

MT8815B

Radio Communication Analyzer

30 MHz to 2.7 GHz





All in **1** Unit for Basic Tx and Rx Measurements of W-CDMA/HSPA, GSM/GPRS/EGPRS, CDMA2000 1X/1xEV-DO, and PHS/Advanced PHS Systems

Supports Multi-Communication Systems

The MT8815B platform covers a frequency range of 30 MHz to 2.7 GHz.

When the dedicated optional measurement software and hardware is installed, the major Tx and Rx characteristics of W-CDMA/HSPA, GSM/GPRS/EGPRS, CDMA2000® 1X (IS-2000), CDMA2000 1xEV-DO and PHS/Advanced PHS terminals can be measured using a single MT8815B unit.

Advanced Digital Signal Processing and Batch Measurement

Manufacturing and inspection test times have been dramatically cut by incorporating advanced DSP and parallel-measurement technologies. Furthermore, several measurement items can be selected freely for batch measurement, and the number of measurements for each measurement item can be configured separately. The one-touch operation supports easy and quick measurement of Tx and Rx characteristics, including transmit frequency, modulation accuracy, transmit power, spectrum emission mask, adjacent channel leakage power ratio, occupied bandwidth, and BER.

High-accuracy Tests at Repair and Maintenance

The MT8815B is a compact high-accuracy, high-speed tester for single RF measurements made at manufacturing, repair, and maintenance of mobile terminals. It is the ideal solution for service points (sales offices) and repair centers when used in combination with the MT8510B Service Tester.

Manufacturer Test Suite

Manufacturer Test Suite is the ideal solution for making RF adjustments and RF parametric tests on mobile terminal production lines. The basic version consists of signal generator and signal analyzer functions without call processing, supporting RF adjustments and RF parametric tests in the test mode (mobile controlled by external PC). Installing the call processing software option supports RF parametric tests while controlling the mobile terminal at call processing. Adding the adjustment software option shortens the time required for RF adjustment by using the chipset adjustment function.

CDMA2000® is a registered trademark of the Telecommunications Industry Association (TIA-USA).

MT8815B

Radio Communication Analyzer

30 MHz to 2.7 GHz



Supports Multi-Communication Systems

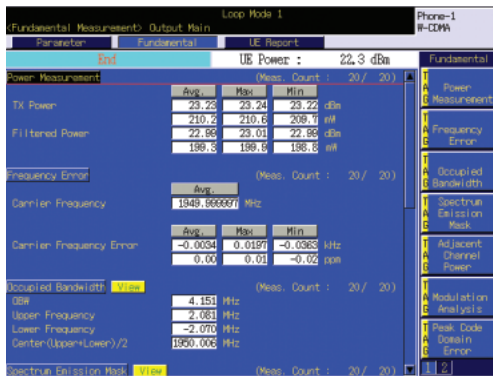
All-in-one Support for Basic Tx and Rx Measurements of W-CDMA/HSPA, GSM/GPRS/EGPRS CDMA2000 1X/1xEV-DO, and PHS/Advanced PHS Systems

W-CDMA Measurements

3GPP-compliant measurements of Tx and Rx characteristics of 3G W-CDMA terminals.

Transmitter Measurements

The transmit power, frequency error, occupied bandwidth, spectrum emission mask, adjacent channel leakage power ratio, modulation accuracy, and peak code domain error can be measured.



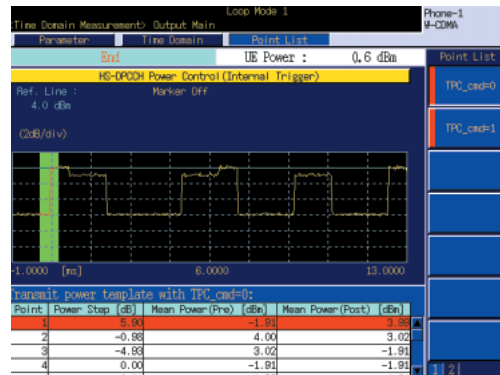
Transmitter Measurements

HSDPA Measurements

3GPP-compliant measurements of Tx and Rx characteristics of 3.5G HSDPA terminals.

Transmitter Measurements

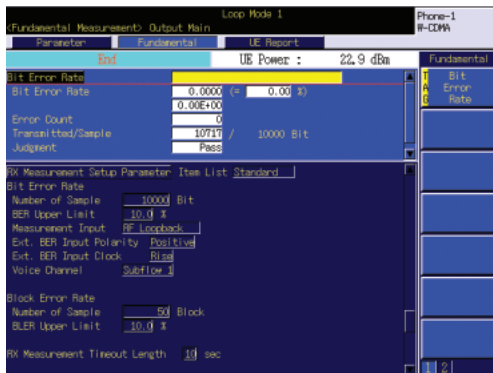
The transmit power, spectrum emission mask and adjacent channel leakage power ratio of the HS-DPCCH transmission slot are measured. At measurement in the time domain, the power step at the HS-DPCCH slot boundary, modulation, and code domain power are measured.



HS-DPCCH Measurement

Receiver Measurements

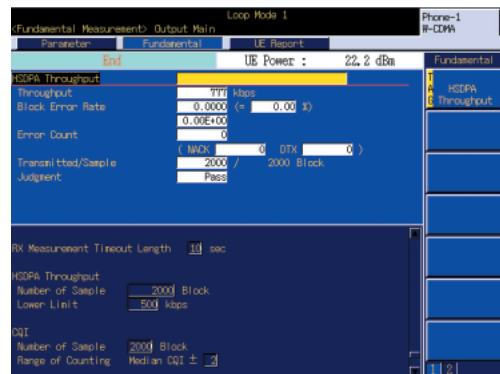
The bit error rate can be measured using the 3GPP-specified loopback test mode. In addition, feeding the demodulated data and clock signals from the W-CDMA terminal directly to the MT8815B supports bit error rate measurement. Both PN9 and PN15 can be set as the downlink RF signal data pattern.



BER

Receiver Measurements

The HSDPA throughput can be measured by counting the number of ACK blocks from the HSDPA terminal.



