

Product Datasheet - Technical Specifications



More information in our Web-Shop at ► www.meilhaus.com and in our download section.

Your contact

**Technical and commercial sales, price information,
quotations, demo/test equipment, consulting:**

Tel.: **+49 - 81 41 - 52 71-0**

FAX: **+49 - 81 41 - 52 71-129**

E-Mail: sales@meilhaus.com

Downloads:

www.meilhaus.com/en/infos/download.htm

Meilhaus Electronic GmbH
Am Sonnenlicht 2
82239 Alling/Germany

Tel. **+49 - 81 41 - 52 71-0**
Fax **+49 - 81 41 - 52 71-129**
E-Mail sales@meilhaus.com

Mentioned company and product names may be registered trademarks of the respective companies. Prices in Euro plus VAT. Errors and omissions excepted.
© Meilhaus Electronic.

www.meilhaus.de



5252D 5G Multichannel Test Set



China Electronics Technology Instruments Co., Ltd.

5252D 5G Multichannel Test Set



Product Overview

Ceyear 5252D 5G multi-channel test set is a multi-channel parallel analysis instrument for 5G base station test, offering high performance on 5G base station transceivers test, and is compatible with 4G (LTE), 3G (WCDMA), 2G (GSM) base stations. The 5252D integrates an advanced multi-channel RF transceiver module and a high-speed baseband processing host, delivering wide frequency band coverage, large modulation bandwidth, multiple channels, and flexible configuration, which can perfectly handle critical technical issues such as large bandwidth, multi-channel, and frame structure.

Represent warranted product specifications of 5252D 5G multi-channel test set include: EVM, OBW, ACLR, time domain, frequency domain, sensitivity, etc., which enabling a full-stage capability of large-scale array antenna BS test, transceiver RF performance test, BS production, BS optimization, etc. Moreover, 5252D provides insights for leading-edge 5G communication technologies verification.

Features and Advantages

- **Parallel test: Multi-channel parallel test**

releases test time with improved test efficiency.

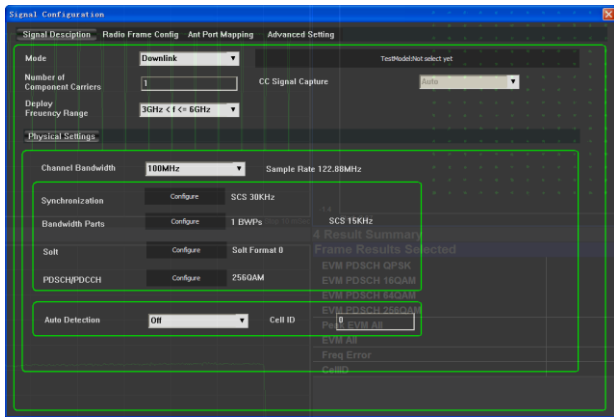
- **Multi-domain analysis: Provides simultaneous analyze ability on frequency domain, time domain and modulation domain to achieve comprehensive signal analysis results.**
- **Test models: Support one-button test for test models launched by 3GPP TS 38.141 for user convenience.**
- **200 MHz RF bandwidth, analysis bandwidth covers 5/10/15/20/25/30/40/50/60/70/80/90/100/200 MHz**
- **Flexible massive MIMO configuration: 4-channel supported in single RF transceiver module, up to 64-channel are attainable via cascading.**
- **Baseband big data optical port transmission: IQ baseband data real-time storage, IQ baseband data real-time filling.**
- **Flexible configuration of control commands: Multiple parameters can be configured and delivered in parallel in one interface. Flexible interfaces switching is available according to specific test scenarios.**
- **Reliable touch screen with flat menu in block diagram ensures straightforward and intuitive operation.**

Applications

The 5252D 5G multi-channel test set is suitable to join in the streamline process of 5G BS signal analysis and troubleshooting during R&D, production, construction, network planning, and optimization. Various function modules allow users to perform analysis on frequency-domain, time-domain, demodulation-domain, ACLR, OBW, power, frequency offset, sensitivity, etc. The RF band bandwidth is not less than 200 MHz, which meets the bandwidth requirements of the 5G system at present.

