

APPLICATIONS

- Solar Panel I-V Curve Simulation
 Aerospace
 Aviation

Your Power Testing Solution





TEFO Witte Range High-power CF POWER SUPPLES

Overcome the toughest high power test challenges

With ITECH's latest technology, the IT6500 series offers a full-featured high-performance power test solution. With fast response these DC power supplies provide users with a new level of power supply performance. From 800W to 30 kW, the whole series include more than 100 models. The maximum output voltage and current is up to 1000V and 1200A respectively. With its autoranging capabillity, it also has a super wide range of voltage and current applications. Users can choose the power supply that fits their testing requirements perfectly.



Choose the right power supplies that fit your test requirements

| IT6502D/IT6512/IT6512A/ IT6513/IT6513A | Good performance and compact size, designed for general purpose testing in R&D and production. |
|---|---|
| IT6500C series | Seamless two quadrant operation, multi-functional and with fast response. These power supplies are designed for continuous source and sink testing requirements. Such as automobile electronics, solar panel IV simulation, DC motors, batteries etc. |
| IT6500D series | High performance with stable output, designed for automobile, green energy, high speed testing, high-power testing etc. |

| 800W | IT6502D 80V/60A/800W | | | | | |
|-------|----------------------------------|-----------------------------------|------------------|------------------|------------------|------------------|
| 1200W | IT6512/A 80V/60A/1200W | IT6513/A 150V/30A/1200W | | | | |
| 1800W | IT6512C/D | IT6513C/D | IT6514C/D | IT6515C/D | IT6516C/D | IT6517C/D |
| | 80V/120A/1800W | 200V/30A/1800W | 360V/30A/1800W | 500V/20A/1800W | 750V/15A/1800W | 1000V/10A/1800W |
| 3kW | IT6522C/D | IT6523C/D | IT6524C/D | IT6525C/D | IT6526C/D | IT6527C/D |
| | 80V/120A/3KW | 200V/60A/3kW | 360V/30A/3KW | 500V/20A/3KW | 750V/15A/3kW | 1000V/10A/3KW |
| 6kW | IT6532C/D | IT6533C/D | IT6534C/D | IT6535C/D | IT6536C/D | IT6537C/D |
| | 80V/240A/6KW | 200V/120A/6kW | 360V/60A/6KW | 500V/40A/6KW | 750V/30A/6kW | 1000V/20A/6kW |
| 9kW | IT6542C/D | IT6543C/D | IT6544C/D | IT6545C/D | IT6546C/D | IT6547C/D |
| | 80V/360A/9KW | 200V/180A/9kW | 360V/90A/9KW | 500V/60A/9KW | 750V/45A/9kW | 1000V/30A/9kW |
| 12kW | IT6552C/D | IT6553C/D | IT6554C/D | IT6555C/D | IT6556C/D | IT6557C/D |
| | 80V/480A/12KW | 200V/240A/12kW | 360V/120A/12kW | 500V/80A/12KW | 750V/60A/12kW | 1000V/40A/12kW |
| 15kW | IT6562C/D | IT6563C/D | IT6564C/D | IT6565C/D | IT6566C/D | IT6567C/D |
| | 80V/600A/15KW | 200V/300A/15kW | 360V/150A/15kW | 500V/100A/15kW | 750V/75A/15kW | 1000V/50A/15kW |
| 21kW | IT6572C/D | IT6573C/D | IT6574C/D | IT6575C/D | IT6576C/D | IT6577C/D |
| | 80V/840A/21KW | 200V/420A/21kW | 360V/210A/21kW | 500V/140A/21kW | 750V/105A/21kW | 1000V/70A/21kW |
| 24kW | IT6582C/D | IT6583C/D | IT6584C/D | IT6585C/D | IT6586C/D | IT6587C/D |
| | 80V/960A/24KW | 200V/480A/24kW | 360V/240A/24kW | 500V/160A/24kW | 750V/120A/24kW | 1000V/80A/24kW |
| 30kW | IT6592C | IT6593C/D | IT6594C/D | IT6595C/D | IT6596C/D | IT6597C/D |
| | 80V/1200A/30KW | 200V/600A/30kW | 360V300A/30kW | 500V/200A/30kW | 750V/150A/30kW | 1000V/100A/30kW |

^{*} For higher power test, please contact ITECH.

| High-power test challenges | IT6500 helps you to overcome the challenges | IT6500C | IT6500D | IT6512 IT6513 | IT6502D IT6512A IT6513A |
|--------------------------------|---|-----------|-----------|------------------|-------------------------------|
| High | Output power of single unit is up to 30kW | $\sqrt{}$ | $\sqrt{}$ | - | _ |
| High- power | Combined with IT-E500 power dissipater unit it can sink up to 90kW of power. | | - | - | - |
| | 800W~30kW, whole series over 100 models. Maximum output voltage is up to 1000V | | | _ | - |
| Wide- range | Maximum output current is up to 1200A | $\sqrt{}$ | | - | - |
| Tungo | Combined with IT-E500 power dissipater unit, the current sinking capacity of IT6500C is up to 100% and the power sinking is up to 300%. | √ | _ | | - |
| Continuous source & | Two-quadrant source/sink current output | √ | - | - | - |
| sink testing | Seamless switching between quadrants | | _ | - | _ |
| | Built-in paralleling capability up to 30kW | √ | √ | - | - |
| Maintain excellent performance | Support multiple power supplies paralleling in Master-Slave mode | √ | √ | √ | √ |
| after paralleling | Ensure each power supply equally shares the current load and all remain in the desired mode. | √ | √ | - | - |
| | Power increasing, performance maintains stable. | | √ | <u> </u> | - |
| Fast | 30kW up/down time < 3mS | | - | - | - |
| response | CC / CV priority automatically selection | | - | - | - |
| | LIST mode programming | | √ | | - |
| Simple | Independent settable slew rate in different modes | √ | - | - | - |
| programming on the front | Adjustable rising and falling time | | √ | - | - |
| panel | Power supply: CV/CC/CP modes | | | | |
| | Electronic load: CC/CP modes | √ | - | _ | _ |
| | Variable output impendence function | √ | _ | _ | - |
| Function for special | Built-in DIN 40839 & ISO-16750-2 voltage curves | | - | | _ |
| applications | Solar panel I-V curve simulation function | √ | _ | _ | - |
| Precise | High resolution and high accuracy | √ | √ | | √ |
| measure- ment | Remote sense function | $\sqrt{}$ | √ | | |
| | Power Supply: OVP,OCP,OPP | | √ | | |
| Fully | Electronic Load: OCP,OPP,OTP | √ | - | - | - |
| Fully protection SAFETY | Anti-reverse protection | Optional | Optional | n= | |
| | Turn-off protection | | √ | | |
| | Under voltage protection | | √ | | √ |