Throughput

* Requires MT8815B-001, MX882000C, MX882000C-011 and MX882050C

* Requires MT8815B-001, MX882000C and MX88205xC

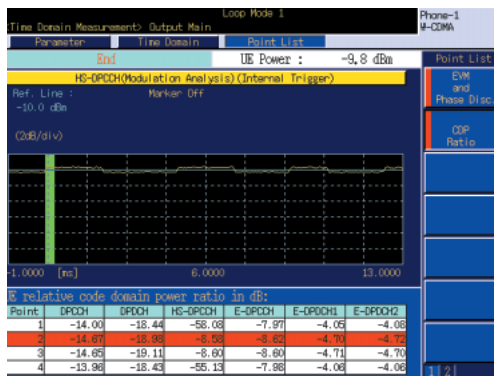
Read the MX882000C catalog for details

HSUPA Measurements

3GPP-compliant measurements of Tx and Rx characteristics of 3.5G HSUPA terminals.

Transmitter Measurements

The transmit power, spectrum emission mask, adjacent channel leakage power ratio, and code domain power at HS-DPCCH and E-DCH transmission are measured.



Code Domain Power

GSM/GPRS Measurements

Measures Tx and Rx characteristics of GSM/GPRS terminals — world's most common digital mobile standard.

Transmitter Measurements

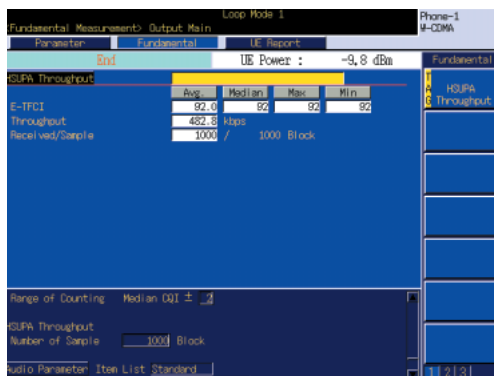
At GSM/GPRS measurement, the transmit frequency, phase error (RMS and peak), transmit power, power versus time (template mask), and output RF spectrum can be measured.



Power versus Time (GSM)

Throughput Monitor

The E-DCH throughput is calculated from the E-TFCI notification from the HSUPA terminals. In addition, the E-TFCI statistics (average, median, maximum and minimum) are displayed.



Throughput Monitor

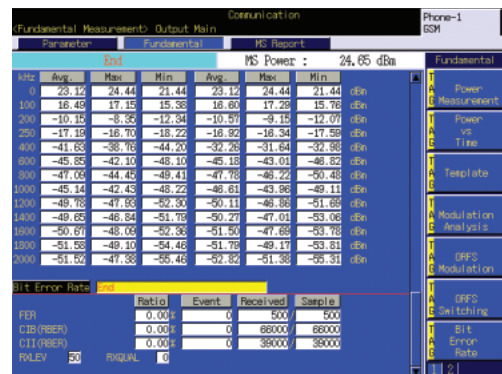
* Requires MT8815B-001, MX882000C, MX882000C-011, MX882000C-021 and MX882050C

Receiver Measurements

The uplink RF signal, which is looped back from GSM terminal, is demodulated by controlling the GSM terminal in the loopback condition to measure the frame error, bit error, and CRC error rates. And FAST BER measurement is supported.

The block error rate can be measured with the BLER and Test Mode B connection by controlling the GPRS terminal in the loopback condition.

The above receiver measurements can be performed in parallel with transmitter measurements.



BER (GSM)

* Requires MT8815B-002 and MX882001C

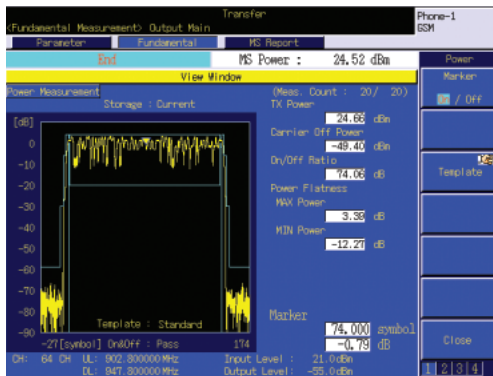


EGPRS Measurements

Measures Tx and Rx characteristics of enhanced GPRS system (EGPRS) terminals.

Transmitter Measurements

At EGPRS measurement, the transmit frequency, EVM (RMS and peak), origin offset, transmit power, power versus time (template mask), and output RF spectrum can be measured.



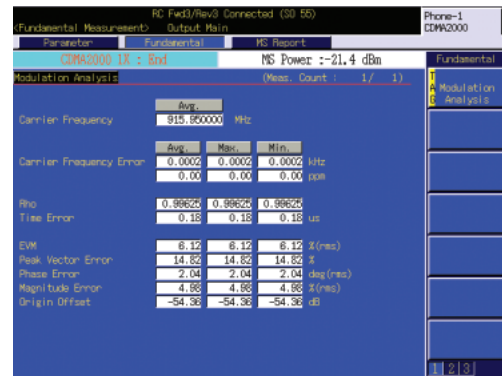
Burst Waveform Display (8PSK)

CDMA2000 1X Measurements

3GPP2-compliant measurements of Tx and Rx characteristics of 3G CDMA2000 1X terminals.

Transmitter Measurements

The transmit power, modulation analysis, occupied bandwidth, code domain power, spurious emission, and access probe power can be measured.

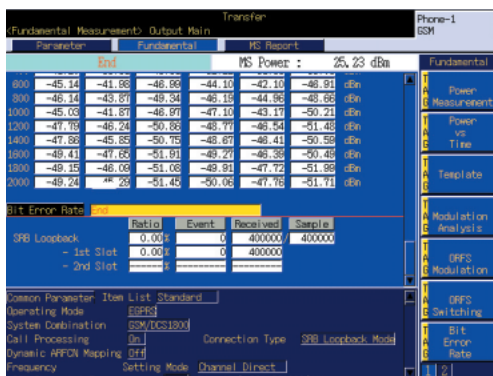


Modulation Analysis

Receiver Measurements

The uplink RF signal, which is looped back from EGPRS terminal, is demodulated by controlling the EGPRS terminal in the loopback condition to measure the block error or bit error.

The above receiver measurements can be performed in parallel with transmitter measurements.

