Manufacturer Test Suite

MT8820B/MT8815B
Radio Communication Analyzer
MT8820B/MT8815B
Manufacturer Test Suite
Product Introduction

MT8820B-031/MX882030C/MX882030C-011/-021 for W-CDMA/HSDPA/HSUPA
MT8820B-032/MX882031C/MX882031C-011 for GSM/GPRS/EGPRS

Version 3.0
May 2009

ANRITSU CORPORATION
Manufacturer Test Suite Outline

Manufacturer Test Suite (MTS) runs on the MT8820B/MT8815B platform and is the generic name for the combination of hardware and software focusing on RF adjustments and RF parametric tests for manufacturing mobile terminals. It is a new low-price solution for the MT8820B/MT8815B offering flexible configuration of options. It supports both W-CDMA/HSDPA/HSUPA and GSM/GPRS/EGPRS.
Manufacturer Test Suite Features

- Basic configuration focusing on RF adjustment and RF parametric tests in test mode (without call processing)
- Optional call processing
- Optional chip-specific RF adjustment
- Low-cost manufacturing of mobile terminals

Manufacturer Test Suite

W-CDMA MTS
- W-CDMA/HSDPA/HSUPA Options
- W-CDMA Measurement Hardware Lite
- W-CDMA Measurement Software Lite

GSM MTS
- GSM/EGPRS Options
- GSM Measurement Software Lite
- TDMA Measurement Hardware Lite

Basic Configuration

MT8820B/MT8815B

Supports RF parametric tests without call processing and RF adjustment, cutting investment costs

Add optional functions, such as call processing for optimized investment
Manufacturer Test Suite Options (W-CDMA/HSDPA/HSUPA)

The Manufacturer Test Suite options for W-CDMA/HSDPA/HSUPA are shown below.

MT8820B/MT8815B Platform

MT8820B-031/MT8815B-031 W-CDMA Measurement Hardware Lite

W-CDMA High-speed Adjustment

W-CDMA Voice Codec*1

HSUPA Measurement Software

W-CDMA Band XI

W-CDMA Band IX

W-CDMA Measurement Software

W-CDMA Call Processing Software

MX882030C W-CDMA Measurement Software Lite

RF Parametric Tests with Call Processing

Basic Configuration

Chipset-specific Adjustment

*1: Requires MT8820B/15B-011 Audio Board

*1: Requires MT8820B/15B-011 Audio Board
**W-CDMA Basic Configuration** (MT8820B-031/MT8815B-031 + MX882030C)

The Manufacturer Test Suite W-CDMA basic configuration supports W-CDMA RF parametric tests (without call processing) in the test mode. The MT8820B/MT8815B functions as a real-time signal generator and signal analyzer. Only RMC 12.2k is supported.

### W-CDMA Measurement Items (Test Mode)

**Tx Measurements (Fundamental Measurement)**
- TX Power and Filtered Power
- Frequency Error
- Occupied Bandwidth
- Spectrum Emission Mask
- Adjacent Channel Leakage Power Ratio
- Error Vector Magnitude
- Peak Code Domain Error

**Tx Measurements (Time Domain)**
- Power Results for Each Timeslot
- Transmit On/Off Power
- Phase Discontinuity
- PRACH Preamble Quality

**Rx Measurement (Fundamental Measurement)**
- BER (RMC12.2k)

**Spectrum Monitor**
- Spectrum in 5 and 25 MHz Bandwidth

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**Diagram Description**

- **MT8820B/MT8815B**
  - Sends uplink signal synchronized with downlink signal
  - Controls mobile terminal

- **UL RMC12.2k**
- **DL RMC12.2k**
- **PC Controller**

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MX882030C_31C-E-L-1
W-CDMA Call Processing Software (MX882030C-050)

Adding the W-CDMA call processing software supports W-CDMA RF parametric tests with call processing and voice communication tests. When the HSDPA/HSUPA Measurement Software (MX882030C-011/-021) is installed, HSDPA/HSUPA RF parametric tests can be performed too.

