Addressing the testing needs for all types of semiconductor components
The world is pushed to change by the advance in semiconductor technologies. This is the time when artificial intelligence meets 5G, when autonomous cars meet big data analysis, with everything consolidated into a portable device. Semiconductor test systems need to be transformed to a new era where all sorts of features need to be integrated into a tiny system. The emerging PXIe-based platform provides a good viable path to fulfill the needs in the new era. Chroma's PXIe Semiconductor Test Solutions give our clients a versatile workplace to complete the semiconductor test while integrating functional instrument modules from different suppliers.

Semiconductor Test Class Power Source for Automotive and Other Applications
Chroma 33021 PXIe based programmable power supply card is an integrated power supply module for higher voltage up to 48V at 250mA current. The outputs can be ganged together with output current up to 500mA per card, and paralleled across cards for high current needs. With an 18-bit force voltage resolution and 18-bit measurement voltage resolution at 1Msps sampling rate, users will be able to read the supply output voltage and current data and save them into the built-in source and capture memory. Programmable voltage and current protection clamps are also designed to make sure the power source is well controlled without risks.

Proprietary Software, CRAFT and other rich features of software support
In addition to supporting the LabView and LabWindows environment, Chroma provides a proprietary software suite, CRAFT. CRAFT, running on Microsoft Windows operation system, contains a full set of tools for semiconductor test from tests program development, debugging, production to maintenance. The production tools include easy-of-use GUI software such as Operator Interface, Test Data Output, Binning and Sequence Control, Wafer Map, Summary Tool, and rich sets of prober/handler drivers. The user debugging tools include the Datalog, Plan Debug, TCM, Shmoo, Pattern Editor, and Waveform, etc. It also supports LabView and LabWindow environment, and a subset of debugging tools are provided. In addition, a third party CAD to ATE pattern conversion tool is also supported to cover the WGL/STIL/VCD/EVCD conversions.

HIGH VOLTAGE DEVICE POWER SUPPLY
MODEL 33021

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MODEL 33021

KEY FEATURES
- Max. 48V DC output with 2 channels per card
- -12V ~ 48V independently programmable voltage levels
- Max. 250mA current per channel
- Parallel current gang feature providing max. 500mA output per card
- 18-bit voltage programming resolution
- 18-bit measurement resolution with accuracy up to 0.01%
- Programmable voltage and current protection clamping
- External trigger input and output for high speed test synchronization
- Semiconductor grade CRAFT-PXIe software
- LabView and LabWindows support
- Master/Slave architecture for boards chaining
- Compliance pattern and timing structure with Chroma 3380 series

FOCUSED APPLICATIONS
- MCU and consumer SoC
- MEMS & Sensors: Light sensors, temperature sensors, pressure sensors, magnetic sensors, gyro, accelerometers
- Automotive 48V power system
- RF: Switch/Front-end module IC, connectivity (bluetooth, WiFi, combo, etc.), mobile IC
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Model</th>
<th>33021</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Channel</td>
<td>2 channels per board</td>
</tr>
<tr>
<td>Total output power</td>
<td>24W per board</td>
</tr>
<tr>
<td>Number of board in a system</td>
<td>optional</td>
</tr>
<tr>
<td>Force Mode</td>
<td>FV, FI, FN</td>
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<tr>
<td>Measure Mode</td>
<td>MI (FN exception), MV (measure I/V simultaneously)</td>
</tr>
<tr>
<td>V Range</td>
<td>4V, 6V, 12V, -12~-+24V, -12~-+48V</td>
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<tr>
<td>I Range</td>
<td>1uA, 10uA, 100uA, 1mA, 10mA, 100mA, 250mA</td>
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<tr>
<td>Outlet</td>
<td>Go through connector</td>
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<tr>
<td>Current Gang Support</td>
<td>Yes</td>
</tr>
<tr>
<td>Ground Reference</td>
<td>System grounding</td>
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<tr>
<td>Measurement Trigger by</td>
<td>CPU, PXI trigger bus</td>
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<tr>
<td>Force DAC</td>
<td>18 bits, 250Kps</td>
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<td>Measure ADC</td>
<td>18 bits, 1Msps</td>
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<tr>
<td>Source Memory</td>
<td>4k depth</td>
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<tr>
<td>Capture Memory</td>
<td>4k depth</td>
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<tr>
<td>Clamp</td>
<td>Programmable, 16 bits</td>
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</tbody>
</table>

### ORDERING INFORMATION

33021 : PXIe High Voltage Device Power Supply (REF02), 2 channels

Load Board

PXIe Chassis

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**ARCHITECTURE OVERVIEW**

![Architecture Overview Diagram]

**ORDERING INFORMATION**

33021 : PXIe High Voltage Device Power Supply (REF02), 2 channels

Load Board

PXIe Chassis

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**Search Keyword**

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