

ROHDE & SCHWARZ

CMD57

The Rohde & Schwarz CMD57 is a digital radiocommunication tester tailored for comprehensive measurements on GSM base stations (BTS) and BTS modules. Supporting GSM900, E-GSM, and UIC, with optional support for GSM1800 and GSM1900, it provides high-precision transmitter and receiver testing without disrupting active telephone calls.

SPECIFICATIONS

General

Interfaces	RS-232-C, IEC/IEEE-488 (GPIB)
Display	LCD display with softkeys on both sides

Physical

Power Supply	100 V to 240 V AC ($\pm 10\%$), 50 Hz to 60 Hz / 400 Hz
Operating Temperature	5 °C to 45 °C °C
Dimensions (W×H×D)	435 mm × 170 mm × 415 mm mm

Protocol & Call Processing

Supported GSM Bands	GSM900, E-GSM, UIC (European train radiotelephony), GSM1800 (optional), GSM1900 (optional)
Bit Error Rate (BER) Measurement Interfaces	Abis interface, IEEE bus, RS-232-C interface, BTS loopback, CMD loopback

RF Analyzer (Receiver & Transmitter Testing)

Dynamic Range	>72 dB (for checking power ramps and output spectrum)
Adjacent Timeslot Rejection	Up to 50 dB higher level (for BTS AGC testing)
Transmitter Power Ramp Measurement	Checking switching characteristics of BTS transmitter
Phase and Frequency Error Measurement	Testing modulation characteristics including statistical function
Spectrum Measurements	Spectrum measurement due to modulation or switching
RF Monitor Bandwidths	30 kHz and 100 kHz (replaces external spectrum analyzer)
Module Test Functionality	Complete transmitter measurements without signaling or time synchronization

RF Signal Generator (Transmitter Simulation)

Multifunction RF Generator	Integrated for receiver module alignment
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Connectivity & Interfaces

Remote Control Protocol	SCPI-compatible remote control
Software Update Method	Simple download via the RS-232-C interface

RF Connections

RF Input/Output Impedance	50 Ω
Main RF Connector Type	N-type (female)
Auxiliary RF Connectors	BNC (female)
Reference Frequency Input/Output	10 MHz, BNC

RF Analyzer

Max RF Input Power (RF IN/OUT)	+47 dBm (GSM peak power)
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Reference Oscillator

Reference Oscillator Frequency	10 MHz
Reference Oven Option	CMD-B1 (OCXO)

GSM Features

Supported Speech Codecs	Full Rate (FR), Enhanced Full Rate (EFR), Half Rate (HR)
GSM Phase Support	Phase 1, Phase 2, Phase 2+

Transmitter Measurements

Peak Power Measurement Range	0 dBm to +47 dBm
Peak Power Measurement Accuracy	< 0.6 dB (GSM900), < 0.9 dB (DCS1800/PCS1900)

Receiver Measurements

RF Generator Output Level Range (RF IN/OUT)	-33 dBm to -120 dBm
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TECHNOLOGY

GSM

APPLICATIONS

Base station (BTS) and BTS module testing

Generated by SpecAtlasHub (specatlashub.com). Specifications are compiled from available sources and are subject to change — verify critical values against the manufacturer before purchase.