

PRODUCT INTRODUCTION

ME7877A/ME7878A

Mobile Communication Test System

ANRITSU CORPORATION

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ME7877A/ME7878A

Mobile Communication Test System

Product Introduction



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Anritsu Corporation

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Product Overview



ME7878A

The ME7877A/78A Mobile Communication Test System series are automated test systems that allow high speed RF Transmitter and Receiver tests of W-CDMA/GSM^(Note) UE.

This product is composed of different measurement instruments, an RF I/F box, and control software. It is expected to be used for simplified serial testing in R&D and for sample testing on the manufacturing line or in QA.

(Note) ME7878A supports W-CDMA test only.

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Product Overview

- Differences between ME7877A and ME7878A -

ME7877A supports spurious measurement of W-CDMA/GSM.
ME7878A supports spurious and interference measurement of W-CDMA.

ME7877A

**W-CDMA/GSM Test System
for Spurious measurement**



Support Spurious Emission measurement according to
W-CDMA 3GPP TS34.121 Clause 5 and 6
GSM 3GPP TS51.010 Clause 12,13 and 14

ME7878A

**W-CDMA Test System for Spurious
and Interference measurement**



Support Spurious Emission and Interference measurement according to
W-CDMA 3GPP TS34.121 Clause 5 and 6

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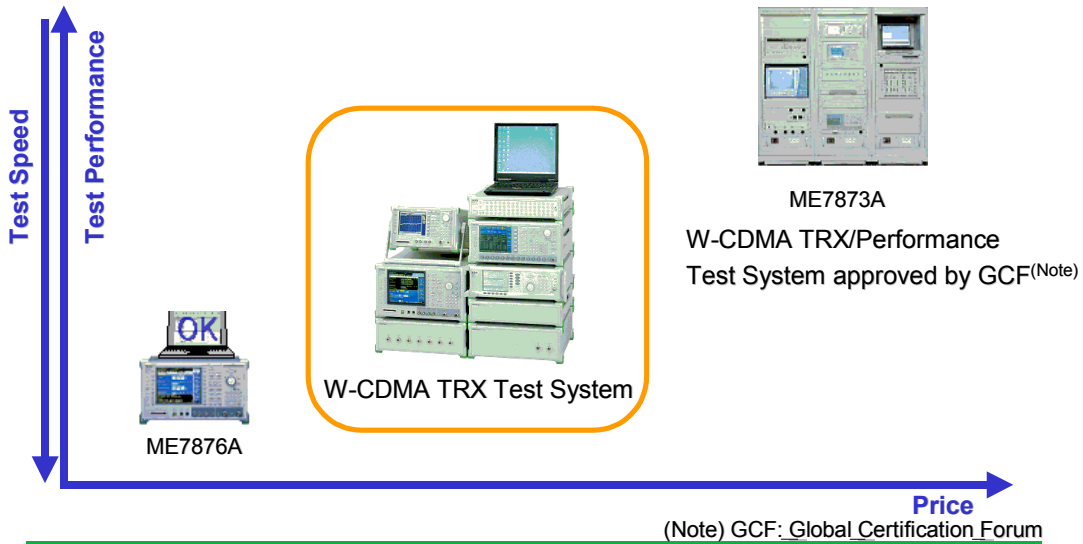
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Product Overview

- Product Position in Anritsu Test Solutions at R&D section -

ME7877A/78A provides high speed TRX test with a lower price than ME7873A by omitting both the performance test capability and GCF approval.



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Product Overview

- Product Position in Anritsu Test Solutions at Manufacturing Line -

ME7877A/78A can be used in the UE manufacturing line for the purpose of sample tests of commercialized UE at the Quality Assurance section. By using the same product in the R&D and Quality Assurance sections, it is easy to share the measurement data between them.



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Automated Test Software

1. Flexible test parameters

As the dedicated software runs on Windows2000 and XP, it is easy to administrate measurement parameters for tests and test result data.

- (1) Various test parameters can be set freely depending on every customer's needs such as automated batch measurement, manual selection measurement and step measurement.
- (2) Test items can be selected per test by arbitrary frequency channels. Furthermore, detailed parameters such as spec. and average can be specified per test item. Also, each test parameter that is changed can be saved to a file and recalled when needed.

