

Waveform File for Cellular Application Operation Manual

10th Edition

- For safety and warning information, please read this manual before attempting to use the equipment.
- Additional safety and warning information is provided in the MT8870A Universal Wireless Test Set Operation Manual. Please refer to this document before using the equipment.
- Keep this manual with the equipment.

ANRITSU CORPORATION

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Symbols used in manual



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This indicates a warning or caution. The contents are indicated symbolically in or near the triangle.



This indicates a note. The contents are described in the box.



These indicate that the marked part should be recycled.

Waveform File for Cellular Application
Operation Manual

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CE marking



1. Product Model

Software:	MV887011A	W-CDMA Downlink Waveform File
	MV887012A	GSM/EDGE Downlink Waveform File
	MV887013A	LTE FDD Downlink Waveform File
	MV887014A	LTE TDD Downlink Waveform File
	MV887015A	CDMA 2000 Forward Link Waveform File
	MV887016A	1xEV-DO Forward Link Waveform File
	MV887017A	TD-SCDMA Forward Link Waveform File
	MV887065A	Category M FDD Downlink Waveform File
	MV887067A	NB-IoT Downlink Waveform File

2. Applied Directive and Standards

When the MV887011A W-CDMA Downlink Waveform File, MV887012A GSM/EDGE Downlink Waveform File, MV887013A LTE FDD Downlink Waveform File, MV887014A LTE TDD Downlink Waveform File, MV887015A CDMA 2000 Forward Link Waveform File, MV887016A 1xEV-DO Forward Link Waveform File, MV887017A TD-SCDMA Downlink Waveform File, MV887065A Category M FDD Downlink Waveform File or MV887067A NB-IoT Downlink Waveform File is installed in the MU887000A and MT8870A, the applied directive and standards of this unit conform to those of the MT8870A Universal Wireless Test Set.

PS: About main frame

Please contact Anritsu for the latest information on the MT8870A Universal Wireless Test Set to be used with the MV887011A W-CDMA Downlink Waveform File, MV887012A GSM/EDGE Downlink Waveform File, MV887013A LTE FDD Downlink Waveform File, MV887014A LTE TDD Downlink Waveform File, MV887015A CDMA 2000 Forward Link Waveform File, MV887016A 1xEV-DO Forward Link Waveform File, MV887017A TD-SCDMA Downlink Waveform File, MV887065A Category M FDD Downlink Waveform File or MV887067A NB-IoT Downlink Waveform File.

RCM Conformity Marking

Anritsu affixes the RCM mark on the following product(s) in accordance with the regulation to indicate that they conform to the EMC framework of Australia/New Zealand.

RCM marking



1. Product Model

Software:	MV887011A	W-CDMA Downlink Waveform File
	MV887012A	GSM/EDGE Downlink Waveform File
	MV887013A	LTE FDD Downlink Waveform File
	MV887014A	LTE TDD Downlink Waveform File
	MV887015A	CDMA 2000 Forward Link Waveform File
	MV887016A	1xEV-DO Forward Link Waveform File
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PS: About main frame


Please contact Anritsu for the latest information on the MT8870A Universal Wireless Test Set to be used with the MV887011A W-CDMA Downlink Waveform File, MV887012A GSM/EDGE Downlink Waveform File, MV887013A LTE FDD Downlink Waveform File, MV887014A LTE TDD Downlink Waveform File, MV887015A CDMA 2000 Forward Link Waveform File, MV887016A 1xEV-DO Forward Link Waveform File, MV887017A TD-SCDMA Downlink Waveform File, MV887065A Category M FDD Downlink Waveform File or MV887067A NB-IoT Downlink Waveform File.

About This Manual

This manual mainly describes the operation of the Waveform File for Cellular Application.

Products relevant to the MT8870A Universal Wireless Test Set include:

- MT8870A Universal Test Set (main unit)
- Modules mounted on the MT8870A Universal Test Set
- Application software installed on the modules
- Control software installed in a PC to control the MT8870A Universal Test Set

These products are referred to as the "Universal Wireless Test Set Series". The operation manuals of the Universal Wireless Test Set Series consist of separate documents for the main unit, module(s), application software, and control software, as shown below.  indicates this manual.

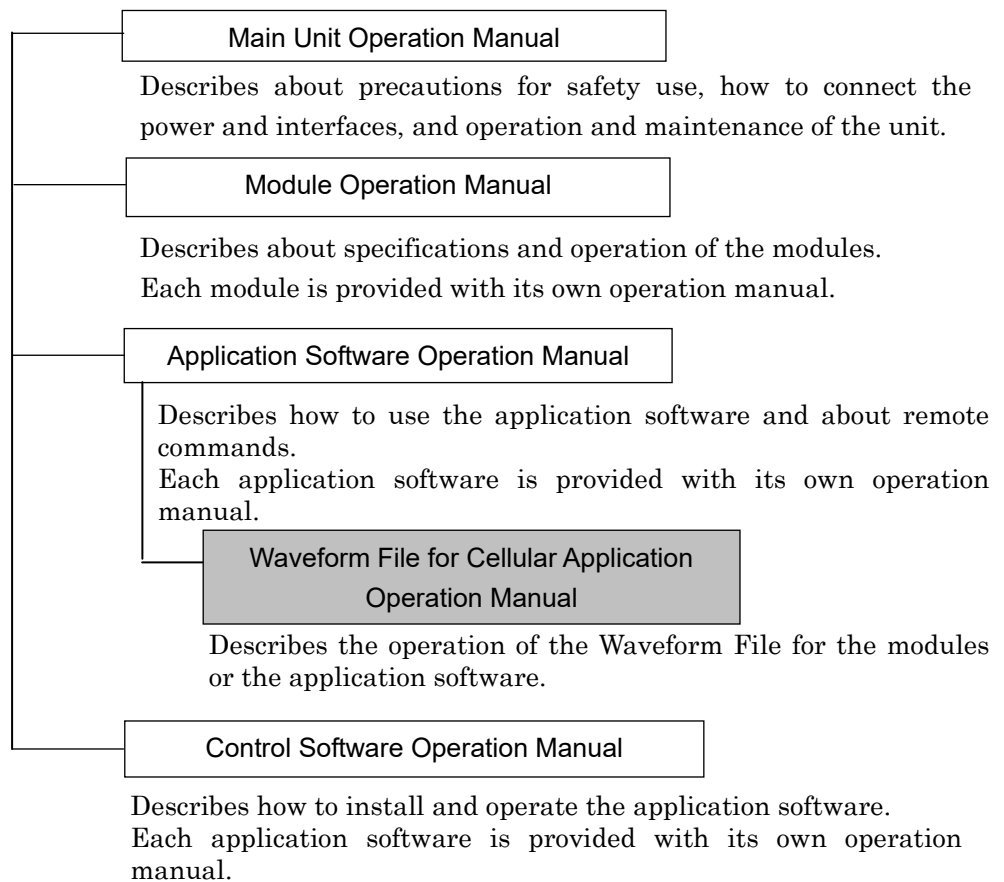


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Appendix

Chapter 1 Outline

This chapter outlines the Cellular Application waveform files and explains the product composition.

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1.2	Product Composition	1-3
1.3	Specifications	1-5
1.4	Abbreviations	1-7

1.1 Introduction to Waveform Files

The MT8870A Universal Wireless Test Set (hereafter MT8870A) output digital modulation signals by loading IQ data saved in files.

The Cellular Application waveform files provide the IQ data for outputting the modulation signal specified in the mobile communications standards.

The mobile station performance is tested by loading the Cellular Application waveform files into the MT8870A and outputting the digital modulation signal.

Table 1.1-1 Cellular Application Waveform Files

Model/Code	Product Name
MV887011A	W-CDMA/HSPA Downlink Waveform File
MV887012A	GSM/EDGE Downlink Waveform File
MV887013A	LTE FDD Downlink Waveform File
MV887014A	LTE TDD Downlink Waveform File
MV887015A	CDMA2000 Forward Link Waveform File
MV887016A	1xEV-DO Forward Link Waveform File
MV887017A	TD-SCDMA Downlink Waveform File
MV887065A	Category M FDD Downlink Waveform File
MV887067A	NB-IoT Downlink Waveform File

1.2 Product Composition

The Cellular Application waveform files have the following composition.
The electronic files are stored in one or more storage media (DVD, etc.)

Table 1.2-1 MV887011A Product Composition

Model/Code	Product Name	Remarks
MV887011A	W-CDMA/HSPA Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-2 MV887012A Product Composition

Model/Code	Product Name	Remarks
MV887012A	GSM/EDGE Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-3 MV887013A Product Composition

Model/Code	Product Name	Remarks
MV887013A	LTE FDD Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-4 MV887014A Product Composition

Model/Code	Product Name	Remarks
MV887014A	LTE TDD Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-5 MV887015A Product Composition

Model/Code	Product Name	Remarks
MV887015A	CDMA2000 Forward Link Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-6 MV887016A Product Composition

Model/Code	Product Name	Remarks
MV887016A	1xEV-DO Forward Link Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-7 MV887017A Product Composition

Model/Code	Product Name	Remarks
MV887017A	TD-SCDMA Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-8 MV887065A Product Composition

Model/Code	Product Name	Remarks
MV887065A	Category M FDD Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

Table 1.2-9 MV887067A Product Composition

Model/Code	Product Name	Remarks
MV887067A	NB-IoT Downlink Waveform File	—
W3621AE	Waveform File for Cellular Application Operation Manual	English

1.3 Specifications

The waveform file specifications are listed in the following tables.

Table 1.3-1 MV887011A

Item	Specification
EVM	$\leq 3\%$ rms at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$

Table 1.3-2 MV887012A

Item	Specification
Phase Error	$\leq 1^\circ$ rms at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$, GMSK modulation
EVM	$\leq 1.8\%$ rms at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$, 8PSK modulation

Table 1.3-3 MV887013A

Item	Specification
Max. output level	-12 dBm (TestPort 1/2, Frequency $\leq 3800 \text{ MHz}$) -20 dBm (TestPort 1/2, $3800 \text{ MHz} < \text{Frequency}$) -2 dBm (TestPort 3/4, Frequency $\leq 3800 \text{ MHz}$) -10 dBm (TestPort 3/4, $3800 \text{ MHz} < \text{Frequency}$)
EVM	$\leq 2\%$ rms at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$ $\leq 3\%$ rms at $3400 \text{ MHz} \leq \text{Frequency} \leq 3800 \text{ MHz}$ $\leq 4\%$ rms at $3800 \text{ MHz} < \text{Frequency} \leq 6000 \text{ MHz}$

Table 1.3-4 MV887014A

Item	Specification
Max. output level	-12 dBm (TestPort 1/2, Frequency $\leq 3800 \text{ MHz}$) -20 dBm (TestPort 1/2, $3800 \text{ MHz} < \text{Frequency}$) -2 dBm (TestPort 3/4, Frequency $\leq 3800 \text{ MHz}$) -10 dBm (TestPort 3/4, $3800 \text{ MHz} < \text{Frequency}$)
EVM	$\leq 2\%$ rms at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$ $\leq 3\%$ rms at $3400 \text{ MHz} \leq \text{Frequency} \leq 3800 \text{ MHz}$ $\leq 4\%$ rms at $3800 \text{ MHz} < \text{Frequency} \leq 6000 \text{ MHz}$

Table 1.3-5 MV887015A

Item	Specification
Waveform Quality	> 0.99 at $400 \text{ MHz} \leq \text{Frequency} \leq 2700 \text{ MHz}$

Table 1.3-6 MV887016A

Item	Specification
Waveform Quality	>0.99 at 400 MHz ≤ Frequency ≤ 2700 MHz at Pilot Channel

Table 1.3-7 MV887017A

Item	Specification
EVM	≤3% rms at 400 MHz ≤ Frequency ≤ 2700 MHz

Table 1.3-8 MV887065A

Item	Specification
Max. output level	–12 dBm (TestPort 1/2, Frequency ≤3800 MHz) –20 dBm (TestPort 1/2, 3800 MHz < Frequency) –2 dBm (TestPort 3/4, Frequency ≤3800 MHz) –10 dBm (TestPort 3/4, 3800 MHz < Frequency)

Table 1.3-9 MV887067A

Item	Specification
Max. output level	–12 dBm (TestPort 1/2, Frequency ≤3800 MHz) –20 dBm (TestPort 1/2, 3800 MHz < Frequency) –2 dBm (TestPort 3/4, Frequency ≤3800 MHz) –10 dBm (TestPort 3/4, 3800 MHz < Frequency)

1.4 Abbreviations

The abbreviations in this manual are listed in Table 1.4-1.

Table 1.4-1 Abbreviations

Abbreviation	Formal Name
3GPP	Third Generation Partnership Project
CATM	Category M
CDMA	Code Division Multiple Access
DL	Downlink
EDGE	Enhanced Data Rate for GSM Evolution
EVDO	Evolution Data Only
FL	Forward Link
GSM	Global System for Mobile Communications
HSPA	High Speed Packet Access
LTE	Long Term Evolution
NB-IoT	NarrowBand-Internet of Things
RL	Reverse Link
TD-SCDMA	Time Division Synchronous Code Division Multiple Access
UL	Uplink
W-CDMA	Wideband CDMA

Chapter 2 Before Use

This chapter explains the preparations before using the Cellular Application waveform files.

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2.3.1	Using MU887000A commands.....	2-4
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2.1 Equipment

The following equipment is required to use the Cellular Application waveform files.

Table 2.1-1 Required Equipment

Model/Code	Product
MT8870A	Universal Wireless Test Set
MU887000A	TRX Test Module

2.2 Installing Waveform Files

To use the waveform files, register the waveform licenses in the MT8870A and transfer the waveform files to the MU887000A.

Registering the waveform licenses and transferring the waveform files can be performed in reverse order.

1. Start the MX887900A Utility Tools software provided with the MU887000A.

Refer to Chapter 8 “Utility Tools” in *the MU887000A TRX Test Module Operation Manual* for a description of how to use the MX887900A Utility Tools.

2. Copy the waveform files and the waveform licenses to PC.

When the waveform license to use is already registered in the MT8870A, it is unnecessary to copy the waveform license file.

For how to check the registered licenses, refer to 8.3.11 “Registering license” in *the MU887000A TRX Test Module Operation Manual*.

3. Move the waveform files to the MU887000A using the Utility Tools Waveform File Transfer function.

To perform separate transfer of waveform files to MU887000A, refer to 8.3.9 “Transferring files” in *the MU887000A TRX Test Module Operation Manual*.

To perform batch transfer of waveform files to MU887000A, refer to 8.3.12 “Transferring waveform files” in *the MU887000A TRX Test Module Operation Manual*.

4. When the waveform license of the waveform file to use is not registered yet, register the license in the MT8870A by using the License Registration function of Utility Tools.

For how to check the registered licenses and how to register a license, refer to 8.3.11 “Registering license” in *the MU887000A TRX Test Module Operation Manual*.

The waveform files and waveform licenses are saved in non-volatile memory. It is unnecessary to re-transfer them every time the MT8870A is turned Off.

2.3 Using Waveform Files

2.3.1 Using MU887000A commands

This section explains the command for using waveform files. For details of the commands, refer to the *MU887000A TRX Test Module Operation Manual*.

To output the modulation signal by using the waveform files, load the waveform file from non-volatile memory into the waveform memory.

- To load waveform file
:SOURce:GPRF:GENerator:ARB:FILE:LOAD
- To confirm waveform loading status
:SOURce:GPRF:GENerator:ARB:FILE:LOAD:STATUS
- To stop loading waveform file
:SOURce:GPRF:GENerator:ARB:FILE:LOAD:CANCEL

Waveform files cannot be loaded into waveform memory if the memory has insufficient free space.

In this case, delete waveform files that are not being used from memory to increase the available free space.

- To query the memory free space
:SOURce:GPRF:GENerator:ARB:WAVEform:FREE
- To defragment waveform memory
:SOURce:GPRF:GENerator:ARB:WAVEform:DEFrag
- To query the number of files
:SOURce:GPRF:GENerator:ARB:WAVEform:COUNt
- To query the file name
:SOURce:GPRF:GENerator:ARB:WAVEform:NAME
- To delete the waveform file
:SOURce:GPRF:GENerator:ARB:WAVEform:DELeTe
:SOURce:GPRF:GENerator:ARB:WAVEform:DELeTe:ALL

Specify the waveform to play from the waveform files in the waveform memory.

- To query the waveform file version
:SOURce:GPRF:GENerator:ARB:FILE:VERSion
- To query the number of group units
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:COUNt
- To query the group number
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern
- To query the pattern name
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:NAME

- To select the waveform data to be played
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:SElect
- To restart the waveform
:SOURce:GPRF:GENerator:ARB:WAVEform:REStart

Usage Example

The following example specifies waveform file MV887013A_LTEFDD_0002 Group Number 4.

1. Set the operation mode to Normal mode.
:SOURce:GPRF:GENerator:MODE NORMAL
2. Set modulation (arbitrarily waveform) to On.
:SOURce:GPRF:GENerator:BBMode ARB
3. Load the waveform file into waveform memory.
:SOURce:GPRF:GENerator:ARB:FILE:LOAD
"MV887013A_LTEFDD_0002"
4. Query the number of waveform file group units.
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:COUNT?
"MV887013A_LTEFDD_0002"
> 7
5. Query the group title of group number 4.
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:NAME?
"MV887013A_LTEFDD_0002",4
> "DL Wave, 10MHz, DL Info : SizeRB=Full QPSK, UL Request :
StartRB=0 SizeRB=50 16QAM TPC +1dB"
6. Specify the waveform.
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:SElect
"MV887013A_LTEFDD_0002",4,1

2.3.2 Using from Cellular Application software

This section explains commands related to use of waveform files. Refer to the following operation manuals for the details of the commands.

MU887000A TRX Test Module Operation Manual

MX887010A Cellular Standards Sequence Measurement Operation Manual

MX887011A W-CDMA/HSPA Uplink TX Measurement Operation Manual

MX887012A GSM/EDGE Uplink TX Measurement Operation Manual

MX887013A/14A LTE FDD/TDD Uplink TX Measurement Operation Manual

MX887015A CDMA2000 Reverse Link TX Measurement Operation Manual

MX887016A 1xEV-DO Reverse Link TX Measurement Operation Manual

MX887017A TD-SCDMA Uplink TX Measurement Operation Manual

MX887065A Category M FDD Uplink TX Measurement Operation Manual

MX887067A NB-IoT Uplink TX Measurement Operation Manual

To output the modulation signal by using the waveform files, load the waveform file from non-volatile memory into the waveform memory.

- To load waveform file
:SOURce:GPRF:GENerator:ARB:FILE:LOAD
- To stop loading waveform file
:SOURce:GPRF:GENerator:ARB:FILE:LOAD:CANCEL

Waveform files cannot be loaded into waveform memory if the memory has insufficient free space.

In this case, delete waveform files that are not being used from memory to increase the available free space.

- To query the number of files
:SOURce:GPRF:GENerator:ARB:WAVEform:COUNT
- To query the file name
:SOURce:GPRF:GENerator:ARB:WAVEform:NAME
- To delete waveform file
:SOURce:GPRF:GENerator:ARB:WAVEform:DELETE
:SOURce:GPRF:GENerator:ARB:WAVEform:DELETE:ALL

Specify the waveform to play from the waveform files in the waveform memory.

- To query the file name
:SOURce:GPRF:GENerator:ARB:WAVEform:NAME
- To query the number of group units
:SOURce:GPRF:GENerator:ARB:WAVEform:PATTERN:COUNT

- To query the group title
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:NAME
- To select the waveform file
PACKAGE
:CONFigure:CELLular:GENerator:ARB:PACKage:SElect
- To select group
At fundamental measurement
DLPAT
:CONFigure:CELLular:GENerator:ARB:WAVEform:PATtern:SElect
At sequence measurement
SEQTRX
:CONFigure:CELLular:SEquence:RFSettings:TRX

Usage Example

The following example specifies waveform MV887011A_WCDMA_0002 Group Number 1.

1. Set the operation mode to Normal mode.
:SOURce:GPRF:GENerator:MODE NORMAL
2. Set modulation (arbitrarily waveform) to On.
:CONFigure:CELLular:GENerator:BBMode ON
3. Load the waveform file into waveform memory.
:SOURce:GPRF:GENerator:ARB:FILE:LOAD
"MV887011A_WCDMA_0002"
4. Query the number of waveform file group units.
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:COUNT?
"MV887011A_WCDMA_0002"
> 12
5. Query the group title of group number 1.
:SOURce:GPRF:GENerator:ARB:WAVEform:PATtern:NAME?
"MV887011A_WCDMA_0002",1
> "DL Wave, Rep 128Frame, DL Info : RMC12.2kbps DPCH9,
UL Request : TPC 0dB"
6. Specify the waveform file.
:CONFigure:CELLular:GENerator:ARB:PACKage:SElect
"MV887011A_WCDMA_0002"

7. To specify group number. Specify as PAT1 for group number 1.

At fundamental measurement

```
:CONFigure:CELLular:GENErator:ARB:WAVEform:PATtern:SE  
Lect PAT1
```

At sequence (segment 0) measurement

```
:CONFigure:CELLular:SEQuencer:RFSettings:TRX  
0,1950.000000,-10.0,2140.000000,-60.0,PAT1
```

Chapter 3 Waveform File Details

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3.1 W-CDMA/HSPA Downlink Files

The specifications of the W-CDMA/HSPA Downlink File are listed in the following table.

