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# R&S®NGU201
## versus Keysight N6781A / N6782A

### What sets this source measure unit apart?

- ► Minimum residual ripple and noise to supply interference free voltage to sensitive DUTs
- ► Fast regulation of output voltage with minimum overshoot and very fast load recovery time
- ► Adjustable output impedance
- ► Constant resistance mode for sink operation
- ► Acquisition rate of up to 500 ksample/s to capture extremely fast variations in voltage or current
- ► Voltage priority and current priority mode
- ► High-capacitance mode
- ► Battery simulation

| Your benefit | Features |
|---|---|
| Minimal overshoot from abrupt load changes | ► Optimized load recovery time of < 30 µs<br>► Handles abrupt load changes from a few nA to the ampere range without creating voltage drops or overshoots |
| Capture fast variations in voltage/current | ► Acquisition rate of up to 500 ksample/s<br>► Voltage and current results available every 2 µs |
| Realistic battery simulation | ► Simulate the actual battery output performance<br>► Testing can be based on a selected battery model<br>► Battery capacity, SoC and $V_{oc}$ can be set to any state to test the device under specific circumstances |

| Parameter | R&S®NGU201 | Keysight N6781A | Keysight N6782A |
|---|---|---|---|
| Max. voltage/current/power | 20 V / 8 A / 60 W | 20 V / 3 A / 20 W | |
| Adjustable output impedance | –50 mΩ to 100 Ω | yes | no |
| Voltage ripple and noise (RMS) | < 500 µV (meas.) | < 1.2 mV | |
| Current ripple and noise (RMS) | < 1 mA (meas.) | noise < 200 µA, ripple not specified | |
| Load recovery time | < 30 µs (meas.) | < 35 µs | |
| Rise time/fall time | < 100 µs / < 100 µs | 10 µs / not specified | |
| Measured voltage/current ranges | 2 / 6 | 3 / 4 | |
| Max. readback resolution | 1 µV / 100 pA | 1 µV / 100 pA | |
| Max. voltage readback accuracy | < 0.02 % + 500 µV | < 0.025 % + 50 µV | |
| Max. current readback accuracy | < 0.025 % + 15 nA | < 0.025 % + 8 nA | |
| Max. acquisition rate (min. step) | 500 ksample/s (2 µs) | 200 ksample/s (5 µs) | |
| High-capacitance mode | yes | no | |
| Current priority mode | yes | yes | |
| Digital voltmeter input | optional | yes | no |
| Modulation input | no | no | yes |
| Battery simulation | optional | no | |
| Standalone instrument | yes | modules for Keysight N6700C/N6705C base units | |

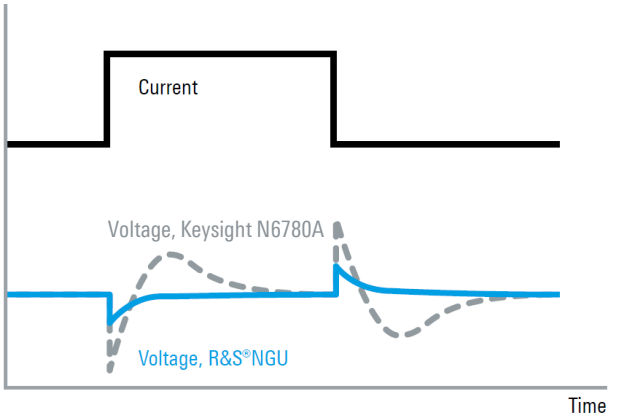
For prices and more information, visit
www.rohde-schwarz.com/product/NGU

## Standalone instrument versus modular system

The R&S®NGU201 is a small standalone instrument in the half 19" format.

Keysight offers the N6700C and N6705C modular systems in the 19" format to hold up to 4 SMU units.

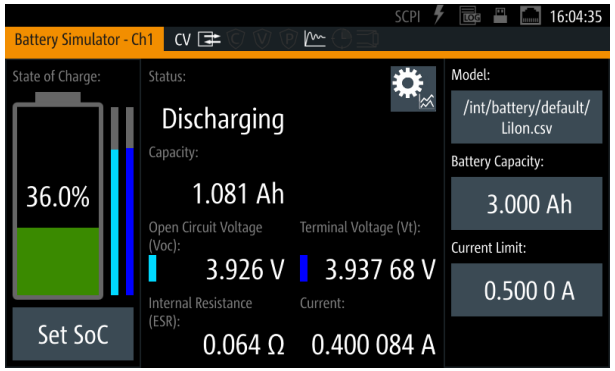
## Optimized load recovery time



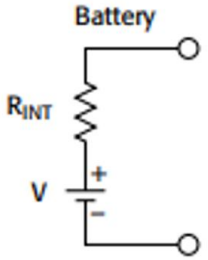

Keysight N6780A modular units are slower compared to the R&S®NGU source measure units

Under challenging load conditions, most power supplies respond with slow recovery times and overshoot. Specially developed circuits in the R&S®NGU source measure units achieve a load recovery time of < 30 µs with minimal overshoot, making them perfect for supplying sensitive components with power.

## Battery simulation

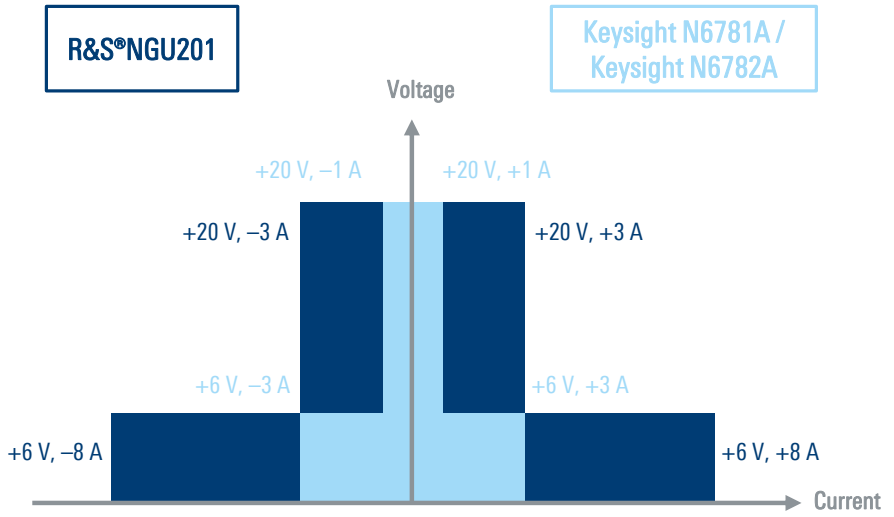



Keysight N6780A modular units do not provide a battery simulation function




- Capacity, open circuit voltage ($V_{oc}$) and equivalent series resistance (ESR) are important battery characteristics that depend on the battery's state of charge (SoC)
- The R&S®NGU-K106 battery simulator option allows users to simulate battery behavior with the parameters listed above

## Power envelope of the R&S®NGU201 versus Keysight N6781A / N6782A

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