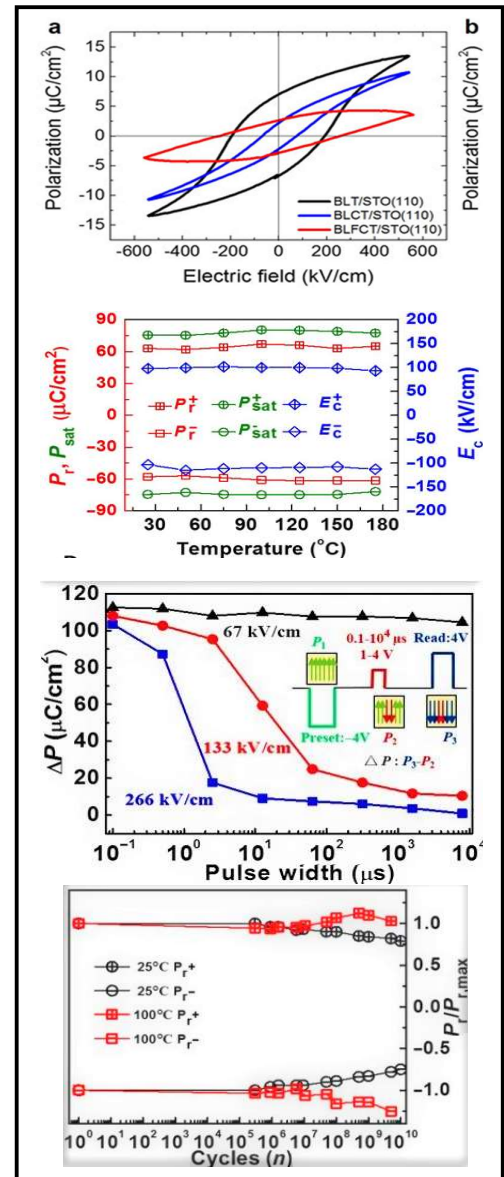


STANDARD PE LOOP FERROELECTRIC TEST SYSTEM



ABOUT THE SYSTEM

The Ferroelectricity is a characteristic of certain materials that have continuous electric polarization that can be reversed by the application of an external electric field. All ferroelectrics are pyroelectric, with the additional property that their natural electrical polarization is reversible. The term is used in analogy to ferrimagnetism, in which a material exhibits a permanent magnetic moment. When most materials are polarized, the polarization induced, P , is almost exactly proportional to the applied external electric field E ; so, the polarization is a linear function. This is called dielectric polarization. Some materials, known as paraelectric materials, show a more enhanced nonlinear polarization. The electric permittivity, corresponding to the slope of the polarization curve, is not constant as in dielectrics but is a function of the external electric field. PE Loop Ferroelectric Test systems designed by our company are most advanced in its specifications and can undertake various tests needed by researchers. The accuracy and the resolution of the system is precise as low as femto coulomb.



MODEL: 20PE 1KHZ 0.01M

Various Tests Performed by this Model

- Ferroelectric charge at different frequencies
- Fatigue measurement
- Ferroelectric charge at different temperature

Test performed by other models.

- Remnant hysteresis, curve energy, leakage current,
- Ferroelectric charge at different magnetic field
- Single point C/V, PUND measurement, General pulse and sample pulse, Electrical Strain vs Field

STANDARD PE LOOP FERROELECTRIC TEST SYSTEM

TECHNICAL SPECIFICATION

STANDARD PE - Main Unit	20PE 1KHZ 0.01M
Field	$\pm 5KV / (50KV/cm)$
Frequency	20Hz – 1KHz
Fatigue	up to 20 th order of cycles
Resolution	16 Bit (0.01uC)
Data	ASCII
Interface	USB/RS232
Wave Form Generator	14 Bit
ADC Resolution	16 Bit
Minimum Charge Sensitivity of Bulk	0.01 uC
Maximum Charge Measurement	100 uC
Minimum Sample Area	1 sq. mm
Maximum Sample Diameter	10 – 15 mm
Maximum Sample Thickness	3 mm
Hysteresis Frequency Bulk Sample	1KHz
Maximum Hysteresis Frequency	1KHz
Minimum Hysteresis Frequency	20Hz
Minimum Leakage Current	0.01uA
Input Capacitance	1 p F
Size	Rack Mountable Unit 19 Inches 4U
Temperature Options	Models
Cryogenic Temperature Stage	100RT (96K – 273K)
Temperature Stage	RT250 (RT – 500K)
Resolution	0.1°K
Accuracy	1°K
Sample Holder	Specifications
Sample Holder	Two Probe Spring Loaded
Construction	Brass
Electrode Material	Silver
Sample Dimension	2- 10 mm diameter
Thickness (Bulk)	0.1mm to 1mm
*For detailed specification, please refer to respective brochures.	

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