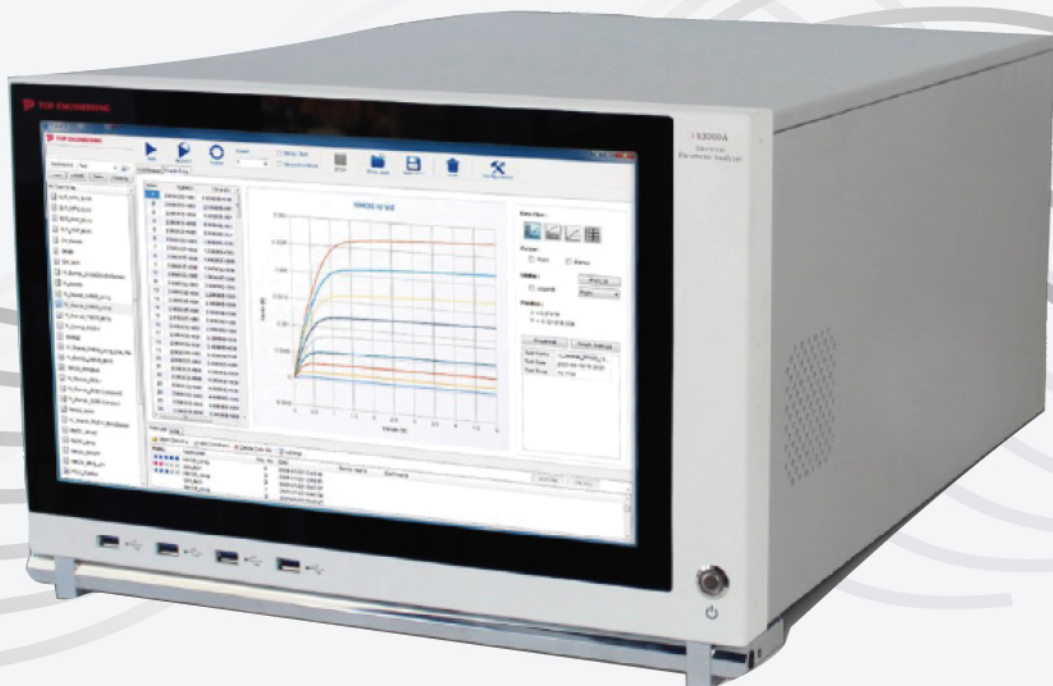




S3000A

Electrical Parameter Analyzer



**Authorized Exclusive Distributor for Educational
Institutions in Korea & International Markets**



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Manufacturer



TOP ENGINEERING
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Gyeonggi-do, Korea

S3000A

Electrical Parameter Analyzer

- Accelerates R&D for semiconductor and electrical materials, enabling the evaluation of electrical parameters across diverse fields, including semiconductors, advanced materials, and electrochemistry.
- Provides high-precision measurements, including I-V (Current-Voltage) characterization.
- Supports both manual and fully automated measurements for R&D applications.
- The system accommodates up to 12 slots, allowing for various instrument modules to be configured based on user requirements. Notably, it can be equipped with up to 12 MPSMU channels.

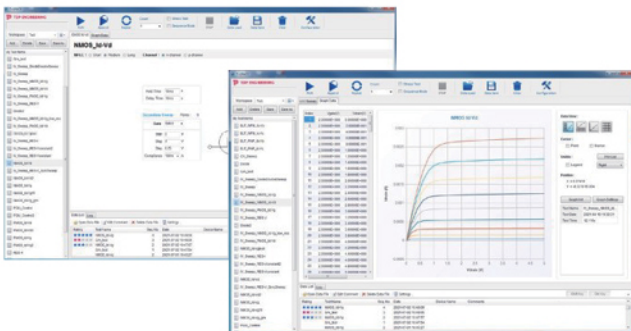
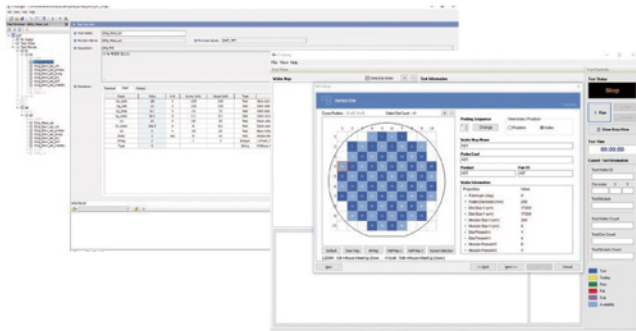
Key Specifications/Functions