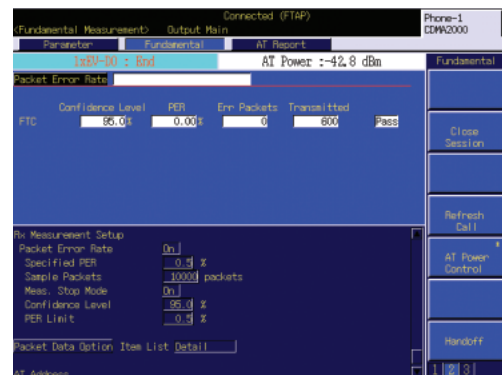


BER (SRB Loopback)

* Requires MT8815B-002, MX882001C and MX882001C-011

Receiver Measurements

The Frame Error Rate (FER) and Pass/Fail evaluation can be performed in SO2, SO9, SO55 and SO32 (TDSO) to display the FER, error frame count, Tx frame count, confidence level, and Pass/Fail results.



FER

* Requires MT8815B-003 and MX882002C

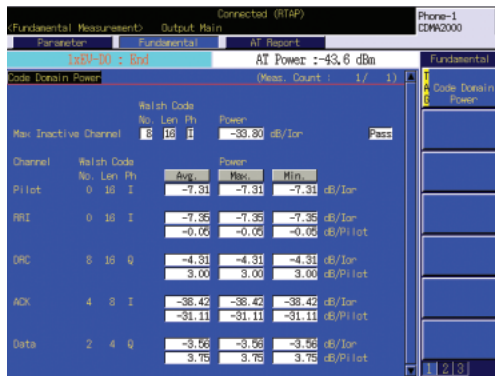


CDMA2000 1xEV-DO Measurements

3GPP2-compliant measurements of Tx and Rx characteristics of 3.5G 1xEV-DO terminals.

Transmitter Measurements

The transmit power, modulation analysis, occupied bandwidth, code domain power, spurious emission, and access probe power can be measured.



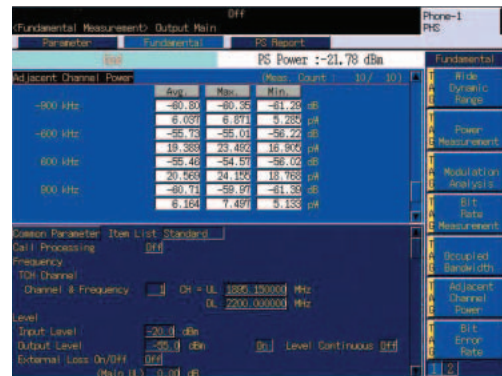
Code Domain power

PHS Measurements

Measures Tx and Rx characteristics of PHS terminals and base stations.

Transmitter Measurements

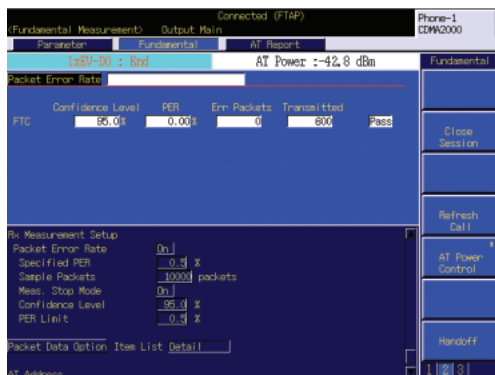
The transmit frequency, modulation accuracy, transmit power, transmission rate, occupied bandwidth, adjacent channel power of PHS terminals and base stations can be measured simultaneously.



Adjacent Channel Power

Receiver Measurements

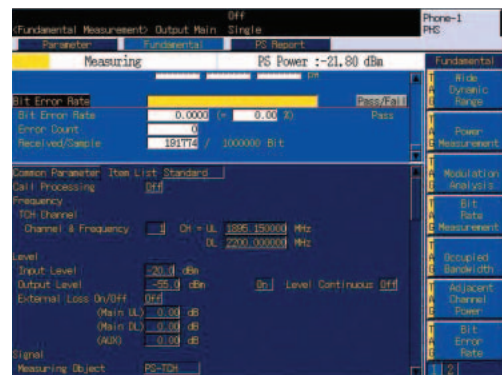
PER (Packet Error Rate) measurement and Pass/Fail evaluation can be performed in FTAP to display the PER, error packet count, transmission packet count, confidence level, and Pass/Fail results.



PER

Receiver Measurements

The bit error rate can be measured on receipt of demodulation data and clocks output from a terminal/base station by controlling the terminal/base station with an external PC etc. This measurement can be performed in parallel with transmitter measurements.



BER

* Requires MT8815B-003, MT8815B-004, MX882002C and MX882003C

* Requires MT8815B-002 and MX882005C

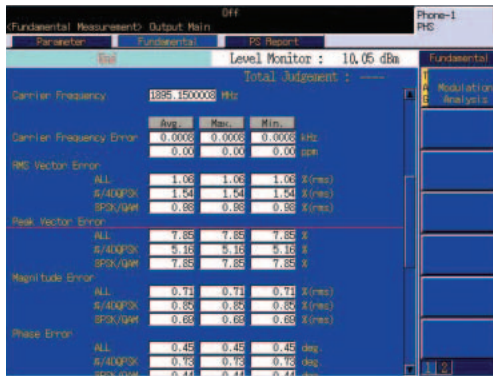
Supports All Function Tests

ADVANCED PHS Measurements

Measures Tx and Rx characteristics of Advanced PHS terminals and base stations in compliance with ARIB RCR-STD-28 edition 5.0 supporting $\pi/4$ DQPSK, 8PSK, and 16QAM modulation methods.

Transmitter Measurements

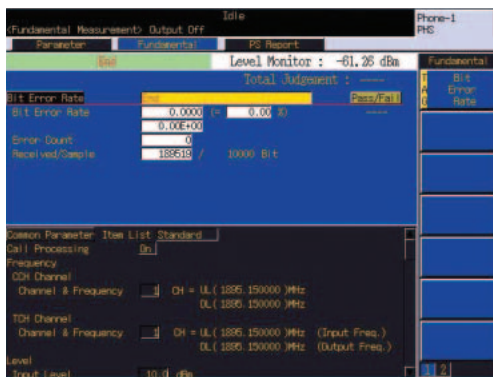
The transmit frequency, modulation accuracy, transmit power, transmission rate, occupied bandwidth, adjacent channel power of Advanced PHS terminals and base stations are measured simultaneously.



