

RTX2018
DECT RF TEST PLATFORM
DATA SHEET

The RTX2018 MLM (Multi-Level Modulation) DECT RF tester performs all key RF measurements on multi-level modulation products which use MLM DECT chips such as the Dialog DA14495.

RTX2018 MLM DECT RF TESTER

SYSTEM COMPONENTS

The RTX2018 system consists of a hardware unit in the form of a Rohde & Schwarz CMW100 and an RTX software application for DECT RF testing.

FEATURES & BENEFITS

- Comprehensive non-signaling application well-suited for both R&D and manufacturing
- Designed for super-high-speed testing including no connection setup time
- Can be used as standalone unit or integrated into customers' ATE systems through the RTX interface modules (.dll's)
- Includes PC GUI for lab use and manufacturing setup debug
- Future-proof, as e.g. new modulation forms and frequencies can be supported through software upgrades
- R&S CMW100 is a flexible & versatile hardware platform to which other functionalities can be added

APPLICATIONS

- R&D - its extended measurement capabilities and high accuracy makes it a perfect tool for R&D.
- Manufacturing - its high-performance measurement capability optimized for high-throughput makes it a perfect match for manufacturing.

RF MEASUREMENTS

- EVM (PSK modulation family only)
- NTP (Transmit power)
- Power template
- Carrier frequency offset
- Frequency deviation (GFSK only)
- BER / FER (requires DUT firmware)

BIT ERROR RATE / FRAME ERROR RATE

The BER and FER is calculated by the DUT firmware. The RTX2018 includes predefined waveform patterns for use with RTX DUT firmware.

RF OUTPUT LEVEL

The RF output level can be adjusted "on-the-fly" for determining sensitivity of the device under test. The RF level output range is between -100 to -10 dBm.

DUT CONTROL

The GUI has a built-in DUT control when using the RTX DECT Stack. This simplifies test set-up making a "one click" solution. The system allows users to communicate with the DUT through UART or USB while performing all the key RF measurements. Measurements are performed as non-signaling with DUT control through the RTX PROD TEST interface.

GRAPHICAL USER INTERFACE

The RTX2018 can be operated using the RTX Windows-based GUI or via the Dynamic Link Library (DLL) function calls. All measurements are easily configured and shown in separate windows when using the GUI.

GUI GRAPHICAL RESULTS

- Constellation diagram (PSK modulation family)
- Frequency demodulated data (GFSK)
- Power template

CONNECTIONS

The CMW100 has 8 RF IN/OUT ports on the front panel for connection to up to 8 DUTs eliminating the need for switches in the test fixture during testing.