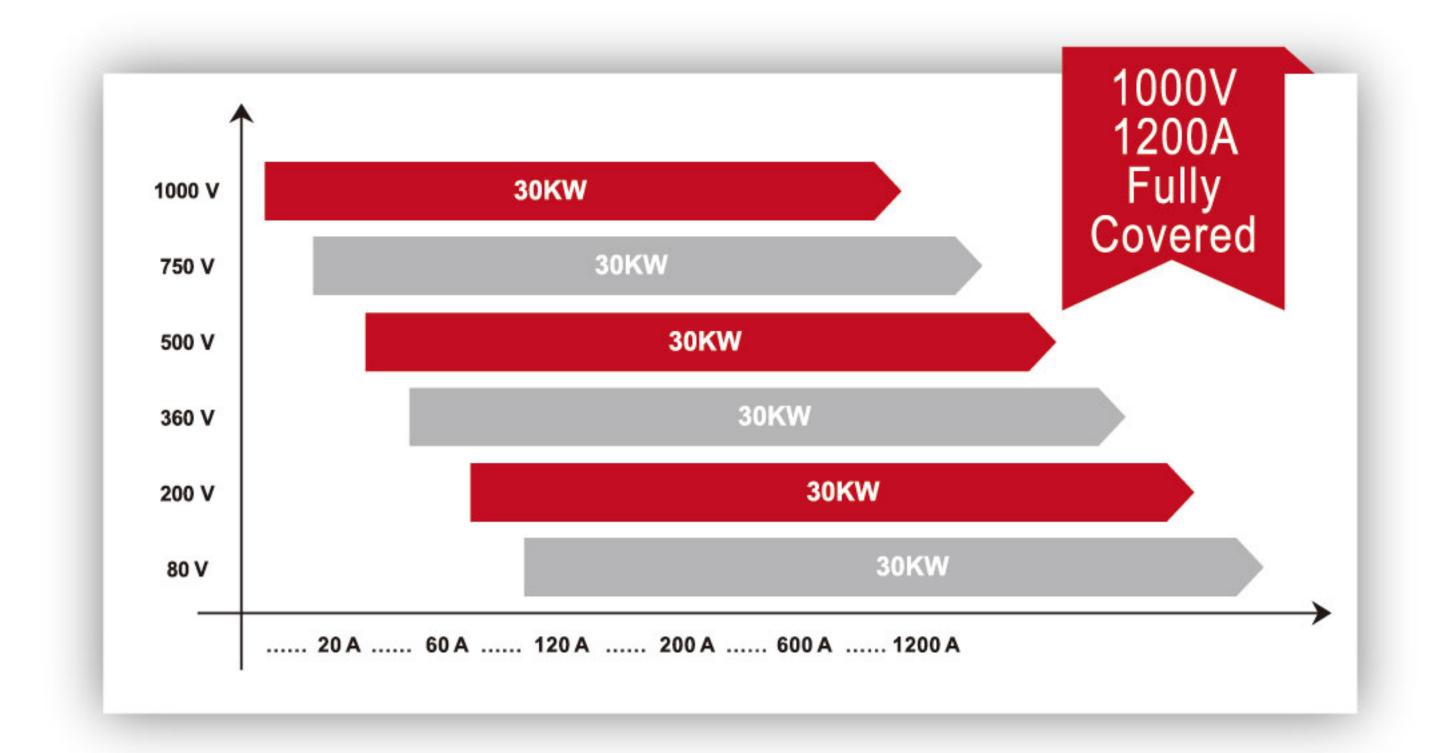
IT6500 Wide-range High-power DC Power Supply





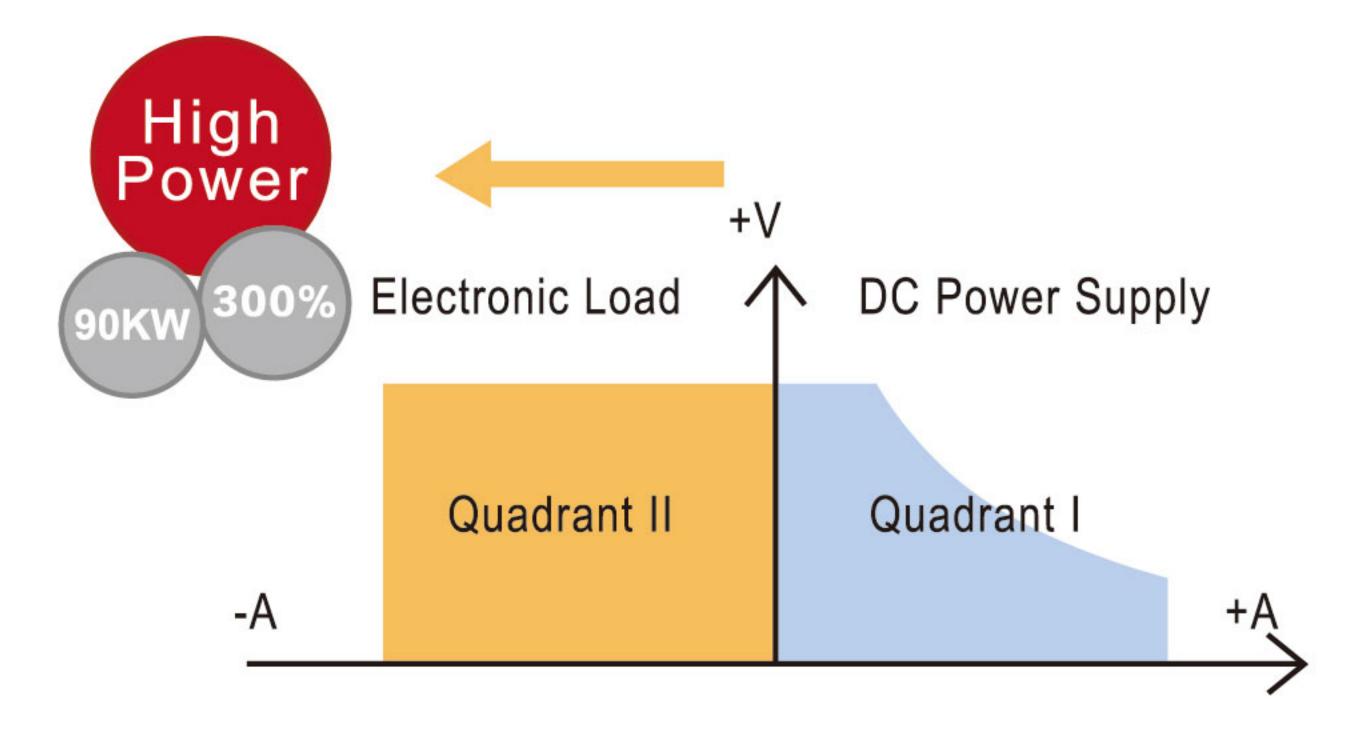
Wide-range & High-power

The IT6500 series wide-range of high-power DC power supplies offers a large range of models. From 800W to 30 kW, the whole series include more than 100 models, the maximum output voltage and current is up to 1000V and 1200A respectively. At the same time, it also has super wide range of voltage and current applications. In combination with the IT-E501 power dissipater unit, the current sinking capacity of IT6500C can be up to 100% and the power sinking up to 300% of the Sourcing capability.



With the power dissipater unit, loading capability is expanded

IT6500C series can be used as both a power supply and an electronic load. It greatly enlarges the current sinking range of the power supplies. It enables sinking of current and power, thus it can be applied to applications requiring fast current sink test and batteries charging /discharging test. Each IT-E500 series power dissipater unit provides up to 3kW power sinking capability for the IT6500C series power supply. To meet higher power discharging test demand, multiple power dissipater units' can be paralleled. The IT-E500 series power dissipater unit can extend the current sinking capability up to 100% of the source range and the power sinking capability up to 300% of the Power sourcing capability. (Max. Power sink is 90kW). Meeting demanding requirements of high power discharging test.