Modulation Accuracy

Receiver Measurements

The bit error rate can be measured on receipt of demodulation data and clocks output from a terminal/base station by controlling the terminal/base station with an external PC etc. This measurement can be performed in parallel with transmitter measurements.



BER (8PSK)

* Requires MT8815B-002, MX882005C and MX882005C-011

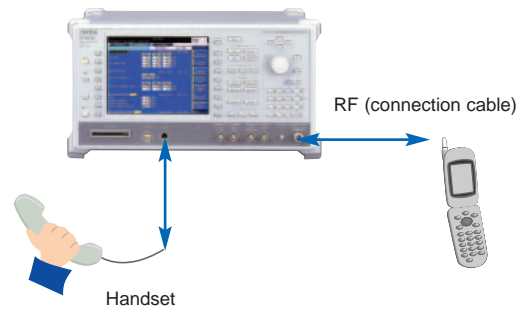
Read the MX882005C catalog for details

Real-time Voice Encoding and Decoding

Voice tests with a handset are supported by the real-time voice encoding and decoding function of the W-CDMA (GSM) Measurement Software. In addition, the call Tx and Rx audio can be measured using the audio measurement function.

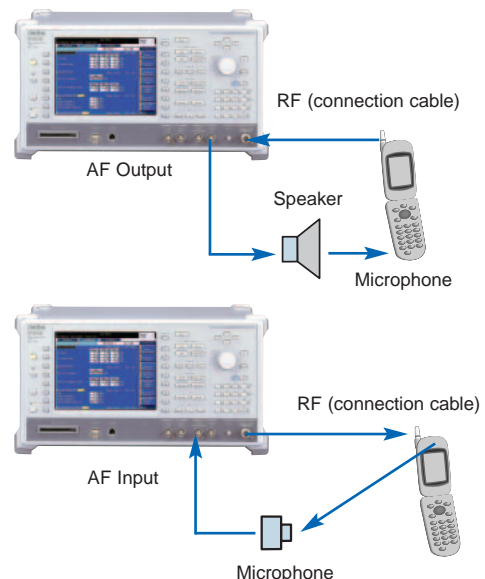
End-to-End Communications Test

This supports the end-to-end communications test between a handset connected to the RJ11 connector on the MT8815B and a mobile terminal.



Audio Transmitter Measurement

The tone signal from the MT8815B AF Output connector is supplied to the microphone of the mobile terminal and the audio transmitter characteristics of the mobile terminal can be measured using the MT8815B to demodulate the uplink RF signal and measure the level, frequency, and distortion of the demodulated tone signal.



* Requires MT8815B-011, MX882000C-001 or MX882001C-001

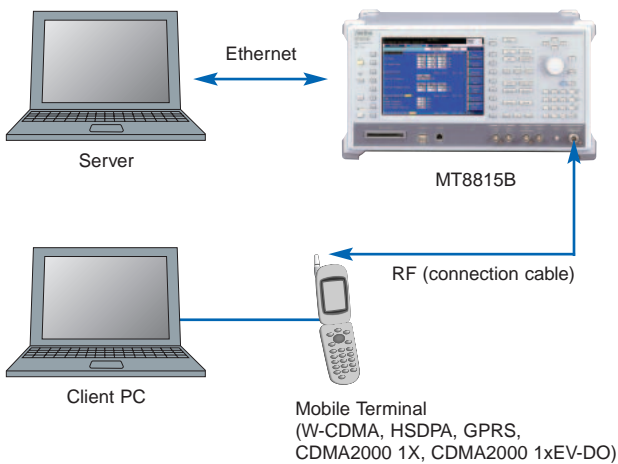
Read the MX882000C and MX882001C catalog for details



Packet Communication Data Transfer Test

End-to-End data transfer Tests

Using the External Packet Data Software option supports end-to-end data transfer between a mobile terminal (W-CDMA, HSDPA, GPRS, CDMA2000 1X, CDMA2000 1xEV-DO) and an application server connected to the MT8815B, or a PC client connected to the terminal, and various application tests.



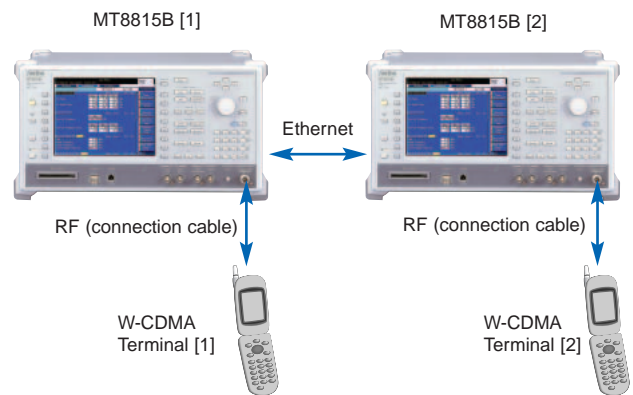
Sample MT8815B connection

* Any of MX882001C-002, MX882002C-002, MX882003C-002, MX882050C-002, MX882050C-011, or MX882051C-002 separately required

W-CDMA Video Phone Test

End-to-End Video Phone Test

Installing the MX882005x-C-003 W-CDMA Video Phone Test Software supports two-ways tests between W-CDMA terminals with video functions via the MT8815B Ethernet port. Two-way video phone tests require two MT8815B units.



Sample MT8815B connection: when MT8815B is two sets

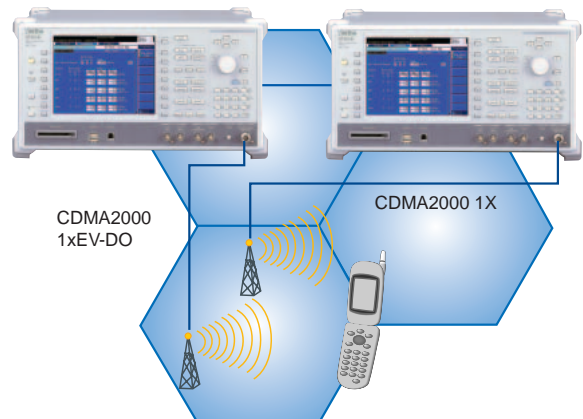
Read the MX882000C catalog for details

CDMA2000 1X/1xEV-DO Synchronous Function

CDMA2000 1X/1xEV-DO Hybrid Terminal Function Tests

By using the MX882002C and MX882003C with two MT8815B units, the CDMA2000 1X and 1xEV-DO forward link signals can be output with synchronized system times, supporting function tests of both CDMA2000 1X and 1xEV-DO mobile terminals.