2. Search mode

Receiver test has search mode. Unlike normal measurements, marginal performance test of UE can be performed in the state BER are fixed.

3. Measured data administrative function

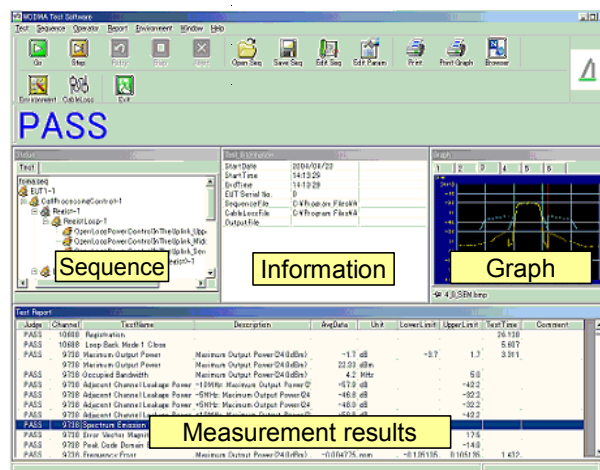
Measured data can be saved in HTML or CSV data format. HTML data format is able to store evaluation results, parameters, test data and graphs of each test.

4. Help guide

Help guide is prepared as an operation guide.

Automated Test Software

Measurement Screen



Judgement Result



Automated Test Software

Recommended PC and Peripheral specifications

- CPU: Pentium 4 1.6GHz or greater
- OS: Microsoft Windows® 2000 Professional SP3 or later
Microsoft Windows® XP Professional SP1 or later
- Main Memory: 512MB or greater
- Screen Resolution: 1024x768 dots
- Hard Disk: 1GB or greater
- CD-ROM drive: For installing and upgrading software
- GPIB Interface: Either of National Instruments product below:
 - PCI-GPIB (PCI-Bus)
 - PCMCIA-GPIB (PCMCIA-Bus)

Windows® 2000, Windows® XP is a registered trademark of Microsoft Corporation in the U.S. and other countries.

Specification

W-CDMA Measurement Items (ME7877A and ME7878A)

Support Frequency Band: Band I, VI

Transmitter Test

No.	3GPP TS 34.121	ME7877A	ME7878A
5.2	Maximum Output Power	S	S
5.3	Frequency Error	S	S
5.4.1	Open Loop Power Control in the Uplink	S	S
5.4.2	Inner Loop Power Control in the Uplink	S	S
5.4.3	Minimum Output Power	S	S
5.4.4	Out-of synchronisation handling of output power	N	N
5.5.1	Transmit OFF Power	S	S
5.5.2	Transmit ON/OFF Time Mask	S	S
5.6	Change of TFC	S	S
5.7	Power setting in Uplink Compressed Mode	N	N
5.8	Occupied Bandwidth (OBW)	S	S
5.9	Spectrum Emission Mask	S	S
5.10	Adjacent Channel Leakage Power Ratio (ACLR)	S	S
5.11	Spurious Emissions	S	S
5.12	Transmit Intermodulation	N	S
5.13.1	Error Vector Magnitude	S	S
5.13.2	Peak Code Domain Error	S	S
5.13.3	UE phase discontinuity	S	S
5.13.4	PRACH preamble quality	S	S

Receiver Test

No.	3GPP TS 34.121	ME7877A	ME7878A
6.2	Reference Sensitivity Level	S	S
6.3	Maximum Input Level	S	S
6.4	Adjacent Channel Selectivity (ACS)	N	S
6.5	Blocking Characteristics	N	S
6.6	Spurious Response	N	S
6.7	Intermodulation Characteristics	N	S
6.8	Spurious Emissions	S	S

S: Supported, N: Not Supported

Specification

GSM Measurement Items (ME7877A)