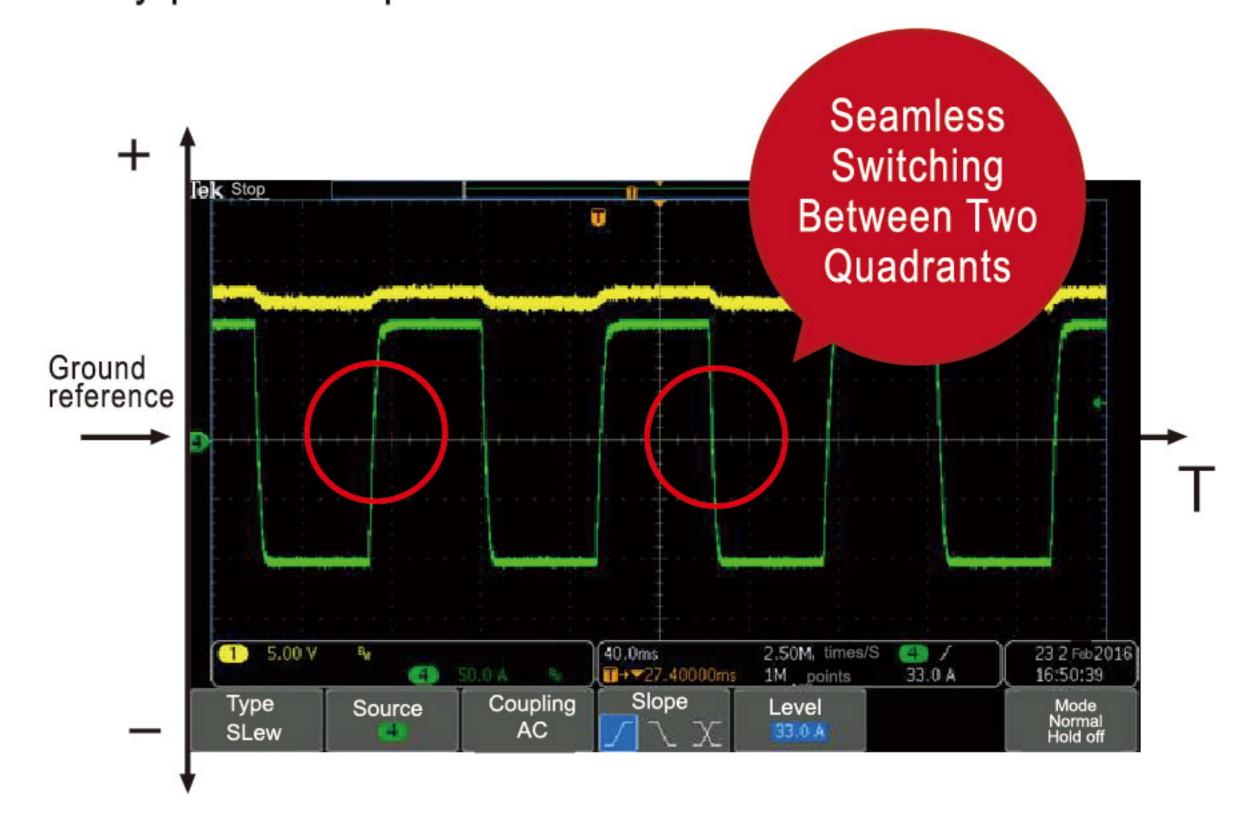




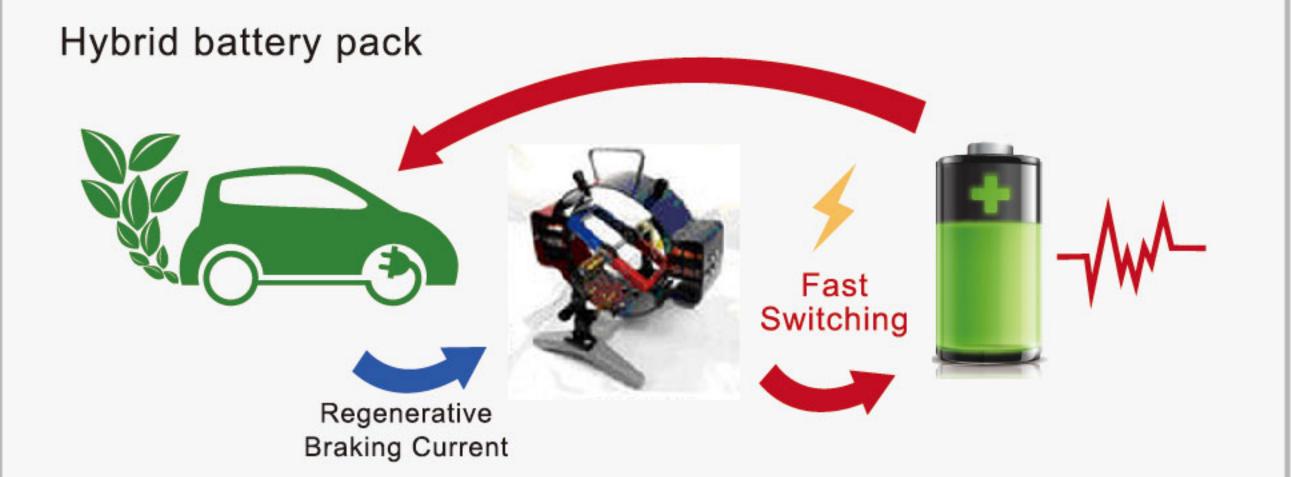


Continuous source & sink testing

For traditional two-quadrant power supply, there will be a short jump and discontinuity across positive and negative currents. As a high-speed two-quadrant power supply, IT6500C (1800W-30KW) series has a priority function so as to realize high-speed current transition between power supply mode and electronic load mode, to achieve fast seamless switching between sourcing and sinking current. Thus avoiding overshoot of voltage or current. That enables it to be suitable for fast battery charging and discharging measurements without sacrificing accuracy and can be widely used in energy storage device testing, such as batteries, battery encapsulation and battery protection panel etc.



Electric Vehicle Battery Test- Braking Current Regenerative Simulation



For practical electric vehicle (EV) battery test, the ultra-realistic simulation of regenerative braking current is necessary, the whole test should be finished within 10mS. So the simulation result depends on the response speed of the relating testing device.

- 1. Traditional solution: Adopt two single units, such as DC Power Supply + Electronic Load, which is of complex configuration, low efficiency and thus can't meet the testing requirements;
- 2. ITECH solution: IT6500C provides fast and seamless switching across current outputting and sinking, combined with IT-E500 power dissipater unite, IT6500C can meet the testing requirements easily. It is an ideal solution for EV braking current's regenerative battery test.

IT6500 Wide-range High-power DC Power Supply

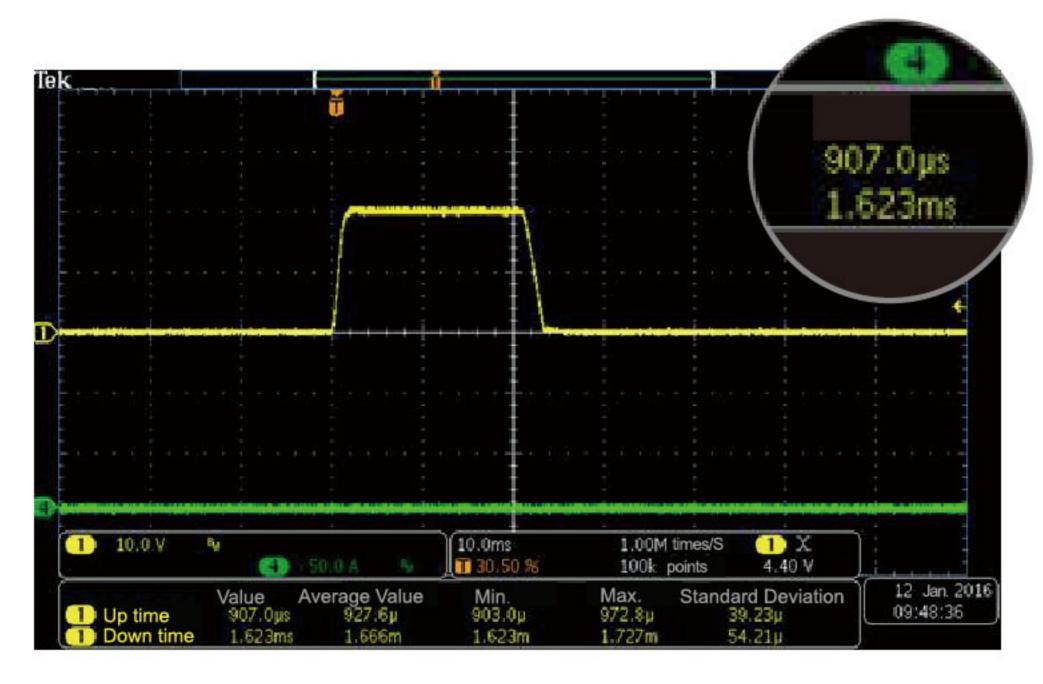


Independent settable slew rate in different modes

IT6500C series can be used as a power supply and an electronic load. As a power supply, CV, CC, CP modes are available. As an electronic load, CC and CP mode are available. IT6500C supports independent adjustable rise/fall time setting in different modes.

