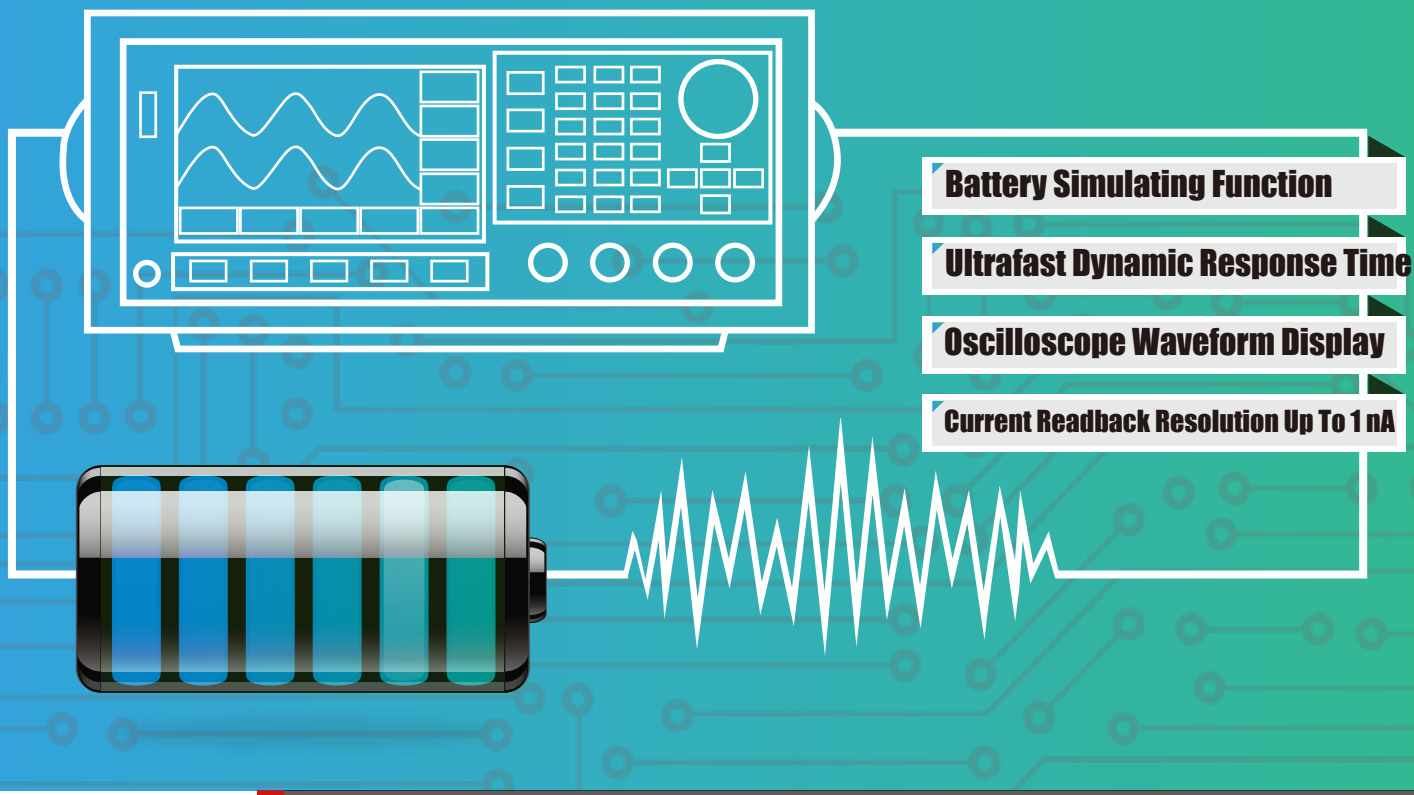
ITECH

YOUR POWER TESTING SOLUTION

Product

IT6400 BIPOLAR DC POWER SUPPLY
BATTERY SIMULATOR

Features



- Battery Simulating Function
- Ultrafast Dynamic Response Time
- Oscilloscope Waveform Display
- Current Readback Resolution Up To 1 nA