Flexible Configuration Menu

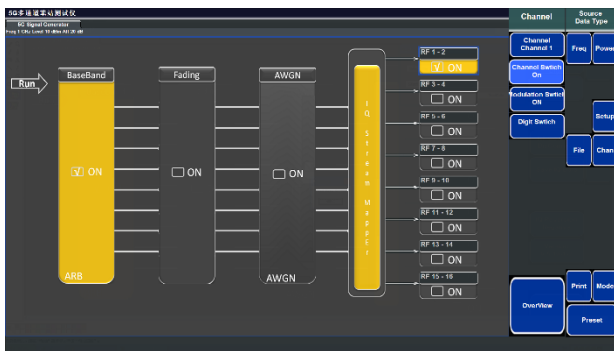
User-friendly interface and flat menu structure of 5252D 5G multi-channel test set offer prominent ease of operation on functions access, configurations and quick-guide. Various parameters can be set in one window, which greatly accelerates the configuration flow.



5G NR Base Station Standard Signal Parameters Configuration

Sensitivity test

The 5252D 5G multi-channel test set has multi-channel simultaneous transmission capability. Users can send standard uplink (UL) signals for performing base station receiver sensitivity test.

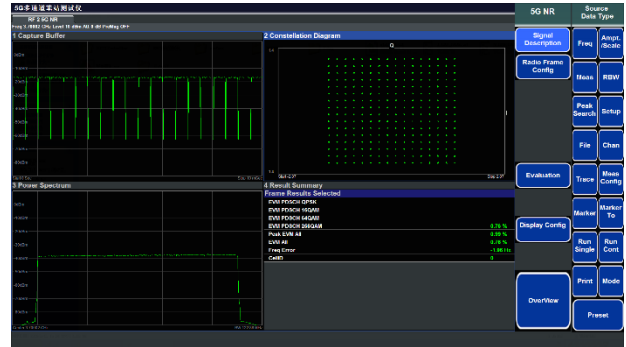


Uplink Signal Transmission Configuration Interface

Time Domain, Frequency Domain, Demodulation Domain Analysis

The 5252D 5G multi-channel test set has multi-domain simultaneous analysis capability, allowing users to view frequency domain analysis,

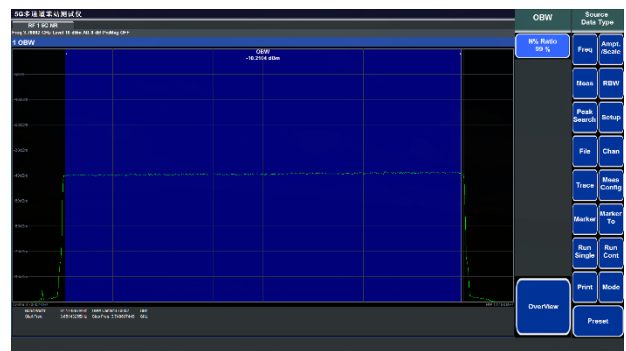
time domain analysis, and demodulation domain analysis results simultaneously.



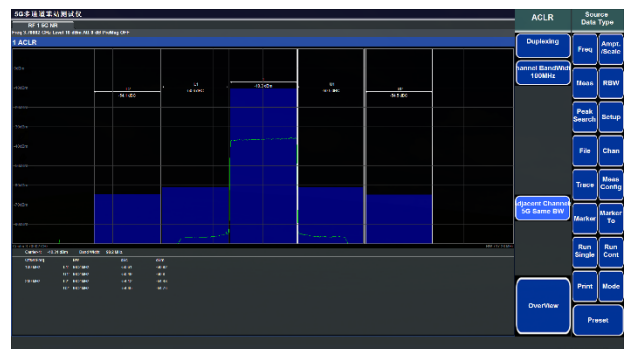
Frequency-domain, Time-domain and Modulation-domain Analysis Interface

Support 3GPP Test Models

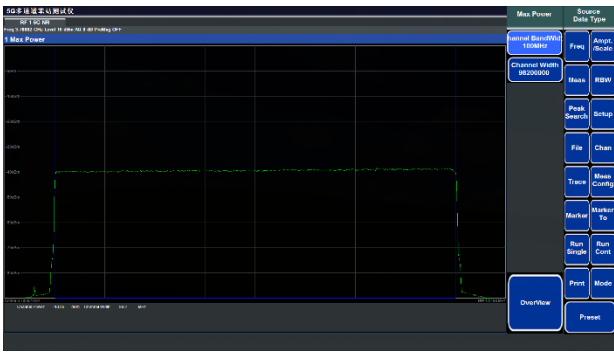
The 5252D 5G multi-channel test set support one-button analysis on EVM, OBW, ACLR, etc. defined by 3GPP.



