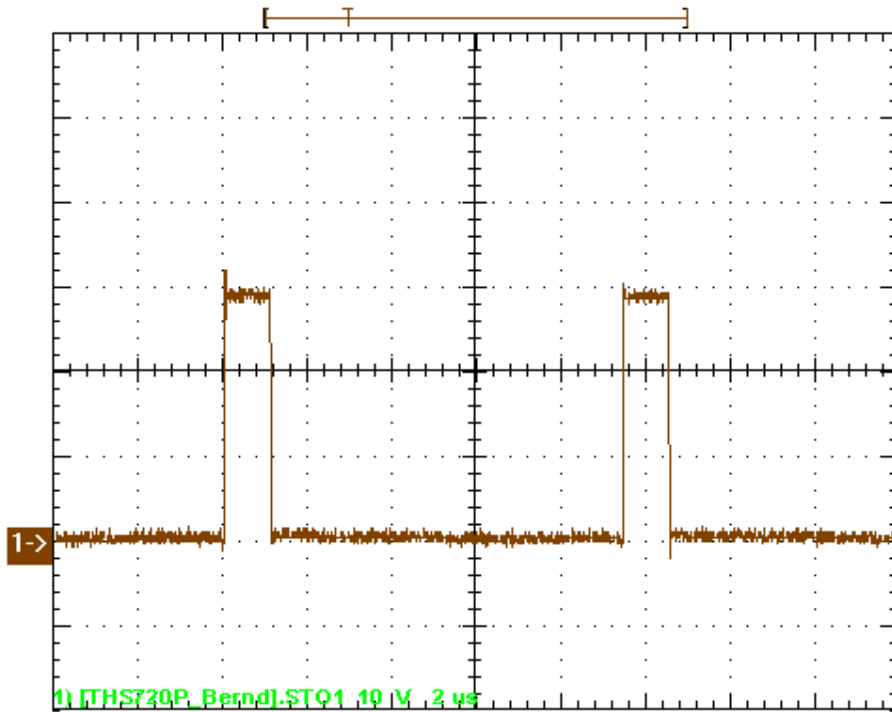


Figure 8

Ch1 =>
switchnode
primary
10V/div
2μs/div
full
bandwidth

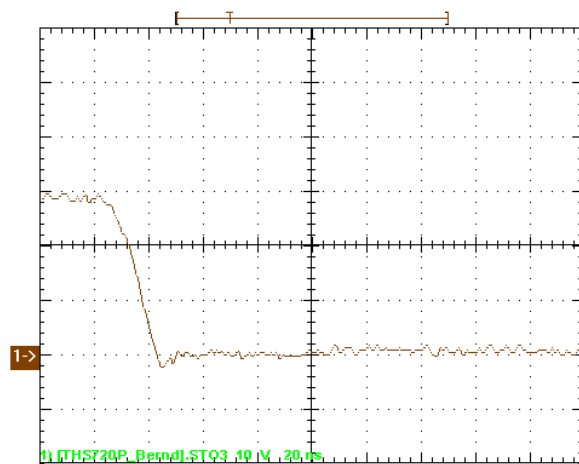
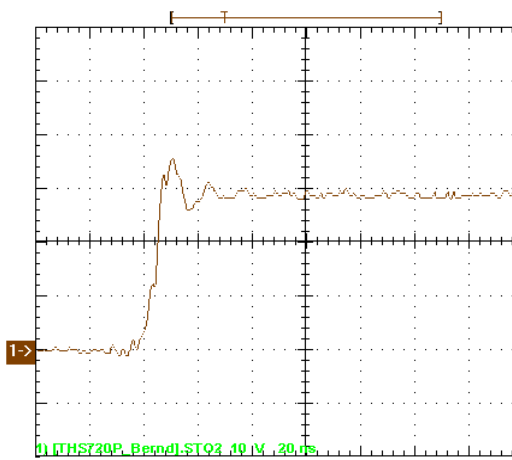


Figure 9

Ch1 =>
switchnode
10V/div
20ns/div
full
bandwidth

8 Ripple Voltages

The output ripple voltage is displayed in Figure 10. The input voltage was set to 28V with output current 12A.

