



**INSTITUTE OF AUTOMATION AND ELECTROMETRY
OF THE SIBERIAN BRANCH OF THE RUSSIAN ACADEMY OF SCIENCES
(IA&E SB RAS)**

SOURCE-MEASUREMENT UNIT SMU-01

SMU-01 combines functions of voltage source, digital multimeter and staircase generator. The unit is controlled by PC.



SMU-01 front panel

Technical Specifications

Voltage source range, V	± 10 ;
Source step, mV	0.3052;
Source accuracy, %, less than	0.05;
Voltage meas. range, V	± 10 ;
Voltage meas. accuracy, %, less than	0.005;
Max. source current, A	± 0.1 ;
Source meas. ranges, A	$\pm 250 \cdot 10^{-6}$; $\pm 2.75 \cdot 10^{-3}$; $\pm 25.2 \cdot 10^{-3}$; ± 0.1 ;
Current meas. accuracy, %, less than	0.05;
ADC performance, samples/sec.,	10000;
Voltmeter input impedance, G Ω , not less than	2.5;
Ammeter input impedance, m Ω , less than	2;
Current compliance, A	0.115;
PC connection	USB-2.0;
Max. Connection rate, ADC samples/sec.	2000;
Power supply	220V, 50 Hz; 20 W
Weight, kg, less than	0.4.

Technical and Economic Advantages

- Compact.
- Low cost.
- Built-in scripts for typical measurements.
- Additional scenarios could be developed on demand.

Application Areas

- studying of electrical properties of materials;
- semiconductors technology development;
- materials incoming inspection;
- studying of reliability of semiconductor devices;
- measuring of parameters of integrated circuits.

Development Stage: Prototypes are used in studying of ceramic materials in ISSC SB RAS.

Patent protection: Patent could be obtained.

Commercial offers: Contract on manufacturing and delivery of the device is offered.

The estimated cost of Variable pricing depends on features.

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