

PMP4740RevB Test Results

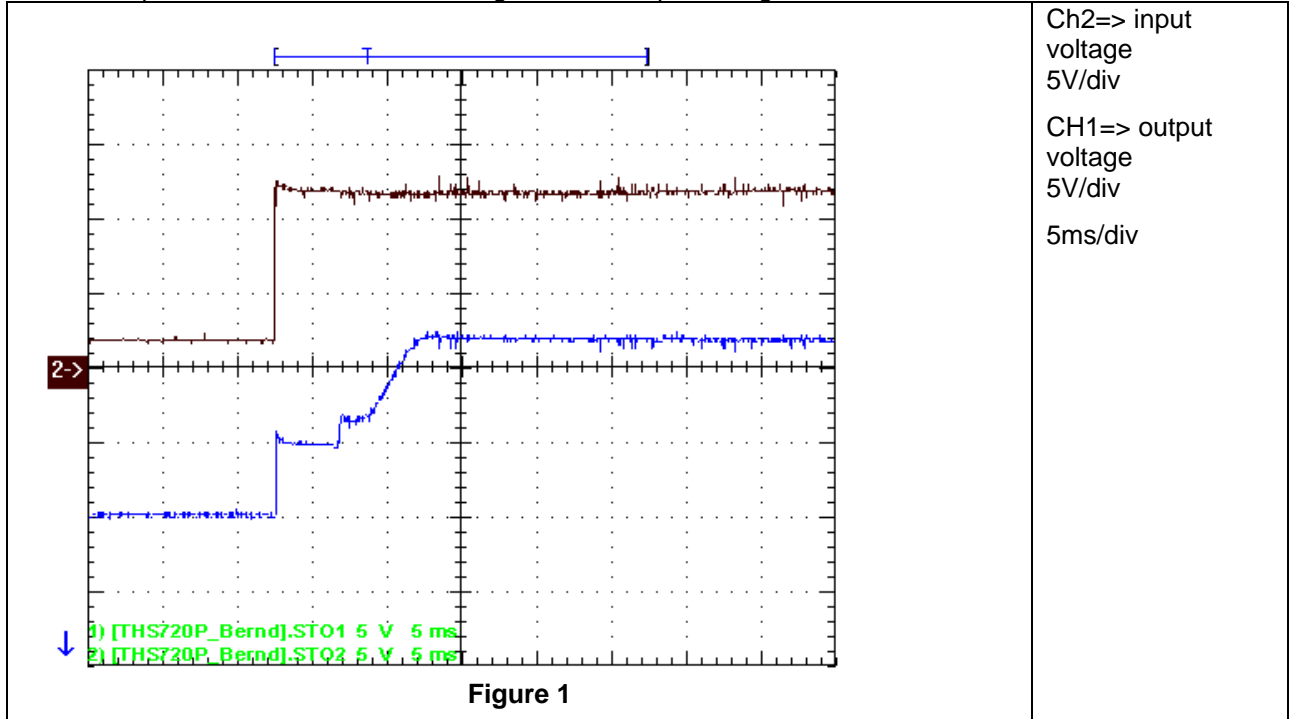
1	Startup.....	2
2	Shutdown	3
3	Efficiency.....	4
4	Line regulation	5
5	Control Loop Frequency Response	6
6	Switch Node Waveform	7
7	Ripple Voltages	8

PMP4740RevB Test Results

All measurements were performed with two LEDs CL-L102-C7D in series from Citizen
[http://ce.citizen.co.jp/lighting_led/dl_data/spec/en/CL-L102/2008/CL-L102-C7D_P248_0308_R1\(0708\)_E.pdf](http://ce.citizen.co.jp/lighting_led/dl_data/spec/en/CL-L102/2008/CL-L102-C7D_P248_0308_R1(0708)_E.pdf))

