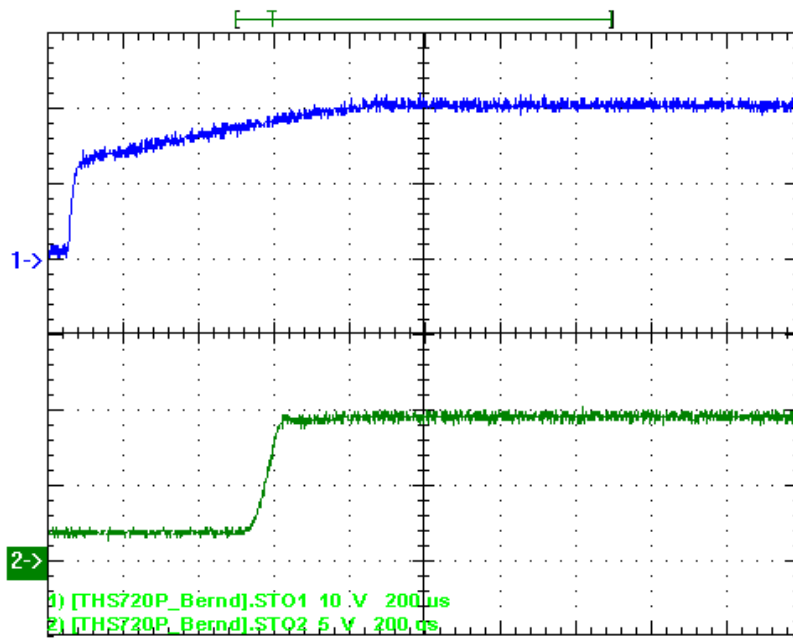


1 Startup

The startup waveform with input voltage=21V is shown in Figure 1. Four LED chains with 3 LEDs were applied.



Ch1: input
voltage
10V/div

Ch2: output
voltage
5V/div

200µs/div

Figure 1

2 Shutdown

The shutdown waveform with input voltage=21V is shown in Figure 2 and Figure 3. Four LED chains with 3 LEDs were applied.

