

- For starting with DC 110 V input, change the voltage dividing resistance ratio of PFC's ZCD / CS terminal to R 5: 3.24 MΩ → 1.237 MΩ to lower IC start detection voltage and verify the gradual increase operation by AC input.
- At that time, the COMP terminal voltage changed from L to H to L to H upon startup, the SW operation burst operation and the output voltage rose stepwise.
- At this time, when the burst operation stops at the moment when PFC\_OUT exceeds the LLC starting voltage (about 325 V), the LLC load discharge of the bulk capacitor is started and once the LLC output stops, the hunting occurs that 5 V restarts.
- Therefore, starting with burst operation at PFC startup, there is a problem of starting hunting if the relation between the bulk voltage value at burst stop immediately after startup and the LLC startup voltage matches poor conditions.

It is unknown whether this is a malfunction of PFC at the present time or malfunction of LLC.

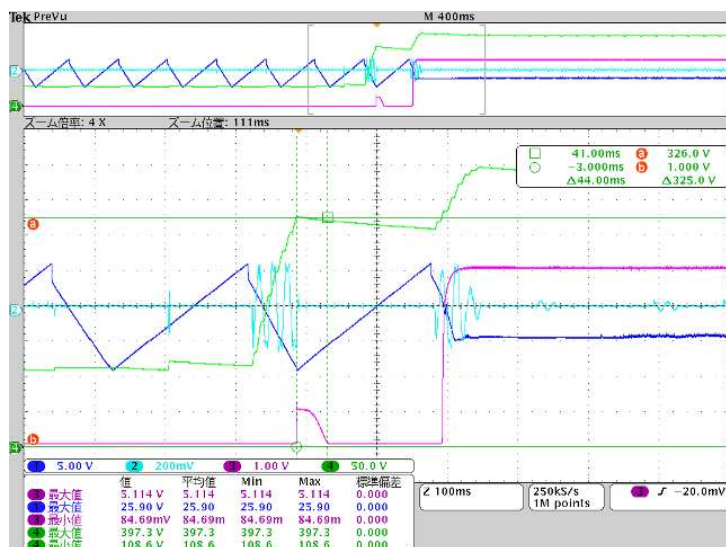
< UCC 28056 \_ ZCD / CS terminal. The gradual rise startup waveform at startup detection voltage change is shown below.>

- The gradual raise start condition is set by activating and setting the COMP terminal to AC80V with the remote control signal.

(Below both waveforms at LLC light load : 5V0.3A, 24V0A)

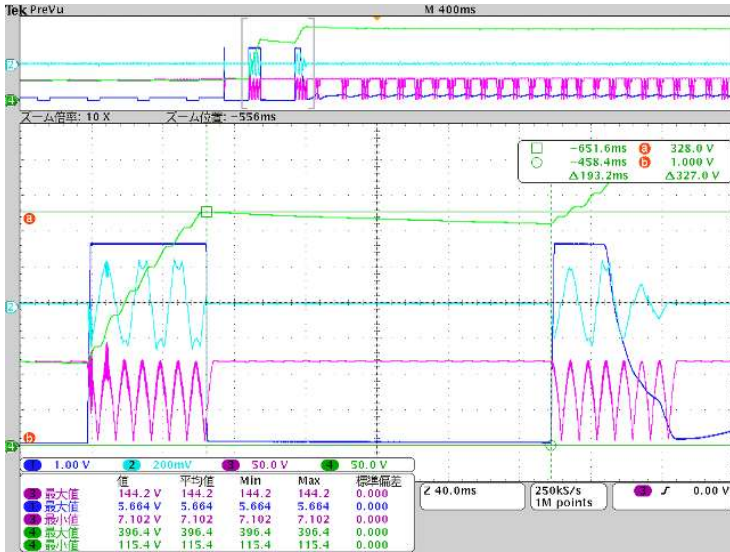
1. LCC VCC voltage and PFC startup voltage / current waveform

**Hunting occurred at 5 V output.** Vcc is in a normal state.



- ① Blue :Vcc[5V/div]
- ② Light blue :PFC\_In[2A/div]
- ③ Pink :5V\_out[1V/div]
- ④ Green :PFC\_out[50V/div]  
H:[100mS(400mS)/div]

2. Full wave rectified voltage of PFC input and COMP terminal level and burst start waveform  
 The PFC is in burst operation at startup.

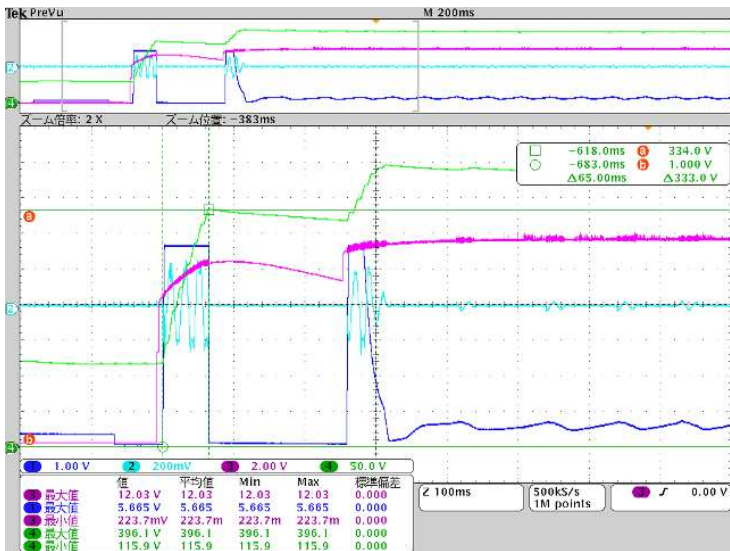


- ① Blue: COMPterminal[1V/div]
  - ② Light blue: PFC\_In[2A/div]
  - ③ Pink : Fullwave rect out[50V/div]
  - ④ Green: PFC\_out[50V/div]
- H:[40mS(400mS)/div]

3. Input voltage monitoring start signal (open collector) level and COMP terminal voltage and PFC current / voltage waveform

The remote signal goes from "L" to "H" level at startup, maintaining this level but **hunting at the H / L level at the COMP terminal level has occurred.**

AC input voltage is measured at remote control startup with AC 80V.



- ① Blue: COMP terminal[1V/div]
  - ② Light blue: PFC\_In[2A/div]
  - ③ Pink: Remote\_out[2V/div]
  - ④ Green: PFC\_out[50V/div]
- H:[100mS(200mS)/div]