

LORLIN[®]

TEST SYSTEMS



The Double Impact Test System checks and verifies the critical parameters of Small Signal and Power Discrete Semiconductors with a maximum degree of accuracy yielding repeatable results ensuring the highest confidence level attainable.

Systems are affordably priced and can be set up for any device testing requirement. The Lorlin Windows Software is by far the most powerful and functional tool offering the user complete programmable control over the desired test selections, options and data reporting methods.

Lorlin Test Systems offers custom design engineering services, solutions and integration of many types of external equipment to meet your needs. The ultra high performance system offers easy to use Windows for test routine creation, operation, and data views.

Transistors
IGBTs
Diodes
Rectifiers
Bridges
Zeners
Darlingtons
FETs
MOSFETs
JFETs
SCRs
Triacs
Optos
Arrays
Small Signal
Power Devices
Hybrid Modules
Dual, Quad and Octal

Double Impact Test System

BENEFITS

Tests Small Signal and Power Semiconductors.
Both New & Rebuilt Systems/Affordably Priced.
The Most Accurate and Reliable in the Industry.
Flexible Design/Easily Configurable/Expandability.

FEATURES

600-2000 Volts, 20-500 Amps Maximum.
The Most Powerful Windows Testing Software.
Auto/Manual Testing with Handlers and Probers.
Extensive Test Parameter Library.

PERFORMANCE

Diagnostics Verify System Integrity
System Calibration Software Ensures Accuracy
Standard Leakage Resolution to 5 Pico Amps
Test by Branch and Sort Modes Run Concurrently

Lorlin Test Systems, Inc.

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The Double Impact is by far the most flexible and expandable tester available today offering the ability to test and classify more semiconductors and parameters than ever before. The system is capable of integrating up to 5 operator stations and 5 computers while operating in both test by sort and branch modes concurrently at any test station for maximum versatility.

A large variety of test stations can accommodate almost any requirement. The test system can be used for incoming inspection, quality assurance, high reliability, component characterization, final test, and wafer probe. The test system uses a Pentium PC and Windows® OS for operation.

System measurement techniques, refined and proven by over 50 years of field experience. Both high speed scanning and other fast measurement techniques are used to test devices. The method, type of test and the level of power are considered for each device parameter, and the best scheme is selected automatically by the system.

In general, for low current tests such as leakage, the power is applied, the device is subjected to a "soak" period, and the high speed scan method which requires a few milliseconds is used. For high current measurements such as common emitter current gain, the power is applied, and an alternative fast technique is used.

For all but low current measurements, which require a 'soak' period, the power is removed immediately from the device under test when a decision is reached. Initial bias conditions are imposed which begin the tests as a pass, and the power is removed as soon as a failure is detected. This safeguard assures that the power is applied for no longer than necessary to perform the measurement accurately.

By considering each type of test and the current levels individually, the testing time techniques are auto adjusted as described to provide extremely accurate measurements over the entire measuring range of the equipment. Kelvin connections are used throughout the system while high quality shielding and guarding assure accurate low level measurements.

Double Impact Systems

System Specifications

FEATURE	RANGE	RESOLUTION	ACCURACY
Voltage Measurements	0-600 V 600-2000 V ²	0.5 mV	0.5% ¹
Current Measurements	0-20 A 20-500A ²	5 pA	0.5% ¹
Expands to 5 Test Stations and PCs	Rack Mounted, and Desktop	N/A	N/A
High Voltage/High Current Multiplex X4	2000 Volts 200 Amps	See Above	See Above

Test Parameters

TEST TYPE	TYPICAL PARAMETERS
Leakage	IR, ICE(O,S,V,R,X), IEBO, IC IDGO, IGSO, IDSO (O,S,R,X,V), IGSS, IGV, IGDO, IDSX, ISDX, ISVI, IGI, VGS1, VTHI
Breakdown	BVCBO, BVEBO, BVCE(O, S, V, R, X) ² BVR, BVZ, BVDGO, BVGSO, BVDS (O,S,R,X,V)
On State	HFE IB, HFE, DHFE, VCESAT, VBESAT, VBEF, VBCF, VRE, VBEON, VF, VZ, VGSF, VGDF, VGS, VDS, VDSON, RDSON, IDON, VTH, ZZ(T,K)
Gain	HFE, I+HFE IB, DHFE, AC I + HFE, AC HIB, GM
Scr/Triac	IAKR, IAKF, IGKO, BVAKR, IH, BVAKF, BVGKO, IGT, VGT, TH, IL, VON

System and Standard Options

PRODUCT DESCRIPTION	MODEL	OPTIONAL	COMMENTS
Double Impact Systems			
Double Impact Base System	DI-700	RACK PC AND VIDEO CONSOLE	Up to 5 Stations and PCs
Standard Station 600V/20A	OTS-100	100 A ³	Requires Supply
2 KV Station with Built In Supply	HVS-102	100A ³	Requires Supply
200 A Station with Built In Supply	OTS-300	OTS-340 400A	HCS-500 500A
2KV Multiplex Test Station Up to 4 per System	OTS-201 OTS-221	100 A 160-200 A	Requires Supply ³ Requires Supply ³
Power Fet Option	FET-101	80 V Gate Supply	Plug In Option
Scr/Triac Option	SCR-100	User Adjustable	Plug In Option
¹ High Voltage Supply	HVS-201 High Voltage Supply, Multiplexes to 4 Stations		
² High Current Supply	HCM-201 High Current Supply, Multiplexes to 4 Stations		

The Most Advanced Discrete Test Systems Available



1. Accuracy does not include the tag error and vary on test performed.
2. Higher ranges may affect resolution and accuracy specifications.
3. Requires an external high voltage and/or high current supply

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