

1 Startup

The startup waveform with input voltage=36V is shown in Figure 1. As Load LED (Citizen CL-L102-C7D) was used

Channel C2: **input voltage**
10V/div, 1ms/div

Channel C1: **output voltage**
5V/div, 1ms/div

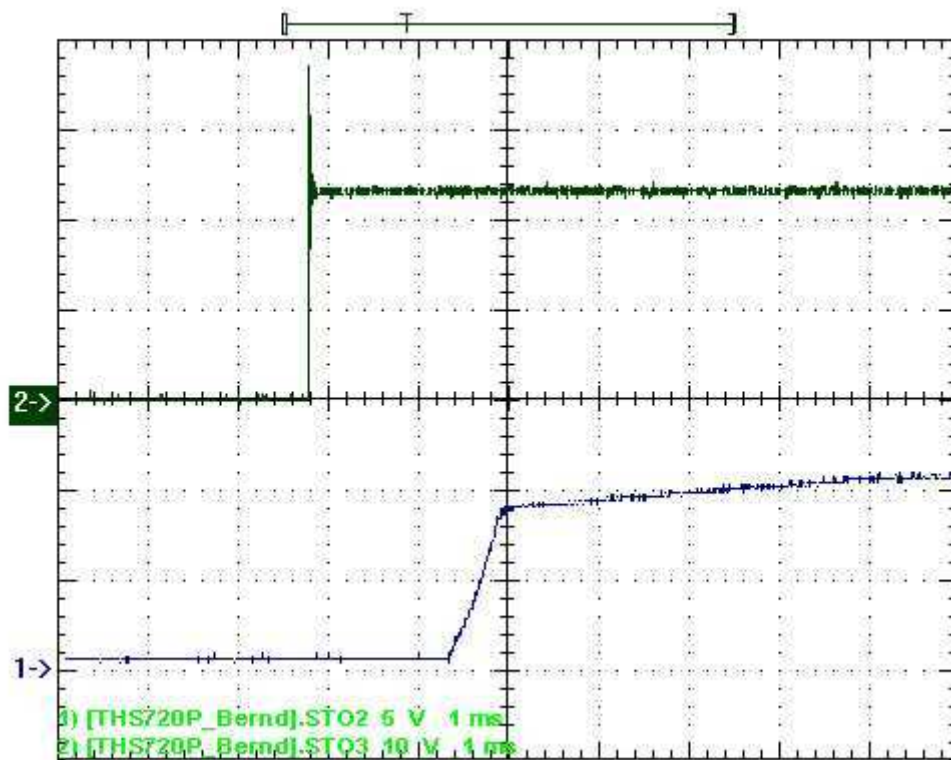


Figure 1

2 Shutdown

The shutdown waveform is shown in Figure 2. The input voltage is set at 36V with a LED load on the output.

Channel C2: **input voltage**
10V/div, 500ms/div

Channel C1: **output voltage**
5V/div, 500ms/div

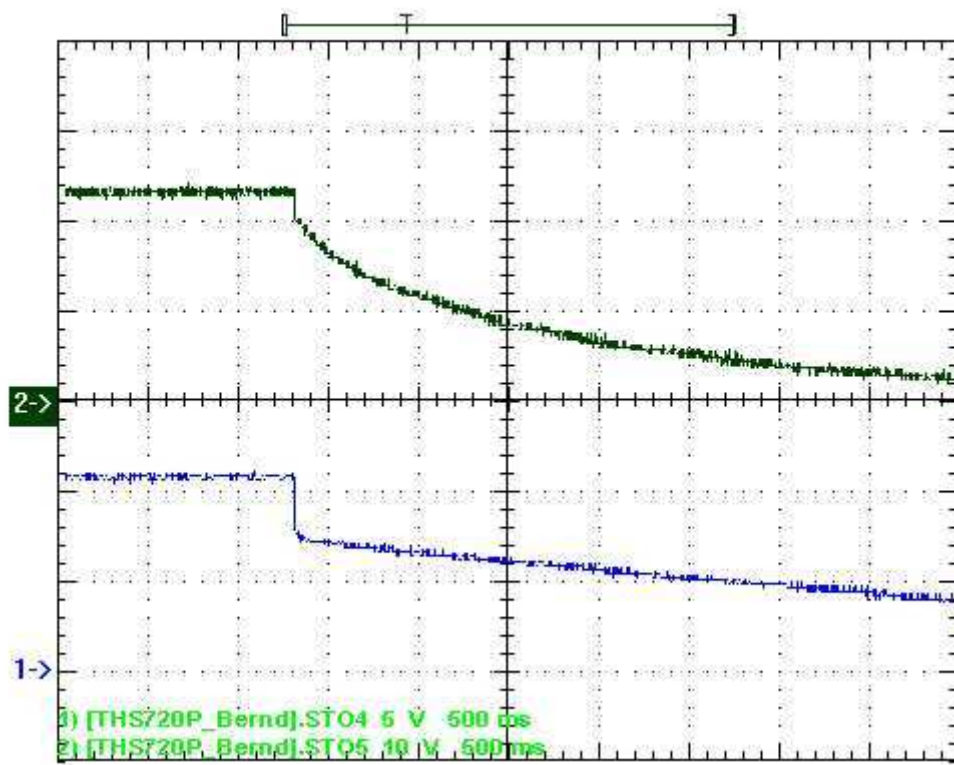


Figure 2

3 Efficiency

The efficiency with LED load is shown in Table 1.

