

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

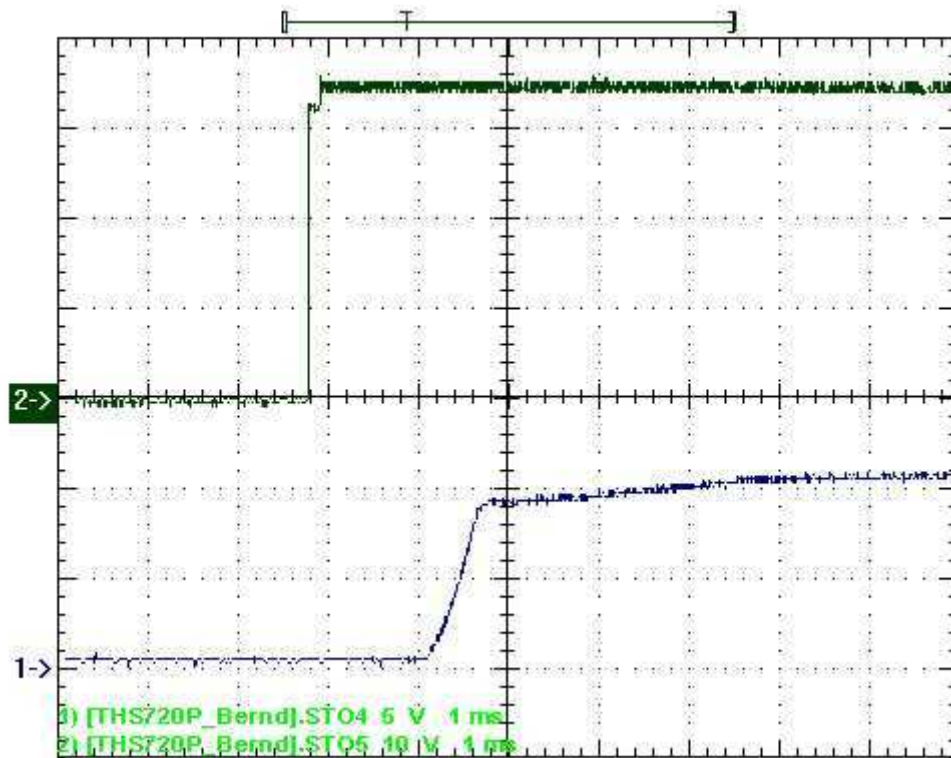


Figure 1

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

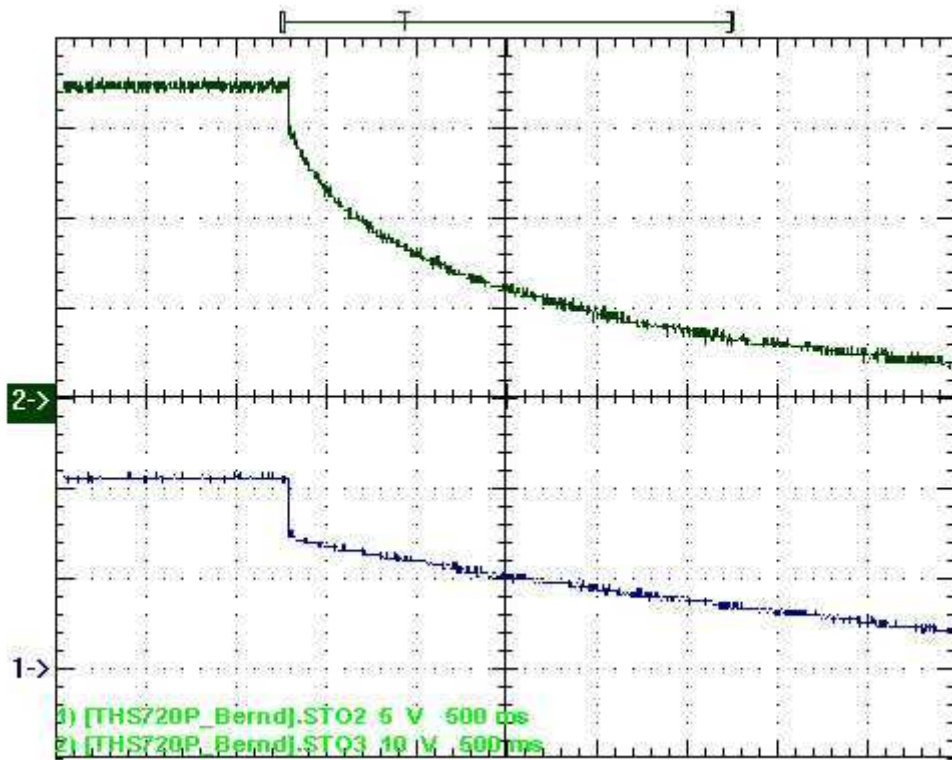


Figure 2

3 Efficiency

The efficiency with LED load is shown in Table 1.