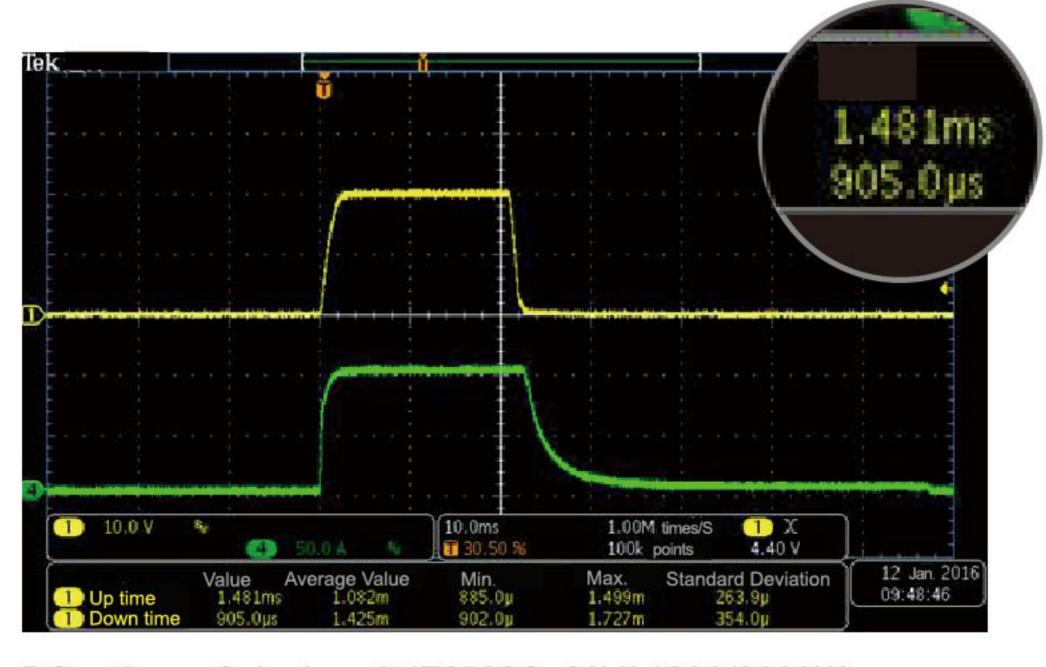
For every single model of IT6500C/D series, no matter it is a single unit or multiple units paralleled together, the rise and fall time of each power supply in IT6500C/D series are the same. Take IT6522C as an example:

- Within 30V voltage range, with 0-90% load, up and down speed < 3mS</p>
- Falling time of no load with voltage at full scale: Without power dissipater unit, falling time < 30mS</p>
 With power dissipater unit, falling time < 5mS</p>
- Dynamic response time < 3mS</p>



DC ratings of single unit IT6522C:80V/120A/3000W

Voltage ratings: 10V
Current ratings: 120A
Load Current: 0A



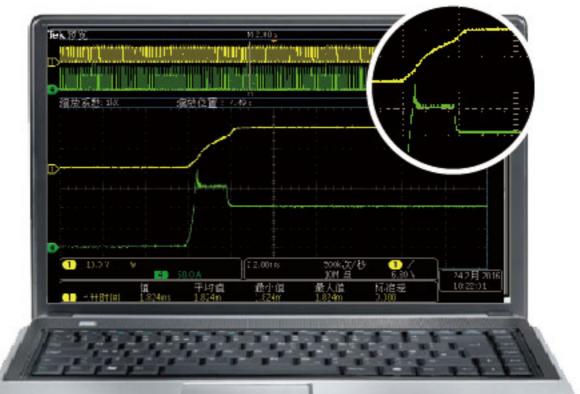
DC ratings of single unit IT6522C: 80V/ 120A/3000W

Voltage ratings: 10V Current ratings: 120A Load Current: 100A

No matter whether it is in the power supply mode (CV, CC, CP) or in the electronic load mode (CC, CP), IT6500 series has adjustable rise and fall time, and the settable range is 1mS-24h.



To conquer the demanding testing requirements existing for a long time in various applications, ITECH developed an innovative industry-leading CV & CC priority concept. The IT6500 is available for high-speed test applications with-out overshoot. Users can chose the desired output mode. Voltage high-speed mode or current no overshoot mode by choosing the loop response speed and loop operation mode. It is suitable for high-power integrated circuit test, charging/ discharging test, military, solar array simulation and the transient simulation/ characteristic of automotive electronics.





Fast voltage built with turn-on over range inrush current (CV-High, CC-Low, CV takes precedence)

Battery charging / discharging test with seamless and no overshoot switching (CV-High, CC-High, CC takes precedence)

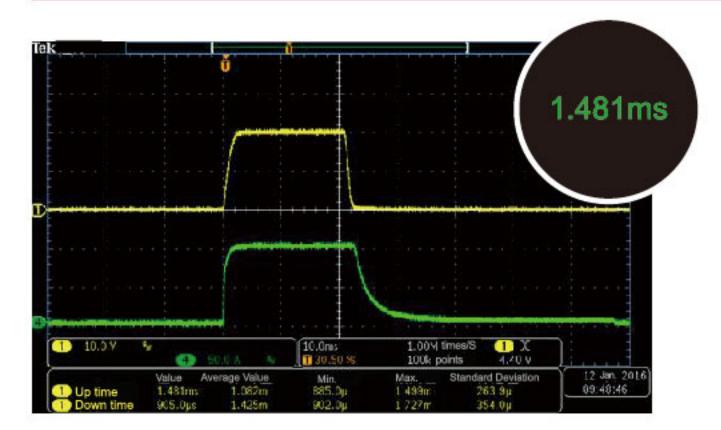


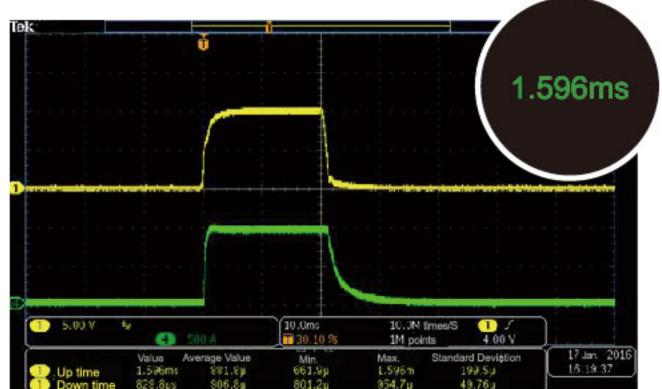
Built-in paralleling of multiple power supplies with even current distribution

IT6500 has built-in paralleling capability up to 30kW. At the same time, IT6500C supports multiple power supplies paralleling together in master-slave mode. Even further it can ensure that each power supply equally shares the load current and they all remain in the desired mode. In the traditional sense, when paralleling power supplies together, different power supplies will operate in different operation modes. For instance, when two sets of power supplies are paralleled together, one will offer a majority of current in CC mode, and the other will offer only a small part of current in CV mode, which will degrade certain power supplies' performance specifications. The even current distribution ability of the IT6500 ensures each power supply equally shares the load current without degrading the performance specifications. When paralleling multiple IT6500 the combined system has all the same functions as a standalone unit. That is a great way to add power flexibility to your test system. What is particularly unusual is that after the expansion of power, IT6500C can still maintain the excellent dynamic characteristics of the single unit to meet the I-V characteristic curve testing demanding a variety of high-power high-speed applications.

IT6500 Wide-range High-power DC Power Supply

Low voltage & high current test





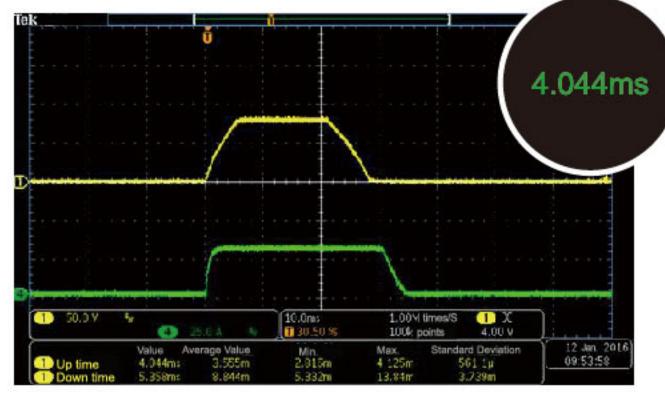
Standalone set IT6522C

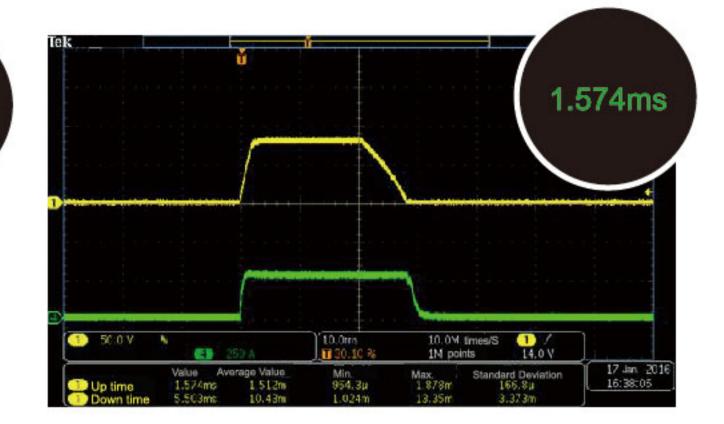
80V,120A, 3000W Voltage ratings: 10V Current ratings: 120A Load current: 100A