Table 3.1-1 W-CDMA/HSPA Downlink File Specifications

Item		Specification		
Waveform File Name		MV887011A_WCDMA_0002	MV887011A_WCDMA_0003	MV887011A_WCDMA_0004
Application		Sequence measurement	UE Sync	Refer to Table 3.1.3-1
Group Number		12	20	15
Group Title		Refer to Table 3.1.1-1	Refer to Table 3.1.2-1	Refer to Table 3.1.3-1
Waveform Cycle/Group		128 [Frame]	2 [Frame]	Refer to Table 3.1.3-1
Group Cycle Period*		Refer to Table 3.1.1-1	Refer to Table 3.1.2-1	Refer to Table 3.1.3-1
Waveform Marker	Marker 1	Top of Downlink Frame		Refer to Table 3.1.3-1
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group (Low Active)		
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, PICH, CPICH, P-CCPCH, P-SCH, S-SCH		
	Code/SF	Refer to Table 3.1.1-1	Refer to Table 3.1.2-1	Refer to Table 3.1.3-1
	PICH Offset	0		
	TFCI	3	Refer to Table 3.1.2-1	3
	Transport Channel Number	2	Refer to Table 3.1.2-1	2
	Transmission Data	DPCH: PN9	Refer to Table 3.1.2-1	DPCH: 0xFFFF
	Frame No.	0 to 127	0, 1	Refer to Table 3.1.3-1
Downlink Control Information	TPC	Refer to Table 3.1.1-1	Alternate (0 dB)	Refer to Table 3.1.3-1
Specifications		3GPP TS34.121		

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEquence:WAVEform:IREPetition command.

Table 3.1-1 W-CDMA/HSPA Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887011A_WCDMA_0005	MV887011A_WCDMA_0006	MV887011A_WCDMA_0008
Application		Refer to Table 3.1.4-1	UE Sync	Refer to Table 3.1.6-1
Group Number		12	1	11
Group Title		Refer to Table 3.1.4-1	DL Wave, Rep 1022Frame, DL Info : RMC12.2kbps DPCH93 TFCI 3 DATA PN9, UL Request : TPC +1dB	Refer to Table 3.1.6-1
Waveform Cycle/Group		Refer to Table 3.1.4-1	1022 [Frame]	Refer to Table 3.1.6-1
Group Cycle Period*		Refer to Table 3.1.4-1	1022 [Frame]	Refer to Table 3.1.6-1
Waveform Marker	Marker 1	Refer to Table 3.1.4-1	Top of Downlink Frame	Refer to Table 3.1.6-1
	Marker 2		Top of Uplink Frame	
	Marker 3		Top of Group (Low Active)	
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, PICH, CPICH, P-CCPCH, P-SCH, S-SCH		
	Code/SF	Refer to Table 3.1.4-1	Refer to Table 3.1.5-1	Refer to Table 3.1.6-1
	PICH Offset	0		
	TFCI	3		
	Transport Channel Number	2		
	Transmission Data	DPCH: PN9		DPCH: 0xFFFF
	Frame No.	Refer to Table 3.1.4-1	0 to 1021	Refer to Table 3.1.6-1
Downlink Control Information	TPC	Refer to Table 3.1.4-1	Up (+1 dB)	Refer to Table 3.1.6-1
Specifications		3GPP TS34.121		

Table 3.1-1 W-CDMA/HSPA Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887011A_WCDMA_0009	MV887011A_WCDMA_0010	MV887011A_WCDMA_0013
Application		Refer to Table 3.1.7-1	Sequence measurement	RX measurement
Group Number		8	3	2
Group Title		Refer to Table 3.1.7-1	Refer to Table 3.1.8-1	Refer to Table 3.1.9-1
Waveform Cycle/Group		Refer to Table 3.1.7-1	1024 [Frame] (160 × 6 + 64)	1022 [Frame]
Group Cycle Period*		Refer to Table 3.1.7-1	1 [Frame]	Refer to Table 3.1.9-1
Waveform Marker	Marker 1	Refer to Table 3.1.7-1	Top of Downlink Frame	
	Marker 2		Top of Uplink Frame	
	Marker 3		Top of Group (Low Active)	
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, PICH, CPICH, P-CCPCH, P-SCH, S-SCH		
	Code/SF	Refer to Table 3.1.7-1	Refer to Table 3.1.8-1	Refer to Table 3.1.9-1
	PICH Offset	0		
	TFCI	3		
	Transport Channel Number	2		
	Transmission Data	DPCH(DCCH) : 0xFFFF DPCH(DTCH) : PN9	DPCH: PN9	
	Frame No.	Refer to Table 3.1.7-1	0 to 159	0 to 1021
Downlink Control Information	TPC	Refer to Table 3.1.7-1	Refer to Table 3.1.8-1	Up (+1 dB)
Specifications		3GPP TS34.121		

Table 3.1-1 W-CDMA/HSPA Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887011A_WCDMA_0015	MV887011A_WCDMA_0016	MV887011A_WCDMA_0017
Application		RX measurement	RX measurement	Calibration
Group Number		9	2	1
Group Title		Refer to Table 3.1.10-1	Refer to Table 3.1.11-1	DL Wave, Rep 4Frame, DL Info : P-CPICH Only
Waveform Cycle/Group		128 [Frame]	1022 [Frame]	4 [Frame]
Group Cycle Period*		Refer to Table 3.1.10-1	Refer to Table 3.1.11-1	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group (Low Active)		
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, PICH, CPICH, P-CCPCH, P-SCH, S-SCH, OCNS		CPICH
	Code/SF	Refer to Table 3.1.10-1	Refer to Table 3.1.11-1	0 / 256
	PICH Offset	0		—
	TFCI	3		—
	Transport Channel Number	2		—
	Transmission Data	DPCH : PN9	DPCH : PN9	—
	Frame No.	0 to 127	0 to 1021	—
Downlink Control Information	TPC	Refer to Table 3.1.10-1	Up (+1 dB)	—
Specifications		3GPP TS34.121		

Table 3.1-1 W-CDMA/HSPA Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887011A_ WCDMA_0021
Application		Refer to Table 3.1.12-1
Group Number		5
Group Title		Refer to Table 3.1.12-1
Waveform Cycle/Group		Refer to Table 3.1.12-1
Group Cycle Period*		Refer to Table 3.1.12-1
Waveform Marker	Marker 1	Refer to Table 3.1.12-1
	Marker 2	
	Marker 3	
Downlink Information	Scrambling Code	128
	Transmission Channel	DPCH, PICH, CPICH, P-CCPCH, P-SCH, S-SCH
	Code/SF	Refer to Table 3.1.12-1
	PICH Offset	0
	TFCI	3
	Transport Channel Number	2
	Transmission Data	DPCH : PN9
	Frame No.	Refer to Table 3.1.12-1
Downlink Control Information	TPC	Refer to Table 3.1.12-1
Specifications		3GPP TS34.121

3.1.1 MV887011A_WCDMA_0002

Waveform File Name
MV887011A_WCDMA_0002

Group Number
12

Table 3.1.1-1 MV887011A_WCDMA_0002 Composition

			Downlink Information		Downlink Control Information
Group (Pattern) No.	Title	Group Cycle Period	Transmission Channel	Code/SF	TPC
1	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC 0dB	128 [Frame]	DPCH	9/128	Alternate (0 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
2	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC +1dB	128 [Frame]	DPCH	9/128	Up (+1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
3	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC -1dB	128 [Frame]	DPCH	9/128	Down (-1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
4	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC 0dB	128 [Frame]	DPCH	96/128	Alternate (0 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
5	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC +1dB	128 [Frame]	DPCH	96/128	Up (+1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
6	DL Wave Rep 128Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC -1dB	128 [Frame]	DPCH	96/128	Down (-1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	

Table 3.1.1-1 MV887011A_WCDMA_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information		Downlink Control Information
			Transmission Channel	Code/ SF	TPC
7	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC 0dB	1 [Frame]	DPCH	9/128	Alternate (0 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
8	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC +1dB	1 [Frame]	DPCH	9/128	Up (+1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
9	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH9 UL Request: TPC -1dB	1 [Frame]	DPCH	9/128	Down (-1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
10	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC 0dB	1 [Frame]	DPCH	96/128	Alternate (0 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
11	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC +1dB	1 [Frame]	DPCH	96/128	Up (+1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	
12	DL Wave Rep 1Frame DL Info: RMC12.2kbps DPCH96 UL Request: TPC -1dB	1 [Frame]	DPCH	96/128	Down (-1 dB)
			PICH	2/256	
			CPICH	0/256	
			P-CCPCH	1/256	

3.1.2 MV887011A_WCDMA_0003

Waveform File Name
MV887011A_WCDMA_0003

Group Number
20

Table 3.1.2-1 MV887011A_WCDMA_0003 Composition

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information				
			TFCI	Transport Channel Number	Trans mission Channel	Code/SF	Trans mission Data
1	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 1 DATA 0xAAAA UL Request: TPC 0dB	2 [Frame]	1	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
2	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 1 DATA 0x5555 UL Request: TPC 0dB	2 [Frame]	1	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
3	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 2 DATA 0xAAAA UL Request: TPC 0dB	2 [Frame]	2	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
4	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 2 DATA 0x5555 UL Request: TPC 0dB	2 [Frame]	2	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
5	DL Wave Rep 2Frame DL Info : SlotFormat 11 DPCH7 TFCI 1 TrCh 1 DATA 0xAAAA UL Request: TPC 0dB	2 [Frame]	1	1	DPCH	7/128	DPCH: 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
6	DL Wave Rep 2Frame DL Info : SlotFormat 11 DPCH7 TFCI 1 TrCh 1 DATA 0x5555 UL Request: TPC 0dB	2 [Frame]	1	1	DPCH	7/128	DPCH: 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	

Table 3.1.2-1 MV887011A_WCDMA_0003 Composition (Cont'd)

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information				
			TCI	Transport Channel Number	Trans mission Channel	Code/SF	Trans mission Data
7	DL Wave Rep 2Frame DL Info : SlotFormat 11 DPCH7 TFCI 2 TrCh 1 DATA 0xAAAA UL Request: TPC 0dB	2 [Frame]	2	1	DPCH	7/128	DPCH: 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
8	DL Wave Rep 2Frame DL Info : SlotFormat 11 DPCH7 TFCI 2 TrCh 1 DATA 0x5555 UL Request: TPC 0dB	2 [Frame]	2	1	DPCH	7/128	DPCH: 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
9	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 1 DATA 0xAAAA UL Request: TPC 0dB	1 [Frame]	1	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
10	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 1 DATA 0x5555 UL Request: TPC 0dB	1 [Frame]	1	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
11	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 2 DATA 0xAAAA UL Request: TPC 0dB	1 [Frame]	2	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
12	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 2 DATA 0x5555 UL Request: TPC 0dB	1 [Frame]	2	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	

Table 3.1.2-1 MV887011A_WCDMA_0003 Composition (Cont'd)

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information				
			TFCI	Transport Channel Number	Transmis sion Channel	Code/SF	Transmis sion Data
13	DL Wave Rep 1Frame DL Info : SlotFormat 11 DPCH7 TFCI 1 TrCh 1 DATA 0xAAAA UL Request: TPC 0dB	1 [Frame]	1	1	DPCH	7/128	DPCH: 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
14	DL Wave Rep 1Frame DL Info : SlotFormat 11 DPCH7 TFCI 1 TrCh 1 DATA 0x5555 UL Request: TPC 0dB	1 [Frame]	1	1	DPCH	7/128	DPCH: 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
15	DL Wave Rep 1Frame DL Info : SlotFormat 11 DPCH7 TFCI 2 TrCh 1 DATA 0xAAAA UL Request: TPC 0dB	1 [Frame]	2	1	DPCH	7/128	DPCH: 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
16	DL Wave Rep 1Frame DL Info : SlotFormat 11 DPCH7 TFCI 2 TrCh 1 DATA 0x5555 UL Request: TPC 0dB	1 [Frame]	2	1	DPCH	7/128	DPCH: 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
17	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 3 DATA 0xAAAA UL Request : TPC 0dB	2 [Frame]	3	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0xAAAA
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	
18	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH7 TFCI 3 DATA 0x5555 UL Request : TPC 0dB	2 [Frame]	3	2	DPCH	7/128	DPCH (DCCH): 0xFFFF DPCH (DTCH): 0x5555
					PICH	2/256	
					CPICH	0/256	
					P-CCPCH	1/256	

Table 3.1.2-1 MV887011A_WCDMA_0003 Composition (Cont'd)

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information				
			TFCI	Transport Channel Number	Transmis sion Channel	Code/SF	Transmis sion Data
19	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 3 DATA 0xAAAA UL Request : TPC 0dB	1 [Frame]	3	2	DPCH	7/128	DPCH (DCCH): 0xFFFF
					PICH	2/256	DPCH (DTCH): 0xAAAA
					CPICH	0/256	
					P-CCPCH	1/256	
20	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH7 TFCI 3 DATA 0x5555 UL Request : TPC 0dB	1 [Frame]	3	2	DPCH	7/128	DPCH (DCCH): 0xFFFF
					PICH	2/256	DPCH (DTCH): 0x5555
					CPICH	0/256	
					P-CCPCH	1/256	

3.1.3 MV887011A_WCDMA_0004

Waveform File Name

MV887011A_WCDMA_0004

Group Number

15

Table 3.1.3-1 MV887011A_WCDMA_0004 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request: TPC +1dB	128 [Frame]	1 [Frame]
2	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request: TPC -1dB	128 [Frame]	1 [Frame]
3	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request: TPC 0dB	128 [Frame]	1 [Frame]
4	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave NonMarker, Rep 1Frame DL Info : DPCH9 TFCI 3	128 [Frame]	1 [Frame]
5	Inner Loop Power Control Measurement	Inner Loop Power Control Wave, Rep 25Frame DL Info : DPCH9 TFCI 3	25 [Frame]	25 [Frame]

Table 3.1.3-1 MV887011A_WCDMA_0004 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
10	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request : TPC +1dB	128 [Frame]	2 [Frame]
11	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request : TPC -1dB	128 [Frame]	2 [Frame]
12	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 TFCI 3 DATA 0xFFFF UL Request : TPC 0dB	128 [Frame]	2 [Frame]
13	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave NonMarker, Rep 2Frame DL Info : DPCH9 TFCI 3	128 [Frame]	2 [Frame]
14	Inner Loop Power Control Measurement	Inner Loop Power Control Wave Rep 26Frame DL Info : DPCH9 TFCI 3	26 [Frame]	26 [Frame]
15	Power Control	Harikiri Power Control Wave, Rep 6Frame DL Info : DPCH9 TFCI 3	6 [Frame]	6 [Frame]
16	Inner Loop Power Control Measurement	Inner Loop Power Control Wave(step ABC), Rep 28Frame DL Info : DPCH9 TFCI 3	28 [Frame]	28 [Frame]
17	Inner Loop Power Control Measurement	Inner Loop Power Control Wave(step GH), Rep 8Frame DL Info : DPCH9 TFCI 3	8 [Frame]	8 [Frame]
20	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave, Rep 4Frame DL Info : DPCH9 TFCI 3 DATA 0xFFFF	4 [Frame]	4 [Frame]
21	Inner Loop Power Control Measurement	Inner Loop Power Control Wave, Rep 16Frame DL Info : DPCH9 TFCI 3 DATA 0xFFFF	16 [Frame]	16 [Frame]

Table 3.1.3-1 MV887011A_WCDMA_0004 Composition (Cont'd)

				Downlink Information			Downlink Control Information		
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/SF	Frame No.	TPC		
1	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9/128	0 to 127	Up (+1 dB)		
				PICH	2/256				
				CPICH	0/256				
				P-CCPCH	1/256				
2				DPCH	9/128	0 to 127	Down (−1 dB)		
								PICH	2/256
								CPICH	0/256
								P-CCPCH	1/256
3				DPCH	9/128	0 to 127	Alternate (0 dB)		
								PICH	2/256
								CPICH	0/256
								P-CCPCH	1/256
4	No Markers			DPCH	9/128	0 to 127	Up (+1 dB)		
				PICH	2/256				
				CPICH	0/256				
				P-CCPCH	1/256				
5	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9/128	0 to 24	—		
				PICH	2/256				
				CPICH	0/256				
				P-CCPCH	1/256				

Table 3.1.3-1 MV887011A_WCDMA_0004 Composition (Cont'd)

				Downlink Information			Downlink Control Information	
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Trans mission Channel	Code/ SF	Frame No.	TPC	
10	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9 / 128	0 to 127	Up (+1 dB)	
				PICH	2 / 256			
				CPICH	0 / 256			
				P-CCPCH	1 / 256			
11				DPCH	9 / 128	0 to 127	Down (−1 dB)	
					PICH			2 / 256
					CPICH			0 / 256
					P-CCPCH			1 / 256
12				DPCH	9 / 128	0 to 127	Alternate (0 dB)	
					PICH			2 / 256
					CPICH			0 / 256
					P-CCPCH			1 / 256
13	No Markers			DPCH	9 / 128	0 to 127	Up (+1 dB)	
				PICH	2 / 256			
				CPICH	0 / 256			
				P-CCPCH	1 / 256			
14	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9 / 128	0 to 25	—	
				PICH	2 / 256			
				CPICH	0 / 256			
				P-CCPCH	1 / 256			
15				DPCH	9 / 128	0 to 5	—	
					PICH			2 / 256
					CPICH			0 / 256
					P-CCPCH			1 / 256
16				DPCH	9 / 128	0 to 27	—	
					PICH			2 / 256
					CPICH			0 / 256
					P-CCPCH			1 / 256
17				DPCH	9 / 128	0 to 7	—	
					PICH			2 / 256
					CPICH			0 / 256
					P-CCPCH			1 / 256

Table 3.1.3-1 MV887011A_WCDMA_0004 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/SF	Frame No.	TPC
20	Top of Downlink Frame (4 Frame Cycle)	Top of Uplink Frame (4 Frame Cycle)	Top of Group (Low Active)	DPCH	9 / 128	0 to 3	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
21				DPCH	9 / 128	0 to 15	—
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		

3.1.4 MV887011A_WCDMA_0005

Waveform File Name

MV887011A_WCDMA_0005

Group Number

12

Table 3.1.4-1 MV887011A_WCDMA_0005 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	UE Sync	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request: TPC 0dB	128 [Frame]	1 [Frame]
2	UE Sync	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request: TPC +1dB	128 [Frame]	1 [Frame]
3	UE Sync	DL Wave Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request: TPC -1dB	128 [Frame]	1 [Frame]
4	UE Sync	DL Wave, Len 512Frame, Rep 1Frame DL Info : RMC12.2kbps DPCH2 UL Request : TPC +1dB	512 [Frame]	1 [Frame]
5	UE Sync	DL Wave, Len 512Frame, Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	512 [Frame]	1 [Frame]
6	UE Sync	DL Wave, Len 169Frame, Rep 169Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	169 [Frame]	169 [Frame]

3

Waveform File Details

Table 3.1.4-1 MV887011A_WCDMA_0005 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
10	UE Sync	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC 0dB	128 [Frame]	2 [Frame]
11	UE Sync	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	128 [Frame]	2 [Frame]
12	UE Sync	DL Wave Rep 2Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC -1dB	128 [Frame]	2 [Frame]
20	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave, Rep 4Frame DL Info : DPCH9 TFCI 3	4 [Frame]	4 [Frame]
21	Inner Loop Power Control Measurement	Inner Loop Power Control Wave, Rep 16Frame DL Info : DPCH9 TFCI 3	16 [Frame]	16 [Frame]
22	Inner Loop Power Control Measurement	Inner Loop Power Control Wave(step G/H), Rep 8Frame DL Info : DL Info : DPCH9 TFCI 3	8 [Frame]	8 [Frame]

Table 3.1.4-1 MV887011A_WCDMA_0005 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/ SF	Frame No.	TPC
1	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9 / 128	0 to 127	Alternate (0 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
2				DPCH	9 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
3				DPCH	9 / 128	0 to 127	Down (−1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
4				DPCH	2 / 128	0 to 511	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
5				DPCH	9 / 128	0 to 511	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
6				DPCH	9 / 128	0 to 168	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		

Table 3.1.4-1 MV887011A_WCDMA_0005 Composition (Cont'd)

				Downlink Information			Downlink Control Information		
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/ SF	Frame No.	TPC		
10	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	9 / 128	0 to 127	Alternate (0 dB)		
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				
11				DPCH	9 / 128	0 to 127	Up (+1 dB)		
								PICH	2 / 256
								CPICH	0 / 256
								P-CCPCH	1 / 256
12				DPCH	9 / 128	0 to 127	Down (−1 dB)		
								PICH	2 / 256
								CPICH	0 / 256
								P-CCPCH	1 / 256
20	Top of Downlink Frame (4 Frame Cycle)	Top of Uplink Frame (4 Frame Cycle)		DPCH	9 / 128	0 to 3	Up (+1 dB)		
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				
				DPCH	9 / 128				
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				
21				P-CCPCH	1 / 256	0 to 15	–		
								DPCH	9 / 128
								PICH	2 / 256
								CPICH	0 / 256
22				DPCH	9 / 128	0 to 7	–		
								PICH	2 / 256
								CPICH	0 / 256
								P-CCPCH	1 / 256