U _{in}	I _{in}	P _{in}	U _{out}	I _{out}	P _{out}	Efficiency
36 V	0.117 A	4.20 W	10.4 V	0.354 A	3.66 W	87.3%

Table 1

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

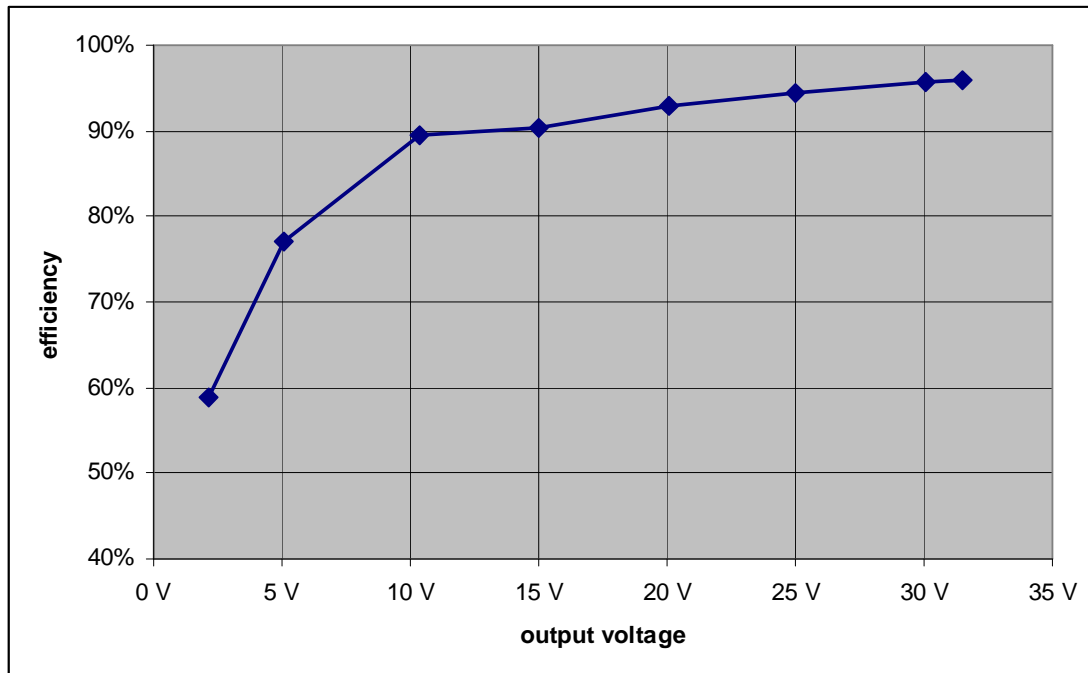


Figure 3

4 Load regulation

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

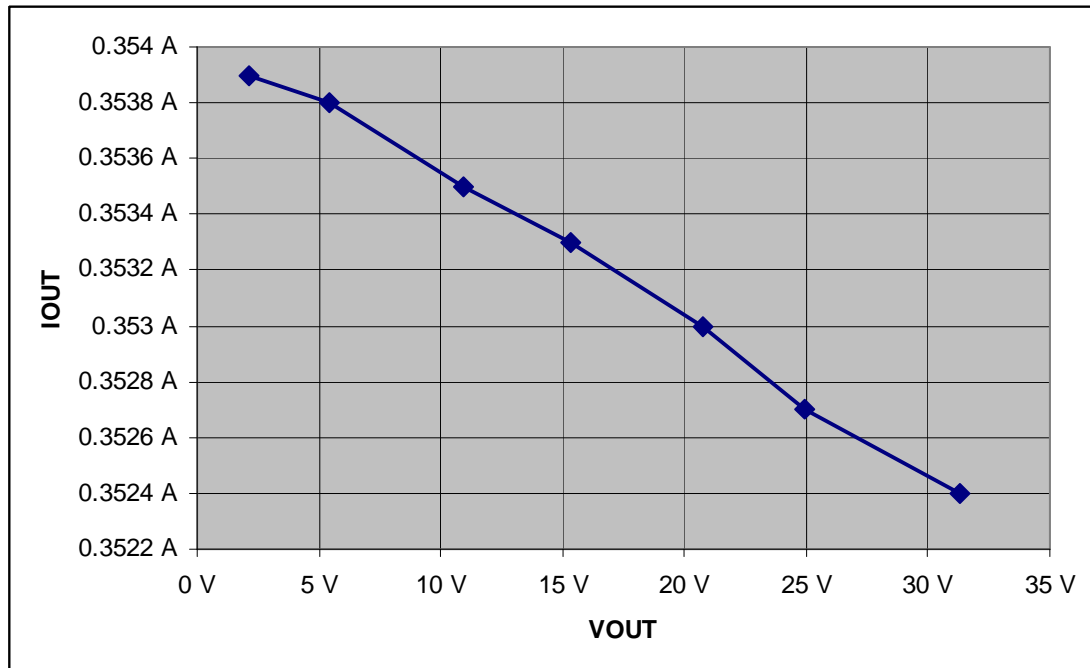


Figure 4

5 Input/Output ripple voltage

