

Medium and Low-Power DC Electronic Load FT6300A

Model	FT6301A	FT6302A	FT6303A	FT6304A	FT6305A	FT6306A
Voltage	0~120V	0~120V	0~500V	0~120V	0~500V	0~120V
Current	0~30A	0~30A	0~15A	0~60A	0~30A	0~120A
Power	150W	300W	300W	300W	600W	600W
Min operation	1.2V@30A	1V@30A	1.6V@15A	1.5V@60A	1.5V@30A	1.8V@120A
Constant Voltage (CV)						
Range	20V/120V	20V/120V	50V/500V	20V/120V	50V/500V	12V/120V
Resolution	1mV/10mV	1mV/10mV	1mV/10mV	1mV/10mV	1mV/10mV	1mV/10mV
Low range accuracy	0.05%+4mV	0.05%+4mV	0.05%+10mV	0.05%+4mV	0.05%+10mV	0.05%+3mV
High range accuracy	0.05%+30mV	0.05%+30mV	0.05%+130mV	0.05%+30mV	0.05%+130mV	0.05%+30mV
Constant Current (CC)						
Range	3A/30A	3A/30A	3A/15A	6A/60A	3A/30A	12A/120A
Resolution	0.1mA/1mA	0.1mA/1mA	0.1mA/1mA	0.1mA/1mA	0.1mA/1mA	1mA/10mA
Low range accuracy	0.05%+3mA	0.05%+3mA	0.05%+1.5mA	0.1%+6mA	0.1%+3mA	0.1%+12mA
High range accuracy	0.1%+30mA	0.1%+30mA	0.1%+15mA	0.1%+60mA	0.1%+30mA	0.1%+120mA
Constant Resistance (CR) (Input voltage & current ≥ 10%F.S.)						
Low range	0.1~10Ω	0.1~10Ω	0.1~10Ω	0.1~10Ω	0.1~10Ω	0.1~10Ω
High range	10.00 ~4kΩ	10.00~4kΩ	10.00~4kΩ	10.00~4kΩ	10.00~4kΩ	10.00~4kΩ
Resolution	16bit	16bit	16bit	16bit	16bit	16bit
Low range accuracy	0.35%+0.08S	0.35%+0.08S	0.35%+0.08S	0.35%+0.08S	0.35%+0.08S	0.35%+0.08S
High range accuracy	0.35%+0.008S	0.35%+0.008S	0.35%+0.008S	0.35%+0.008S	0.35%+0.008S	0.35%+0.008S
Constant Power (CP) Input voltage & current ≥ 10%F.S.)						
Range	100W/150W	100W/300W	100W/300W	100W/300W	100W/600W	100W/600W
Resolution	1mW/10mW	1mW/10mW	1mW/10mW	1mW/10mW	1mW/10mW	1mW/10mW
Low range accuracy	1%+100mW					
High range accuracy	1%+150mW	1%+300mW	1%+300mW	1%+300mW	1%+600mW	1%+600mW
Current measurement						
Low range accuracy	0.1%+3mA	0.1%+3mA	0.1%+3mA	0.1%+12mA	0.1%+3mA	0.1%+12mA
High range accuracy	0.1%+30mA	0.1%+30mA	0.1%+15mA	0.1%+60mA	0.1%+30mA	0.1%+120mA
Voltage measurement						
Low range accuracy	0.02%+4mV	0.02%+4mV	0.02%+10mV	0.02%+4mV	0.02%+10mV	0.02%+3mV
High range accuracy	0.02%+30mV	0.02%+30mV	0.02%+130mV	0.02% + 30mV	0.02%+130mV	0.02%+30mV
Power measurement						
Accuracy	1%+150mW	1%+300mW	1%+300mW	1%+300mW	1%+600mW	1%+600mW
Transient	Dynamic frequency: 0.083Hz~1kHz					
Dimension (mm)	213 (W) ×134 (H) ×374 (D) (FT6301A/FT6302A/FT6303A/FT6304A)					
	213 (W) ×134 (H) ×594 (D) (FT6305A/FT6306A)					

