

ETSI TS 134 121-1 V14.3.0 (2018-01)



**Universal Mobile Telecommunications System (UMTS);
User Equipment (UE) conformance specification;
Radio transmission and reception (FDD);
Part 1: Conformance specification
(3GPP TS 34.121-1 version 14.3.0 Release 14)**



Reference

RTS/TSGR-0534121-1ve30

Keywords

UMTS

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° 7803/88

Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

If you find errors in the present document, please send your comment to one of the following services:
<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.
The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2018.
All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members.
GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: "*Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards*", which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<https://ipr.etsi.org/>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

This Technical Specification (TS) has been produced by the ETSI 3rd Generation Partnership Project (3GPP).

The present document may refer to technical specifications or reports using their 3GPP identities, UMTS identities or GSM identities. These should be interpreted as being references to the corresponding ETSI deliverables.

The cross reference between GSM, UMTS, 3GPP and ETSI identities can be found under
<http://webapp.etsi.org/key/queryform.asp>.

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"**must**" and "**must not**" are **NOT** allowed in ETSI deliverables except when used in direct citation.

Contents

Intellectual Property Rights	2
Foreword.....	2
Modal verbs terminology.....	2
Foreword.....	59
Introduction	59
1 Scope	60
2 References	60
3 Definitions, symbols, abbreviations and equations	62
3.1 Definitions	62
3.2 Symbols.....	63
3.3 Abbreviations	63
3.4 Equations	64
4 Frequency bands and channel arrangement.....	66
4.1 General	66
4.2 Frequency bands.....	67
4.3 TX-RX frequency separation	68
4.4 Channel arrangement.....	68
4.4.1 Channel spacing.....	68
4.4.2 Channel raster	69
4.4.3 Channel number.....	69
4.4.4 UARFCN	71
4A Reference Conditions	72
4A.1 Generic setup procedures	72
4A.2 System information	72
4A.3 Message contents.....	72
4A.4 Measurement configurations	73
5 Transmitter Characteristics.....	73
5.1 General	73
5.2 Maximum Output Power	74
5.2.1 Definition and applicability	74
5.2.2 Minimum Requirements	75
5.2.3 Test purpose.....	76
5.2.4 Method of test	76
5.2.4.1 Initial conditions	76
5.2.4.2 Procedure	77
5.2.5 Test requirements.....	77
5.2A Maximum Output Power with HS-DPCCH (Release 5 only)	78
5.2A.1 Definition and applicability	78
5.2A.2 Minimum Requirements	78
5.2A.3 Test purpose.....	78
5.2A.4 Method of test	78
5.2A.4.1 Initial conditions	78
5.2A.4.2 Procedure	79
5.2A.5 Test requirements.....	79
5.2AA Maximum Output Power with HS-DPCCH (Release 6 and later).....	80
5.2AA.1 Definition and applicability	80
5.2AA.2 Minimum Requirements	80
5.2AA.3 Test purpose.....	80
5.2AA.4 Method of test	80
5.2AA.4.1 Initial conditions	80
5.2AA.4.2 Procedure	81
5.2AA.5 Test requirements.....	81

5.2AB	Maximum Output Power for OLTD	82
5.2AB.1	Definition and applicability	82
5.2AB.2	Minimum Requirements	83
5.2AB.3	Test purpose.....	83
5.2AB.4	Method of test	83
5.2AB.4.1	Initial conditions	83
5.2AB.4.2	Procedure	84
5.2AB.5	Test requirements.....	84
5.2AC	Maximum Output Power for UL CLTD activation state 1	86
5.2AC.1	Definition and applicability	86
5.2AC.2	Minimum Requirements	86
5.2AC.3	Test purpose.....	87
5.2AC.4	Method of test	87
5.2AC.4.1	Initial conditions	87
5.2AC.4.2	Procedure	87
5.2AC.5	Test requirements.....	88
5.2AD	Maximum Output Power for UL CLTD activation state 2 and 3	89
5.2AD.1	Definition and applicability	89
5.2AD.2	Minimum Requirements	89
5.2AD.3	Test purpose.....	90
5.2AD.4	Method of test	90
5.2AD.4.1	Initial conditions	90
5.2AD.4.2	Procedure	91
5.2AD.5	Test requirements.....	91
5.2B	Maximum Output Power with HS-DPCCH and E-DCH.....	92
5.2B.1	Definition and applicability	92
5.2B.2	Minimum Requirements	92
5.2B.3	Test purpose.....	93
5.2B.4	Method of test	93
5.2B.4.1	Initial conditions	93
5.2B.4.2	Procedure	95
5.2B.5	Test requirements.....	95
5.2BA	UE Maximum Output Power for DC-HSUPA (QPSK).....	97
5.2BA.1	Definition and applicability	97
5.2BA.2	Minimum Requirements	97
5.2BA.3	Test purpose.....	98
5.2BA.4	Method of test	98
5.2BA.4.1	Initial conditions	98
5.2BA.4.2	Procedure	99
5.2BA.5	Test requirements.....	99
5.2BB	UE Maximum Output Power for DC-HSUPA (16QAM)	100
5.2BB.1	Definition and applicability	100
5.2BB.2	Minimum Requirements	101
5.2BB.3	Test purpose.....	102
5.2BB.4	Method of test	102
5.2BB.4.1	Initial conditions	102
5.2BB.4.2	Procedure	102
5.2BB.5	Test requirements.....	103
5.2BC	Maximum Output Power with HS-DPCCH and E-DCH for OLTD	104
5.2BC.1	Definition and applicability	104
5.2BC.2	Minimum Requirements	104
5.2BC.3	Test purpose.....	104
5.2BC.4	Method of test	105
5.2BC.4.1	Initial conditions	105
5.2BC.4.2	Procedure	107
5.2BC.4.2.1	Procedure for sub-test 1 to 4.....	107
5.2BC.5	Test requirements.....	107
5.2BD	Maximum Output Power with HS-DPCCH and E-DCH for UL CLTD activation state 1	108
5.2BD.1	Definition and applicability	108
5.2BD.2	Minimum Requirements	109
5.2BD.3	Test purpose.....	109
5.2BD.4	Method of test	109