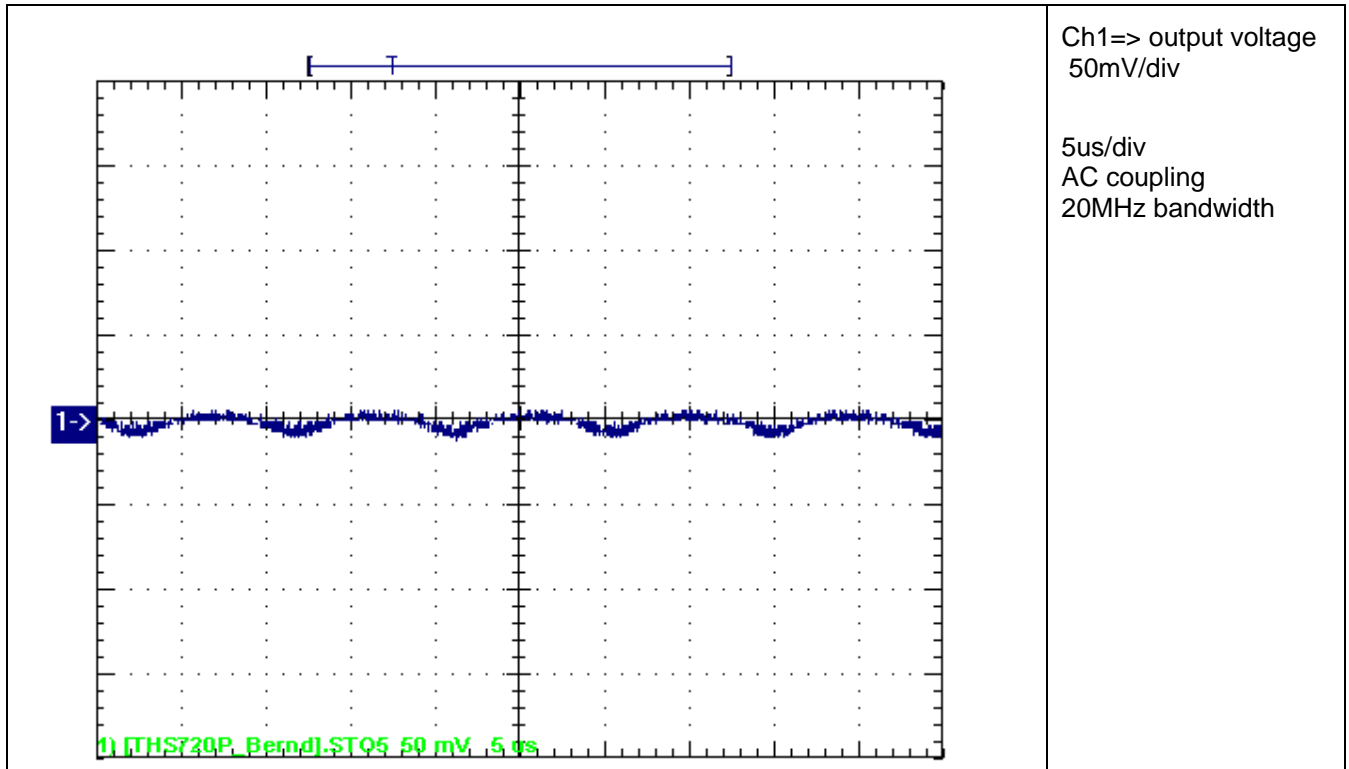


Figure 10

The input ripple voltage is displayed in Figure 11. The input voltage was set to 28V with output current 12A.