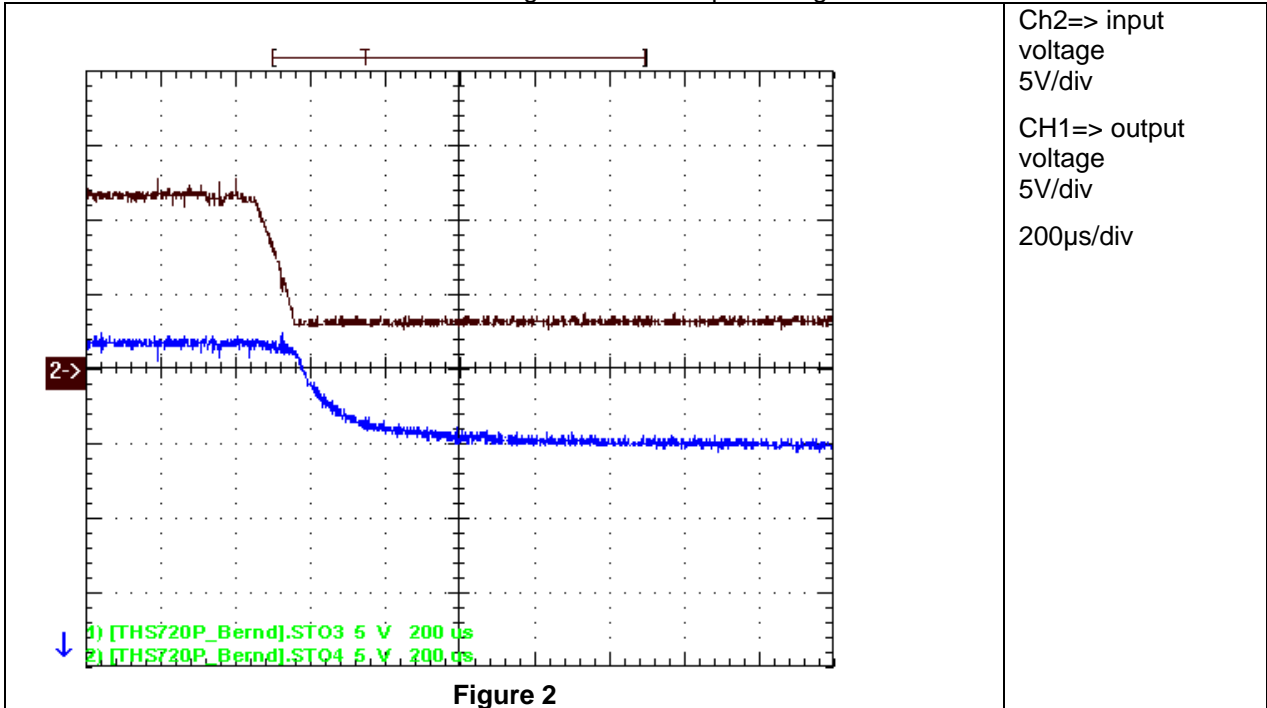
1 Startup

The startup waveform is shown in the Figure 1. The input voltage was set at 12V



2 Shutdown

The shutdown waveform is shown in the Figure 2 at 12V input voltage.



PMP4740RevB Test Results

3 Efficiency

The efficiency is shown in the Figure 3 below.