5.2BD.4.1	Initial conditions	109
5.2BD.4.2	Procedure	111
5.2BD.4.2.1	Procedure for sub-test 1 to 4.....	111
5.2BD.5	Test requirements.....	112
5.2BE	Maximum Output Power with HS-DPCCH and E-DCH for UL CLTD activation state 2 and 3.....	113
5.2BE.1	Definition and applicability	113
5.2BE.2	Minimum Requirements	113
5.2BE.3	Test purpose.....	114
5.2BE.4	Method of test.....	114
5.2BE.4.1	Initial conditions	114
5.2BE.4.2	Procedure	116
5.2BE.4.2.1	Procedure for sub-test 1 to 4.....	116
5.2BE.5	Test requirements.....	116
5.2C	UE relative code domain power accuracy	118
5.2C.1	Definition and applicability	118
5.2C.2	Minimum Requirements	118
5.2C.3	Test purpose.....	118
5.2C.4	Method of test.....	118
5.2C.4.1	Initial conditions	118
5.2C.4.2	Procedure	119
5.2C.5	Test requirements.....	120
5.2CA	UE relative code domain power accuracy for OLTD.....	121
5.2CA.1	Definition and applicability	121
5.2CA.2	Minimum Requirements	121
5.2CA.3	Test purpose.....	121
5.2CA.4	Method of test.....	121
5.2CA.4.1	Initial conditions	121
5.2CA.4.2	Procedure	122
5.2CA.5	Test requirements.....	123
5.2CB	UE relative code domain power accuracy for UL CLTD activation state 1	124
5.2CB.1	Definition and applicability	124
5.2CB.2	Minimum Requirements	124
5.2CB.3	Test purpose.....	124
5.2CB.4	Method of test.....	124
5.2CB.4.1	Initial conditions	124
5.2CB.4.2	Procedure	125
5.2CB.5	Test requirements.....	126
5.2CC	UE relative code domain power accuracy for UL CLTD activation state 2 and 3	127
5.2CC.1	Definition and applicability	127
5.2CC.2	Minimum Requirements	127
5.2CC.3	Test purpose.....	127
5.2CC.4	Method of test.....	127
5.2CC.4.1	Initial conditions	127
5.2CC.4.2	Procedure	128
5.2CC.5	Test requirements.....	129
5.2D	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH.....	130
5.2D.1	Definition and applicability	130
5.2D.2	Minimum Requirements	130
5.2D.3	Test purpose.....	130
5.2D.4	Method of test.....	131
5.2D.4.1	Initial conditions	131
5.2D.4.2	Procedure	132
5.2D.5	Test requirements.....	133
5.2DA	UE Relative Code Domain Power Accuracy for DC-HSUPA with QPSK	134
5.2DA.1	Definition and applicability	134
5.2DA.2	Minimum Requirements	134
5.2DA.3	Test purpose.....	134
5.2DA.4	Method of test.....	135
5.2DA.4.1	Initial conditions	135
5.2DA.4.2	Procedure	135
5.2DA.5	Test requirements.....	136
5.2DB	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for OLTD	136

5.2DB.1	Definition and applicability	136
5.2DB.2	Minimum Requirements	137
5.2DB.3	Test purpose.....	137
5.2DB.4	Method of test	137
5.2DB.4.1	Initial conditions	137
5.2DB.4.2	Procedure	139
5.2DB.5	Test requirements.....	139
5.2DC	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for UL CLTD activation state 1.....	140
5.2DC.1	Definition and applicability	140
5.2DC.2	Minimum Requirements	141
5.2DC.3	Test purpose.....	141
5.2DC.4	Method of test	141
5.2DC.4.1	Initial conditions	141
5.2DC.4.2	Procedure	143
5.2DC.5	Test requirements.....	143
5.2DD	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for UL CLTD activation state 2 and 3	144
5.2DD.1	Definition and applicability	144
5.2DD.2	Minimum Requirements	144
5.2DD.3	Test purpose.....	145
5.2DD.4	Method of test	145
5.2DD.4.1	Initial conditions	145
5.2DD.4.2	Procedure	147
5.2DD.5	Test requirements.....	148
5.2E	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM	148
5.2E.1	Definition and applicability	148
5.2E.2	Minimum Requirements	149
5.2E.3	Test purpose.....	149
5.2E.4	Method of test	149
5.2E.4.1	Initial conditions	149
5.2E.4.2	Procedure	150
5.2E.5	Test requirements.....	151
5.2EA	UE Relative Code Domain Power Accuracy for DC-HSUPA with 16QAM.....	152
5.2EA.1	Definition and applicability	152
5.2EA.2	Minimum Requirements	152
5.2EA.3	Test purpose.....	152
5.2EA.4	Method of test	153
5.2EA.4.1	Initial conditions	153
5.2EA.4.2	Procedure	153
5.2EA.5	Test requirements.....	154
5.2EB	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM for OLTD	154
5.2EB.1	Definition and applicability	154
5.2EB.2	Minimum Requirements	155
5.2EB.3	Test purpose.....	155
5.2EB.4	Method of test	155
5.2EB.4.1	Initial conditions	155
5.2EB.4.2	Procedure	156
5.2EB.5	Test requirements.....	157
5.2EC	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM for UL CLTD activation state 1	158
5.2EC.1	Definition and applicability	158
5.2EC.2	Minimum Requirements	158
5.2EC.3	Test purpose.....	159
5.2EC.4	Method of test	159
5.2EC.4.1	Initial conditions	159
5.2EC.4.2	Procedure	160
5.2EC.5	Test requirements.....	161
5.2ED	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM for UL CLTD activation state 2 and 3	162
5.2ED.1	Definition and applicability	162
5.2ED.2	Minimum Requirements	162