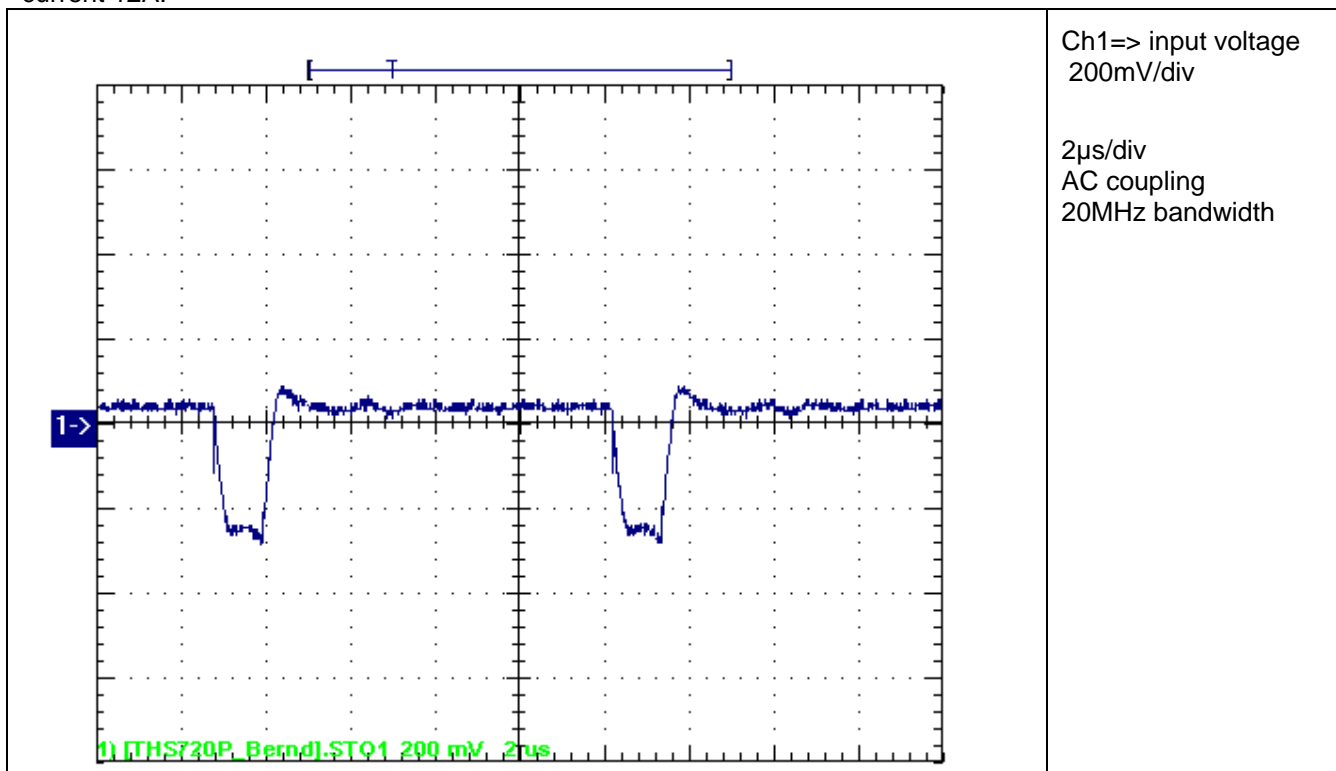
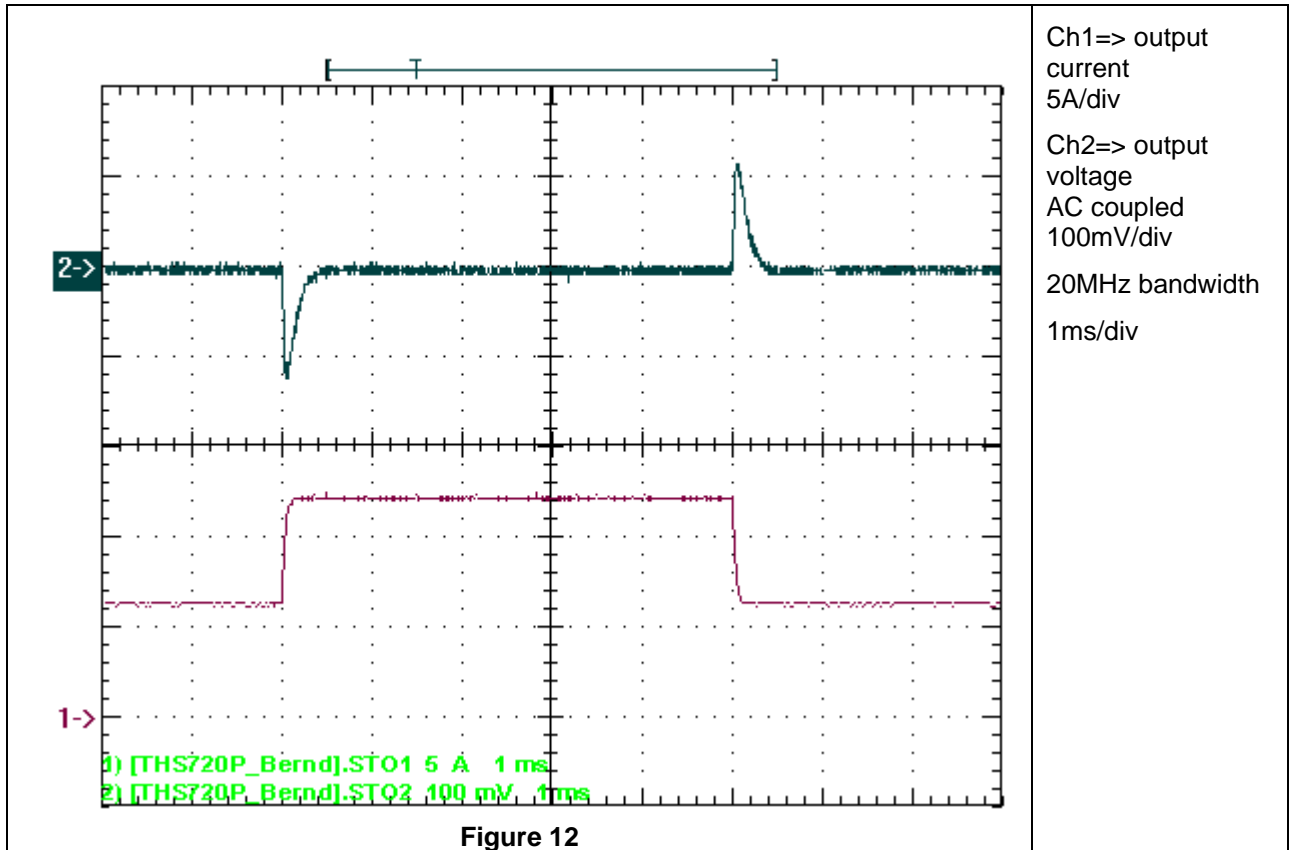