8 sets of IT6522C paralleling together

Voltage ratings: 10V Current ratings: 960A Load current: 800A

High voltage & low current test





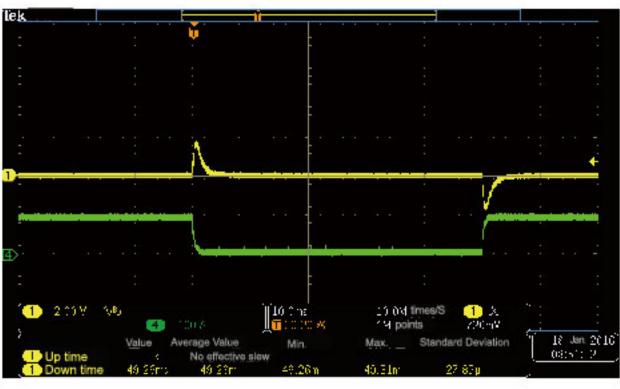
Standalone set unit IT6522C

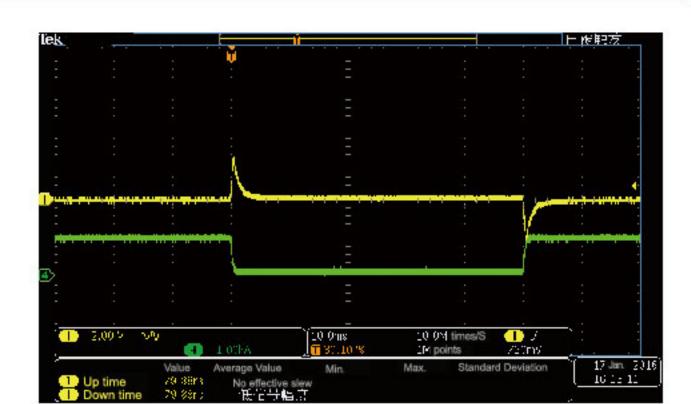
80V, 120A, 3000W Voltage ratings: 80V Current ratings: 120A Load current: 30A

8 sets of IT6522C paralleling together

Voltage ratings: 80V Current ratings: 960A Load current: 300A

Dynamic response test





Standalone set IT6522C

80V, 120A, 3000W Voltage ratings: 10V Current ratings: 120A Load current: Level A=10A Level B=100A F=10 Hz

8 sets of IT6522C paralleling together

Voltage ratings: 10V Current ratings: 960A Load current: Level A=100A Level B=800A F=10Hz

* Figure: Voltage-Yellow, Current-Green

From the tests, we conclude:

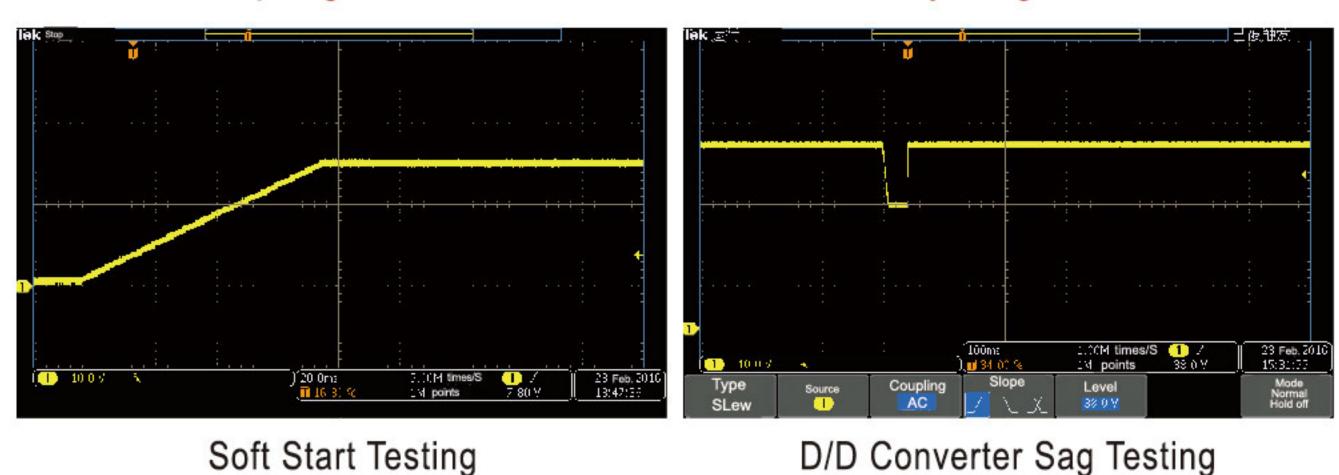
- 1. Voltage rise time: 8 units of IT6522C paralleling together, the voltage rise time is faster than single unit operation.
- 2. Fall time: parallel units remain the same as single unit.
- 3. Dynamic response waveforms: parallel units remain the same as single unit

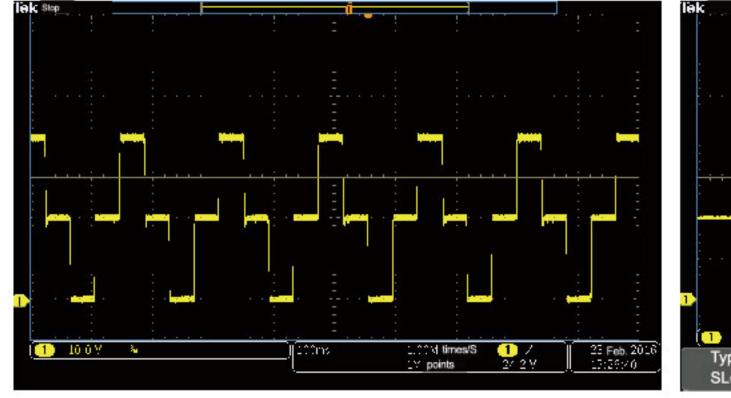
Simple programming on the front panel (List)

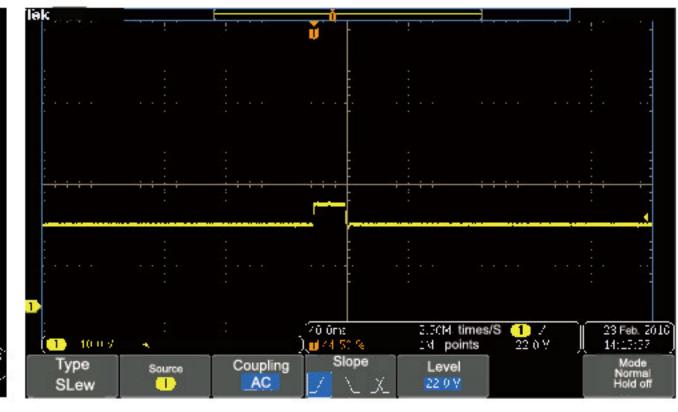
Similar to other modern ITECH products, the IT6500 series provides a user friendly front panel for quick programming without the need for external software.

In list mode, the IT6500 series can store, recall and run the preset customized program sequences via front panel programming. Users can edit the voltage/current value & the time of each step in advance and provide the power supply with a trigger signal. Then the preset sequences/waveform will be executed automatically according to the defined LIST. That's especially suitable for the applications such as DC/DC converters, inverters voltage drop test, engine start-up simulation, battery charging/discharging tests, product life cycle tests and aircraft test etc.

