# ADVANCE PE LOOP FERROELECTRIC TEST SYSTEM



### **ABOUT THE SYSTEM**

- Hysteresis Frequency Range: 0.03Hz –2.5MHz
- 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 <u>+</u>10V range as low as 20 mV with 1nV resolution
- Fatigue Measurement: 2.5 MHz

The Advance Ferroelectric Test system is most versatile advanced model having maximum test facility for ferroelectric measurements. This Advance Model is ideal for advance researchers who have wide interest in performing high end task of ferroelectricity. The model is available in 5/10KV field option. High Voltage amplifier is fully integrated with 5/10KV PE main unit. The Advance 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.

#### **TESTS PERFROMED**

- Hysteresis at different frequencies and temperature
- Ferroelectric Charge at different frequencies & temperature
- Fatigue measurement
- Remnant/Retention hysteresis
- Curve energy
- Leakage current/Current Density



- Single point C/V
- Pund/Imprint measurement
- General pulse and sample pulse
- DC Poling
- Independent I/V



## **ADVANCE PE LOOP FERROELECTRIC TEST SYSTEM**

### **TECHNICAL SPECIFICATION**

MODEL	0.03PE 2MHZ 1F
Field Options	<u>+</u> 10/100/200/500 V
Field with (External HV amplifier)	<u>+</u> 5 KV or <u>+</u> 10 KV
Test Frequency Range Small Signal	0.03Hz to 500KHz/1MHz up to 200V
	0.03Hz to 10KHz/1MHz up to 500V
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	0.08µm square
Maximum Charge Resolution	6 m C (with HV Amp)
Maximum area resolution	50 cm square (with HV Amp)
Maximum Hysteresis Frequency	2.5 MHz
Minimum Hysteresis Frequency	0.03Hz
Minimum Pulse Width	0.2µs
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	2.5 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
Electrical Strain Vs Field (Optional Item)	0.1 SM 100HZ 18
Frequency Range	0.1 Hz to 100 Hz
Temperature Options (Optional Item)	Model
Cryogenic Temperature Stage	100RT (96K – 273K)
Temperature Stage	RT250 (RT – 500K)
Resolution/ Accuracy	0.1°K
Interface	USB 3.0
Sample Holder	Specifications
Sample Holder	Two Probe Spring Loaded
Construction	SS304 /Teflon
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(For optional items separate brochure is available)

### **MARINE INDIA**

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