

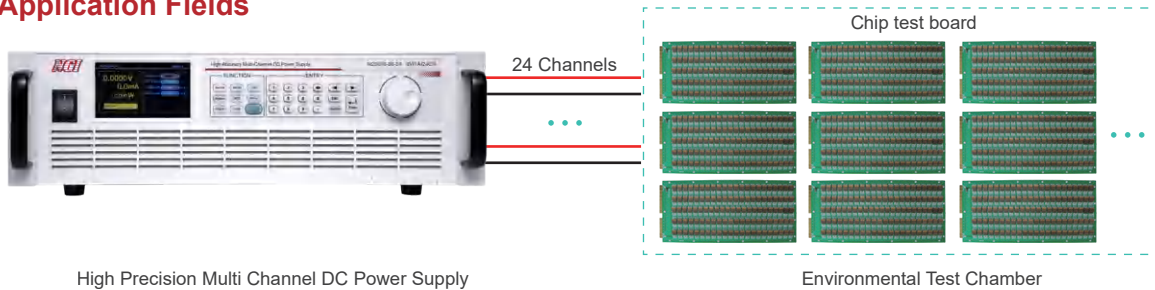
N23010 Series High-accuracy Multi Channel Programmable DC Power Supply



Product Introduction

N23010 series is a high-precision, multi-channel programmable DC power supply specially developed for the semiconductor industry, which can provide high-precision, stable and pure power for chips, and cooperate with the environmental test chamber for a number of environmental reliability tests. Its voltage accuracy up to 0.01%, support μA level current measurement, up to 24 channels for single unit, support local/remote (LAN/RS232/CAN) control, to meet the needs of chip batch, automatic testing.

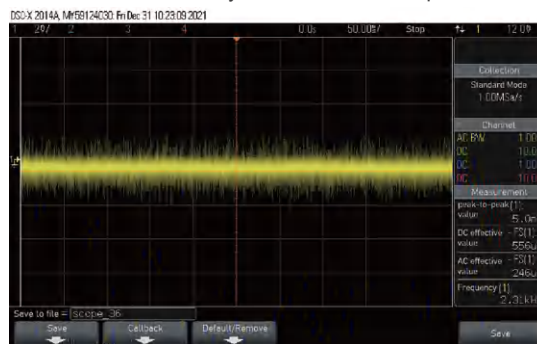
Application Fields



To complete HTOL, LTOL, ELFR/EFR, HAST, THB, etc., and support chip leakage current measurement test within Environmental Test Chamber

Main Features

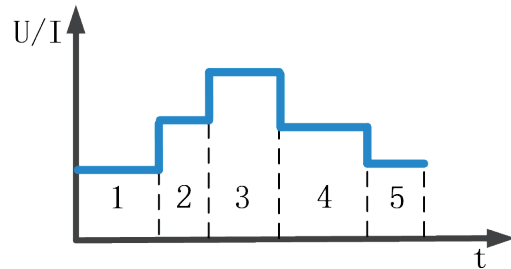
- **Accuracy and stability Ensure test reliability:** Reliability test usually requires multiple chips to run for a long time under power supply. Take HTOL as an example, the number of samples are at least 231 pieces and the test time is up to 1000 hours. N23010 voltage precision is 0.6mV, long-term stability 80ppm/1000h, voltage ripple noise $\leq 2\text{mVrms}$, can effectively ensure the reliability of the user test process all round protection, ensure the safety of instruments and products under test.



- **Ultra-high integration, saving user investment:** In the process of chip R&D, flow sheet and mass production, Usually it is necessary to carry out reliability test on multiple groups of samples. In addition, the leakage current of chip or jointed board is also an important test index. The traditional scheme usually adopts multiple linear power sources with data sampling, which is troublesome to connect and occupies test space. The N23010 integrates up to 24 power channels in a 19-inch 3U chassis to support μA -level current measurement, providing a highly integrated solution for large-scale chip testing.

