

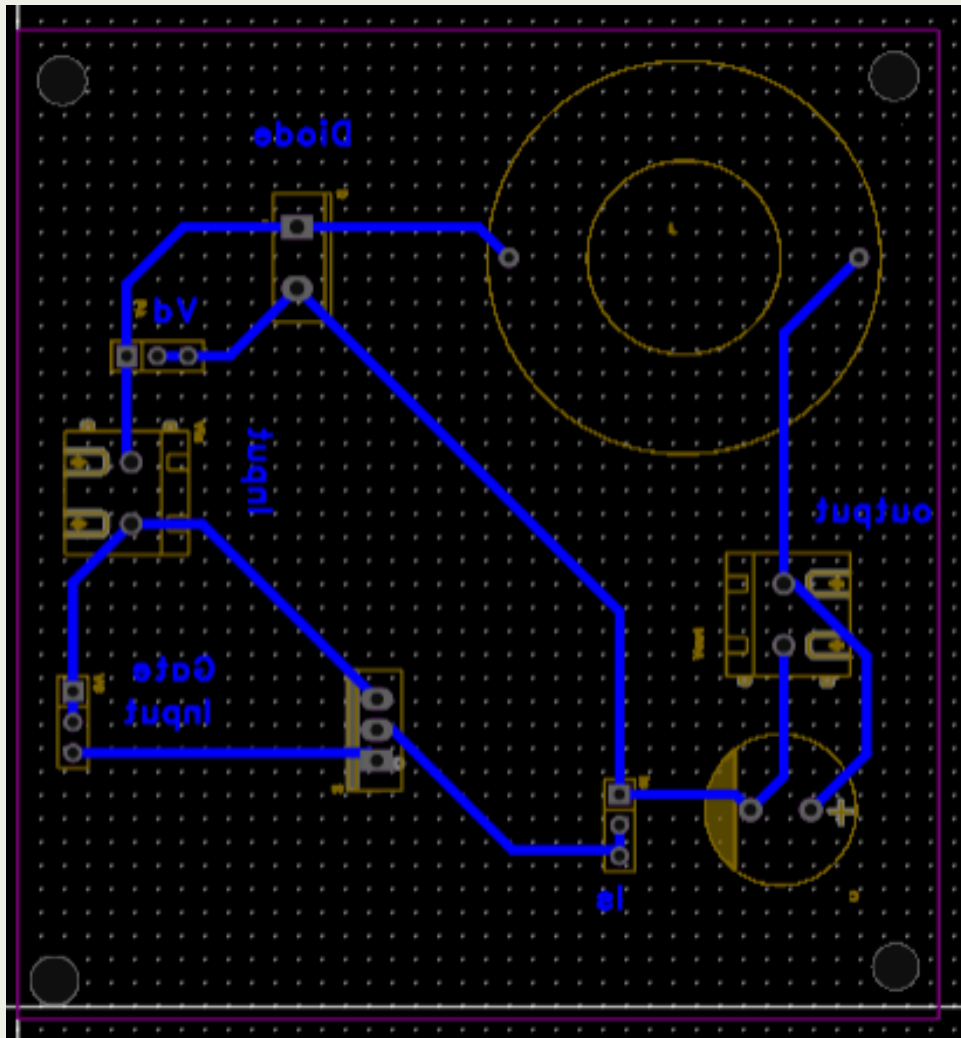
DC-DC BUCK CONVERTER REPORT

Problem Statement:
Buck Converter.