3.1.5 MV887011A_WCDMA_0006

Waveform File Name
MV887011A_WCDMA_0006

Group Number
1

Table 3.1.5-1 MV887011A_WCDMA_0006 Composition

Group (Pattern) No.	Downlink Information	
	Transmission Channel	Code/SF
1	DPCH	93 / 128
	PICH	2 / 256
	CPICH	0 / 256
	P-CCPCH	1 / 256

3.1.6 MV887011A_WCDMA_0008

Waveform File Name
MV887011A_WCDMA_0008

Group Number
11

Table 3.1.6-1 MV887011A_WCDMA_0008 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC +1dB	128 [Frame]	1 [Frame]
2	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC -1dB	128 [Frame]	1 [Frame]
3	Loop Back BER Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC 0dB	128 [Frame]	1 [Frame]
4	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave NonMarker, Rep 1Frame DL Info : DPCH6 TFCI 3	128 [Frame]	1 [Frame]
5	Inner Loop Power Control Measurement	Inner Loop Power Control Wave Rep 25Frame DL Info : DPCH6 TFCI 3	25 [Frame]	25 [Frame]

Table 3.1.6-1 MV887011A_WCDMA_0008 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
10	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC +1dB	128 [Frame]	2 [Frame]
11	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC -1dB	128 [Frame]	2 [Frame]
12	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 TFCI 3 DATA 0xFFFF UL Request : TPC 0dB	128 [Frame]	2 [Frame]
13	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave NonMarker, Rep 2Frame DL Info : DPCH6 TFCI 3	128 [Frame]	2 [Frame]
14	Inner Loop Power Control Measurement	Inner Loop Power Control Wave Rep 26Frame DL Info : DPCH6 TFCI 3	26 [Frame]	26 [Frame]
15	Power Control	Harikiri Power Control Wave Rep 6Frame DL Info : DPCH6 TFCI 3	6 [Frame]	6 [Frame]

Table 3.1.6-1 MV887011A_WCDMA_0008 Composition (Cont'd)

				Downlink Information			Downlink Control Information						
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Trans mission Channel	Code/ SF	Frame No.	TPC						
1	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 127	Up (+1 dB)						
				PICH	2 / 256								
				CPICH	0 / 256								
				P-CCPCH	1 / 256								
2				Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 127	Down (−1 dB)			
							PICH	2 / 256					
							CPICH	0 / 256					
							P-CCPCH	1 / 256					
3							Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 127	Alternate (0 dB)
										PICH	2 / 256		
										CPICH	0 / 256		
										P-CCPCH	1 / 256		
4	No Markers									DPCH	6 / 128	0 to 127	Up (+1 dB)
										PICH	2 / 256		
										CPICH	0 / 256		
										P-CCPCH	1 / 256		
5	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 24				—			
				PICH	2 / 256								
				CPICH	0 / 256								
				P-CCPCH	1 / 256								

Table 3.1.6-1 MV887011A_WCDMA_0008 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Trans mission Channel	Code/ SF	Frame No.	TPC
10	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
11				DPCH	6 / 128	0 to 127	Down (−1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
12				DPCH	6 / 128	0 to 127	Alternate (0 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
13	No Markers			DPCH	6 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
14	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 25	–
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
15				DPCH	6 / 128	0 to 5	–
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		

3.1.7 MV887011A_WCDMA_0009

Waveform File Name
MV887011A_WCDMA_0009

Group Number
8

Table 3.1.7-1 MV887011A_WCDMA_0009 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	RX Measurement	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC +1dB	128 [Frame]	1 [Frame]
2		DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC -1dB		1 [Frame]
3		DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC 0dB		1 [Frame]
10		DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC +1dB		2 [Frame]
11		DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC -1dB		2 [Frame]
12		DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH6 UL Request : TPC 0dB		2 [Frame]
13	Inner Power Control Measurement	Inner Loop Power Control PreWave, NonMarker, Rep 2Frame DL Info : DPCH6 TFCI 3	128 [Frame]	2 [Frame]
14		Inner Loop Power Control Wave, Rep 26Frame DL Info : DPCH6 TFCI 3	26 [Frame]	26 [Frame]

Table 3.1.7-1 MV887011A_WCDMA_0009 Composition (Cont'd)

Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Downlink Information			Downlink Control Information
				Trans mission Channel	Code/ SF	Frame No.	TPC
1	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
2				DPCH	6 / 128	0 to 127	Down (-1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
3				DPCH	6 / 128	0 to 127	Alternate (0 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
10				DPCH	6 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
11				DPCH	6 / 128	0 to 24	—
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
12				DPCH	6 / 128	0 to 24	—
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		

Table 3.1.7-1 MV887011A_WCDMA_0009 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/SF	Frame No.	TPC
13	No Markers			DPCH	6 / 128	0 to 127	Up (+1 dB)
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		
14	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	6 / 128	0 to 25	–
				PICH	2 / 256		
				CPICH	0 / 256		
				P-CCPCH	1 / 256		

3.1.8 MV887011A_WCDMA_0010

Waveform File Name

MV887011A_WCDMA_0010

Group Number

3

Table 3.1.8-1 MV887011A_WCDMA_0010 Composition

Group (Pattern) No.	Title	Downlink Information		Downlink Control Information
		Transmission Channel	Code/SF	TPC
1	DL Wave, Len 160×6+64Frame, Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	DPCH	9/128	Up (+1 dB)
		PICH	2/256	
		CPICH	0/256	
		P-CCPCH	1/256	
2	DL Wave, 160×6+64Frame, Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC -1dB	DPCH	9/128	Down (-1 dB)
		PICH	2/256	
		CPICH	0/256	
		P-CCPCH	1/256	
3	DL Wave, 160×6+64Frame, Rep 1Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC 0dB	DPCH	9/128	Alternate (0 dB)
		PICH	2/256	
		CPICH	0/256	
		P-CCPCH	1/256	

3

Waveform File Details

3.1.9 MV887011A_WCDMA_0013

Waveform File Name
MV887011A_WCDMA_0013

Group Number
2

Table 3.1.9-1 MV887011A_WCDMA_0013 Composition

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information	
			Transmission Channel	Code/SF
1	DL Wave, Len 1022Frame, Rep 511Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	511 [Frame]	DPCH	9/128
			PICH	2/256
			CPICH	0/256
			P-CCPCH	1/256
2	DL Wave, Len 1022Frame, Rep 1022Frame DL Info : RMC12.2kbps DPCH9 UL Request : TPC +1dB	1022 [Frame]	DPCH	9/128
			PICH	2/256
			CPICH	0/256
			P-CCPCH	1/256

3.1.10 MV887011A_WCDMA_0015

Waveform File Name
MV887011A_WCDMA_0015

Group Number
9

Table 3.1.10-1 MV887011A_WCDMA_0015 Composition

			Downlink Information		Downlink Control Information
Group (Pattern) No.	Title	Group Cycle Period	Transmission Channel	Code/SF	TPC
1	DL Wave, Rep 128Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC 0dB	128 [Frame]	DPCH	9 / 128	Alternate (0 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
2	DL Wave, Rep 128Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC +1dB	128 [Frame]	DPCH	9 / 128	Up (+1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
3	DL Wave, Rep 128Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC -1dB	128 [Frame]	DPCH	9 / 128	Down (-1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	

Table 3.1.10-1 MV887011A_WCDMA_0015 Composition (Cont'd)

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information		Downlink Control Information
			Transmission Channel	Code/SF	TPC
4	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC 0dB	1 [Frame]	DPCH	9 / 128	Alternate (0 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
5	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC +1dB	1 [Frame]	DPCH	9 / 128	Up (+1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
6	DL Wave, Rep 1Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC -1dB	1 [Frame]	DPCH	9 / 128	Down (-1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
7	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC 0dB	2 [Frame]	DPCH	9 / 128	Alternate (0 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
8	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC +1dB	2 [Frame]	DPCH	9 / 128	Up (+1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	
9	DL Wave, Rep 2Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC -1dB	2 [Frame]	DPCH	9 / 128	Down (-1 dB)
			PICH	2 / 256	
			CPICH	0 / 256	
			P-CCPCH	1 / 256	
			OCNS	16Code	

3.1.11 MV887011A_WCDMA_0016

Waveform File Name
MV887011A_WCDMA_0016

Group Number
2

Table 3.1.11-1 MV887011A_WCDMA_0016 Composition

Group (Pattern) No.	Title	Group Cycle Period	Downlink Information	
			Transmission Channel	Code/SF
1	DL Wave, Len 1022Frame, Rep 511Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC +1dB	511 [Frame]	DPCH	9 / 128
			PICH	2 / 256
			CPICH	0 / 256
			P-CCPCH	1 / 256
			OCNS	16Code
2	DL Wave, Len 1022Frame, Rep 1022Frame DL Info : RMC12.2kbps DPCH9 -19dB OCNS 16code UL Request : TPC +1dB	1022 [Frame]	DPCH	9 / 128
			PICH	2 / 256
			CPICH	0 / 256
			P-CCPCH	1 / 256
			OCNS	16Code

3.1.12 MV887011A_WCDMA_0021

Waveform File Name

MV887011A_WCDMA_0021

Group Number

5

Table 3.1.12-1 MV887011A_WCDMA_0021 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : ScrambleCode128 RMC12.2kbps DPCH96 TFCI 3 UL Request : TPC +1dB	128 [Frame]	2 [Frame]
2	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : ScrambleCode128 RMC12.2kbps DPCH96 TFCI 3 UL Request : TPC -1dB	128 [Frame]	2 [Frame]
3	Loop Back BER Measurement	DL Wave, Rep 2Frame DL Info : ScrambleCode128 RMC12.2kbps DPCH96 TFCI 3 UL Request : TPC 0dB	128 [Frame]	2 [Frame]
4	Inner Loop Power Control Measurement	Inner Loop Power Control PreWave NonMarker, Rep 2Frame DL Info : ScrambleCode128 DPCH96 TFCI 3	128 [Frame]	2 [Frame]
5	Inner Loop Power Control Measurement	Inner Loop Power Control Wave, Rep 26Frame DL Info : ScrambleCode128 DPCH96 TFCI 3	26 [Frame]	26 [Frame]

Table 3.1.12-1 MV887011A_WCDMA_0021 Composition (Cont'd)

				Downlink Information			Downlink Control Information		
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Code/ SF	Frame No.	TPC		
1	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	96 / 128	0 to 127	Up (+1 dB)		
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				
2				DPCH	96 / 128	0 to 127	Down (−1 dB)		
								PICH	2 / 256
								CPICH	0 / 256
								P-CCPCH	1 / 256
3				DPCH	96 / 128	0 to 127	Alternate (0 dB)		
								PICH	2 / 256
								CPICH	0 / 256
								P-CCPCH	1 / 256
4	No Markers			DPCH	96 / 128	0 to 127	Up (+1 dB)		
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				
5	Top of Downlink Frame	Top of Uplink Frame	Top of Group (Low Active)	DPCH	96 / 128	0 to 25	—		
				PICH	2 / 256				
				CPICH	0 / 256				
				P-CCPCH	1 / 256				

3.2 GSM/EDGE Downlink Files

The specifications of the GSM/EDGE Downlink File are listed in the following table.

Table 3.2-1 GSM/EDGE Downlink File Specifications

Item		Specification	
Waveform File Name		MV887012A_GSM_0002	MV887012A_GSM_0007
Application		Sequence measurement	Refer to Table 3.2.3-1
Group Number		8	6
Group Title		Refer to Table 3.2.1-1	Refer to Table 3.2.3-1
Waveform Cycle/Group		52 [Frame]	Refer to Table 3.2.3-1
Group Cycle Period*		52 [Frame]	Refer to Table 3.2.3-1
Waveform Marker	Marker 1	Top of Downlink Frame	
	Marker 2	Top of Uplink Frame	
	Marker 3	Top of Group	
Downlink Information	Transmission Channel	Refer to Table 3.2.1-1	Refer to Table 3.2.3-1
	SCH	BCC:001 (binary) NCC:001 (binary) FN:0 to 51	Refer to Table 3.2.3-1
	TSC	TSC0	
	Transmission Data	TCH or PDTCH: PN9	Refer to Table 3.2.3-1
	Transmission Data Modulation	Refer to Table 3.2.1-1	Refer to Table 3.2.3-1
Specifications		3GPP TS45.003	

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURce:GPRF:GENerator:SEQuence:WAVEform:IREPetition command.

Table 3.2-1 GSM/EDGE Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887012A_GSM_0008	MV887012A_GSM_0009	MV887012A_GSM_0010
Application		RX measurement	UE Sync	RX measurement
Group Number		1	1	2
Group Title		DL Wave, DL Info : CCH & PDTCH CS4 GMSK 7Slot	DL Wave, DL Info : CCH & TCH-FS GMSK 1Slot	Refer to Table 3.2.6-1
Waveform Cycle/Group		2652 [Frame]	5304 [Frame]	624 [Frame]
Group Cycle Period*		2652 [Frame]	5304 [Frame]	624 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	Refer to Table 3.2.4-1	Refer to Table 3.2.5-1	Refer to Table 3.2.6-1
	SCH	BCC:000 (binary) NCC:000 (binary) FN:0 to 2651	BCC:000 (binary) NCC:000 (binary) FN:0 to 5303	BCC:001 (binary) NCC:001 (binary) FN:0 to 623
	TSC	TSC0		
	Transmission Data	PDTCH :PN9	TCH:PN9	
	Transmission Data Modulation	GMSK		
Specifications		3GPP TS45.003		

Table 3.2-1 GSM/EDGE Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887012A_GSM_0011	MV887012A_GSM_0013	MV887012A_GSM_0015
Application		UE Sync	UE Sync	RX measurement
Group Number		2	2	1
Group Title		Refer to Table 3.2.7-1	Refer to Table 3.2.8-1	DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS Uncoded GMSK 1Slot for PCL5
Waveform Cycle/Group		104 [Frame]	2652 [Frame]	6643 [Frame]
Group Cycle Period*		104 [Frame]	2652 [Frame]	6643 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	Refer to Table 3.2.7-1	Refer to Table 3.2.8-1	Refer to Table 3.2.9-1
	SCH	BCC:000 (binary) NCC:001 (binary) FN:0 to 103	BCC:000 (binary) NCC:001 (binary) FN:0 to 2651	BCC:001 (binary) NCC:001 (binary) FN:0 to 6642
	TSC	TSC0		
	Transmission Data	TCH :PN9	Refer to Table 3.2.8-1	TCH :PN9
	Transmission Data Modulation	GMSK	Refer to Table 3.2.8-1	GMSK
Specifications		3GPP TS45.003		

Table 3.2-1 GSM/EDGE Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887012A_GSM_0016	MV887012A_GSM_0017	MV887012A_GSM_0018
Application		Refer to Table 3.2.10-1	RX measurement	Loop Back BER Measurement
Group Number		4	1	2
Group Title		Refer to Table 3.2.10-1	DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS Uncoded GMSK 7Slot for PCL5	Refer to Table 3.2.12-1
Waveform Cycle/Group		Refer to Table 3.2.10-1	6643 [Frame]	104 [Frame]
Group Cycle Period*		Refer to Table 3.2.10-1	6643 [Frame]	104 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	Refer to Table 3.2.10-1	Refer to Table 3.2.11-1	Refer to Table 3.2.12-1
	SCH	Refer to Table 3.2.10-1	BCC:000 (binary) NCC:001 (binary) FN:0 to 6642	BCC:001 (binary) NCC:001 (binary) FN:0 to 103
	TSC	TSC5	TSC0	TSC5
	Transmission Data	Refer to Table 3.2.10-1	TCH : PN9	TCH : 0xAAAA
	Transmission Data Modulation	Refer to Table 3.2.10-1	GMSK	GMSK
Specifications		3GPP TS45.003		

Table 3.2-1 GSM/EDGE Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887012A_GSM_0019	MV887012A_GSM_0021	MV887012A_GSM_0026
Application		RX measurement	UE Sync	Calibration
Group Number		1	2	3
Group Title		DL Wave, Len 5304Frame, DL Info : CCH & TCH FS coded GMSK 7Slot NoSACCH BcchTsc5 CcchTsc5 TchTsc5 Cell ID 0	Refer to Table 3.2.14-1	Refer to Table 3.2.15-1
Waveform Cycle/Group		5304 [Frame]	6643 [Frame]	Refer to Table 3.2.15-1
Group Cycle Period*		5304 [Frame]	6643 [Frame]	Refer to Table 3.2.15-1
Waveform Marker	Marker 1	Top of Downlink Frame		—
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	Refer to Table 3.2.13-1	Refer to Table 3.2.14-1	—
	SCH	BCC:101 (binary) NCC:000 (binary) FN:0 to 5303	BCC:001 (binary) NCC:001 (binary) FN:0 to 6642	—
	TSC	TSC5	TSC5	—
	Transmission Data	TCH : PN9	TCH : PN9	—
	Transmission Data Modulation	GMSK	GMSK	GMSK
Specifications		3GPP TS45.003		

Table 3.2-1 GSM/EDGE Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887012A_GSM_0027	MV887012A_GSM_0030	MV887012A_GSM_0031
Application		Sequence Measurement	Sequence Measurement	UE Sync
Group Number		1	2	1
Group Title		DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS coded GMSK 7Slot BcchTsc5 Tch&DummyTsc5 PCL5	Refer to Table 3.2.17-1	DL Wave, Len 2652Frame, DL Info : CCH & PDTCH MCS5 8PSK 7Slot BcchTsc5 PdtchTsc5 PNInit=0x178 IdleFrame
Waveform Cycle/Group		6643 [Frame]	527 [Frame]	2562 [Frame]
Group Cycle Period*		6643 [Frame]	527 [Frame]	2562 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	Refer to Table 3.2.16-1	Refer to Table 3.2.17-1	Refer to Table 3.2.18-1
	SCH	BCC:101 (binary) NCC:001 (binary) FN:0 to 6642	BCC:001 (binary) NCC:001 (binary) FN:0 to 526	BCC:101 (binary) NCC:001 (binary) FN:0 to 2651
	TSC	TSC5	TSC0	TSC5
	Transmission Data	TCH :PN9	TCH or PDTCH : PN9	PDTCH : PN9
	Transmission Data Modulation	GMSK	Refer to Table 3.2.17-1	Refer to Table 3.2.18-1
Specifications		3GPP TS45.003		

Table 3.2-2 Rx Sweep GSM/EDGE Downlink File Specifications

Item	Specification
Waveform File Name	MV887012A_GSM_0003
Application	Rx Sweep Measurement
Group Number	136

3.2.1 MV887012A_GSM_0002

Waveform File Name
MV887012A_GSM_0002

Group Number
8

Table 3.2.1-1 MV887012A_GSM_0002 Composition

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
1	DL Wave DL Info: CCH & TCH FS Uncoded GMSK 1Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	
		2	TCH	
			SACCH	
			DUMMY	
		3	DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	
2	DL Wave DL Info: CCH & PDTCH MCS5 8PSK 1Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	
		2	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		3	DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	

Table 3.2.1-1 MV887012A_GSM_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
3	DL Wave DL Info: CCH & PDTCH MCS9 8PSK 1Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	8PSK GMSK
		2	PDTCH_MCS9	
			DUMMY	
		3	DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	
4	DL Wave DL Info: CCH & PDTCH MCS1 GMSK 2Slot & PDTCH MCS9 8PSK 2Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	8PSK GMSK
		2	PDTCH_MCS1	
			DUMMY	
		3	PDTCH_MCS1	
			DUMMY	
		4	PDTCH_MCS9	
			DUMMY	
		5	PDTCH_MCS9	
			DUMMY	
		6	DUMMY	
		7	DUMMY	

Table 3.2.1-1 MV887012A_GSM_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
5	DL Wave DL Info: CCH & TCH FS Uncoded GMSK 1Slot Slot No.3	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	
		2	DUMMY	
		3	TCH	
			SACCH	
			DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	

Table 3.2.1-1 MV887012A_GSM_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
6	DL Wave DL Info: CCH & TCH FS Uncoded GMSK 7Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	TCH	
			SACCH	
			DUMMY	
		2	TCH	
			SACCH	
			DUMMY	
		3	TCH	
			SACCH	
			DUMMY	
		4	TCH	
			SACCH	
			DUMMY	
		5	TCH	
			SACCH	
			DUMMY	
		6	TCH	
			SACCH	
			DUMMY	
		7	TCH	
			SACCH	
			DUMMY	

Table 3.2.1-1 MV887012A_GSM_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
7	DL Wave DL Info: CCH & PDTCH MCS5 8PSK 7Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		2	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		3	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		4	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		5	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		6	PDTCH_MCS5	8PSK
			DUMMY	GMSK
		7	PDTCH_MCS5	8PSK
			DUMMY	GMSK

Table 3.2.1-1 MV887012A_GSM_0002 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
8	DL Wave DL Info: CCH & PDTCH MCS9 8PSK 7Slot	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		2	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		3	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		4	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		5	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		6	PDTCH_MCS9	8PSK
			DUMMY	GMSK
		7	PDTCH_MCS9	8PSK
			DUMMY	GMSK

3.2.2 MV887012A_GSM_0003

Waveform File Name

MV887012A_GSM_0003

Group Number

136

The MV887012A_GSM_0003 file is used at Rx Sweep as described in section 2.10 High Speed Adjustment Measurement in the *MX887012A GSM/EDGE Uplink Tx Measurement Operation Manual*.

