I was advised to adjust the capacitance of the capacitor connected to the Isns pin, but I remember doing this before. As a result, it was not effective in improving the performance.
After that, I moved the current detection resistor (equivalent to R42 in the submitted circuit diagram), which had been bothering me for some time, to a position closer to the Isns pin of the UCC256403 (the filter capacitor C82 is mounted nearby).
After that, I performed the sudden load change test again, and the problematic single burst mode operation did not occur, and it was possible to operate in continuous mode.
However, although I was able to avoid the burst mode, the crucial overshoot when the load suddenly changes from 100% to 0% has not been resolved.
I observed the waveforms of each pin of the IC in this state, and the observed waveforms raised the following questions about the control logic.

1-1 Questions about the control sequence

In the waveforms of 1), 2-1), and 2-2), the overshoot is limited to about 100mV, but in the waveforms of 2-3) to 2-5), it rises to about 200mV.

2) In the process in which the overshoot rises to nearly 200mV, a transient voltage rise occurs in two stages.

3) When observing the second rise closely, the control frequency tends to decrease and the T1 primary current begins to increase, even though the FB pin voltage is pulled slightly toward GND by the feedback signal of the photocoupler from the secondary side.

4) This means that even though surplus power is being supplied to the output, the energy transmission from the primary side is not throttled and increases, so the negative feedback in the feedback control does not work and temporary positive feedback occurs, which is considered to be an uncontrolled state.

5) We surmise that this is due to the hybrid charge control on the primary side not working properly.
6) My question is, from the current observed waveform, the VCR pin voltage after a sudden change from 100% to 0% drops below ±200mV in the waveforms in sections 2.3 and 2.4. When this happens, won't the primary side control determine that there is a shortage of transmitted energy and switch to control in the direction of lowering the control frequency? If so, it makes sense why an overshoot occurs while ignoring the excess energy signal from the secondary side.
1-2. Based on the above question, here are my next questions.
Question 1): What is the ± lower limit of the controllable input voltage of the VCR pin?
Question 2): If an overshoot exceeding 100mV cannot be avoided due to a drop in the VCR voltage, are there any measures to keep the overshoot below 100mV?
Thank you for your advice once again.
Please contact us if you have any questions.

2. Measured waveforms

<Waveform measurement conditions>

1) Input voltage: DC380V (PFC output)

2) Output settings

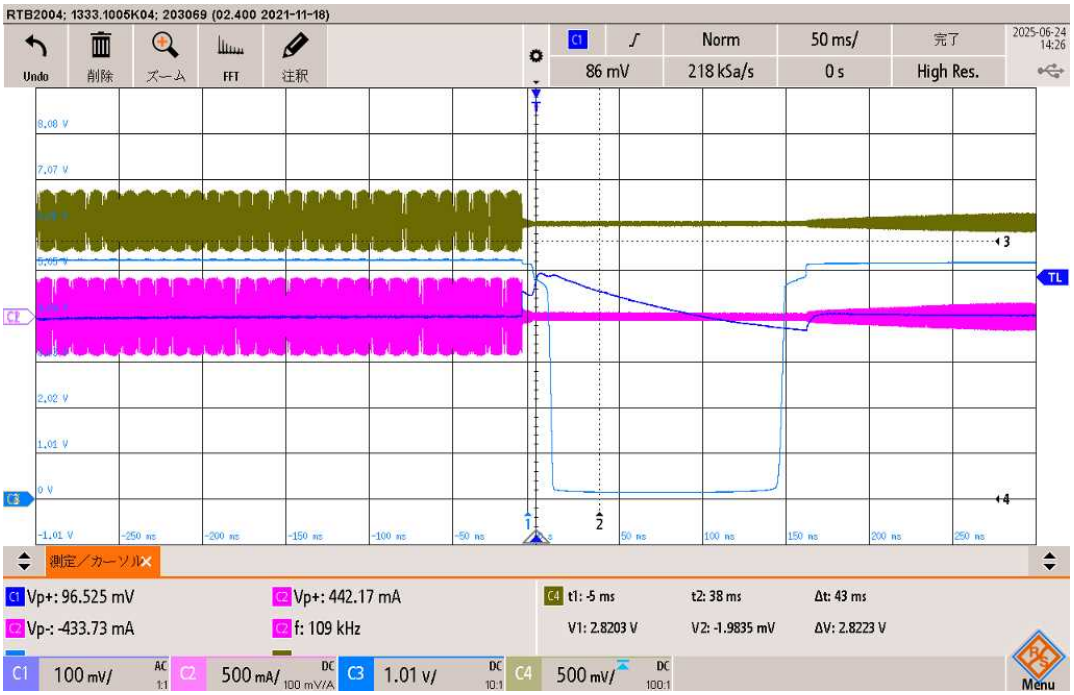
①_5V output voltage setting: Vo=4.70V_Io=(100%⇒0%) sudden change, ②_24V: no load