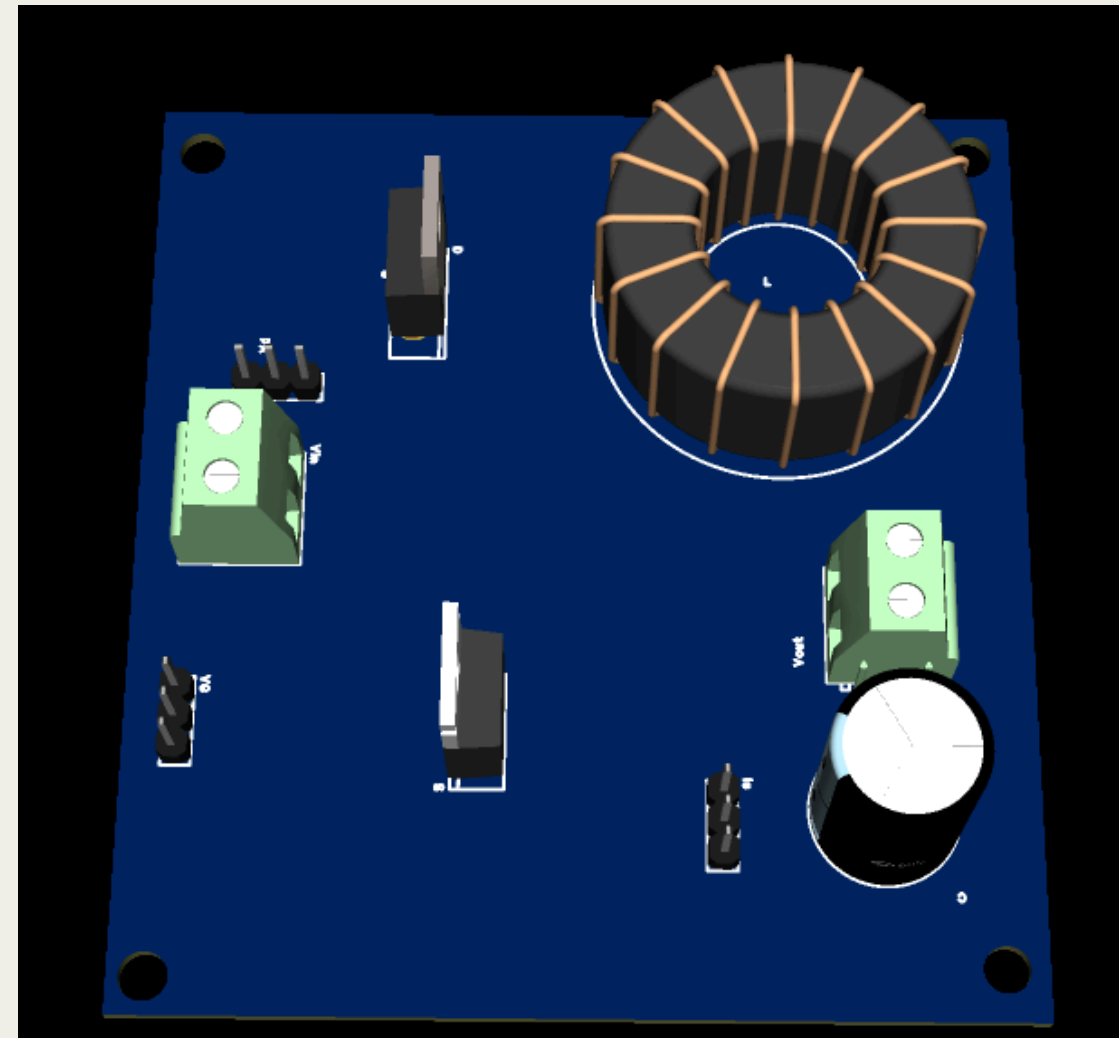
Specifications:

Input 12.5 V, Output 7.5V, Switching frequency 12.5 kHz, Output current 1 A.
Waveforms of Switch current and diode voltage in CCM.
Reduce the switching frequency to Demonstrate DCM.