* This function cannot be used when the MX882000C W-CDMA Measurement Software is installed. Uninstall this function when the MX882000C is installed.



Sample MT8815B connection: When MT8815B is two sets

Read the MX882002C/MX882003C catalog for details

Read the MX882000C, MX882001C and MX882002C/MX88203C catalog for details

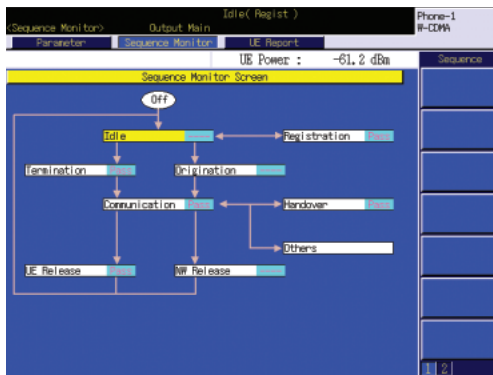
Supports Multi-System Call Processing Tests

Call Processing Tests

Call Processing

Connection Tests

Various connection tests, such as registration, origination, termination, handover, terminal disconnect, and network disconnect, can be tested using the call processing functionality. Moreover, voice from the mobile terminal can be echoed back while calling to test simple voice communications.



Sequence Monitor (W-CDMA)

Mobile Terminal Report Monitor

The mobile terminal status can be displayed as a periodic report sent by the mobile terminal to the MT8815B. The downlink RF signal level at the mobile receiver can be checked with the Rx level reported from the mobile terminal.

Parameter	Fundamental	MS Report
MS Power		24.62 dBm
MS Power Class	BCH	
IMSI	001011234567890	RMLEV : 50 (-61 to -80 dBm)
IMEI	8200000004411900	RMUPL : 0 (< 0.25ER)
NR Phone No	44444	
MS Power Level	3	
Timing Advance	0	bit
Cell	ARFDN	RMLEV
1	1	1
2	1	1
3	1	1
4	1	1
5	1	1
6	1	1

Mobile Terminal Report Monitor (GSM)

GPIB Control

High-Speed Easy-to-Use GPIB Interface

The built-in GPIB interface enables the MT8815B to be integrated into automated test systems for after-sales maintenance, as well as into automated production lines.

Independent Screen Items

Items not currently displayed on-screen can be read out or changed freely without changing the screen, dramatically saving time that would otherwise be lost by displaying the relevant screen.

Batch Readout Command for Measurement Results

All results of batch measurement can be read out using the single command "ALLMEAS?". The intended measurement results can be read out using a command such as "ALL MEAS? MOD". The reduced number of GPIB commands cuts the overhead of both the MT8815B and control PC, increasing measurement throughput. Moreover, since the control program step size is also reduced, easy-to-read control programs with high maintainability are easily created.

Excellent Cost-Performance Solution

Perfect RF Adjustment and Test Solution for Mobile Production Lines

Manufacturer Test Suite

Basic Configuration

Call processing functions are not required for RF adjustments, and are only rarely required for RF parametric tests. Consequently, the basic configuration of Manufacturer Test Suite offers signal generator and signal analyzer functions without call processing, and is ideal for making RF adjustments and RF parametric tests in the test mode (mobile controlled by external PC).

W-CDMA

MT8815B	Radio Communication Analyzer
MT8815B-031	W-CDMA Measurement Hardware Lite
MX882030C	W-CDMA Measurement Software Lite

GSM

MT8815B	Radio Communication Analyzer
MT8815B-032	TDMA Measurement Hardware Lite
MX882031C	GSM Measurement Software Lite

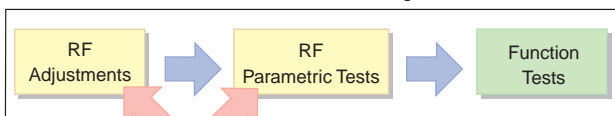
RF Adjustments

The basic configuration with signal generator and signal analyzer functions supports RF adjustments using traditional adjustment methods. Installing the adjustment software option cuts the RF adjustment time because the chipset adjustment function is used.

RF Parametric Tests

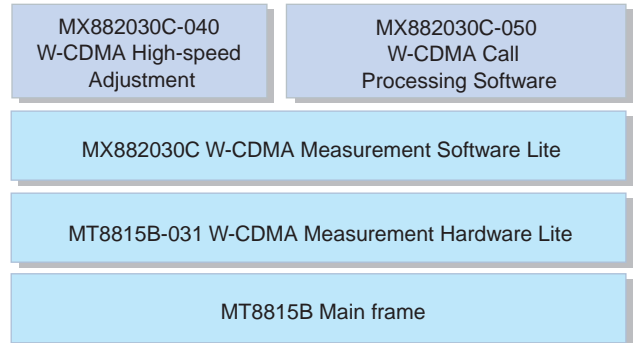
The RF parametric tests control the mobile terminal in the test mode or with call processing. The basic configuration performs RF parametric tests in the test mode but installing the call processing software option adds support for RF parametric tests with call processing.

Mobile Terminal Manufacturing Phase



Target Phase of Manufacturer Test Suite

Example of Manufacturer Test Suite Options Stack (W-CDMA)



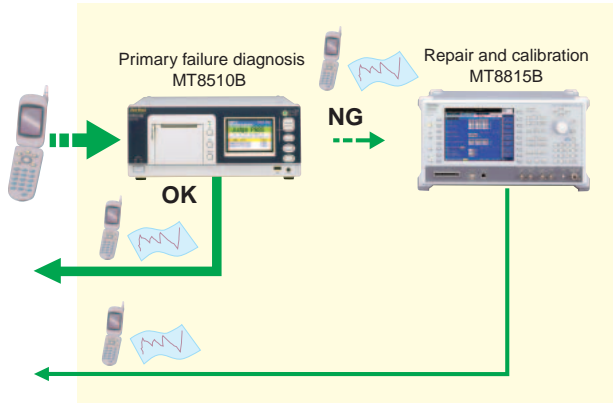
Example of Manufacturer Test Suite Options Stack

- * Manufacturer Test Suite supports W-CDMA/HSDPA and GSM/GPRS/EGPRS.
- * Manufacturer Test Suite does not support real-time processing functions, such as external packet data and video phone tests.