Datasheet



Model	FT6309A	FT6310A	FT6313A	FT6314A	FT6318A	FT6319A
Voltage	120V	500V	120V	500V	120V	500V
Current	120A	30A	180A	45A	240A	60A
Power	900W	900W	1350W	1350W	1800W	1800W
Min operation voltage	2.5V@120A	5V@30A	2.5V@180A	5V@45A	2.5V@240A	5V@60A
Constant Current (CC)						
Range	12A/120A	3A/30A	18A/180A	4.5A/45A	24A/240A	6A/60A
Resolution	0.2mA/2mA	0.05mA/0.5mA	0.3mA/3mA	0.8mA/8mA	0.4mA/4mA	1mA/10mA
Low range accuracy	0.1%+0.1%F.S.					
High range accuracy	0.1%+0.1%F.S.					
Constant Voltage (CV)						
Range	20V/120V	50V/500V	20V/120V	50V/500V	20V/120V	50V/500V
Resolution	0.4mV/2mV	0.9mV/9mV	0.4mV/2mV	0.9mV/9mV	0.4mV/2mV	0.9mV/9mV
Low range accuracy	0.05%+0.1%F.S.					
High range accuracy	0.05%+0.1%F.S.					
Constant Power (CP)						
Range	0~900W	0~900W	0~1350W	0~1350W	0~1800W	0~1800W
Resolution	15mW	15mW	22.5mW	22.5mW	30mW	30mW
Accuracy	1%+0.5%F.S.					
Constant Resistance (CR)						
Low range	0.025~50Ω	0.25~500Ω	0.0167~33.3Ω	0.167~333Ω	0.0125~25Ω	0.125~250Ω
High range	0.6~1200Ω	10~20000Ω	0.4~800Ω	6.67~13333Ω	0.3~600Ω	5~10kΩ
Resolution	16bit					
Low range accuracy	0.2%+0.009S	0.2%+0.0125S	0.2%+0.018S	0.2%+0.005S	0.2%+0.018S	0.2%+0.024S
High range accuracy	0.2%+0.002S	0.2%+160uS	0.2%+0.004S	0.2%+240uS	0.2%+0.004S	0.2%+300uS
Slew rate						
Current range	0~120A	0~30A	0~180A	0~45A	0~240A	0~60A
Slew rate	0.1~5A/us	0.01~1.25A/us	0.15~7.5A/us	0.1~1.8A/us	0.2~10A/us	0.1~2.5A/us
Accuracy	(1±35%)×set value					
Voltage measurement						
Range	12V/120V	50V/500V	12V/120V	50V/500V	12V/120V	50V/500V
Resolution	0.2mV/2mV	0.9mV/9mV	0.2mV/2mV	0.9mV/9mV	0.2mV/2mV	0.9mV/9mV
Accuracy	0.05%+0.1%F.S.					
Current measurement						
Range	12A/120A	3A/30A	18A/180A	4.5A/45A	24A/240A	6A/60A
Resolution	0.2mA/20mA	0.05mA/5mA	0.3mA/3mA	0.8mA/8mA	0.4mA/4mA	1mA/10mA
Accuracy	0.05%+0.1%F.S.					
Temperature	Protection 85℃、Operation 0~40℃、Full power 0~25℃					
Others						
Weight	18kg	18kg	20kg	20kg	22kg	22kg
Dimension (mm)	427 (W) ×135 (H) ×460 (D)					

Datasheet



- Voltage range : 120V/500V;
- Current range : 0 ~ 240A;
- Power range :
150W/300W/600W/900W/1350W/1800W;
- 20kHz dynamic test, adjustable slew rate
(FT6309A-FT6319A);
- CC, CV, CR, CP;
- Quick call, call test functions with one key;
- Sequence test, simulate complex load changes;
- Intelligent auto test function, automatic
PASS/FAIL check;
- Battery internal resistance and battery capacity
test;
- Remote sensing to compensate voltage drop;
- OCP test, automatically find the OCP point;
- High-definition, high-brightness VFD display;
- Keyboard and knob setting, easy to operate;
- OVP, OCP, OPP, OTP and reverse connection
protection;
- Support SCPI commands;
- Standard RS232 interface facilitates remote
control.

