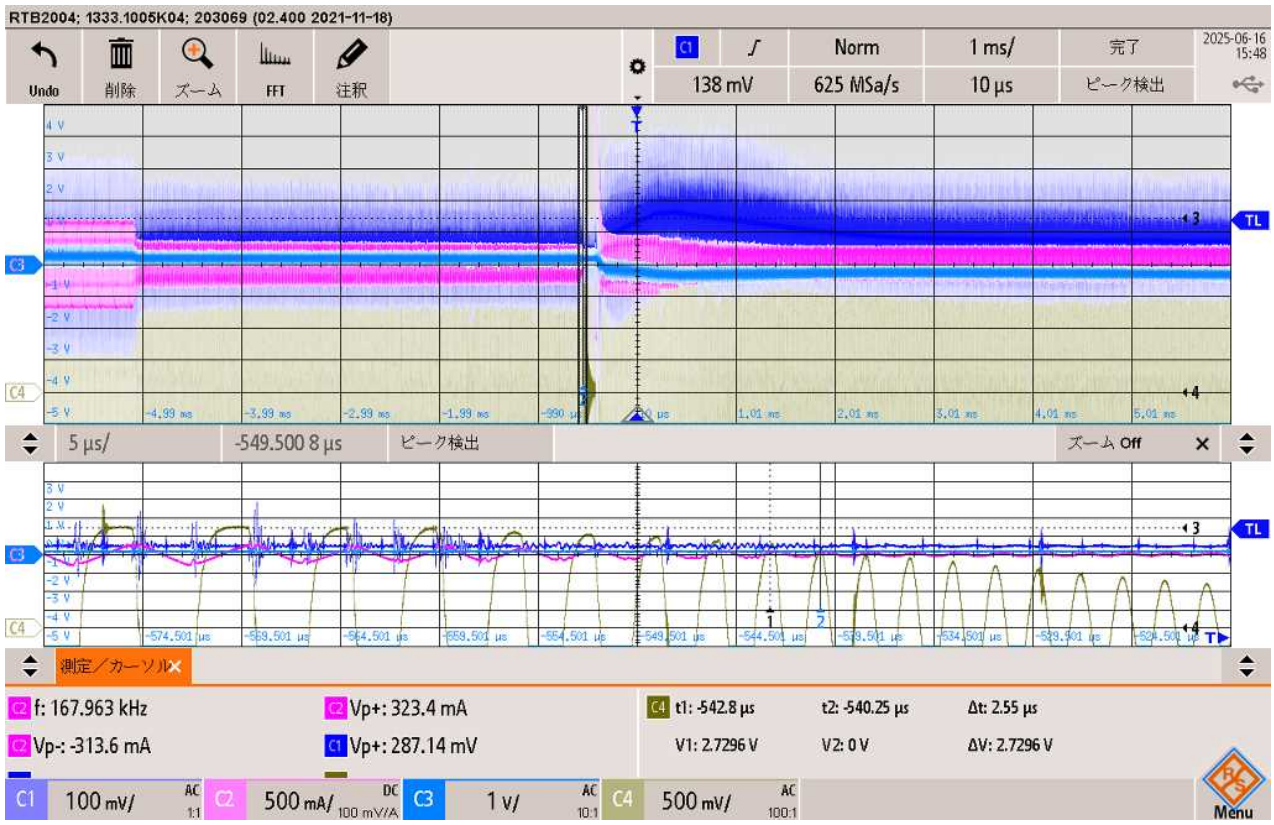
<Checking the BW pin resistance setting>

garding whether the burst mode setting is enabled, the conditions for using the device at the beginning of the investigation state that even at light loads and no loads, control is to be used in continuous mode and burst is not to be used.

Therefore, the resistance of the IC's BW terminal is set to the resistance of option 7, the burst disable setting.

When there is a sudden change from rated load to no load, the voltage at the BW terminal tends to decrease, so we changed the resistance to 3.6 kΩ, which is nearly 10% higher than the current set resistance of 3.3 kΩ, and tested it, but as shown in the following observed waveform, there was no improvement from burst to continuous mode.

In this waveform, the control frequency of the C4 BW terminal waveform has a period of about 2.55 μsec (390 kHz) when it starts to droop, so it appears to have reached the upper limit of the control frequency. During the 4 to 5 ms period when it goes from rated load to no load, the period of about 5 μsec (about 200 kHz) is maintained for the FB control, but as soon as it starts to droop, it rises to about 400 kHz. It is not clear why this is the case; is it because the voltage suppression due to the control transient response reached its limit and the frequency was forced to shift to maximum, or is it because the output stopped mode, in which the frequency increased to maximum, was entered when the HO and LO outputs in the attached data from the previous issue, section 1.2.2, were stopped?



C1: 5Vout [100mV/div], C2: T1 primary current [500mA/div], C3: FB pin voltage [1V/div], C4: BW pin voltage [500mV/div]

Also, in the following observation, the period during which the BW pin voltage drooped was approximately140 μ sec。