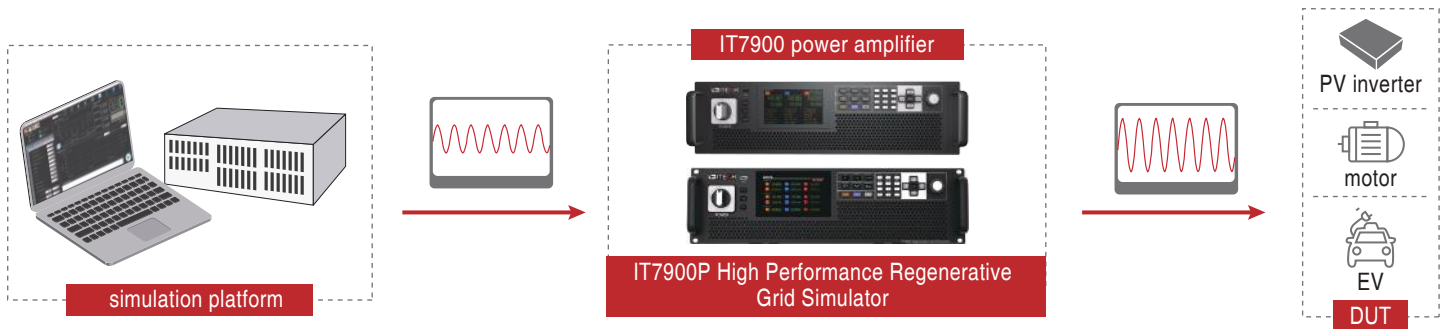
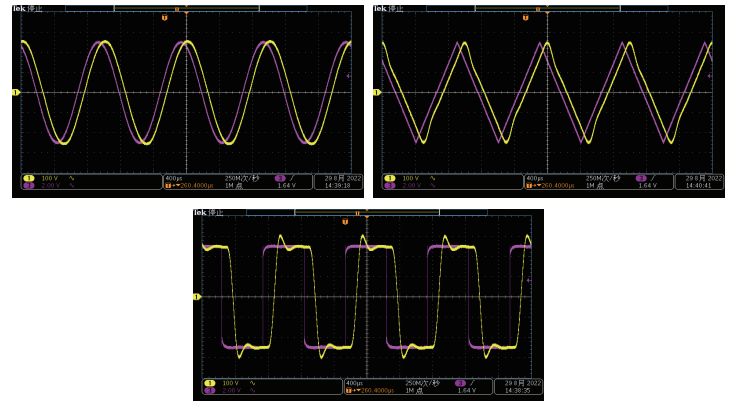


# ITECH Test Solution Power Hardware in the Loop

Power hardware in the loop, PHIL realizes the extension of signal level real-time simulation to power level. It can flexibly change the system topology, simulate various working conditions, and solve the problems caused by the system building and testing difficulties. Power hardware-in-the-loop testing can test real power devices, such as energy storage equipment, PV devices, wind turbines, generators, EV motor drives, electric motors, and networks composed of the above devices.



ITECH IT7900P/IT7900 grid simulator can amplify the digital or modeled analog signal through the external analog interface without distortion, and convert it into a real waveform. It can simulate power level waveforms with high fidelity, and more realistically simulate test scenarios such as power generation or grid energy storage.



**IT7900 is used for PHIL test.**

Real measurement results: Delay 65 $\mu$ s, rising and falling speed 2V/ $\mu$ s



## IT7900P High performance regenerative grid simulator

3 in 1 : AC power source + grid simulator + RLC load

## IT7900 Regenerative grid simulator

One unit to complete the island simulation test

- Four quadrant power amplifier
- Master-slave current sharing, parallel up to 960kVA
- Bandwidth up to 2.4kHz
- Delay time  $\leq 65\mu$ s
- The fastest rising/falling speed can reach 2.5V/ $\mu$ s
- Support single phase/three phase/reverse phase
- Output modes : AC/DC/AC+DC/DC+AC
- Provide rich trigger configurations to realize data collection and simulation functions