W-CDMA Measurement Items (Call Processing)

<table>
<thead>
<tr>
<th>TX Measurements (Fundamental Measurement)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>TX Power and Filtered Power</td>
<td></td>
</tr>
<tr>
<td>Frequency Error</td>
<td></td>
</tr>
<tr>
<td>Occupied Bandwidth</td>
<td></td>
</tr>
<tr>
<td>Spectrum Emission Mask</td>
<td></td>
</tr>
<tr>
<td>Adjacent Channel Leakage Power Ratio</td>
<td></td>
</tr>
<tr>
<td>Error Vector Magnitude</td>
<td></td>
</tr>
<tr>
<td>Peak Code Domain Error</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TX Measurements (Time Domain)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Open Loop Power</td>
<td></td>
</tr>
<tr>
<td>Inner Loop Power</td>
<td></td>
</tr>
<tr>
<td>Transmit On/Off Power</td>
<td></td>
</tr>
<tr>
<td>Phase Discontinuity</td>
<td></td>
</tr>
<tr>
<td>PRACH Preamble Quality</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RX Measurement (Fundamental Measurement)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>BER (RMC12.2k)</td>
<td></td>
</tr>
<tr>
<td>BLER (RMC12.2k)</td>
<td></td>
</tr>
</tbody>
</table>

| Spectrum Monitor                         |   |
| Spectrum in 5 and 25 MHz Bandwidth       |   |
**HSDPA Measurement Software (MX882030C-011)**

Installing the HSDPA Measurement Software supports HSDPA RF parametric tests. When the W-CDMA Call Processing Software is not installed, HSDPA RF parametric tests (without call processing) can be performed in the test mode. When the W-CDMA Call Processing Software is installed, HSDPA RF parametric tests with call processing can be performed too. Only FRC H-Set 1 (QPSK, 16QAM) is supported.

### HSDPA Measurement Items

<table>
<thead>
<tr>
<th>TX Measurements (Fundamental Measurement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX Power and Filtered Power</td>
</tr>
<tr>
<td>Frequency Error</td>
</tr>
<tr>
<td>Occupied Bandwidth</td>
</tr>
<tr>
<td>Spectrum Emission Mask</td>
</tr>
<tr>
<td>Adjacent Channel Leakage Power Ratio</td>
</tr>
<tr>
<td>Error Vector Magnitude</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TX Measurement (Time Domain)</th>
</tr>
</thead>
<tbody>
<tr>
<td>HS-DPCCH Power Control</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>RX Measurement (Fundamental Measurement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throughput (H-Set 1)</td>
</tr>
</tbody>
</table>

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**Without call processing**

**Sends uplink signal synchronized with downlink signal**

MT8820B/MT8815B

UL RMC12.2k + HS-DPCCH

MT8820B-031/MT8815B-031

DL RMC12.2k + FRC H-Set 1

PC Controller

MT8820B-031/MT8815B-031 + MX882030C-011

Controls mobile terminal with call processing

UL RMC12.2k + HS-DPCCH

MT8820B/MT8815B

DL RMC12.2k + FRC H-Set 1

MT8820B/MT8815B + MX882030C-011 + MX882030C-050

Controls mobile terminal
**HSUPA Measurement Software (MX882030C-021)**

Installing the HSUPA Measurement Software supports HSUPA RF parametric tests. When the W-CDMA Call Processing Software is not installed, HSUPA RF parametric tests (without call processing) can be performed in the test mode. When the W-CDMA Call Processing Software is installed, HSUPA RF parametric tests with call processing can be performed too.