3.2.3 MV887012A_GSM_0007

Waveform File Name

MV887012A_GSM_0007

Group Number

6

Table 3.2.3-1 MV887012A_GSM_0007 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
1	Loop Back BER Measu rement	DL Wave DL Info: CCH & TCH FS coded GMSK 7Slot NoSACCH	104 [Frame]	104 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 103	0	FCCH	GMSK	TCH: 0xAAAA
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							DUMMY		
						2	TCH		
							DUMMY		
						3	TCH		
							DUMMY		
						4	TCH		
							DUMMY		
						5	TCH		
							DUMMY		
						6	TCH		
							DUMMY		
						7	TCH		
							DUMMY		

Table 3.2.3-1 MV887012A_GSM_0007 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
2	SRB Loop Back BER Measu rement	DL Wave DL Info: CCH & PDTCH MCS9 8PSK 7Slot	104 [Frame]	104 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 103	0	FCCH	GMSK	PDTCH: PN9 (4Frame initializa tion)
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						2	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						3	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						4	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						5	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						6	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	
						7	PDTCH_ MCS9	8PSK	
							DUMMY	GMSK	

Table 3.2.3-1 MV887012A_GSM_0007 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
3	Loop Back BER Measu rement	DL Wave DL Info: CCH & TCH FS coded GMSK 7Slot PCL0	104 [Frame]	104 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 103	0	FCCH	GMSK	TCH: 0xAAAA
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							SACCH		
							DUMMY		
						2	TCH		
							SACCH		
							DUMMY		
						3	TCH		
							SACCH		
							DUMMY		
						4	TCH		
							SACCH		
							DUMMY		
						5	TCH		
							SACCH		
							DUMMY		
						6	TCH		
							SACCH		
							DUMMY		
						7	TCH		
							SACCH		
							DUMMY		

Table 3.2.3-1 MV887012A_GSM_0007 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
4	Loop Back BER Measu rement	DL Wave DL Info: CCH & TCH FS coded GMSK 7Slot PCL5	104 [Frame]	104 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 103	0	FCCH	GMSK	TCH: 0xAAAA
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							SACCH		
							DUMMY		
						2	TCH		
							SACCH		
							DUMMY		
						3	TCH		
							SACCH		
							DUMMY		
						4	TCH		
							SACCH		
							DUMMY		
						5	TCH		
							SACCH		
							DUMMY		
						6	TCH		
							SACCH		
							DUMMY		
						7	TCH		
							SACCH		
							DUMMY		

Table 3.2.3-1 MV887012A_GSM_0007 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
5	Loop Back BER Measu rement	DL Wave, Len 208Frame, DL Info : CCH & TCH FS coded GMSK 7Slot NoSACCH	208 [Frame]	208 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 207	0	FCCH	GMSK	TCH: 0xAAAA
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							DUMMY		
						2	TCH		
							DUMMY		
						3	TCH		
							DUMMY		
						4	TCH		
							DUMMY		
						5	TCH		
							DUMMY		
						6	TCH		
							DUMMY		
						7	TCH		
							DUMMY		

Table 3.2.3-1 MV887012A_GSM_0007 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
6	SRB Loop Back BER Measu rement	DL Wave DL Info : CCH & PDTCH MCS5 8PSK 7Slot	104 [Frame]	104 [Frame]	BCC: 000 (binary) NCC: 001 (binary) FN: 0 to 103	0	FCCH	GMSK	PDTCH: PN9 (4Frame initializ ation)
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						2	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						3	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						4	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						5	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						6	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						7	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	

3.2.4 MV887012A_GSM_0008

Waveform File Name

MV887012A_GSM_0008

Group Number

1

Table 3.2.4-1 MV887012A_GSM_0008 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	PDTCH_CS4
		DUMMY
	2	PDTCH_CS4
		DUMMY
	3	PDTCH_CS4
		DUMMY
	4	PDTCH_CS4
		DUMMY
	5	PDTCH_CS4
		DUMMY
	6	PDTCH_CS4
		DUMMY
	7	PDTCH_CS4
		DUMMY

3.2.5 MV887012A_GSM_0009

Waveform File Name

MV887012A_GSM_0009

Group Number

1

Table 3.2.5-1 MV887012A_GSM_0009 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	DUMMY
	2	DUMMY
	3	TCH
		DUMMY
	4	DUMMY
	5	DUMMY
	6	DUMMY
	7	DUMMY

3.2.6 MV887012A_GSM_0010

Waveform File Name

MV887012A_GSM_0010

Group Number

2

Table 3.2.6-1 MV887012A_GSM_0010 Composition

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
1	DL Wave DL Info : CCH & TCH FS Uncoded GMSK 1Slot for PCL5	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	DUMMY
		2	TCH
			SACCH
			DUMMY
		3	DUMMY
		4	DUMMY
		5	DUMMY
		6	DUMMY
2	DL Wave DL Info : CCH & TCH FS Uncoded GMSK 1Slot for PCL0	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	DUMMY
		2	TCH
			SACCH
			DUMMY
		3	DUMMY
		4	DUMMY
		5	DUMMY
		6	DUMMY
		7	DUMMY

3.2.7 MV887012A_GSM_0011

Waveform File Name
MV887012A_GSM_0011

Group Number
2

Table 3.2.7-1 MV887012A_GSM_0011 Composition

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
1	DL Wave DL Info : CCH & TCH FS coded GMSK 1Slot for PCL5	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	DUMMY
		2	DUMMY
		3	TCH
			SACCH
			DUMMY
		4	DUMMY
		5	DUMMY
		6	DUMMY
		7	DUMMY
2	DL Wave DL Info : CCH & TCH FS coded GMSK 1Slot for PCL0	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	DUMMY
		2	DUMMY
		3	TCH
			SACCH
			DUMMY
		4	DUMMY
		5	DUMMY
		6	DUMMY
		7	DUMMY

3.2.8 MV887012A_GSM_0013

Waveform File Name

MV887012A_GSM_0013

Group Number

2

Table 3.2.8-1 MV887012A_GSM_0013 Composition

		Downlink Information			
Group (Pattern) No.	Title	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
1	DL Wave, SRBLB DL Info : CCH & PDTCH MCS5 8PSK 1Slot	0	FCCH	GMSK	PDTCH: PN9 (4Frame initialization)
			SCH		
			BCCH		
			CCCH		
			DUMMY		
		1	DUMMY	8PSK	
		2	PDTCH_MCS5		
			IDLE	—	
		3	DUMMY	GMSK	
		4	DUMMY		
		5	DUMMY		
		6	DUMMY		
		7	DUMMY		
2	DL Wave DL Info : CCH & PDTCH MCS5 8PSK 1Slot	0	FCCH	GMSK	PDTCH: PN9
			SCH		
			BCCH		
			CCCH		
			DUMMY		
		1	DUMMY	8PSK	
		2	PDTCH_MCS5		
			IDLE	—	
		3	DUMMY	GMSK	
		4	DUMMY		
		5	DUMMY		
		6	DUMMY		
		7	DUMMY		

3.2.9 MV887012A_GSM_0015

Waveform File Name

MV887012A_GSM_0015

Group Number

1

Table 3.2.9-1 MV887012A_GSM_0015 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	DUMMY
	2	TCH
		SACCH
		DUMMY
	3	DUMMY
	4	DUMMY
	5	DUMMY
	6	DUMMY
	7	DUMMY

3.2.10 MV887012A_GSM_0016

Waveform File Name
MV887012A_GSM_0016

Group Number
4

Table 3.2.10-1 MV887012A_GSM_0016 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
1	UE Sync	DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS coded GMSK 7Slot BcchTsc5 TchTsc5 PCL5	6643 [Frame]	6643 [Frame]	BCC: 101 (binary) NCC: 001 (binary) FN: 0 to 6642	0	FCCH	GMSK	TCH: PN9
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							SACCH		
							DUMMY		
						2	TCH		
							SACCH		
							DUMMY		
						3	TCH		
							SACCH		
							DUMMY		
						4	TCH		
							SACCH		
							DUMMY		
						5	TCH		
							SACCH		
							DUMMY		
						6	TCH		
							SACCH		
							DUMMY		
						7	TCH		
							SACCH		
							DUMMY		

Table 3.2.10-1 MV887012A_GSM_0016 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
2	Loop Back BER Meas urem ent	DL Wave, Len 5304Frame, DL Info : CCH & TCH FS coded GMSK 7Slot BcchTsc5 TchTsc5 PCL5	5304 [Frame]	5304 [Frame]	BCC: 101 (binary) NCC: 001 (binary) FN: 0 to 5303	0	FCCH	GMSK	TCH: 0xAAAA
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	TCH		
							SACCH		
							DUMMY		
						2	TCH		
							SACCH		
							DUMMY		
						3	TCH		
							SACCH		
							DUMMY		
						4	TCH		
							SACCH		
							DUMMY		
						5	TCH		
							SACCH		
							DUMMY		
						6	TCH		
							SACCH		
							DUMMY		
						7	TCH		
							SACCH		
							DUMMY		

Table 3.2.10-1 MV887012A_GSM_0016 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
3	UE Sync	DL Wave, Len 2652Frame, DL Info : CCH & PDTCH MCS5 8PSK 7Slot BcchTsc5 PdtchTsc5	2652 [Frame]	2652 [Frame]	BCC: 101 (binary) NCC: 001 (binary) FN: 0 to 2651	0	FCCH	GMSK	PDTCH: PN9
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						2	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						3	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						4	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						5	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						6	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						7	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	

Table 3.2.10-1 MV887012A_GSM_0016 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Waveform Cycle/Group	Group Cycle Period	Downlink Information				
					SCH	Slot No.	Transmission Channel	Transmission Data Modulation	Transmission Data
4	UE Sync	DL Wave, Len 2652Frame, DL Info : CCH & PDTCH MCS5 8PSK 7Slot BcchTsc5 PdtchTsc5 PNInitialValue =0x178	2652 [Frame]	2652 [Frame]	BCC: 101 (binary) NCC: 001 (binary) FN: 0 to 2651	0	FCCH	GMSK	PDTCH: PN9
							SCH		
							BCCH		
							CCCH		
							DUMMY		
						1	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						2	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						3	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						4	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						5	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						6	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	
						7	PDTCH_ MCS5	8PSK	
							DUMMY	GMSK	

3.2.11 MV887012A_GSM_0017

Waveform File Name
MV887012A_GSM_0017

Group Number
1

Table 3.2.11-1 MV887012A_GSM_0017 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	TCH
		SACCH
		DUMMY
	2	TCH
		SACCH
		DUMMY
	3	TCH
		SACCH
		DUMMY
	4	TCH
		SACCH
		DUMMY
	5	TCH
		SACCH
		DUMMY
	6	TCH
		SACCH
		DUMMY
	7	TCH
		SACCH
		DUMMY

3.2.12 MV887012A_GSM_0018

Waveform File Name
MV887012A_GSM_0018

Group Number
2

Table 3.2.12-1 MV887012A_GSM_0018 Composition

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
1	DL Wave, DL Info : CCH & TCH FS coded GMSK 7Slot TchTsc5 PCL5	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	TCH
			SACCH
			DUMMY
		2	TCH
			SACCH
			DUMMY
		3	TCH
			SACCH
			DUMMY
		4	TCH
			SACCH
			DUMMY
		5	TCH
			SACCH
			DUMMY
		6	TCH
			SACCH
			DUMMY
		7	TCH
			SACCH
			DUMMY

Table 3.2.12-1 MV887012A_GSM_0018 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
2	DL Wave, DL Info : CCH & TCH FS coded GMSK 7Slot TchTsc5 PCL0	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	TCH
			SACCH
			DUMMY
		2	TCH
			SACCH
			DUMMY
		3	TCH
			SACCH
			DUMMY
		4	TCH
			SACCH
			DUMMY
		5	TCH
			SACCH
			DUMMY
		6	TCH
			SACCH
			DUMMY
		7	TCH
			SACCH
			DUMMY

3.2.13 MV887012A_GSM_0019

Waveform File Name

MV887012A_GSM_0019

Group Number

1

Table 3.2.13-1 MV887012A_GSM_0019 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	TCH
		DUMMY
	2	TCH
		DUMMY
	3	TCH
		DUMMY
	4	TCH
		DUMMY
	5	TCH
		DUMMY
	6	TCH
		DUMMY
	7	TCH
		DUMMY

3.2.14 MV887012A_GSM_0021

Waveform File Name
MV887012A_GSM_0021

Group Number
2

Table 3.2.14-1 MV887012A_GSM_0021 Composition

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
1	DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS coded GMSK 7Slot TchTsc5 PCL5	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	TCH
			SACCH
			DUMMY
		2	TCH
			SACCH
			DUMMY
		3	TCH
			SACCH
			DUMMY
		4	TCH
			SACCH
			DUMMY
		5	TCH
			SACCH
			DUMMY
		6	TCH
			SACCH
			DUMMY
		7	TCH
			SACCH
			DUMMY

Table 3.2.14-1 MV887012A_GSM_0021 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	
		Slot No.	Transmission Channel
2	DL Wave, Len 13x511Frame, DL Info : CCH & TCH FS coded GMSK 7Slot TchTsc5 PCL0	0	FCCH
			SCH
			BCCH
			CCCH
			DUMMY
		1	TCH
			SACCH
			DUMMY
		2	TCH
			SACCH
			DUMMY
		3	TCH
			SACCH
			DUMMY
		4	TCH
			SACCH
			DUMMY
		5	TCH
			SACCH
			DUMMY
		6	TCH
			SACCH
			DUMMY
		7	TCH
			SACCH
			DUMMY

3.2.15 MV887012A_GSM_0026

Waveform File Name

MV887012A_GSM_0026

Group Number

3

Table 3.2.15-1 MV887012A_GSM_0026 Composition

Group (Pattern) No.	Title	Waveform Cycle/ Group	Group Cycle Period
1	DL Wave, Len 204Frame, DL Info : CCH & Dummy Burst 7Slot BcchTsc1 CcchTsc1	204 [Frame]	204 [Frame]
2	DL Wave, Len 204Frame, DL Info : PRBS Burst 8Slot	204 [Frame]	204 [Frame]
3	DL Wave DL Info : PRBS Continuous	2044 [Bit]	2044 [Bit]

3

Waveform File Details

3.2.16 MV887012A_GSM_0027

Waveform File Name

MV887012A_GSM_0027

Group Number

1

Table 3.2.16-1 MV887012A_GSM_0027 Composition

Group (Pattern) No.	Downlink Information	
	Slot No.	Transmission Channel
1	0	FCCH
		SCH
		BCCH
		CCCH
		DUMMY
	1	TCH
		SACCH
		DUMMY
	2	TCH
		SACCH
		DUMMY
	3	TCH
		SACCH
		DUMMY
	4	TCH
		SACCH
		DUMMY
	5	TCH
		SACCH
		DUMMY
	6	TCH
		SACCH
		DUMMY
	7	TCH
		SACCH
		DUMMY

3.2.17 MV887012A_GSM_0030

Waveform File Name

MV887012A_GSM_0030

Group Number

2

Table 3.2.17-1 MV887012A_GSM_0030 Composition

Group (Pattern) No.	Title	Downlink Information		
		Slot No.	Transmission Channel	Transmission Data Modulation
1	DL Wave DL Info : CCH & PDTCH MCS5 8PSK 1Slot 527Frame Information bit header improvement	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	8PSK GMSK
		2	PDTCH_MCS5	
			DUMMY	
		3	DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	
2	DL Wave DL Info : CCH & PDTCH MCS9 8PSK 1Slot 527Frame Information bit header improvement	0	FCCH	GMSK
			SCH	
			BCCH	
			CCCH	
			DUMMY	
		1	DUMMY	8PSK GMSK
		2	PDTCH_MCS9	
			DUMMY	
		3	DUMMY	
		4	DUMMY	
		5	DUMMY	
		6	DUMMY	
		7	DUMMY	

3.2.18 MV887012A_GSM_0031

Waveform File Name

MV887012A_GSM_0031

Group Number

1

Table 3.2.18-1 MV887012A_GSM_0031 Composition

Group (Pattern) No.	Downlink Information		
	Slot No.	Transmission Channel	Transmission Data Modulation
1	0	FCCH	GMSK
		SCH	
		BCCH	
		CCCH	
		DUMMY	
	1	PDTCH_MCS5	8PSK
		IDLE	GMSK
	2	PDTCH_MCS5	8PSK
		DUMMY	GMSK
	3	PDTCH_MCS5	8PSK
		DUMMY	GMSK
	4	PDTCH_MCS5	8PSK
		DUMMY	GMSK
	5	PDTCH_MCS5	8PSK
		DUMMY	GMSK
	6	PDTCH_MCS5	8PSK
		DUMMY	GMSK
	7	PDTCH_MCS5	8PSK
		DUMMY	GMSK

3.3 LTE FDD Downlink Files

The specifications of the LTE FDD Downlink File are listed in the following table.

Table 3.3-1 LTE FDD Downlink File Specifications

Item		Specification		
Waveform File Name		MV887013A_LTEFDD_0002	MV887013A_LTEFDD_0003	MV887013A_LTEFDD_0004
Application		Sequence measurement	UE Sync	UE Sync
Group Number		7	12	12
Group Title		Refer to Table 3.3.1-1	Refer to Table 3.3.2-1	Refer to Table 3.3.3-1
Waveform Cycle/Group		8 [Frame]	8 [Frame]	8 [Frame]
Group Cycle Period*		8 [Frame]	8 [Frame]	8 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	No Markers		
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH		
	Transmission Data	PDSCH: PN9		
	Transmission Data Modulation	PDSCH: QPSK		
	Cell ID	0		
	Frame No.	0 to 3		
	Downlink RB Assigned Position	Full Assign		
	Tx Antenna Number	1		
	CP Classification	Normal CP		
	Ng	1		
	Phich Duration	Normal		
	System Bandwidth	10 MHz	Refer to Table 3.3.2-1	Refer to Table 3.3.3-1
	DCI Format (DL Info)	DCI Format 1		

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEquence:WAVEform:IREPetition command.

