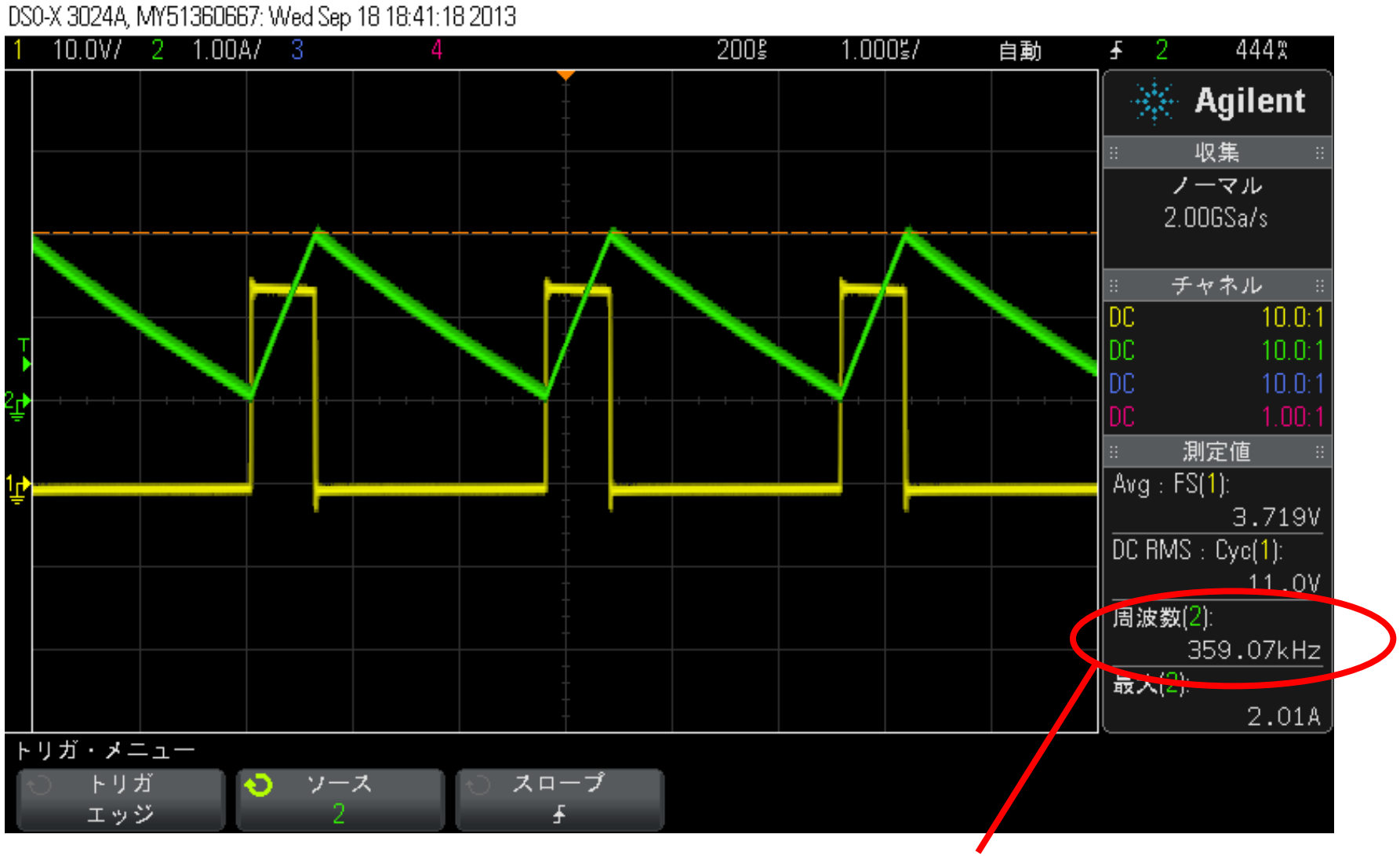
TPS54560　Vin＝24V　Vout＝5V　Iout=1A　fsw setting=720kHz(RT=140kΩ）

