

Power Supply Testing

PROGRAMMABLE AC POWER SOURCES

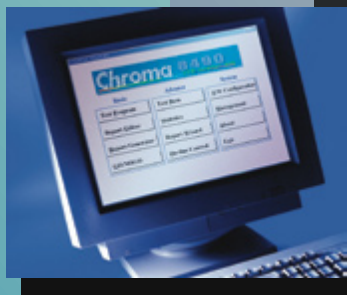
PROGRAMMABLE DC POWER SUPPLIES

PROGRAMMABLE AC ELECTRONIC LOADS

PROGRAMMABLE DC ELECTRONIC LOADS

DIGITAL POWER METERS

AUTOMATIC TEST SYSTEMS



Programmable AC Power Sources

MODEL 61500 Series



Advance IEC Test & Measurement AC Power Sources

The Chroma 61500 series Programmable AC Power Source defines a new standard for high performance AC power sources. It's equipped with powerful features such as power line disturbance simulation, programmable output impedance, comprehensive measurement functions, wave-shape synthesis and regulation test software. Chroma also provides a software for aerospace testing, including MIL-STD-704F, RTCA DO-160D, ABD100. These features make Chroma's 61500 Series ideal for commercial, power electronics, avionics, marine, military and regulation test applications from bench-top testing to mass productions.

Key Features:

- Output: 500VA~4KVA/0~300VAC/424VDC
- AC, DC, AC+DC output mode
- Programmable output impedance
- IEC 61000-4-11, 61000-4-13, 61000-4-14, 61000-4-28 regulation testing
- High output current crest factor up to 6 times



List Mode: voltage transient programming

MODEL 61600 Series



Cost Effective AC Power Sources

The Chroma 61600 series Programmable AC Power Source delivers pure, instrument grade AC power at a very low cost. The 61600 series AC power source offers output voltages from 0 to 300VAC, and a frequency range from 15 to 1000Hz. A easy-use software can let users edit an auto-run profile and record the measuring data during the test. It is suitable for commercial, avionics, marine, and military applications from bench-top testing to mass productions.

Key Features:

- Output: 500VA~4KVA/0~300VAC/424VDC
- AC, DC, AC+DC output mode
- High output current crest factor up to 6 times
- Analog input for power amplifier
- Analog programming interface



Auto-run

MODEL 61700 Series



Three-phase AC Power Sources

The Chroma 61700 Series AC Power Source delivers pure, 5-wire, 3-phase AC power. Unlike the traditional 3-phase AC power sources, it includes low power rating models at very low cost. Users can program voltage, frequency and measure the critical characteristics of the output on its LCD display. It delivers the right solution to simulate all kinds of input conditions of a UUT to be utilized in R&D and QA. It is also suitable for commercial applications from laboratory testing to mass productions.

Key Features:

- Output Rating:
 - Power: 1500VA~12KVA, 3 PHASE
 - Voltage: 0~150V/0~300VAC
- Frequency: 15~1.2KHz
- Phase Angle: 0~360°programmable
- Turn on, turn off phase angle control
- Transient voltage programming:
 - List, Pulse, Step mode (Optional)
- Distorted waveform editor (Optional)



List Mode: voltage transient programming



MIL-STD-704F Testing

MODEL
6500 Series



AC Sources with advance features up to 27KVA

The Chroma 6500 series is capable of simulating a wide variety of AC line conditions, harmonic waveforms, accurate power measurement and analysis. It delivers the right solution to simulate all kinds of normal/abnormal input conditions and measures the critical characteristics of the product under test.



List Mode: Transient Voltage Programming

Key Features:

- ☑ Power rating: 1200VA-27KVA
- ☑ Voltage range: 0-500V
- ☑ Current range: Up to 90Arms
- ☑ Programmable Sine, Square, or Clipped Sine waveform output
- ☑ Programmable voltage, current limit, frequency, phase and distortion
- ☑ PLD simulation capability, 30 factory installed harmonic waveforms in the waveform library
- ☑ Powerful measurement of Vrms, Irms, Ipk+, Ipk-, power etc.

MODEL
6400 Series



AC Sources with basic functions up to 27KVA

The Chroma 6400 series Programmable AC Power Source uses state of the art PWM technology to deliver pure, instrument grade AC power at very low cost never achieved before. The 6400 AC power source offers maximum rated power for any output voltage from 0 to 300VAC, at any frequency from 45 to 1K Hz. It is not only suitable for commercial applications (47-63Hz), avionics, marine and military applications at 400Hz.