Table 3.3-1 LTE FDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887013A_ LTEFDD_0002	MV887013A_ LTEFDD_0003	MV887013A_ LTEFDD_0004
Downlink Control Information	TPC	Up (+1 dB)		
	UE ID (C-RNTI)	0x000E	0xAAAA	
	Uplink Modulation Method	Refer to Table 3.3.1-1	PUSCH : QPSK	PUSCH : 16QAM
	Uplink RB Assigned Position	Refer to Table 3.3.1-1	Refer to Table 3.3.2-1	Refer to Table 3.3.3-1
	DCI Format (UL Info)	DCI Format 0		
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1		

Table 3.3-1 LTE FDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887013A_ LTEFDD_0005	MV887013A_ LTEFDD_0007	MV887013A_ LTEFDD_0011
Application		Sequence measurement	Sequence measurement	RX measurement
Group Number		6	8	12
Group Title		Refer to Table 3.3.4-1	Refer to Table 3.3.5-1	Refer to Table 3.3.6-1
Waveform Cycle/Group		8 [Frame]	8 [Frame]	4 [Frame]
Group Cycle Period*		8 [Frame]	Refer to Table 3.3.5-1	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	No Markers		

Table 3.3-1 LTE FDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887013A_ LTEFDD_0005	MV887013A_ LTEFDD_0007	MV887013A_ LTEFDD_0011
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH		
	Transmission Data	PDSCH: PN9		
	Transmission Data Modulation	PDSCH: QPSK		Refer to Table 3.3.6-1
	Cell ID	0		
	Frame No.	0 to 3		
	Downlink RB Assigned Position	Full Assign		
	Tx Antenna Number	1		
	CP Classification	Normal CP		
	Ng	1		
	Phich Duration	Normal		
	System Bandwidth	Refer to Table 3.3.4-1	10 MHz	Refer to Table 3.3.6-1
	DCI Format (DL Info)	DCI Format 1		DCI Format 1A
	TPC	Up (+1 dB)		0 dB
Downlink Control Information	UE ID (C-RNTI)	0x000E		0xAAAA
	Uplink Modulation Method	PUSCH: QPSK		—
	Uplink RB Assigned Position	Refer to Table 3.3.4-1	Refer to Table 3.3.5-1	—
	DCI Format (UL Info)	DCI Format 0		—
	Specifications	3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1		

Table 3.3-1 LTE FDD Downlink File Specifications (Cont'd)

Item		Specification	
Waveform File Name		MV887013A_ LTEFDD_0013	MV887013A_ LTEFDD_0014
Application		RX measurement	UE Sync
Group Number		12	6
Group Title		Refer to Table 3.3.7-1	Refer to Table 3.3.8-1
Waveform Cycle/Group		4 [Frame]	4 [Frame]
Group Cycle Period*		4 [Frame]	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame	
	Marker 2	Top of Uplink Frame	
	Marker 3	No Markers	
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH	
	Transmission Data	PDSCH: PN9	
	Transmission Data Modulation	PDSCH: 64QAM	PDSCH: QPSK
	Cell ID	0	3
	Frame No.	0 to 3	
	Downlink RB Assigned Position	Refer to Table 3.3.7-1	Full Assign
	Tx Antenna Number	1	
	CP Classification	Normal CP	
	Ng	1	1/6
	Phich Duration	Normal	
	System Bandwidth	Refer to Table 3.3.7-1	Refer to Table 3.3.8-1
	DCI Format (DL Info)	DCI Format 1A	

Table 3.3-1 LTE FDD Downlink Specifications (Cont'd)

Item		Specification	
Waveform File Name		MV887013A_ LTEFDD_0013	MV887013A_ LTEFDD_0014
Downlink Control Information	TPC	0 dB	Up (+1 dB)
	UE ID (C-RNTI)	0xAAAA	0x0001
	Uplink Modulation Method	—	
	Uplink RB Assigned Position	—	
	DCI Format (UL Info)	—	
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1	

Table 3.3-1 LTE FDD Downlink Specifications (Cont'd)

Item		Specification	
Waveform File Name		MV887013A_ LTEFDD_0017	MV887013A_ LTEFDD_0018
Application		RX measurement	RX measurement
Group Number		2	12
Group Title		Refer to Table 3.3.9-1	Refer to Table 3.3.10-1
Waveform Cycle/Group		8 [Frame]	8 [Frame]
Group Cycle Period*		8 [Frame]	8 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame	
	Marker 2	Top of Uplink Frame	
	Marker 3	No Markers	
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH	
	Transmission Data	PDSCH : PN9	
	Transmission Data Modulation	PDSCH : QPSK	Refer to Table 3.3.10-1
	Cell ID	0	
	Frame No.	0 to 3	
	Downlink RB Assigned Position	Full Assign	
	Tx Antenna Number	1	
	CP Classification	Normal CP	
	Ng	1/6	1
	Phich Duration	Normal	
	System Bandwidth	Refer to Table 3.3.9-1	Refer to Table 3.3.10-1
	DCI Format (DL Info)	DCI Format 1	

Table 3.3-1 LTE FDD Downlink Specifications (Cont'd)

Item		Specification	
Waveform File Name		MV887013A_ LTEFDD_0017	MV887013A_ LTEFDD_0018
Downlink Control Information	TPC	Up (+1 dB)	
	UE ID (C-RNTI)	0x0064	0xAAAA
	Uplink Modulation Method	PUSCH : QPSK	
	Uplink RB Assigned Position	Refer to Table 3.3.9-1	Refer to Table 3.3.10-1
	DCI Format (UL Info)	DCI Format 0	
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1	

Table 3.3-1 LTE FDD Downlink Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887013A_ LTEFDD_0024
Application		RX measurement
Group Number		12
Group Title		Refer to Table 3.3.11-1
Waveform Cycle/Group		4 [Frame]
Group Cycle Period*		4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame
	Marker 2	Top of Uplink Frame
	Marker 3	No Markers
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH
	Transmission Data	PDSCH : PN9
	Transmission Data Modulation	PDSCH : 256QAM
	Cell ID	0
	Frame No.	0 to 3
	Downlink RB Assigned Position	Full Assign
	Tx Antenna Number	1
	CP Classification	Normal CP
	Ng	1
	Phich Duration	Normal
	System Bandwidth	Refer to Table 3.3.11-1
	DCI Format (DL Info)	DCI Format 1

Table 3.3-1 LTE FDD Downlink Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887013A_ LTEFDD_0024
Downlink Control Information	TPC	0 dB
	UE ID (C-RNTI)	0xAAAA
	Uplink Modulation Method	—
	Uplink RB Assigned Position	—
	DCI Format (UL Info)	—
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1

3.3.1 MV887013A_LTEFDD_0002

Waveform File Name

MV887013A_LTEFDD_0002

Group Number

7

Table 3.3.1-1 MV887013A_LTEFDD_0002 Composition

Group (Pattern) No.	Title	Downlink Control Information		
		PUSCH Modulation	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=50 QPSK TPC +1dB	QPSK	0	50
2	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=12 QPSK TPC +1dB	QPSK	0	12
3	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=38 SizeRB=12 QPSK TPC +1dB	QPSK	38	12
4	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=50 16QAM TPC +1dB	16QAM	0	50
5	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=38 SizeRB=12 16QAM TPC +1dB	16QAM	38	12
6	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=12 16QAM TPC +1dB	16QAM	0	12
7	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=20 QPSK TPC +1dB	QPSK	0	20

3.3.2 MV887013A_LTEFDD_0003

Waveform File Name

MV887013A_LTEFDD_0003

Group Number

12

Table 3.3.2-1 MV887013A_LTEFDD_0003 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 1.4MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=1 QPSK TPC +1dB	1.4 MHz	0	1
2	DL Wave 1.4MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=6 QPSK TPC +1dB	1.4 MHz	0	6
3	DL Wave 3MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=4 QPSK TPC +1dB	3 MHz	0	4
4	DL Wave 3MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=15 QPSK TPC +1dB	3 MHz	0	15
5	DL Wave 5MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=8 QPSK TPC +1dB	5 MHz	0	8
6	DL Wave 5MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=25 QPSK TPC +1dB	5 MHz	0	25
7	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=12 QPSK TPC +1dB	10 MHz	0	12
8	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=50 QPSK TPC +1dB	10 MHz	0	50

Table 3.3.2-1 MV887013A_LTEFDD_0003 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
9	DL Wave 15MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=16 QPSK TPC +1dB	15 MHz	0	16
10	DL Wave 15MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=75 QPSK TPC +1dB	15 MHz	0	75
11	DL Wave 20MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=18 QPSK TPC +1dB	20 MHz	0	18
12	DL Wave 20MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=100 QPSK TPC +1dB	20 MHz	0	100

3.3.3 MV887013A_LTEFDD_0004

Waveform File Name

MV887013A_LTEFDD_0004

Group Number

12

Table 3.3.3-1 MV887013A_LTEFDD_0004 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 1.4MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=1 16QAM TPC +1dB	1.4 MHz	0	1
2	DL Wave 1.4MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=6 16QAM TPC +1dB	1.4 MHz	0	6
3	DL Wave 3MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=4 16QAM TPC +1dB	3 MHz	0	4
4	DL Wave 3MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=15 16QAM TPC +1dB	3 MHz	0	15
5	DL Wave 5MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=8 16QAM TPC +1dB	5 MHz	0	8
6	DL Wave 5MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=25 16QAM TPC +1dB	5 MHz	0	25
7	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=12 16QAM TPC +1dB	10 MHz	0	12
8	DL Wave 10MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=50 16QAM TPC +1dB	10 MHz	0	50

3

Waveform File Details

Table 3.3.3-1 MV887013A_LTEFDD_0004 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
9	DL Wave 15MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=16 16QAM TPC +1dB	15 MHz	0	16
10	DL Wave 15MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=75 16QAM TPC +1dB	15 MHz	0	75
11	DL Wave 20MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=18 16QAM TPC +1dB	20 MHz	0	18
12	DL Wave 20MHz DL Info: SizeRB=Full QPSK UL Request: StartRB=0 SizeRB=100 16QAM TPC +1dB	20 MHz	0	100

3.3.4 MV887013A_LTEFDD_0005

Waveform File Name

MV887013A_LTEFDD_0005

Group Number

6

Table 3.3.4-1 MV887013A_LTEFDD_0005 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=6 QPSK TPC +1dB	1.4 MHz	0	6
2	DL Wave 3MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=15 QPSK TPC +1dB	3 MHz	0	15
3	DL Wave 5MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=25 QPSK TPC +1dB	5 MHz	0	25
4	DL Wave 10MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB	10 MHz	0	50
5	DL Wave 15MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=75 QPSK TPC +1dB	15 MHz	0	75
6	DL Wave 20MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=100 QPSK TPC +1dB	20 MHz	0	100

3

Waveform File Details

3.3.5 MV887013A_LTEFDD_0007

Waveform File Name

MV887013A_LTEFDD_0007

Group Number

8

Table 3.3.5-1 MV887013A_LTEFDD_0007 Composition

Group (Pattern) No.	Title	Group Cycle Period	Downlink Control Information	
			PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 10MHz DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB	8 [Frame]	0	50
2	DL Wave 10MHz DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=0 SizeRB=1 QPSK TPC +1dB	8 [Frame]	0	1
3	DL Wave 10MHz DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=25 SizeRB=1 QPSK TPC +1dB	8 [Frame]	25	1
4	DL Wave 10MHz DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=49 SizeRB=1 QPSK TPC +1dB	8 [Frame]	49	1
5	DL Wave 10MHz, Rep 1Frame DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB	1 [Frame]	0	50
6	DL Wave 10MHz, Rep 1Frame DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=0 SizeRB=1 QPSK TPC +1dB	1 [Frame]	0	1
7	DL Wave 10MHz, Rep 1Frame DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=25 SizeRB=1 QPSK TPC +1dB	1 [Frame]	25	1
8	DL Wave 10MHz, Rep 1Frame DL Info : SizeRB=Full QPSK mcs5 UL Request : StartRB=49 SizeRB=1 QPSK TPC +1dB	1 [Frame]	49	1

3.3.6 MV887013A_LTEFDD_0011

Waveform File Name
MV887013A_LTEFDD_0011

Group Number
12

Table 3.3.6-1 MV887013A_LTEFDD_0011 Composition

Group (Pattern) No.	Title	Downlink Information	
		PDSCH Modulation	System Bandwidth
1	DL Wave 1.4MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	1.4MHz
2	DL Wave 3MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	3MHz
3	DL Wave 5MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	5MHz
4	DL Wave 10MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	10MHz
5	DL Wave 15MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	15MHz
6	DL Wave 20MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	20MHz

3

Waveform File Details

Table 3.3.6-1 MV887013A_LTEFDD_0011 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	
		PDSCH Modulation	System Bandwidth
7	DL Wave 1.4MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	1.4MHz
8	DL Wave 3MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	3MHz
9	DL Wave 5MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	5MHz
10	DL Wave 10MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	10MHz
11	DL Wave 15MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	15MHz
12	DL Wave 20MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	20MHz

3.3.7 MV887013A_LTEFDD_0013

Waveform File Name

MV887013A_LTEFDD_0013

Group Number

12

Table 3.3.7-1 MV887013A_LTEFDD_0013 Composition

Group (Pattern) No.	Title	Downlink Information		
		PDSCH RB Assigned Position		System Bandwidth
		Start RB No.	Assigned RB Number	
1	DL Wave 1.4MHz UE Category1 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	6	1.4MHz
2	DL Wave 3MHz UE Category1 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	15	3MHz
3	DL Wave 5MHz UE Category1 DL Info : StartRB=0 SizeRB=18 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	18	5MHz
4	DL Wave 10MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	10MHz
5	DL Wave 15MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	15MHz
6	DL Wave 20MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	20MHz

3

Waveform File Details

Table 3.3.7-1 MV887013A_LTEFDD_0013 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		PDSCH RB Assigned Position		System Bandwidth
		Start RB No.	Assigned RB Number	
7	DL Wave 1.4MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	6	1.4MHz
8	DL Wave 3MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	15	3MHz
9	DL Wave 5MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	25	5MHz
10	DL Wave 10MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	50	10MHz
11	DL Wave 15MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	75	15MHz
12	DL Wave 20MHz UE Category2 DL Info : StartRB=0 SizeRB=83 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	83	20MHz

3.3.8 MV887013A_LTEFDD_0014

Waveform File Name

MV887013A_LTEFDD_0014

Group Number

6

Table 3.3.8-1 MV887013A_LTEFDD_0014 Composition

Group (Pattern) No.	Title	Downlink Information
		System Bandwidth
1	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	5MHz
2	DL Wave 10MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	10MHz
3	DL Wave 20MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	20MHz
4	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	1.4MHz
5	DL Wave 3MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	3MHz
6	DL Wave 15MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	15MHz

3

Waveform File Details

3.3.9 MV887013A_LTEFDD_0017

Waveform File Name

MV887013A_LTEFDD_0017

Group Number

2

Table 3.3.9-1 MV887013A_LTEFDD_0017 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 5MHz DL Info : SizeRB=Full QPSK PHICH Ng 1/6 UL Request : cRNTI 0x0064 TPC +1dB	5MHz	0	25
2	DL Wave 10MHz DL Info : SizeRB=Full QPSK PHICH Ng 1/6 UL Request : cRNTI 0x0064 TPC +1dB	10MHz	0	50

3.3.10 MV887013A_LTEFDD_0018

Waveform File Name

MV887013A_LTEFDD_0018

Group Number

12

Table 3.3.10-1 MV887013A_LTEFDD_0018 Composition

Group (Pattern) No.	Title	Downlink Information		Downlink Control Information	
		PDSCH Modulation	System Bandwidth	PUSCH RB Assigned Position	
				Start RB No.	Assigned RB Number
1	DL Wave, 1.4MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 QPSK TPC +1dB	QPSK	1.4 MHz	0	6
2	DL Wave, 3MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=15 QPSK TPC +1dB	QPSK	3 MHz	0	15
3	DL Wave, 5MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=25 QPSK TPC +1dB	QPSK	5 MHz	0	25
4	DL Wave, 10MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB	QPSK	10 MHz	0	50
5	DL Wave, 15MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=75 QPSK TPC +1dB	QPSK	15 MHz	0	75
6	DL Wave, 20MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=100 QPSK TPC +1dB	QPSK	20 MHz	0	100

3

Waveform File Details

Table 3.3.10-1 MV887013A_LTEFDD_0018 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		Downlink Control Information	
		PDSCH Modulation	System Bandwidth	PUSCH RB Assigned Position	
				Start RB No.	Assigned RB Number
7	DL Wave, 1.4MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 QPSK TPC +1dB	64QAM	1.4 MHz	0	6
8	DL Wave, 3MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=15 QPSK TPC +1dB	64QAM	3 MHz	0	15
9	DL Wave, 5MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=25 QPSK TPC +1dB	64QAM	5 MHz	0	25
10	DL Wave, 10MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB	64QAM	10 MHz	0	50
11	DL Wave, 15MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=75 QPSK TPC +1dB	64QAM	15 MHz	0	75
12	DL Wave, 20MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=100 QPSK TPC +1dB	64QAM	20 MHz	0	100

3.3.11 MV887013A_LTEFDD_0024

Waveform File Name

MV887013A_LTEFDD_0024

Group Number

12

Table 3.3.11-1 MV887013A_LTEFDD_0024 Composition

Group (Pattern) No.	Title	Downlink Information
		System Bandwidth
1	DL 1.4MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	1.4MHz
2	DL 3MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	3MHz
3	DL 5MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	5MHz
4	DL 10MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	10MHz
5	DL 15MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	15MHz
6	DL 20MHz UE Cat. 6/7/13 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	20MHz

3

Waveform File Details

Table 3.3.11-1 MV887013A_LTEFDD_0024 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information
		System Bandwidth
7	DL 1.4MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	1.4MHz
8	DL 3MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	3MHz
9	DL 5MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	5MHz
10	DL 10MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	10MHz
11	DL 15MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	15MHz
12	DL 20MHz UE Cat. 11/12 DL Info : SizeRB=Full 256Q DCI format 1 PHICH Ng 1 Cell ID 0 UL Request : cRNTI 0xAAAA TPC 0dB	20MHz

3.4 LTE TDD Downlink Files

The specifications of the LTE TDD Downlink File are listed in the following table.

Table 3.4-1 LTE TDD Downlink File Specifications

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0005	MV887014A_ LTETDD_0006	MV887014A_ LTETDD_0009
Application		Sequence measurement	UE Sync	UE Sync
Group Number		6	6	12
Group Title		Refer to Table 3.4.1-1	Refer to Table 3.4.2-1	Refer to Table 3.4.3-1
Waveform Cycle/Group		4 [Frame]	4 [Frame]	4 [Frame]
Group Cycle Period*		4 [Frame]	4 [Frame]	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH		
	Transmission Data	PDSCH: PN9		
	Transmission Data Modulation	PDSCH: QPSK		
	Cell ID	0		
	Frame No.	0 to 3		
	Downlink RB Assigned Position	Full Assign	Full Assign (only Dummy Data)	Full Assign
	Tx Antenna Number	1		
	CP Classification	Normal CP		
	Ng	1		
	Phich Duration	Normal		
	System Bandwidth	Refer to Table 3.4.1-1	Refer to Table 3.4.2-1	Refer to Table 3.4.3-1
	DCI Format (DL Info)	DCI Format 1	–	DCI Format 1
	Uplink-Downlink Configuration	1		
	Special Subframe Configuration	4	5	4

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEquence:WAVEform:IREPetition command.

Table 3.4-1 LTE FDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0005	MV887014A_ LTETDD_0006	MV887014A_ LTETDD_0009
Downlink Control Information	TPC	Up (+1 dB)	0 dB	Up (+1 dB)
	UE ID (C-RNTI)	0x000E		0xAAAA
	Uplink Modulation Method	PUSCH : QPSK		
	Uplink RB Assigned Position	Refer to Table 3.4.1-1	Refer to Table 3.4.2-1	Refer to Table 3.4.3-1
	DCI Format (UL Info)	DCI Format 0		
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1		

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0010	MV887014A_ LTETDD_0011	MV887014A_ LTETDD_0012
Application		RX measurement	RX measurement	UE Sync
Group Number		12	12	6
Group Title		Refer to Table 3.4.4-1	Refer to Table 3.4.5-1	Refer to Table 3.4.6-1
Waveform Cycle/Group		4 [Frame]	4 [Frame]	4 [Frame]
Group Cycle Period*		4 [Frame]	4 [Frame]	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH		
	Transmission Data	PDSCH: PN9		
	Transmission Data Modulation	Refer to Table 3.4.4-1	PDSCH: 64QAM	PDSCH: QPSK
	Cell ID	0		3
	Frame No.	0 to 3		
	Downlink RB Assigned Position	Full Assign	Refer to Table 3.4.5-1	Full Assign
	Tx Antenna Number	1		
	CP Classification	Normal CP		
	Ng	1		1/6
	Phich Duration	Normal		
	System Bandwidth	Refer to Table 3.4.4-1	Refer to Table 3.4.5-1	Refer to Table 3.4.6-1
	DCI Format (DL Info)	DCI Format 1A		
	Uplink-Downlink Configuration	1		2
	Special Subframe Configuration	4		7

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0010	MV887014A_ LTETDD_0011	MV887014A_ LTETDD_0012
Downlink Control Information	TPC	0 dB		Up (+1 dB)
	UE ID (C-RNTI)	0xAAAA		0x0001
	Uplink Modulation Method	—		
	Uplink RB Assigned Position	—		
	DCI Format (UL Info)	—		
Specifications		3GPP TS36.211, 3GPP TS36.213, 3GPP TS36.521-1		

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0013	MV887014A_ LTETDD_0014	MV887014A_ LTETDD_0015
Application		UE Sync	RX measurement	RX measurement
Group Number		6	12	2
Group Title		Refer to Table 3.4.7-1	Refer to Table 3.4.8-1	Refer to Table 3.4.9-1
Waveform Cycle/Group		4 [Frame]	4 [Frame]	4 [Frame]
Group Cycle Period*		4 [Frame]	4 [Frame]	4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame		
	Marker 2	Top of Uplink Frame		
	Marker 3	Top of Group		
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH		
	Transmission Data	PDSCH : PN9		
	Transmission Data Modulation	PDSCH : QPSK	Refer to Table 3.4.8-1	PDSCH : QPSK
	Cell ID	0		
	Frame No.	0 to 3		
	Downlink RB Assigned Position	Full Assign		
	Tx Antenna Number	1		
	CP Classification	Normal CP		
	Ng	1		1/6
	Phich Duration	Normal		
	System Bandwidth	Refer to Table 3.4.7-1	Refer to Table 3.4.8-1	Refer to Table 3.4.9-1
	DCI Format (DL Info)	DCI Format 1		DCI Format 1A
	Uplink-Downlink Configuration	1		
	Special Subframe Configuration	4		

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887014A_ LTETDD_0013	MV887014A_ LTETDD_0014	MV887014A_ LTETDD_0015
Downlink Control Information	TPC	Up (+1 dB)		
	UE ID (C-RNTI)	0x0064	0xAAAA	0x0064
	Uplink Modulation Method	PUSCH : QPSK		
	Uplink RB Assigned Position	Refer to Table 3.4.7-1	Refer to Table 3.4.8-1	Refer to Table 3.4.9-1
	DCI Format (UL Info)	DCI Format 0		
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1		

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887014A_ LTETDD_0017
Application		RX measurement
Group Number		1
Group Title		DL Wave, 10MHz DL Info : SizeRB=Full QPSK 1965.6kbps UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB
Waveform Cycle/Group		4 [Frame]
Group Cycle Period*		4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame
	Marker 2	Top of Uplink Frame
	Marker 3	Top of Group
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH
	Transmission Data	PDSCH : PN9
	Transmission Data Modulation	PDSCH : QPSK
	Cell ID	0
	Frame No.	0 to 3
	Downlink RB Assigned Position	Full Assign
	Tx Antenna Number	1
	CP Classification	Normal CP
	Ng	1
	Phich Duration	Normal
	System Bandwidth	10 MHz
	DCI Format (DL Info)	DCI Format 1
	Uplink-Downlink Configuration	1
	Special Subframe Configuration	4