Fig. 1: R&S CMW100 hardware platform for RTX2018

GRAPHICAL USER INTERFACE

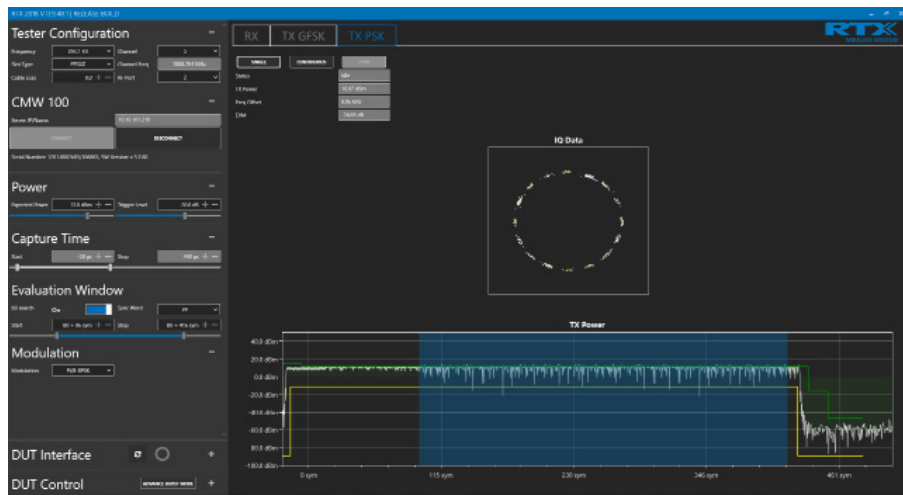


Fig. 2: Constellation diagram & power template in xPSK mode

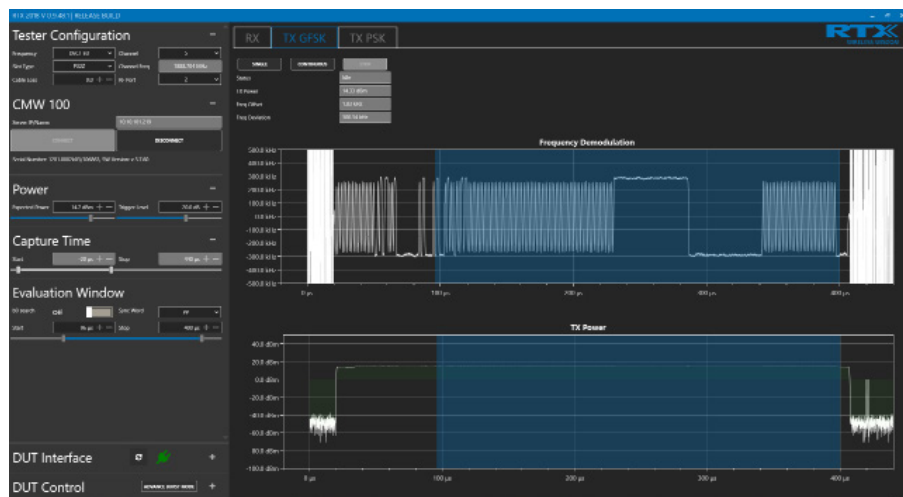


Fig. 3: Frequency demodulation data & power template in GFSK mode

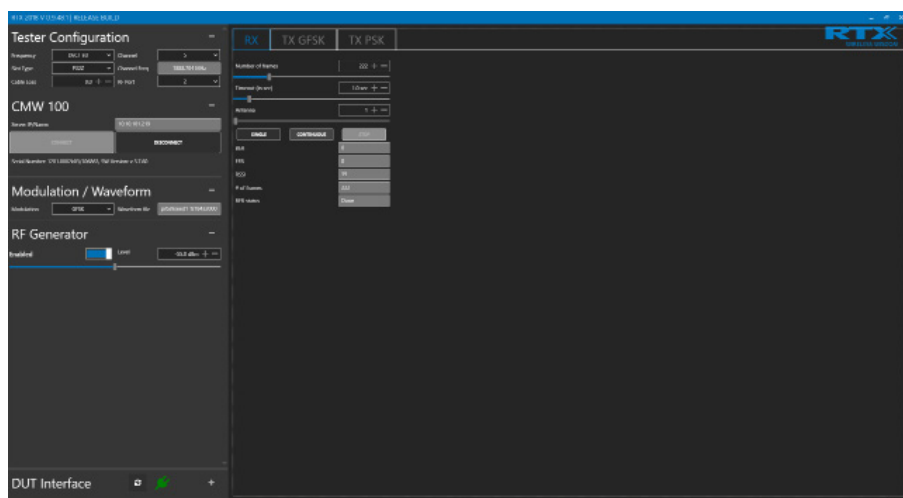


Fig. 4: Receiver measurement

MEASUREMENT CAPABILITIES

MEASUREMENT TYPE	DESCRIPTION
FREQUENCY BANDS	<ul style="list-style-type: none">• DECT EU• DECT US• DECT Japan• DECT Korea
SLOT TYPES	<ul style="list-style-type: none">• P32• PP32• P64• PP64
MODULATION TYPES	<ul style="list-style-type: none">• $\pi/2$-DBPSK• $\pi/4$-DQPSK• $\pi/8$-D8PSK• GFSK
TRANSMITTER	<ul style="list-style-type: none">• EVM• NTP• Power template• Carrier frequency offset• Frequency deviation
RECEIVER	<ul style="list-style-type: none">• Sensitivity• BER• PER

TECHNICAL SPECIFICATIONS

GENERAL DATA	SPECIFICATIONS
R&S CMW100	Please see the data sheet for CMW100 on R&S website

ORDERING DETAILS

RTX NO.	DESCRIPTION
95101349	RTX2018 HW unit & SW application
95200908	RTX2018 SW application only
95201046	RTX2018 5 year warranty for HW & SW incl. 4 scheduled calibrations
95201047	RTX2018 5 year warranty for SW application only