5.2ED.3	Test purpose.....	162
5.2ED.4	Method of test	163
5.2ED.4.1	Initial conditions	163
5.2ED.4.2	Procedure	164
5.2ED.5	Test requirements.....	165
5.3	Frequency Error.....	165
5.3.1	Definition and applicability	165
5.3.2	Minimum Requirements	166
5.3.3	Test purpose.....	166
5.3.4	Method of test	166
5.3.4.1	Initial conditions	166
5.3.4.2	Procedure	166
5.3.5	Test Requirements	166
5.3A	Frequency Error for DC-HSUPA	166
5.3A.1	Definition and applicability	166
5.3A.2	Minimum Requirements	167
5.3A.3	Test purpose.....	167
5.3A.4	Method of test	167
5.3A.4.1	Initial conditions	167
5.3A.4.2	Procedure	167
5.3A.5	Test Requirements	167
5.3B	Frequency Error for OLTD	168
5.3B.1	Definition and applicability	168
5.3B.2	Minimum Requirements	168
5.3B.3	Test purpose.....	168
5.3B.4	Method of test	168
5.3B.4.1	Initial conditions	168
5.3B.4.2	Procedure	169
5.3B.5	Test Requirements	169
5.3C	Frequency Error for UL CLTD Activation state 1	169
5.3C.1	Definition and applicability	169
5.3C.2	Minimum Requirements	169
5.3C.3	Test purpose.....	169
5.3C.4	Method of test	170
5.3C.4.1	Initial conditions	170
5.3C.4.2	Procedure	170
5.3C.5	Test Requirements	171
5.3D	Frequency Error for UL CLTD Activation state 2 and 3.....	171
5.3D.1	Definition and applicability	171
5.3D.2	Minimum Requirements	171
5.3D.3	Test purpose.....	171
5.3D.4	Method of test	171
5.3D.4.1	Initial conditions	171
5.3D.4.2	Procedure	172
5.3D.5	Test Requirements	172
5.4	Output Power Dynamics in the Uplink.....	172
5.4.1	Open Loop Power Control in the Uplink	172
5.4.1.1	Definition and applicability.....	172
5.4.1.2	Minimum requirements	172
5.4.1.3	Test purpose	173
5.4.1.4	Method of test	173
5.4.1.5	Test requirements	174
5.4.1A	Open Loop Power Control in the Uplink for DC-HSUPA.....	175
5.4.1A.1	Definition and applicability.....	175
5.4.1A.2	Minimum requirements	175
5.4.1A.3	Test purpose	175
5.4.1A.4	Method of test	175
5.4.1A.5	Test requirements	177
5.4.2	Inner Loop Power Control in the Uplink	177
5.4.2.1	Definition and applicability.....	177
5.4.2.2	Minimum requirements	177
5.4.2.3	Test purpose	178

5.4.2.4	Method of test	178
5.4.2.5	Test requirements	182
5.4.2A	Inner Loop Power Control in the Uplink for DC-HSUPA.....	184
5.4.2A.1	Definition and applicability.....	184
5.4.2A.2	Minimum requirements	184
5.4.2A.3	Test purpose	185
5.4.2A.4	Method of test	186
5.4.2A.5	Test requirements	188
5.4.2B	Inner Loop Power Control in the Uplink for OLTD	190
5.4.2B.1	Definition and applicability.....	190
5.4.2B.2	Minimum requirements	190
5.4.2B.3	Test purpose	191
5.4.2B.4	Method of test	192
5.4.2B.4.1	Initial conditions.....	192
5.4.2B.4.2	Procedure.....	192
5.4.2B.5	Test requirements	195
5.4.2C	Inner Loop Power Control in the Uplink for UL CLTD activation state 1	197
5.4.2C.1	Definition and applicability.....	197
5.4.2C.2	Minimum requirements	197
5.4.2C.3	Test purpose	199
5.4.2C.4	Method of test	199
5.4.2C.4.1	Initial conditions.....	199
5.4.2C.4.2	Procedure.....	200
5.4.2C.5	Test requirements	203
5.4.2D	Inner Loop Power Control in the Uplink for UL CLTD activation state 2 and 3	205
5.4.2D.1	Definition and applicability.....	205
5.4.2D.2	Minimum requirements	205
5.4.2D.3	Test purpose	207
5.4.2D.4	Method of test	207
5.4.2D.4.1	Initial conditions.....	207
5.4.2D.4.2	Procedure.....	208
5.4.2D.5	Test requirements	211
5.4.3	Minimum Output Power	213
5.4.3.1	Definition and applicability.....	213
5.4.3.2	Minimum Requirements.....	213
5.4.3.3	Test purpose	213
5.4.3.4	Method of test	213
5.4.3.5	Test requirements	214
5.4.3A	Minimum Output Power for DC-HSUPA.....	214
5.4.3A.1	Definition and applicability.....	214
5.4.3A.2	Minimum Requirements.....	214
5.4.3A.3	Test purpose	214
5.4.3A.4	Method of test	214
5.4.3A.4.1	Initial conditions.....	214
5.4.3A.4.2	Procedure.....	215
5.4.3A.5	Test requirements	215
5.4.3B	Minimum Output Power for OLTD	215
5.4.3B.1	Definition and applicability.....	215
5.4.3B.2	Minimum Requirements.....	215
5.4.3B.3	Test purpose	215
5.4.3B.4	Method of test	216
5.4.3B.4.1	Initial conditions.....	216
5.4.3B.4.2	Procedure.....	216
5.4.3B.5	Test requirements	216
5.4.3C	Minimum Output Power for UL CLTD Activation state 1	216
5.4.3C.1	Definition and applicability.....	216
5.4.3C.2	Minimum Requirements.....	216
5.4.3C.3	Test purpose	217
5.4.3C.4	Method of test	217
5.4.3C.4.1	Initial conditions.....	217
5.4.3C.4.2	Procedure.....	217
5.4.3C.5	Test requirements	217