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887014A_ LTETDD_0017
Downlink Control Information	TPC	Up (+1 dB)
	UE ID (C-RNTI)	0xAAAA
	Uplink Modulation Method	PUSCH : QPSK
	Uplink RB Assigned Position	Refer to Table 3.4.10-1
	DCI Format (UL Info)	DCI Format 0
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1

Table 3.4-1 LTE TDD Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887014A_ LTETDD_0023
Application		RX measurement
Group Number		1
Group Title		Refer to Table 3.4.11-1
Waveform Cycle/Group		4 [Frame]
Group Cycle Period*		4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame
	Marker 2	Top of Uplink Frame
	Marker 3	Top of Group
Downlink Information	Transmission Channel	PSC, SSC, CellRS, PCFICH, PDCCH, PHICH, PDSCH
	Transmission Data	PDSCH : 1F 00 00 00 00...(Padding 0)
	Transmission Data Modulation	PDSCH : QPSK
	Cell ID	0
	Downlink RB Assigned Position	Full Assign
	Tx Antenna Number	1
	CP Classification	Normal CP
	Ng	1
	Phich Duration	Normal
	System Bandwidth	Refer to Table 3.4.11-1
	DCI format (DL Info)	DCI format 1A
	LAA Cycle	10
	LAA On Duration	8
	LAA Last Symbol	14
	LAA Start Subframe	3
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1

3.4.1 MV887014A_LTETDD_0005

Waveform File Name
MV887014A_LTETDD_0005

Group Number
6

Table 3.4.1-1 MV887014A_LTETDD_0005 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=6 QPSK TPC +1dB	1.4 MHz	0	6
2	DL Wave 3MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=15 QPSK TPC +1dB	3 MHz	0	15
3	DL Wave 5MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=25 QPSK TPC +1dB	5 MHz	0	25
4	DL Wave 10MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB	10 MHz	0	50
5	DL Wave 15MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=75 QPSK TPC +1dB	15 MHz	0	75
6	DL Wave 20MHz DL Info : SizeRB=Full QPSK UL Request : StartRB=0 SizeRB=100 QPSK TPC +1dB	20 MHz	0	100

3.4.2 MV887014A_LTETDD_0006

Waveform File Name

MV887014A_LTETDD_0006

Group Number

6

Table 3.4.2-1 MV887014A_LTETDD_0006 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	1.4 MHz	0	6
2	DL Wave 3MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	3 MHz	0	15
3	DL Wave 5MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	5 MHz	0	25
4	DL Wave 10MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	10 MHz	0	50
5	DL Wave 15MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	15 MHz	0	75
6	DL Wave 20MHz DL Info : SizeRB=Full QPSK UL Request : for General ON/OFF Time Mask	20 MHz	0	100

3

Waveform File Details

3.4.3 MV887014A_LTETDD_0009

Waveform File Name

MV887014A_LTETDD_0009

Group Number

12

Table 3.4.3-1 MV887014A_LTETDD_0009 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave, 1.4MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=1 QPSK TPC +1dB	1.4 MHz	0	1
2	DL Wave, 1.4MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 QPSK TPC +1dB	1.4 MHz	0	6
3	DL Wave, 3MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=4 QPSK TPC +1dB	3 MHz	0	4
4	DL Wave, 3MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=15 QPSK TPC +1dB	3 MHz	0	15
5	DL Wave, 5MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=8 QPSK TPC +1dB	5 MHz	0	8
6	DL Wave, 5MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=25 QPSK TPC +1dB	5 MHz	0	25

Table 3.4.3-1 MV887014A_LTETDD_0009 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
7	DL Wave, 10MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=12 QPSK TPC +1dB	10 MHz	0	12
8	DL Wave, 10MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB	10 MHz	0	50
9	DL Wave, 15MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=16 QPSK TPC +1dB	15 MHz	0	16
10	DL Wave, 15MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=75 QPSK TPC +1dB	15 MHz	0	75
11	DL Wave, 20MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=18 QPSK TPC +1dB	20 MHz	0	18
12	DL Wave, 20MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=100 QPSK TPC +1dB	20 MHz	0	100

3.4.4 MV887014A_LTETDD_0010

Waveform File Name
MV887014A_LTETDD_0010

Group Number
12

Table 3.4.4-1 MV887014A_LTETDD_0010 Composition

Group (Pattern) No.	Title	Downlink Information	
		PDSCH Modulation	System Bandwidth
1	DL Wave 1.4MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	1.4 MHz
2	DL Wave 3MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	3 MHz
3	DL Wave 5MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	5 MHz
4	DL Wave 10MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	10 MHz
5	DL Wave 15MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	15 MHz
6	DL Wave 20MHz UE Category 3 to 5 DL Info : SizeRB=Full QPSK DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	QPSK	20 MHz

Table 3.4.4-1 MV887014A_LTETDD_0010 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information	
		PDSCH Modulation	System Bandwidth
7	DL Wave 1.4MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	1.4 MHz
8	DL Wave 3MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	3 MHz
9	DL Wave 5MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	5 MHz
10	DL Wave 10MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	10 MHz
11	DL Wave 15MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	15 MHz
12	DL Wave 20MHz UE Category 3 to 5 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	64QAM	20 MHz

3.4.5 MV887014A_LTETDD_0011

Waveform File Name
MV887014A_LTETDD_0011

Group Number
12

Table 3.4.5-1 MV887014A_LTETDD_0011 Composition

Group (Pattern) No.	Title	Downlink Information		
		PDSCH RB Assigned Position		System Bandwidth
		Start RB No.	Assigned RB Number	
1	DL Wave 1.4MHz UE Category1 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	6	1.4 MHz
2	DL Wave 3MHz UE Category1 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	15	3 MHz
3	DL Wave 5MHz UE Category1 DL Info : StartRB=0 SizeRB=18 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	18	5 MHz
4	DL Wave 10MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	10 MHz
5	DL Wave 15MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	15 MHz
6	DL Wave 20MHz UE Category1 DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	17	20 MHz

Table 3.4.5-1 MV887014A_LTETDD_0011 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		
		PDSCH RB Assigned Position		System Bandwidth
		Start RB No.	Assigned RB Number	
7	DL Wave 1.4MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	6	1.4 MHz
8	DL Wave 3MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	15	3 MHz
9	DL Wave 5MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	25	5 MHz
10	DL Wave 10MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	50	10 MHz
11	DL Wave 15MHz UE Category2 DL Info : SizeRB=Full 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	75	15 MHz
12	DL Wave 20MHz UE Category2 DL Info : StartRB=0 SizeRB=83 64QAM DCI format 1A UL Request : cRNTI 0xAAAA TPC 0dB	0	83	20 MHz

3.4.6 MV887014A_LTETDD_0012

Waveform File Name

MV887014A_LTETDD_0012

Group Number

6

Table 3.4.6-1 MV887014A_LTETDD_0012 Composition

Group (Pattern) No.	Title	Downlink Information
		System Bandwidth
1	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	5 MHz
2	DL Wave 10MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	10 MHz
3	DL Wave 20MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	20 MHz
4	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	1.4 MHz
5	DL Wave 3MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	3 MHz
6	DL Wave 15MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 3 UL Request : cRNTI 0x0001 TPC +1dB	15 MHz

3.4.7 MV887014A_LTETDD_0013

Waveform File Name

MV887014A_LTETDD_0013

Group Number

6

Table 3.4.7-1 MV887014A_LTETDD_0013 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave, 1.4MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=6 QPSK TPC +1dB	1.4 MHz	0	6
2	DL Wave, 3MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=15 QPSK TPC +1dB	3 MHz	0	15
3	DL Wave, 5MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=25 QPSK TPC +1dB	5 MHz	0	25
4	DL Wave, 10MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=50 QPSK TPC +1dB	10 MHz	0	50
5	DL Wave, 15MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=75 QPSK TPC +1dB	15 MHz	0	75
6	DL Wave, 20MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0x0064 StartRB=0 SizeRB=100 QPSK TPC +1dB	20 MHz	0	100

3.4.8 MV887014A_LTETDD_0014

Waveform File Name

MV887014A_LTETDD_0014

Group Number

12

Table 3.4.8-1 MV887014A_LTETDD_0014 Composition

Group (Pattern) No.	Title	Downlink Information		Downlink Control Information	
		PDSCH Modulation	System Bandwidth	PUSCH RB Assigned Position	
				Start RB No.	Assigned RB Number
1	DL Wave, 1.4MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 QPSK TPC +1dB	QPSK	1.4 MHz	0	6
2	DL Wave, 3MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=15 QPSK TPC +1dB	QPSK	3 MHz	0	15
3	DL Wave, 5MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=25 QPSK TPC +1dB	QPSK	5 MHz	0	25
4	DL Wave, 10MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB	QPSK	10 MHz	0	50
5	DL Wave, 15MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=75 QPSK TPC +1dB	QPSK	15 MHz	0	75
6	DL Wave, 20MHz DL Info : SizeRB=Full QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=100 QPSK TPC +1dB	QPSK	20 MHz	0	100

Table 3.4.8-1 MV887014A_LTETDD_0014 Composition (Cont'd)

Group (Pattern) No.	Title	Downlink Information		Downlink Control Information	
		PDSCH Modulation	System Bandwidth	PUSCH RB Assigned Position	
				Start RB No.	Assigned RB Number
7	DL Wave, 1.4MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 QPSK TPC +1dB	64QAM	1.4 MHz	0	6
8	DL Wave, 3MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=15 QPSK TPC +1dB	64QAM	3 MHz	0	15
9	DL Wave, 5MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=25 QPSK TPC +1dB	64QAM	5 MHz	0	25
10	DL Wave, 10MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=50 QPSK TPC +1dB	64QAM	10 MHz	0	50
11	DL Wave, 15MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=75 QPSK TPC +1dB	64QAM	15 MHz	0	75
12	DL Wave, 20MHz DL Info : SizeRB=Full 64QAM UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=100 QPSK TPC +1dB	64QAM	20 MHz	0	100

3.4.9 MV887014A_LTETDD_0015

Waveform File Name
MV887014A_LTETDD_0015

Group Number
2

Table 3.4.9-1 MV887014A_LTETDD_0015 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information	
		System Bandwidth	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 UL Request : cRNTI 0x0064 TPC +1dB	5 MHz	0	25
2	DL Wave 10MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 UL Request : cRNTI 0x0064 TPC +1dB	10 MHz	0	50

3.4.10 MV887014A_LTETDD_0017

Waveform File Name

MV887014A_LTETDD_0017

Group Number

1

Table 3.4.10-1 MV887014A_LTETDD_0017 Composition

Group (Pattern) No.	Downlink Control Information	
	PUSCH RB Assigned Position	
	Start RB No.	Assigned RB Number
1	0	50

3.4.11 MV887014A_LTETDD_0023

Waveform File Name

MV887014A_LTETDD_0023

Group Number

1

Table 3.4.11-1 MV887014A_LTETDD_0023 Composition

		Downlink Information
Group (Pattern) No.	Title	System Bandwidth
1	DL Wave, 20MHz (LAA) DL Info : SizeRB=Full QPSK Cycle=10 On Duration=8 Last Symbol=14 Start Subframe=3	20 MHz

3.5 CDMA2000 Forward Link Files

The specifications of the CDMA2000 Forward Link File are listed in the following table.

Table 3.5-1 CDMA2000 Forward Link File Specifications

Item		Specification		
Waveform File Name		MV887015A_C2K_0002	MV887015A_C2K_0003	MV887015A_C2K_0006
Application		Sequence measurement	Sequence measurement	UE Sync
Group Number		6	12	3
Group Title		Refer to Table 3.5.1-1	Refer to Table 3.5.2-1	Refer to Table 3.5.3-1
Waveform Cycle/Group		12 [Frame]	12 [Frame]	12 [Frame]
Group Cycle Period*		12 [Frame]	12 [Frame]	12 [Frame]
Waveform Marker	Marker 1	Top of Forward Link Superframe		
	Marker 2	Top of Forward Link Frame		
	Marker 3	Top of Group		
Forward Link Information	Long Code	Disable		
	Transmission Channel	Pilot(F-PICH), Sync, Traffic(F-FCH), Paging, OCNS		
	Walsh Code/Code Length	Refer to Table 3.5.1-1	Refer to Table 3.5.2-1	Refer to Table 3.5.3-1
	Radio Configuration	Refer to Table 3.5.1-1	Refer to Table 3.5.2-1	RC3
	PN Offset	0		
Forward Link Control Information	PCB	Refer to Table 3.5.1-1	Refer to Table 3.5.2-1	Refer to Table 3.5.3-1
Specifications		3GPP2 TSG-C.S0002, 3GPP2 TSG-C.S0011		

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEquence:WAVEform:IREPetition command.

Table 3.5-1 CDMA2000 Forward Link File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887015A_ C2K_0007
Application		Sequence measurement
Group Number		3
Group Title		Refer to Table 3.5.4-1
Waveform Cycle/Group		12 [Frame]
Group Cycle Period*		12 [Frame]
Waveform Marker	Marker 1	Top of Forward Link Superframe
	Marker 2	Top of Forward Link Frame
	Marker 3	Top of Group
Forward Link Information	Long Code	Disable
	Transmission Channel	Pilot (F-PICH), Sync, Traffic (F-FCH), Paging, OCNS
	Walsh Code/Code Length	Refer to Table 3.5.4-1
	Radio Configuration	Refer to Table 3.5.4-1
	PN Offset	0
Forward Link Control Information	PCB	Refer to Table 3.5.4-1
Specifications		3GPP2 TSG-C.S0002, 3GPP2 TSG-C.S0011

3.5.1 MV887015A_C2K_0002

Waveform File Name

MV887015A_C2K_0002

Group Number

6

Table 3.5.1-1 MV887015A_C2K_0002 Composition

		Forward Link Information			Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	Walsh Code/Code Length	Radio Configuration	PCB
1	FL Wave RL Request: PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	10/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
2	FL Wave RL Request: PCB +1dB	Pilot (F-PICH)	0/64	—	Up (+1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	10/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
3	FL Wave RL Request: PCB -1dB	Pilot (F-PICH)	0/64	—	Down (-1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	10/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
4	FL Wave FL Info : RC3 RL Request: PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	10/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	
5	FL Wave FL Info : RC3 RL Request: PCB +1dB	Pilot (F-PICH)	0/64	—	Up (+1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	10/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	

3

Waveform File Details

Table 3.5.1-1 MV887015A_C2K_0002 Composition (Cont'd)

		Forward Link Information			Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	Walsh Code/Code Length	Radio Configuration	PCB
6	FL Wave FL Info : RC3 RL Request: PCB -1dB	Pilot (F-PICH)	0/64	–	Down (–1 dB)
		Sync	32/64	–	
		Traffic (F-FCH)	10/64	RC3	
		Paging	1/64	–	
		OCNS	63/64	–	

3.5.2 MV887015A_C2K_0003

Waveform File Name

MV887015A_C2K_0003

Group Number

12

Table 3.5.2-1 MV887015A_C2K_0003 Composition

		Forward Link Information			Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	Walsh Code/Code Length	Radio Configuration	PCB
1	FL Wave FL Info : RC1 FCH Walsh Code 8 RL Request : PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
2	FL Wave FL Info : RC1 FCH Walsh Code 8 RL Request: PCB +1dB	Pilot (F-PICH)	0/64	—	Up (+1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
3	FL Wave FL Info : RC1 FCH Walsh Code 8 RL Request: PCB -1dB	Pilot (F-PICH)	0/64	—	Down (-1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
4	FL Wave FL Info : RC3 FCH Walsh Code 8 RL Request: PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	
5	FL Wave FL Info : RC3 FCH Walsh Code 8 RL Request: PCB +1dB	Pilot (F-PICH)	0/64	—	Up (+1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	

3

Waveform File Details

Table 3.5.2-1 MV887015A_C2K_0003 Composition (Cont'd)

Group (Pattern) No.	Title	Forward Link Information			Forward Link Control Information
		Transmission Channel	Walsh Code/Code Length	Radio Configuration	PCB
6	FL Wave FL Info : RC3 FCH Walsh Code 8 RL Request : PCB -1dB	Pilot (F-PICH)	0/64	—	Down (-1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	8/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	
7	FL Wave FL Info : RC1 FCH Walsh Code 12 RL Request: PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	12/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
8	FL Wave FL Info : RC1 FCH Walsh Code 12 RL Request: PCB +1dB	Pilot (F-PICH)	0/64	—	Up (+1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	12/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
9	FL Wave FL Info : RC1 FCH Walsh Code 12 RL Request: PCB -1dB	Pilot (F-PICH)	0/64	—	Down (-1 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	12/64	RC1	
		Paging	1/64	—	
		OCNS	63/64	—	
10	FL Wave FL Info : RC3 FCH Walsh Code 12 RL Request: PCB 0dB	Pilot (F-PICH)	0/64	—	Alternate (0 dB)
		Sync	32/64	—	
		Traffic (F-FCH)	12/64	RC3	
		Paging	1/64	—	
		OCNS	63/64	—	

Table 3.5.2-1 MV887015A_C2K_0003 Composition (Cont'd)

		Forward Link Information			Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	Walsh Code/Code Length	Radio Configuration	PCB
11	FL Wave FL Info : RC3 FCH Walsh Code 12 RL Request : PCB +1dB	Pilot (F-PICH)	0/64	–	Up (+1 dB)
		Sync	32/64	–	
		Traffic (F-FCH)	12/64	RC3	
		Paging	1/64	–	
		OCNS	63/64	–	
12	FL Wave FL Info : RC3 FCH Walsh Code 12 RL Request: PCB -1dB	Pilot (F-PICH)	0/64	–	Down (–1 dB)
		Sync	32/64	–	
		Traffic (F-FCH)	12/64	RC3	
		Paging	1/64	–	
		OCNS	63/64	–	

3.5.3 MV887015A_C2K_0006

Waveform File Name
MV887015A_C2K_0006

Group Number
3

Table 3.5.3-1 MV887015A_C2K_0006 Composition

		Forward Link Information		Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	WalshCode / CodeLength	PCB
1	FL Wave FL Info : RC3 PN Offset10 RL Request : PCB 0dB	Pilot (F-PICH)	0 / 64	Alternate (0 dB)
		Sync	32 / 64	
		Traffic (F-FCH)	10 / 64	
		Paging	1 / 64	
		OCNS	63 / 64	
2	FL Wave FL Info : RC3 PN Offset10 RL Request : PCB +1dB	Pilot (F-PICH)	0 / 64	Up (+1 dB)
		Sync	32 / 64	
		Traffic (F-FCH)	10 / 64	
		Paging	1 / 64	
		OCNS	63 / 64	
3	FL Wave FL Info : RC3 PN Offset10 RL Request : PCB -1dB	Pilot (F-PICH)	0 / 64	Down (-1 dB)
		Sync	32 / 64	
		Traffic (F-FCH)	10 / 64	
		Paging	1 / 64	
		OCNS	63 / 64	

3.5.4 MV887015A_C2K_0007

Waveform File Name

MV887015A_C2K_0007

Group Number

3

Table 3.5.4-1 MV887015A_C2K_0007 Composition

		Forward Link Information			Forward Link Control Information
Group (Pattern) No.	Title	Transmission Channel	WalshCode / CodeLength	Radio Configuration	PCB
1	FL Wave RL Request : PCB 0dB FCH -7.33dB	Pilot (F-PICH)	0 / 64	—	Alternate (0 dB)
		Sync	32 / 64	—	
		Traffic (F-FCH)	10 / 64	RC1	
		Paging	1 / 64	—	
		OCNS	63 / 64	—	
2	FL Wave RL Request : PCB +1dB FCH -7.33dB	Pilot (F-PICH)	0 / 64	—	Up (+1 dB)
		Sync	32 / 64	—	
		Traffic (F-FCH)	10 / 64	RC1	
		Paging	1 / 64	—	
		OCNS	63 / 64	—	
3	FL Wave RL Request : PCB -1dB FCH -7.33dB	Pilot (F-PICH)	0 / 64	—	Down (-1 dB)
		Sync	32 / 64	—	
		Traffic (F-FCH)	10 / 64	RC1	
		Paging	1 / 64	—	
		OCNS	63 / 64	—	

3

Waveform File Details

3.6 1xEV-DO Forward Link File

The specifications of the 1xEV-DO Forward Link File are listed in the following table.

Table 3.6-1 1xEV-DO Forward Link File Specifications

Item		Specification
Waveform File Name		MV887016A_EVDO_0002
Application		Sequence measurement
Group Number		6
Group Title		Refer to Table 3.6.1-1
Waveform Cycle/Group		16 [Frame]
Group Cycle Period*		16 [Frame]
Waveform Marker	Marker 1	No Markers
	Marker 2	Top of Forward Link Frame
	Marker 3	Top of Group
Forward Link Information	Transmission Channel	Preamble, Pilot, MAC, Control, Traffic
	Transmission Rate	Control: 38.4 kbps Traffic: 307.2 kbps, 2Slot (DRC Value 4)
	MAC Index	Traffic: 63
	Revision	Refer to Table 3.6.1-1
Forward Link Control Information	PCB	Refer to Table 3.6.1-1
Specifications		3GPP2 TSG-C.S0024, 3GPP2 TSG-C.S0033

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEQuence:WAVEform:IREPetition command.