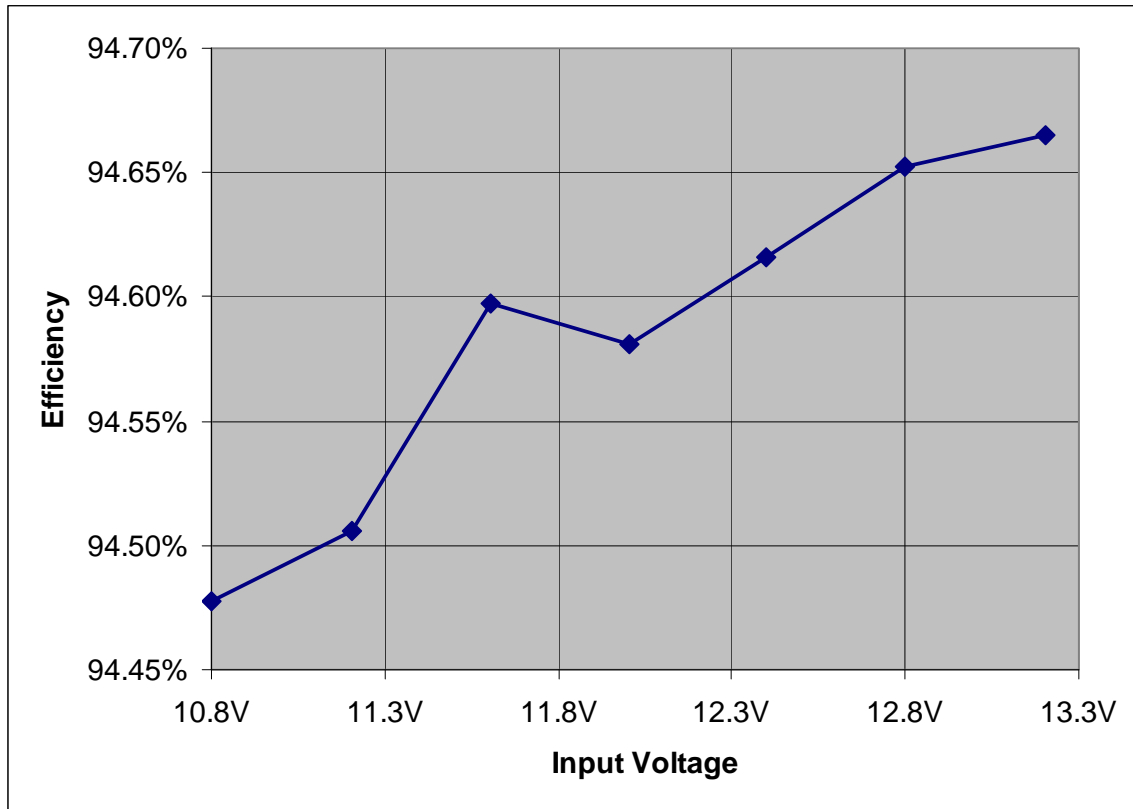


Figure 3

4 Line regulation

The line regulation is shown in Figure 4.

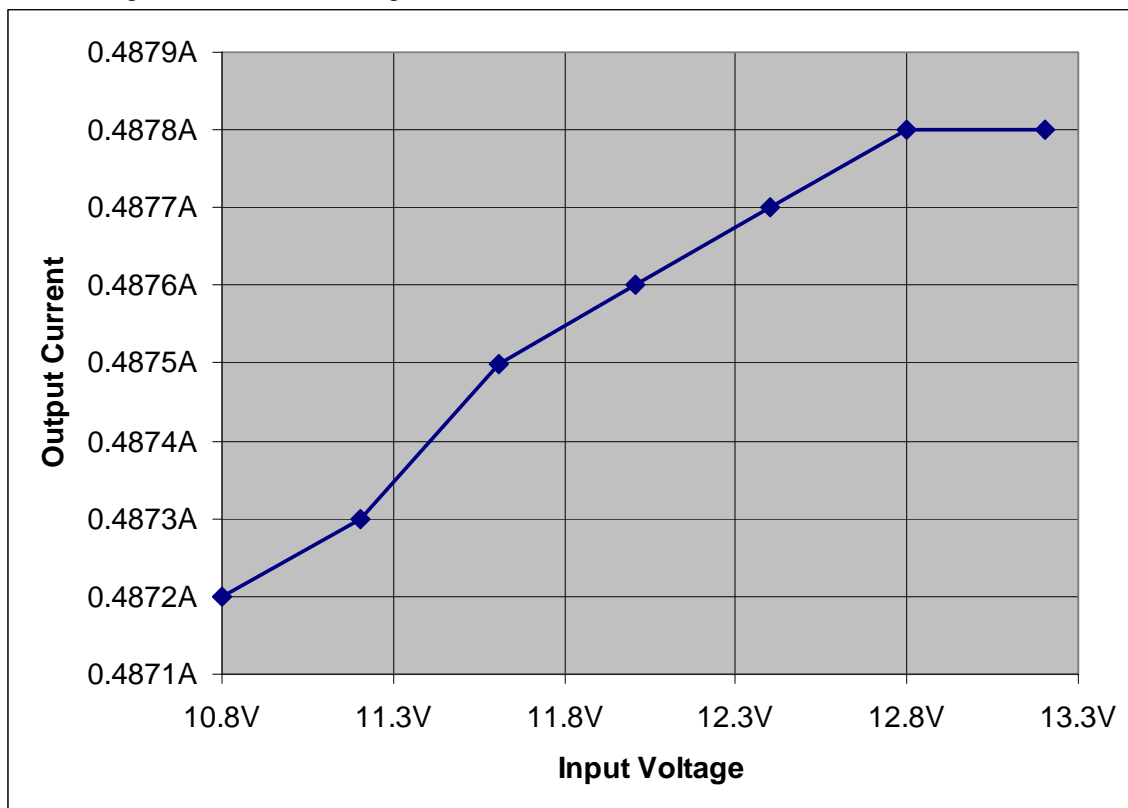


Figure 4

5 Control Loop Frequency Response

Figure 5 shows the loop response. 4-load applied. The input voltage was set to 10.8V and 13.2V.