IT6400 BIPOLAR DC POWER SUPPLY

BATTERY SIMULATOR

Your Power Testing Solution

Your contact:

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IT6400

Bipolar DC Power Supply Battery Simulator

The unique bipolar voltage/current output makes IT6400 series can be used as a bipolar power source or a bipolar electronic load. The battery simulating function is especially applicable for development and high speed production testing of portable, battery-operated products. IT6400 has ultrafast transient time less than 50 μs and resolution up to 1 nA. Its new designed speed shift mode achieves voltage/current fast rising and without overshoot, the rising time up to 150μs. Meanwhile, the waveform display function let the test be visible and simple. IT6400 series can be widely used in portable battery-operated products test, mobile power pack test, LED test and other fields.

Features

- Maximum output power of single channel up to 150 W, outputvoltage max. ±60 V, output current max. ±10A
- High performance color LCD display, dual channel output display main interface *1
- Bipolar dual-range output
- Accurate Battery Simulation
- Oscilloscope waveform display (DSO)
- Ultrafast transient response time < 20 μs
- Ultrafast voltage rising time up to 150 μs
- Current display resolution up to 1 nA
- Ultra-small current ripple up to 2 μArms
- Built-in high accuracy DVM
- Variable output impedance
- Applicable to portable battery power supplies test
- LED test no overcharged current
- Relay out function achieves electrical isolation on terminals
- High speed AD sampling
- List function achieves voltage/current output as programmed
- Standard interface LAN/USB *2

*1 IT6402 / IT6412 / IT6412S provide this function
*2 For any GPIB interface option request , check with ITECH for availability.

Model	Voltage	Current	Power	Channel
IT6402	CH1： -6V - 0V , 0 - 6V CH2： 0 - 6V	CH1： ±2A CH2： ±2A	CH1： 12W CH2： 12W	2
IT6411	±15V/±9V	±3A/±5A	45W	1
IT6411S	-15V~0V， 0~15V	±0.1 A	1.5 W	1
IT6412	CH1： ±15V/±9V CH2： 0~15V/0~9V	CH1： ±3A/±5A CH2： ±3A/±5A	CH1： 45W CH2： 45W	2
IT6412S	CH1： -15V~0V,0~15V CH2： 0~15V	CH1： ±0.1A CH2： ±0.1A	CH1： 1.5W CH2： 1.5W	2
IT6431	-15V~ 0V, 0~ 15V	±10 A	150W	1
IT6432	-30V~0V， 0~30V	±5A	150W	1
IT6432S	-30V~0V， 0~30V	±21mA	0.63W	1
IT6433	-60V-0V,0-60V	±2.5 A	150W	1

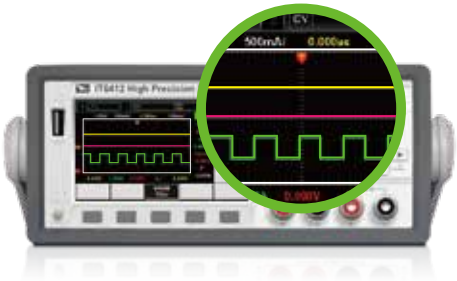
Bipolar Output

IT6400 high speed linear DC source provides bipolar output, maximum output voltage of single channel up to ± 60 V, maximum output current up to ± 10 A. IT6400 is with multi-functional and high-performance output, so that it meets various of test needs.

IT6402/IT6412/IT6412S are dual channel power supply and they are available for easy-shifting dual range output with each channel. Users can switch according to test requirements, one set of IT6412 can finish mobile and charger test independently， a single device to complete the test phone and charger,easy to use.

Oscilloscope Waveform Display Function

IT6400 provides waveform display function based on sample data. The voltage/current waveform is visible or invisible by your option, and can be adjusted by the knob. The graphic on the newly design colorful display can be saved, achieves easy and effective oscilloscope experience.



