

IT2705 is a highly integrated modular DC power analyzer designed for dynamic power consumption measurement, battery simulation, and power characterization. It integrates a DC power supply, regenerative load, arbitrary waveform generator, oscilloscope sampling, and data logging functions, featuring a graphical user interface that enables complex test sequences without the need for secondary development.

The IT2705 supports flexible combinations of multiple functional modules, including DC sources, bidirectional sources, regenerative loads, and SMU modules, with single-module power ranging from 20W to 500W, and up to 8 channels configurable. It is ideal for applications such as IoT devices, chip power supply testing, automotive electronics, and wearable technology. The IT2705 empowers engineers to deeply analyze startup waveforms, transient responses, and power consumption characteristics, thereby enhancing both test efficiency and measurement accuracy.



- Supports 20 types of modules (including DC sources, regenerative loads, bidirectional sources, and SMU modules)
- Up to 8 modules can be installed, with independent control and full channel isolation
- Supports two sets of “master-slave parallel” configuration, enabling effortless power range extension \*1
- Graphical operation interface with guided menus for greatly enhanced usability
- Integrates multiple functions, including LIST mode, sequence output, battery testing/simulation, arbitrary waveform customization, and sine sweep
- Built-in EIS (Electrochemical Impedance Spectroscopy) function as standard (when IT2705 is paired with the IT27814 SMU module)
- Internal Ah/Wh statistics with automatic calculation of regenerative energy
- Flexible display modes: Meter / Scope / Data Logger
- Oscilloscope mode with a sampling rate up to 200 kHz
- Data logging with a minimum sampling interval of 20 $\mu$ s
- Web control support, enabling full function operation through a standard web browser
- Standard interfaces: USB / LAN / CAN / Digital I/O, with free control software PV2700 included

\*1 The IT27814 module supports parallel operation only in CC mode

Rated value	Voltage	-20V~20V	
	Current	-3A~3A	
	Power	-20W~20W	
	Series internal resistance (CV Priority)	-0.04 Ω ~1 Ω	
Setup Resolution	Voltage	6V range	6μV
		20V range	20μV
	Current	10mA range	0.1μA
		100mA range	1μA
		3A range	10μA
	Series internal resistance (CV Priority)	6V range	0.25mΩ
20V range		0.5mΩ	
Read Back Resolution	Voltage	6V range	6μV
		20V range	20μV
	Current	10μA range	100pA
		1mA range	10nA
		100mA range	1μA
		3A range	10μA
Setup Accuracy	Voltage	6V range	0.015% + 300 μV
		20V range	0.015% + 1mV
	Current	10mA range	0.025% + 5 μA
		100mA range	0.025% + 10 μA
		3A range	0.03% + 250 μA
	Series internal resistance (CV Priority) (1)	6V range	0.1% + 1.5 mΩ
20V range		0.1% + 3 mΩ	
Read Back Accuracy	Voltage	6V range	0.015% + 300 μV
		20V range	0.015% + 1mV
	Current	10μA range	0.025% + 8 nA
		1mA range	0.025% + 100 nA

		100mA range	0.025% + 10 $\mu$ A
		3A range	0.03% + 250 $\mu$ A
Voltage ripple	Vpeak		$\leq$ 12mVpp
	Vrms		$\leq$ 1.2mV
Transient Response Time (2)	Voltage	6V range with a 1.4A load step	$\leq$ 35 $\mu$ s
		20V range with a 0.8A load step	$\leq$ 35 $\mu$ s
Load Regulation	Voltage (3)	6V range	150 $\mu$ V
		20V range	400 $\mu$ V
	Current	10mA&100mA range	1 $\mu$ A
		1A range	50 $\mu$ A
3A range	100 $\mu$ A		
Output protection	OCP		-3.06A~3.06A
	OVP		-20.4V~20.4V
Remote Sense Compensation Voltage	$<$ 2V		
Isolation DC to GND	600Vdc		
Working Temperature	0~40°C		
Storage Temperature	-10°C~70°C		
IP	IP20		
Cooling	Air		
Dimension ( mm)	320mm*104mm*40.5mm		
Weight( net)	0.95kg		

**Note:**

(1) The voltage/current input is no less than 0.1A.

(2) With 150  $\mu$  F cap (ESR=50 m $\Omega$ ) at load, remote sensing at cap, the current rise time(10%~90%) is 10us, settling band is  $\pm$ 20mV/ $\pm$ 10mV under 6V/20V range.

(3) Under sense mode

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This specification is for reference only and is subject to change without notice.