

## TF 1000

### TF Analyzer 1000 Measurement System

The ferroelectric test system TF Analyzer 1000 is designed to allow various measurements on ferroelectric materials to determine its main electric characteristics.

Standard features of the TF Analyzer 1000 are

- Hysteresis measurement
- Fatigue measurement
- Retention measurement
- Imprint measurement
- Leakage current measurement

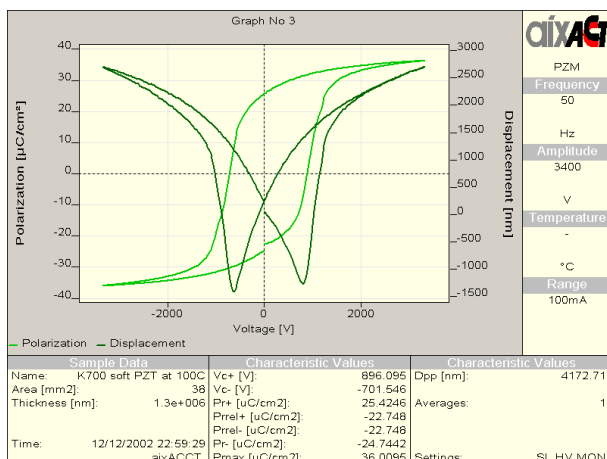
and optional

- C(V) measurement
- Piezo measurement

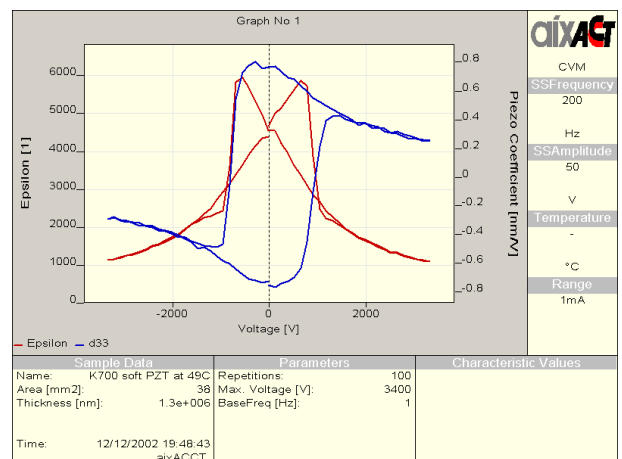


The TF Analyzer 1000 includes a built-in function generator, an analog input board, and a wide bandwidth virtual ground amplifier with driving unit. This system offers hysteresis measurements from 0.1 Hz to 1000 Hz bandwidth depending on the excitation voltage in virtual ground mode.

A Windows XP / 2000 based graphical user interface ensures easy access to all operations and has been designed to cover scientific and next generation application needs.



Large signal response of Keramos PZT sample



Small signal response on Keramos PZT samples

## TF 1000

### ■ Features / Specifications

Computer hard- and software:

- IBM PC compatible computer
- VGA graphical interface
- USB port and 3.5" floppy drive
- 40 GB hard disk or larger
- min. 128 MB RAM
- Operating system Windows XP / 2000 or higher
- aixACCT's sophisticated and highly flexible ferroelectric test software

Driving Unit:

- Voltage range  $\pm 12$  V\* (1% accuracy)  
(optional with external amplifier up to 10.000 V)
- Output impedance 50  $\Omega$
- Maximum hysteresis excitation frequency (load dependent) 1000 Hz\*
- Min. pulse width 20  $\mu$ s\*
- Maximum fatigue frequency 50 kHz\*
- Slew rate (typical) 10 V/ $\mu$ s
- Maximum capacitive load (freq. dependent) 100 nF
- Steady state output current  $\pm 50$  mA\*

\* Other options available upon request.

Current Amplifier:

- Virtual ground
- Current range 1 nA - 1 A (1% accuracy)
- High-voltage protection
- Rise time (maximum values)  
Ranges:  
1 nA 300  $\mu$ s  
1 mA 30  $\mu$ s  
1 A 10  $\mu$ s

Dimensions:

- Height 100 mm, Width 480 mm, Depth 530 mm
- Weight 10 kg