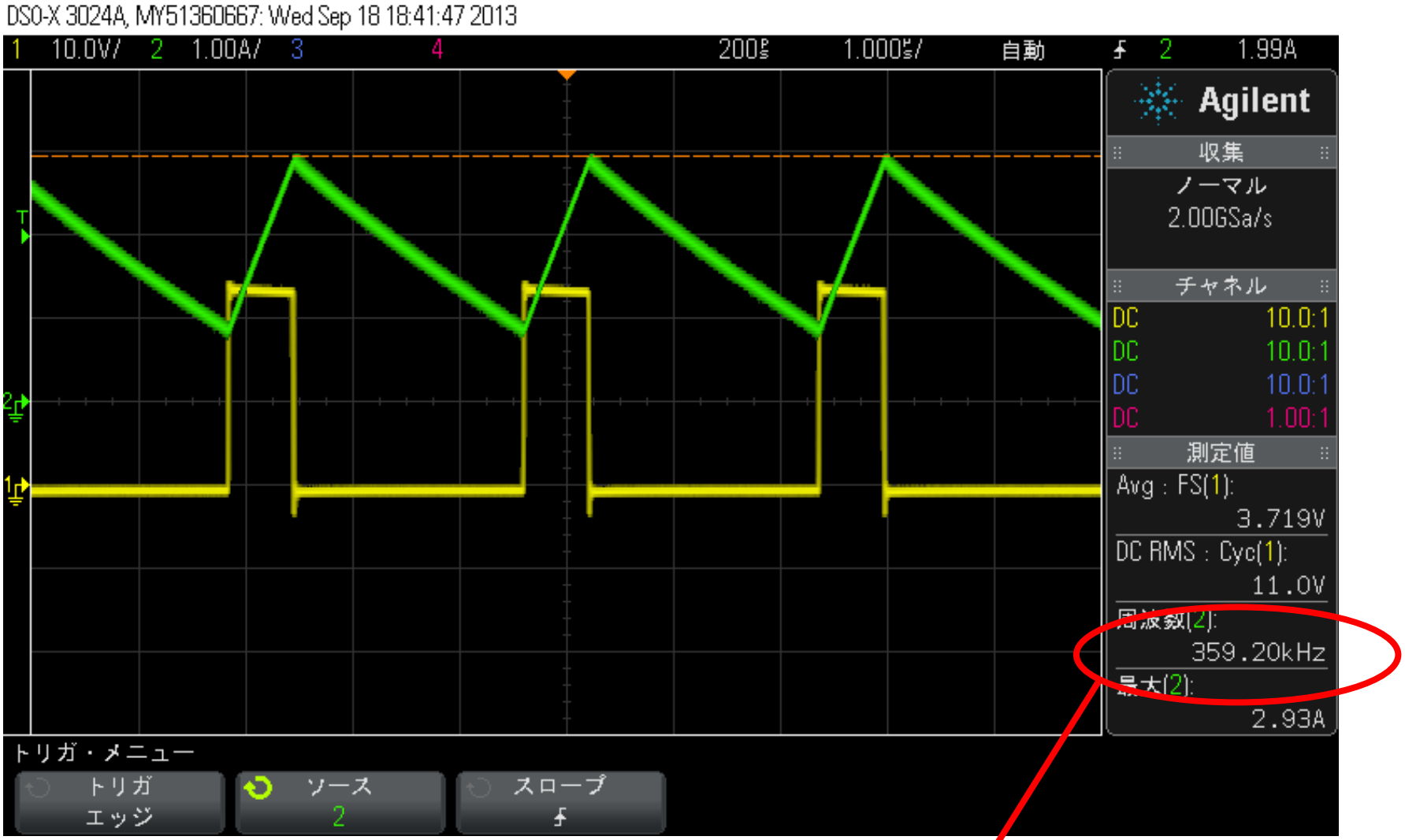
Ch1: Sw node Voltage(Yellow)　Ch2 : Inductor current(Green)



Switching frequency was about 360KHz even though the setting frequency was 720kHz(RT=140kΩ).