### HSUPA Measurement Items

<table>
<thead>
<tr>
<th>TX Measurements (Fundamental Measurement)</th>
<th>TX Measurements (Time Domain Measurement)</th>
</tr>
</thead>
<tbody>
<tr>
<td>TX Power and Filtered Power</td>
<td>HS-DPCCH and E-DCH Power Control</td>
</tr>
<tr>
<td>Occupied Bandwidth</td>
<td></td>
</tr>
<tr>
<td>Spectrum Emission Mask</td>
<td></td>
</tr>
<tr>
<td>Adjacent Channel Leakage Power Ratio</td>
<td></td>
</tr>
<tr>
<td>DL RMC12.2k + FRC H-Set 1 + E-AGCH, E-RGCH, E-HICH</td>
<td></td>
</tr>
<tr>
<td>UL RMC12.2k + HS-DPCCH and E-DCH</td>
<td></td>
</tr>
</tbody>
</table>

- **MT8820B**
- **MT8815B**
- **MT8820B-031**
- **MT8815B-031**
- **MX882030C**
- **+ MX882030C-011**
- **+ MX882030C-021**
- **+ MX882030C-050**

**PC Controller**

- Sends uplink signal synchronized with downlink signal
- Controls mobile terminal with call processing
- Controls mobile terminal with call processing

**MT8820B/MT8815B**

- Without call processing

**MT8820B-031/MT8815B-031**

- DL RMC12.2k + FRC H-Set 1 + E-AGCH, E-RGCH, E-HICH
- UL RMC12.2k + HS-DPCCH and E-DCH

**MT882030C**

- Without call processing

**PC Controller**

- Sends uplink signal synchronized with downlink signal
- Controls mobile terminal with call processing
- Controls mobile terminal with call processing

**MT8820B**

- DL RMC12.2k + FRC H-Set 1 + E-AGCH, E-RGCH, E-HICH
- UL RMC12.2k + HS-DPCCH and E-DCH

**MT8815B-031/MT8815B-031**

- UL RMC12.2k + HS-DPCCH and E-DCH
- DL RMC12.2k + FRC H-Set 1 + E-AGCH, E-RGCH, E-HICH
**W-CDMA High-speed Adjustment (MX882030C-040)**

W-CDMA High-speed Adjustment is a function for fast adjustment of the RF Tx/Rx part of W-CDMA terminals. High-speed adjustment is performed in conjunction with the mobile adjustment function.

**Tx/Rx versus Frequency**

Simultaneous adjustment of Tx output power and Rx input level at several frequencies in one sweep.
**W-CDMA High-speed Adjustment (MX882030C-040)**

W-CDMA High-speed Adjustment is a function for fast adjustment of the RF Tx/Rx part of W-CDMA terminals. High-speed adjustment is performed in conjunction with the mobile adjustment function.

**Multi-power Measurement**

Adjustment of transmitter output power in one sweep

![Diagram showing Uplink, PC Controller, and signal from mobile with measurement interval and level markers.](image)
Manufacturer Test Suite Options (GSM/GPRS/EGPRS)

The Manufacturer Test Suite options for GSM/GPRS/EGPRS are shown below.

*1: Requires MT8820B/15B-011 Audio Board
The Manufacturer Test Suite GSM/GPRS basic configuration supports GSM/GPRS RF parametric tests (without call processing) in the test mode. The MT8820B/MT8815B functions as a real-time signal generator and signal analyzer. Only enhanced full rate speech and full rate speech are supported.

### GSM/GPRS Measurement Items (Test Mode)

**TX Measurements (Fundamental Measurement)**
- Frequency Error and Phase Error
- Transmit Output Power and Burst Timing
- Output RF Spectrum (Modulation and Switching)

**RX Measurements (Fundamental Measurement)**
- FER, CRC Error and BER (FS and EFS)(GSM)

**Spectrum Monitor**
- Spectrum in 250k, 1M, 5M to 25 MHz Bandwidth

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**Diagram:**
- **MT8820B/MT8815B**
  - Sends uplink signal synchronized with downlink signal
- **MT8820B-032/MT8815B-032**
  - Without call processing
  - Spectrum in 250k, 1M, 5M to 25 MHz Bandwidth
- **MX882031C**
  - PC Controller
  - Controls mobile terminal
GSM Call Processing Software (MX882031C-050)

Adding the GSM call processing software supports GSM/GPRS RF parametric tests with call processing and voice communication tests. When the EGPRS Measurement Software (MX882031C-011) is installed, EGPRS RF parametric test can be performed too.

