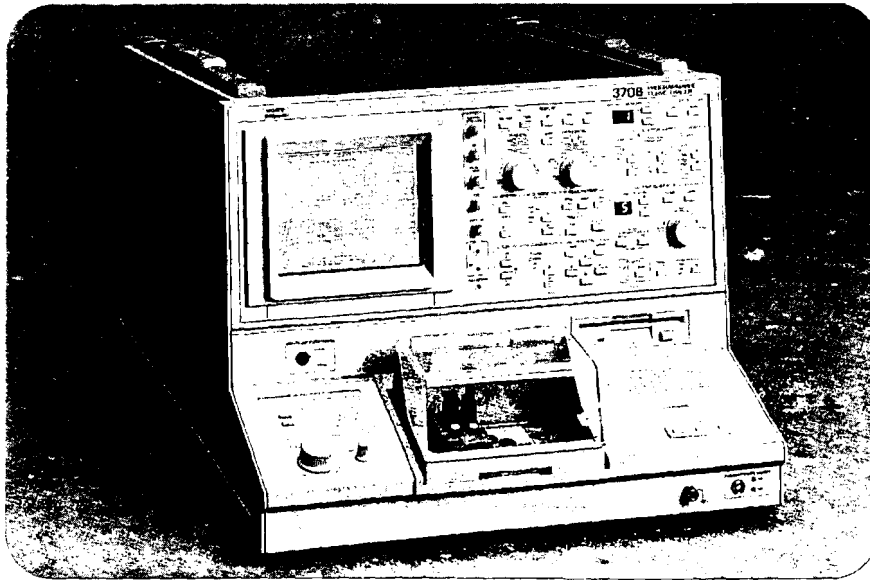


## Curve Tracers

NEW 370B • NEW 371B



► 370B.

### 370B/371B Programmable Curve Tracer

#### Interactive Programmable Control

Interactive control of all measurement 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 370B memory, the built-in MS DOS compatible floppy disk or to an external controller.

#### 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.

#### 370B Programmable Curve Tracer

The 370B, the world standard for high resolution curve tracers is used in a wide variety of applications. The 370B 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 370B is used for a verify device quality and process monitoring.

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

#### ► Features & Benefits

High Precision Measurements of Semiconductor Devices

- Up to 2000 Volts or 10 Amp Sourcing (370B)
- Up to 3,000 Volts (371B)
- Up to 220 Watts (370B)
- Up to 400 Amps (371B)
- 1 Nanoamp Measurement Resolution (370B)
- Up to 3,000 Watts (371B)

Down to 2 Millivolt Measurement Resolution (370B)

Waveform Comparison

Envelope Display

Waveform Averaging

Dot Cursor (370B)

Kelvin Sense Measurements

Fully Programmable

1.44MB Floppy Drive Stores Setup and Bitmap of Curves

#### ► 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

For your local Tektronix representative see the list in the back of this catalog or outside the U.S. call: 1-503-627-7111, inside the U.S. call: 1-800-833-9200.

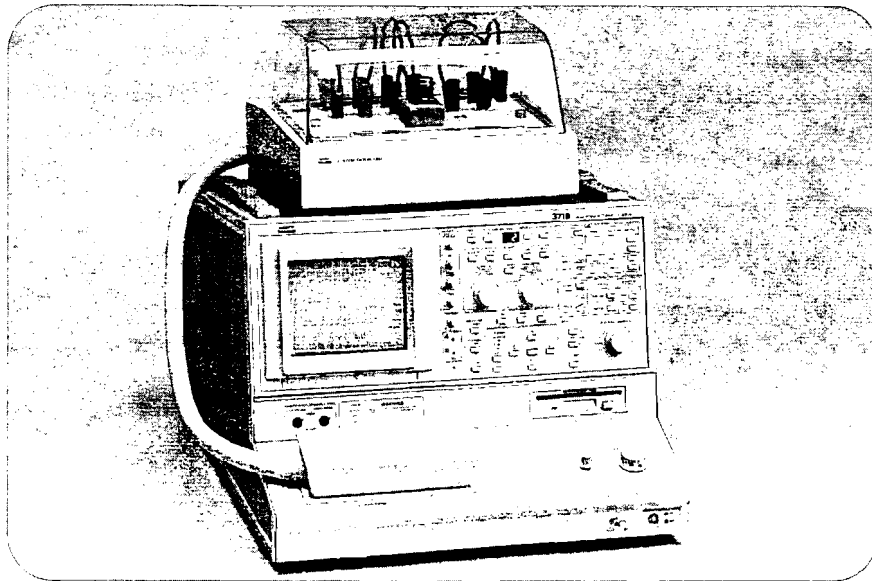


Product(s) complies with IEEE Standard 488.1-1987, RS-232-C, and with Tektronix Standard Codes and Formats.



# Curve Tracers

370B • 371B



▶ 371B.

## 371B High Power Programmable Curve Tracer

The 371B, the industry leader in high power curve tracers, is used for testing a wide variety of power semiconductors. It performs DC parametric characterization of thyristors, SCRs and power MOSFETs.

The high voltage collector mode permits testing the Off-characteristics of a device up to 3,000 volts. The pulsed high current collector mode provides output current pulses greater than 400 amps peak for testing up to 3,000 watts.

In the R&D lab, the 371B is used for characterization of new designs of power devices, extraction of SPICE parameters, failure analysis and data sheet generation.

In manufacturing test, the 371B is used for a verify device quality and process monitoring.

The 371B is used for incoming inspection to verify power device performance and performance failure.

### Automated Cursor

The 371B provides three cursor measurement modes. The Dot cursor provides direct screen readout of voltage, current, gm or DC beta at any point. The Window cursor can be positioned between two curves to measure small signal beta or gm and can also be used for visual go/no-go test. The Function line cursor provides screen readout of a slope or intercept value.

### Sweep Measurement Mode

In the sweep measurement mode, the 371B will automatically construct a family of curves while stimulating the device with low duty-cycle pulses. With this capability, power curves can be displayed without excessive heating of the device.

## ▶ Characteristics

### Source Characteristics

#### Collector Supply

Modes- AC,  $\pm$ DC,  $\pm$ Leakage,  $\pm$ Rectified Sine.

Range	Max PeakPeak Current ( $\pm$ )	Current Pulsed ( $\pm$ )*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  $\mu$ s pulse, 300  $\mu$ s 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  $\pm$ 10x step amplitude.

No. of Steps – 0 to 10.

#### 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.

Safety – UL 3111.1, CSA C22.2 No. 1010.1