Uin	Iin	Pin	Uout	Iout	Pout	Efficiency
24 V	0.1724 A	4.14 W	10.4 V	0.3516 A	3.65 W	88.3%

Table 1

Also with a variable resistive load different output voltages were obtained as Figure 3 shows.

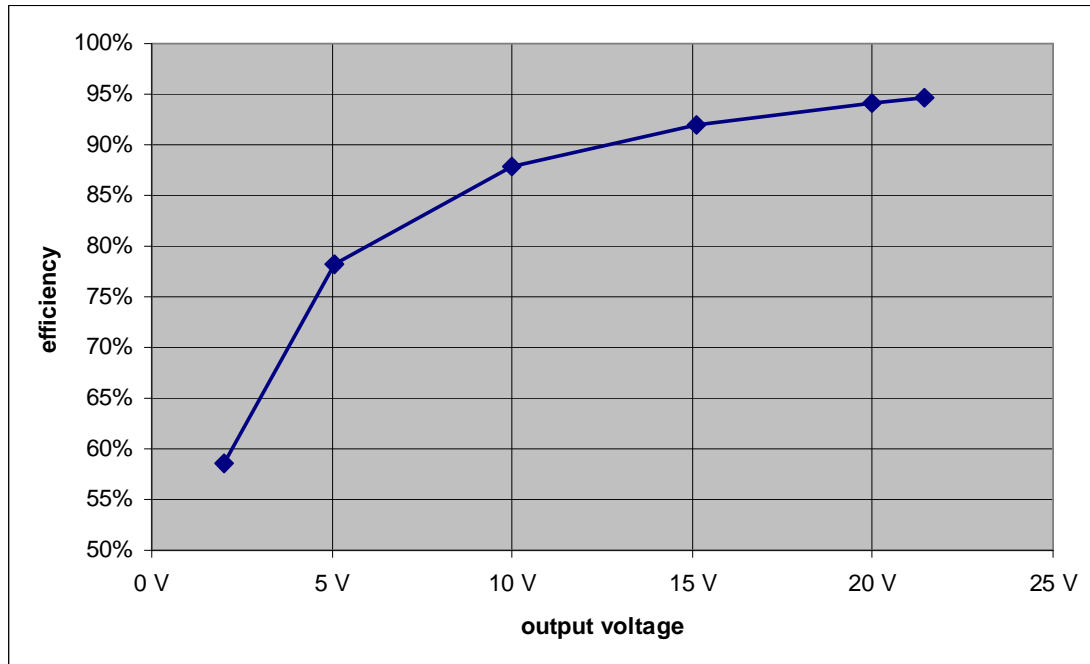


Figure 3

4 Load regulation

The load regulation with different input voltages is shown in Figure 4.