The output is not the normal voltage setting, but is evaluated at 4.7V

due to the specification requirement of setting the rated voltage -5%.2.測定波形

2-1. Waveforms of each part when the load of 5V output suddenly changes from 100% to 0%

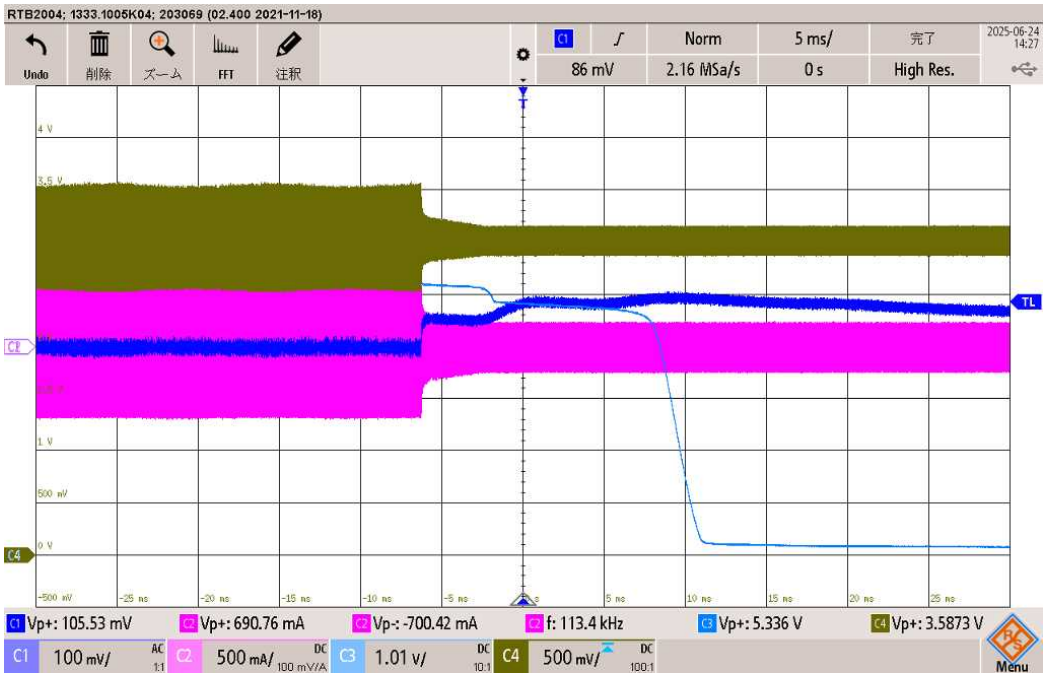
(H: 50msec/div)



C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1.01V/div], C4: VCR pin voltage [0.5V/div] (DC mode)