5.4.3D	Minimum Output Power for UL CLTD Activation state 2 and 3	217
5.4.3D.1	Definition and applicability.....	217
5.4.3D.2	Minimum Requirements.....	218
5.4.3D.3	Test purpose	218
5.4.3D.4	Method of test	218
5.4.3D.4.1	Initial conditions.....	218
5.4.3D.4.2	Procedure.....	218
5.4.3D.5	Test requirements	219
5.4.4	Out-of-synchronisation handling of output power	219
5.4.4.1	Definition and applicability.....	219
5.4.4.2	Minimum Requirements.....	219
5.4.4.3	Test purpose	221
5.4.4.4	Method of test	221
5.4.4.5	Test requirements	222
5.4.4A	Out-of-synchronization handling of output power for a UE which supports type1 for DCH	222
5.4.4A.1	Definition and applicability.....	222
5.4.4A.2	Minimum requirement	222
5.4.4A.3	Test purpose	224
5.4.4A.4	Method of test	224
5.4.4A.5	Test requirements	225
5.4.4B	Out-of-synchronisation handling of output power for OLTD	225
5.4.4B.1	Definition and applicability.....	226
5.4.4B.2	Minimum Requirements.....	226
5.4.4B.3	Test purpose	227
5.4.4B.4	Method of test	228
5.4.4B.4.1	Initial conditions.....	228
5.4.4B.4.2	Procedure.....	228
5.4.4B.5	Test requirements	228
5.4.4C	Out-of-synchronisation handling of output power for UL CLTD activation state 1	228
5.4.4C.1	Definition and applicability.....	229
5.4.4C.2	Minimum Requirements.....	229
5.4.4C.3	Test purpose	231
5.4.4C.4	Method of test	231
5.4.4C.5	Test requirements	232
5.4.4D	Out-of-synchronisation handling of output power for UL CLTD activation state 2 and 3	232
5.4.4D.1	Definition and applicability.....	232
5.4.4D.2	Minimum Requirements.....	232
5.4.4D.3	Test purpose	234
5.4.4D.4	Method of test	234
5.4.4D.5	Test requirements	235
5.4.5	Out of quality handling of TPI for UL CLTD activation state 1	235
5.4.5.1	Definition and applicability.....	235
5.4.5.2	Minimum Requirements.....	236
5.4.5.3	Test purpose	237
5.4.5.4	Method of test	237
5.4.5.5	Test requirements	238
5.5	Transmit ON/OFF Power	238
5.5.1	Transmit OFF Power	238
5.5.1.1	Definition and applicability.....	238
5.5.1.2	Minimum Requirements.....	238
5.5.1.3	Test purpose	238
5.5.1.4	Method of test	238
5.5.1.5	Test requirements	238
5.5.2	Transmit ON/OFF Time mask	239
5.5.2.1	Definition and applicability.....	239
5.5.2.2	Minimum requirements	239
5.5.2.3	Test purpose	241
5.5.2.4	Method of test	241
5.5.2.5	Test requirements	243
5.6	Change of TFC	244
5.6.1	Definition and applicability	244
5.6.2	Minimum requirements	244

5.6.3	Test purpose.....	246
5.6.4	Method of test	246
5.6.5	Test requirements.....	246
5.6AA	Change of TFC for OLTD	247
5.6AA.1	Definition and applicability	247
5.6AA.2	Minimum requirements.....	247
5.6AA.3	Test purpose.....	249
5.6AA.4	Method of test	249
5.6AA.4.1	Initial conditions	249
5.6AA.4.2	Procedure	249
5.6AA.5	Test requirements.....	249
5.6AB	Void.....	249
5.6AC	Void.....	249
5.7	Power setting in uplink compressed mode	249
5.7.1	Definition and applicability	249
5.7.2	Minimum requirements.....	250
5.7.3	Test purpose.....	252
5.7.4	Method of test	252
5.7.5	Test requirements.....	259
5.7A	HS-DPCCH power control	261
5.7A.1	Definition and applicability	261
5.7A.2	Minimum requirement	261
5.7A.3	Test purpose.....	263
5.7A.4	Method of test	263
5.7A.5	Test requirements.....	264
5.7BA	HS-DPCCH power control for UL OLTD	265
5.7BA.1	Definition and applicability	266
5.7BA.2	Minimum requirement	266
5.7BA.3	Test purpose.....	266
5.7BA.4	Method of test	267
5.7BA.4.1	Initial conditions	267
5.7BA.4.2	Procedure	267
5.7BA.5	Test requirements.....	268
5.7BB	HS-DPCCH power control for UL CLTD activation state 1	269
5.7BB.1	Definition and applicability	270
5.7BB.2	Minimum requirement	270
5.7BB.3	Test purpose.....	270
5.7BB.4	Method of test	271
5.7BB.4.1	Initial conditions	271
5.7BB.4.2	Procedure	271
5.7BB.5	Test requirements.....	272
5.7BC	HS-DPCCH power control for UL CLTD activation state 2 and 3	274
5.7BC.1	Definition and applicability	274
5.7BC.2	Minimum requirement	274
5.7BC.3	Test purpose.....	275
5.7BC.4	Method of test	275
5.7BC.4.1	Initial conditions	275
5.7BC.4.2	Procedure	275
5.7BC.5	Test requirements.....	276
5.8	Occupied Bandwidth (OBW)	278
5.8.1	Definition and applicability	278
5.8.2	Minimum Requirements	278
5.8.3	Test purpose.....	278
5.8.4	Method of test	279
5.8.5	Test Requirements	279
5.8A	Occupied Bandwidth (OBW) for DC-HSUPA	279
5.8A.1	Definition and applicability	279
5.8A.2	Minimum Requirements	279
5.8A.3	Test purpose.....	279
5.8A.4	Method of test	280
5.8A.4.1	Initial conditions	280
5.8A.4.2	Procedure	280