Waveforms programmed with IT6500 series by engineers

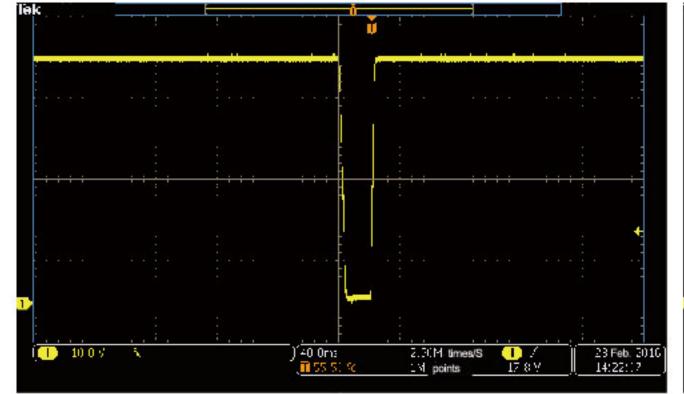


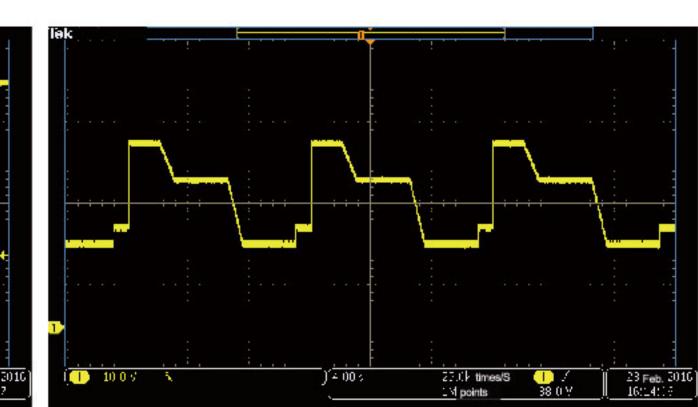




Voltage Step Waveform

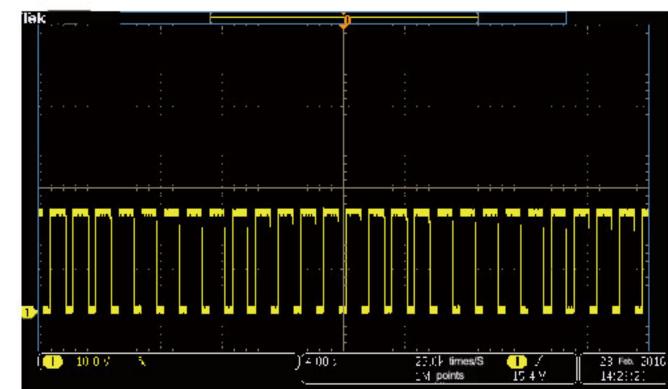
D/D Converter Surge Testing

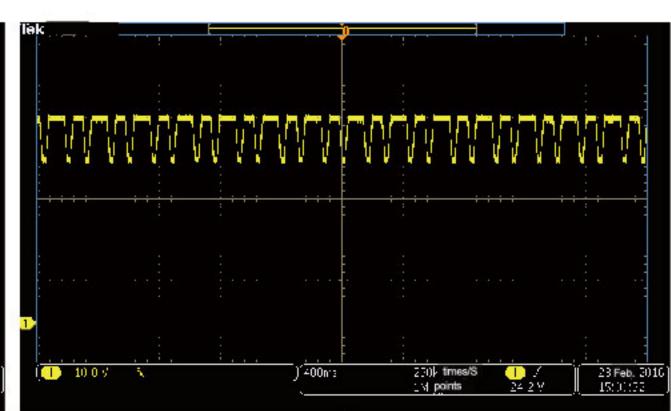




D/D Converter Cycle drop Testing

Life Cycle Testing





Pulse Charge of Battery

Line Regulation Testing

*Output test with no load

IT6500 Wide-range High-power DC Power Supply



Programmable output impendence

In battery charging and discharging test, the changes of internal resistance should be taken into account. For enhancing test precision, IT6500C series power supply provides built-in internal resistance setting function which can simulate battery operation status in real-case.



Multiple actual working status simulation of batteries

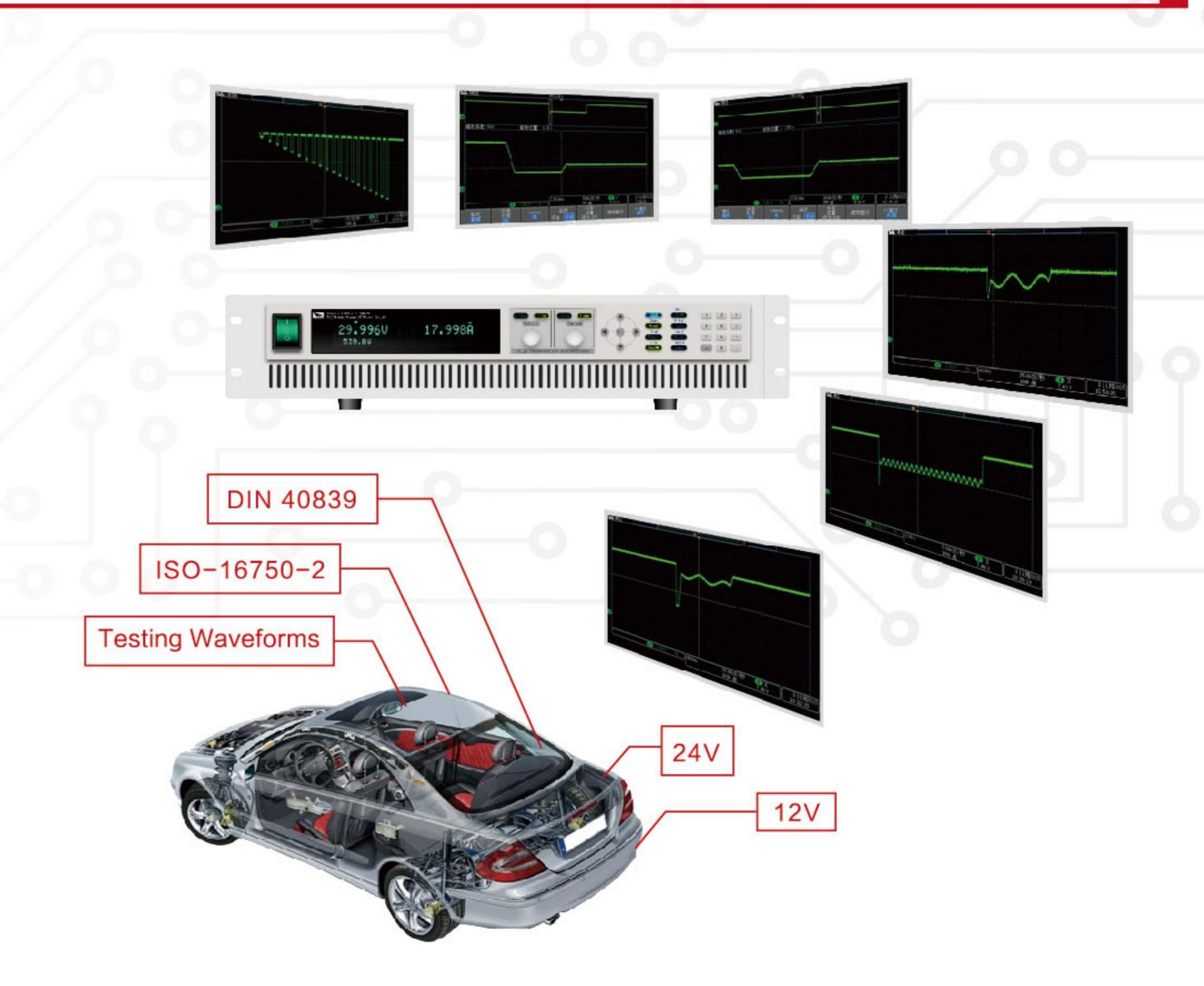
Solar panel I-V curve simulation function

I-V curve output of the solar array can be influenced by climate factors such as light, temperature etc. The IT6500C series has built-in solar panel I-V curve simulation function, support maximum open-circuit current and maximum short-circuit current. 16 I-V curves in different conditions can be stored and recalled in IT6500 through setting the parameters, e.g. Voc, Isc, Vmp, Imp etc. It can be applied in MPPT (maximum power point tracking) performance tests for solar inverters, micro-inverters, and solar chargers. Controlled from a PC, the IT6500C can simulate even more detailed I-V curve. Up to 1024 points can be edited.



