

Characteristics

Digital Radio Tester CTS – the service tester family from Rohde & Schwarz – comes in four models:

- CTS30 for mobile phones GSM900/ 1800/ 1900 remote control only (no display)
- CTS55 for mobile phones to GSM900/ 1800/1900
- CTS60 for DECT phones (portable part and fixed part)
- CTS65 for GSM and DECT

Digital Radio Tester CTS is an extremely compact, modular yet powerful measuring instrument. It combines great ease of operation and the necessary test depth for use in all service areas for mobile and cordless phones: from a simple functional test to repairs. Both the newcomer and the service specialist will be able to conveniently carry out fast automatic functional tests as well as complex and comprehensive manual measurements down to component level.

GSM measurement functions

CTS55 simulates a GSM base station and can completely control the mobile for testing purposes. The following measurements and tests can be performed by automatic test routines or manually.

- Synchronization of mobile phone with base station (which is simulated by CTS)
- Location update
- Call establish (mobile originated/ mobile terminated)
- Call release (mobile originated/ mobile terminated)
- Power Control
- Measurement of transmitter power
- Handover (channel change)
- Sensitivity

- Bit error rate BER and RBER
- RxLev and RxQual

- Phase and frequency error
- Power ramp versus time (Power time template)
- Dual band handover
- Timing error
- Echo test (voice test, includes also testing of loudspeaker and microphone)
- Function test of mobile's keypad through display of dialled number
- Display of

- IMSI (international mobile subscriber identity)
- IMEI (international mobile equipment identity)

All these measurements can be found in 5 different modes of operation:

1. Go/ Nogo Test mode
2. Auto test mode
3. Manual test mode
4. Module test mode (optional)
5. Remote control (from an external PC (optional))

DECT measurement, test and adjustment capabilities

- Synchronization of DUT with the CTS
- Call establish
- Call release
- Echo test

- Detection and display of RFPI (FP)
- Normal transmit power (NTP)
- Power ramp versus time(Power time template)
- Modulation characteristics versus time
- Frequency offset
- Maximum modulation deviation
- Frequency drift
- Timing (jitter, packet delay)
- Bit error rate (BER), frame error rate (FER)
- GAP signalling (optional)
- IPUI detection (optional)

The DECT measurements are available in three different modes

1. Auto test mode (free configurable)
2. Manual test mode
3. Remote control (from an external PC (optional))

Remote control with CTS-GO

CTS-Go is a free application software, which gives the user an example of the CTS capabilities, which are available under remote control. All above listed functions are accessible from an external Windows based PC via RS232 interface (requires option CTS-K6).