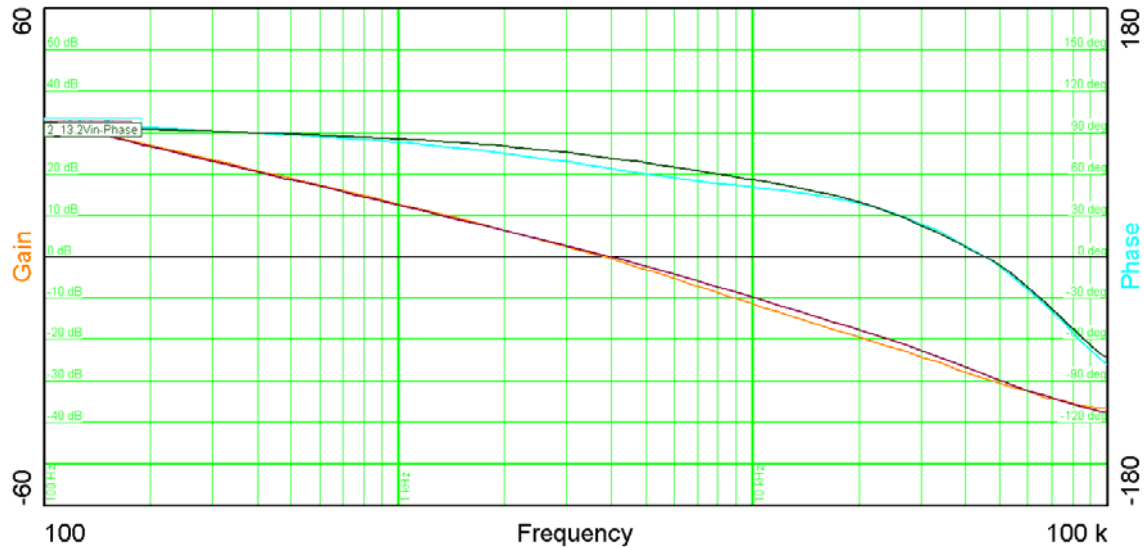


Figure 5

Table 1 summarizes the results from Figure 5

VIN	10.8V	13.2V
Bandwidth (kHz)	3.797	4
Phase margin	65°	71.7°
slope (20dB/decade)	-1.28	-1.14
gain margin (dB)	-29.3	-28.3
slope (20dB/decade)	-1.35	-1.75
freq (kHz)	45.3	45.1

Table 1

6 Switch Node Waveform

The waveforms at the switchnode are shown in Figure 6 and Figure 7. 12V were applied to the input.