Key Features:

- ☑ Power rating: 375VA-27KVA
- ☑ Voltage range: 0-500V
- ☑ Current range: Up to 90Arms
- ☑ Output distortion less than 0.3% and peak repetitive current over 2.5 times of the rms current
- ☑ EEPROM storage of user defined voltage & frequency combination for instant recall anytime
- ☑ High accuracy measurement of RMS voltage, RMS current, true power, frequency, power factor, and current crest factor



Softpanel

Programmable DC Power Supplies

MODEL
6200P Series **NEW**

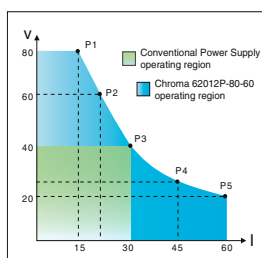


4 times VxI Constant Power Operating Envelope

Chroma's new 6200P Series programmable DC power supplies offer many unique advantages for ATE integration and testing. These advantages include constant power operating envelope, precision readback of output current and voltage, output trigger signals as well as the ability to create complex DC transient waveforms. Designed for automated testing DC-DC converters and similar products.

Key Features:

- ☑ Power rating: 600,1200W
- ☑ Voltage range: 0-600V
- ☑ Current range: 0-160A
- ☑ Wide range of voltage & current combinations with constant power
- ☑ High-speed Programming
- ☑ Precision V&I Measurements
- ☑ Current sharing for parallel operation with Master/Slave Control
- ☑ Auto Sequencing Programming: 10 Programs/100 Sequences/8 bit TTL
- ☑ Voltage & Current Slew Rate Control
- ☑ OVP, Current Limit, Thermal protection



Wide operating region with constant power



Program Panel

Programmable DC Electronic Loads

MODEL 6310 Series



Cost effective Modular Electronic Loads, up to 8 channels in one chassis

Chroma's 6310 loads are economical modular loads designed for power supply testing applications. Up to eight independent channels maybe configured into a single mainframe. Instruments come standard with front panel controls & RS232 or optional GPIB. Load modules are available from a wide range covering 0.1VDC to 500VDC, up to 240A and 1200W.

Key Features:

- ✓ Power Levels: 200W, 100x2(Dual), 30W & 250W, 300W, 600W, 1200W
- ✓ Wide range 1-500V operating voltage
- ✓ Up to 8 channels in one mainframe, excellent for testing multiple output SMPS
- ✓ CC, CR, CV operation modes
- ✓ Minimum input resistance allowing load to sink high current at low voltage
- ✓ High/Low limits of testing parameters to test GO/NG



Battery Discharge Testing



Over-current Testing

MODEL 6300 Series



Modulized Electronic loads with Noise Measurement option

The Chroma 6300 series can be configured by plugging load modules into the system mainframe and operated using the keypad on the front panel of the instrument or GPIB/RS-232 interface. The load modules can be programmed independently for testing multi-output power supplies or can be paralleled for high power applications.

Key Features:

- ✓ Power rating: 60-300W
- ✓ Voltage range: 1-256V
- ✓ CC, CR, CV, and CP operation modes
- ✓ Master/Slave interface for synchronizing multiple loads
- ✓ 20MHz differential mode noise measurement
- ✓ Short circuit test & short current measurement
- ✓ Minimize input resistance allowing load to sink high current at low voltage

MODEL 63200 Series



High Power Loads with 2.5X time surge

Chroma's 63200 series loads are design for telecom, fuel cell and other applications requiring high power or high current DC loading. Instruments use FET technology and are air cooled for simple operation and maintenance. Loads are parallelable allowing for loading systems of up to 30KW. Instruments come standard with front panel controls & RS232 or optional GPIB .