Your Power Testing Solution

IT6400 BIPOLAR DC POWER SUPPLY

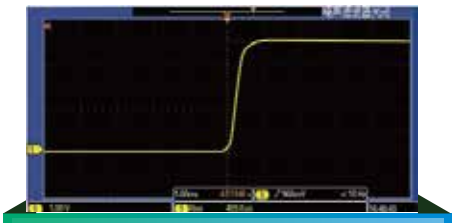
Battery Simulating Function

With the unique current bipolar design and 0~20 Ω variable outpu t impedance, IT6400 is applicable to types of portable battery charge-discharge tests. Simulating the battery charge-discharge features and assist with other tests are also reliable. One equipment, diversified applications.

Portable battery-operated products test

Ultrafast Transient Time <20 μs

IT6400 has ultrafast transient ability, the transient time for recovering to 50 mV is less than 20 μs when 50%-100% loaded. New designed speed shift mode achieving voltage/current high speed rising waveform without overshoot, supports stable power supply, and ensures the security, especially for LED test.



LED test without overshoot current

Screenshots Function

IT6400 provides screenshots function to facilitate customer data analysis. Press screenshots on front panel, the display graphic will be saved in inserted USB storage disk, easy for your reanalysis on data and waveform. The USB interface on front panel makes the data saving on time and easily.

DVM Test Function

Abundant electrical basic measuring functions are available on IT6400. High accuracy DVM is built in each channel with readback resolution up to 1 mV. The measured data will be visible on specified channel screen. The changes of voltage waveform measured by DVM can be observed by oscilloscope display function.

Applications

- Portable battery-operated products test
- Mobile power pack test
- Battery protection board test
- Battery test
- LED test
- Power amplifier Test
- DC / DC converter test
- Support fast charge

Fast charge has become a development trend for mobile phone, tablet PC and other electronic products, the major electronics manufacturers also focus on fast charge. IT6431 battery simulator current output up to ± 10 A, fully meet the market mainstream low-voltage, high current fast charge test requirements.

Parameter		IT6411		IT6411S		IT6412			
Channel		1		1		2			
		High Range	Low Range			CH1		CH2	
Output Rating (0～40 ℃)	Voltage	±15V	±9V	-15V-0V,0-15V		±15V	±9V	0-15V	0-9V
	Current	±3A	±5A	±0.1 A		±3A	±5A	±3A	±5A
	Power	45W		1.5 W		45W			
Load Regulation±(%output+offset)	Voltage/Current	≤0.01%+2mV/≤0.05%+1mA		≤0.01%+1mV/≤0.05%+1mA		≤0.01%+2mV/≤0.05%+1mA			
Line Regulation±(%of output+offset)	Voltage/Current	≤0.02%+2mV/≤0.05%+1mA		≤0.02%+2mV/≤0.05%+1mA		≤0.02%+2mV/≤0.05%+1mA			
Setup Resolution	Voltage/Current	1mV/0.1mA		1mV/10μA		1mV/0.1mA			
Readback Resolution	Voltage	1mV		1mV		1mV			
	Current	5A Range	1mA	100mA Range	1μA	5A Rang		1mA	
		5mA Range	100nA	100μA Range	1nA	5mA Rang		100nA	
Setup Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+3mV		≤0.02%+3mV		≤0.02%+3mV			
	Current	≤0.05%+2mA		≤0.05%+50μA		≤0.05%+2mA			
Readback Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+2mV		≤0.02%+2mV		≤0.02%+2mV			
	Current	≤0.05%+2mA/≤0.05%+2μA		≤0.05%+50μA/≤0.05%+50nA		≤0.05%+2mA/≤0.05%+2μA			
Ripple (20Hz~20MHz)	Voltage	≤ 3mVp-p / 1 mV rms		≤ 3mVp-p / 1 mV rms		≤ 3mVp-p / 1 mV rms			
	Current	≤1mArms		≤2μArms		≤1mArms			
Dynamic ResponseTime (50%-100% LOAD recover to 50 mV)		≤50μs		≤200μs		≤50μs			
Rising time (Fast mode no load)	Voltage	≤500μs		≤1ms		≤500μs			
Rising time (Fast mode full load)	Voltage	≤500μs		≤1ms		≤500μs			
Falling time (Fast mode no load)	Voltage	≤1ms		≤1s		≤1ms			
Falling time (Fast mode full load)	Voltage	≤500μs		≤0.5ms		≤500μs			
Dimension (mm)		226mmW*88.2mmH*476.26mmD		226mmW*88.2mmH*476.26mmD		226mmW*88.2mmH*476.26mmD			
Net weight (KG)		8KG		8KG		9KG			
DVM									
Measuring Range		-20V ~ +20V		-20V ~ +20V		-20V ~ +20V			
Readback Accuracy		0.02%+3mV		0.02%+3mV		0.02%+3mV			
Readback Resolution		1mV		1mV		1mV			