TPS54560 Vin＝24V Vout＝5V Iout=2A fsw setting=720kHz(RT=140kΩ）

Ch1: Sw node Voltage(Yellow) Ch2 : Inductor current(Green)

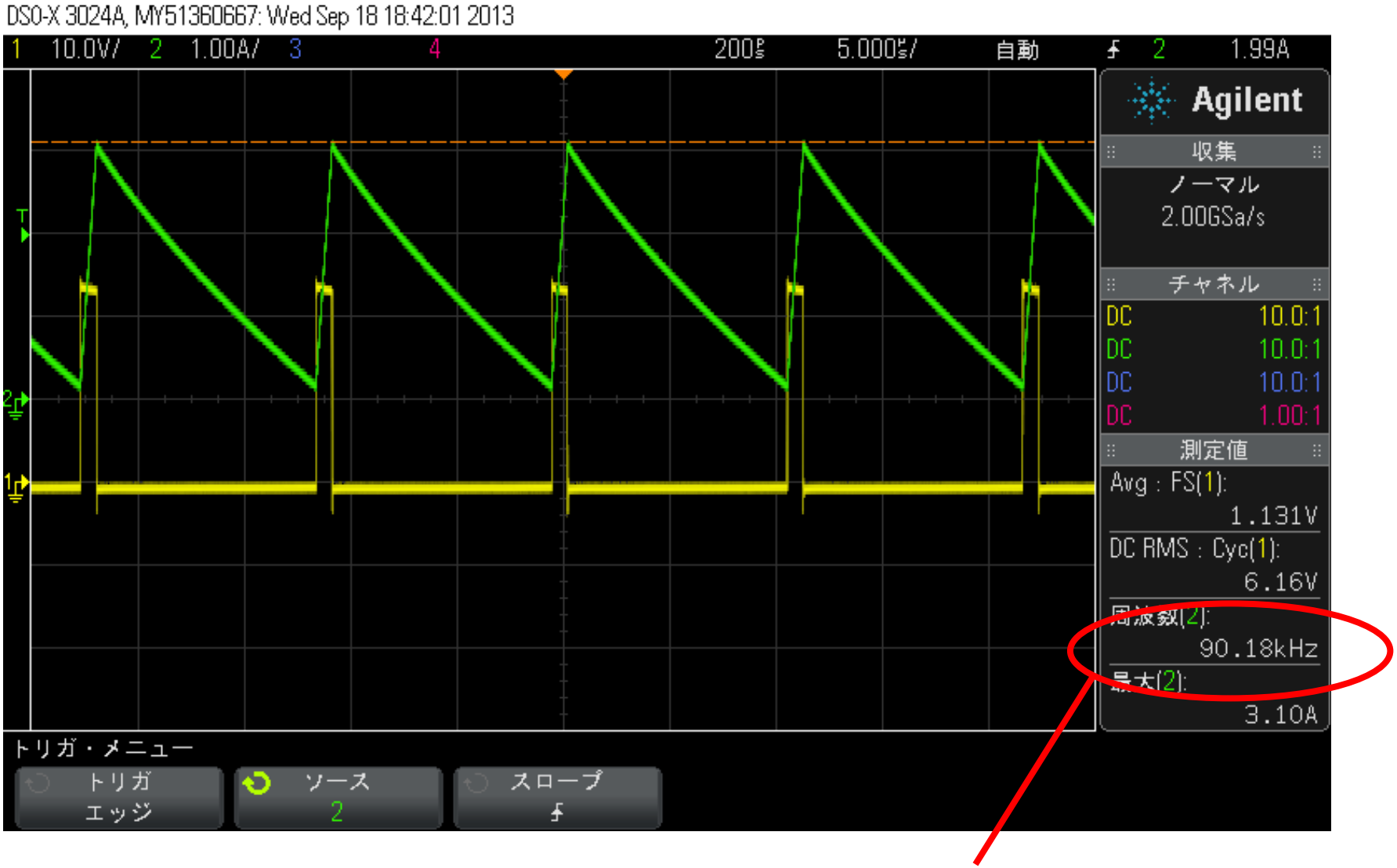


Switching frequency was still 360KHz, and peak inductor current was limited at 3A.

If we tried to have more load current , the fsw was folded back as see in next page.

