3751A主要技术参数

Power Measurement	
Range	0 ~ 2000W
Resolution@P<100W	1mW
@P≥100W	10mW
@P≥1000W	100mW
Accuracy	± (0.2%+600mW)

Current Slew Rate	
Range CCH	1mA/us ~ 15A/us
CCL*2	100uA/us ~ 600mA/us
Resolution	1mA/us
Accuracy*3	± (3% + 10us)

Transient Operation	
Transient Mode	Continuous/Pulse/Toggled
Frequency Range*4	0.025Hz ~ 50kHz
High/Low Time	10us ~ 10s
Resolution	10us
Accuracy	± (0.2%+10us)
Rising/Falling Time	10us ~ 10s
Resolution	10us
Accuracy	± (0.2%+10us)

List Characteristics	
Step Time	10us ~ 99999s
Resolution	10us
Accuracy	± (0.2%+10us)
Number of Steps	1 ~ 100
Cycle	1 ~ 255
Store Capacity	20lists
Expanded Functions	Chain

Reverse Current Capacity	
Input OFF	120A
Input ON	150A

Maximum Slew Rate	
Current	15A/us
Voltage	0.6V/us
Programmable Open Circuit	≥20kΩ

Trigger Input	
Trigger Level	TTL falling edge
Trigger Pulse Width	≥10us

Maximum DC Input	
Current	151A
Voltage	242V
Protection Function	OC, OT, OP
Alarm Function	OV, RV

Ripple & Noise	
Current(rms/p-p)	3mA/30mA
Voltage(rms)	5mV

Environment Conditions	
Temperature	0 ~ 50℃
Relative Humidity	≤90%
Remote Interface*5	RS232, GPIB, USB
Programming Language	SCPI

AC Input	
Voltage	(AC110V / AC120V / AC220V / AC240V) ±10%
Frequency	48 to 63Hz
Input Power	110VA
Net Weight	26.5kg

*1. The maximum continuous input power can reach the rated power at 40℃.The maximum continuous input power will linearly decreases to 75% between 40℃ to 50℃.
*2. The current change rate is 1/25 of the set value in CCL mode.
*3. The transition time is defined as the time required for the input to change from 10% to 90%.
*4. The transient frequency depends on the time for high/low level and rising/falling edge.
*5. Standard equipped RS232 and USB cable, optional equipped GPIB card.

ARRAY

ARRAY

3751A

High-power Programmable DC Electronic Load

- High resolution large screen color TFT-LCD display.
- 4 basic operating modes: Constant Current; Constant Voltage; Constant Resistance; Coustaut Power.
- High-speed sequence, high-speed transient, synchronously current waveform output.
- Minimum operating voltage is less than 1.8V at the load's full rated current.
- Programmable rising/falling slew rate.
- With complete fast hardware overcurrent and overpower protection, high reliability.
- Multiple groups parameters and lists can be saved and recalled.
- Standard 4U case can meet the desk test and the rack mounting.
- Supporting SCPI (standard Commands for Programmable Instrumentation) and LabView, and providing necessary PC software.

High Reliability

In order to cope with the complex environment, to maintain the excellent performance of the products, ARRAY pursue the rugged design and the excellent stability.

◆Perfect protection circuit, with over current, over power and over temperature protection, and with over voltage and polarity reverse connection alarm to ensure the safety of the electronic load.

◆High-speed Power-limit circuit can limit the input power when it is overloaded to effectively protect the electronic load and the tested equipment. Thus there is no necessary to interrupt the test. It greatly enhances the adaptability of the electronic load for the complex environment.

◆High-efficiency intelligent tunnel-type cooling system can effectively reduce the system temperature and enhance the system stability to guarantee the system in long-term full-power trouble-free continuous running.

◆The input binding posts are suitable for large current testing and are easy to operate, reliable and durable.

◆The high-impact case and the modularity design enhance the reliability and the maintainability of the system.