OBW Test for 5G NR Base Station Signal (100 MHz BW)



ACLR Test for 5G NR Base Station Signal (100 MHz BW)



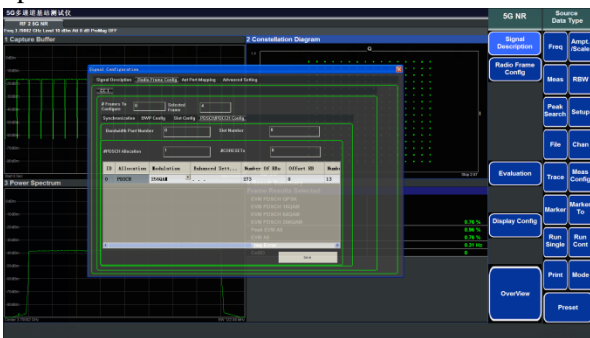
Channel Power Test for 5G NR Base Station Signal (100 MHz BW)



Multi-channel Test for 5G NR Base Station Signal (100 MHz BW)

Optimized User Interaction

The 5252D 5G multi-channel test set builds a linkage between inspiration and action. Intuitive configuration, measurement and analysis can be achieved via structured test flow in the display by offering users optional functional branches.



Structured Measurement Flowchart on Touch Screen

Connectors and Interfaces

The 5252D 5G multi-channel test set provides LAN (local area network) ports, USB ports and other connectors/interfaces to explore operation boundary. Remote control and SCPI programming is supported.

Highly Integrated Instrument with Low Cost of Ownership

As a high-precision test and validation platform, 5252D 5G multi-channel test set integrated multiple receiver and transmitter modules, providing industry leading measurement and validation performance in the lowest overall cost.

Specification

5252D 5G multichannel test set	
Band Coverage	400 MHz to 6 GHz
Analysis Bandwidth	5/10/15/20/25/30/40/50/60/70/80/90/100/200 MHz
Communication Standard	5G NR, provides options for GSM, WCDMA and LTE base station test
Input Level Range	-80 dBm to +28 dBm
Output Level Range	-120 dBm to 0 dBm
EVM	1% (for 100 MHz BW 5G NR signal)
Frequency Offset Error	≤ 1 Hz
OBW	Main signal bandwidth error < 1 MHz (for 100 MHz BW 5G NR signal)
ACLR	52 dBc (L1, U1) (for 100 MHz BW 5G NR signal)
Spectra Template	Support all templates defined by 3GPP 38.141
Isolation between Channels	> 80 dB
Delay Error	< 17 ns
Flexible Configuration	sub-carrier separation, RB, downlink (DL) configuration, etc.
RF transmitter	
Frequency Resolution	0.1 Hz
RF Bandwidth	200 MHz
Output Level Resolution	0.1 dB
Absolute Level Accuracy	temperature range from 20 °C to 30 °C: ≤ 0.4 dB from -10 dBm to 0 dBm ≤ 0.6 dB from -40 dBm to -10 dBm ≤ 1.0 dB from -70 dBm to -40 dBm ≤ 1.2 dB from -100 dBm to -70 dBm ≤ 1.8 dB from -120 dBm to -100 dBm
Harmonic	≤ -30 dBc
Single Sideband Phase Noise (@1GHz)	-90 dBc/Hz @100Hz
	-110 dBc/Hz @1kHz
	-118 dBc/Hz @10kHz
	-114 dBc/Hz @100kHz
	-120 dBc/Hz @1MHz
Non- harmonic	≤ -40 dBc
Carrier Leakage	< -45 dBc

Sideband Suppression	> 40 dB
Source Standing Wave	≤1.55 from 400 MHz to 800 MHz
	≤1.45 from 800 MHz to 6000 MHz
RF receiver	
Frequency Resolution	1 Hz
RF Bandwidth	200 MHz
Internal Attenuator Range	0 dB to 30 dB
Single Sideband Phase Noise (@ 1GHz)	-90 dBc/Hz @ 100Hz
	-110 dBc/Hz @ 1kHz
	-118 dBc/Hz @ 10kHz
	-114 dBc/Hz @ 100kHz
	-120 dBc/Hz @ 1MHz
DANL	≤ -160 dBc/Hz (Preamplifier On)
Third-order Intercept Point (TOI)	+11 dBm
Residual Spurious	< -90 dBm (Preamplifier On)
Absolute Level Accuracy	≤ 0.5 dB @ from -10dBm to +28dBm
	≤ 1 dB @ from -80dBm to -10dBm
VSWR	≤ 1.5
Power Source	220VAC ±10%、50Hz ±10%
Operation Temperature Range	0°C to +40°C

Ordering information

- **Host: 5252D 5G Multichannel Test Set**
- Option 1: Sub-6 GHz RF T/R module
- Option 2: 5G base station tset module
- Option 3: LTE base station tset module
- Option 4: WCDMA base station tset module
- Option 4: GSM base station tset module