5.8A.5	Test Requirements	281
5.8B	Occupied Bandwidth (OBW) for OLTD	281
5.8B.1	Definition and applicability	281
5.8B.2	Minimum Requirements	281
5.8B.3	Test purpose.....	281
5.8B.4	Method of test	281
5.8B.4.1	Initial conditions	281
5.8B.4.2	Procedure	281
5.8B.5	Test Requirements	282
5.8C	Occupied Bandwidth (OBW) for UL CLTD Activation state 1	282
5.8C.1	Definition and applicability	282
5.8C.2	Minimum Requirements	282
5.8C.3	Test purpose.....	282
5.8C.4	Method of test	282
5.8C.4.1	Initial conditions	282
5.8C.4.2	Procedure	283
5.8C.5	Test Requirements	283
5.9	Spectrum emission mask	283
5.9.1	Definition and applicability	283
5.9.2	Minimum Requirements	283
5.9.3	Test purpose.....	285
5.9.4	Method of test	285
5.9.4.1	Initial conditions	285
5.9.4.2	Procedure	285
5.9.5	Test requirements.....	285
5.9A	Spectrum Emission Mask with HS-DPCCH	287
5.9A.1	Definition and applicability	287
5.9A.2	Minimum Requirements	287
5.9A.3	Test purpose.....	288
5.9A.4	Method of test	288
5.9A.4.1	Initial conditions	288
5.9A.4.2	Procedure	289
5.9A.5	Test requirements.....	289
5.9AA	Spectrum Emission Mask with HS-DPCCH for UL OLTD	291
5.9AA.1	Definition and applicability	291
5.9AA.2	Minimum Requirements	291
5.9AA.3	Test purpose.....	292
5.9AA.4	Method of test	292
5.9AA.4.1	Initial conditions	292
5.9AA.4.2	Procedure	293
5.9AA.5	Test requirements.....	293
5.9AB	Spectrum Emission Mask with HS-DPCCH for UL CLTD activation state 1	295
5.9AB.1	Definition and applicability	295
5.9AB.2	Minimum Requirements	295
5.9AB.3	Test purpose.....	296
5.9AB.4	Method of test	296
5.9AB.4.1	Initial conditions	296
5.9AB.4.2	Procedure	297
5.9AB.5	Test requirements.....	297
5.9AC	Spectrum Emission Mask with HS-DPCCH for UL CLTD activation state 2 and 3	299
5.9AC.1	Definition and applicability	299
5.9AC.2	Minimum Requirements	299
5.9AC.3	Test purpose.....	300
5.9AC.4	Method of test	300
5.9AC.4.1	Initial conditions	300
5.9AC.4.2	Procedure	301
5.9AC.5	Test requirements.....	301
5.9B	Spectrum Emission Mask with E-DCH	302
5.9B.1	Definition and applicability	302
5.9B.2	Minimum Requirements	303
5.9B.3	Test purpose.....	304
5.9B.4	Method of test	304

5.9B.4.1	Initial conditions	304
5.9B.4.2	Procedure	305
5.9B.5	Test requirements.....	305
5.9BA	Spectrum Emission Mask with E-DCH for UL OLTD	307
5.9BA.1	Definition and applicability	307
5.9BA.2	Minimum Requirements	307
5.9BA.3	Test purpose.....	308
5.9BA.4	Method of test	308
5.9BA.4.1	Initial conditions	308
5.9BA.4.2	Procedure	309
5.9BA.5	Test requirements.....	309
5.9BB	Spectrum Emission Mask with E-DCH for UL CLTD activation state 1.....	311
5.9BB.1	Definition and applicability	311
5.9BB.2	Minimum Requirements	311
5.9BB.3	Test purpose.....	312
5.9BB.4	Method of test	312
5.9BB.4.1	Initial conditions	312
5.9BB.4.2	Procedure	313
5.9BB.5	Test requirements.....	313
5.9BC	Spectrum Emission Mask with E-DCH for UL CLTD activation state 2 and 3	315
5.9BC.1	Definition and applicability	315
5.9BC.2	Minimum Requirements	315
5.9BC.3	Test purpose.....	316
5.9BC.4	Method of test	316
5.9BC.4.1	Initial conditions	316
5.9BC.4.2	Procedure	317
5.9BC.5	Test requirements.....	317
5.9C	Additional Spectrum Emission Mask for DC-HSUPA (QPSK).....	319
5.9C.1	Definition and applicability	319
5.9C.2	Minimum Requirements	319
5.9C.3	Test purpose.....	319
5.9C.4	Method of test	320
5.9C.4.1	Initial conditions	320
5.9C.4.2	Procedure	320
5.9C.5	Test requirements.....	320
5.9D	Additional Spectrum Emission Mask for DC-HSUPA (16QAM).....	321
5.9D.1	Definition and applicability	321
5.9D.2	Minimum Requirements	321
5.9D.3	Test purpose.....	322
5.9D.4	Method of test	322
5.9D.4.1	Initial conditions	322
5.9D.4.2	Procedure	323
5.9D.5	Test requirements.....	323
5.10	Adjacent Channel Leakage Power Ratio (ACLR).....	323
5.10.1	Definition and applicability	323
5.10.2	Minimum Requirements	324
5.10.3	Test purpose.....	324
5.10.4	Method of test	324
5.10.5	Test requirements.....	325
5.10A	Adjacent Channel Leakage Power Ratio (ACLR) with HS-DPCCH	325
5.10A.1	Definition and applicability	325
5.10A.2	Minimum Requirements	325
5.10A.3	Test purpose.....	325
5.10A.4	Method of test	326
5.10A.5	Test requirements.....	327
5.10AA	Adjacent Channel Leakage Power Ratio (ACLR) with HS-DPCCH for OLTD	327
5.10AA.1	Definition and applicability	327
5.10AA.2	Minimum Requirements	327
5.10AA.3	Test purpose.....	327
5.10AA.4	Method of test	328
5.10AA.5	Test requirements.....	329
5.10AB	Adjacent Channel Leakage Power Ratio (ACLR) with HS-DPCCH for UL CLTD Activation state 1	329

5.10AB.1	Definition and applicability	329
5.10AB.2	Minimum Requirements	329
5.10AB.3	Test purpose.....	329
5.10AB.4	Method of test	330
5.10AB.4.1	Initial conditions	330
5.10AB.4.2	Procedure	330
5.10AB.5	Test requirements.....	330
5.10AC	Adjacent Channel Leakage Power Ratio (ACLR) with HS-DPCCH for UL CLTD Activation state 2 and 3.....	331
5.10AC.1	Definition and applicability	331
5.10AC.2	Minimum Requirements	331
5.10AC.3	Test purpose.....	331
5.10AC.4	Method of test	331
5.10AC.4.1	Initial conditions	331
5.10AC.4.2	Procedure	332
5.10AC.5	Test requirements.....	333
5.10B	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH.....	333
5.10B.1	Definition and applicability	333
5.10B.2	Minimum Requirements	333
5.10B.3	Test purpose.....	333
5.10B.4	Method of test	334
5.10B.5	Test requirements.....	335
5.10BA	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for OLTD	335
5.10BA.1	Definition and applicability	335
5.10BA.2	Minimum Requirements	335
5.10BA.3	Test purpose.....	335
5.10BA.4	Method of test	336
5.10BA.5	Test requirements.....	336
5.10BB	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for UL CLTD Activation state 1	337
5.10BB.1	Definition and applicability	337
5.10BB.2	Minimum Requirements	337
5.10BB.3	Test purpose.....	337
5.10BB.4	Method of test	337
5.10BB.5	Test requirements.....	338
5.10BC	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for UL CLTD Activation state 2 and 3.....	338
5.10BC.1	Definition and applicability	338
5.10BC.2	Minimum Requirements	339
5.10BC.3	Test purpose.....	339
5.10BC.4	Method of test	339
5.10BC.5	Test requirements.....	340
5.10C	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for DC-HSUPA (QPSK)	341
5.10C.1	Definition and applicability	341
5.10C.2	Minimum Requirements	341
5.10C.3	Test purpose.....	341
5.10C.4	Method of test	341
5.10C.5	Test requirements.....	342
5.10D	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for DC-HSUPA (16QAM)	342
5.10D.1	Definition and applicability	342
5.10D.2	Minimum Requirements	343
5.10D.3	Test purpose.....	343
5.10D.4	Method of test	343
5.10D.5	Test requirements.....	344
5.11	Spurious Emissions	344
5.11.1	Definition and applicability	344
5.11.2	Minimum Requirements	344
5.11.3	Test purpose.....	352
5.11.4	Method of test	352
5.11.5	Test requirements.....	353
5.11A	Spurious Emissions for DC-HSUPA	360
5.11A.1	Definition and applicability	360
5.11A.2	Minimum Requirements	360
5.11A.3	Test purpose.....	364

