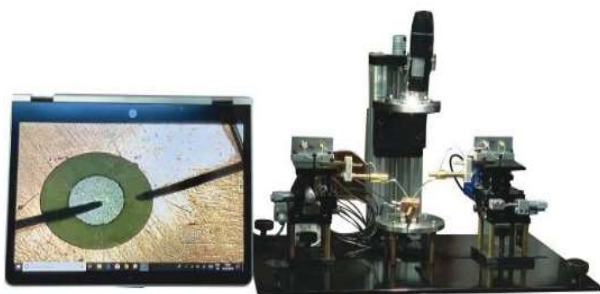


# THIN FILM FERROELECTRIC TEST SYSTEM



## ABOUT THE SYSTEM

The **Thin Ferroelectric Test system** is versatile having maximum test facility for **thin film measurements**. This model is ideal for advance researchers who have wide interest in performing **high resolution measurements**. The model is available in **10/100/500V field option**. **High Voltage amplifier** can be integrated with **thin film main unit**. The Thin Ferroelectric Test system is designed by our company & its most advanced in its specifications and can undertake various tests **simultaneously**. The resolution of the system is precise **as low as femto coulomb**.

- Hysteresis Frequency Range: **0.03Hz – 1 MHz**
- **18 Bit** Resolution at **2.5 MHz**
- Hysteresis Accuracy: **0.5%**
- Max Data Points: **32768**
- Minimum Pulse Width: **0.2 μs**
- Maximum Pulse Width: **1s**
- Leakage Current Resolution: **1 pA**
- **2** External Input **+10V** range as low as **20 mV** with **1nV** resolution
- Fatigue Measurement: **2.5 MHz**
- Option to attach **10KV High Voltage Amplifier**

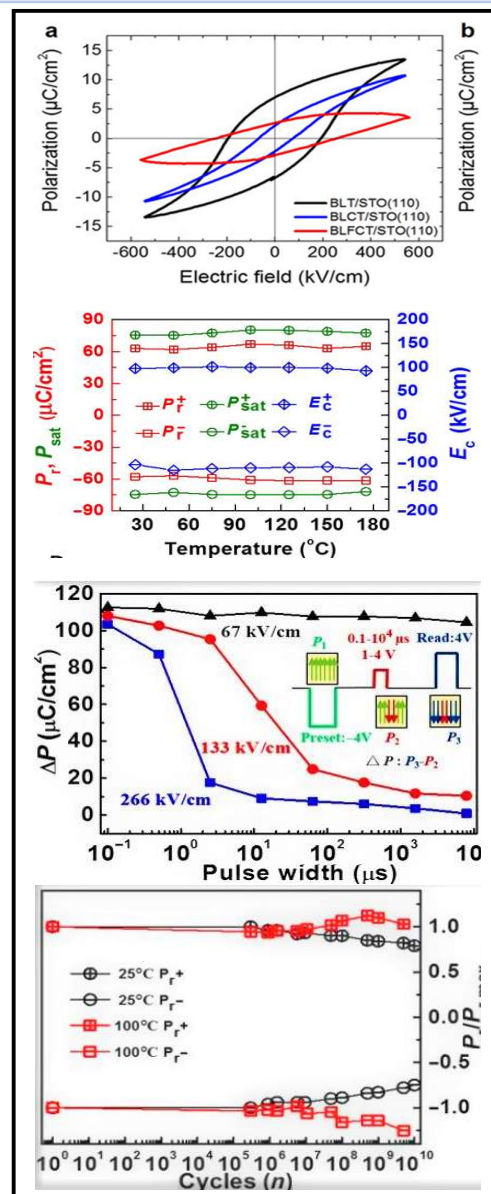
## MODEL: 0.03THPE 1MHZ 1F

### Various tests performed by this model:

- |   |                                    |
|---|------------------------------------|
| - Ferroelectric charge at different frequencies | - Single point C/V                 |
| - Ferroelectric charge at different temperature | - PUND measurement                 |
| - Fatigue measurement                           | - General pulse and sample pulse   |
| - Remnant hysteresis                            | - Pyroelectric current measurement |
| - Curve energy                                  |                                    |
| - Leakage current/Current Density               |                                    |

### Test options available in other models:

- |  |                              |
|--|------------------------------|
| - Ferroelectric charge at different magnetic field | - DC Poling                  |
| - ME Coupling Measurement                          | - Electrical Strain vs Field |



# THIN FILM FERROELECTRIC TEST SYSTEM

## TECHNICAL SPECIFICATION

<b>MODEL</b>	<b>0.03THPE 1MHZ 1F</b>
Field	$\pm 10/100/ 500$ V
Test Frequency Range Small Signal	0.03Hz to 1MHz
Test Frequency Range Large Signal (HV amplifier)	0.03Hz to 10 KHz
Wave Form Generator	18 Bit
ADC Resolution	18 Bit Resolution at 2.5 MHz
Minimum Charge Resolution	0.8 fC
Minimum Dot Size	0.08 $\mu$ m square
Maximum Charge Resolution	6 m C (with HV Amp)
Maximum area resolution	50 cm square (with HV Amp)
Maximum Hysteresis Frequency	1MHz
Minimum Hysteresis Frequency	0.03Hz
Minimum Pulse Width	0.2 $\mu$ s
Maximum Pulse Width	1s
Minimum Pulse Rise Time (10V)	400ns
Maximum Delay between Pulse	40ks
Internal Clock	20ns
Minimum Leakage Current	1pA
Leakage Current Accuracy	5pA 2.5% 1pA 10%
Input Capacitance	5f
Maximum Small Signal Cap Freq	1 MHz
Minimum Small Signal Cap Freq	0.03 Hz
Fatigue	up to 20 <sup>th</sup> order of cycles
Resolution	18 Bit (1fC)
Input Power	220V 5 Amp
<b>Temperature Options</b>	<b>Model</b>
Cryogenic Temperature Stage	100RT (96K – 273K)
Temperature Stage	RT250 (RT – 500K)
Resolution/Accuracy	0.1 $^{\circ}$ K/1 $^{\circ}$ K
Data	ASCII
Interface	USB 3.0
<b>Microprobe Station Option</b>	<b>Model</b>
Micro-positioners	2 Probe/4 Probe
Movement resolution	0.001mm (XYZ)
Digital Camera / binocular microscope	1600x /2400x
Vacuum chuck	Inbuilt

(For optional items separate brochure is available)

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