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

Channel 1: **output voltage**, AC coupled, full bandwidth

Channel 2: **input voltage**, AC coupled, 20% bandwidth

The curves were measured separately

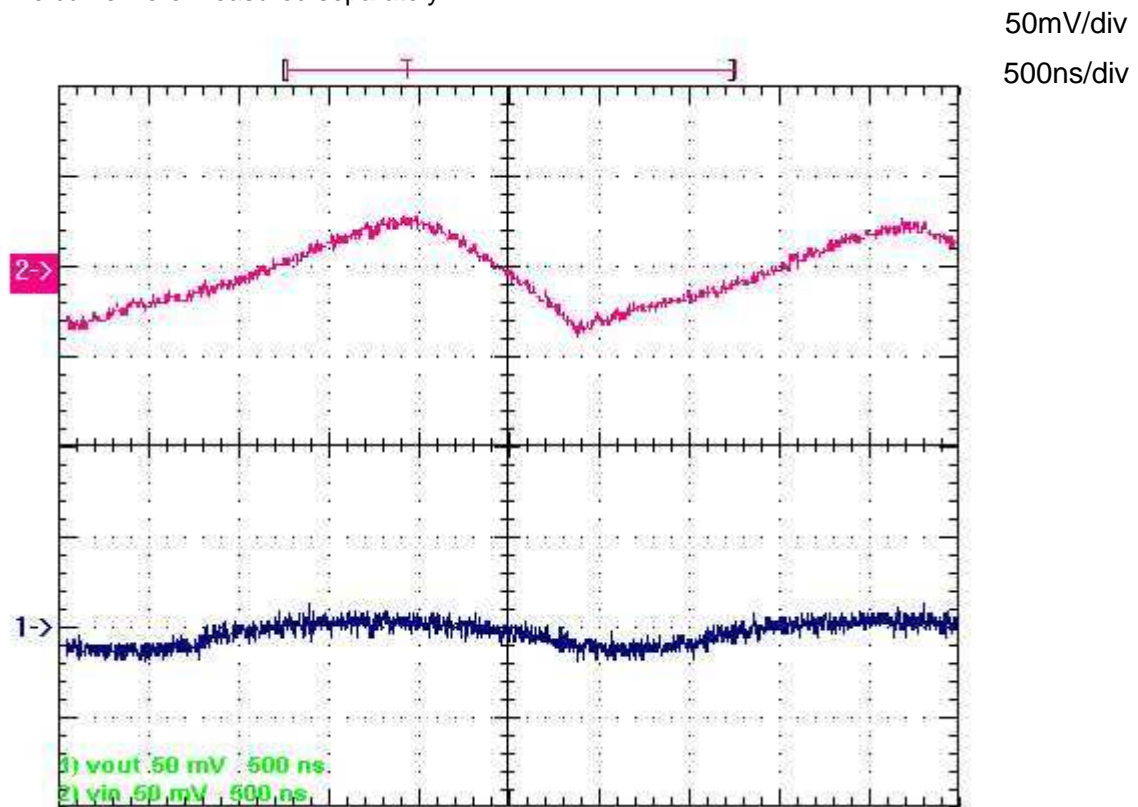


Figure 5

6 Frequency response

shows the loop response of with 36V input and LED load. 63° phase margin @ crossover frequency 14.4kHz and -16.3dB gain margin @ 46.5kHz.

