

TF 1000

TF Analyzer 1000 Measurement System

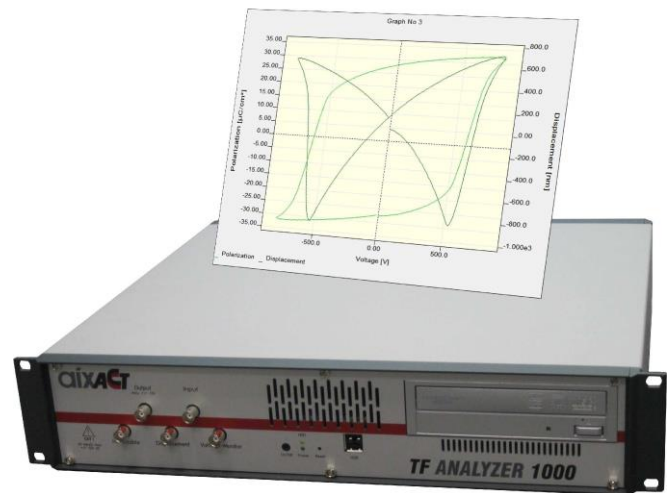
The ferroelectric test system TF Analyzer 1000 is designed to allow various measurements on ferroelectric materials to determine its main electric characteristics.

Standard features of the TF Analyzer 1000 are

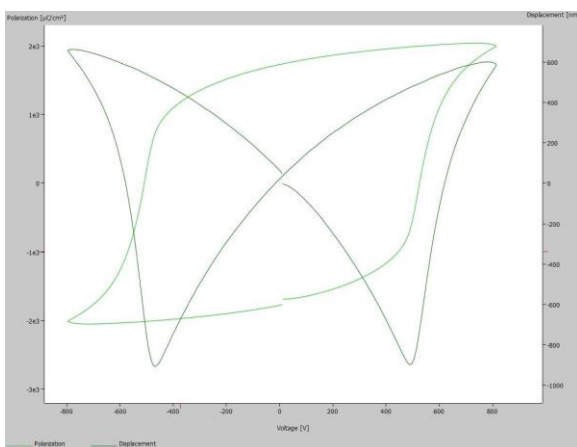
- Dynamic Hysteresis measurement - DHM
- Fatigue measurement - FM
- Retention measurement - RM
- Imprint measurement - IM
- Leakage current measurement - LM

and optional

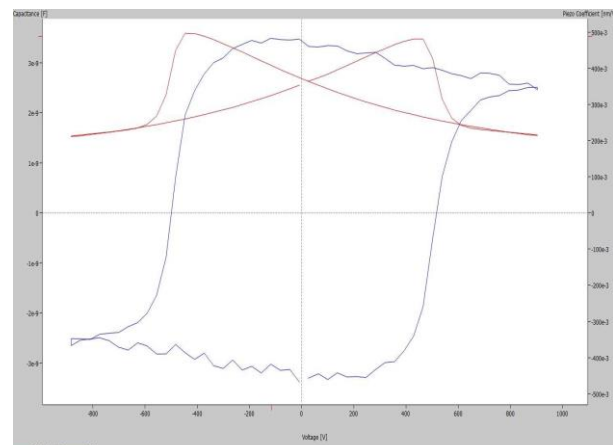
- C(V) measurement - CVM
- Piezo measurement - PZM
- Pulse Measurement – PM
- Static Hysteresis measurement – SHM



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. Our sophisticated aixPlover3.0 software running under Windows 10 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 with multiple core processor type min i3
- VGA graphical interface
- USB port and DVD drive
- min. 250GB hard disk or larger
- min. 2GB RAM
- Operating system Windows 10 or higher
- aixACCT's sophisticated and highly flexible ferroelectric test software aixPlover3.0
- Manuals only available in English

Driving Unit:

- Voltage range ± 10 V* (1% accuracy)
(Optional with external amplifier up to 10.000 V)
- Output impedance 50 Ω
- Maximum hysteresis excitation frequency (load dependent) 1000 Hz*
- Min. pulse width 5 μ s*
- Maximum fatigue frequency 100 kHz*
- Slew rate (typical) 10 V/ μ s
- 4 x16bit input resolution
- 16 bit output resolution
- Maximum capacitive load (freq. dependent) 100 nF
- Steady state output current ± 50 mA*

* Other options available upon request.

Current Amplifier:

- Virtual ground
- Current range 1 nA - 1 A (1% accuracy)
- Minimum Charge Resolution: ≤ 20 fC
- Maximum Charge Resolution: ≥ 1 C
- High-voltage protection against dielectric brake down (>20 kV)
- Rise time (maximum values) Ranges:
 - 1 nA 300 μ s
 - 1 mA 30 μ s
 - 1 A 10 μ s

Dimensions:

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