

Curve Tracer

370A

★ Features

- High Precision Measurements of Semiconductor Devices
 - Up to 2000 Volts or 10 Amp Sourcing
 - Up to 220 Watts
 - Down to 1 Nanoamp Measurement Resolution
- Down to 2 Millivolt Measurement Resolution
- Waveform Comparison
- Envelope Display
- Waveform Averaging
- Dot Cursor
- 3.5 Inch MS-DOS Compatible Disk Storage

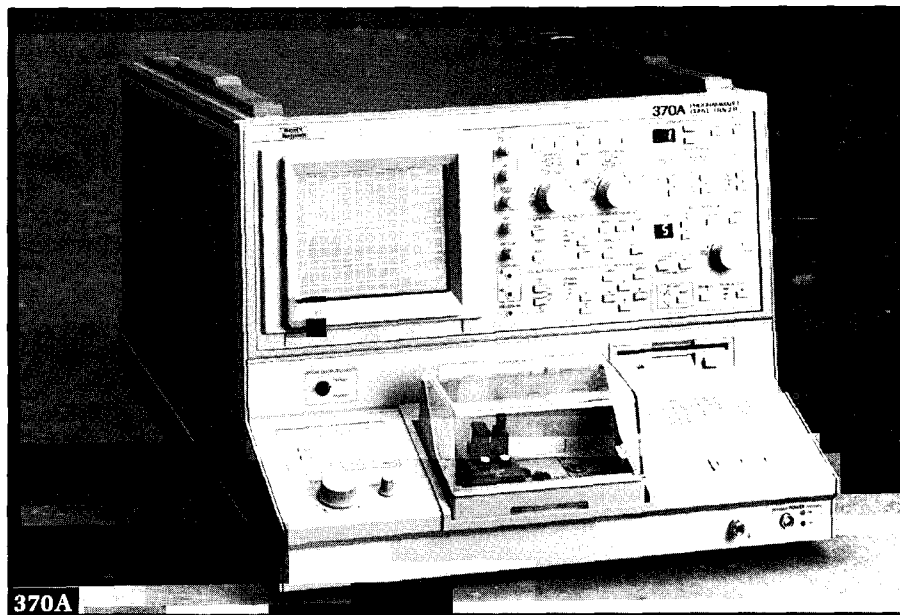
BENEFITS

- Kelvin Sense Measurements
- High Resolution Measurements
- Versatile Power Range
- Fully Programmable
- Save and Recall Setups Using Floppy Disk for Later Use

Ⓐ Applications

Manual or Automated High Resolution DC Parametric Characterization of Semiconductors

- Incoming Inspection
- Manufacturing Test
- Process Monitoring and Quality Control
- Data Sheet Generation
- Component Matching
- Failure Analysis
- Engineering



370A Programmable Curve Tracer

The 370A, the world standard for high resolution curve tracers is used in a wide variety of applications. The 370A performs DC parametric characterization of transistors, thyristors, diodes, SCRs, MOSFETs, optoelectronic components, solar cells, solid state displays and other semiconductor devices.

In the R&D lab, it is used for characterization of new designs, extraction of SPICE parameters, failure analysis, and data sheet generation.

In manufacturing test, the 370A is used to verify device quality and process monitoring.

The 370A is used for incoming inspection to verify device performance, perform failure analysis and to match components.

INTERACTIVE, PROGRAMMABLE CONTROL

Interactive control of all measurements is accomplished from the full featured front panel or over the GPIB. Operating parameters can be adjusted and stored and recalled using several storage methods including the 370A non-volatile memory, the built-in DOS compatible floppy disk or to an external controller.

TEST AND MEASUREMENT SOFTWARE

Metrics software offers computer-controlled DC parameter characterization of numerous semiconductor devices. Through Metrics ICS control of the 370A, measurements can be performed without the need to interact with the instruments front panel. Every aspect of instrument control and data analysis is available through a set of interactive dialog boxes that are configured in a graphics-oriented Microsoft Windows environment.

Turn to page 436 for more information about Metrics ICS software.

TEST FIXTURING

A test fixture is a standard accessory that provides safe device enclosure to ensure operator protection during measurements. The test fixture accommodates standard A1001 through A1005 adapters with Kelvin sensing, 3-Pin adapters without Kelvin sensing and the A1023 and A1024 surface mount adapters.