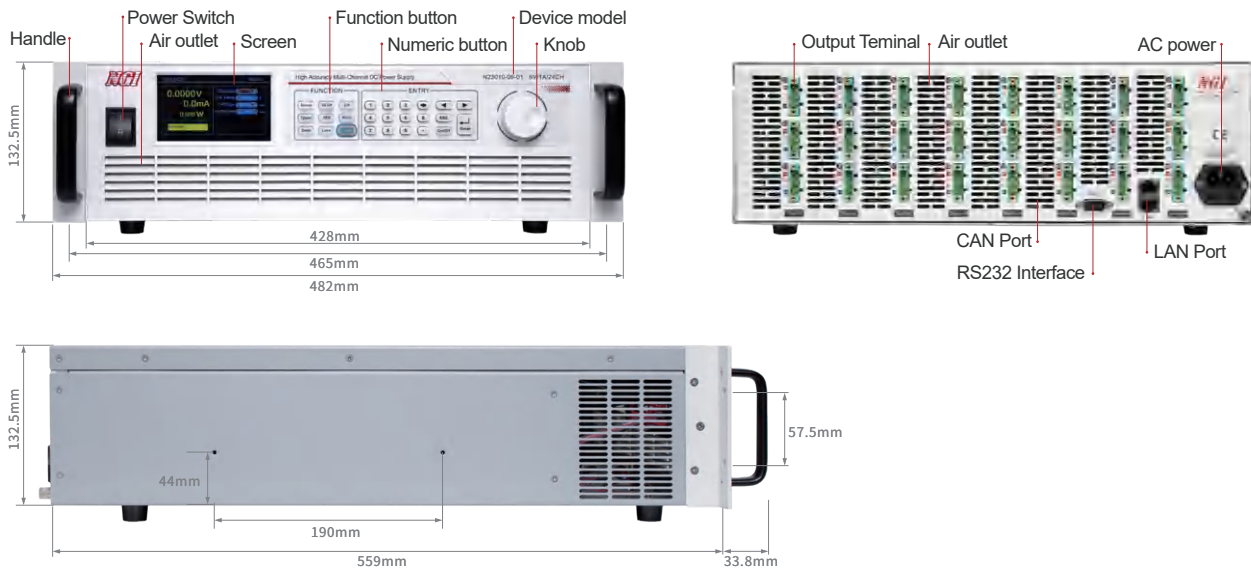
Semiconductor

- **Fast dynamic response:** N23010 is provided fast dynamic response capability, under the full voltage output, the load changes from 10% to 90%, voltage recovery to the original voltage reduction within 50mV time is less than 200μs, to ensure that the voltage or current rise waveform within high speed and no over impulse, to provide stable power supply for the chip under test.
- **Sequence editing:** N23010 supports sequence editing function. Users can set output voltage, output current and single step running time. 100 groups of voltage and current sequences can be customized locally.



- **Various communication interface, meet the requirement of automatic test:** support RS232, LAN, CAN port, convenient for users to build automatic test system.

Product Dimension



Technical Data Sheet

Model	N23010-06-01	N23010-06-03	N23010-06-05	N23010-15-01					
Voltage									
Range	0~6V	0~6V	0~6V	0~15V					
Setting Resolution	0.1mV								
Setting Accuracy (23±5°C)	0.6mV	0.6mV	0.6mV	1.5mV					
Readback Resolution	0.1mV								
Readback Accuracy (23±5°C)	0.6mV	0.6mV	0.6mV	1.5mV					
Ripple Noise(20Hz~20MHz)	≤2mVrms	≤2mVrms	≤2mVrms	≤5mVrms					
Long-term Stability	80ppm/1000h								
Temperature Coefficient	25ppm/°C								
Current									
Range	0~1A	0~1mA	0~3A	0~1mA	0~5A	0~1mA	0~1A	0~1mA	
Setting Resolution	0.1mA	0.1μA	0.1mA	0.1μA	0.1mA	0.1μA	0.1mA	0.1μA	
Setting Accuracy (23±5°C)	1mA	1μA	3mA	1μA	5mA	1μA	1mA	1μA	
Readback Resolution	0.1mA	0.1μA	0.1mA	0.1μA	0.1mA	0.1μA	0.1mA	0.1μA	
Readback Accuracy (23±5°C)	1mA	1μA	3mA	1μA	5mA	1μA	1mA	1μA	
Long-term Stability	100ppm/1000h								
Temperature Coefficient	30ppm/°C								
Dynamic Characteristics									
Voltage Rise Time(10%~90%)	≤20μs(no load, pure resistance full load)						≤40μs(no load, pure resistance full load)		
Voltage Fall Time(90%~10%)	≤3ms(no load) ≤100μs(pure resistance full load)						≤6ms(no load) ≤200μs(pure resistance full load)		
Transient Voltage Drop ¹	200mV						400mV		
Transient Recovery Time ²	<100μs						<200μs		
Others									
Isolation Voltage (Output to ground)	1500V DC								
Isolation Voltage (Inter-channel)	500V DC								
Operating Environment	Operating temperature:0°C~40°C; storage temperature:-20°C~60°C; altitude<2000m; relative humidity:5%~90%RH(non-condensing); atmosphere pressure:80~110kPa								
Interface	LAN/RS232/CAN								
AC Input	Single phase 100~240V AC, frequency 47Hz~63Hz, current ≤8A@220V, ≤14A@110V								
Net Weight	Approx.17kg								
Dimension	3U,132.5mm(H)*482.0mm(W)with handle*559.0mm(D)								

Note 1: Load varies from10% to 90% by full voltage output.

Note 2: Load varies from 10% to 90% by full voltage output, with voltage recovering within 50mV of previous voltage.

Note 3: For other specifications, please contact NGI.

Note 4: All specifications are subject to change without notice.