Built-in DIN40839 & ISO-16750-2 test sequences

The automobile electronics devices must tolerate the dropouts or surges from power turn-on or turn-off transient. For these tests, it is necessary to simulate the worst-case power transient conditions. IT6512, IT6513 and IT6500C series power supplies provide built-in DIN40839 and ISO-16750-2 testing curves. Users can select any built-in curve to do the DUT performance test directly according to their demand. 12V and 24V are available for choice.





Multiple built-in interfaces

In conventional high power test instrument, extra interfaces add cost. In the IT6500 series all the implemented interfaces are built-in standard. Simplifying the configuration process and adding flexibility to change interface used without adding additional cost.

| Cost saving | IT6500C | IT6500D | IT6512 IT6513 | IT6502D IT6512A IT6513A |
|---------------------------|----------|-----------|------------------|-------------------------------|
| Analog control interfaces | √ | √ | √ | √ |
| USB | | | | √ |
| RS232 | √ | | | |
| RS485 | - | - | | √ |
| GPIB | | $\sqrt{}$ | | $\sqrt{}$ |
| LAN | √ | √ | - | - |
| CAN | | √ | - | - |



Fully protections

Integrating protection measures into test instruments is critical and high cost especially in high power test. To provide fully protections for DUTs, IT6500 series integrate multiple fast protection measures.

These protection capabilities include:

- CC & CV Priority Function to avoid unwanted overshoot
- Power Supply mode: OVP,OCP,OPP
- Electronic Load mode: OCP,OPP,OTP (IT6500C)
- Anti-reverse protection (optional)
- Turn-off protection
- Under voltage protection (UVP)

| Parameters | ; | IT6512C | IT6512D | IT6522C | IT6522D | IT6532C | IT6532D | |
|--|-----------|-----------------------------------|-----------------------------|------------|---------|---------|---------|--|
| | Voltage | 0~80V | 0~80V | 0~80V | 0~80V | 0~80V | 0~80V | |
| Output Rating | Current | 0~120A | 0~120A | 0~120A | 0~120A | 0~240A | 0~240A | |
| (0°C-40°C) | Power | 0~1800W | 0~1800W | 0~3000W | 0~3000W | 0~6KW | 0~6KW | |
| | Impedance | 0~3.6Ω | - | 0~3Ω | - | 0~1.5Ω | - | |
| Load Regulation | Voltage | | | ≤0.01%+30 | mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.05%+30 | mA | | | |
| Line Regulation | Voltage | | | ≤0.01%+10 | mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.01%+10 | mA | | | |
| Setup Resolution | Voltage | | | 10mV | | | | |
| · | Current | | | 10mA | | | | |
| Read back Resolution | Voltage | Voltage 10mV | | | | | | |
| | Current | | | 10mA | | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | | ≤0.05%+30 | mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.2%+120 | mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | | ≤0.05%+30 | mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.2%+120 | mA | | | |
| Ripple | Voltage | | | ≤80mVp- | р | | | |
| (20Hz-20MHz) | Current | | | ≤0.05%+60m | Arms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤30ms | ≤5ms | ≤30ms | ≤5ms | ≤30ms | |
| Up time (full load) | Voltage | ≤10ms | ≤10ms ≤30ms ≤10ms ≤30ms ≤10 | | | | ≤30ms | |
| Down time (no load) | Voltage | ≤30ms ≤150ms ≤30ms ≤150ms ≤150ms | | | | | ≤150ms | |
| Down time (full load) | Voltage | ≤10ms ≤150ms ≤150ms ≤150ms ≤150ms | | | | | | |
| Operation Temperature | | 0~40°C | | | | | | |

| Parameters | ; | IT6542C | IT6542D | IT6552C | IT6552D | |
|--|-----------|---------------------------|-----------|----------|----------|--|
| | Voltage | 0~80V | 0~80V | 0~80V | 0~80V | |
| Output Rating | Current | 0~360A | 0~360A | 0~480A | 0~480A | |
| (0°C-40°C) | Power | 0~9KW | 0~9KW | 0~12KW | 0~12KW | |
| | Impedance | 0~1Ω | - | 0~0.75Ω | - | |
| Load Regulation | Voltage | | ≤0.01%+3 | 80mV | | |
| ±(%of Output+Offset) | Current | | ≤0.05%+3 | 30mA | | |
| Line Regulation | Voltage | | ≤0.01%+1 | 0mV | | |
| ±(%of Output+Offset) | Current | | ≤0.01%+1 | 0mA | | |
| Setup Resolution | Voltage | | 10mV | / | | |
| | Current | | 10mA | \ | | |
| Read back Resolution | Voltage | | 10mV | / | | |
| | Current | | 10mA | \ | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 80mV | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+12 | 20mA | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 80mV | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+12 | 20mA | | |
| Ripple | Voltage | | ≤80mVp | о-р | | |
| (20Hz-20MHz) | Current | | ≤0.05%+60 | mArms | | |
| Up time (no load) | Voltage | ≤5ms | ≤30ms | ≤5ms | ≤30ms | |
| Up time (full load) | Voltage | ≤10ms | ≤30ms | ≤10ms | ≤30ms | |
| Down time (no load) | Voltage | ≤30ms ≤150ms ≤30ms ≤150ms | | | | |
| Down time (full load) | Voltage | ≤10ms ≤150ms ≤150ms | | | | |
| Operation Temperature | | | 0~40°C | | | |

| Parameters | | IT6562C | IT6562D | IT6572C | IT6572D | | |
|--|-----------|--------------------------|-------------------|----------|---------|--|--|
| | Voltage | 0~80V | 0~80V | 0~80V | 0~80V | | |
| Output Rating | Current | 0~600A | 0~600A | 0~840A | 0~840A | | |
| (0°C-40°C) | Power | 0~15KW | 0~15KW | 0~21KW | 0~21KW | | |
| | Impedance | 0~0.6Ω | - | 0~0.43Ω | _ | | |
| Load Regulation | Voltage | | ≤0.01%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.05%+3 | 30mA | | | |
| Line Regulation | Voltage | | ≤0.01%+ | 10mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.01%+ | 10mA | | | |
| Setup Resolution | Voltage | | 10m\ | V | | | |
| , | Current | | 10m/ | A | | | |
| Read back Resolution | Voltage | Voltage 10mV | | | | | |
| | Current | | 10m/ | A | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+1 | 20mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+1 | 20mA | | | |
| Ripple | Voltage | | ≤80mV | p-p | | | |
| (20Hz-20MHz) | Current | | ≤0.05%+60 | mArms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤30ms | ≤5ms | ≤30ms | | |
| Up time (full load) | Voltage | ≤10ms | ≤10ms ≤30ms ≤10ms | | | | |
| Down time (no load) | Voltage | ≤30ms ≤150ms ≤30ms ≤150n | | | | | |
| Down time (full load) | Voltage | ≤10ms ≤150ms ≤150ms | | | | | |
| Operation Temperature | | 0~40°C | | | | | |

| Parameters | | IT6582C | IT6582D | IT6592C | IT6592D | | |
|--|-----------|---------------------------|--------------|----------|---------|--|--|
| | Voltage | 0~80V | 0~80V | 0~80V | 0~80V | | |
| Output Rating | Current | 0~960A | 0~960A | 0~1200A | 0~1200A | | |
| (0°C-40°C) | Power | 0~24KW | 0~24KW | 0~30KW | 0~30KW | | |
| | Impedance | 0~0.375Ω | - | 0~0.3Ω | - | | |
| Load Regulation | Voltage | | ≤0.01%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.05%+3 | 30mA | | | |
| Line Regulation | Voltage | | ≤0.01%+1 | 10mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.01%+ | 10mA | | | |
| Setup Resolution | Voltage | | 10m\ | / | | | |
| • | Current | | 10m <i>A</i> | 4 | | | |
| Read back Resolution | Voltage | e 10mV | | | | | |
| | Current | | 10m <i>A</i> | 4 | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+12 | 20mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%+3 | 30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%+12 | 20mA | | | |
| Ripple | Voltage | | ≤80mV | p-p | | | |
| (20Hz-20MHz) | Current | | ≤0.05%+60 | mArms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤30ms | ≤5ms | ≤30ms | | |
| Up time (full load) | Voltage | ≤10ms ≤30ms ≤10ms ≤30ms | | | | | |
| Down time (no load) | Voltage | ≤30ms ≤150ms ≤30ms ≤150ms | | | | | |
| Down time (full load) | Voltage | ≤10ms ≤150ms ≤150ms | | | | | |
| Operation Temperature | | 0~40°C | | | | | |