5.11A.4	Method of test.....	365
5.11A.5	Test requirements.....	365
5.11B	Spurious Emissions for UL OLTD.....	370
5.11B.1	Definition and applicability	370
5.11B.2	Minimum Requirements	370
5.11B.3	Test purpose.....	370
5.11B.4	Method of test.....	370
5.11B.5	Test requirements.....	371
5.11C	Spurious Emissions for UL CLTD Activation state 1	378
5.11C.1	Definition and applicability	378
5.11C.2	Minimum Requirements	378
5.11C.3	Test purpose.....	378
5.11C.4	Method of test	379
5.11C.5	Test requirements.....	379
5.11D	Spurious Emissions for UL CLTD Activation state 2 and 3	386
5.11D.1	Definition and applicability	386
5.11D.2	Minimum Requirements	386
5.11D.3	Test purpose.....	386
5.11D.4	Method of test	387
5.11D.5	Test requirements.....	387
5.12	Transmit Intermodulation.....	394
5.12.1	Definition and applicability	394
5.12.2	Minimum Requirements	394
5.12.3	Test purpose.....	394
5.12.4	Method of test	395
5.12.5	Test requirements.....	395
5.12A	Transmit Intermodulation for DC-HSUPA	395
5.12A.1	Definition and applicability	395
5.12A.2	Minimum Requirements for DC-HSUPA.....	396
5.12A.3	Test purpose.....	396
5.12A.4	Method of test	396
5.12A.5	Test requirements.....	396
5.13	Transmit Modulation.....	397
5.13.1	Error Vector Magnitude (EVM)	397
5.13.1.1	Definition and applicability.....	397
5.13.1.2	Minimum Requirements.....	397
5.13.1.3	Test purpose	397
5.13.1.4	Method of test	397
5.13.1.5	Test requirements.....	398
5.13.1A	Error Vector Magnitude (EVM) with HS-DPCCH.....	398
5.13.1A.1	Definition and applicability.....	398
5.13.1A.2	Minimum Requirements.....	398
5.13.1A.3	Test purpose	399
5.13.1A.4	Method of test	399
5.13.1A.5	Test requirements	400
5.13.1AA	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH	401
5.13.1AA.1	Definition and applicability.....	401
5.13.1AA.2	Minimum Requirements.....	401
5.13.1AA.3	Test purpose	402
5.13.1AA.4	Method of test	402
5.13.1AA.5	Test requirements	403
5.13.1AB	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH for OLTD	404
5.13.1AB.1	Definition and applicability.....	404
5.13.1AB.2	Minimum Requirements.....	404
5.13.1AB.3	Test purpose	405
5.13.1AB.4	Method of test	405
5.13.1AB.5	Test requirements	406
5.13.1AB	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH for OLTD	407
5.13.1AC	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH for UL CLTD Activation state 1	407
5.13.1AC.1	Definition and applicability.....	407
5.13.1AC.2	Minimum Requirements.....	407

5.13.1AC.3	Test purpose	408
5.13.1AC.4	Method of test	408
5.13.1AC.5	Test requirements	410
5.13.1AD	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH for UL CLTD Activation state 2 and 3	410
5.13.1AD.1	Definition and applicability.....	410
5.13.1AD.2	Minimum Requirements.....	411
5.13.1AD.3	Test purpose	411
5.13.1AD.4	Method of test	412
5.13.1AD.5	Test requirements	413
5.13.1AAA	EVM and IQ origin offset for HS-DPCCH and E-DCH with 16 QAM.....	414
5.13.1AAA.1	Definition and applicability.....	414
5.13.1AAA.2	Minimum requirement	414
5.13.1AAA.3	Test purpose	415
5.13.1AAA.4	Method of test	415
5.13.1AAA.5	Test requirements	416
5.13.2	Peak code domain error	417
5.13.2.1	Definition and applicability.....	417
5.13.2.2	Minimum Requirements.....	417
5.13.2.3	Test purpose	417
5.13.2.4	Method of test	417
5.13.2.5	Test requirements	418
5.13.2A	Relative Code Domain Error with HS-DPCCH.....	418
5.13.2A.1	Definition and applicability.....	418
5.13.2A.2	Minimum Requirements.....	418
5.13.2A.3	Test purpose	419
5.13.2A.4	Method of test	419
5.13.2B	Relative Code Domain Error with HS-DPCCH and E-DCH	421
5.13.2B.1	Definition and applicability.....	421
5.13.2B.2	Minimum Requirements.....	421
5.13.2B.3	Test purpose	422
5.13.2B.4	Method of test	422
5.13.2B.5	Test requirements	424
5.13.2BA	Relative Code Domain Error with HS-DPCCH and E-DCH for DC-HSUPA	425
5.13.2BA.1	Definition and applicability.....	425
5.13.2BA.2	Minimum Requirements.....	425
5.13.2BA.3	Test purpose	426
5.13.2BA.4	Method of test	426
5.13.2BA.5	Test requirements	427
5.13.2C	Relative Code Domain Error for HS-DPCCH and E-DCH with 16QAM	427
5.13.2C.1	Definition and applicability.....	427
5.13.2C.2	Minimum Requirements.....	428
5.13.2C.3	Test purpose	429
5.13.2C.4	Method of test	429
5.13.2CA	Relative Code Domain Error for HS-DPCCH and E-DCH with 16QAM for DC-HSUPA	431
5.13.2CA.1	Definition and applicability.....	431
5.13.2CA.2	Minimum Requirements.....	432
5.13.2CA.3	Test purpose	433
5.13.2CA.4	Method of test	433
5.13.2CA.5	Test requirements	434
5.13.3	UE phase discontinuity	435
5.13.3.1	Definition and applicability.....	435
5.13.3.2	Minimum requirements	435
5.13.3.3	Test purpose	436
5.13.3.4	Method of test	436
5.13.3.5	Test requirements	437
5.13.4	PRACH preamble quality	438
5.13.4.1	Definition and applicability.....	438
5.13.4.2	Minimum requirements	438
5.13.4.3	Test purpose	438
5.13.4.4	Method of test	438
5.13.4.5	Test requirements	439