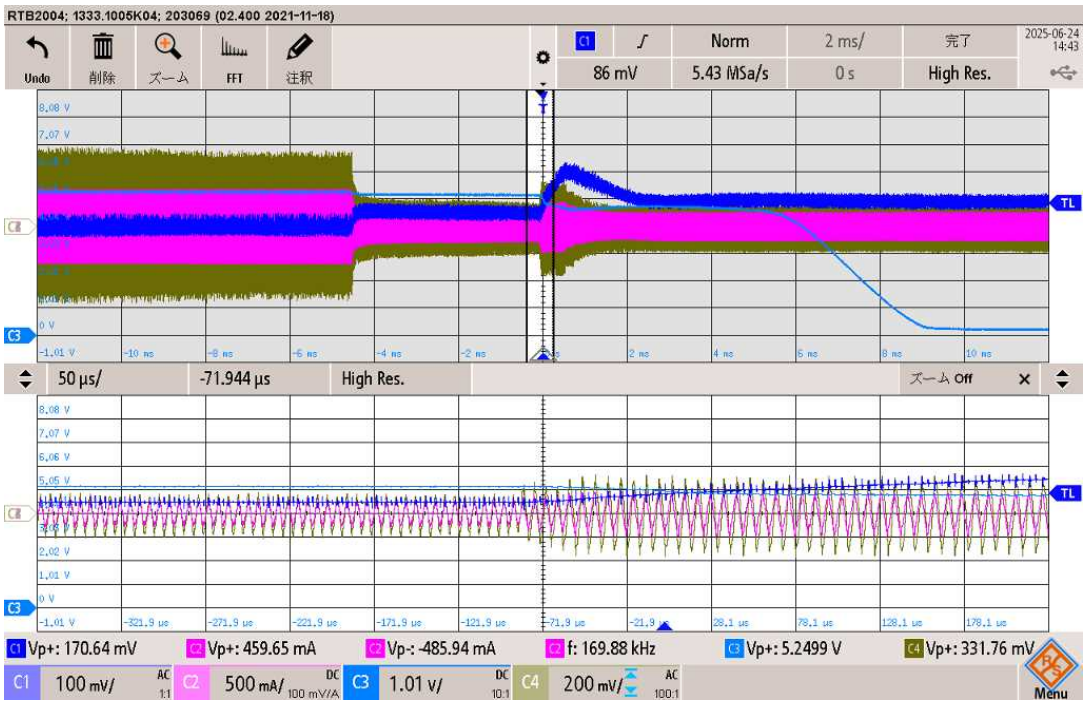
2-2. Waveforms of each part when the load of 5V output suddenly changes from 100% to 0%

(H: 5msec/div)



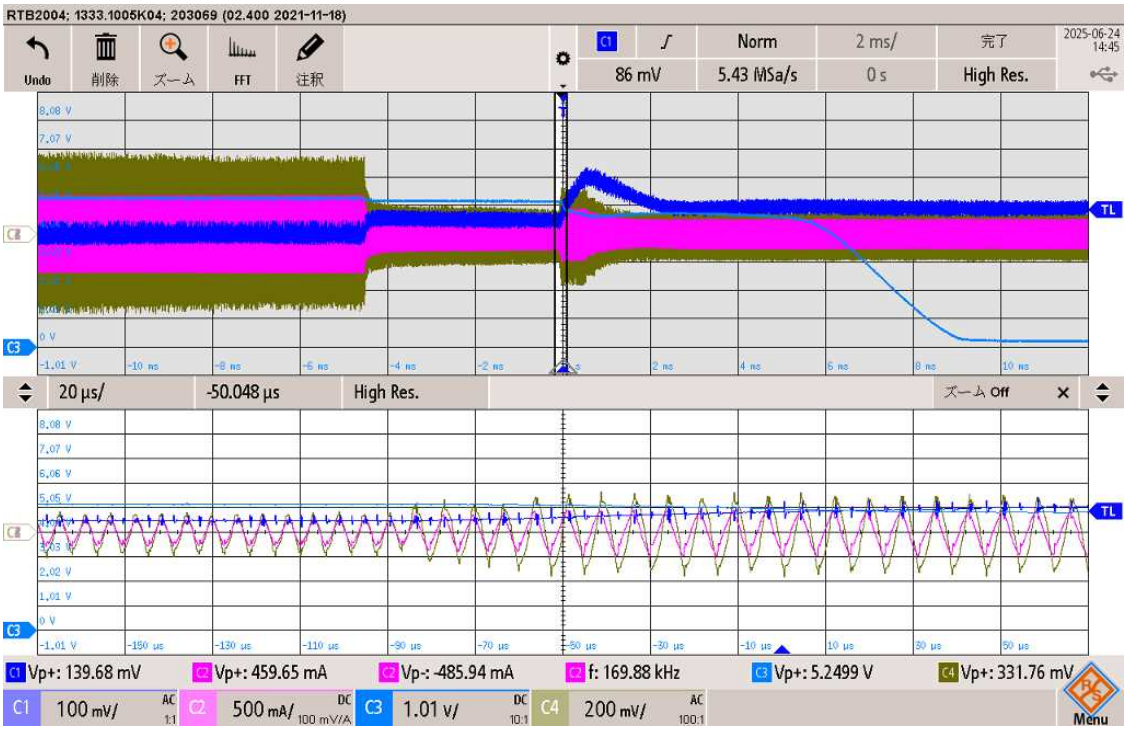
C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1.01V/div], C4: VCR pin voltage [0.5V/div] (DC mode)

