



Your power testing solution.

High efficiency and high performance test solution for aging ATE system

- IT-M3100D

To achieve an efficient and large-scale automated production mode in the manufacturing industry, a reliable, stable and efficient ATE test system needs to be used on the production line. Among them, the burn-in test system is a very common type of ATE in the electronics industry. Whether it is a component, a component, a whole machine or an equipment, aging test is required. On the one hand, it can predict the life of the product, and at the same time, it can also promote the early exposure of various potential defects hidden in the product, so as to achieve the purpose of early rejection of failed products.

The traditional aging solution is to provide stable power supply to the DUT through a simple power module, which is pulled by a resistance box. Although this solution can reduce the equipment cost, the enterprise also needs to invest more cost for the heat dissipation of the aging room. With the implementation of the relevant development policies of "carbon peaking and carbon neutrality", the traditional aging test solution may also lead to excessive power consumption of enterprises. In terms of performance, traditional aging solutions are not flexible enough in terms of module accuracy and speed, data sampling, data remote access, test throughput, maintenance, and scalability, and cannot meet similar semiconductor chip aging, rail transit control power modules. Aging, aging of automotive precision components and lights are waiting for use scenarios where there are many specifications of the measured object parameters and high-test accuracy requirements.

In terms of performance, the traditional aging test is not flexible enough in module precision and speed, data sampling, remote data access, test throughput, maintenance and scalability, and cannot meet the usage scenarios with many parameter specifications and high-test accuracy requirements, such as semiconductor chips aging, rail transit control power modules aging, automotive precision components and lamp aging, etc.

So, how to build a high-performance and efficient aging system that combines current and future demand expansion? Choosing the right aging test instrument is especially critical.

1) [Choose a compact, high-power-density aging source or load to improve single-cabinet aging throughput](#)

Taking ITECH's latest IT-M3100D dual-channel DC power supply as an example, only 1U half rack, two channels can simultaneously output 400W power. A single cabinet can integrate up to 80 channels. Channels are isolated from each other, even if a single channel is abnormal, it will not affect the overall aging operation. Not only that, the IT-M3100D supports series and parallel connection between dual channels to easily expand the aging voltage and power range. The series single unit can reach 100V/10A/800W or 30V/30A/800W single channel output to meet the aging needs of users with different specifications.

Large scale system

MAX.
80ch



2) [Select the aging test equipment with synchronization function to improve the efficiency of batch aging parameter setting](#)

In batch aging test, users often need to set the same aging parameters for hundreds of channels. Generally, the software sends the same setting instructions to each channel in turn, which is limited by communication time and low efficiency. To ensure the consistency of aging applications, the IT-M3100D series has built-in multi-channel synchronization control function. With this function enabled, up to 8 units of IT-M3100D (16CH) can be cascaded together. Testers only need to set the voltage/current for one of them, and the rest of the channels are automatically copied, improving the efficiency of batch parameter setting.



3) Select equipment with channel cascading function, which can optimize hundreds of channels aging communication wiring

When the number of aging channels reaches hundreds of channels, the communication connection will become a headache, because each channel needs to lead out a communication cable, and the dense cables will make communication investigation extremely difficult. To help engineers optimize wiring, IT-M3100D series can complete the program control of 16 CH through the channel cascade function, which simplifies the communication wiring. IT-M3100D series supports CANOPEN, LXI, SCPI and other communication protocols. Five optional cards realize plug-and-play function and provide various control methods such as RS232 , CAN, LAN, GPIB, USB_TMC, USB_VCP, RS485, external analog and IO.

4) Choose regenerative aging equipment, save electricity costs

In the aging system integration, using the regenerative load to replace the traditional resistance box can save a large amount of electricity expenses for the enterprise. The regenerative load can invert the energy absorbed from the DUT to AC power for other electrical loads in the plant. At present, for aging applications, ITECH provides regenerative equipment ranging from hundreds of W to MW, and the regenerative efficiency can reach up to 95% (IT-M3300/IT-M3800/IT8000).

Choosing the right aging instrument can not only improve the aging efficiency of the enterprise, but also improve the system stability and ease of operation. IT-M3100D series dual-channel power supply can be widely used in semiconductor, intelligent electronic products, LEN, power supply and other industries. For more information, please visit ITECH official website <https://www.itechate.com>.