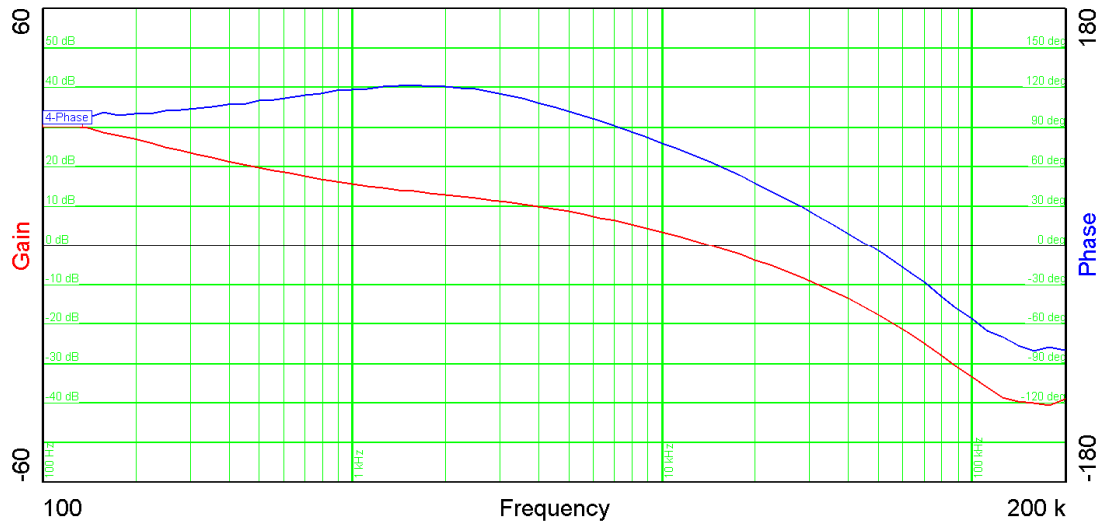


Figure 6

7 Miscellaneous waveforms

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

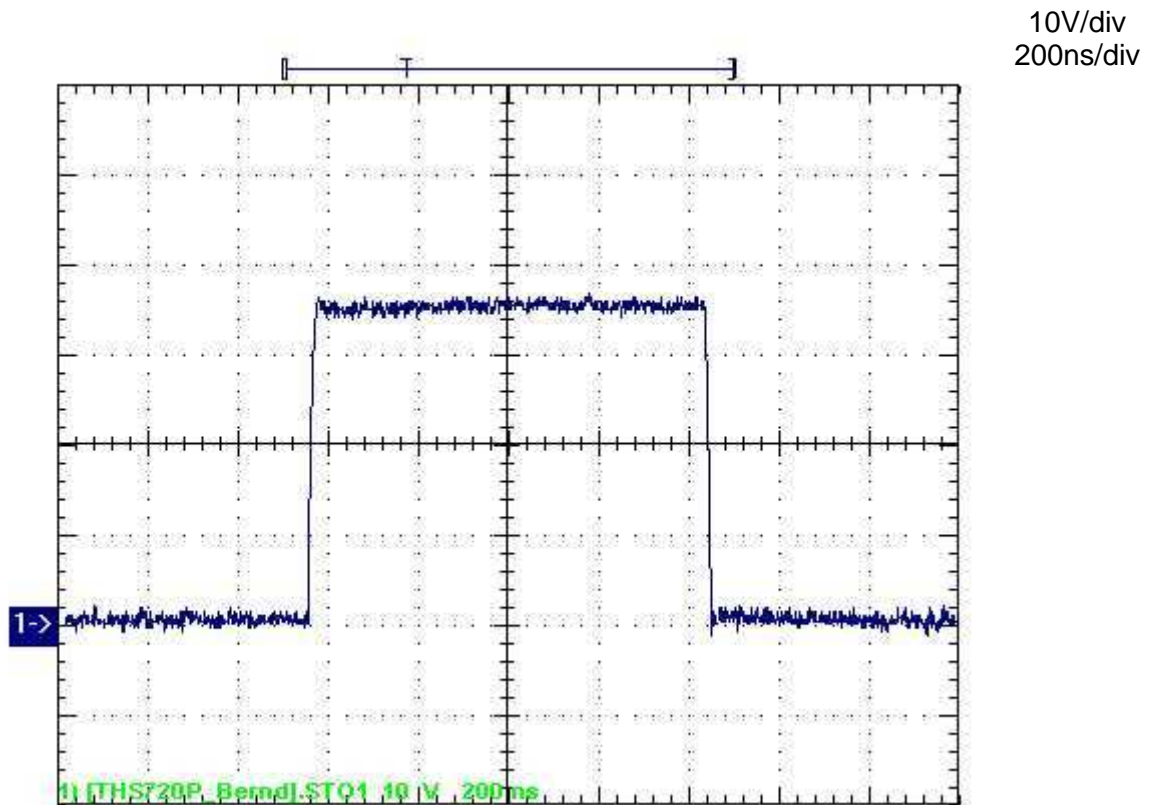


Figure 7

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