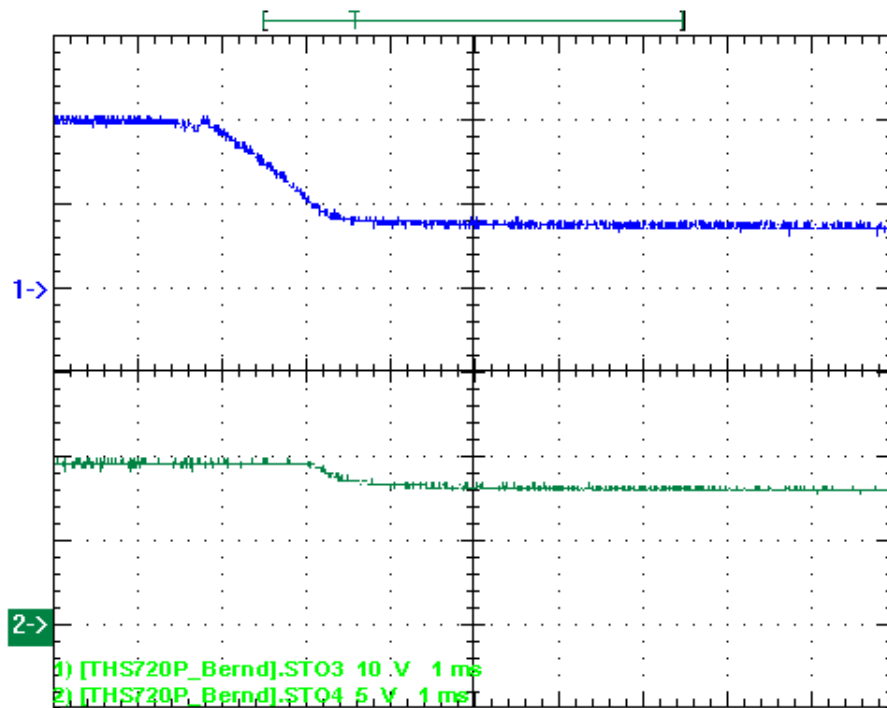


Figure 2

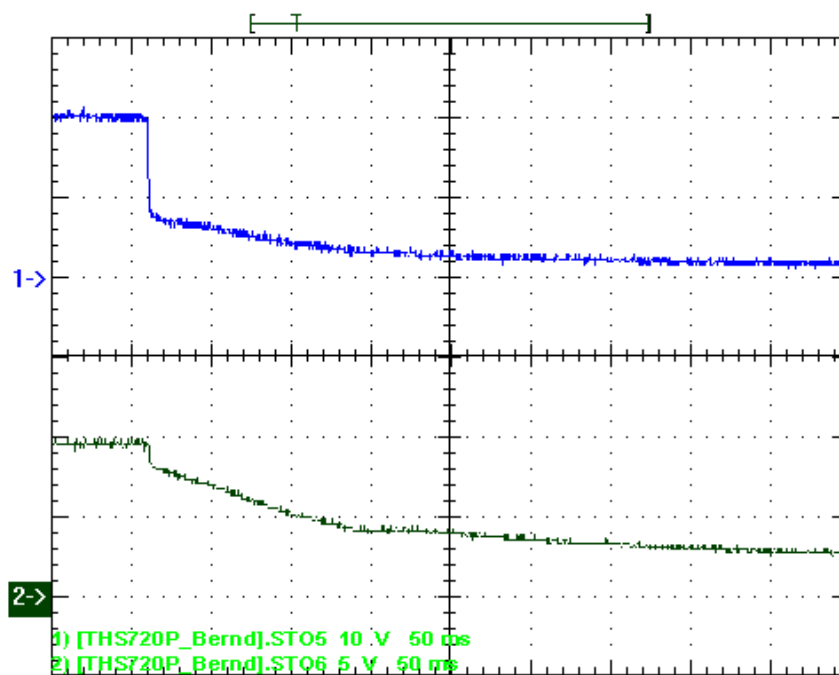


Figure 3

Ch1: input
voltage
10V/div

Ch2: output
voltage
5V/div

1ms/div

Ch1: input
voltage
10V/div

Ch2: output
voltage
5V/div

50ms/div

3 Efficiency

The efficiency with different input voltages is shown in Figure 4. The output voltage was varied by means of variable resistors.

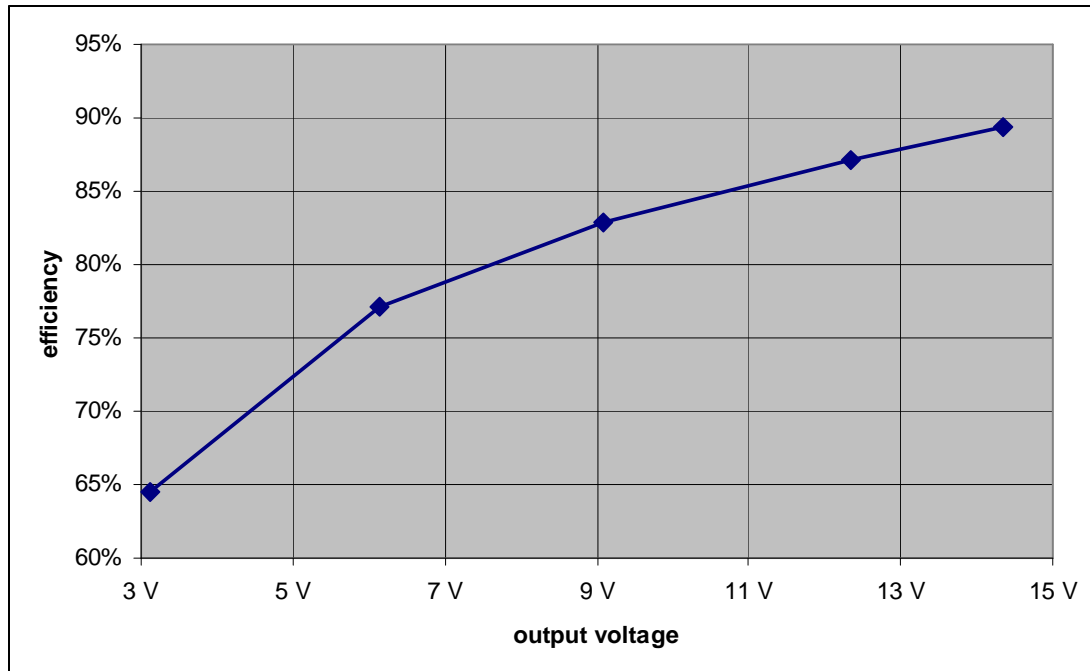


Figure 4

4 Ripple voltage

The voltage with LED load and 21V input voltage are shown in Figure 5.

