

## Test Procedure for the LV5061VGEVB Evaluation Board

### Test Setup 1

1. Operating Current
2. Soft Start Waveforms
3. Operate & Output Waveforms
4. HICCUP Operating Waveforms
5. Load Transient Response

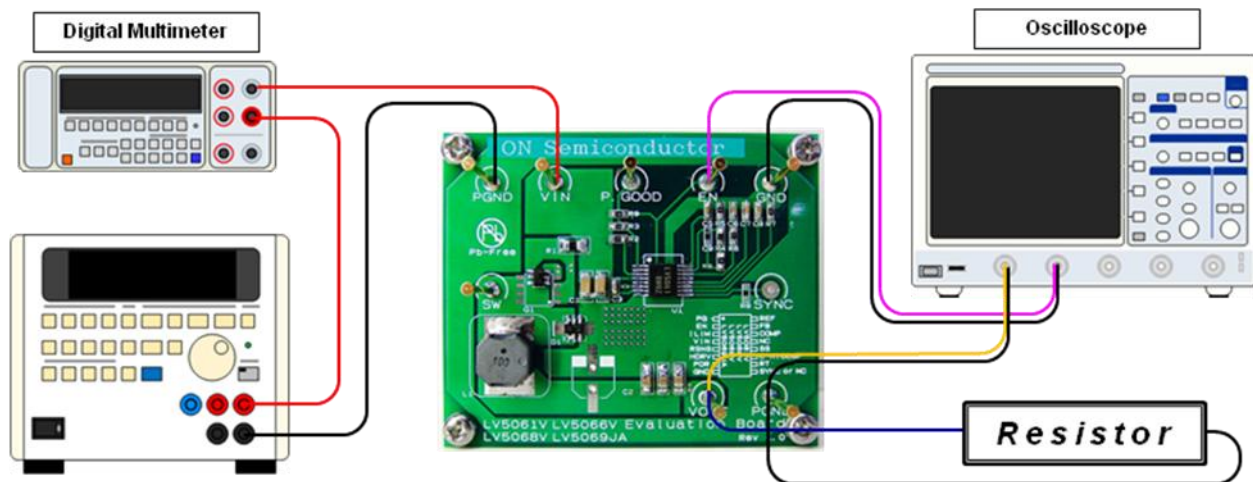


Figure 1: Test Setup

### Suggested Equipment:

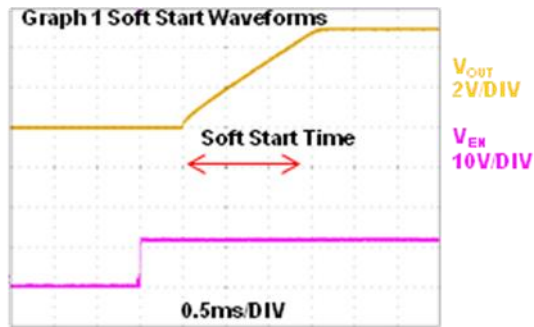
- Current limited DC Power Supply (e.g. ADVANTEST R6243 DC Voltage Current Source/Monitor)
- Digital Multimeter {able to measure up to 30V and 3A} (e.g. ADVANTEST R6452 Digital Multimeter)
- Electronic Load (e.g. FUJITSU ACCESS LIMITED Electric Load EUL-150αXL)
- Oscilloscope (e.g. LeCroy WaveJet)

#### 1. Operating Current

- The layout is as shown in Figure 1: Test\_setup1 and supply input voltage ( $V_{IN} = 12V$ ).
- Connected to the output load resistance (2.5kΩ).
- Measure the current consumption, to ensure that it is within the specified value.

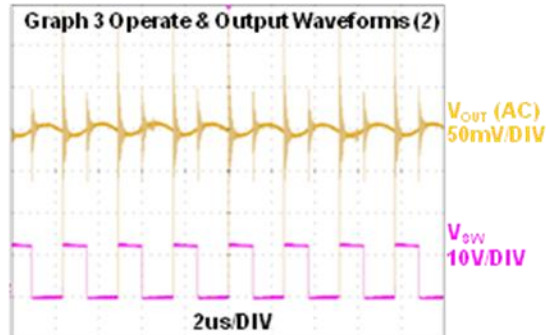
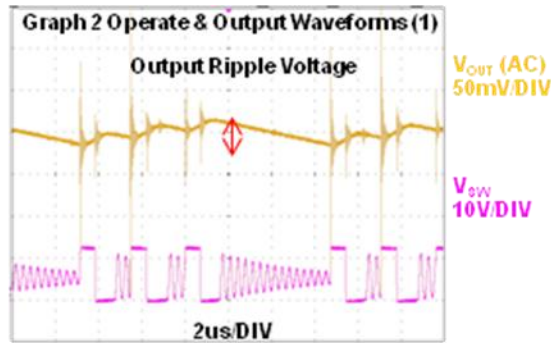
#### 2. Soft Start Waveforms

- The trigger of oscilloscope is set to the rising edge and falling edge of EN voltage ( $V_{EN}$ ).
- To measure the waveform of the startup when terminal EN shorted to GND, was released.
- Soft-start time to confirm whether it is within the specified value. (Graph.1)



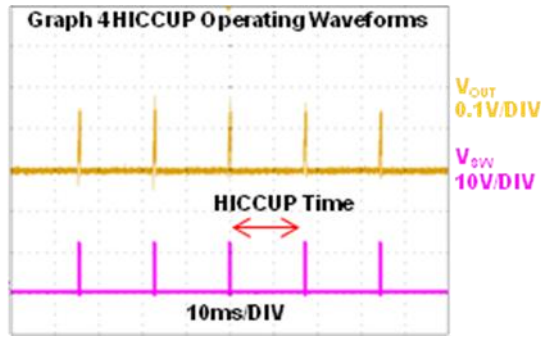
3. Operate & Output Waveforms

- The layout is as shown in Figure 1 : Test\_setup1 and supply input voltage ( $V_{IN} = 12V$ ).
- Ensure that the output ripple voltage and the switching frequency is within the specified value raise the current value of the electronic load. (Graph.2 & Graph.3)



4. HICCUP Operating Waveforms

- (OCP) makes the over-current limiter operation further up the current value of the electronic load.
- Measure the HICCUP time, to ensure that it is within the specified value.



5. Load Transient Response

- ❑ The load current ( $I_{OUT}$ ) is increased by pulse (1A  $\leftrightarrow$  3A) using the electric load. Setting Slew Rate = 100us
- ❑ Measure the waveform of output ripple voltage ( $V_{OUT} (AC)$ ) when the load is changed. (Graph.5 ~ 7)
- ❑ Ensure that the variation of the output voltage is within the specified value. Probe to measure  $V_{OUT} (AC)$  connect as short as possible.

