

# STE110 Series Semiconductor C-V Characteristic Analyzer



## Features

- 10.1-inch capacitive touch screen, resolution 1280\*800, Linux system
- Dual CPU architecture , the fastest test speed of 0.56ms
- Three test methods: spot test, list scan, and graphic scan (option)
- Four parasitic parameters (Ciss, Coss, Crss, Rg) are measured and displayed on the same screen
- Integrated design: LCR + high voltage source + channel switching
- Standard 2-channel test, which can test two devices or dual-chip devices at the same time, the channel is the most Up to 6 channels can be expanded, channel parameters are stored separately
- Fast charging, shortens capacitor charging time and enables fast testing
- Fast turn-on test Conduction
- Automatic delay setting
- High Bias: VGS: 0 - ±40V, VDS: 0 - 200V/1500V/3000V
- 10 bin sorting



RS232	LAN	HANDER	USB HOST	USB DEVICE	RS485
standard	standard	standard	standard	standard	option

## STE110 Series

Dimension: 430(W)x177(H)x265(D)  
Weight : about 16kg

## Applications

- Semiconductor components/Power components

Parasitic capacitance test and C-V characteristic analysis of diodes, triodes, MOSFETs, IGBTs, thyristors, integrated circuits, optoelectronic chips, etc.

- Semiconductor material  
Wafer dicing, C-V characteristic analysis
- Liquid crystal material  
Elastic constant analysis

## Specifications

Model	STE111	STE112	STE113	
Channel	2 (2/4 Ch Optional)			
Display	Display	10.1-inch capacitive touchscreen		
	Ratio	16:9		
	Resolution	1280×RGB×800		
Test Parameter	C <sub>ISS</sub> , C <sub>OSS</sub> , C <sub>RSS</sub> , R <sub>g</sub> . Four parameter selectable arbitrarily			
Test Frequency	Range	10kHz-2MHz		
	Accuracy	0.01%		
	Resolution	10mHz	1.00000kHz-9.99999kHz	
		100mHz	10.0000kHz-99.9999kHz	
Resolution	1Hz	100.000kHz-999.999kHz		
	10Hz	1.00000MHz-2.00000MHz		
Test Level	Voltage Range	5mVrms-2Vrms		
	Accuracy	± (10% x Setting Value+2mV)		
	Resolution	1mVrms	5mVrms-1Vrms	
10mVrms		1Vrms-2Vrms		
V <sub>GS</sub>	Range	0 - ±40V		
	Accuracy	1% x Setting Voltage+8mV		
	Resolution	1mV	0V - ±10V	
10mV		±10V - ±40V		
V <sub>DS</sub>	Range	0 - ±200V	0 - ±1500V	0 - ±3000V
	Accuracy	1%×Setting Voltage + 100mV		
Output Impedance	100Ω, ±2%@1kHz			
Computation	Absolute deviation Δ from nominal value, percent deviation from nominal value Δ%			
Calibration Function	OPEN, SHORT, LOAD			

Measure Average		1-255 times	
AD Conversion Time (ms/time)		Fast+: 0.56ms (> 5kHz), Fast: 3.3ms, Middle: 90ms, Slow: 220ms.	
Basic Accuracy		0.1%	
C <sub>ISS</sub> , C <sub>OSS</sub> , C <sub>RSS</sub>		0.00001pF - 9.99999F	
Rg		0.001mΩ - 99.9999MΩ	
Δ%		± (0.000% - 999.9%)	
Multi-Function Parameter List Scan	Spots	20 spots, the average number can be set for each spot, and each spot can be sorted separately	
	Parameter	Test Frequency, Vg, Vd, Channel	
	Trigger Mode	Sequence SEQ: After one trigger, measure at all sweep points, /EOM/INDEX output only once.  Step: perform a sweep point measurement per trigger, each point outputs /EOM/INDEX, but the list scan comparator result is only output at the last /EOM	
Graphic Scan	Scanning Spots	Any Spot is optional, up to 1001 Spots	
	Result Display	Multiple curves with the same parameter and different Vg; multiple curves with the same Vg and different parameters.	
	Display Range	Real-time automatic, locked	
	Coordinate ruler	Logarithmic, linear	
	Parameter	Vg, Vd	
	Trigger Mode	Single	Manual trigger once, complete one scan from the start spot to the end spot, and start a new scan with the next trigger signal
		Continuous	Infinite loop scan from the start spot to the end spot
Result Storage	Graphics, files		
Comparators	Bin	10Bin, PASS, FAIL	
	Bin Deviation Setting	Deviation, Percent Deviation, Off	
	Bin Mode	Tolerance, continuous	
	Bin Count	0-99999	
	Bin Judgement	A maximum of four parameter limit ranges can be set for each bin. The corresponding bin number will be displayed within the setting range of the four test parameter results. If it exceeds the set maximum bin number range, FAIL will be displayed. Test parameters without upper and lower limits will be automatically ignored.	
	PASS/FAIL indication	Satisfy Bin1-10, the PASS light on the front panel is on, otherwise the FAIL light is on.	
Data Storage		201 measurement results can be read in batches	
Storage File	Internal	About 100M non-volatile memory test setup file	
	External USB	Test setup files, screenshots, log files	
Keyboard Lock		Lockable front panel buttons, other functions to be expanded	
Interface	USB HOST	2 USB HOST interfaces, which can be connected to the mouse and keyboard at the same time, and only one U disk can be used at the same time	
	USB DEVICE	Universal Serial Bus socket, small type B (4 contact positions); compliant with USB TMC-USB488 and USB2.0, female connector for connecting external controllers.	
	LAN	10/100M Ethernet, 8 pins, two speed options	
	HANDLER	Used for Bin signal output	
	RS232C	Standard 9-pin, crossed	
	RS485	Can receive modification or external RS232 to RS485 module	
Boot Warm-up Time		60 Minutes	
Power consumption		100-120VAC/198-242VAC Option, 47-63Hz	
Power consumption		More than 130VA	
Dimensions (WxHxD) mm		430x177x405	
Weight		16kg	