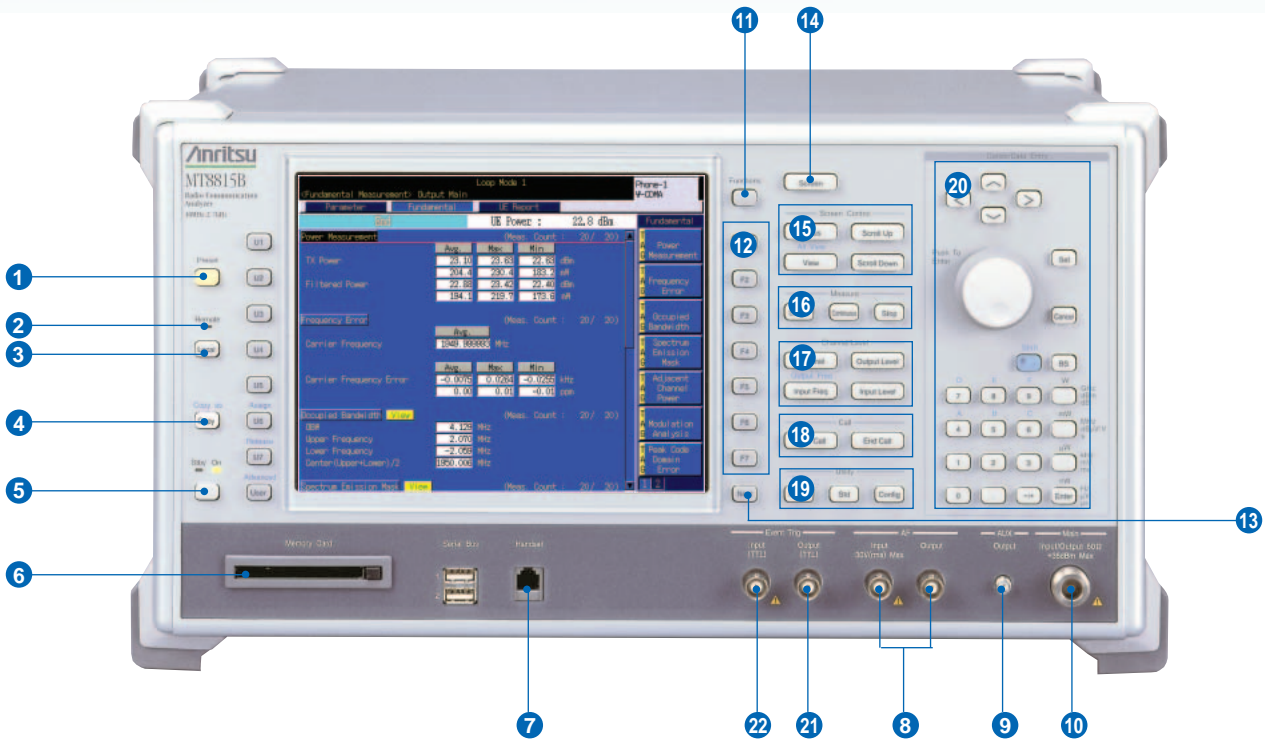
High-accuracy Tests at Repair and Maintenance

Compact, High-accuracy, High-speed Tester

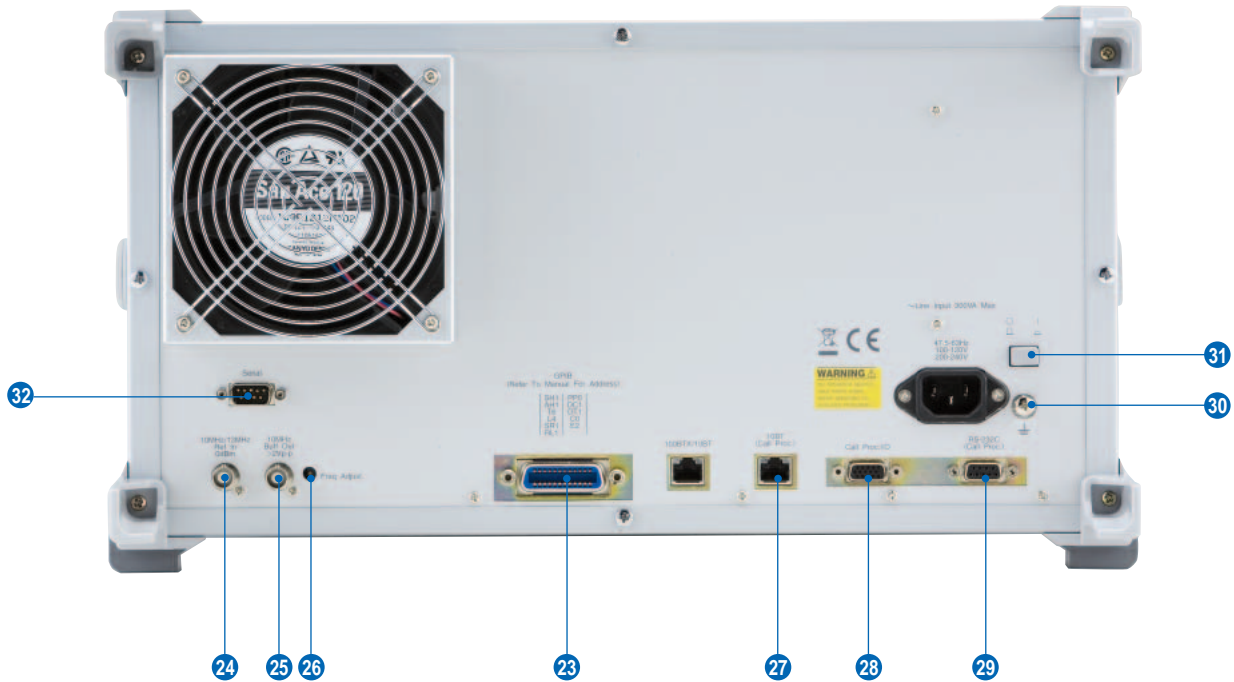
The MT8815B is a compact high-accuracy, high-speed tester for single RF measurements made at manufacturing, repair, and maintenance of mobile terminals. It is the ideal solution for service points (sales offices) and repair centers when used in combination with the MT8510B Service Tester, because the MT8510B offers simple No/No-Go troubleshooting while the MT8815B diagnoses faults in detail using additional tests and higher-accuracy measurements.