Buck converter PCB design



Design on EasyEDA

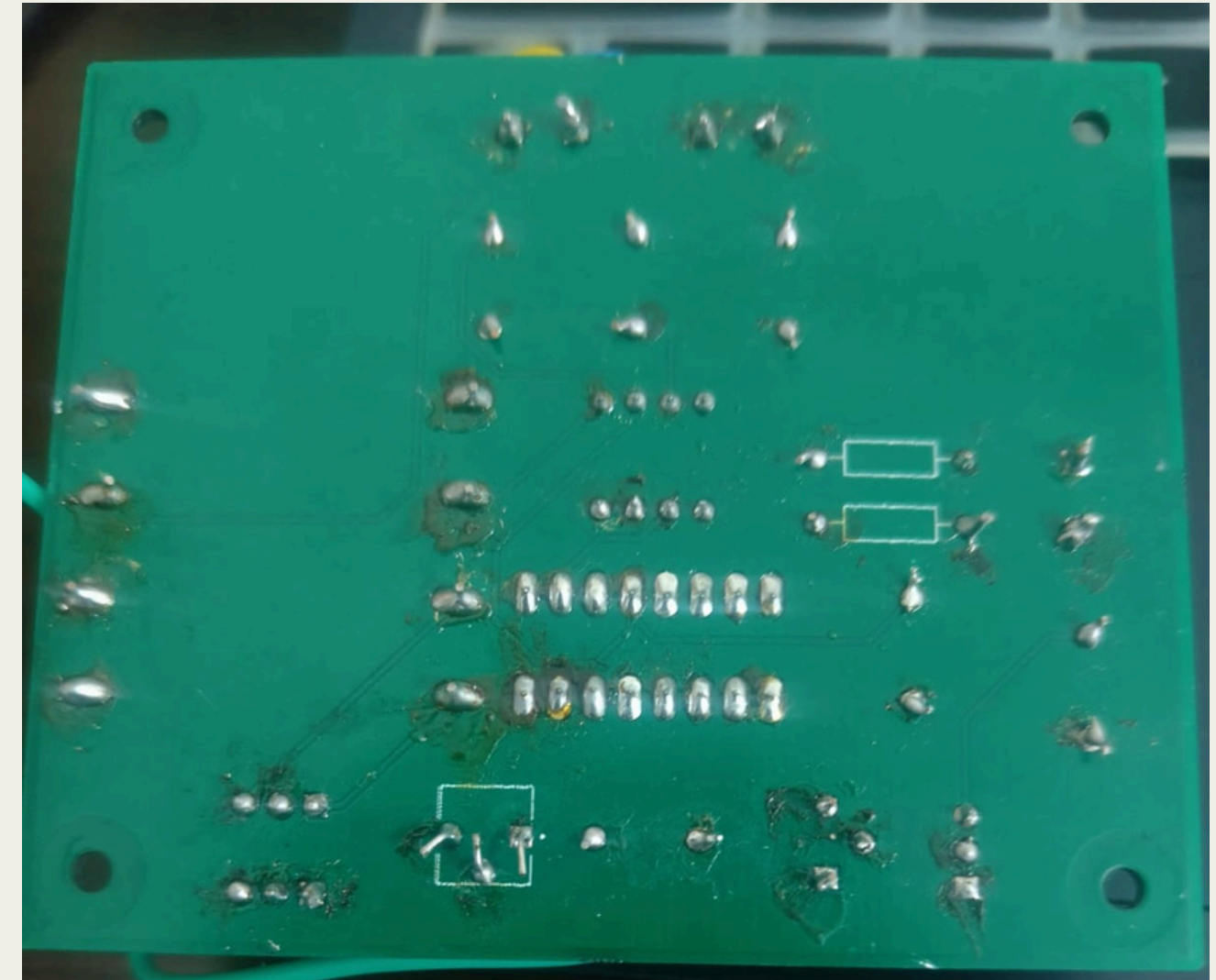
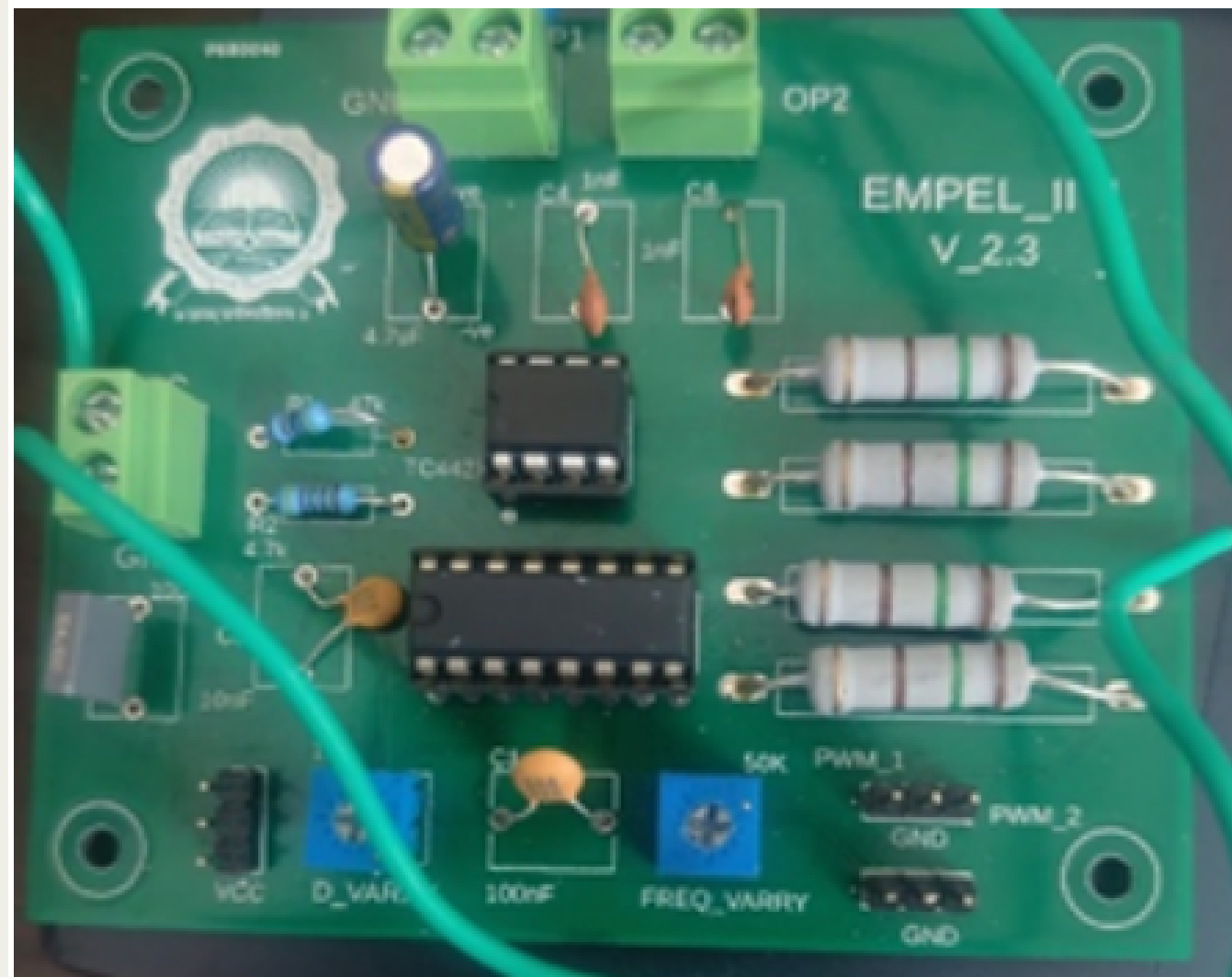


