Development and Optimization Of Component Tests

A crucial role for the cost of electrical components plays the test development. A well-structured, in scope and duration optimized test saves unnecessary costs at the test of every single device later on.

Hitest developes for you "turnkey" qualification tests and production tests with all the necessary components. We conduct a test development in several steps, each building on each other. The starting point is, next to the component description and test specification, the environment in which the test should be carried out.

The main steps are:

- Test Concept Development
- Software Development
- Test Hardware Development
- Test Verification
- Test Optimization
- Transfer to Production

Also part of the test development is the definition of the documentation such as statistical analysis, measurement data files or wafer maps.

Our Goal: An optimal test

Hitest trusts in the test developing successfully in a holistic approach. Hardware and software are developed in parallel in house, as far as it is required to get the final result.

This ensures that all components of the test work together optimally.

Test Concept Development

The analysis of the test specification and data sheet results in a description of the necessary resources for testing, as well as the structure of the tests. It includes also the determination of the target test system, as well as handling and probing systems.

Here is the basis for the later test costs laid.

Software Development

Starting from the concept, we create the various components of the test software.

This may consist of:

- Test flow control of the automatic test system
- Description of the device under test
- Test vectors
- Control of external devices
- Interpretation of test results
- User interface and data interface

Hardware Development

In parallel with the software, the test hardware is developed and produced. These include:

- DUT Boards
- Test Socket
- Probe Cards
- Mechanical Constructions

Test Verification

After completion of hardware and software we obtain by the first test runs the stability of the test steps and the plausibility of the results. An important aspect is the involvement of the tolerances of the used instruments. If required, the necessary changes will be implemented.

Only when the results have turned out that the test structure is robust and reproducible, the test is released for production.

Transfer to Production

For larger volumes the production test is often done directly at the semiconductor manufacturer.

In this case, Hitest has the task to install and to operate the in-house developed tests in the semiconductor factory.

Test Optimization

Often arises during the production tests, that some test steps have too narrow limits which leads to unnecessary high failure rates.

Similarly, there is often found that individual test steps show no losses and are therefore not relevant.

Hitest analyzed these results and modify or re-move individual test steps. Similarly, a change in the sequence of test steps might lead to better results.

If there are new failures during the life cycle of the components, Hitest adds additional test steps to prevent the failures.

Our customers will receive by this at any time an optimal test program.

On us you can rely

We work in accordance with the requirements of DIN EN ISO 9001:2008. Our quality is documented, and the results are available even after 10 years.

Put your trust in us

Our employees have many years of experience in the implementation of demanding projects at national and international level.

We guarantee reliable, traceable and documented measurements at the highest level of quality.

How you can reach us

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