GSM/GPRS Measurement Items (Call Processing)

**TX Measurements (Fundamental Measurement)**
- Frequency Error and Phase Error
- Transmit Output Power and Burst Timing
- Output RF Spectrum (Modulation and Switching)

**RX Measurements (Fundamental Measurement)**
- FER, CRC Error and BER (FS and EFS) (GSM)
- BLER (GPRS)

**Spectrum Monitor**
- Spectrum in 250k, 1M, 5M to 25 MHz Bandwidth

Controls mobile terminal with call processing

MT8820B/MT8815B

MT8820B-032/MT8815B-032

MX882031C + MX882031C-050
**EGPRS Measurement Software (MX882031C-011)**

Installing the EGPRS Measurement Software supports EGPRS RF parametric tests. When the GSM Call Processing Software is not installed, EGPRS RF parametric tests (without call processing) can be performed in the test mode. When the GSM Call Processing Software is installed, EGPRS RF parametric tests with call processing can be performed too.

### EGPRS Measurement Items

**TX Measurements (Fundamental Measurement)**
- Frequency Error and Modulation Accuracy
- Transmit Output Power and Burst Timing
- Output RF Spectrum (Modulation and Switching)

**RX Measurements (Fundamental Measurement)**
- SRB Loopback BER
- BLER (call processing)

**Spectrum Monitor**
- Spectrum in 250k, 1M, 5M to 25 MHz Bandwidth
EGPRS Predistortion Adjustment (MX882031C-040)*

EGPRS Predistortion Adjustment is a function to adjust the predistortion part of EGPRS terminals. Predistortion adjustment is performed in conjunction with the mobile adjustment function.

*The measurement runs Fundamental Measurement screen. The measurement runs with Call Processing Off only. The measurement runs with Remote Control only.

MT8820B/MT8815B

PC Controller

MT8820B-032/MT8815B-032
MX882031C
+ MX882031C-040

Signal from DUT

GMSK Modulation

Measure amplitude and phase at each sample time in CW duration

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MX882030C_31C-E-L-1

Slide 15
GSM High-Speed Adjustment (MX882031C-041)*

GSM High-Speed Adjustment is a function of GSM terminals, running in synchronization with the chipset adjustment function. And it runs IQ Capturing Measurement.

*The measurement runs Fundamental Measurement screen. The measurement can't run Fundamental Measurement, and IQ Capturing Measurement, or High-Speed Adjustment Measurement when the measurement is effective. The measurement runs with Remote Control only.

Sequence of Rx Sweep
- Burst Type: FCCH, SCH, PRBS
- TDMA Frame: 4.6msec
- Tuning slots
- Step: 1, 2, 3, 4, 5
- Power: 0 to -30dB

Sequence of Tx Sweep
- Burst Type: FCCH, SCH, PRBS
- TDMA Frame: 4.6msec
- Reference Level
- Tuning slots
- Frequency: 890.2MHz, 902.4MHz, 914.8MHz, 1710.2MHz
- Time: 925.2MHz, 930.2MHz, 935.2MHz

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MX882030C_31C-E-L-1

Anritsu
### Flexible Configuration

The Manufacturer Test Suite cuts equipment investment by offering optimum configuration to each test method.

<table>
<thead>
<tr>
<th>RF Adjustment</th>
<th>MT8820B/MT8815B</th>
<th>Option</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Call Processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traditional Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Function as SG + SA</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chip-specific Adjustment</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF Parametric Tests</td>
<td>MT8820B/MT8815B</td>
<td></td>
</tr>
<tr>
<td>RF Parametric Tests in</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test Mode (Without Call</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Processing)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Configuration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>RF Parametric Tests</td>
<td>MT8820B/MT8815B</td>
<td></td>
</tr>
<tr>
<td>with Call Processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Call Processing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Basic Configuration</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Two Test Solutions on One Platform

Manufacturer Test Suite is a manufacturing solution focused on RF adjustment and RF parametric tests of mobile terminals. Developer Test Suite launched in October 2006 is a solution targeted at RF design, RF performance tests, and all stages for manufacturing. Both solutions are supported by the MT8820B/MT8815B platform.