3D view



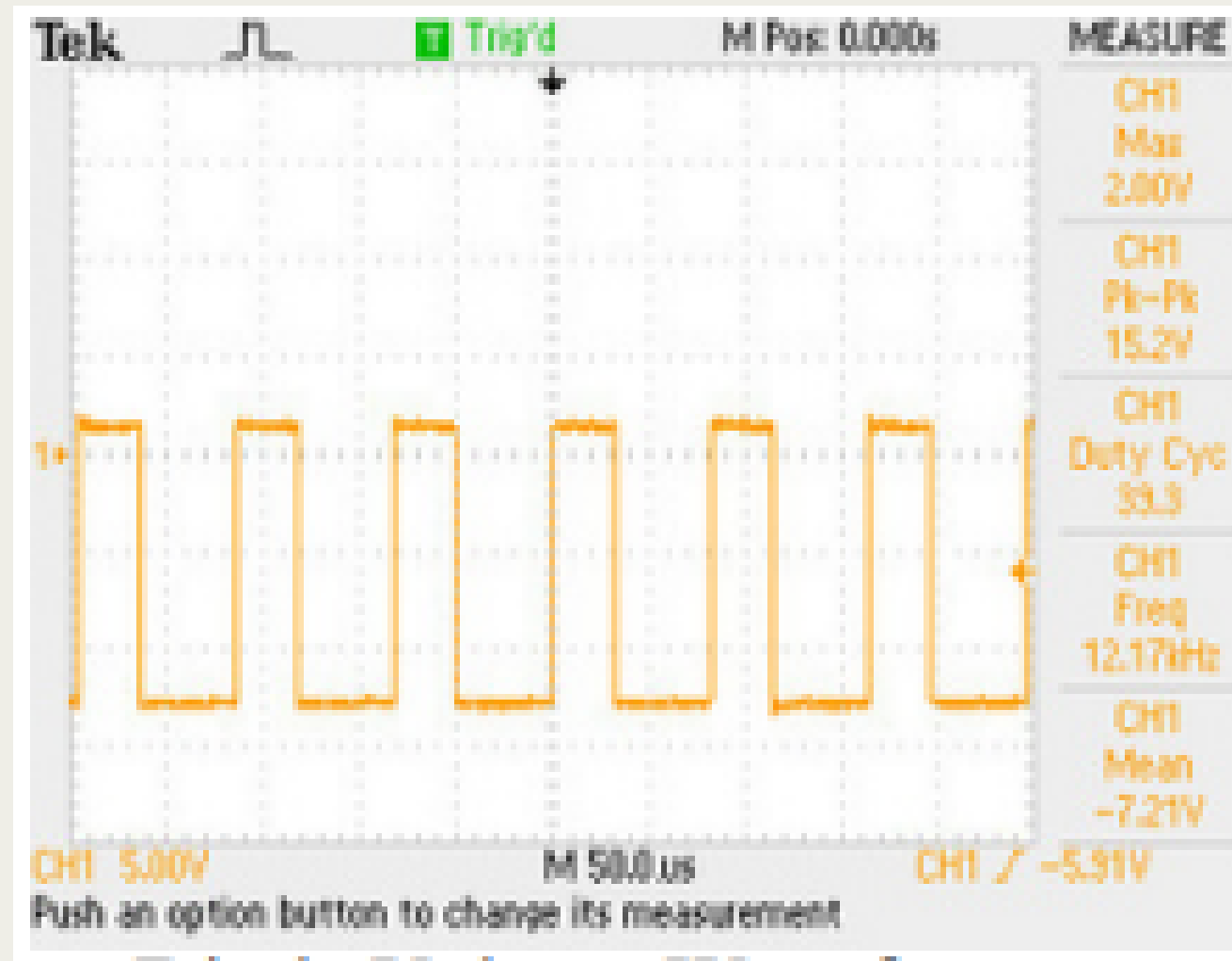
Soldered PCB

Gate Driver PCB