3.6.1 MV887016A_EVDO_0002

Waveform File Name
MV887016A_EVDO_0002

Group Number
6

Table 3.6.1-1 MV887016A_EVDO_0002 Composition

		Forward Link Information	Forward Link Control Information
Group (Pattern) No.	Title	Revision	PCB
1	FL Wave FL Info: Rev0 RL Request: PCB 0dB	Rev. 0	Alternate (0 dB)
2	FL Wave FL Info: Rev0 RL Request: PCB +1dB	Rev. 0	Up (+1 dB)
3	FL Wave FL Info: Rev0 RL Request: PCB -1dB	Rev. 0	Down (-1 dB)
4	FL Wave FL Info: RevA RL Request: PCB 0dB	Rev. A	Alternate (0 dB)
5	FL Wave FL Info: RevA RL Request: PCB +1dB	Rev. A	Up (+1 dB)
6	FL Wave FL Info: RevA RL Request: PCB -1dB	Rev. A	Down (-1 dB)

3.7 TD-SCDMA Downlink Files

The specifications of the TD-SCDMA Downlink File are listed in the following table.

Table 3.7-1 TD-SCDMA Downlink File Specifications

Item		Specification		
Waveform File Name		MV887017A_ TDSCDMA_0002	MV887017A_ TDSCDMA_0004	MV887017A_ TDSCDMA_0005
Application		Refer to Table 3.7.1-1	Refer to Table 3.7.2-1	UE Sync
Group Number		5	14	3
Group Title		Refer to Table 3.7.1-1	Refer to Table 3.7.2-1	Refer to Table 3.7.3-1
Waveform Cycle/Group		Refer to Table 3.7.1-1	128 [Frame]	128 [Frame]
Group Cycle Period*		Refer to Table 3.7.1-1	0.5 [Frame] (1 Subframe)	0.5 [Frame] (1 Subframe)
Waveform Marker	Marker 1	Refer to Table 3.7.1-1	Top of Downlink Frame	
	Marker 2		Top of Downlink Subframe	
	Marker 3		Top of Group	
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, DwPCH, P-CCPCH	Refer to Table 3.7.2-1	DPCH, DwPCH, P-CCPCH
	Code/SF	Refer to Table 3.7.1-1	Refer to Table 3.7.2-1	Refer to Table 3.7.3-1
	Transmission Data	DPCH: PN9	DPCH: 0xFFFF	DPCH: PN9
	Frame No.	Refer to Table 3.7.1-1	0 to 127	
	SS	Do nothing	Down	
	K	8		
	TFCS Config	0213		
Downlink Control Information	TPC	Refer to Table 3.7.1-1	Refer to Table 3.7.2-1	Refer to Table 3.7.3-1
Specifications		3GPP TS25.221, 3GPP TS34.122		

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENERator:SEQUence:WAVEform:IREPetition command.

Table 3.7-1 TD-SCDMA Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887017A_ TDSCDMA_0006	MV887017A_ TDSCDMA_0007	MV887017A_ TDSCDMA_0008
Application		Calibration	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
Group Number		1	6	5
Group Title		DL Wave DwPTS Slot0,2,3,4,5,6 for Calibration, Valid P-CCPCH	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
Waveform Cycle/Group		128 [Frame]	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
Group Cycle Period*		0.5 [Frame] (1 Subframe)	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
Waveform Marker	Marker 1	Top of Downlink Frame	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
	Marker 2	Top of Downlink Subframe		
	Marker 3	Top of Group		
Downlink Information	Scrambling Code	0		
	Transmission Channel	DPCH, DwPCH, P-CCPCH		
	Code/SF	Refer to Table 3.7.4-1	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
	Transmission Data	DPCH: 0xFFFF		
	Frame No.	0 to 127	Refer to Table 3.7.5-1	0 to 127
	SS	Down		
	K	8		
	TFCS Config	0213	0123	0213
Downlink Control Information	TPC	Up (+1 dB)	Refer to Table 3.7.5-1	Refer to Table 3.7.6-1
Specifications		3GPP TS25.221, 3GPP TS34.122		

Table 3.7-1 TD-SCDMA Downlink File Specifications (Cont'd)

Item		Specification		
Waveform File Name		MV887017A_ TDSCDMA_0009	MV887017A_ TDSCDMA_0011	MV887017A_ TDSCDMA_0013
Application		RX measurement	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
Group Number		3	7	6
Group Title		Refer to Table 3.7.7-1	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
Waveform Cycle/Group		128 [Frame]	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
Group Cycle Period*		2 [Frame]	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
Waveform Marker	Marker 1	Top of Downlink Frame	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
	Marker 2	Top of Downlink Subframe		
	Marker 3	Top of Group		
Downlink Information	Scrambling Code	0		1
	Transmission Channel	DPCH, DwPCH, P-CCPCH		
	Code/SF	Refer to Table 3.7.7-1	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
	Transmission Data	DPCH : 0x5555	DPCH : PN9	DPCH : 0x5555
	Frame No.	0 to 127	Refer to Table 3.7.8-1	0 to 127
	SS	Down		
	K	8		
	TFCS Config	0123	0213	
Downlink Control Information	TPC	Refer to Table 3.7.7-1	Refer to Table 3.7.8-1	Refer to Table 3.7.9-1
Specifications		3GPP TS25.221, 3GPP TS34.122		

Table 3.7-1 TD-SCDMA Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887017A_TDSCDMA_0014
Application		Sequence measurement
Group Number		1
Group Title		PRBS9 Continuous QPSK
Waveform Cycle/Group		—
Group Cycle Period*		—
Waveform Marker	Marker 1	No Markers
	Marker 2	No Markers
	Marker 3	Top of Group
Downlink Information	Scrambling Code	—
	Transmission Channel	—
	Code/SF	—
	Transmission Data	—
	Frame No.	—
	SS	—
	K	—
	TFCS Config	—
Downlink Control Information	TPC	—
Specifications		3GPP TS25.221, 3GPP TS34.122

3.7.1 MV887017A_TDSCDMA_0002

Waveform File Name

MV887017A_TDSCDMA_0002

Group Number

5

Table 3.7.1-1 MV887017A_TDSCDMA_0002 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	Sequence Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC 0dB	128 [Frame]	0.5 [Frame] (1 Subframe)
2	Sequence Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC +1dB	128 [Frame]	0.5 [Frame] (1 Subframe)
3	Sequence Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC -1dB	128 [Frame]	0.5 [Frame] (1 Subframe)
4	Closed Loop Power Control Measurement	Closed Loop Power Control PreWave, Rep 0.5Frame, DL Info : K8 DPCH1,2	4 [Frame]	0.5 [Frame] (1 Subframe)
5	Closed Loop Power Control Measurement	Closed Loop Power Control Wave, Rep 23.5Frame, DL Info : K8 DPCH1,2	94 [Frame]	23.5 [Frame] (47 Subframe)

Table 3.7.1-1 MV887017A_TDSCDMA_0002 Composition (Cont'd)

				Downlink Information				Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Slot	Code/SF	Frame No.	TPC
1	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	Alternate (0 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
2				DPCH	4	1,2 / 16	0 to 127	Up (+1 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
3				DPCH	4	1,2 / 16	0 to 127	Down (−1 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
4	Top of Downlink Frame (4 Frame Cycle)	Top of Downlink Subframe (4 Frame Cycle)		DPCH	4	1,2 / 16	0 to 3	Up (+1 dB)
			DwPCH					
			P-CCPCH	0	1,2 / 16			
5			DPCH	4	1,2 / 16	0 to 93	—	
			DwPCH					
			P-CCPCH	0	1,2 / 16			

3.7.2 MV887017A_TDSCDMA_0004

Waveform File Name

MV887017A_TDSCDMA_0004

Group Number

14

Table 3.7.2-1 MV887017A_TDSCDMA_0004 Composition

			Downlink Information			Downlink Control Information
Group (Pattern) No.	Application	Title	Transmission Channel	Slot	Code/SF	TPC
1	Loop Back BER Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC 0dB	DPCH	4	1,2 / 16	Alternate (0 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
2	Loop Back BER Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC +1dB	DPCH	4	1,2 / 16	Up (+1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
3	Loop Back BER Measurement	DL Wave DL Info : RMC12.2kbps K8 DPCH 1,2 UL Request : TPC -1dB	DPCH	4	1,2 / 16	Down (−1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
4	Calibration	DL Wave Slot6 for Calibration	DPCH	6	1,2 / 16	Up (+1 dB)
5	Calibration	DL Wave Slot5,6 for Calibration	DPCH	5,6	1,2 / 16	Up (+1 dB)
6	Calibration	DL Wave DwPTS Slot6 for Calibration	DPCH	6	1,2 / 16	Up (+1 dB)
			DwPCH			

Table 3.7.2-1 MV887017A_TDSCDMA_0004 Composition (Cont'd)

Group (Pattern) No.	Application	Title	Downlink Information			Downlink Control Information
			Transmission Channel	Slot	Code/ SF	TPC
7	Calibration	DL Wave DwPTS Slot5,6 for Calibration	DPCH	5,6	1,2 / 16	Up (+1 dB)
			DwPCH			
8	Calibration	DL Wave DwPTS Slot0,2,3,4,5,6 for Calibration	DPCH	2,3, 4,5, 6	1,2 / 16	Up (+1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
9	Calibration	DL Wave DwPTS Slot0,5,6 for Calibration	DPCH	5,6	1,2 / 16	Up (+1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
10	Power Control	Harikiri Power control1 To Max Power (TPC Up, Manual Trigger)	DPCH	4	1,2 / 16	Up (+1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
11	Power Control	Harikiri Power control2-1 To Target Power (TPC Alt, Fix Length)	DPCH	4	1,2 / 16	Alternate (0 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
12	Power Control	Harikiri Power control2-2 To Target Power (TPC Down, Fix Length)	DPCH	4	1,2 / 16	Down (-1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
13	Power Control	Harikiri Power control2-3 To Target Power (TPC Alt, Manual Trigger)	DPCH	4	1,2 / 16	Alternate (0 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	
14	Power Control	Harikiri Power control3 To Min Power (TPC Down, Manual Trigger)	DPCH	4	1,2 / 16	Down (-1 dB)
			DwPCH			
			P-CCPCH	0	1,2 / 16	

3.7.3 MV887017A_TDSCDMA_0005

Waveform File Name

MV887017A_TDSCDMA_0005

Group Number

3

Table 3.7.3-1 MV887017A_TDSCDMA_0005 Composition

		Downlink Information			Downlink Control Information
Group (Pattern) No.	Title	Transmission Channel	Slot	Code/SF	TPC
1	DL Wave DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC 0dB SS Down	DPCH	4	1,2 / 16	Alternate (0 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	
2	DL Wave DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC +1dB SS Down	DPCH	4	1,2 / 16	Up (+1 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	
3	DL Wave DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC -1dB SS Down	DPCH	4	1,2 / 16	Down (−1 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	

3.7.4 MV887017A_TDSCDMA_0006

Waveform File Name

MV887017A_TDSCDMA_0006

Group Number

1

Table 3.7.4-1 MV887017A_TDSCDMA_0006 Composition

Group (Pattern) No.	Downlink Information		
	Transmission Channel	Slot	Code/SF
1	DPCH	2,3,4,5,6	1,2 / 16
	DwPCH		
	P-CCPCH	0	1,2 / 16

3.7.5 MV887017A_TDSCDMA_0007

Waveform File Name

MV887017A_TDSCDMA_0007

Group Number

6

Table 3.7.5-1 MV887017A_TDSCDMA_0007 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 DATA 0xFFFF TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC 0dB	128 [Frame]	2 [Frame]
2	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 DATA 0xFFFF TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC +1dB	128 [Frame]	2 [Frame]
3	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 DATA 0xFFFF TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC -1dB	128 [Frame]	2 [Frame]
4	Closed Loop Power Control Measurement	Closed Loop Power Control PreWave, NonMarker, Rep 2Frame, DL Info : K8 DPCH1,2 TFCS_Config 0123 Valid P-CCPCH	128 [Frame]	2 [Frame]
5	Closed Loop Power Control Measurement	Closed Loop Power Control Wave, Rep 170Frame, DL Info : K8 DPCH1,2 TFCS_Config 0123 Valid P-CCPCH	170 [Frame]	170 [Frame]
6	Power Control	Harikiri Power Control Wave, Rep 30Frame, DL Info : K8 DPCH1,2 TFCS_Config 0123 Valid P-CCPCH	30 [Frame]	30 [Frame]

Table 3.7.5-1 MV887017A_TDSCDMA_0007 Composition (Cont'd)

				Downlink Information				Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Slot	Code/SF	Frame No.	TPC
1	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	Alternate (0 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
2				DPCH	4	1,2 / 16	0 to 127	Up (+1 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
3				DPCH	4	1,2 / 16	0 to 127	Down (−1 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
4	No Markers			DPCH	4	1,2 / 16	0 to 127	Up (+1 dB)
				DwPCH				
				P-CCPCH	0	1,2 / 16		
5	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	—
				DwPCH				
				P-CCPCH	0	1,2 / 16		
6				DPCH	4	1,2 / 16	0 to 29	—
				DwPCH				
				P-CCPCH	0	1,2 / 16		

3.7.6 MV887017A_TDSCDMA_0008

Waveform File Name

MV887017A_TDSCDMA_0008

Group Number

5

Table 3.7.6-1 MV887017A_TDSCDMA_0008 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0xFFFF Valid P-CCPCH, UL Request : TPC 0dB	128 [Frame]	2 [Frame]
2	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0xFFFF Valid P-CCPCH, UL Request : TPC +1dB	128 [Frame]	2 [Frame]
3	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0xFFFF Valid P-CCPCH, UL Request : TPC -1dB	128 [Frame]	2 [Frame]
4	Closed Loop Power Control Measurement	Closed Loop Power Control PreWave, NonMarker, Rep 2Frame, DL Info : K8 DPCH1,2 Valid P-CCPCH	128 [Frame]	2 [Frame]
5	Closed Loop Power Control Measurement	Closed Loop Power Control Wave, Rep 170Frame, DL Info : K8 DPCH1,2 Valid P-CCPCH	170 [Frame]	170 [Frame]

Table 3.7.6-1 MV887017A_TDSCDMA_0008 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Slot	Code/SF	TPC
1	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	Alternate (0 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
2				DPCH	4	1,2 / 16	Up (+1 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
3				DPCH	4	1,2 / 16	Down (−1 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
4				No Markers	DPCH	4	1,2 / 16
	DwPCH						
	P-CCPCH	0	1,2 / 16				
5	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	—
				DwPCH			
				P-CCPCH	0	1,2 / 16	

3.7.7 MV887017A_TDSCDMA_0009

Waveform File Name

MV887017A_TDSCDMA_0009

Group Number

3

Table 3.7.7-1 MV887017A_TDSCDMA_0009 Composition

		Downlink Information			Downlink Control Information
Group (Pattern) No.	Title	Transmission Channel	Slot	Code/SF	TPC
1	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC 0dB	DPCH	4	1,2 / 16	Alternate (0 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	
2	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC +1dB	DPCH	4	1,2 / 16	Up (+1 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	
3	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 TFCS_Config 0123 Valid P-CCPCH, UL Request : TPC -1dB	DPCH	4	1,2 / 16	Down (−1 dB)
		DwPCH			
		P-CCPCH	0	1,2 / 16	

3.7.8 MV887017A_TDSCDMA_0011

Waveform File Name

MV887017A_TDSCDMA_0011

Group Number

7

Table 3.7.8-1 MV887017A_TDSCDMA_0011 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 Valid P-CCPCH, UL Request : TPC 0dB	128 [Frame]	2 [Frame]
2	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 Valid P-CCPCH, UL Request : TPC +1dB	128 [Frame]	2 [Frame]
3	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH1,2 Valid P-CCPCH, UL Request : TPC -1dB	128 [Frame]	2 [Frame]
4	Closed Loop Power Control Measurement	Closed Loop Power Control PreWave, NonMarker, Rep 2Frame, DL Info : K8 DPCH1,2 DATA PN9 Valid P-CCPCH	128 [Frame]	2 [Frame]
5	Closed Loop Power Control Measurement	Closed Loop Power Control Wave, Rep 170Frame, DL Info : K8 DPCH1,2 DATA PN9 Valid P-CCPCH	170 [Frame]	170 [Frame]
6	Power Control	Harikiri Power Control Wave, Rep 30Frame, DL Info : K8 DPCH1,2 DATA PN9 Valid P-CCPCH	30 [Frame]	30 [Frame]
7	Power Control	Harikiri Power Control Wave2, Rep 30Frame, DL Info : K8 DPCH1,2 DATA PN9 Valid P-CCPCH	30 [Frame]	30 [Frame]

Table 3.7.8-1 MV887017A_TDSCDMA_0011 Composition (Cont'd)

				Downlink Information				Downlink Control Information							
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Slot	Code/SF	Frame No.	TPC							
1	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	Alternate (0 dB)							
				DwPCH											
				P-CCPCH	0	1,2 / 16									
2				Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	Up (+1 dB)				
							DwPCH								
							P-CCPCH	0	1,2 / 16						
3							Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	0 to 127	Down (−1 dB)	
										DwPCH					
										P-CCPCH	0	1,2 / 16			
4	No Markers	Top of Downlink Frame	Top of Downlink Subframe							Top of Group	DPCH	4	1,2 / 16	0 to 127	Up (+1 dB)
											DwPCH				
											P-CCPCH	0	1,2 / 16		
5	Top of Downlink Frame			Top of Downlink Subframe	Top of Group	DPCH					4	1,2 / 16	0 to 127	—	
						DwPCH									
						P-CCPCH					0	1,2 / 16			
6						Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH		4	1,2 / 16	0 to 29	—	
									DwPCH						
									P-CCPCH		0	1,2 / 16			
7		Top of Downlink Frame	Top of Downlink Subframe						Top of Group	DPCH	4	1,2 / 16	0 to 29	—	
										DwPCH					
										P-CCPCH	0	1,2 / 16			

3.7.9 MV887017A_TDSCDMA_0013

Waveform File Name

MV887017A_TDSCDMA_0013

Group Number

6

Table 3.7.9-1 MV887017A_TDSCDMA_0013 Composition

Group (Pattern) No.	Application	Title	Waveform Cycle/ Group	Group Cycle Period
1	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 Valid P-CCPCH ScrambleCode1, UL Request : TPC 0dB	128 [Frame]	2 [Frame]
2	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 Valid P-CCPCH ScrambleCode1, UL Request : TPC +1dB	128 [Frame]	2 [Frame]
3	UE Sync	DL Wave, Rep 2Frame, DL Info : RMC12.2kbps K8 DPCH 1,2 DATA 0x5555 Valid P-CCPCH ScrambleCode1, UL Request : TPC -1dB	128 [Frame]	2 [Frame]
4	Closed Loop Power Control Measurement	Closed Loop Power Control PreWave, NonMarker, Rep 2Frame, DL Info : K8 DPCH1,2 Valid P-CCPCH ScrambleCode1	128 [Frame]	2 [Frame]
5	Closed Loop Power Control Measurement	Closed Loop Power Control Wave, Rep 170Frame, DL Info : K8 DPCH1,2 Valid P-CCPCH ScrambleCode1	170 [Frame]	170 [Frame]
6	Closed Loop Power Control Measurement	Closed Loop Power Control Wave2, Rep 170Frame, DL Info : K8 DPCH1,2 Valid P-CCPCH ScrambleCode1	170 [Frame]	170 [Frame]

3

Waveform File Details

Table 3.7.9-1 MV887017A_TDSCDMA_00013 Composition (Cont'd)

				Downlink Information			Downlink Control Information
Group (Pattern) No.	Marker 1	Marker 2	Marker 3	Transmission Channel	Slot	Code/SF	TPC
1	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	Alternate (0 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
2				DPCH	4	1,2 / 16	Up (+1 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
3				DPCH	4	1,2 / 16	Down (−1 dB)
				DwPCH			
				P-CCPCH	0	1,2 / 16	
4				No Markers			DPCH
	DwPCH						
	P-CCPCH	0	1,2 / 16				
5	Top of Downlink Frame	Top of Downlink Subframe	Top of Group	DPCH	4	1,2 / 16	—
				DwPCH			
				P-CCPCH	0	1,2 / 16	
6				DPCH	4	1,2 / 16	—
				DwPCH			
				P-CCPCH	0	1,2 / 16	

3.8 NB-IoT Downlink Files

The specifications of the NB-IoT Downlink File are listed in the following table.

Table 3.8-1 NB-IoT Downlink File Specifications

Item		Specification	
Waveform File Name		MV887067A_NBIOT_0001	MV887067A_NBIOT_0002
Application		RX measurement	TX measurement
Group Number		1	1
Group Title		Refer to Table 3.8.1-1	Refer to Table 3.8.2-1
Waveform Cycle/Group		64 [Frame]	64 [Frame]
Group Cycle Period*		64 [Frame]	64 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame	
	Marker 2	Top of Uplink Frame	
	Marker 3	Top of Group	
Downlink Information	Transmission Channel	NPSS, NSSS, NPBCH, NRS, NPDCCH, NPDSCH	
	Transmission Data	NPDSCH: 1F 00 00 00 00 00 00 00 00 00 00	
	Transmission Data Modulation	NPDSCH: QPSK	
	NCell ID	0	
	Frame No.	0 to 63	
	Tx Antenna Number	1	1
	System Bandwidth	Refer to Table 3.8.1-1	
	DCI format (DL Info)	DCI format N1	—
Downlink Control Information	UE ID (C-RNTI)	0x000E	0x000E
	DCI format (UL Info)	—	DCI format N0
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1	

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEQUence:WAVEform:IREPetition command.