DIRECT HARDCOPY

Plotter output data can be sent directly from the 370A without the need for an external controller. Plotting can continue while the 370A performs the next tasks.

For your local Tektronix representative see the list in the back of this catalog or outside the U.S. call: 1-503-627-1933, inside the U.S. call: 1-800-426-2200.



Product(s) complies with IEEE Standard 488.1, and with Tektronix Standard Codes and Formats.



See Tektronix on the World Wide Web:
<http://www.tek.com>

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Curve Tracer

370A

Source Characteristics

COLLECTOR SUPPLY

Modes – AC, ±DC, ±Leakage, ±Rectified Sine.

| Range | Max Peak Current (±) | Peak Current Pulsed (±)*1 |
|--------|----------------------|---------------------------|
| 16 V | 10 A | 20 A |
| 80 V | 2 A | 4 A |
| 400 V | .4 A | .8 A |
| 2000 V | .05 A | .1 A |

*1 Collector supply is not pulsed; assumes a pulsed step generator supply.

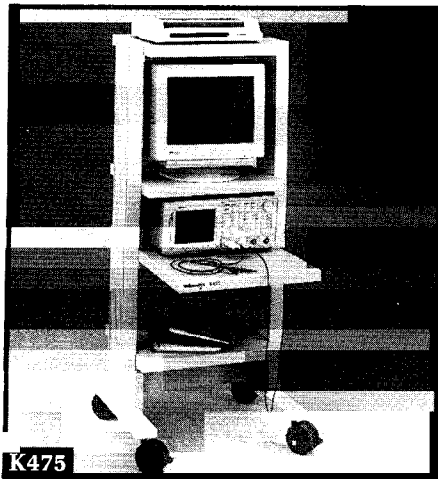
STEP GENERATOR

Modes – Stair step: DC, 80 µsec pulse, 300 µsec pulse.

Step Range – Current: 50 nA to 200 mA in 1-2-5 sequence. Voltage: 50 mV to 2 V in 1-2-5 sequence.

Offset – Up to ±10X step amplitude.

No. of steps – 0 to 10.



Accessory

K475

Instrument Cart

- Ergonomic design
- Simple height, angle, and shelf adjustments
- Durable steel and aluminum construction
- Large diameter smooth rolling casters
- Nylon safety straps included

For complete selection information on all Accessory products, see page 438.

Measurement Characteristics

Collector Current – Measurement range: 100 nA/div (1 nA resolution) to 2 A/div. Accuracy: 1.5% of cursor readout + 0.05 div of setting (with dot cursor).

Emitter Current – Measurement range: 1 nA/div (10 pA resolution) to 2 mA/div. Accuracy: 1.5% of cursor readout + 0.05 div of setting + 1 nA.

ORDERING INFORMATION

For price information: Outside the U.S. contact your local Tektronix representative, inside the U.S. see the price list in the back of this catalog.

370A

Curve Tracer.

Includes: Blank Adapter A1001; In-line Transistor A1002, Axial Diode Lead Adapter A1005; 4 and 6 Lead Transistor/FET Adapter A1007; Floppy Diskette (119-3446-00); Protective Cover (337-3344-00); Spare Fuses 125 V/4 A (159-0259-00); Slow Blow 250 V/2 A Fuse (159-0160-00); Power Cord (161-0066-00); Operator's Manual (070-7779-00).

Opt. 1R – Rack Mounting.

MEASUREMENT SERVICE OPTIONS

Opt. C3 – Three years of Calibration Services.

Opt. C5 – Five years of Calibration Services.

Opt. D3 – Test Data (requires Opt. C3).

Opt. D5 – Test Data (requires Opt. C5).

Opt. R3 – Repair warranty extended to cover three years.

Opt. R5 – Repair warranty extended to cover five years.

ADDITIONAL ACCESSORIES – Also see page 438.

Service Manual – Order 070-7780-00.

Calibration Fixture – Order 067-0187-00.

Rackmount Kit – Order 016-0930-00.

Socket Adapters – See adapters on page 437.

SOFTWARE

METRICS ICS Software – Requires 063-1650-00 drivers. Order 063-1649-00.

METRICS Software Drivers – Tektronix 37x Curve Tracer Drivers. Order 063-1650-00.

CART – Order K475.

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