

# 303-Sidac Test System

The SemiTek 303-Sidac Test System has been developed for application-specific needs and features plug-in boards designed for specific test functions. This new concept provides you the most economical, versatile solution for inspection testing available. It also allows you a greater flexibility within a specific application for programming and data acquisition.

The SemiTek 303-Sidac Test System determines the electrical integrity of Sidac and Diac devices. The system can perform an array of tests and control output binning in a fraction of the time of any other tester on the market. Controlled by a personal computer, the system is ideal for high-speed production testing.

Programming and data management has never been easier. The 303 uses Microsoft Excel® to maintain test files and provides a quick data output for data logging and statistical analysis.



The 303-Sidac Test System provides the following test capabilities:

**Off Tests**

- Vbo@Ibo
- Vdrm@Idrm and/or
- Idrm@% of Vbo

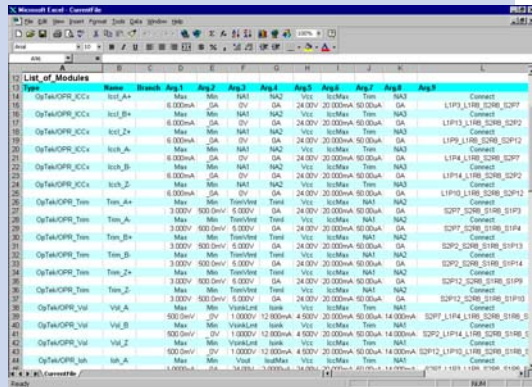
**On Tests**

- Peak Switching Voltage – Vpeak
- Vt@It forces current and measures voltage
- Ih forces current until part turns off

**Diac Tests**

- Vbo • Vbb • Vdrop
- Leakage

For high-speed production applications, the 303 can be fully integrated with any handler/prober system.



Test results exported in Microsoft Excel®

The Windows-based Tester Operating System gives complete process control to the operator.

The Build Editor simplifies the creation of test programs using preformatted module sets detailing stimulus and acceptance criteria.

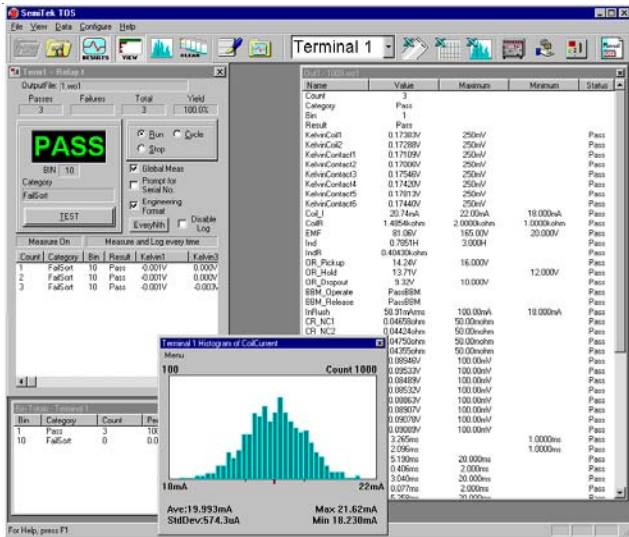
Plug-in boards provide the hardware control of the system. Options may be added after installation to increase the number of terminals or test capability.

## Specifications

Test	Range
<b>Off Tests</b>	
Vbo/Vbb	60V, 1200V
Vdrm	60V, 1200V
Idrm	200nA, 2uA, 20uA, 200uA
<b>On Tests</b>	
Vpeak	1200V
Vt	10V
Ih	2A

# 303-Sidac Test System

## Software



The 303 Tester Operating System (TOS) software controls the test system. Engineers program and operators control the 303-Sidac Test System from the TOS Main Window.

Views of the active Test Terminals appear as separate windows. Access to individual test programs and other system functions is accessible from the Main Menu.

A summary of the test data appears in the Bin Totals window while real-time individual test results appear in the Output window.

Each function is password programmable and a complete diagnostic and calibration procedure is included.

## Configuration

The 303 comes in a bench-top or rack-mount configuration. Removable plug-in cards provide flexibility to configure the tester for any application. The minimum cards required are the Slot Zero card, Sidac SMU, 20V Power Supply, and System Power Supply.

### Options include:

- 3-Lead Mux for testing additional pins or for multiple terminals.
- Surge Unit for surge protection testing.
- Upto six manual test sites.
- 303-Handler/Prober Interface for Handler or Prober test terminals.



Manual Test Terminal

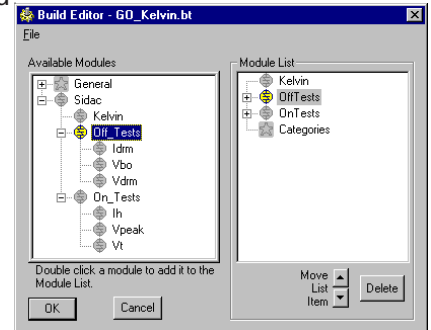
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## Modular Programming

The TOS Build Editor generates and maintains test file data instructions. These instructions can also be maintained using Microsoft's Excel® if so desired.

To program, you select the desired preformatted modules and configure them with the stimulus and acceptance criteria necessary. Once the information is complete, the test file is ready for use.

Online Help is available and fully defines the acceptable limits for each test or operation.



### • General Modules

General modules are used to specify a variety of system commands such as Pause, Wait, Message, and Categories.

### • Sidac/Diac Modules

These Modules perform the tests that determine the parameters of the device under test.

### • Custom Modules

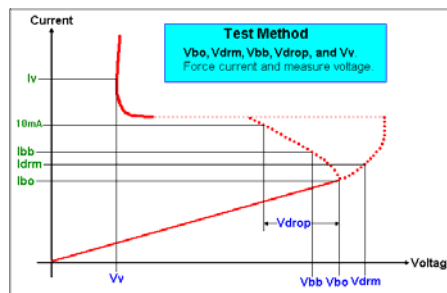
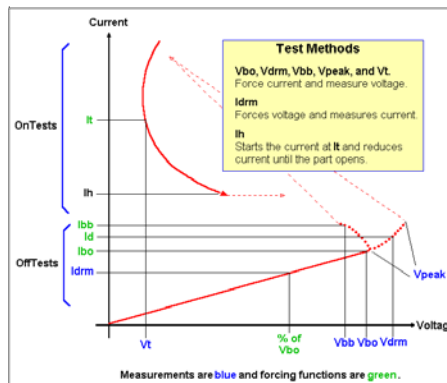
You can setup Custom Modules to perform a module to add special or unique tests as necessary.

### • Categories

The Categories module determines which modules a device must pass to be categorized as the part number specified.

There are two types of categories, Pass and Fail. A Pass category

typically has the name of the part number and a list of the tests the part must pass to meet spec. A Fail category contains a list of tests on which any failure by the part indicates failure to meet spec.



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