MT8815B Panel Layout



- 1 Preset Key: Starts initializing
- 2 Remote Lamp: Lit while in remote control mode
- 3 Local Key: Switches remote control to manual control
- 4 Copy Key: Copies screen
- 5 Power Switch: Switches mode between power-on and standby
- 6 Memory Card Slot: For saving/recalling measurement parameters and update software to/from PCMCIA-compliant PC-card-type memory card (Type II)
- 7 Handset Connector: For testing end-to-end voice communication between MT8815B and mobile terminal using handset
- 8 AF Input/Output Connector: For audio measurement
- 9 AUX Output Connector: Outputs RF signal for RF testing mobile terminal (SMA connector)
- 10 Main Input/Output Connector: Outputs RF signal for RF testing mobile terminal (N-type connector)
- 11 Functions: Displays function menu on screen
- 12 Function Key: Executes function menu displayed on right of screen
- 13 Page Switch Key: Switches function menu displayed on right of screen
- 14 Screen Switch Key: Switches screen
- 15 Screen Control: Switches display window for manual operation
- 16 Measure: Starts and stops measurement
- 17 Channel/Level: Sets channel, frequency, and level
- 18 Call: Connects and disconnects call
- 19 Utility: Saves and recalls parameters, and displays configuration
- 20 Cursor/Data Entry: Moves cursor and sets parameters
- 21 Trigger Output Connector: Outputs event-timing signal to external equipment (BNC connector)
- 22 Trigger Input Connector: Inputs trigger signal from external equipment to measure uplink signal from mobile equipment by synchronizing (BNC connector)



- 23 GPIB Connector: For remote control of MT8815B
- 24 Reference Signal Input Connector: Inputs 10/13 MHz reference signal (BNC connector)
- 25 Reference Signal Output Connector: Outputs 10 MHz reference signal of MT8815B (BNC connector)
- 26 Frequency Adjust: Adjusts frequency of internal reference oscillator
- 27 10BASE-T Port: Interface for packet and W-CDMA video communication test
- 28 Call Processing Input/Output Port: Interface for BER measurement and synchronization
- 29 RS-232C Port: Interface for packet communication test
- 30 Grounding Terminal: Connected to ground potential
- 31 Main Power Switch: Switches main power on/off. The front-panel power switch enters the standby (Stby) mode when the main power is switched on.
- 32 Serial port: Interface for remote control via RS-232C (D-Sub 9-pin connector)

Specifications

• MT8815B Radio Communication Analyzer

General	<p>Frequency range: 30 to 2700 MHz Max. input level: +35 dBm (Main) Main I/O Impedance: 50 Ω VSWR: ≤1.2 (<1.6 GHz), ≤1.25 (1.6 to 2.2 GHz), ≤1.3 (>2.2 GHz) Connector: N type AUX output Impedance: 50 Ω VSWR: ≤1.3 (at SG Output level: ≤-10 dBm) Connector: SMA type Reference oscillator Frequency: 10 MHz Level: TTL Startup characteristics: ≤±5 × 10⁻⁸ (at 10 min after startup referenced to frequency 24 h after startup) Aging rate: ≤±2 × 10⁻⁸/day, ≤±1 × 10⁻⁷/year (referenced to frequency 24 h after startup) Temperature characteristics: ≤±5 × 10⁻⁸ Connector: BNC type External reference input Frequency: 10 MHz or 13 MHz (±1 ppm) Level: ≥0 dBm Impedance: 50 Ω Connector: BNC type</p>
RF signal generator	<p>Frequency Frequency range: 30 to 2700 MHz (setting range: 0.4 to 2700 MHz) Setting resolution: 1 Hz Accuracy: Due to reference oscillator accuracy Output level Level range: -140 to -10 dBm (Main), -130 to 0 dBm (AUX) Resolution: 0.1 dB Accuracy: ±1.0 dB (-120 to -10 dBm, Main, after calibration), ±1.0 dB (-110 to 0 dBm, AUX, after calibration) Signal purity Non-harmonic spurious: ≤-50 dBc (at offset frequency: ≥100 kHz) Harmonics: ≤-25 dBc Uninterrupted level variation Variable range: 0 to -30 dB Setting resolution: 1 dB</p>
Others	<p>Display Color 8.4-inch TFT LCD, 640 x 480 dots External control GPIO: Control from external host with main unit as device (excluding some functions such as power-on), no external device control Interface functions: SH1, AH1, T6, L4, SR1, RL1, PP0, DC1, DT1, C0, E2, RS-232C</p>
Power supply	100 to 120/200 to 240 Vac (-15/+15%, 250 V max.), 47.5 to 63 Hz, ≤300 VA (with all Options)
Dimensions and mass	426 (W) x 221.5 (H) x 351 (D) mm (excluding projections), ≤17.8 kg (with all Options)
Environmental conditions	<p>Operating temperature and humidity: 0° to +50°C, ≤95% (no condensation) Storage temperature and humidity: -20° to +60°C, ≤95% (no condensation) EMC EN61326: 1997 + A1: 1998 + A2:2001 + A3: 2003 (Class A, Annex A), EN61000-3-2: 2000 (Class A) LVD EN61010-1: 2001 (Pollution Degree 2)</p>

Ordering Information

Please specify the model/order number, name and quantity when ordering.

The following name of articles is an order name. The actual name may differ name from the product.