Key Features:

- ✓ Power Rating: 2.6kW, 5.2kW, 6.5kW, 10.4kw, 14.5kW, 15.6kW
- ✓ Voltage range: 1-80V/2.5-500V
- ✓ Current range: Up to 1000A
- ✓ CC, CR, CV & CP load modes
- ✓ Master/Slave parallel control mode, allow synchronous load control under static and dynamic loading mode
- ✓ Only 1V needed to draw the rated current
- ✓ External loading waveform simulation



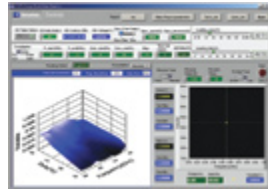
Battery Discharge Test & Record

MODEL
63472 Series



High Slew Rate Loads up to 1200A/us

The 63472 load series is designed to simulate current Intel processor technology allowing for discrete testing of VR's and motherboards at load di/dt rates of up to 1200A/us. Built in functions are included to measure +VPK, -VPK, eff and P-OK timing. Dynamic VID addressing and dynamic loading of up to 1MHz is provided. Instruments come standard with manual controls or optional GPIB .



Dynamic Sweep Test for VRM&VRD

Key Features:

- Static Loading:
 - Power rating: 200W, Voltage range: 0-2V,
 - Current range: 150A
- Dynamic Loading:
 - Current range: 150A, Slew rate: Up to 1200A/μs
 - Dynamic Freq: Up to 1MHz, Duty control: 10-90%
- Dynamic VID simulation
- Measurements:
 - Static mode: Vdc, Idc; Dynamic mode: Vpk+, Vpk-
 - Dynamic VID: Vpk check, Vdc for last VID
- Built-in and user definable VID tables for flexibility
- Current Voltage monitor output
- Full protection: OP, OC and OV protection
- Versatile remote controller
- GPIB & RS-232 interface
- LabView Soft-panel

Programmable AC Electronic Loads

MODEL
63800 Series **NEW**



AC Loads with user programmable Power Factor

The Chroma 63800 series AC Electronic Load is designed to test UPS, AC Source and power electronic devices such as switches, circuit breakers, fuse and connectors. The power rating, parallel and synchronization capabilities make it an ideal tool to test the high power and system integration.

Key Features:

- Power Rating: 4500W
- Voltage Range: 50V to 350Vrms
- Current Range: Up to 45Arms
- Frequency Range: 45 to 70Hz
- CC, CR & CP load modes
- Programmable Crest Factor: 1.414 to 5.0
- Programmable Power Factor: 0 to 1 lead or lag
- Voltage & Current Monitor

Digital Power Meters

MODEL
66200 Series **NEW**



Ideal for Energy-star & High Precision Power Measurement

Chroma's new series 66200 Digital Power Meter is designed for single-phase measurements of AC power signals and related parameters common to most electronic products. Instead of traditional analog measurement circuits the 66200 uses state-of-the-art DSP digitizing technology. The internal 16 bits analog/digital converters with sampling rates of up to 240KHz provide both high speed and high accuracy measurements which is unprecedented within the industry for this class of power meters current on the market.

Key Features:

- Current Range:
 - Model 66201: 0.01/0.1/0.4/2 Arms
 - Model 66202: 0.01/0.1/0.4/2 Arms, 0.2/2/8/20 Arms
- 10 mA minimum current range & 1mW power resolution
- Meets ENERGY STAR/IEC 62301 measurement requirements
- Accumulated energy methods for unstable power measurement
- THD and user-specify order distortion measurement (Model 66202)

Automatic Test Systems

MODEL
8000
NEW

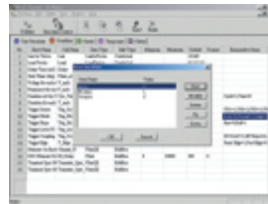


Switching Power Supply ATS

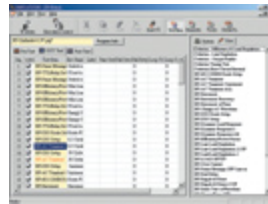
Chroma is a leading worldwide supplier of automated testing equipment to the power conversion industries. Automated systems are available for R&D, Design verification and production applications.

Key Features:

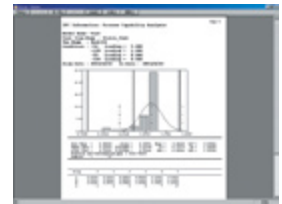
- Open architecture software platform
- Support any instrument with GPIB/RS-232/RS-485/I²C interface
- Test command optimizer helps to improve test speed
- Capable of coding for any power supply application
- Cost effective
- Windows 98/NT/2000 or higher based software
- Comprehensive hardware modules provide high accuracy and repetitive measurements
- Statistical and user editable test report
- User editable test item/ test program
- Remote monitoring via internet



Test Item Editor



Test Program Editor



Statistical Report



Telecom Power Supply Testing

For the Switching Mode Rectifier or Telecom Power Supply Testing, it should build in other special instruments just like:

RF Voltmeter:

It offers measurement with high-input impedance, excellent stability and low noise. It measures the wide band noise of SMR at different frequency.