Measurement Capabilities	Features
Current/Voltage(IV) (S3020)	• Voltage and Current Range : 100V/0.1A • Current and Voltage Resolution : 1fA/0.1μV • Spot, Sweep and other function for basic and advance IV measurement

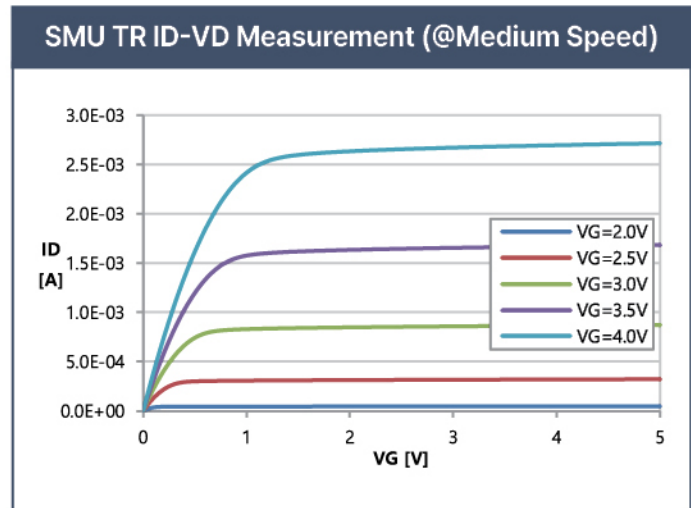
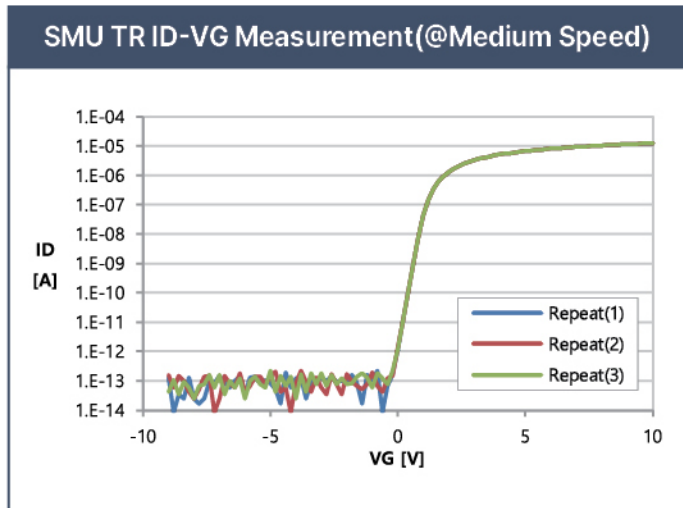
Instrument Modules

Code	Name	Description	Qty	Total channel
S3020	MPSMU	Medium Power SMU (1ch) : 2W,200V/100mA	4ea	4ea

Software

T-Space	T-REX
 Basic Test System S/W - Sets each device and item - Displays the Graph and Data of test device	 Automation Test System S/W - Manages Control of Probe Station - Programs recipe

