Dear TI Support

You mentioned that when IGBTs are not connected you see the output switching of the OUT channels.

- Can you provide waveforms for this so I can ensure the driver is functioning as expected.
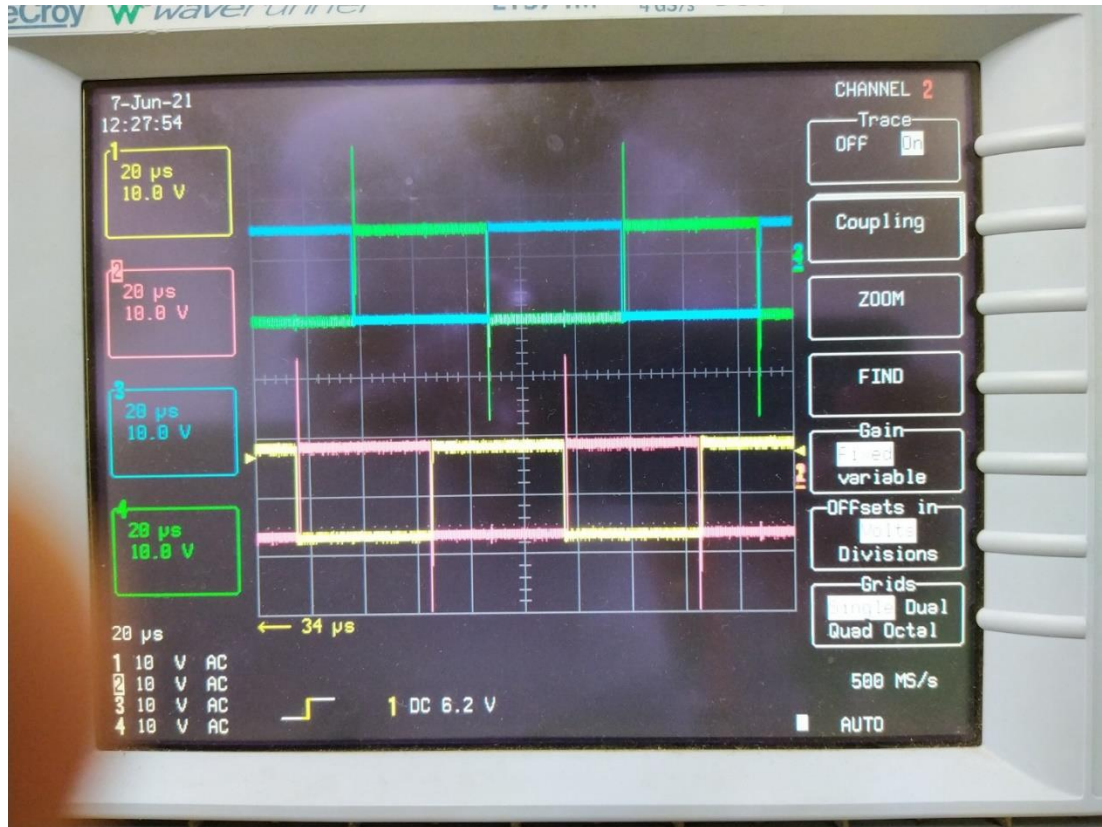

Figure 1- Output Waveforms of the 2 gate drivers

This is the waveforms from the output pins of the 2 gate drivers. I have removed the jumper of J-DT to have some deadtime between the two outputs.

Here I am using 2 gate drivers (lets name it **A** and **B**)
The output of **A** are AA and AB, and the output for **B** are BA and BB.

Waveforms **colors** are as follow-

AA- Pink
AB- Yellow
BA- Green
BB- Blue

- Can you provide the part number for the IGBTs and your test set up conditions, such as VCC,IN,VDD voltages and the frequencies?