5.13.5	In-band emission for DC-HSUPA	440
5.13.5.1	Definition and applicability.....	440
5.13.5.2	Minimum Requirements.....	440
5.13.5.3	Test purpose	440
5.13.5.4	Method of test	440
5.13.5.5	Test requirements.....	441
6	Receiver Characteristics	442
6.1	General	442
6.1A	Reference input power adjustment for a dual band device	443
6.2	Reference Sensitivity Level.....	444
6.2.1	Definition and applicability	444
6.2.2	Minimum Requirements	444
6.2.3	Test purpose.....	445
6.2.4	Method of test	445
6.2.5	Test requirements.....	446
6.2A	Reference Sensitivity Level for DC-HSDPA	446
6.2A.1	Definition and applicability	446
6.2A.2	Minimum Requirements	447
6.2A.3	Test purpose.....	448
6.2A.4	Method of test	448
6.2A.5	Test requirements.....	449
6.2B	Reference Sensitivity Level for DB-DC-HSDPA	450
6.2B.1	Definition and applicability	450
6.2B.2	Minimum Requirements	450
6.2B.3	Test purpose.....	451
6.2B.4	Method of test	451
6.2B.5	Test requirements.....	452
6.2C	Reference Sensitivity Level for Single band 4C-HSDPA	452
6.2C.1	Definition and applicability	452
6.2C.2	Minimum Requirements	453
6.2C.3	Test purpose.....	454
6.2C.4	Method of test	454
6.2C.4.2	Procedure	454
6.2C.5	Test requirements.....	454
6.2D	Reference Sensitivity Level for Dual band 4C-HSDPA	455
6.2D.1	Definition and applicability	455
6.2D.2	Minimum Requirements	455
6.2D.3	Test purpose.....	456
6.2D.4	Method of test	456
6.2D.5	Test requirements.....	457
6.2DA	Reference Sensitivity Level for Dual band 4C-HSDPA (3 carrier).....	457
6.2DA.1	Definition and applicability	457
6.2DA.2	Minimum Requirements	457
6.2DA.3	Test purpose.....	458
6.2DA.4	Method of test	458
6.2DA.5	Test requirements.....	459
6.3	Maximum Input Level.....	459
6.3.1	Definition and applicability	459
6.3.2	Minimum requirements.....	459
6.3.3	Test purpose.....	459
6.3.4	Method of test	460
6.3.5	Test requirements.....	460
6.3A	Maximum Input Level for HS-PDSCH Reception (16QAM)	461
6.3A.1	Definition and applicability	461
6.3A.2	Minimum requirements.....	461
6.3A.3	Test purpose.....	461
6.3A.4	Method of test	461
6.3A.5	Test requirements.....	462
6.3B	Maximum Input Level for HS-PDSCH Reception (64QAM)	462
6.3B.1	Definition and applicability	462
6.3B.2	Minimum requirements.....	462

6.3B.3	Test purpose.....	463
6.3B.4	Method of test	463
6.3B.5	Test requirements.....	465
6.3C	Maximum Input Level for DC-HSDPA Reception (16QAM)	465
6.3C.1	Definition and applicability	465
6.3C.2	Minimum requirements.....	465
6.3C.3	Test purpose.....	466
6.3C.4	Method of test	466
6.3C.5	Test requirements.....	467
6.3D	Maximum Input Level for DC-HSDPA Reception (64QAM)	467
6.3D.1	Definition and applicability	467
6.3D.2	Minimum requirements.....	467
6.3D.3	Test purpose.....	468
6.3D.4	Method of test	468
6.3D.5	Test requirements.....	469
6.3E	Maximum Input Level for DB-DC-HSDPA Reception (16QAM).....	469
6.3E.1	Definition and applicability	469
6.3E.2	Minimum requirements.....	469
6.3E.3	Test purpose.....	470
6.3E.4	Method of test	470
6.3E.5	Test requirements.....	471
6.3F	Maximum Input Level for DB-DC-HSDPA Reception (64QAM).....	471
6.3F.1	Definition and applicability	471
6.3F.2	Minimum requirements.....	471
6.3F.3	Test purpose.....	472
6.3F.4	Method of test	472
6.3F.5	Test requirements.....	473
6.3G	Maximum Input Level for 4C-HSDPA Reception (16QAM)	474
6.3G.1	Definition and applicability	474
6.3G.2	Minimum requirements.....	474
6.3G.3	Test purpose.....	474
6.3G.4	Method of test	474
6.3G.5	Test requirements.....	475
6.3GA	Maximum Input Level for 4C-HSDPA Reception (16QAM) (3 carrier)	476
6.3GA.1	Definition and applicability	476
6.3GA.2	Minimum requirements.....	476
6.3GA.3	Test purpose.....	476
6.3GA.4	Method of test	476
6.3GA.5	Test requirements.....	477
6.3H	Maximum Input Level for 4C-HSDPA Reception (64QAM)	478
6.3H.1	Definition and applicability	478
6.3H.2	Minimum requirements.....	478
6.3H.3	Test purpose.....	478
6.3H.4	Method of test	478
6.3H.5	Test requirements.....	480
6.3HA	Maximum Input Level for 4C-HSDPA Reception (64QAM) (3 carrier)	480
6.3HA.1	Definition and applicability	480
6.3HA.2	Minimum requirements.....	480
6.3HA.3	Test purpose.....	481
6.3HA.4	Method of test	481
6.3HA.5	Test requirements.....	482
6.4	Adjacent Channel Selectivity (ACS) (Rel-99 and Rel-4).....	483
6.4.1	Definition and applicability	483
6.4.2	Minimum Requirements	483
6.4.3	Test purpose.....	483
6.4.4	Method of test	484
6.4.5	Test requirements.....	484
6.4A	Adjacent Channel Selectivity (ACS) (Rel-5 and later releases)	485
6.4A.1	Definition and applicability	485
6.4A.2	Minimum Requirements	485
6.4A.3	Test purpose.....	485
6.4A.4	Method of test	485

