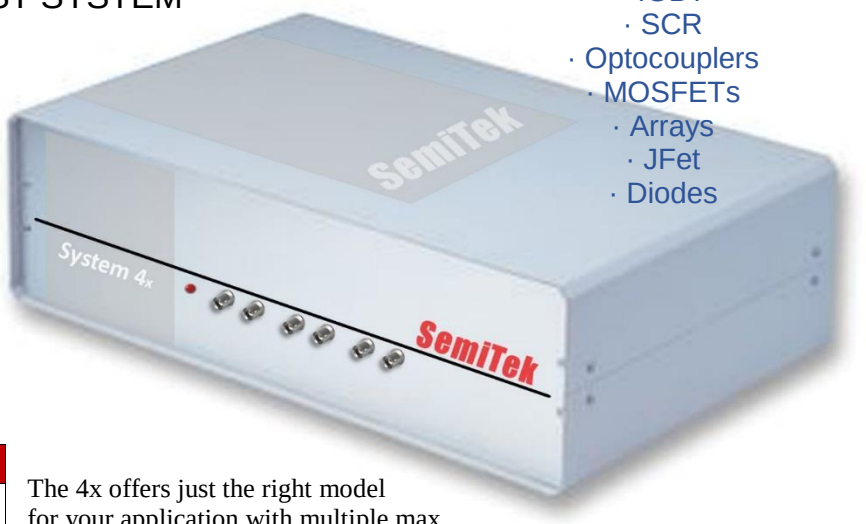
HIGH VOLTAGE / HIGH SPEED

System 4x

DISCRETE SEMICONDUCTOR TEST SYSTEM

- Transistors
- IGBT
- SCR
- Optocouplers
- MOSFETs
- Arrays
- JFet
- Diodes



The 4x is the next generation test system for discrete semiconductors. Designed with high volume production in mind, the system is also ideal for incoming or general purpose test applications. The 4x is PC Windows based and linked to an embedded processor for uninterrupted test operations. Most devices can be tested in 300µs or less, in production applications.

4x Model Chart

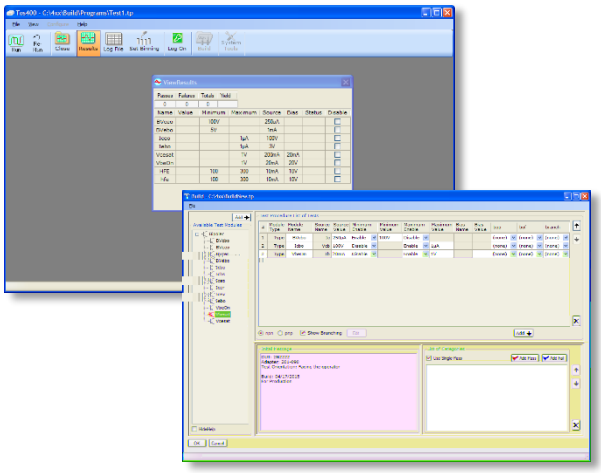
		Maximum Voltage			
		3000	2000	1000	500
Maximum Current	200	4.3K2C	4.2K2C	4.1K2C	4.5C2C
	20	4.3K20	4.2K20	4.1K20	4.5C20

The 4x offers just the right model for your application with multiple max voltage and max current configurations. Select the maximum voltage and the maximum current from the chart to pick the right model for your application.

System Configuration

The 4x is self-contained, except for the PC, and is approximately 19 inches wide by 12 inches deep and 6 inches high. Front panel coax interface connections are provided to connect to your prober, handler or device interface adapter.

Test operations are controlled from the 4x Dashboard at the PC, however a remote terminal controller is available for manual operation if so desired. A plug and play interface is provide for automated operations. Simply identify the signal paths and the 4x can communicate with virtually any automated prober or handler.



The 4x Build Editor is used to create and edit a test procedure to verify the electrical parameters of your devices. In Build, a list of test symbols is displayed by device type and are easily added to a test procedure to build a list. Each parameter is edited for the specified test condition.

Theory of Operation

The 4x is personal comp
uter based using Microsoft Windows 7 Professional for all user-interface functions. An embedded processor controls all system and instrument functions.

There are two Source Measure Units (SMU) to stimulate or measure the Device Under Test (DUT). Both SMUs include a voltage and current source originating from the raw power supply and individual meters to make measurements.

The 4x SMUs are robust in design and can withstand long ON times. The 4x automatically detects when the source stimulus (voltage or current) is reached to sense the desired characteristic to measure and perform the test.

Each SMU source has its own Digital to Analog Converter (DAC) for controlling the amount of current and voltage specified for the DUT. Using proprietary circuitry, voltage and current can be held tightly to the programmed value. A high-speed switch matrix is used to switch in or out the SMUs to the DUT. See System Overview for complete specifications.

Source/Measurement Summary

	Ranges	
	Input	Output
Voltage	5V, 50V	5mV, 50mV, 500mV, 5V, 50V, 300V*, 3000V*
Current	200pA, 2nA, 20nA, 200nA, 2uA, 20uA, 200uA, 2mA, 20mA, 200mA, 2A, 20A	2nA, 20nA, 200nA, 2uA, 20uA, 200uA, 2mA, 20mA, 200mA, 2A**, 20A**, 200A**
±(0.5% of the range + 0.5% of the value)		

*200mA max. **50V max.

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