I am using Semikron SKM75GB12T4 IGBT modules(http://www.farnell.com/datasheets/2085658.pdf). I am trying to test a half bridge configuration using 4 IGBTs as shown below.
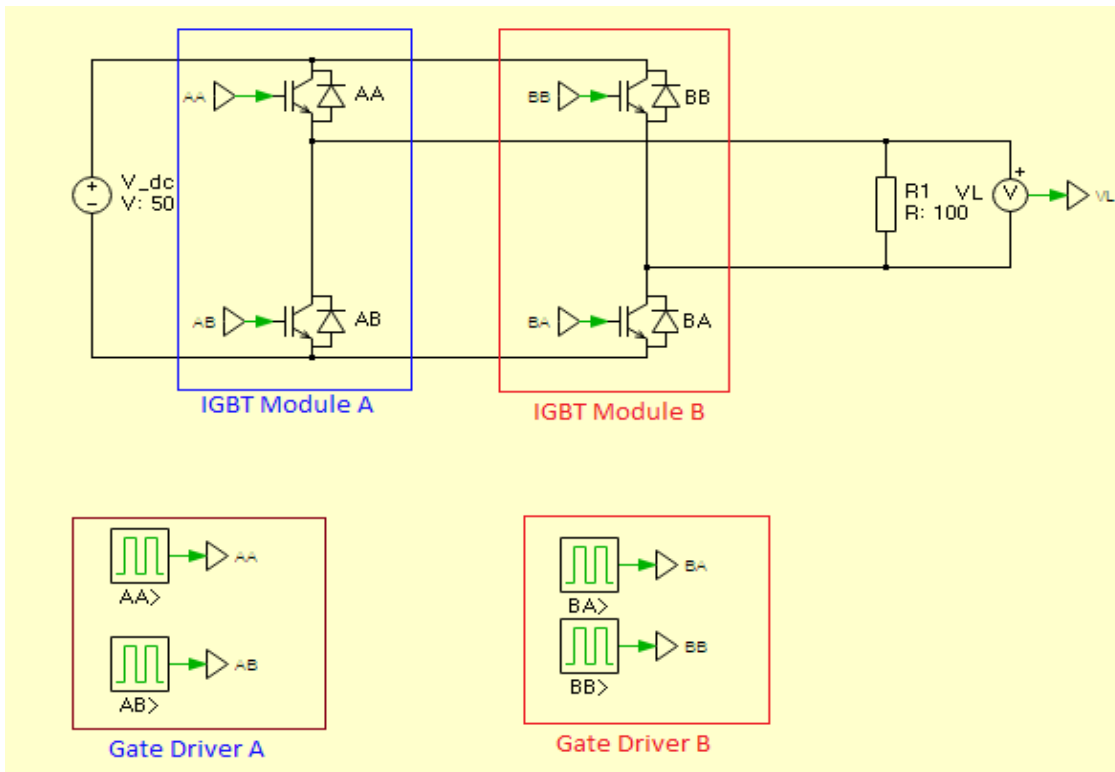
Figure 2- Testing setup for 4 igbts.