- **R&D**
  - RF Design and Evaluation
  - RF Performance

- **Manufacturing**
  - RF Tx/Rx Adjustment
  - RF Parametric Tests
  - Functional Tests
  - Voice Calling Test
  - Video Communications Test
  - Packet Communications Test
  - Shipment
  - S/N Input

- **MT8820B/MT8815B**
  - Supports packet data transfer, video function tests and RF performance tests
  - Does not support real-time processing functions, such as packet data transfer and video function tests
Two Test Solutions on One Platform

Because two solutions runs on the MT8820B/MT8815B platform, the GPIB commands, measurement speed, and measurement results of Developer Test Suite (DTS) and Manufacturer Test Suite are the same. The lower internal temperature and fan noise when MTS is installed is also achieved as same level as when DTS is installed.
Comparison of Manufacturer Test Suite and Developer Test Suite Functions (W-CDMA)

The required functions are installed as options for Manufacturer Test Suite. Meanwhile, Developer Test Suite includes call processing and chip-specific adjustment as basic functions.
Comparison of Manufacturer Test Suite and Developer Test Suite Functions (W-CDMA)

The Manufacturer Test Suite and Developer Test Suite functions are compared below.

<table>
<thead>
<tr>
<th>W-CDMA</th>
<th>Manufacturer Test Suite</th>
<th>Developer Test Suite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet data transfer</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td>Video function test</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td>Ciphering</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td>Call processing</td>
<td>Option</td>
<td>Yes</td>
</tr>
<tr>
<td>RMC</td>
<td>12.2k</td>
<td>12.2k/64k/144k/384k</td>
</tr>
<tr>
<td>Sequence monitor</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>High-speed adjustment</td>
<td>Option</td>
<td>Yes</td>
</tr>
</tbody>
</table>

TS34.121 chapters 5 and 6 specify RMC 12.2k for the RF parametric tests.
TS34.121 chapter 7 specifies RMC 12.2k, 64k, 144k and 384k for the RF performance tests.
Comparison of Manufacturer Test Suite and Developer Test Suite Functions (HSDPA)

The Manufacturer Test Suite and Developer Test Suite functions are compared below. Because DTS supports FRC H-Set 1 to 5, it supports throughput tests (demodulation of HS-DSCH – Single Link Performance) in addition to RF parametric tests.

<table>
<thead>
<tr>
<th>HSDPA</th>
<th>Manufacturer Test Suite</th>
<th>Developer Test Suite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet data transfer</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td>FRC</td>
<td>H-Set 1</td>
<td>H-Set 1 to 5</td>
</tr>
</tbody>
</table>

TS34.121 chapters 5 and 6 specify FRC H-Set 1 for the RF parametric tests. TS34.121 chapter 9 specifies FRC H-Set 1 to 5 for the RF performance tests (throughput).

Comparison of Manufacturer Test Suite and Developer Test Suite Functions (HSUPA)

There are no functional differences in the MTS and DTS for HSUPA Software.
Comparison of Manufacturer Test Suite and Developer Test Suite Functions (GSM/GPRS)

The required functions are installed as options for Manufacturer Test Suite. Meanwhile, Developer Test Suite includes call processing and chip-specific adjustment as basic functions.

**Developer Test Suite**
- MT8820B/MT8815B
  - MT8820B-002/MT8815B-002
  - MX882001C
  - Basic Configuration
  - RF Adjustment, EGPRS predistortion adjustment
  - RF Parametric tests in test mode and with call processing

**Manufacturer Test Suite**
- MT8820B/MT8815B
  - MT8820B-032/MT8815B-032
  - MX882031C
  - Options
  - + MX882031C-050
  - + MX882031C-040
  - + MX882031C-041
  - Basic Configuration
  - RF Adjustment, RF parametric tests in test mode
  - EGPRS predistortion adjustment, GSM High-speed Adjustment

