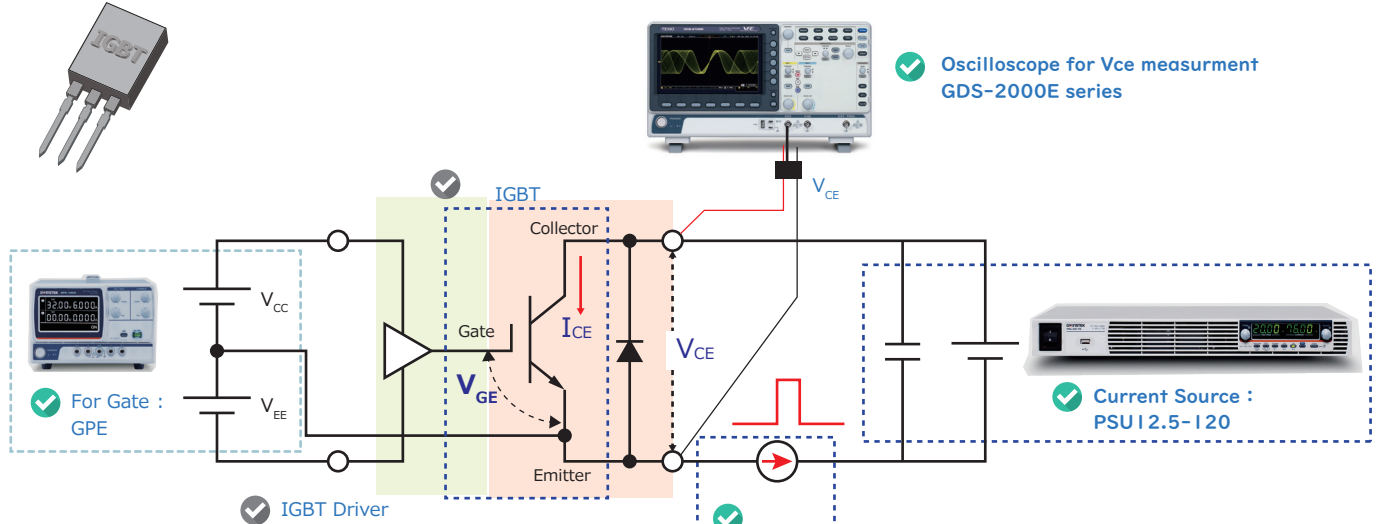


In the evaluation and development of power semiconductors such as IGBT, a measurement system such as "curve tracer" that can sweep high voltage and a large current is effective.

However, those are very expensive products because those can test the various parameters of power semiconductors.

Electronic load PEL-3000/3000H can control a large current as like a pulse within tens of micro-sec. Combination of PEL-3000/3000H, PSU, and Oscilloscope can measure high-current I-V character. This combination system is useful for IGBT test at a low cost.

## Test Image



## Feature

- Low-cost and versatile test system

DC Electronic load PEL-3000/3000H can control a large current as like a pulse within tens of micro-sec. Combination of PEL-3000, DC Power Supply PSU, and Oscilloscope can measure high-current I-V character. This combination system is useful for IGBT test at a low cost.

## Process

- Set the gate voltage ( $V_{GE}$ ) in the IGBT driver
- The input of the electronic load is turned off. The setting voltage and current of the PSU I 2.5-120 are set to the maximum output state (the current does not flow unless the electronic load device is on).
- Turn on the electronic load device to flow the pulse current between the collector and emitter. The oscilloscope measures the voltage ( $V_{CE}$ ) of a flat portion of the peak current.
- Changing the current value of electronic load, measuring the  $V_{ce}$  value by Oscilloscope and plot it's value.
- The point where the flowing current does not become the same as the set value of the electronic load is called a saturated current
- Change the Gate control voltage. Repeat item 3 to 5 until the current reach the saturation point.

## electronic load control Pulse current.

Electronic Load control the current pulse width which is applied between collector and emitter of IGBT.

The pulse current by the control of the electronic load minimizes the effect on the measured value by the generation of the IGBT.

PEL-3000/3000H can be used to vary the pulse width in microseconds, eliminating the effect of self-heating on IGBT.

