



With the rapid development of electric vehicles, testing of high-voltage components has become increasingly critical. High-voltage components are the core components of electric vehicle power systems, mainly including battery packs, motor controllers, high-voltage cables, etc. These components are directly involved in the storage, conversion and transmission of electrical energy, and are directly related to the performance, safety and overall reliability of the vehicle. Therefore, the testing of high-voltage components of electric vehicles is particularly important. ISO 21498-2 came into being in this context.

ISO 21498-2 Overview

ISO 21498-2 is an international standard for electrical performance testing of high-voltage components of new energy vehicles. It is used to ensure the safety, reliability and performance consistency of high-voltage components of new energy vehicles. This standard covers testing methods, testing equipment, testing procedures, test result analysis, etc., and provides a complete electrical performance testing system for the new energy vehicle industry.

The ISO 21498-2:2021 standard is suitable for testing high-voltage components of new energy vehicles within the voltage range of DC 60V~1500V. A series of electrical characteristic tests can be used to verify the high-voltage battery system (HV battery system), DC/DC converter HV/LV, on-board charger (On-board charger), air conditioning compressor (Air electrical parameters and safety of high-voltage components such as conditioning compressors).

IT6600C bidirectional programmable power supply has built-in 9 kinds of automotive electronic waveforms. In addition to the common LV123, LV124, ISO 16750-2, and ISO 21848, it also has built-in ISO 21498-2 regulations, further expanding the testing of IT6600C in the automotive field. scope.

Test project overview

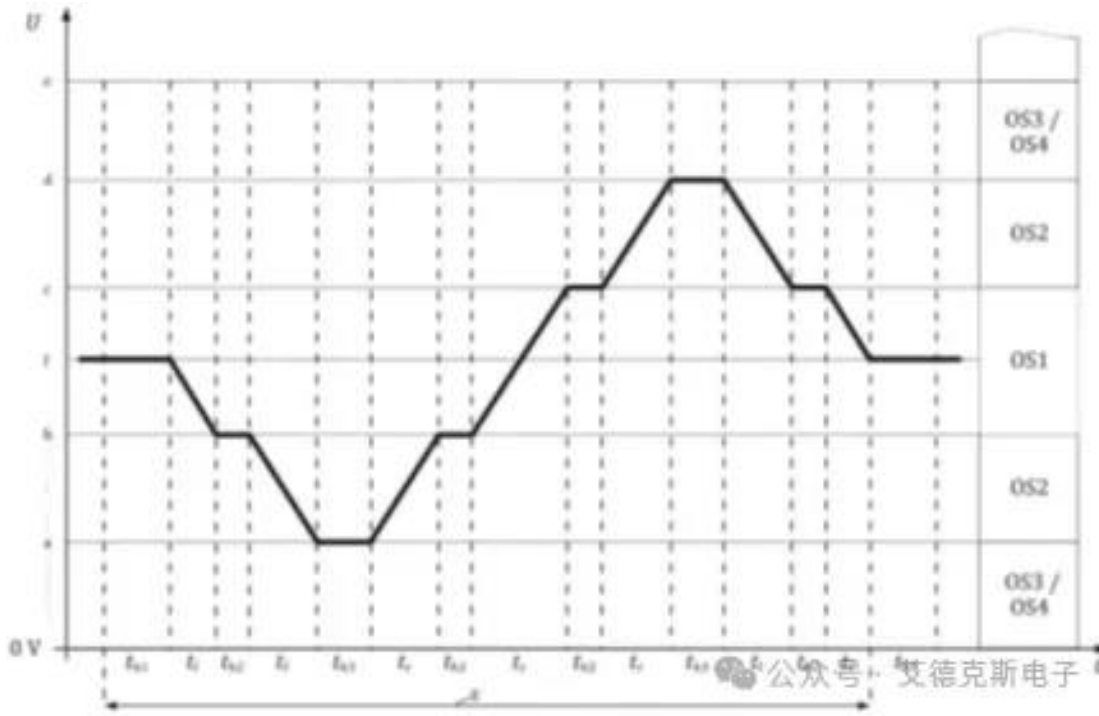
序号	测试项目名称
1	直流电源电压在工作范围内的变化DC supply voltage variation within operational range
2	产生的电压斜率Generated voltage slope
3	电压斜率抗扰度Immunity to voltage slope
4	产生的电压纹波Generated voltage ripple
5	电压纹波抗扰度Immunity to voltage ripple
6	过压Overvoltage
7	欠压Undervoltage
8	电压偏移Voltage offset
9	产生的抛负载电压Generated load dump voltage
10	抛负载电压抗扰度Immunity to load dump voltage

公众号·艾德克斯电子

ITECH test method

Take "Changes in the Working Range of DC Power Supply Voltage" as an example:

Definition: Verify whether the DUT can operate in the specified manner when the DC voltage changes within the range between the lower voltage limit and the upper voltage limit, simulating real battery operation;

