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Data Sheet

August 14, 2026

AGILENT / KEYSIGHT

Keysight N6781A 2-Quadrant Source/Measure Unit for Battery Drain Analysis, 20 V

Agilent Keysight N6781A 2 Quadrant SMU for Battery Drain Analysis 20 W The Agilent/Keysight N6781A is an N6780 Series source/measure unit module for the N6700 Modular Power System. OEM N6780 datasheets describe 2 quadrant smu for battery drain analysis with 20 W output rating and seamless multi-range measurement. Battery drain analysis, mobile device power characterization, and functional test of power-managed electronics in N6700/N6705 systems. Modular SMU for N6700 Modular Power System / DC Power Analyzer The Agilent/Keysight N6781A is an N6780 Series source/measure unit module for the N6700 Modular Power System. OEM N6780 datasheets describe 2 quadrant smu for battery drain analysis with 20 W output rating and seamless multi-range measurement. Battery drain analysis, mobile device power characterization, and functional test of power-managed electronics in N6700/N6705 systems. Modular SMU for N6700 Modular Power System / DC Power Analyzer Seamless measurement ranging for battery drain analysis class models



MODEL

**Agilent / Keysight
N6781A**

CALIBRATION

**Available on
request**

CONDITION

Used

STATUS

In stock

RFQ / SKU

N6781A

LISTING

<https://aumictechlabs.com/products/n6781a-3/>

NIST-traceable cal

SAM registered

30-day returns

NAICS 423690 · 811210 · 541380

This unit

The Agilent/Keysight N6781A is a source/measure unit (SMU) that provides precise voltage and current control and measurement. The N6781A features a wide operating range and high

resolution, making it suitable for a variety of testing and measurement tasks.

N6781A Characteristics / Specifications

PARAMETER	VALUE
Instrument Type	Source measure unit module
Series Family	Keysight N6780 for N6700
Application Role	2 Quadrant SMU for Battery Drain Analysis
Output Power Rating	20 W
Voltage Output Ranges	20 V / 6 V class ranges
Current Output Ranges	plus or minus 1 A / plus or minus 3 A
CV Peak Peak Ripple Noise	12 mV from 20 Hz to 20 MHz at full load
CV RMS Ripple Noise	1.2 mV from 20 Hz to 20 MHz at full load
Voltage Measurement Accuracy 20 V Range	0.025 percent plus 1.2 mV at 23 C plus or minus 5 C
Current Measurement Accuracy High Range	0.03 percent plus 250 uA on 3 A range
Quadrants	2 quadrant
Seamless Measurement Autoranging	standard on this model class
Auxiliary Voltage Measurement Input	0.025 percent plus 5 mV
Output Disconnect Relays	included on N6781A N6785A N6786A class
Host Mainframes	N6700C N6701C N6702C N6705B N6705C class
Digitizer	built in for scope like voltage and current traces on analyzer hosts
Arbitrary Waveforms	supported on compatible hosts
Programmable Output Resistance	available on battery drain analysis models
Current Derating Note	derated 1 percent perCabove 30 C per OEM
Multiple Voltage Ranges Count Class	3 or 4 depending on 20 W vs 80 W model
Multiple Current Measurement Ranges	multi range per OEM tables
SCPI List Capability	supported on N6700 family hosts
Software Companion Class	PathWave BenchVue Advanced Power Control and Analysis
Module Width Class	single wide for 20 W; double wide for 80 W N6785A N6786A

PARAMETER	VALUE
Voltage Priority Current Priority Modes	supported

N6781A Specifications

PARAMETER	VALUE
Applications	Battery drain analysis, mobile device power characterization, and functional test of power-managed electronics in N6700/N6705 systems.
Key Features	Modular SMU for N6700 Modular Power System / DC Power Analyzer
Two quadrant operation for source and sink	Built in digitizer and arbitrary waveform support on N6705 platforms
Technical Specifications	Instrument Type: Source measure unit module
Notes	Numeric rows from Keysight N6780 Series SMU datasheet and N6700 family specification summaries for N6781A.

Full OEM specifications

Complete technical content extracted from the manufacturer datasheet. Sparse OEM tables are reconstructed as tables below; other text is preserved as paragraphs.

Specifications	
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Notes

Numeric rows from Keysight N6780 Series SMU datasheet and N6700 family specification summaries for N6781A.

Available from Aumictech

Used and refurbished unit evaluated in-house. Calibration: Available on request. Used · In stock.

Request a quote: sales@aumictech.com · +1 (484) 841-9341

Aumictech

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NIST-traceable calibration · SAM registered ·
30-day returns
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Technical content from manufacturer specifications. Unit photo/stock from Aumictech listing when available. Specifications subject to OEM documentation and unit condition.