2-3. Waveforms of each part when the load of 5V output suddenly changes from 100% to 0% (H: 2msec/div, 50 μ sec/div)



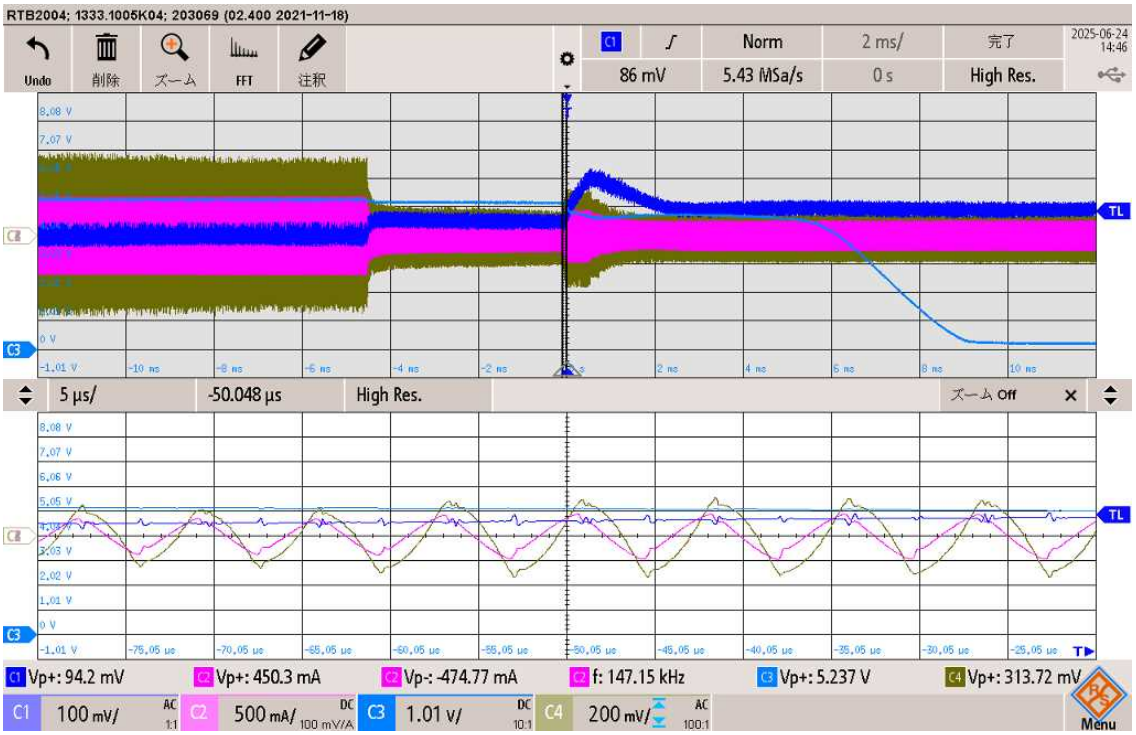
C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1.01V/div], C4: VCR pin voltage [200mV/div] (AC mode)

2-4. Enlarged waveform of item 2-3 (H: 2msec/div, 20 μ sec/div)



C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1.01V/div], C4: VCR pin voltage [200mV/div] (AC mode)

2-5. Enlarged waveform of item 2-3 (H: 2msec/div, 5 μ sec/div)



C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1.01V/div], C4: VCR pin voltage [200mV/div] (AC mode)

---------- The End ----------