The curves are captured separately. AC-coupled with 20MHz bandwidth

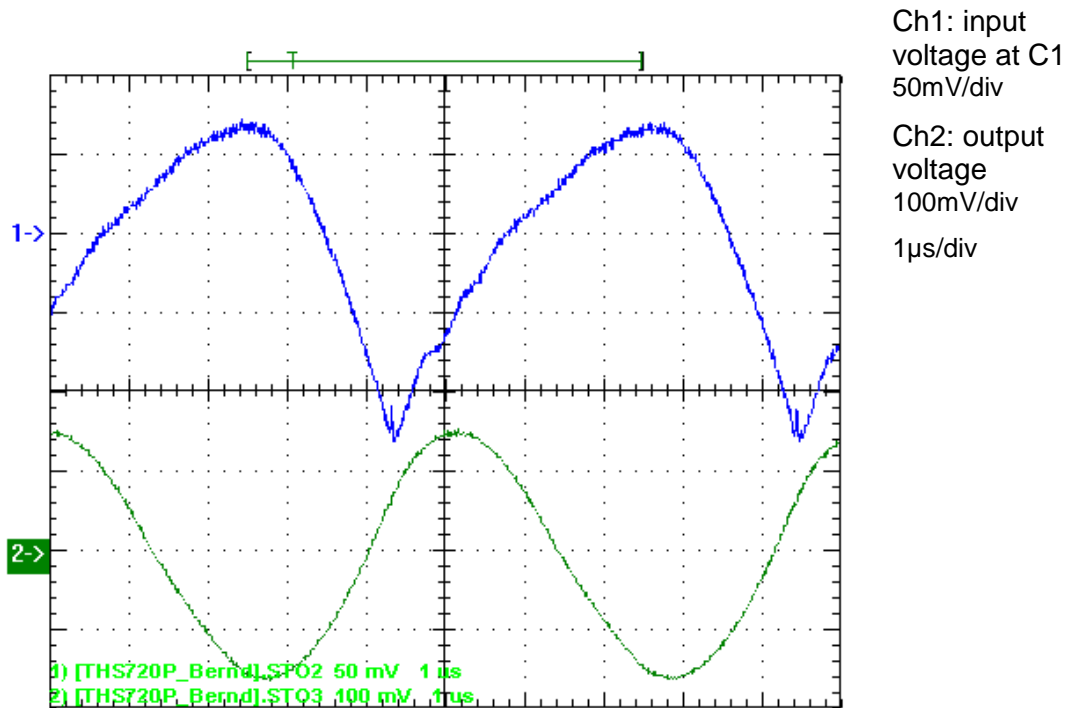


Figure 5

5 Frequency response

Figure 6 shows the loop response of with input voltage 21V and a LED load.

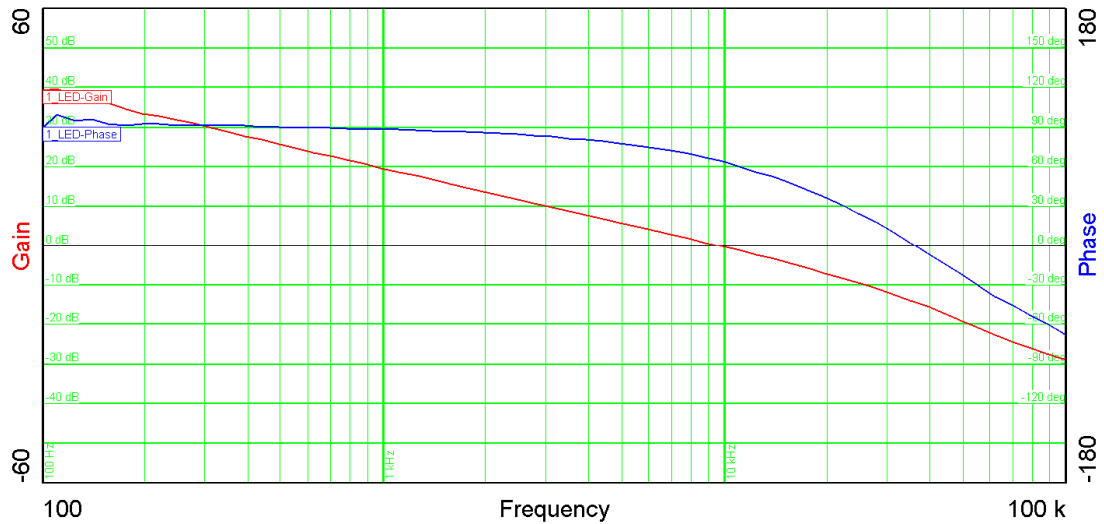


Figure 6

Figure 7 shows the loop response of with input voltage 21V and a Resistor load.