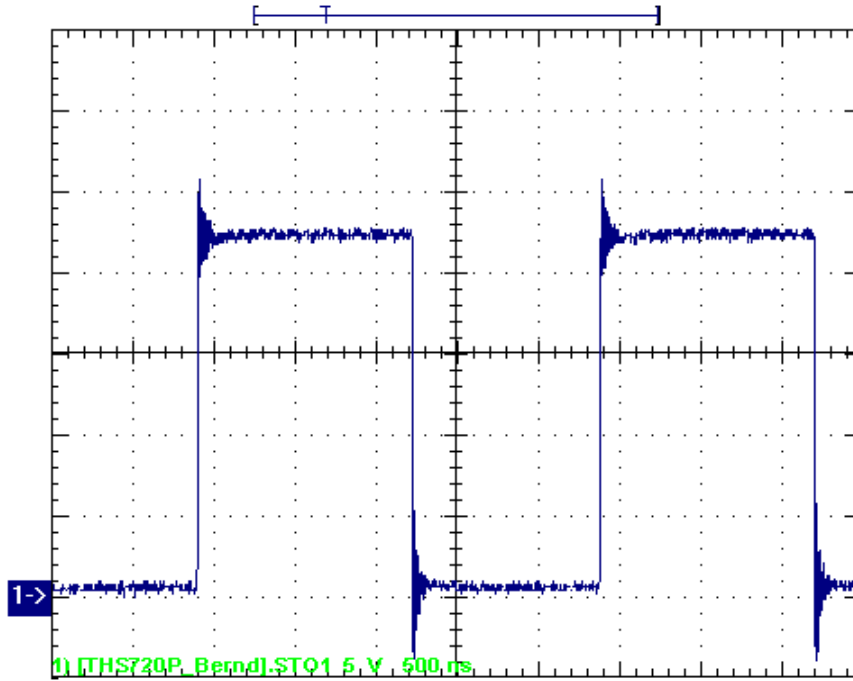


Figure 6

Ch3 =>
switchnode
5V/div
500ns/div
full
bandwidth

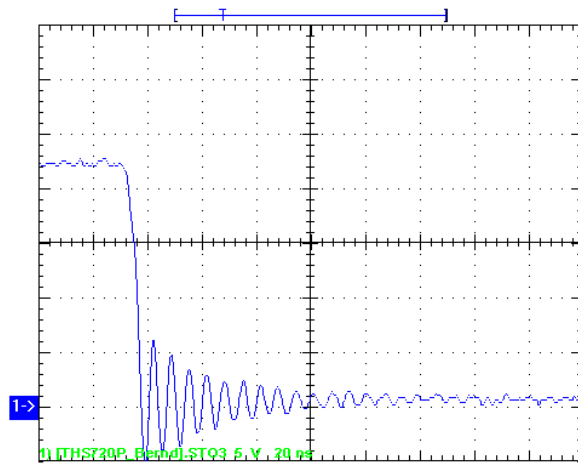
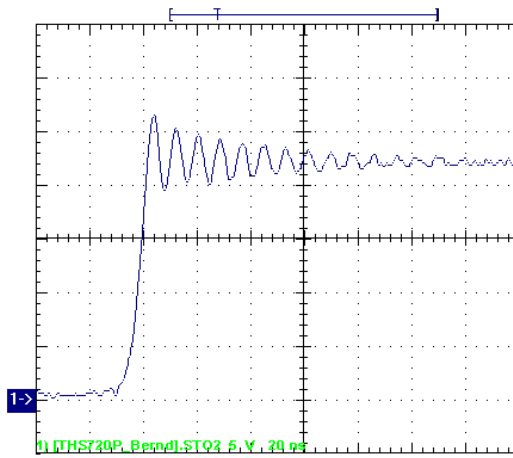


Figure 7

Ch1 =>
switchnode
5V/div
20ns/div
full
bandwidth

7 Ripple Voltages

The output ripple voltage is displayed in Figure 8. The input voltage was set to 12V.

