● Voltage waveforms measurement under abnormal temperature indications

System Under Test

Unit A1~A128

Unit B1~B128

Montoring Unit

Probe point 'A'

Probe point 'C'

Probe point 'B'

GUI Display

Temp : +25℃ (Normal)

-40℃ (Error)
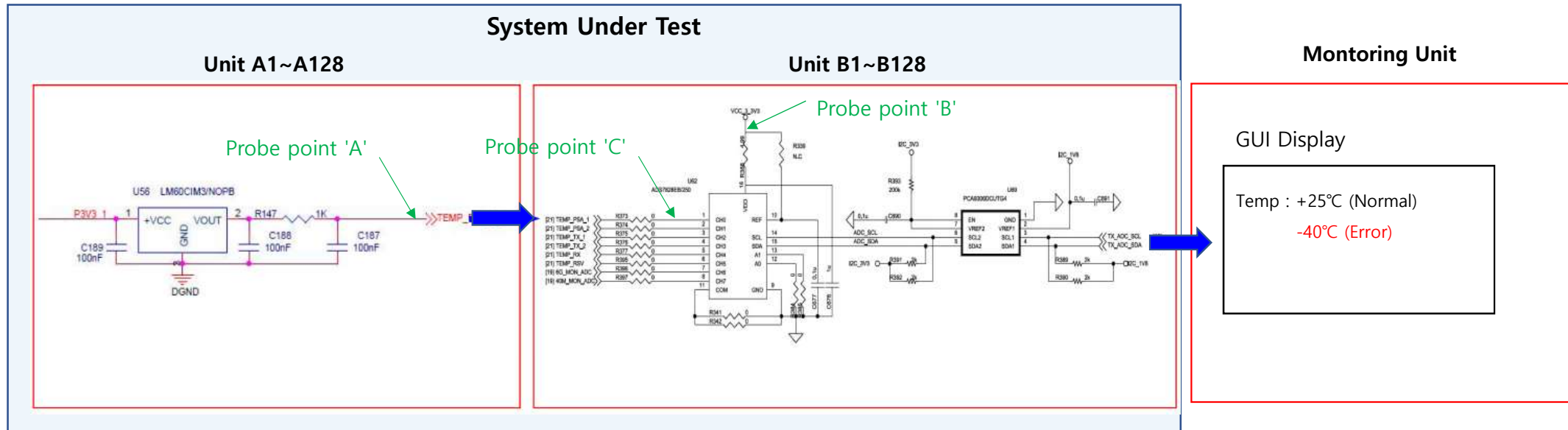
▶ Initial LM60CIM output and ADS7828 Vdd power-up waveforms during abnormal temperature indication

- The LM60CIM output is applied approximately 178 ms earlier than the ADS7828 Vdd.

- An abnormal temperature is displayed on the GUI approximately 240 ms after the ADS7828 Vdd is applied.
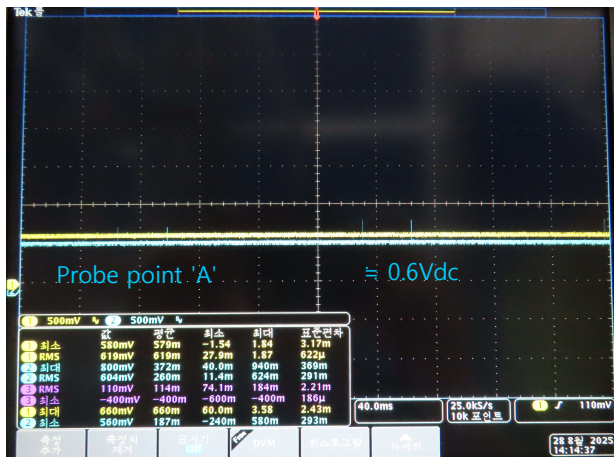
Question 1 >
   Could applying voltage to the ADS7828 analog pin before Vdd be the cause of the previously mentioned abnormal temperature indication?
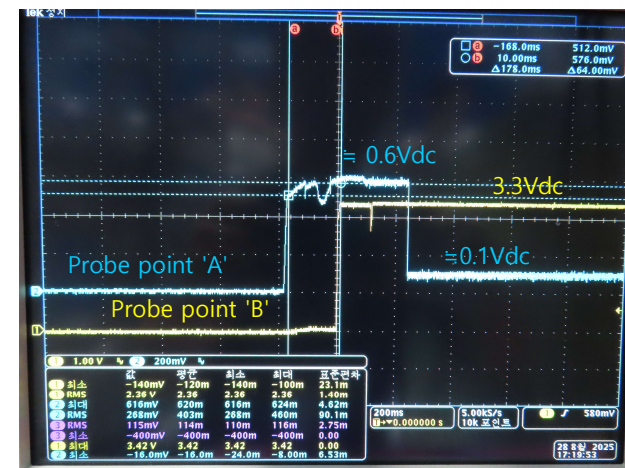
▶ In the abnormal temperature indication state, **disconnect Points A and C** and measure the LM60CIM output and ADS7828 analog input waveforms respectively.

- The LM60CIM output was measured at 0.6 V, corresponding to the normal sensed temperature of 25 °C.

- Voltage waveform of the ADS7828 analog input pin (Measured waveforms when the LM60CIM output is physically disconnected from the ADS7828 analog input pin during abnormal temperature indication)

Probe point 'A'   ≒ 0.6Vdc

≒ 0.9Vdc

Probe point 'C'   ≒ 0.1Vdc
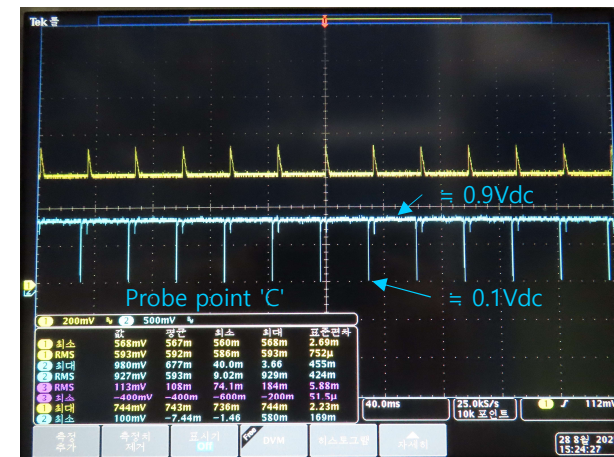
Question 2 >
    What is the cause of the ADS7828 analog input pin voltage periodically varying between 0.9 V and 0.1 V?