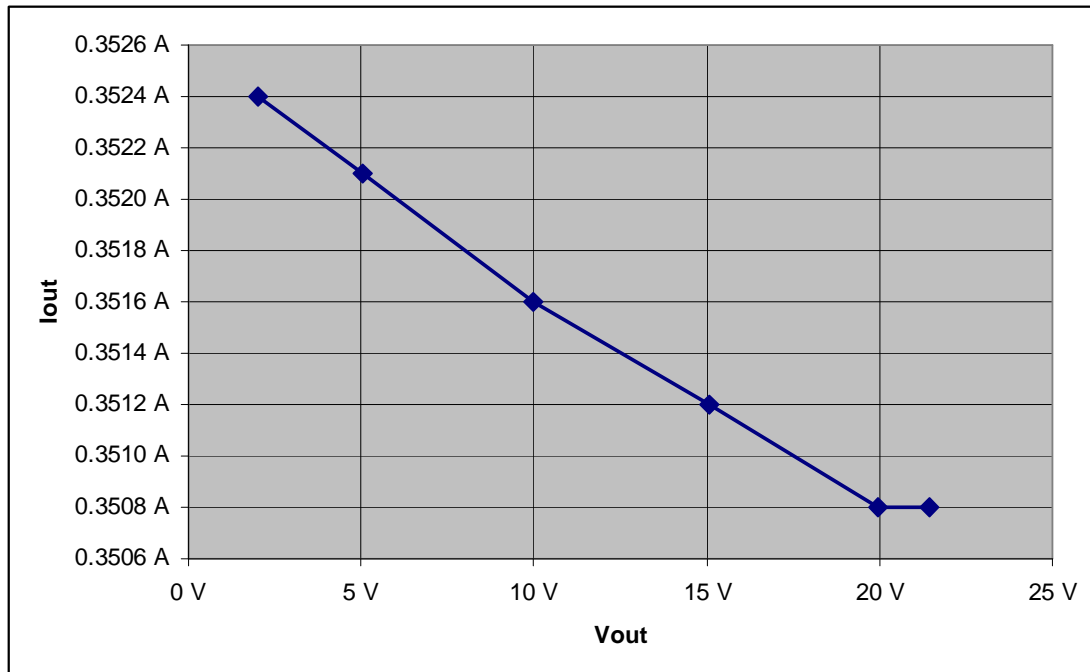


Figure 4

5 Input/Output ripple voltage

The output and input ripple voltage with LED Load is shown in Figure 5.

Channel 2: **output voltage**, AC coupled, full bandwidth

Channel 1: **input voltage**, AC coupled, 20% bandwidth

The curves were measured separately

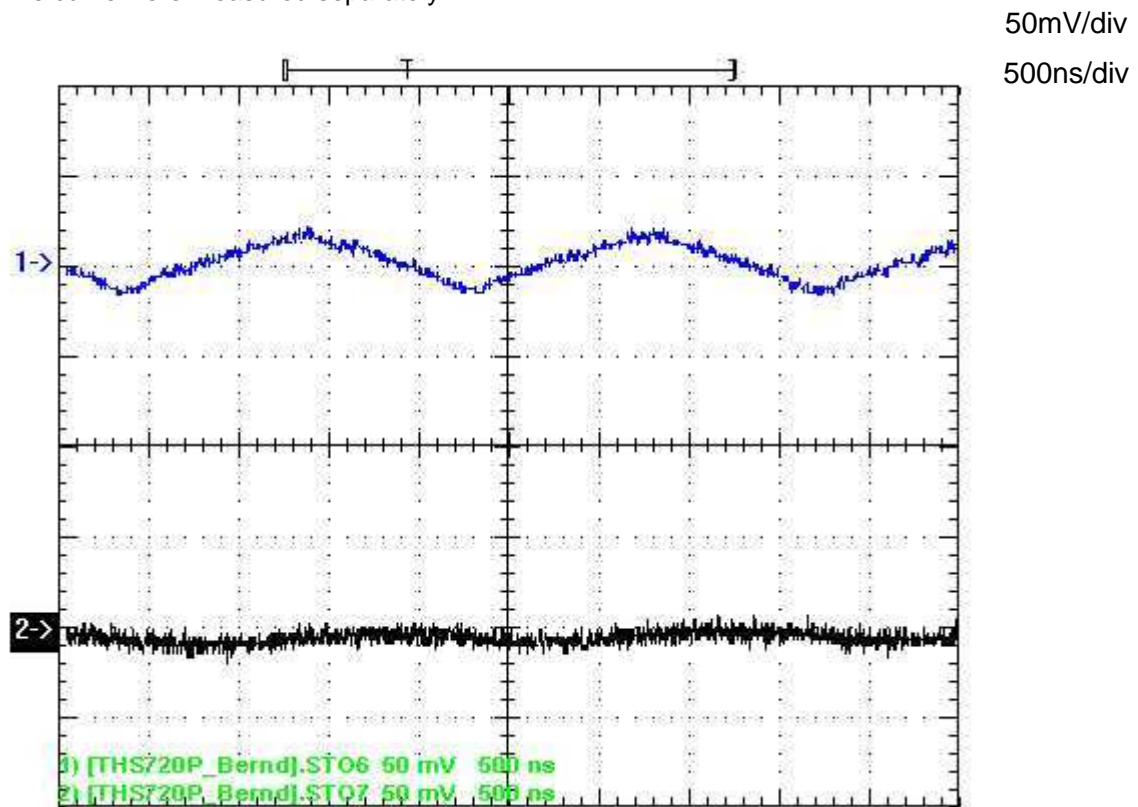


Figure 5

6 Frequency response

Figure 6 shows the loop response of with 24V input and LED load. 67.6° phase margin @ crossover frequency 11kHz and -19dB gain margin @ 40.7kHz