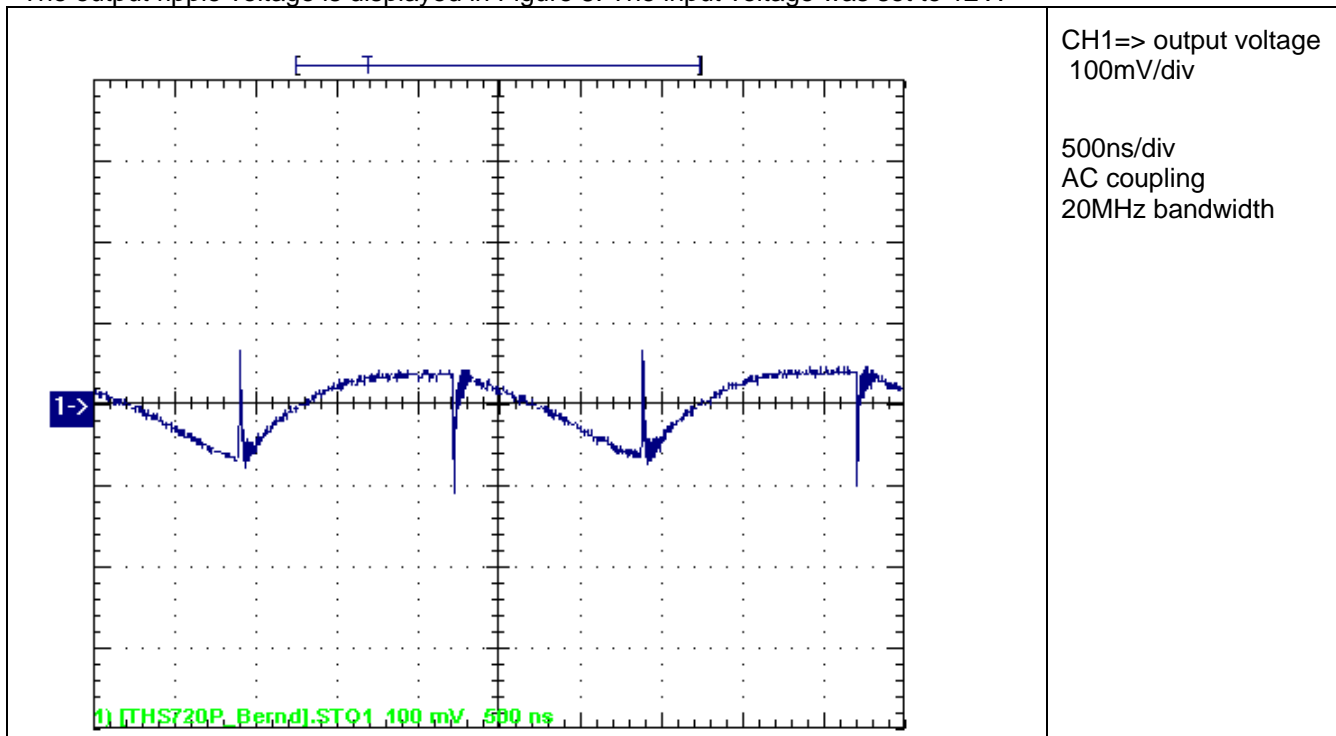


Figure 8

The input ripple voltage is displayed in Figure 9. The input voltage was set to 14V.

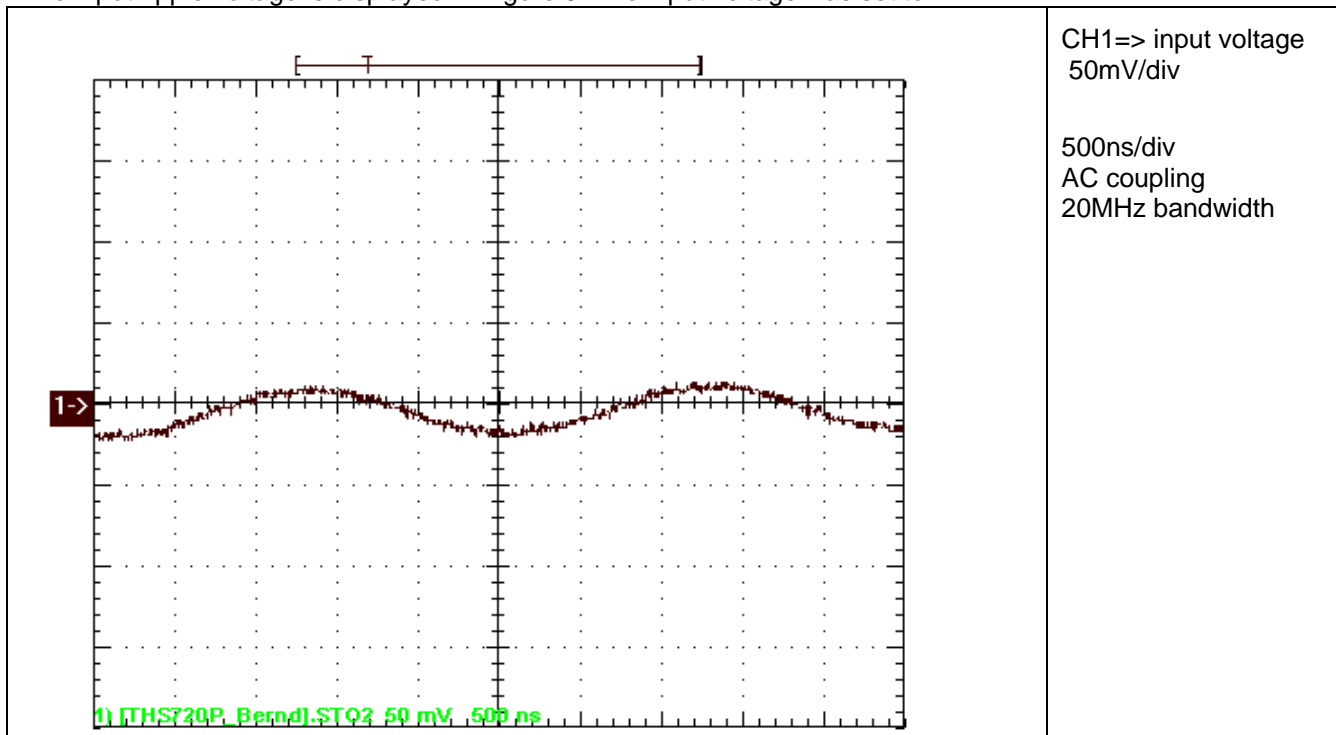


Figure 9

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