**Comparison of Manufacturer Test Suite and Developer Test Suite Functions (GSM/GPRS)**

**Manufacturer Test Suite**
- MT8820B/MT8815B
  - MT8820B-032/MT8815B-032
  - MX882031C
  - Options
  - + MX882031C-050
  - + MX882031C-040
  - + MX882031C-041
  - Basic Configuration
  - RF Adjustment, RF parametric tests in test mode
  - EGPRS predistortion adjustment, GSM High-speed Adjustment

**Developer Test Suite**
- MT8820B/MT8815B
  - MT8820B-002/MT8815B-002
  - MX882001C
  - Basic Configuration
  - RF Adjustment, EGPRS predistortion adjustment
  - RF Parametric tests in test mode and with call processing
Comparison of Manufacturer Test Suite and Developer Test Suite Functions (GSM/GPRS)

The Manufacturer Test Suite and Developer Test Suite functions are compared below. DTS supports half rate speech and AMR as channel coding in addition to full rate speech and enhanced full rate speech.

<table>
<thead>
<tr>
<th>GSM/GPRS/EGPRS</th>
<th>Manufacturer Test Suite</th>
<th>Developer Test Suite</th>
</tr>
</thead>
<tbody>
<tr>
<td>Packet data transfer</td>
<td>No</td>
<td>Option</td>
</tr>
<tr>
<td>Voice Codec</td>
<td>Option (EFS)</td>
<td>Option (EFS/AMR)</td>
</tr>
<tr>
<td>SMS</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Predistortion adjustment</td>
<td>Option</td>
<td>Yes</td>
</tr>
<tr>
<td>GSM High-speed Adjustment</td>
<td>Option</td>
<td>Option</td>
</tr>
<tr>
<td>Channel coding</td>
<td>FS/EFS</td>
<td>FS/EFS/HS0/HS1/AHS0/AHS1</td>
</tr>
</tbody>
</table>
### Ordering Information

**Manufacturer Test Suite**

<table>
<thead>
<tr>
<th>Model</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>MT8815B-031</td>
<td>W-CDMA Measurement Hardware Lite</td>
</tr>
<tr>
<td>MT8820B-031</td>
<td>W-CDMA Measurement Hardware Lite</td>
</tr>
<tr>
<td>MX882030C</td>
<td>W-CDMA Measurement Software Lite</td>
</tr>
<tr>
<td>MX882030C-050</td>
<td>W-CDMA Call Processing Software</td>
</tr>
<tr>
<td>MX882030C-040</td>
<td>W-CDMA High-speed Adjustment</td>
</tr>
<tr>
<td>MX882030C-011</td>
<td>HSDPA Measurement Software</td>
</tr>
<tr>
<td>MX882030C-021</td>
<td>HSUPA Measurement Software</td>
</tr>
<tr>
<td>MX882030C-008</td>
<td>W-CDMA Band XI</td>
</tr>
<tr>
<td>MX882030C-009</td>
<td>W-CDMA Band IX</td>
</tr>
<tr>
<td>MX882030C-001</td>
<td>W-CDMA Voice Codec</td>
</tr>
<tr>
<td>MT8815B-032</td>
<td>TDMA Measurement Hardware Lite</td>
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<tr>
<td>MT8820B-032</td>
<td>TDMA Measurement Hardware Lite</td>
</tr>
<tr>
<td>MX882031C</td>
<td>GSM Measurement Software Lite</td>
</tr>
<tr>
<td>MX882031C-050</td>
<td>GSM Call Processing Software</td>
</tr>
<tr>
<td>MX882031C-040</td>
<td>EGPRS Predistortion Adjustment</td>
</tr>
<tr>
<td>MX882031C-041</td>
<td>GSM High-speed Adjustment</td>
</tr>
<tr>
<td>MX882031C-011</td>
<td>EGPRS Measurement Software</td>
</tr>
<tr>
<td>MX882031C-001</td>
<td>GSM Voice Codec</td>
</tr>
</tbody>
</table>
Note
Specifications are subject to change without notice.

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