Support Frequency Band: GSM900, DCS1800, PCS1900

Transceiver and Transmitter Test

No.	3GPP TS 34.121	ME7877A
12.1	Conducted spurious emissions	S
12.2	Radiated spurious emissions	N
12.3	Conducted spurious emissions for MS supporting the R-GSM frequency	S
12.4	Radiated spurious emissions for MS supporting the R-GSM frequency band	N
13.1	Frequency error and phase error	S
13.2	Frequency error under multipath and interference conditions	N
13.3	Transmitter output power and burst timing	S
13.4	Output RF spectrum	S
13.5	Frequency error and phase error in HSCSD multislot configurations	N
13.6	Transmitter output power and burst timing in HSCSD configurations	N
13.7	Output RF spectrum in HSCSD multislot configuration	N
13.8	Output RF spectrum for MS supporting the R-GSM band	S
13.16.1	Frequency error and phase error in GPRS multislot configuration	S
13.16.2	Transmitter output power in GPRS multislot configuration	S
13.16.3	Output RF spectrum in GPRS multislot configuration	N
13.17.1	Frequency error and Modulation accuracy in EGPRS Configuration	N
13.17.2	Frequency error under multipath and interference conditions	N
13.17.3	EGPRS Transmitter output power	N
13.17.4	Output RF spectrum EGPRS configuration	N

S: Supported
N: Not Supported

(Note) Frequency hopping and Ciphering is not supported

Specification

GSM Measurement Items (ME7877A)

Receiver Test

No.	3GPP TS 34.121	ME7877A
14.2.1	Reference sensitivity - TCH/FS	S
14.2.7	Reference sensitivity - TCH/EFS	S
14.2.9	Reference sensitivity - TCH/FS for MS supporting the R-GSM band	S
14.3	Usable receiver input level range	S
14.4.7	Receiver performance in the case of frequency hopping and	N
14.6.1	Intermodulation rejection - speech channels	N
14.6.2	Intermodulation rejection - control channels	N
14.7.1	Blocking and spurious response - speech channels	N
14.7.2	Blocking and spurious response - control channels	N
14.7.3	Blocking and spurious response - speech channels for MS supporting the R-GSM band	N
14.7.4	Blocking and spurious response - control channels for MS supporting the R-GSM band	N
14.8.1	AM suppression - speech channels	N
14.8.2	AM suppression - control channels	N
14.9	Paging performance at high input levels	N
14.10.1	Performance of the Codec Mode Request Generation – TCH/AFS	N
14.10.2	Performance of the Codec Mode Request Generation – TCH/AHS	N
14.16.1	Minimum Input level for Reference Performance	S
14.18.1	Minimum Input level for Reference Performance	N
14.18.3	Adjacent channel rejection	N
14.18.4	Intermodulation rejection	N
14.18.5	Blocking and spurious response	N
14.18.6	EGPRS Usable receiver input level range	N
14.18.7	Incremental Redundancy Performance	N

S: Supported
N: Not Supported

Product Configuration - ME7877A -

ME7877A consists of the following components.

[MX787720A W-CDMA/GSM Measurement Software](#) for ATE software

[MT8820A Radio Communication Analyzer](#) for TRX measurement with call processing

[MS8609A Digital Mobile Radio Transmitter Tester](#) for Spurious measurement

[MN7476A RF Interface unit](#) for Signal Filter and the internal configuration is changed according to the correspond frequency band.

[MN7451A SW driver unit](#) for Switching the internal signal path of MN7476A.

Product Configuration - ME7878A -

ME7878A consists of the following components.

[MX787800A W-CDMA Measurement Software](#) for ATE software.

[MT8820A Radio Communication Analyzer](#) for TRX measurement with call processing

[MS8609A Digital Mobile Radio Transmitter Tester](#) for Spurious measurement

[MG3681A Digital Modulation Signal Generator and MG3692B RF/Microwave Signal Generator](#) for the source of interference signal

[MN7476A RF Interface unit](#) for Signal Filter and the internal configuration is changed according to the correspond frequency band.

[MN7486A Interference Measurement unit](#) for Signal Filter and the internal configuration is changed according to the correspond frequency band.

[MN7451A SW driver unit](#) for Switching the internal signal path of MN7476A.

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Specifications are subject to change without notice.

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