TPS54560 Vin＝24V Vout＝5V Iout<2A fsw setting=720kHz(RT=140kΩ）

Ch1: Sw node Voltage(Yellow) Ch2 : Inductor current(Green)

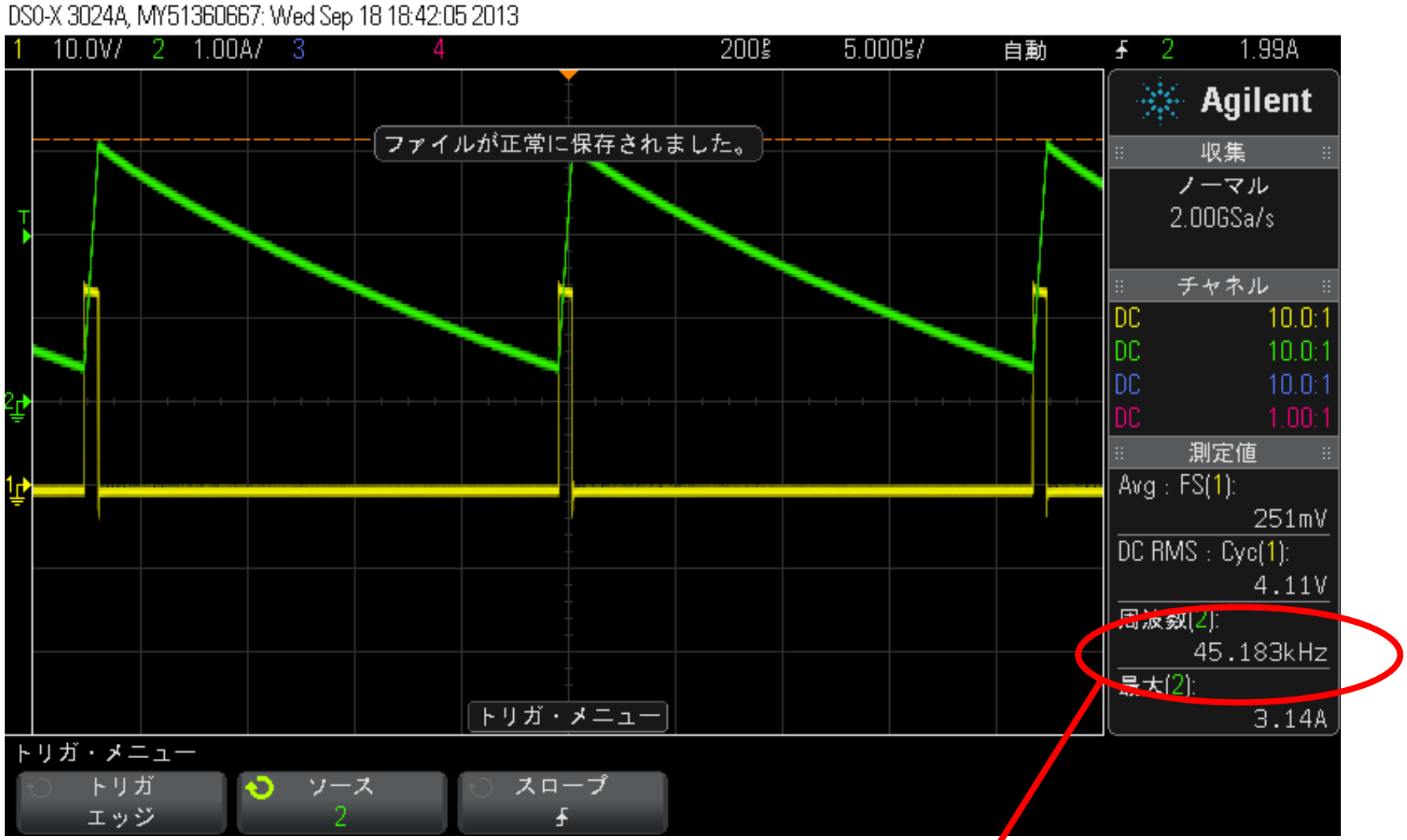


Switching frequency decreased to 90KHz due to the frequency fold back (360/4=90kHz) ,

and peak inductor current was still limited at 3A.

TPS54560 Vin＝24V Vout＝5V Iout<<2A fsw setting=720kHz(RT=140kΩ）

Ch1: Sw node Voltage(Yellow) Ch2 : Inductor current(Green)



Switching frequency decreased to 90KHz due to the frequency fold back (360/8=45kHz) ,

and peak inductor current was still limited at 3A.