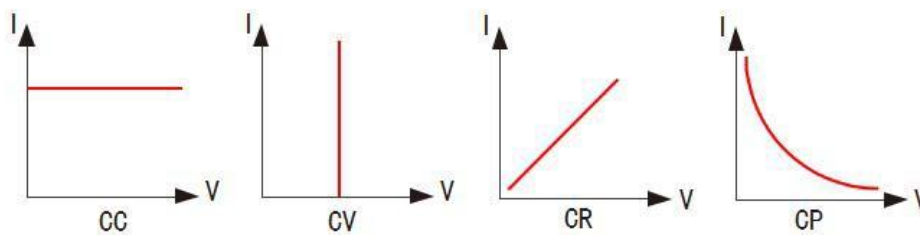
General

The FT6300 series of electronic loads have a variety of models, with power ranging from 150W to 1800W and current up to 240A. It is mainly used in the testing of various chargers/adapters, switching power supplies, LED drivers, power batteries, telecom power supplies, fuses, solar cells and their components.

The FT6300 series provides basic functions such as CC, CV, CR and CP; it has dynamic and sequence test functions to simulate various load changes; the intelligent automatic test function can greatly improve the test efficiency of the production line.

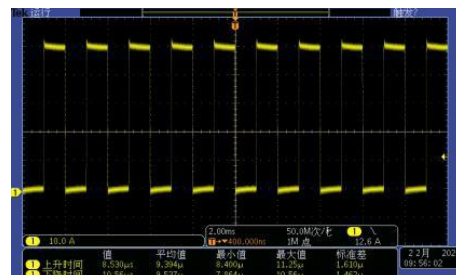
Static

The FT6300A series electronic load has four test modes: constant current, constant voltage, constant resistance and constant power, which can meet comprehensive test requirements.



Dynamic

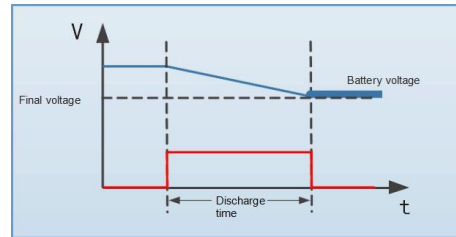
FT6300A series electronic load provides programmable dynamic test function, which includes three modes: continuous, pulse, and flip, with slew rate adjustable. It is suitable for testing the dynamic characteristics and stability of the power supply, the protection point and protection time of the battery, etc.



Battery test

Battery testing includes: battery internal resistance test and battery capacity test. Battery capacity test is implemented in the constant current (CC) mode, users only need to set the protection voltage and discharge current.

The load records the voltage, current, time and AH automatically, and it will terminate the test process when voltage drops to the protection voltage. Users can collaborate with the host PC software for testing and analyzing of more parameters.



Automatic test

The FT6300A series has a flexible automatic test feature. The automatic test feature includes multiple test modes such as CC, CV, CR and CP, which can compare the test parameters with corresponding upper and lower limits, and display the test results in the form of PASS/FAILED. This feature greatly improves the test efficiency.

SCPI and remote control

FT6300A series supports standard SCPI commands, all panel operations can be realized through SCPI commands. It facilitates the establishment of the intelligent test platform and secondary development. Remote control is available through RS232 interface.

Host PC software

The FT6300A series provides a host PC software with virtual instrument function, which can read test data, generate images, export reports, print reports, etc. in real time, it is convenient for customers to use.

Model options

Model	Specification	Size	Model	Specification	Size
FT6301A	120V/30A/150W	1/2 3U	FT6309A	120V/120A/900W	3U
FT6302A	120V/30A/300W	1/2 3U	FT6310A	500V/30A/900W	3U
FT6303A	500V/15A/300W	1/2 3U	FT6313A	120V/180A/1350W	3U
FT6304A	120V/60A/300W	1/2 3U	FT6314A	500V/45A/1350W	3U
FT6305A	500V/30A/600W	1/2 3U	FT6318A	120V/240A/1800W	3U
FT6306A	120V/120A/600W	1/2 3U	FT6319A	500V/60A/1800W	3U

Options

Specification	DC2-2P15M	DC16-2P20M	DC25-2P25M	DC50-2P20M	DC50-2P40M	DC120-2P20M	DC150-2P20M
Max voltage	750V						
Max current	10A	60A	100A	200A	200A	300A	400A
Terminal	M8/Alligator	M8/M8	M8/M8	M8/M8	M8/M8	M8/M8	M10/M10
Cross-sectional area	4.0mm ²	16mm ²	25mm ²	50mm ²	50mm ²	120mm ²	150mm ²
Length	~1.5m	~2m	~2m	~2m	~4m	~2m	~2m
Shape							

Dimension

FT6309~FT6319 model dimension