Superior Performance

ARRAY accumulating R&D and production experience in the field of electronic load for many years, adopting innovative design and advanced manufacturing technology, comprehensively improve the product performance.

◆Adopting an optimum design of calculation method and high-speed hardware circuit, the D/A conversion rate can reach 500KHz. The smoothness of the slope control is comprehensively enhanced. The resolution and accuracy of transient operation and list characteristics is improved simultaneously.

◆With CCH+CV mode, it is suitable for the test application of car charger and so on new energy.

◆With I MON OUT output terminal, being isolated to the tested source, the system can be connected with oscilloscope to directly observe the dynamic waveform of the current.

◆The 24 bit A/D and 16 bit DA converters incorporated, provide the equipment with greatly enhanced setting and measurement sesolution.

Multifunction

3751A is with rich test functions and can meet the test requirements of users in many fields.

◆4 basic functions: CC, CV, CR and CP and 3 additional functions: CC+CV, CRR+CV and CP+CV.

◆High-speed transient operation with separate high/low level time and rising/falling time control.

◆Powerful sequential test function: minimum step time 10us, maximum step time 99999s, resolution 10us. Cyclic times can be set freely and can be chained to another sequence to realize more complex test procedure.

◆With remote sense input terminal and external trigger input terminal, the remote measurement can monitor the imput signal automatically, and it is not necessary to change the wiring or modify the setting during operation.

◆10 groups of set parameters can be saved and the preset parameters will be uploaded automatically when power ON.

◆Supporting SCPI (Standard Commands for Programmable Instruments), with RS232, USB and GPIB interfaces, it is convenient to built an ATE system with other programmable instruments.

Easy Operability

◆Standard 4U case can meet desk operation and rack mounting.

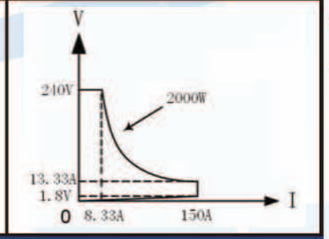
◆Reasonable keyboard design and basic operation using single layer shortcuts, make the test operation be more convenient.

◆Easy-to-set test parameters coupled with a powerful sequence editing function

◆All electronic calibration, no need to dismantle the equipment case.

◆Firmware can be updated online.

3751A Main Parameters

Model	3751A
Current	0 ~ 150A
Voltage	0 ~ 240V
Power*1	2000W at 40℃
Input Characteristics	

Constant Current Mode	
Low Range	0 ~ 6A
Resolution	0.1mA
Accuracy	± (0.2%+5mA)
High Range	0 ~ 150A
Resolution	1mA (0 ~ 100A) 10mA (100 ~ 150A)
Accuracy	± (0.2%+10mA)

Constant Voltage Mode	
Range	0 ~ 240V
Resolution	1mV (0 ~ 100V) 10mV (100 ~ 240V)
Accuracy	± (0.2%+10mV)

Constant Resistance Mode	
Low Range	0.2Ω ~ 2.4MΩ
Resolution	0.1mΩ
Accuracy @I<6A	± (0.5%+12mΩ)
High Range	0.01Ω ~ 240K
Resolution	0.1mΩ
Accuracy @V＞6A	± (0.5%+12mΩ)

Constant Power Mode	
Range	0 ~ 2000W
Resolution@P<100W	1mW
@P≥100W	10mW
@P≥1000W	100mW
Accuracy	± (0.2%+600mW)

Current Measurement	
Low Range	0 ~ 6A
Resolution	0.1mA
Accuracy	± (0.2%+8mA)+Vin/50KΩ
High Range	0 ~ 150A
Resolution	1mA (0 ~ 100A) 10mA (100 ~ 150A)
Accuracy	± (0.2%+8 mA)+Vin/50KΩ

Voltage Measurement	
Range	0 ~ 240V
Resolution	1mV (0 ~ 100V) 10mV (100 ~ 240V)
Accuracy	± (0.2%+8mV)