Power supplies

for mobile terminals

- ◆ Output voltages up to 6 V for use as battery replacement
- ◆ Output voltages up to 15 V as charger supply
- ◆ Output currents of max. 3 A to 5 A
- ◆ Fast output regulation at minimal temporary voltage drops/overshoots
- ◆ Fast remote sensing capability

- ◆ Minimum ripple/noise
- ◆ High voltage resolution for setting and measurement (1 mV)
- ◆ High current resolution for measurement
- ◆ Current analysis
- ◆ Sinking capability
- ◆ Remote operation for system applications

ROHDE & SCHWARZ

Mobile radio

During normal operation, mobile terminals are powered by batteries or accumulators. The electrical characteristics of these power storage components, however, are charge- and temperature-dependent and are subject to aging. To create reproducible supply conditions or simulate limit conditions in the development, production and servicing of mobile terminals, the batteries are replaced by suitable laboratory power supply units that must fulfil special requirements. The combination of low supply voltages, strong dynamic load fluctuations in the µs range (e.g. GSM transmission burst) and the necessity to be able to read back minimum currents (e.g. standby currents) place demands on the power supply which can only be met by units with special characteristics.

All power supply units from Rohde & Schwarz listed on the following pages feature the following:

◆ High-resolution voltage setting
◆ Minimum ripple and noise
◆ Fast remote sensing capability
◆ Usable in mobile phone production/ development/servicing

In addition, they exhibit outstanding device-specific characteristics for use in mobile radio:

Programmable Single-Channel Analyzer/ Power Supply R&S®NGMO1

Programmable Dual-Channel Analyzer/ Power Supply R&S®NGMO2

R&S® NGMO1/NGMO2

Single-/Dual-Channel Analyzer/Power Supply – More than just a power supply

Key features

◆ One/two channel(s) (R&S®NGMO1/ R&S®NGMO2) 15 V/2.5 (5) A with 7 A peak
◆ Fast load regulation (<35 µs)
◆ Internal/external measurement triggers
◆ 5000-point sample buffer for fast current and voltage measurements with up to 10 µs resolution
◆ Sinking to 2.8 A (static)
◆ Precise measurement in µA range (up to 0.1 µA resolution)
◆ Adjustable output impedance for battery emulation
◆ Overvoltage protection, overcurrent protection (OVP, OCP)
◆ Convenient manual operation
◆ RS-232-C and IEEE 488.2 interface included
◆ Compact design (½ 19", 2 HU)

Typical applications

◆ Error detection in mobile phones
◆ Evaluation of operating time in different modes
◆ Setup of optimum network transmission parameters
◆ Charger tests (R&S®NGMO2)
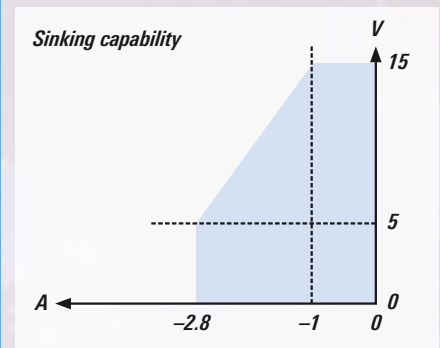◆ Mobile phone development/production/ servicing

Further features of the R&S® NGMO2

Software R&S®NGMO2-K10 for R&S®Current Sniffer

◆ Long-term current analysis
◆ Short-term current/voltage analysis
◆ Battery test

Optional R&S®NGMO 2-K10 plug-in for charger test

Sinking capability

R&S® NGSM32/10

Programmable Power Supply

Key features
◆ Output: 0 V to max. 32 V/0 A to max. 10 A (20 A)
◆ Optimized transient response for GSM mobile phones (load regulation <100 µs)
◆ Simple arbitrary generator included
◆ Large LED display
◆ Easy operation
◆ Up to 100 µA current read-back resolution
◆ Optional RS-232-C or IEEE 488 interface
◆ Compact design (½ 19", 3 HU)

Typical applications
◆ Mobile phone development
◆ Mobile phone production
◆ Mobile phone servicing

R&S® NGPL6/5

Programmable Four-Channel Power Supply

Key features
◆ Four channels, max. 0 V to 6 V/0 A to 5 A/30 W
◆ Setting resolution 1 mV, 1 mA
◆ Read-back resolution 1 mV, 100 µA
◆ Remote operation by IEEE 488.2 interface and RS-232-C
◆ Optional terminal software for stand-alone operation, maintenance and firmware updates
◆ Optimized transient response for GSM mobile phones (load regulation <30 µs)
◆ Favorable price
◆ Compact design (½ 19", 2 HU)

Typical application
◆ Mobile phone production (esp. for software downloads, radiation tests, final assembly tests)

R&S® NGPQ32/6

Programmable Power Supply

Key features
◆ One channel (48 W) with supply range of 0 V to max. 32 V/0 A to max. 6 A
◆ Two measurement ranges: 0 A to 6 A with 100 µA resolution, 0 mA to 100 mA with 1 µA resolution
◆ Voltage resolution 1 mV
◆ Optimized transient response for mobile phones (load regulation <80 µs)
◆ Settable overvoltage, overcurrent and soft limits
◆ Intelligent status indication
◆ Convenient manual and remote operation
◆ RS-232-C and IEEE 488.2 interface included
◆ Compact design (½ 19", 3 HU)

Typical applications
◆ Mobile phone development
◆ Mobile phone servicing
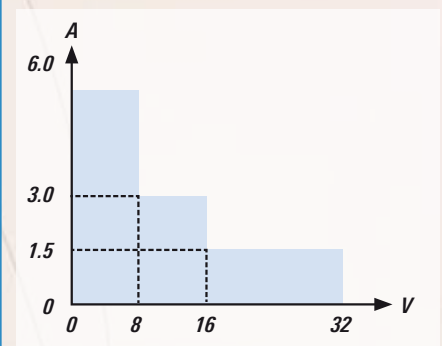
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