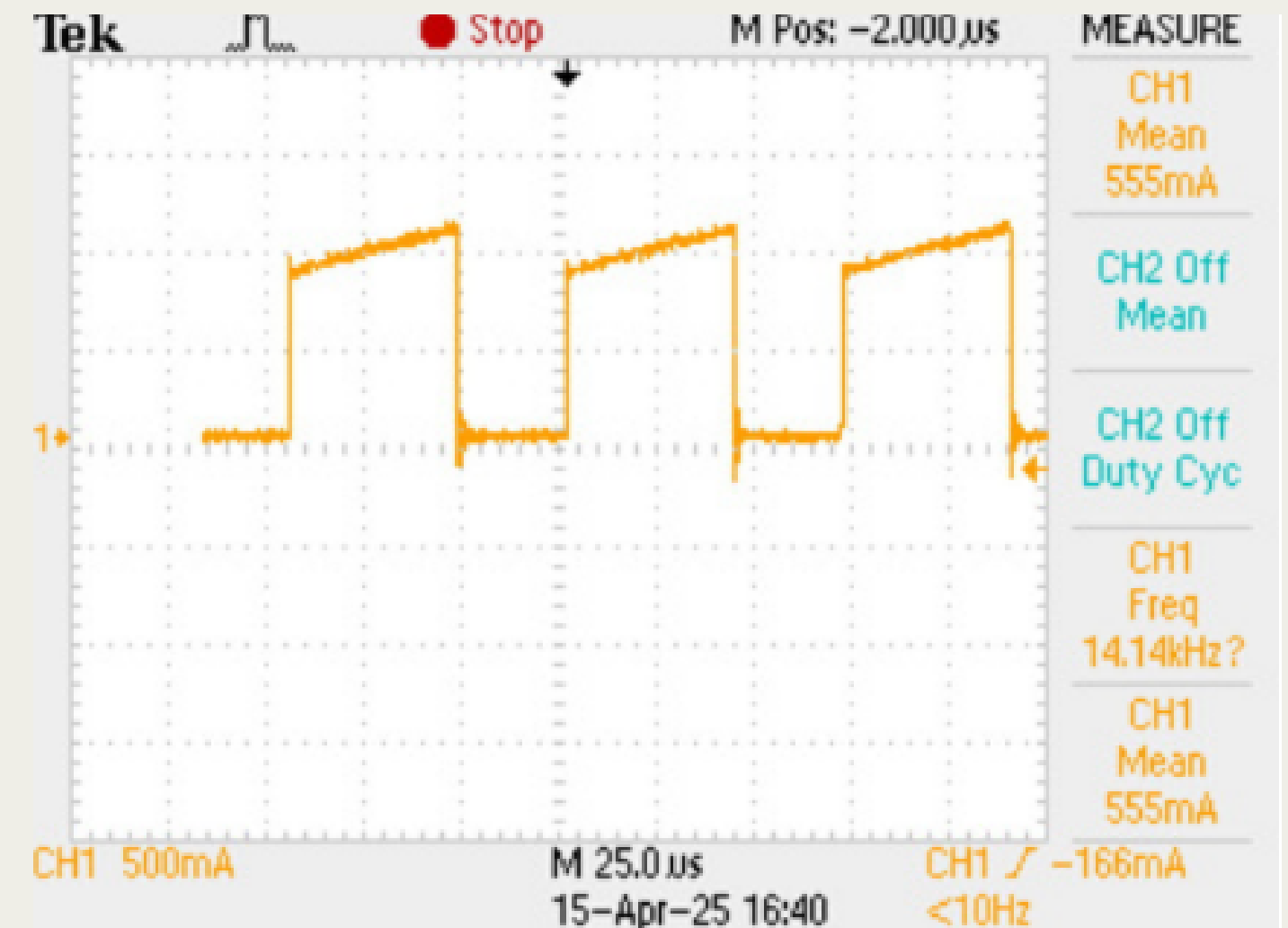


Soldered MOSFET gate driver

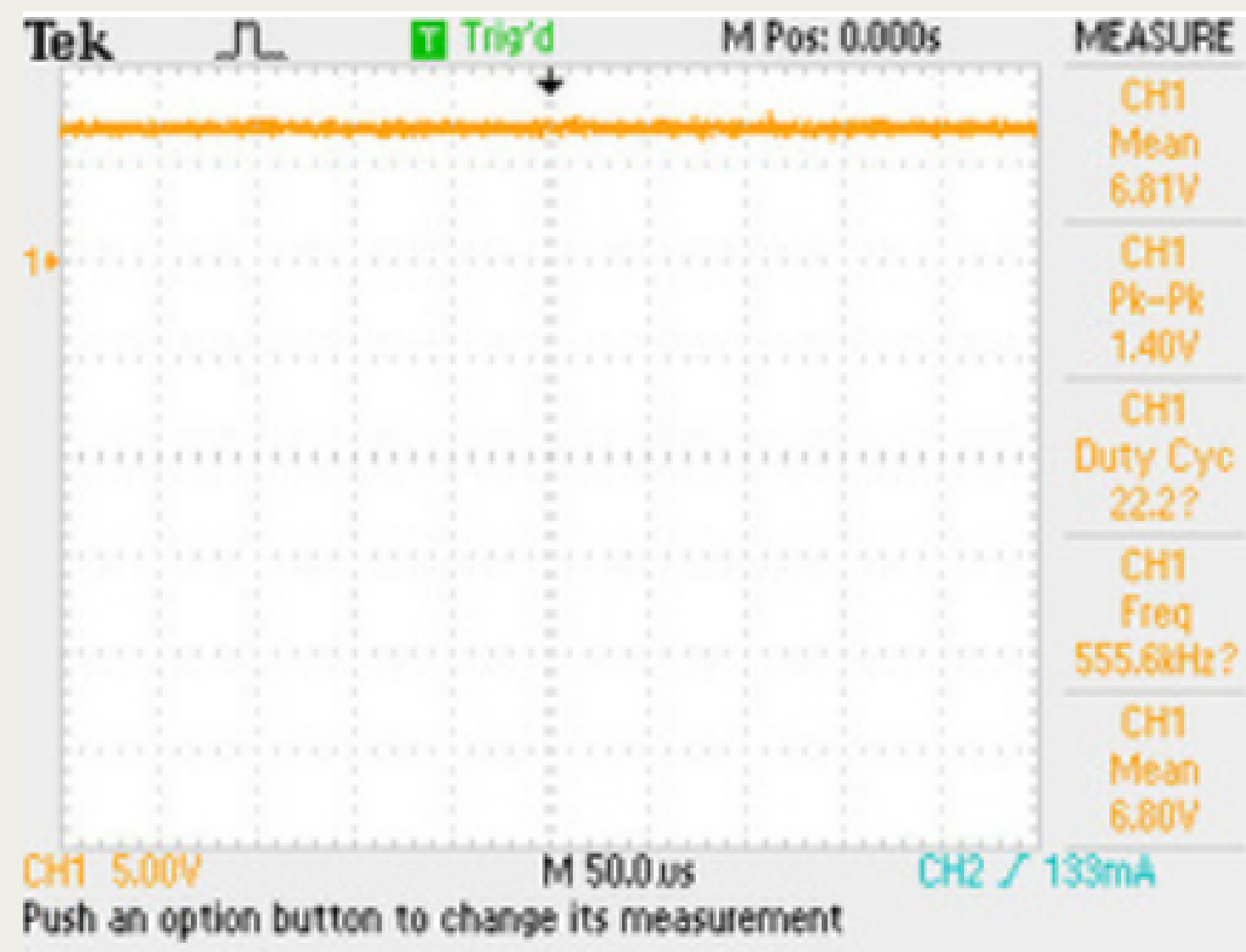