Table 3.8-1 NB-IoT Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887067A_NBIOT_0003
Application		RX measurement
Group Number		1
Group Title		Refer to Table 3.8.3-1
Waveform Cycle/Group		4 [Frame]
Group Cycle Period*		4 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame
	Marker 2	Top of Uplink Frame
	Marker 3	Top of Group
Downlink Information	Transmission Channel	NPSS, NSSS, NPBCH, NRS, NPDCCH, NPDSCH
	Transmission Data	NPDSCH: 1F 00 00 00 00 00 00 00 00 00
	Transmission Data Modulation	NPDSCH: QPSK
	NCell ID	0
	Frame No.	0 to 3
	Tx Antenna Number	1
	System Bandwidth	Refer to Table 3.8.3-1
	DCI format (DL Info)	DCI format N1
Downlink Control Information	UE ID (C-RNTI)	0x000E
	DCI format (UL Info)	DCI format N0
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1

3.8.1 MV887067A_NBIOT_0001

Waveform File Name
MV887067A_NBIOT_0001

Group Number
1

Table 3.8.1-1 MV887067A_NBIOT_0001 Composition

		Downlink Control Information
Group (Pattern) No.	Title	System Bandwidth
1	DL Wave DL Info : OperationMode=Standalone DCI Format N1 NCell ID 0 UL Request : cRNTI 0x000E	0.2 MHz

3.8.2 MV887067A_NBIOT_0002

Waveform File Name
MV887067A_NBIOT_0002

Group Number
1

Table 3.8.2-1 MV887067A_NBIOT_0002 Composition

Group (Pattern) No.	Title	Downlink Information	Downlink Control Information		
		System Bandwidth	NPUSCH SC Assigned Position		
			SC Spacing	Start SC No.	Assigned SC Number
1	DL Wave DL Info : OperationMode=Standalone DCI Format N0 NCell ID 0 UL Request : cRNTI 0x000E	0.2 MHz	15 kHz	0	1

3.8.3 MV887067A_NBIOT_0003

Waveform File Name
MV887067A_NBIOT_0003

Group Number
1

Table 3.8.3-1 MV887067A_NBIOT_0003 Composition

		Downlink Information
Group (Pattern) No.	Title	System Bandwidth
1	DL Wave DL Info : OperationMode=Standalone DCI Format N1 NCell ID 0 UL Request : cRNTI 0x000E	0.2 MHz

3

Waveform File Details

3.9 Category M FDD Downlink Files

The specifications of the Category M FDD Downlink File are listed in the following table.

Table 3.9-1 Category M FDD Downlink File Specifications

Item		Specification
Waveform File Name		MV887065A_CATM1_0002
Application		TRX measurement
Group Number		1
Group Title		Refer to Table 3.9.1-1
Waveform Cycle/Group		16 [Frame]
Group Cycle Period*		16 [Frame]
Waveform Marker	Marker 1	Top of Downlink Frame
	Marker 2	Top of Uplink Frame
	Marker 3	Top of Group
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, MPDCCH, PDSCH
	Transmission Data	PDSCH: 1F 00 00 00 00 00 00 00 00 00 00
	Transmission Data Modulation	PDSCH: QPSK
	Cell ID	0
	Frame No.	0 to 15
	Tx Antenna Number	1
	System Bandwidth	Refer to Table 3.9.1-1
	DCI format (DL Info)	DCI format 6-1A
Downlink Control Information	UE ID (C-RNTI)	0xAAAA
	DCI format (UL Info)	DCI format 6-0A
Specifications		3GPP 36.211, 3GPP 36.213, 3GPP 36.521-1

*: This item shows the frame length of each cycle of the group cycle period specified by the :SOURCE:GPRF:GENerator:SEQuence:WAVEform:IREPetition command.

3.9.1 MV887065A_CATM1_0002

Waveform File Name

MV887065A_CATM1_0002

Group Number

1

Table 3.9.1-1 MV887065A_CATM1_0002 Composition

Group (Pattern) No.	Title	Downlink Control Information		
		PUSCH Modulation	PUSCH RB Assigned Position	
			Start RB No.	Assigned RB Number
1	DL Wave 5 MHz DL Info : SizeRB=4 QPSK UL Request : cRNTI 0xAAAA StartRB=0 SizeRB=6 TPC +1dB	QPSK	0	6

3

Waveform File Details

3.10 Other File

The specifications of the LTE FDD/TDD Downlink File are listed in the following table.

Table 3.10-1 LTE FDD/TDD Downlink File Specifications

Item		Specification
Waveform File Name		MV887013A_14A_ LTFDD_TDD_0001
Application		UE Sync
Group Number		12
Group Title		Refer to Table 3.10.1-1
Waveform Cycle/Group		4 [Frame]
Group Cycle Period*		4 [Frame]
Waveform Marker	Marker 1	Refer to Table 3.10.1-1
	Marker 2	
	Marker 3	
Downlink Information	Transmission Channel	PSC, SSC, PBCH, CellRS, PCFICH, PDCCH, PHICH, PDSCH
	Transmission Data	PDSCH : PN9
	Transmission Data Modulation	PDSCH : QPSK
	Cell ID	Refer to Table 3.10.1-1
	Frame No.	0 to 3
	Downlink RB Assigned Position	Full Assign
	Tx Antenna Number	1
	CP Classification	Normal CP
	Ng	1/6
	Phich Duration	Normal
	System Bandwidth	Refer to Table 3.10.1-1
	DCI format (DL Info)	DCI format 1A

Table 3.10-1 LTE FDD/TDD Downlink File Specifications (Cont'd)

Item		Specification
Waveform File Name		MV887013A_14A_ LTEFDD_TDD_0001
Uplink-Downlink Configuration		Refer to Table 3.10.1-1
Special Subframe Configuration		Refer to Table 3.10.1-1
Downlink Control Information	TPC	Up (+1 dB)
	UE ID (C-RNTI)	0x0001
	Uplink Modulation Method	—
	Uplink RB Assigned Position	—
	DCI format (UL Info)	—
Specifications		3GPP TS36.211, 3GPP TS36.213 3GPP TS36.521-1

3.10.1 MV887013A_14A_LTEFDD/TDD_0001

Waveform File Name

MV887013A_14A_LTEFDD_TDD_0001

Group Number

12

Note:

To use the waveform file, the MV887014A LTE TDD Downlink waveform license are required in addition to the MV887013A LTE FDD waveform license.

Table 3.10.1-1 MV887013A_14A_LTEFDD_TDD_0001 Composition

Group (Pattern) No.	Title	Marker 1	Marker 2	Marker 3
1	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB	Top of Downlin k Frame	Top of Uplink Frame	No Markers
2	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
3	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
4	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
5	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
6	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			

Table 3.10.1-1 MV887013A_14A_LTEFDD_TDD_0001 Composition (Cont'd)

Group (Pattern) No.	Title	Marker 1	Marker 2	Marker 3
7	DL Wave 5MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB	Top of Downlin k Frame	Top of Uplink Frame	Top of Group
8	DL Wave 10MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
9	DL Wave 20MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
10	DL Wave 1.4MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
11	DL Wave 3MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			
12	DL Wave 15MHz DL Info : SizeRB=Full QPSK DCI format 1A PHICH Ng 1/6 Cell ID 0 UL Request : cRNTI 0x0001 TPC +1dB			

Table 3.10.1-1 MV887013A_14A_LTEFDD_TDD_0001 Composition (Cont'd)

Group (Pattern) No.	Downlink Information			
	Cell ID	System Bandwidth	Uplink- Downlink Configuration	Special Subframe Configuration
1	0	5 MHz	—	—
2		10 MHz		
3		20 MHz		
4		1.4 MHz		
5		3 MHz		
6		15 MHz		
7	0	5 MHz	2	7
8		10 MHz		
9		20 MHz		
10		1.4 MHz		
11		3 MHz		
12		15 MHz		

Appendix A MT8820C Waveform File Support

This Appendix lists the waveform files described in this manual and the MT8820C Radio Communications Analyzer support for these files.

- A.1 MX882020C Sequence Measurement Software
(For MT8820C) Support.....A-2
- A.2 MX882002C/32C CDMA2000 Measurement Software/
CDMA2000 Measurement Software Lite SupportA-5
- A.3 MX88201xC/4xC LTE FDD/
TDD Measurement Software/
LTE FDD/TDD Measurement Software Lite Support....A-6
 - A.3.1 FDDA-6
 - A.3.2 TDDA-10

A.1 MX882020C Sequence Measurement Software(For MT8820C) Support

This section shows the table that defines the correspondence between the following two items:

- Downlink signal patterns described in “3.2.12 ARB Signal – Pattern” of the *MX882020C Sequence Measurement Software (For MT8820C) Seventh Edition Operation Manual*
- MT8870A's waveform files

Table A.1-1 MX882020C Sequence Measurement Software Signal Pattern Support

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT0	WCDMA RMC12.2kbps (TPC Alt)	MV887011A_WCDMA_0005	1	DL Wave, Rep 1Frame, DL Info : RMC12.2kbps DPCH9, UL Request : TPC 0dB
	PAT1	WCDMA RMC12.2kbps (TPC Up)		2	DL Wave, Rep 1Frame, DL Info : RMC12.2kbps DPCH9, UL Request : TPC +1dB
	PAT2	WCDMA RMC12.2kbps (TPC Down)		3	DL Wave, Rep 1Frame, DL Info : RMC12.2kbps DPCH9, UL Request : TPC -1dB
	PAT3	WCDMA RMC12.2kbps (ILPC E/F)		21	Inner Loop Power Control Wave, Rep 16Frame, DL Info : DPCH9 TFCI 3
	PAT6	GSM LB Type C (GMSK)	MV887012A_GSM_0002	6	DL Wave, DL Info : CCH & TCH FS Uncoded GMSK 7Slot
	PAT7	GSM MCS5 (8PSK)		7	DL Wave, DL Info : CCH & PDTCH MCS5 8PSK 7Slot
	PAT8	GSM MCS9 (8PSK)		8	DL Wave, DL Info : CCH & PDTCH MCS9 8PSK 7Slot
	PAT9	GSM MCS1 (GMSK) + MCS9 (8PSK)		4	DL Wave, DL Info : CCH & PDTCH MCS1 GMSK 2Slot & PDTCH MCS9 8PSK 2Slot
	PAT12	CDMA2K RC1 (PCB Alt)	MV887015A_C2K_0002	1	FL Wave, RL Request : PCB 0dB
	PAT13	CDMA2K RC1 (PCB Up)		2	FL Wave, RL Request : PCB +1dB
	PAT14	CDMA2K RC1 (PCB Down)		3	FL Wave, RL Request : PCB -1dB

Table A.1-1 MX882020C Sequence Measurement Software Signal Pattern Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT18	EVDO Rev.0 (PCB Alt)	MV887016A_ EVDO_0002	1	FL Wave, FL Info : Rev0, RL Request : PCB 0dB
	PAT19	EVDO Rev.0 (PCB Up)		2	FL Wave, FL Info : Rev0, RL Request : PCB +1dB
	PAT20	EVDO Rev.0 (PCB Down)		3	FL Wave, FL Info : Rev0, RL Request : PCB -1dB
	PAT21	EVDO Rev.A (PCB Alt)		4	FL Wave, FL Info : RevA, RL Request : PCB 0dB
	PAT22	EVDO Rev.A (PCB Up)		5	FL Wave, FL Info : RevA, RL Request : PCB +1dB
	PAT23	EVDO Rev.A (PCB Down)		6	FL Wave, FL Info : RevA, RL Request : PCB -1dB
	PAT27	TD-SCDMA RMC12.2kbps (TPC Alt)	MV887017A_ TDSCDMA_0002	1	DL Wave, DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC 0dB
	PAT28	TD-SCDMA RMC12.2kbps (TPC Up)		2	DL Wave, DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC +1dB
	PAT29	TD-SCDMA RMC12.2kbps (TPC Down)		3	DL Wave, DL Info : RMC12.2kbps K8 DPCH1,2, UL Request : TPC -1dB

Table A.1-1 MX882020C Sequence Measurement Software Signal Pattern Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT33	LTE FDD 1.4MHz QPSK	MV887013A_ LTEFDD_0005	1	DL Wave, 1.4MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=6 QPSK TPC +1dB
	PAT34	LTE FDD 3MHz QPSK		2	DL Wave, 3MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=15 QPSK TPC +1dB
	PAT35	LTE FDD 5MHz QPSK		3	DL Wave, 5MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=25 QPSK TPC +1dB
	PAT36	LTE FDD 10MHz QPSK		4	DL Wave, 10MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB
	PAT37	LTE FDD 15MHz QPSK		5	DL Wave, 15MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=75 QPSK TPC +1dB
	PAT38	LTE FDD 20MHz QPSK		6	DL Wave, 20MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=100 QPSK TPC +1dB
	PAT39	LTE TDD 1.4MHz QPSK	MV887014A_ LTETDD_0005	1	DL Wave, 1.4MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=6 QPSK TPC +1dB
	PAT40	LTE TDD 3MHz QPSK		2	DL Wave, 3MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=15 QPSK TPC +1dB
	PAT41	LTE TDD 5MHz QPSK		3	DL Wave, 5MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=25 QPSK TPC +1dB
	PAT42	LTE TDD 10MHz QPSK		4	DL Wave, 10MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=50 QPSK TPC +1dB
	PAT43	LTE TDD 15MHz QPSK		5	DL Wave, 15MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=75 QPSK TPC +1dB
	PAT44	LTE TDD 20MHz QPSK		6	DL Wave, 20MHz, DL Info : SizeRB=Full QPSK, UL Request : StartRB=0 SizeRB=100 QPSK TPC +1dB
	PAT62	TDSCDMA Continuous	MV887017A_ TDSCDMA_0014	1	PRBS9 Continuous QPSK
	PAT63	GSM Continuous	MV887012A_ GSM_0026	3	DL Wave, DL Info : PRBS Continuous

A.2 MX882002C/32C CDMA2000 Measurement Software/ CDMA2000 Measurement Software Lite Support

This section shows the table that defines the correspondence between the following two items:

- CDMA2000 Waveform patterns for RX measurement described in “11.1.3 Call Processing” of the *MX882002C/32C CDMA2000 Measurement Software/CDMA2000 Measurement Software Lite Operation Manual Panel Operation 15th Edition*
- MT8870A’s waveform files

Table A.2-1 CDMA2000 Measurement Software Signal Pattern Support

MT8820C ARB FL Signal Pattern	MT8870A Waveform File		
CDMA2000 Waveform pattern for RX measurement	Waveform File Name	Group No.	Group Title
RC1, Traffic Walsh 10, PCB=ALL0	MV887015A_	2	FL Wave, RL Request : PCB +1dB
RC3, Traffic Walsh 10, PCB=ALL0	C2K_0002	5	FL Wave, FL Info : RC3, RL Request : PCB +1dB

A.3 MX88201xC/4xC LTE FDD/TDD Measurement Software/ LTE FDD/TDD Measurement Software Lite Support

A.3.1 FDD

This section shows the table that defines the correspondence between the following two items:

- Downlink signal patterns for FDD described in “3.1.55 ARB Signal - Pattern Table 3.1.55-1” of the *MX88201xC/4xC LTE FDD/TDD Measurement Software / LTE FDD/TDD Measurement Software Lite 18th Edition Operation Manual*
- MT8870A's waveform files

Table A.3.1-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For FDD Support

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT0	FDD 1.4MHz QPSK	MV887013A_LTEFDD_0011	1	DL Wave 1.4MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT1	FDD 3MHz QPSK		2	DL Wave 3MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT2	FDD 5MHz QPSK		3	DL Wave 5MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT3	FDD 10MHz QPSK		4	DL Wave 10MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT4	FDD 15MHz QPSK		5	DL Wave 15MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT5	FDD 20MHz QPSK		6	DL Wave 20MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.1-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For FDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT6	FDD 1.4MHz 64QAM(Category3-5)	MV887013A_LTEFDD_0011	7	DL Wave 1.4MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT7	FDD 3MHz 64QAM(Category3-5)		8	DL Wave 3MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT8	FDD 5MHz 64QAM(Category3-5)		9	DL Wave 5MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT9	FDD 10MHz 64QAM(Category3-5)		10	DL Wave 10MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT10	FDD 15MHz 64QAM(Category3-5)		11	DL Wave 15MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT11	FDD 20MHz 64QAM(Category3-5)		12	DL Wave 20MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.1-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For FDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC2	PAT0	FDD 1.4MHz 64QAM(Category1)	MV887013A_LTEFDD_0013	1	DL Wave 1.4MHz UE Category1, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT1	FDD 3MHz 64QAM(Category1)		2	DL Wave 3MHz UE Category1, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT2	FDD 5MHz 64QAM(Category1)		3	DL Wave 5MHz UE Category1, DL Info : StartRB=0 SizeRB=18 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT3	FDD 10MHz 64QAM(Category1)		4	DL Wave 10MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT4	FDD 15MHz 64QAM(Category1)		5	DL Wave 15MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT5	FDD 20MHz 64QAM(Category1)		6	DL Wave 20MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.1-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For FDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC2	PAT6	FDD 1.4MHz 64QAM(Category2)	MV887013A_LTEFDD_0013	7	DL Wave 1.4MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT7	FDD 3MHz 64QAM(Category2)		8	DL Wave 3MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT8	FDD 5MHz 64QAM(Category2)		9	DL Wave 5MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT9	FDD 10MHz 64QAM(Category2)		10	DL Wave 10MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT10	FDD 15MHz 64QAM(Category2)		11	DL Wave 15MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT11	FDD 20MHz 64QAM(Category2)		12	DL Wave 20MHz UE Category2, DL Info : StartRB=0 SizeRB=83 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

A.3.2 TDD

This section shows the table that defines the correspondence between the following two items:

- Downlink signal patterns for TDD described in “3.1.55 ARB Signal - DL Pattern Table 3.1.55-2” of the *MX88201xC/4xC LTE FDD/TDD Measurement Software / LTE FDD/TDD Measurement Software Lite 18th Edition Operation Manual*
- MT8870A’s waveform files

Table A.3.2-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For TDD Support

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT12	TDD 1.4MHz QPSK	MV887014A_LTETDD_0010	1	DL Wave 1.4MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT13	TDD 3MHz QPSK		2	DL Wave 3MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT14	TDD 5MHz QPSK		3	DL Wave 5MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT15	TDD 10MHz QPSK		4	DL Wave 10MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT16	TDD 15MHz QPSK		5	DL Wave 15MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT17	TDD 20MHz QPSK		6	DL Wave 20MHz UE Category 3 to 5, DL Info : SizeRB=Full QPSK DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.2-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For TDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC1	PAT18	TDD 1.4MHz 64QAM(Category3-5)	MV887014A_LTETDD_0010	7	DL Wave 1.4MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT19	TDD 3MHz 64QAM(Category3-5)		8	DL Wave 3MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT20	TDD 5MHz 64QAM(Category3-5)		9	DL Wave 5MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT21	TDD 10MHz 64QAM(Category3-5)		10	DL Wave 10MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT22	TDD 15MHz 64QAM(Category3-5)		11	DL Wave 15MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT23	TDD 20MHz 64QAM(Category3-5)		12	DL Wave 20MHz UE Category 3 to 5, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.2-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For TDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC2	PAT12	TDD 1.4MHz 64QAM(Category1)	MV887014A_LTETDD_0011	1	DL Wave 1.4MHz UE Category1, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT13	TDD 3MHz 64QAM(Category1)		2	DL Wave 3MHz UE Category1, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT14	TDD 5MHz 64QAM(Category1)		3	DL Wave 5MHz UE Category1, DL Info : StartRB=0 SizeRB=18 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT15	TDD 10MHz 64QAM(Category1)		4	DL Wave 10MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT16	TDD 15MHz 64QAM(Category1)		5	DL Wave 15MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT17	TDD 20MHz 64QAM(Category1)		6	DL Wave 20MHz UE Category1, DL Info : StartRB=0 SizeRB=17 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

Table A.3.2-1 MX88201xC/4xC LTE FDD/TDD Measurement Software Downlink Signal Pattern For TDD Support (Cont'd)

MT8820C ARB DL Signal Pattern			MT8870A Waveform File		
Package	DL Pattern	Screen Display	Waveform File Name	Group No.	Group Title
PAC2	PAT18	TDD 1.4MHz 64QAM(Category2)	MV887014A_LTETDD_0011	7	DL Wave 1.4MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT19	TDD 3MHz 64QAM(Category2)		8	DL Wave 3MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT20	TDD 5MHz 64QAM(Category2)		9	DL Wave 5MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT21	TDD 10MHz 64QAM(Category2)		10	DL Wave 10MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT22	TDD 15MHz 64QAM(Category2)		11	DL Wave 15MHz UE Category2, DL Info : SizeRB=Full 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB
	PAT23	TDD 20MHz 64QAM(Category2)		12	DL Wave 20MHz UE Category2, DL Info : StartRB=0 SizeRB=83 64QAM DCI format 1A, UL Request : cRNTI 0xAAAA TPC 0dB