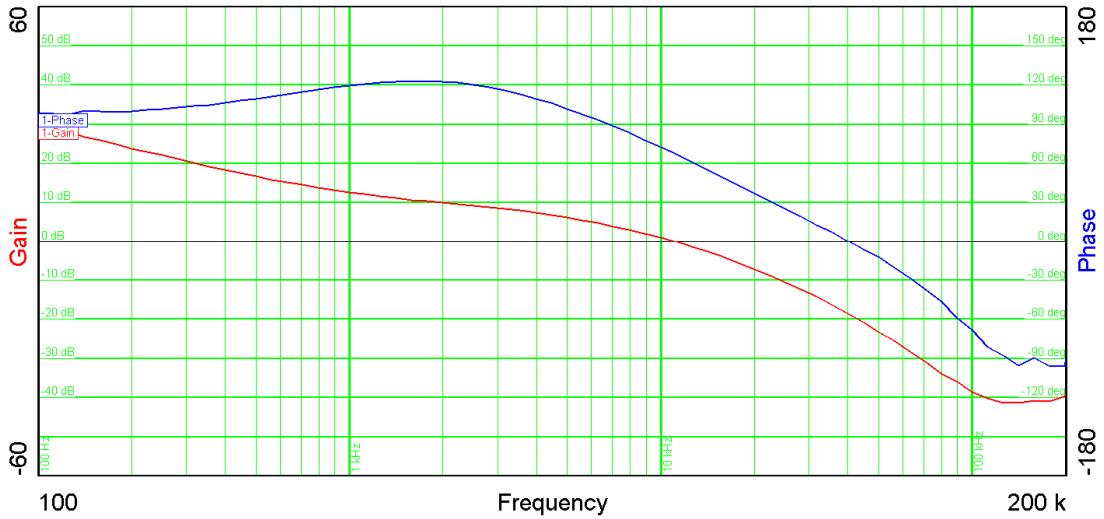


Figure 6

7 Miscellaneous waveforms

The voltage on the switch node is shown in Figure 7.

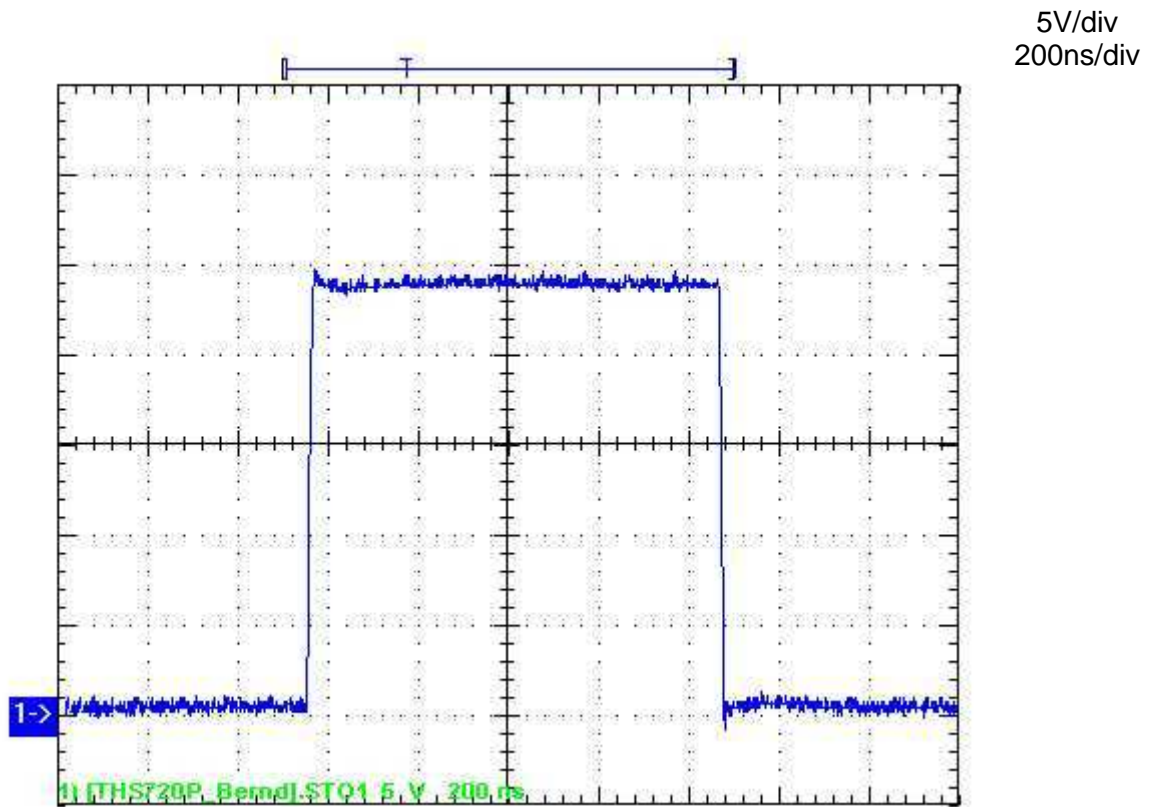


Figure 7

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