Waveforms



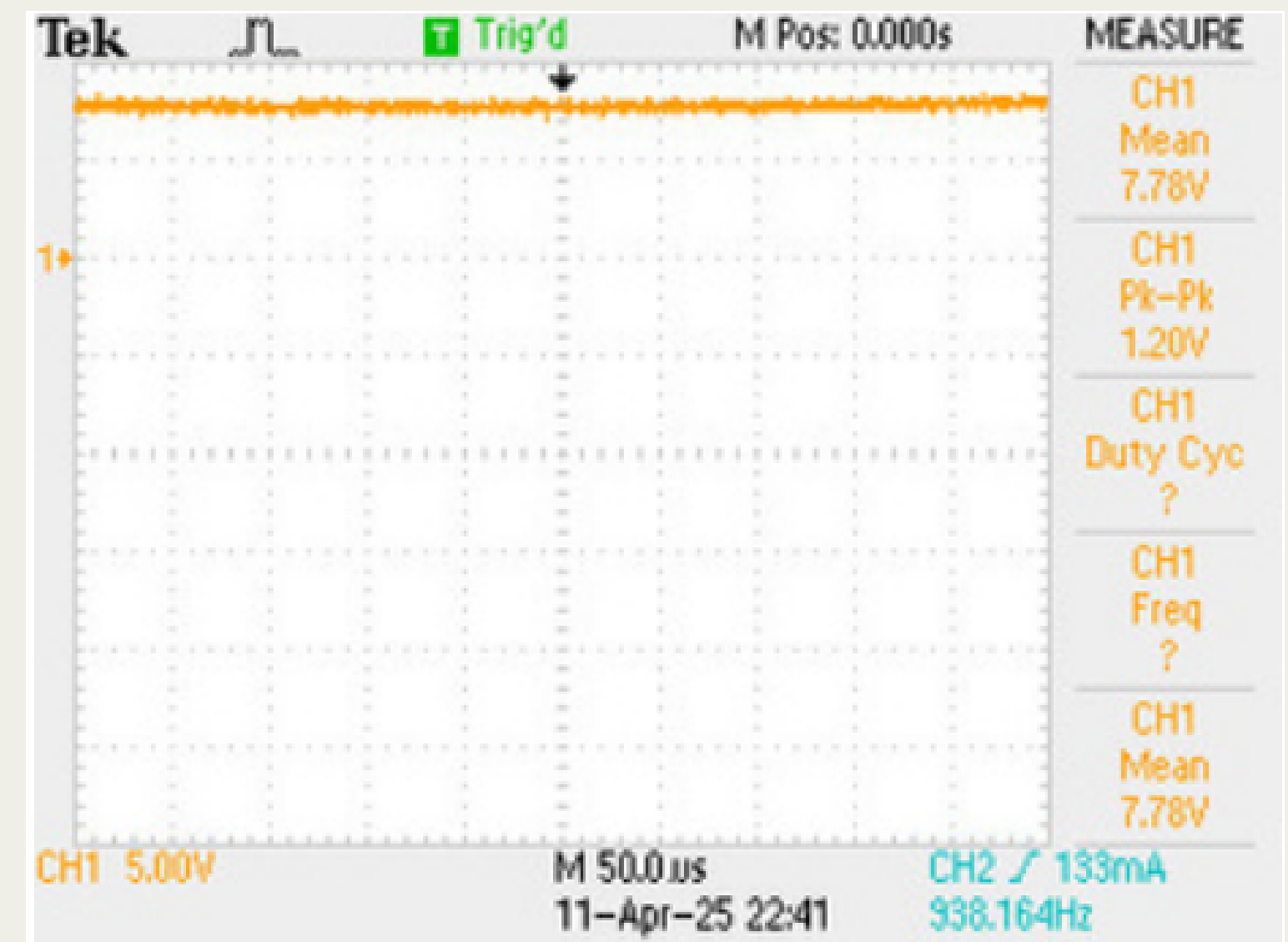
Diode Voltage Waveform



Switch Current waveform



Output Voltage in CCM



Output voltage in DCM

Thank you!

by Vansh Sabharwal