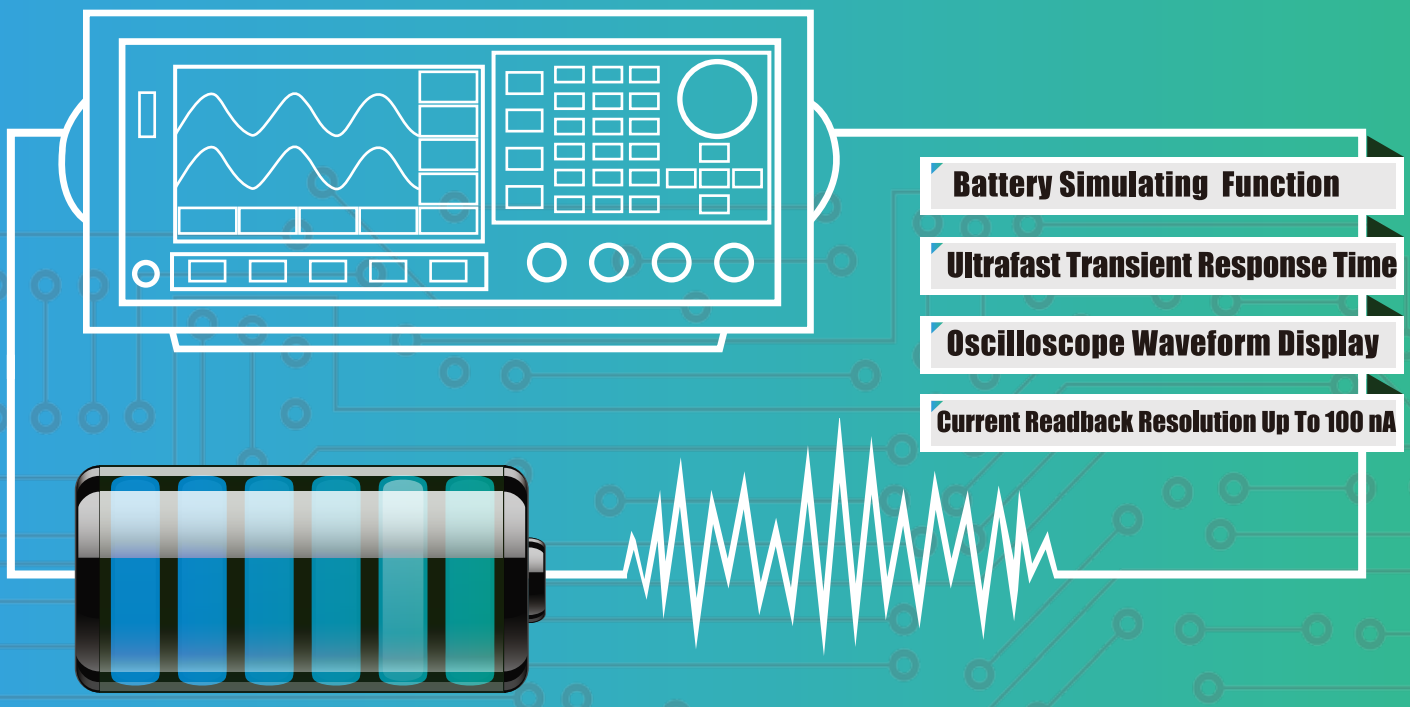
ITECH

YOUR POWER TESTING SOLUTION

Product

IT6400 BIPOLAR DC POWER SOURCE

Features



- Battery Simulating Function
- Ultrafast Transient Response Time
- Oscilloscope Waveform Display
- Current Readback Resolution Up To 100 nA

IT6400 BIPOLAR DC POWER SOURCE

BATTERY/CHARGER SIMULATOR

Your Power Testing Solution



IT6400

Bipolar DC Power Source

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.

IT6412 is dual-channel power source, channel 1 is for instrument power source and channel 2 is for battery charging performance test. IT6411 and IT6432 are the single channel type of IT6412 and they can realize all the functions of channel 1. IT6400 has ultrafast transient time less than 50μs. Its new designed speed shift mode achieves voltage/current fast rising and without overshoot. Meanwhile, the waveform display function let the test be visible and simple.