| Parameters | ; | IT6513C | IT6513D | IT6523C | IT6523D | IT6533C | IT6533D | |
|--|-----------|---------------------------------|---------|------------|---------|---------|---------|--|
| | Voltage | 0~200V | 0~200V | 0~200V | 0~200V | 0~200V | 0~200V | |
| Output Rating | Current | 0~60A | 0~60A | 0~60A | 0~60A | 0~120A | 0~120A | |
| (0°C-40°C) | Power | 0~1800W | 0~1800W | 0~3000W | 0~3000W | 0~6KW | 0~6KW | |
| | Impedance | 0~23Ω | - | 0~13Ω | - | 0~7.5Ω | _ | |
| Load Regulation | Voltage | | | ≤0.01%+50 | 0mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.1%+20 |)mA | | | |
| Line Regulation | Voltage | | | ≤0.01%+30 | 0mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.1%+10 |)mA | | | |
| Setup Resolution | Voltage | | | 10mV | | | | |
| • | Current | rent 10mA | | | | | | |
| Read back Resolution | Voltage | Voltage 10mV | | | | | | |
| | Current | rrent 10mA | | | | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | | ≤0.05%+10 | 0mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.2%+60 |)mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | | ≤0.05%+10 | 0mV | | | |
| ±(%of Output+Offset) | Current | | | ≤0.2%+60 |)mA | | | |
| Ripple | Voltage | ltage ≤200mVp-p | | | | | | |
| (20Hz-20MHz) | Current | | | ≤0.05%+60n | nArms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤25ms | ≤5ms | ≤25ms | ≤5ms | ≤25ms | |
| Up time (full load) | Voltage | ≤10ms | ≤50ms | ≤10ms | ≤50ms | ≤10ms | ≤50ms | |
| Down time (no load) | Voltage | ≤40ms ≤200ms ≤40ms ≤200ms ≤40ms | | | | ≤200ms | | |
| Down time (full load) | Voltage | ≤10ms ≤50ms ≤50ms ≤50ms ≤50ms | | | | | | |
| Operation Temperature | | 0~40°C | | | | | | |

| Parameters | | IT6543C | IT6543D | IT6553C | IT6553D | |
|--|-----------|---------------------|----------|---------|---------|--|
| | Voltage | 0~200V | 0~200V | 0~200V | 0~200V | |
| Output Rating | Current | 0~180A | 0~180A | 0~240A | 0~240A | |
| (0°C-40°C) | Power | 0~9KW | 0~9KW | 0~12KW | 0~12KW | |
| | Impedance | 0~4.33Ω | _ | 0~3.25Ω | - | |
| Load Regulation | Voltage | | ≤0.01% | +50mV | | |
| ±(%of Output+Offset) | Current | | ≤0.1%- | +20mA | | |
| Line Regulation | Voltage | | ≤0.01% | +30mV | | |
| ±(%of Output+Offset) | Current | | ≤0.1%- | +10mA | | |
| Setup Resolution | Voltage | | 10r | mV | | |
| • | Current | | 10r | mA | | |
| Read back Resolution | Voltage | | 10r | nV | | |
| | Current | | 10r | mA | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%- | +100mV | | |
| ±(%of Output+Offset) | Current | | ≤0.2%- | +60mA | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%- | +100mV | | |
| ±(%of Output+Offset) | Current | | ≤0.2%- | +60mA | | |
| Ripple | Voltage | | ≤200n | nVp-p | | |
| (20Hz-20MHz) | Current | | ≤0.05%+6 | 30mArms | | |
| Up time (no load) | Voltage | ≤5ms | ≤25ms | ≤5ms | ≤25ms | |
| Up time (full load) | Voltage | ≤10ms | ≤50ms | ≤10ms | ≤50ms | |
| Down time (no load) | Voltage | ≤40ms ≤200ms ≤200ms | | | | |
| Down time (full load) | Voltage | ≤10ms ≤50ms ≤50ms | | | | |
| Operation Temperature | | | 0~40°C | | | |

| Parameters | | IT6563C | IT6563D | IT6573C | IT6573D | | |
|--|-----------|-------------------------|----------|---------|---------|--|--|
| | Voltage | 0~200V | 0~200V | 0~200V | 0~200V | | |
| Output Rating | Current | 0~300A | 0~300A | 0~420A | 0~420A | | |
| (0°C-40°C) | Power | 0~15KW | 0~15KW | 0~21KW | 0~21KW | | |
| | Impedance | 0~2.6Ω | - | 0~1.86Ω | | | |
| Load Regulation | Voltage | | ≤0.01% | +50mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.1%- | +20mA | | | |
| Line Regulation | Voltage | | ≤0.01% | +30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.1%- | +10mA | | | |
| Setup Resolution | Voltage | | 10r | mV | | | |
| • | Current | 10mA | | | | | |
| Read back Resolution | Voltage | 10mV | | | | | |
| | Current | 10mA | | | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%- | +100mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%- | +60mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%- | +100mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%- | +60mA | | | |
| Ripple | Voltage | | ≤200n | nVp-p | | | |
| (20Hz-20MHz) | Current | | ≤0.05%+6 | 60mArms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤25ms | ≤5ms | ≤25ms | | |
| Up time (full load) | Voltage | ≤10ms | ≤50ms | ≤10ms | ≤50ms | | |
| Down time (no load) | Voltage | ≤40ms ≤200ms ≤40ms ≤200 | | | | | |
| Down time (full load) | Voltage | ≤10ms ≤50ms ≤50ms | | | | | |
| Operation Temperature | | 0~40°C | | | | | |

| Parameters | | IT6583C | IT6583D | IT6593C | IT6593D | | |
|--|-----------|---------------------|---------|---------|---------|--|--|
| | Voltage | 0~200V | 0~200V | 0~200V | 0~200V | | |
| Output Rating | Current | 0~480A | 0~480A | 0~600A | 0~600A | | |
| (0°C- 40°C) | Power | 0~24KW | 0~24KW | 0~30KW | 0~30KW | | |
| | Impedance | 0~1.63Ω | - | 0~1.3Ω | _ | | |
| Load Regulation | Voltage | | ≤0.01% | +50mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.1% | +20mA | | | |
| Line Regulation | Voltage | | ≤0.01% | +30mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.1%· | +10mA | | | |
| Setup Resolution | Voltage | | 101 | mV | | | |
| · | Current | | 10 | mA | | | |
| Read back Resolution | Voltage | e 10mV | | | | | |
| | Current | | 10 | mA | | | |
| Setup Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05% | +100mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2% | +60mA | | | |
| Readback Accuracy (Within 12 months,25°C±5°C) | Voltage | | ≤0.05%· | +100mV | | | |
| ±(%of Output+Offset) | Current | | ≤0.2%· | +60mA | | | |
| Ripple | Voltage | tage ≤200mVp-p | | | | | |
| (20Hz-20MHz) | Current | | ≤0.05%+ | 60mArms | | | |
| Up time (no load) | Voltage | ≤5ms | ≤25ms | ≤5ms | ≤25ms | | |
| Up time (full load) | Voltage | ≤10ms | ≤50ms | ≤10ms | ≤50ms | | |
| Down time (no load) | Voltage | ≤40ms ≤200ms ≤200ms | | | | | |
| Down time (full load) | Voltage | ≤10ms ≤50ms ≤50ms | | | | | |
| Operation Temperature | | | 0~40°C | | | | |

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