Parameter		IT6431		IT6432		IT6433	
Output Rating (0～40 ℃)	Voltage	-15V~0V, 0~15V		-30V~0V, 0~30V		-60V~0V, 0~60V	
	Current	±10 A		±5 A		±2.5 A	
	Power	150 W		150 W		150 W	
Load Regulation±(%output+offset)	Voltage/Current	≤0.01%+3.5mV/≤0.05%+2mA		≤0.01%+2mV/≤0.05%+1mA		≤0.01%+2mV/≤0.05%+1mA	
Line Regulation±(%of output+offset)	Voltage/Current	≤0.02%+2mV/≤0.05%+1mA		≤0.02%+2mV/≤0.05%+1mA		≤0.02%+2mV/≤0.05%+1mA	
Setup Resolution	Voltage/Current	1mV/1mA		1mV/0.1mA		1mV/0.1mA	
Readback Resolution	Voltage	1mV		1mV		1mV	
	Current	10A Rang	1mA	5A Rang	0.1mA	5A Rang	0.1mA
		20mA Rang	1μA	5mA Rang	100nA	5mA Rang	100nA
Setup Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+3mV		≤0.02%+3mV		≤0.02%+4mV	
	Current	≤0.05%+5mA		≤0.05%+2mA		≤0.05%+2mA	
Readback Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+3mV		≤0.02%+3mV		≤0.02%+4mV	
	Current	≤0.05%+4mA/≤0.05%+5μA		≤0.05%+2mA/≤0.05%+2μA		≤0.05%+2mA/≤0.05%+2μA	
Ripple (20Hz~20MHz)	Voltage	≤ 4mVp-p / 1 mV rms		≤ 4mVp-p / 1 mV rms		≤ 5mVp-p / 1 mV rms	
	Current	≤1.5mArms		≤1mArms		≤1mArms	
Dynamic ResponseTime (50%-100% LOAD recover to 50 mV)		≤20μs		≤20μs		≤20μs	
Rising time (Fast mode no load)	Voltage	≤200μs		≤150μs		≤200μs	
Rising time (Fast mode full load)	Voltage	≤300μs		≤150μs		≤200μs	
Falling time (Fast mode no load)	Voltage	≤200μs		≤150μs		≤200μs	
Falling time (Fast mode full load)	Voltage	≤200μs		≤150μs		≤200μs	
Dimension (mm)		226mmW*88.2mmH*476.26mmD		226mmW*88.2mmH*476.26mmD		226mmW*88.2mmH*476.26mmD	
Net weight (KG)		8KG		8KG		8KG	
DVM							
Measuring Range		-20V ~ +20V		-30V ~ +30V		-60V ~ +60V	
Readback Accuracy		0.02%+3mV		0.02%+3mV		0.02%+5mV	
Readback Resolution		1mV		1mV		1mV	

* This information is subject to change without notice.

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