LORLIN® TEST SYSTEMS

The Lorlin Impact 7BT is a compact discrete device component tester that verifies the critical parameters of semiconductors with many of the same features as the more complex and expanded systems.

The Impact 7BT 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 allowing the customer 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. This ultra high performance system offers easy to use Windows for test routine creation, operation, and data views.

Transistors
IGBTs
Diodes
Rectifiers
Bridges
Zeners
Daarlingtons
FETs
MOSFETs
JFETS
SCRs
Triacs
Optos
Arrays
Small Signal
Power Devices
Hybrid Modules
Dual and Quads

Impact 7BT Test System

BENEFITS

- Test Station Built into Front Panel for Easy Access.
- Affordably Priced /Rebuilt Systems Available.
- Two Additional Test Stations can be Added.
- Compact Benchtop Design/Space Savings

FEATUTES

- High Current and High Voltage Capabilities.
- Extremely Powerful Windows Testing Software.
- Auto/Manual Testing with Handlers and Probers.
- Pass/Fail Testing and Several Datalog Modes

PEFORMANCE

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

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The compact Impact 7BT semiconductor tester offers the ability to test and classify most all discrete components. The system is capable of 3 manual or automatic stations and 3 computers while operating in both test by sort and branch modes concurrently.

Several test stations and options can be added at any time as requirements may change. The test system can be used for inspection, quality control, high reliability, component characterization, final test, and wafer probe. The system operates the Lorlin Windows application software package with a Pentium® based PC.

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 verify components. The method, type of test and the level of power are considered for each device parameter, and the best scheme is selected 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 a alternative fast measuring 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.

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

Impact 7BT Systems

System Specifications

FEATURE	RANGE	RESOLUTION	ACCURACY
Voltage Measurements	0-600 V 600-2000 V [3]	0.5 mV[2]	0.5% [1,2]
Current Measurements	0-20 A 20-500A [3]	5 pA[2]	0.5% [1,2]
Expands to 3 Test Stations and PCs	Rack Mounted, and Desktop	N/A	N/A
Handler and Wafer Prober Interfaces	Universal 25 Bin /Sort	N/A	N/A

Test Parameters

TEST TYPE	TYPICAL PARAMETERS
Leakage	IR, ICE(O,S,V,R,X), IEBO, ICBO, IDGO, IGSO, IDSO (O,S,R,X,V), IGSS, IGV, IGDO, IDSX, ISDX, ISVI, IGI, VGSI, 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, 1+HFE IB, DHFE, AC 1 + 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
Impact 7BT Systems			
Impact 7BT Base System	7BT	Standard PC	Up to 3 Stations and PCs
Standard Station 600V/20A	Front Panel	100 A[3]	Requires Supply for 100 Amps
2000 V Station with Built In Supply	HVS-102	100A[3]	Requires Supply for 100 Amps
200 A Station with Built In Supply	OTS-300	OTS-340 400A HCS-500 500A	No External Supply Needed
AC Test Option	AC-100	1 Khz	Plug in Option
Power Fet Option	FET-101	80 V Gate Supply	Plug In Option
Scr/Triac Option	SCR-100	User Adjustable	Plug In Option
Rack Mounted PC Option	RM-PC Available for Impact 7BT		
Rack Mounted Monitor Console Option	Includes Keyboard and Touchpad		

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