elowerk
Testsystems

eloZ1

Example of an eloZ1 test system

Manufacturing Defects Analyzer

The eloZ1 Manufacturing Defects Analyzer is an in-circuit tester of the very latest generation, reliably detecting connection and assembly faults on printed circuit board assemblies.

Hardware Architecture

The eloZ1 is designed as a modular system. It can be customized to the respective test application. Thanks to its compact design, space saving test systems can be realized.

Stimulus Unit

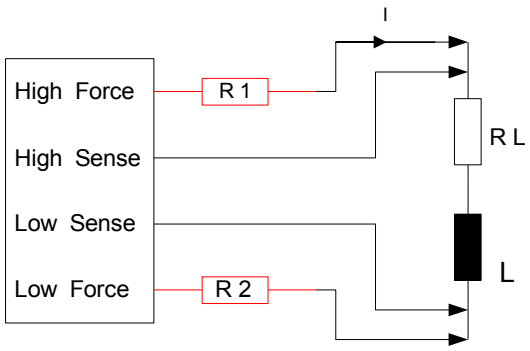
- The analog section is galvanically isolated from the digital section.
- Each generator has its own power supply.
- The stimulus unit can be used as a voltage source or as a current source.
- Basic version: up to ±10 V and up to ±1 A.
- Sense lines allow precision measurements with controlled voltage at the UUT.
- Current and voltage are measured dynamically and simultaneously.

Switching Matrix

- A multiplexer joins the eight internal analog rails to four rails.
- A full matrix connects the four rails to the test pins.

Options

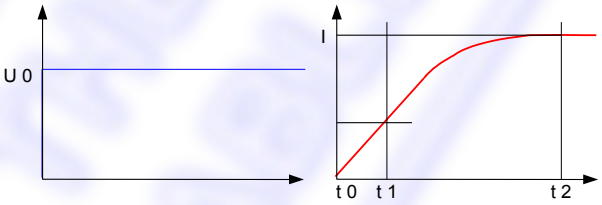
- PXI version
- Functional tests
- Programming of Flash IC's etc
- Boundary Scan



Voltage Controlled Stimulation

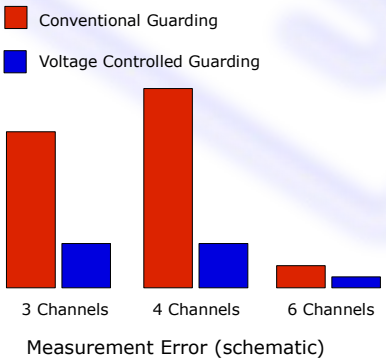
The eloZ1 extends in-circuit measurements by voltage controlled stimulation, which allows precision measurements within the application environment. That allows the testing accuracy of conventional test methods to be significantly increased. For instance the measurement of small inductances:

During the measurement of the inductance a constant voltage needs to be stimulated at the UUT. Due to its sense lines the eloZ1 is able to stimulate a precisely controlled voltage. Parasitic effects are compensated.

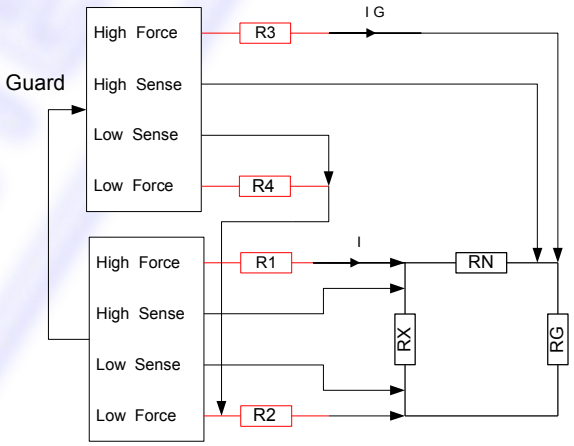


Voltage Controlled Guarding

Having sense lines at the guard amplifier the eloZ1 is able to guard with precisely controlled voltage.



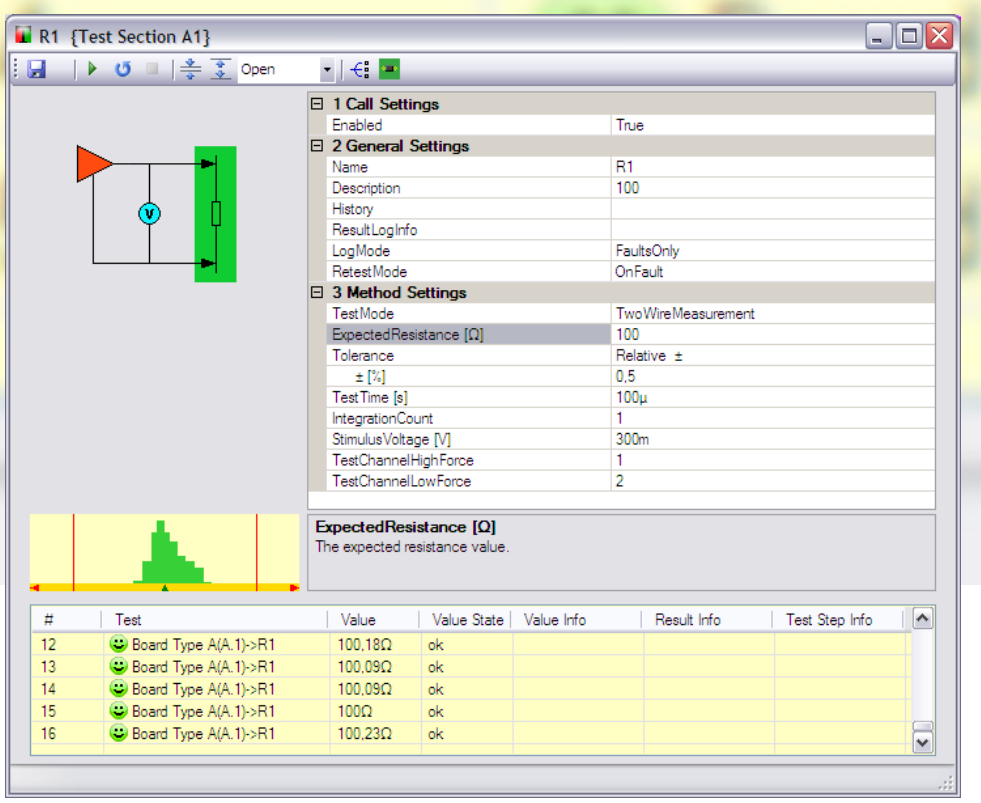
Measurement Error (schematic)



Voltage controlled guarding is superior to conventional guarding methods. Many UUTs only become measurable using this method.

Operating Software elowerk TestBuilder

- TestBuilder is based on Microsoft .Net Framework® and runs on Windows XP®, Windows Vista® and Windows 7® (32-Bit and 64-Bit).
- TestBuilder has a graphical user interface and a high level language program interface.
- TestBuilder can be extended using plug-in technology.
- TestBuilder provides several options for cooperation.
- An integration into National Instruments Teststand® is feasible.



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