Transmission Impairment measurement Set:

It offers testing of voice-grade data circuits and metallic digital circuits. It measures the output voltage voice and noise of SMR.



DC to DC Converter Testing

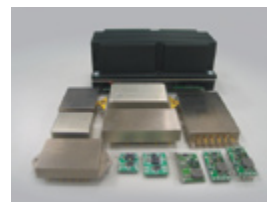
Software:

Special Design Test Items (Load Fault Power Dissipation Test, Switching Frequency Test, Synchronization Frequency Test)

Hardware: Create Standard Test Fixture platform (Receiver)



DC-DC Converter Test Fixture



DC-DC Converter

**MODEL
6000**



Switching Power Supply ATS

The PC-controlled Chroma 6000 ATE software-PowerPro is a Windows-based integrated software system for PC-based ATE control, test development and data manipulation. It adopts open architecture concept and modern database techniques to provide flexible, speed of programming and ease of use test solutions for AC/DC type power supplies and DC/DC converters.

Key Features:

- ☑ Synchronization And Measurement Accuracy
- ☑ High Test Throughput And Efficiency
- ☑ Friendly Windows 98/NT or higher graphical user interface
- ☑ Easy-to-edit flexible test procedure
- ☑ Network support, high performance data acquisition and statistics capability

**MODEL
8490**

NEW



Model 8490 for D/A Inverter



Model 8490 for LIPS Type

LCD Inverter ATS

The Chroma LCD Inverter Auto Test System model 8490 is the ultimate solution for LCD inverter. It can test not only traditional DC to AC inverter but also the LIPS (LCD Integrated Power Supply) type that combines adapter and inverter in one board. Besides the test fixture is the most critical ingredient for LCD inverter ATS. All Chroma test fixture modules are special designed and make the output impedance the lowest to reduce loading effect.

Key Features:

- ☑ For both inverter & LIPS testing
- ☑ High test throughput by system default test items
- ☑ Cost effective
- ☑ Synchronized measurement in multi-channel reduce the test time
- ☑ Expandable PCI interface card: Measurement Card, Control Card, DMM Card
- ☑ Three brightness control modes DC Voltage, PWM, and SM Bus control
- ☑ Compensation function to correlate the error caused by fixture
- ☑ Burst mode frequency & duty measurement
- ☑ Two different modules can test CCFL or EEFL inverter
- ☑ Special design inverter automatic tester for large size LCD TV inverter testing



Inverter Automatic Tester



Chroma

HEADQUARTERS

CHROMA ATE INC.
No. 66, Hwa-Ya 1st Rd.
Hwa-Ya Technology Park
Kuei-Shan Hsiang, Taoyuan Hsien
Taiwan
Tel: +886-3-327 9999
Fax: +886-3-327 8898
E-mail: chroma@chroma.com.tw

BRANCH OFFICES

CHINA

Chroma Electronics (Shenzhen)Co., Ltd.
8F, No.4, Nanyou Tian An Industrial Estate
Shenzhen
China
Post Code: 518054
Tel: +86-755-2664 4598
Fax: +86-755-2641 9620

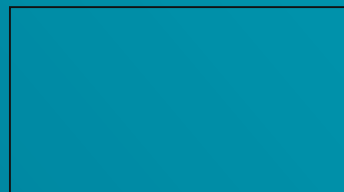
U.S.A.

CHROMA ATE INC.
CHROMA SYSTEMS SOLUTIONS, INC.
7 Chrysler, Irvine, CA 92618
Tel: +1-949-421 0355
Fax: +1-949-421 0353
Toll Free: +1-800-478 2026
E-mail: info@chromaus.com
E-mail: Sales@ChromaUSA.com

EUROPE

Chroma ATE Europe B.V.
Max Planckstraat 4,6716 BE Ede
The Netherlands
Tel: +31-318-648282
Fax: +31-318-648288
E-mail: info@chromaate.nl

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