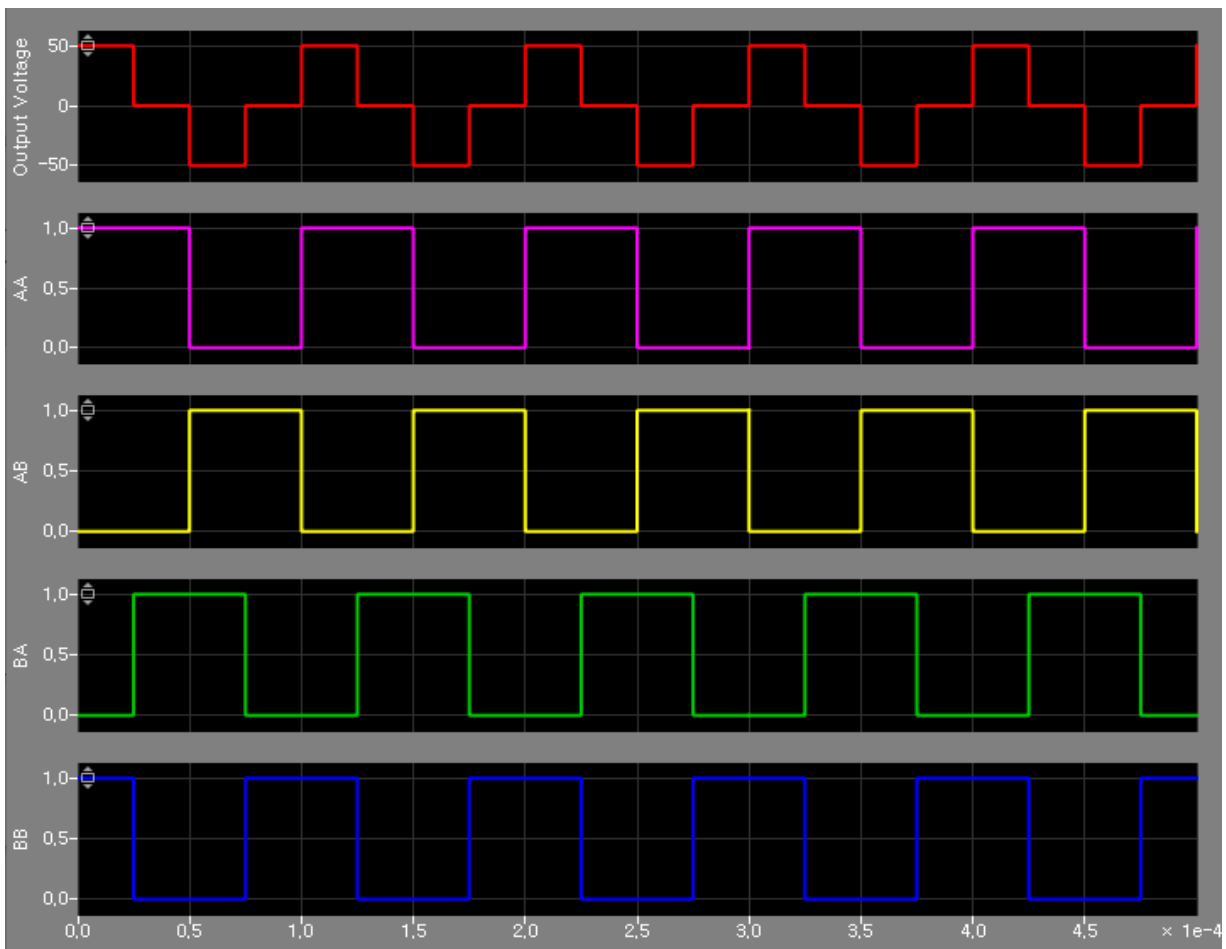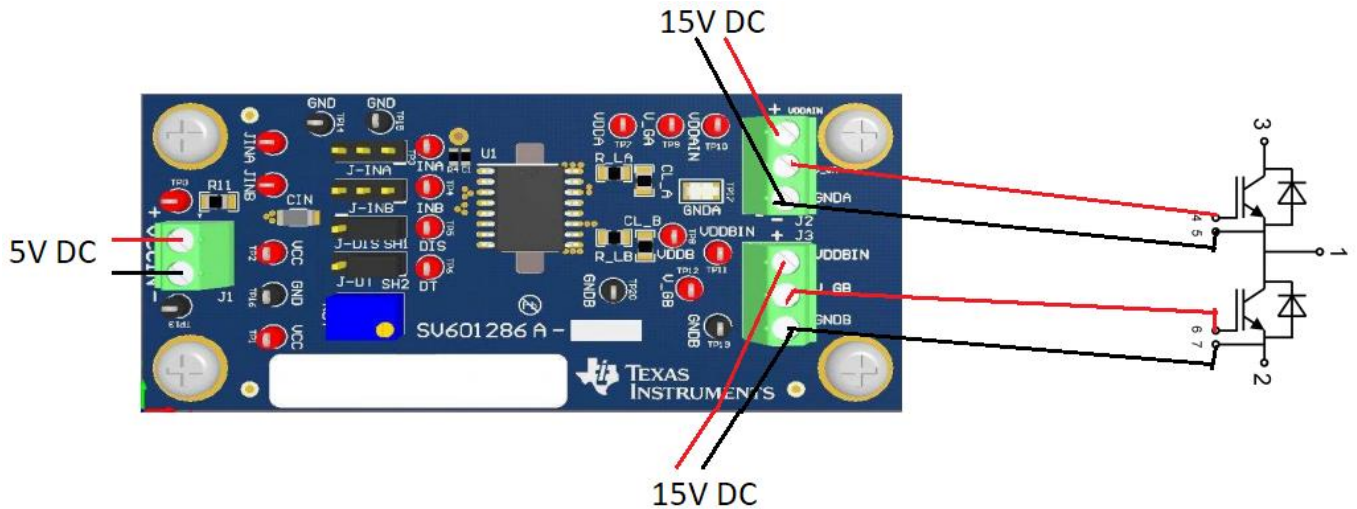The switching pulses and output voltage for simulation result are-

Figure 3 – Simulation results for switching waveforms and output voltage

Input voltage to the Half-bridge is **50V** and the switching frequency is **10kHz.**

The connection between the gate drivers and IGBTs are shown below-

- How is your configuration for the IGBT test, are you using a halfbridge config? In case you have a halfbridge configuration, do you have isolated power supplies or a bootstrap configuration?

My actual experimental setup would be a Single phase Dual Active Bridge Converter. However, for testing the IGBTs and Gate driver working, I have prepared a setup for only one half bridge as shown in figure 2. For VCCI Primary-side power supply I am using a 5V fixed DC supply, separate for both gate drivers. For VDDA, VDDB Driver output power supply I am using a 15V fixed DC supply, separate for all 4 outputs. So, eventually there are **6 separate isolated DC supply** for Inputs and Outputs for the two gate drivers.

It seems that I have lost two gate drivers after applying the above test conditions because the output (AA) of the gate driver (**A**) is now null. And it happened to the 2 gate drivers for same output pin. I am hoping to solve the issues with TI support help and able to successfully test IGBTs with the above configuration and can finally apply it to my actual experimental setup.

The abbreviations used for waveform names is same for simulation and experimental results.