Model/Order No.	Name
MT8815B	Main frame Radio Communication Analyzer
	Standard accessories
Z0956A	Power Cord, 2.6 m : 1 pc
CA68ADP	ANR-CFX40T256 (CF card, 256 MB) : 1 pc
W2778AE	PC Card Adapter : 1 pc
	MT8815B/MT8820B Operation Manual (CD-ROM): 1 copy
	Options
MT8815B-001	W-CDMA Measurement Hardware
MT8815B-002	TDMA Measurement Hardware
MT8815B-003	CDMA2000 Measurement Hardware
MT8815B-004	1xEV-DO Measurement Hardware
MT8815B-011	Audio Board
MT8815B-031	W-CDMA Measurement Hardware Lite
MT8815B-032	TDMA Measurement Hardware Lite
MT8820B-043	CDMA2000 Time Offset CAL For GPS SG (requires MT8815B-003 and MX882002C)
MT8815B-101	W-CDMA Measurement Hardware retrofit
MT8815B-102	TDMA Measurement Hardware retrofit
MT8815B-103	CDMA2000 Measurement Hardware retrofit
MT8815B-104	1xEV-DO Measurement Hardware retrofit
MT8815B-111	Audio Board retrofit
MT8815B-131	W-CDMA Measurement Hardware Lite Retrofit
MT8815B-132	TDMA Measurement Hardware Lite Retrofit
MT8820B-143	CDMA2000 Time Offset CAL For GPS SG Retrofit (requires MT8815B-003 and MX882002C)
	Softwares
MX882000C	W-CDMA Measurement Software (requires MT8815B-001 and MX88205xC)
MX882000C-001	W-CDMA Voice Codec (requires MT8815B-011 and MX882000C)
MX882000C-011	HSDPA Measurement Software (requires MT8815B-001, MX882000C and MX882050C)
MX882000C-012	HSDPA H-Set 6 Throughput Test (requires MT8815B-001, MX882000C, MX882000C-011 and MX882050C)
MX882000C-021	HSUPA Measurement Software (requires MT8815B-001, MX882000C, MX882000C-011 and MX882050C)
MX882001C	GSM Measurement Software (requires MT8815B-002)
MX882001C-001	GSM Voice Codec (requires MT8815B-011 and MX882001C)
MX882001C-002	GSM External Packet Data (requires MX882001C)
MX882001C-011	EGPRS Measurement Software (requires MX882001C)
MX882002C	CDMA2000 Measurement Software (requires MT8815B-003)
MX882002C-002	CDMA2000 External Packet Data (requires MX882002C)
MX882003C	1xEV-DO Measurement Software (requires MT8815B-003, MT8815B-004 and MX882002C)
MX882003C-002	1xEV-DO External Packet Data (requires MX882003C)
MX882005C	PHS Measurement Software (requires MT8815B-002)
MX882005C-011	Advanced PHS Measurement Software (requires MX882005C)
MX882030C	W-CDMA Measurement Software Lite (requires MT8815B-031)
MX882030C-001	W-CDMA Voice Codec (requires MT8815B-011 and MX882030C)
MX882030C-009	W-CDMA Band IX*1 (requires MX882030C-050)
MX882030C-011	HSDPA Measurement Software (requires MX882030C)
MX882030C-040	W-CDMA High-speed Adjustment (requires MX882030C)
MX882030C-050	W-CDMA Call Processing Software*1, *2 (requires MX882030C)
MX882031C	GSM Measurement Software Lite (requires MT8815B-032)
MX882031C-001	GSM Voice Codec (requires MT8815B-011 and MX882031C)
MX882031C-011	EGPRS Measurement Software (requires MX882031C)
MX882031C-040	EGPRS Predistortion Adjustment (requires MX882031C)
MX882031C-050	GSM Call Processing Software (requires MX882031C)

MX882050C	W-CDMA Call Processing Software*1, *2 (requires MX882000C)
MX882050C-002	W-CDMA External Packet Data*1 (requires MX882050C)
MX882050C-003	W-CDMA Video Phone Test*1 (requires MX882050C)
MX882050C-009	W-CDMA Band IX*1 (requires MX882050C)
MX882050C-011	HSDPA External Packet Data*1 (requires MX882000C-001)
MX882070C	W-CDMA Ciphering Software*1 (requires MX882050C)
MX882051C	W-CDMA Call Processing Software*1 (requires MX882000C)
MX882051C-002	W-CDMA External Packet Data*1 (requires MX882051C)
MX882051C-003	W-CDMA Video Phone Test*1 (requires MX882051C)
MX882071C	W-CDMA Ciphering Software*1 (requires MX882051C)
	Warranty
MT8815B-ES210	Extended Two Year Warranty Service
MT8815B-ES310	Extended Three Year Warranty Service
MT8815B-ES510	Extended Five Year Warranty Service
	Application parts
P0019	TEST USIM001*3
P0027	W-CDMA/GSM Test USIM
A0013	Handset
J1249	CDMA2000 Cable [D-Sub (15pin, P-type) · D-Sub (15pin, P-type), used in combination with J1267 (sold separately)]
J1267	CDMA2000 Cross Cable [D-Sub (9pin, P-type) · D-Sub (9pin, P-type), reverse cable used in combination with J1249 (sold separately)]
J0576B	Coaxial Cord (N-P · 5D-2W · N-P), 1 m
J0576D	Coaxial Cord (N-P · 5D-2W · N-P), 2 m
J0127A	Coaxial Cord (BNC-P · RG58A/U · BNC-P), 1 m
J0127C	Coaxial Cord (BNC-P · RG58A/U · BNC-P), 0.5 m
J0007	GPIB Cable, 1 m
J0008	GPIB Cable, 2 m
MN8110B	I/O Adapter (for call processing I/O)
B0332	Joint Plate (4 pcs/set)
B0333G	Rack Mount Kit
B0544	Carrying Case (hard type, with protective cover and casters)
B0545	Carrying Case (hard type, with protective cover, without casters)
W2776AE	MT8815B/MT8820B Operation Manual (booklet)
W2765AE	MX882000C Operation Manual (booklet)
W2771AE	MX882001C Operation Manual (booklet)
W2790AE	MX882002C Operation Manual Panel Operation (booklet)
W2791AE	MX882002C Operation Manual Remote Control (booklet)
W2793AE	MX882003C Operation Manual Panel Operation (booklet)
W2794AE	MX882003C Operation Manual Remote Control (booklet)
W2769AE	MX882005C Operation Manual (booklet)
W2894AE	MX882030C Operation Manual (booklet)
W2895AE	MX882031C Operation Manual (booklet)
W2767AE	MX88205xC Operation Manual (booklet)
W2773AE	MX88207xC Operation Manual (booklet)

*1: For terminal connectivity, contact your Anritsu sales representative.

*2: MX882050C preinstalls the integrity protection function.

*3: This Test USIM can be worked on only W-CDMA mode.

When the connection of GSM is necessary, P0027 can be applied.

• CF* card is a registered trademark of SanDisk Corporation in the United States and is licensed to CFA (Compact Flash Association).

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