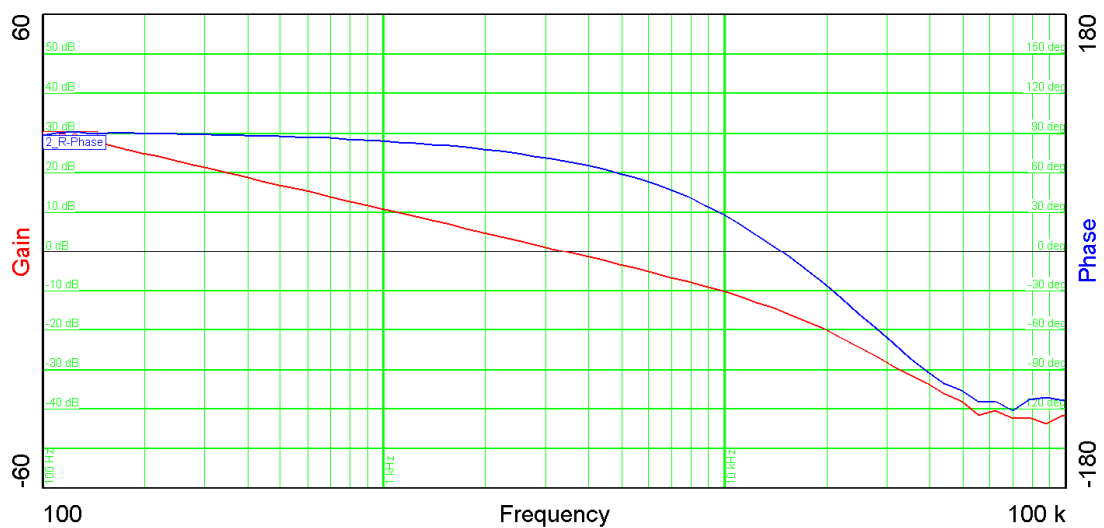


Figure 7

	LED	R
fco	9.7 kHz	3.4 kHz
phase margin	64.2°	68.8°
gain margin	-14 dB	-15 dB

6 Miscellaneous waveforms

The voltage on the switch node is shown in Figure 8.

Channel 1: switchnode @ 21 V input (at full bandwidth)

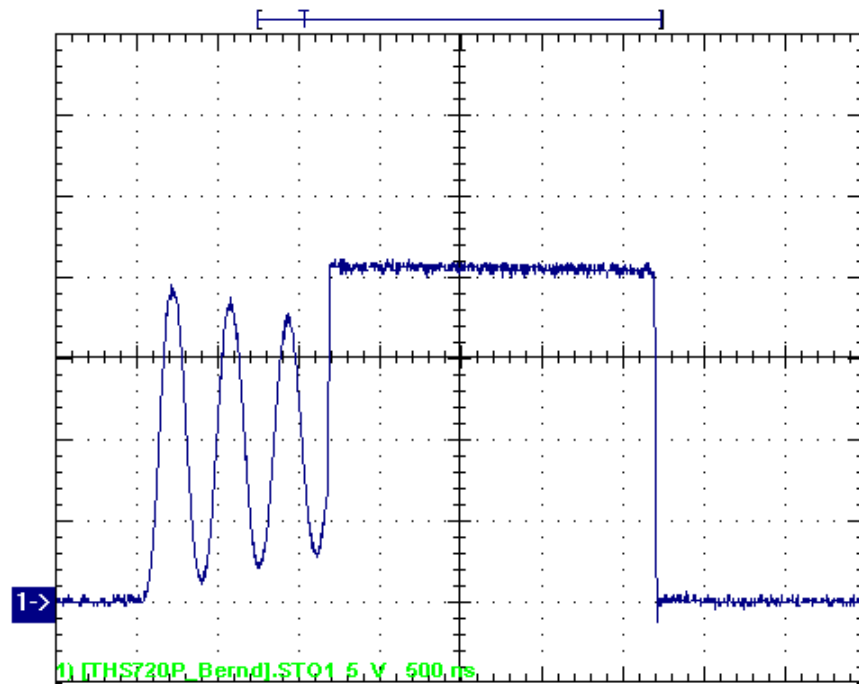


Figure 8

All measurements done for a load of 1.36 Amps

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