Measurement Example



SMU Module Specifications

Voltage range, resolution, and accuracy¹

Voltage range	Force resolution ²	Measure resolution ²	Measure accuracy	Maximum current
±0.5 V	2 μ V	0.1 μ V	±(0.02%+150 μ V)	0.1 A
±2 V	5 μ V	0.5 μ V	±(0.02%+200 μ V)	0.1 A
±5 V	20 μ V	1 μ V	±(0.02%+500 μ V)	0.1 A
±20 V	50 μ V	5 μ V	±(0.02%+1 mV)	0.1 A
±40 V	100 μ V	10 μ V	±(0.02%+2 mV)	50 mA
±200 V	500 μ V	50 μ V	±(0.02%+3 mV)	10 mA

Current range, resolution, and accuracy¹

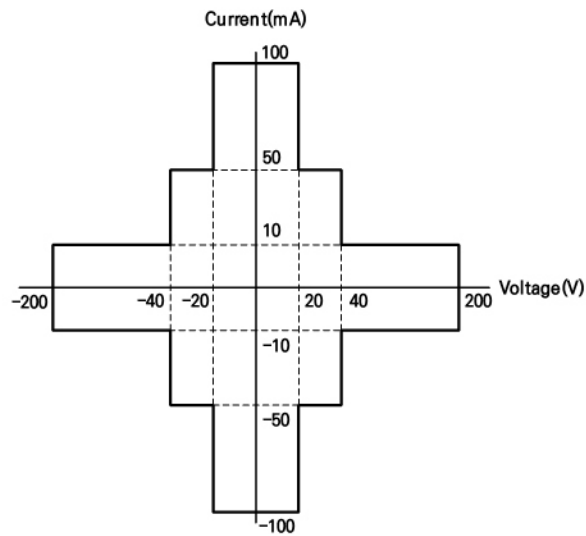
Current Range	Force resolution ²	Measure resolution ²	Measure accuracy	Maximum voltage
±1 nA	10 fA	1 fA	±(0.1%+400 fA)	200 V
±10 nA	50 fA	2 fA	±(0.1%+2 pA)	200 V
±100 nA	500 fA	20 fA	±(0.1%+20 pA)	200 V
±1 μ A	5 pA	200 fA	±(0.1%+200 pA)	200 V
±10 μ A	50 pA	2 pA	±(0.05%+2 nA)	200 V
±100 μ A	500 pA	20 pA	±(0.05%+20 nA)	200 V
±1 mA	5 nA	200 pA	±(0.05%+200 nA)	200 V
±10 mA	50 nA	2 nA	±(0.05%+2 μ A)	200 V
±100 mA	500 nA	20 nA	±(0.05%+20 μ A)	40 V (20 V) ³

Notes

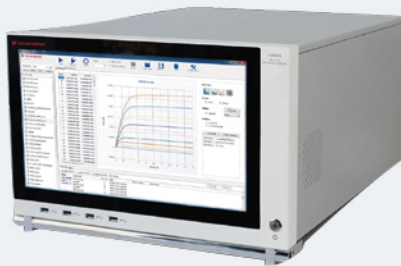
- Resolution and accuracy is valid under specific environmental conditions.
- Specified resolution is limited by fundamental noise limits.
- 40V(10mA<Io≤50mA), 20V(50mA<Io≤0.1A)

SMU Module Specifications

Measurement and output range
(rated power : 2W)



Components



S3000A



Triaxial cable (SMU)



SMA to BNC coaxial cable
(PGU)



LAN Cable



DUT box & Grabber



General Information

- **Mainframe display**

15.6 inch LCD touch screen
1920 x 1080 full HD

- **Operating Condition**

Temperature: 10~40 degree C
Humidity: 10~75% RH
Pressure: 800~2060 hpa

- **Calibration period : 1year**

- **Size and Mass**

Mainframe size (W x H x D) : 430 mm x 290 mm x 530 mm
Mass of equipment(kg) : 26kg (MPSMU 12ch)

- **Power requirement**

Rated Voltage : Main 100~240 Vac
Rated Frequency : 50/60 Hz, 1 Phase, 2Wires + PE
Rated Current : 10 A

- **Warm up time : 30 min (at least)**