

Barth Model 4012 VFTLP+™

Very Fast High Speed Pulse Curve Tracer



System Components

- Ⓚ Tektronix 6GHz digitizing oscilloscope
- Ⓚ High reliability Barth Electronics control box/pulse generator
- Ⓚ Keithley Picoammeter/voltage source
- Ⓚ Test control computer
- Ⓚ LabView® runtime control and analysis software
- Ⓚ One year warranty on the entire system
- Ⓚ One year BSSP Barth Software Subscription Program

How It Works

To use the Pulse Curve Tracer, the operator enters the desired test parameters via keyboard, such as starting voltage, current and voltage limits, voltage step increments, pulse risetime, and pulse width.

The test then proceeds automatically, controlled by Barth software developed with National Instruments LabView®.

The operator can halt and resume the testing and can view the plotted test data points as the test proceeds.

The operator can also view (during testing or afterward), voltage & current waveforms, single point or multi-point leakage evolution, test set-up parameters, or numerical data information.

The active test and several previous test data plots may be viewed simultaneously on the I/V plot.

Hardcopy prints are immediately available; this includes both the active I/V plot plus leakage vs. average current plot.

Screen Displays

Eight display screens all display the active test and up to 5 recalled tests (on the left half of the screen).

The left side display shows the I/V curve and leakage evolution.

The right side display can also show: V & I waveforms, single or multi-point leakage evolution, operator info, test parameters, numerical test-point data. or calibration values.

The Barth Model 4012 VFTLP+™ Very Fast Pulse Curve Tracer is built with specially designed high speed hardware.

Its test pulse simulates the CDM speed and its current and voltage sensors capture the very fast response of ESD circuits necessary for CDM design.

Barth manufactured hardware has the fastest instrumentation of any system and corrects for losses inherent at these picosecond speeds. This system is the first to add accurate peak TDDDB oxide threat data to the usual I-V data plot. It is used to analyze the gate oxide threat produced by ESD protection structures. This system captures both voltage and current waveforms at silicon level before packaging for first silicon CDM success.

Software

The software includes voltage & current DUT waveform capture, automatic calibration / compensation (and save / recall), save / recall operator set-ups, auto or manual axis scaling. Single or multi-point leakage testing (configurable), adjustable measurement window, dynamic resistance plots with values, compare & analyze multiple tests, save / recall pulsing "profiles", multi pulsing capability (between data collection points), and scope auto-SPC (signal path compensation), to aid your CDM design effort.

The BSSP (Barth Software Subscription Program) provides periodic software updates and improvements. This assures your system is in peak operating condition. Test speed increases and efficiency improves. Improve system capability with regard to calibration, reporting, and system diagnostics; all available with BSSP.