Features

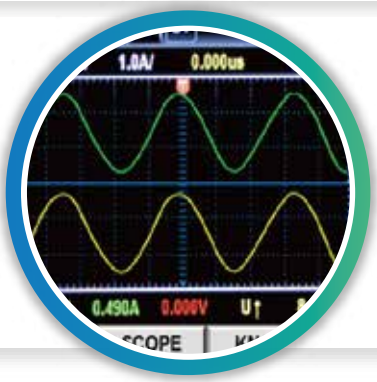
- Maximum output power of single channel up to 150 W, output voltage max. ±30 V, output current max. ±5 A
- Dual-channel output-IT6412; Single channel-IT6411, IT6432
- Accurate Battery Simulation
- Oscilloscope waveform display (DSO)
- Dual-channel display on high performance colorful LCD screen
- Ultrafast transient response time < 50 μs
- Ultrafast voltage rising time up to 500 μs
- Current readback resolution up to 100 nA
- 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
- List function achieves voltage/current output as programmed
- Standard interface LAN/USB/GPIB

Bipolar Output

IT6400 high speed linear DC source provides bipolar output, maximum output voltage of single channel up to ± 30 V, maximum output current up to ± 5 A. IT6412 is a dual-channel bipolar DC source and it is available for easy-shifting dual range output with each channel. One set of IT6412 can finish mobile and charger test independently. With multifunctional and high performance, IT6400 makes diversified testing requests available.

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 SOURCE

Battery Simulating Function

With the unique current bipolar design and 0~1 Ω variable output 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 <50 μs

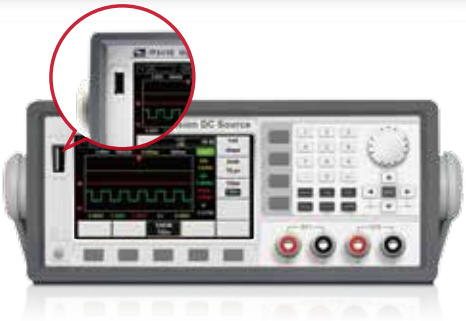
IT6400 has ultrafast transient ability, the transient time for recovering to 50 mV is less than 50 μs when 50%-100% loaded. New designed speed shift mode achieving voltage/current high speed rising waveform without overshoot, supports stable power supply, and ensures the security, especially for LED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



Model		IT6411		IT6412				IT6432
		High Range	Low Range	CH1		CH2		
Output Rating (0 ℃–40 ℃)	Voltage	± 15 V	± 9 V	± 15 V	± 9 V	0–15 V	0–9 V	–30 V–0 V,0–30 V
	Current	± 3 A	± 5 A	± 3 A	± 5 A	± 3 A	± 5 A	± 5 A
	Power	45 W		45 W				150 W
Load Regulation ±(%of Output+Offset)	Voltage	≤0.01%+2 mV		≤0.01%+2 mV				≤0.01%+2 mV
	Current	≤0.05%+1 mA		≤0.05%+1 mA				≤0.05%+1 mA
Line Regulation ±(%of Output+Offset)	Voltage	≤0.02%+2 mV		≤0.02%+2 mV				≤0.02%+2 mV
	Current	≤0.05%+1 mA		≤0.05%+1 mA				≤0.05%+1 mA
Setup Resolution	Voltage	1 mV		1 mV				1 mV
	Current	0.1 mA		0.1 mA				0.1 mA
	OVP	10 mV		10 mV				10 mV
Readback Resolution	Voltage	1 mV		1 mV				1 mV
	Current	100 nA at 5 mA range, 1 mA at 5 A range						
Setup Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+3 mV		≤0.02%+3 mV				≤0.02%+3 mV
	Current	≤0.05%+2 mA*1		≤0.05%+2 mA*1				≤0.05%+2 mA
	OVP	0.5 V*2		0.5 V*2				0.5 V*2
Readback Accuracy (12-month validity, 25°C±5°C) ±(%of Output+Offset)	Voltage	≤0.02%+2 mV		≤0.02%+2 mV				≤0.02%+3 mV
	Current	≤0.05%+2 μA at 5 mA range, ≤0.05%+2 mA at 5 A range						
Ripple (20Hz –20MHz)	Voltage	≤ 3 mVp–p / 1 mV rms		≤ 3 mVp–p / 1 mVrms				≤ 3 mVp–p / 1 mV rms
	Current	≤1 mArms		≤1 mArms				≤1 mArms
Transient ResponseTime		50%–100% LOAD recover to 50 mV ≤50 μS						
Protection Function		OVP/OCP/OTP		OVP/OCP/OTP				OVP/OCP/OTP
Communication Interface		GPIB/USB/LAN		GPIB/USB/LAN				GPIB/USB/LAN
Dimension (mm)		226 mmW*88.2 mmH*476.26 mmD		226 mmW*88.2 mmH*476.26 mmD				226 mmW*88.2 mmH*476.26 mmD
Net weight (kg)		8 kg		9 kg				10 kg
DVM								
Measuring Range		–20 V ~ +20 V		–20 V ~ +20 V				–20 V ~ +20 V
Readback Accuracy		0.02%+3 mV		0.02%+3 mV				0.02%+3 mV
Readback Resolution		1 mV		1 mV				1 mV
Input Common-mode Voltage		< 50 Vdc		< 50 Vdc				< 50 Vdc
Input Impedance		4.5 MΩ		4.5 MΩ				4.5 MΩ

*1 In CC mode, the minimum setup current is 2 mA.
*2 It is the maximum error of the power terminal with full load.