Figure 11

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9 Load Transients

A output current change from 6A to 12A (100Hz) results in following Figure 12. The input voltage was set to 28V



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A output current change from 0A to 12A (100Hz) results in following Figure 12. The input voltage was set to 28V

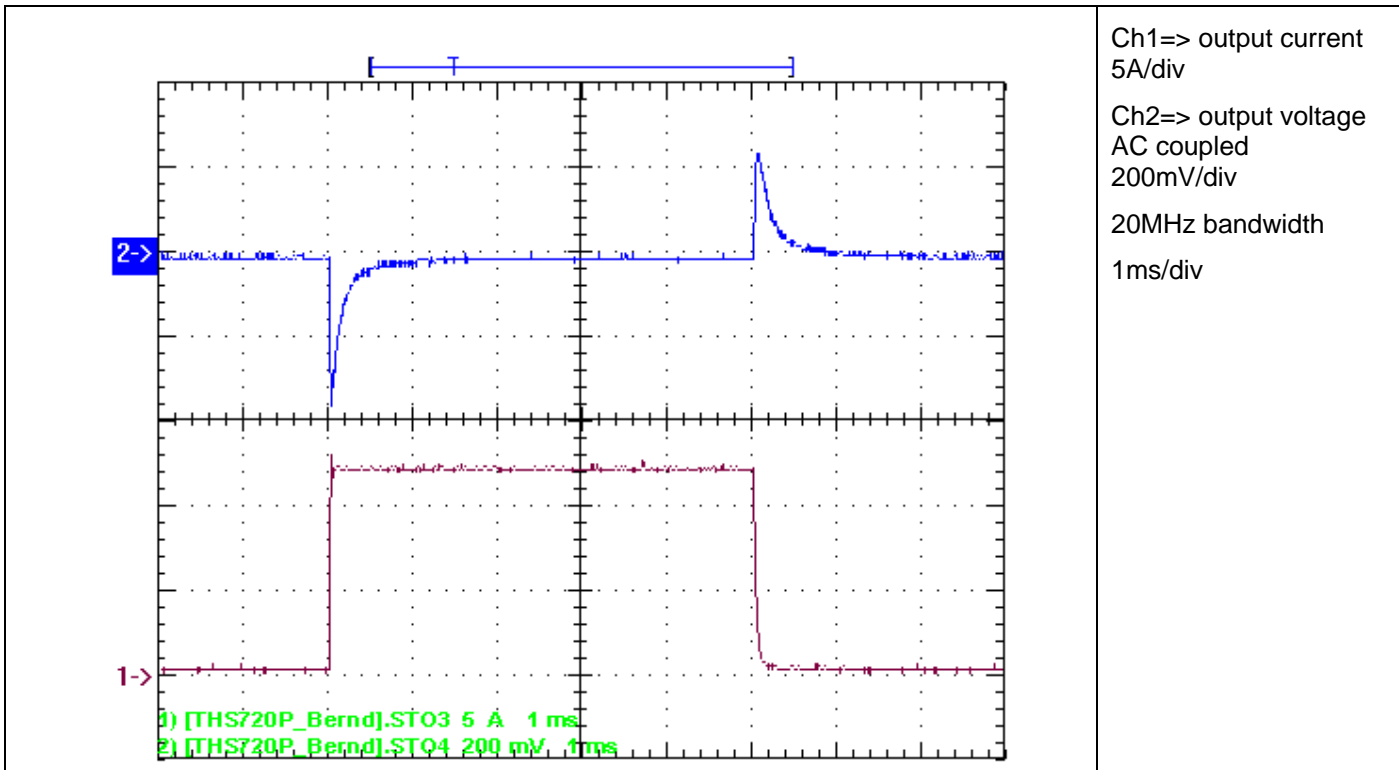


Figure 13

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