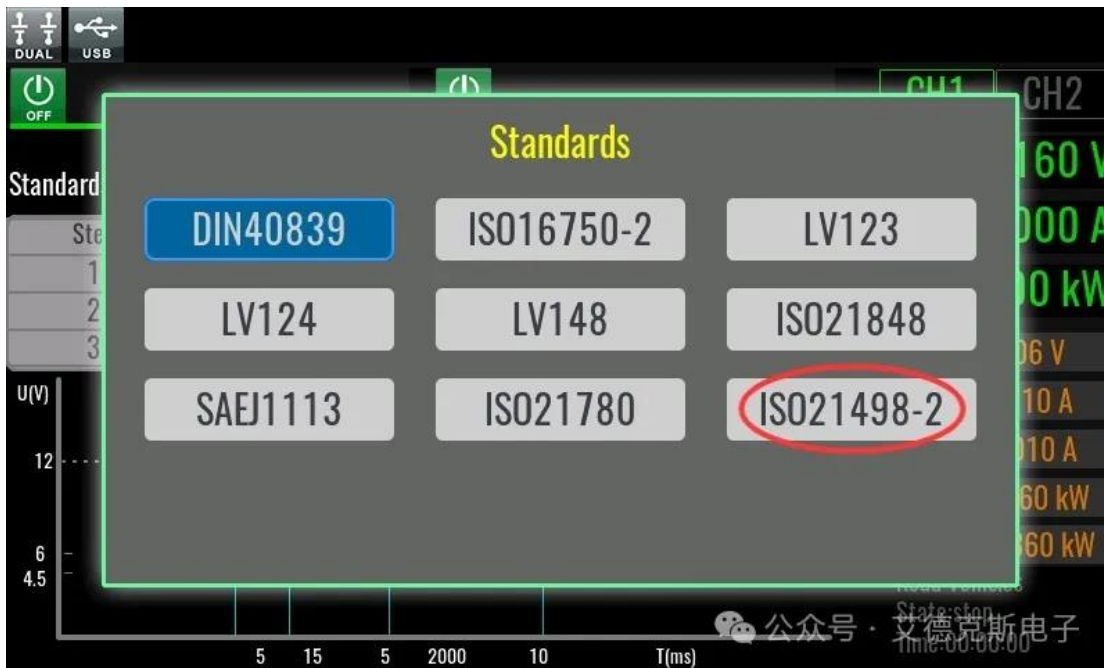


The implementation of IT6600C is:

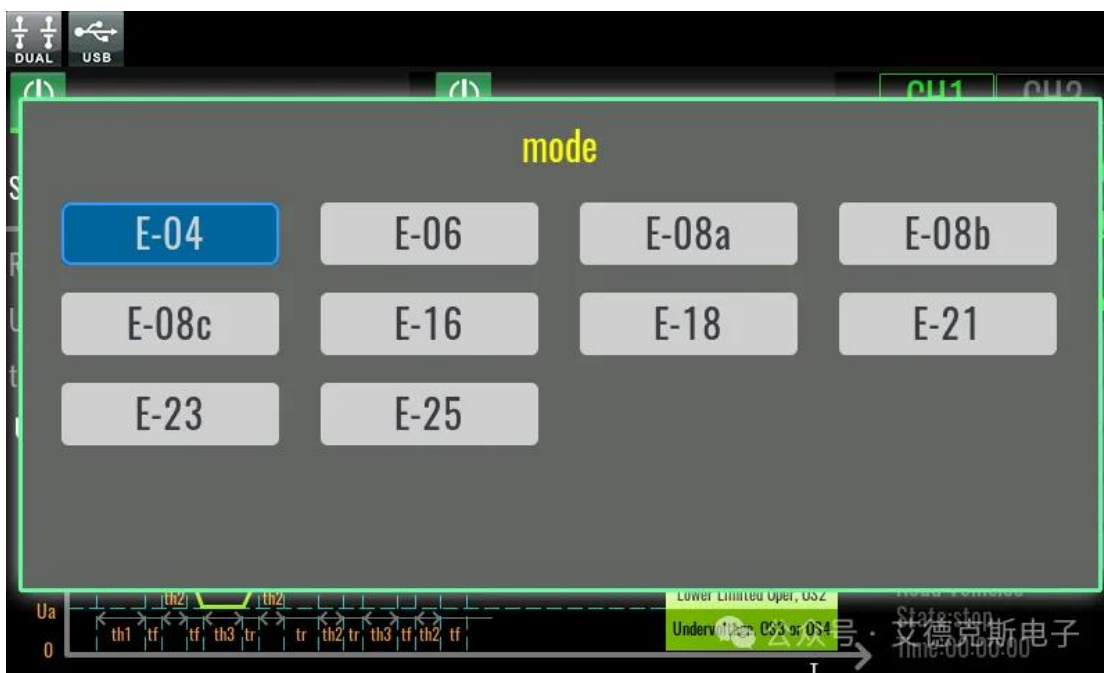
Enter the menu interface and tap the Automotive Electronics Waveform menu item



You can see that there are 9 types of automotive electronic waveforms built into this project.



Select ISO21498-2 and you can see that there are 10 regulatory items built into this standard.



After selecting item E04 "Changes in DC power supply voltage within the working range", click run to execute.



If the user has higher testing requirements, he can tap more and directly modify the 6 test parameters in the picture below.