6.4A.5	Test requirements.....	486
6.4B	Adjacent Channel Selectivity (ACS) for DC-HSDPA	486
6.4B.1	Definition and applicability	486
6.4B.2	Minimum Requirements	487
6.4B.3	Test purpose.....	487
6.4B.4	Method of test	487
6.4B.5	Test requirements.....	488
6.4C	Adjacent Channel Selectivity (ACS) for DB-DC-HSDPA.....	489
6.4C.1	Definition and applicability	489
6.4C.2	Minimum Requirements	489
6.4C.3	Test purpose.....	490
6.4C.4	Method of test	490
6.4C.5	Test requirements.....	491
6.5	Blocking Characteristics.....	491
6.5.1	Definition and applicability	491
6.5.2	Minimum Requirements	491
6.5.2.1	Minimum Requirements (In-band blocking).....	491
6.5.2.2	Minimum requirements (Out of-band blocking)	493
6.5.2.3	Minimum requirements (Narrow band blocking).....	495
6.5.3	Test purpose.....	495
6.5.4	Method of test	495
6.5.5	Test requirements.....	496
6.5A	Blocking Characteristics for DC-HSDPA	499
6.5A.1	Definition and applicability	499
6.5A.2	Minimum Requirements	500
6.5A.2.1	Minimum Requirements (In-band blocking).....	500
6.5A.2.2	Minimum requirements (Out of-band blocking)	501
6.5A.2.3	Minimum requirements (Narrow band blocking).....	503
6.5A.3	Test purpose.....	503
6.5A.4	Method of test	503
6.5A.5	Test requirements.....	505
6.5B	Blocking Characteristics for DB-DC-HSDPA	508
6.5B.1	Definition and applicability	508
6.5B.2	Minimum Requirements	508
6.5B.2.1	Minimum Requirements (In-band blocking).....	508
6.5B.2.2	Minimum requirements (Out of-band blocking)	510
6.5B.2.3	Minimum requirements (Narrow band blocking).....	511
6.5B.3	Test purpose.....	511
6.5B.4	Method of test	511
6.5B.5	Test requirements.....	512
6.5C	Blocking Characteristics for DC-HSUPA	515
6.5C.1	Definition and applicability	515
6.5C.2	Minimum Requirements	515
6.5C.2.1	Minimum Requirements (In-band blocking).....	515
6.5C.2.2	Minimum requirements (Narrow band blocking).....	517
6.5C.3	Test purpose.....	518
6.5C.4	Method of test	518
6.5C.5	Test requirements.....	519
6.5D	Blocking Characteristics for single Uplink Single band 4C-HSDPA.....	522
6.5D.1	Definition and applicability	522
6.5D.2	Minimum Requirements	522
6.5D.2.1	Minimum Requirements (In-band blocking).....	522
6.5D.2.2	Minimum requirements (Out of-band blocking)	523
6.5D.3	Test purpose.....	523
6.5D.4	Method of test	524
6.5D.4.1	Initial conditions	524
6.5D.4.2	Procedure	524
6.5D.5	Test requirements.....	524
6.5E	Blocking Characteristics for dual uplink single band 4C-HSDPA	526
6.5E.1	Definition and applicability	526
6.5E.2	Minimum Requirements	526
6.5E.2.1	Minimum Requirements (In-band blocking).....	526

6.5E.3	Test purpose.....	526
6.5E.4	Method of test	527
6.5E.4.1	Initial conditions	527
6.5E.4.2	Procedure	527
6.5E.5	Test requirements.....	527
6.5F	Blocking Characteristics for single Uplink dual band 4C-HSDPA	528
6.5F.1	Definition and applicability	528
6.5F.2	Minimum Requirements	528
6.5F.2.1	Minimum Requirements (In-band blocking).....	528
6.5F.2.2	Minimum requirements (Out of-band blocking)	529
6.5F.2.3	Minimum requirements (Narrow band blocking).....	531
6.5F.3	Test purpose.....	532
6.5F.4	Method of test	532
6.5F.4.1	Initial conditions	532
6.5F.4.2	Procedure	533
6.5F.5	Test requirements.....	533
6.5FA	Blocking Characteristics for single Uplink dual band 4C-HSDPA (3 carrier)	536
6.5FA.1	Definition and applicability	536
6.5FA.2	Minimum Requirements	536
6.5FA.2.1	Minimum Requirements (In-band blocking).....	536
6.5FA.2.2	Minimum requirements (Out of-band blocking)	537
6.5FA.2.3	Minimum requirements (Narrow band blocking).....	539
6.5FA.3	Test purpose.....	540
6.5FA.4	Method of test	540
6.5FA.4.1	Initial conditions	540
6.5FA.4.2	Procedure	541
6.5FA.5	Test requirements.....	541
6.5G	Blocking Characteristics for dual uplink dual band 4C-HSDPA.....	544
6.5G.1	Definition and applicability	544
6.5G.2	Minimum Requirements	544
6.5G.2.1	Minimum Requirements (In-band blocking).....	544
6.5G.2.2	Minimum requirements (Narrow band blocking).....	546
6.5G.3	Test purpose.....	547
6.5G.4	Method of test	547
6.5G.5	Test requirements.....	548
6.5GA	Blocking Characteristics for dual uplink dual band 4C-HSDPA (3 carrier)	550
6.5GA.1	Definition and applicability	550
6.5GA.2	Minimum Requirements	551
6.5GA.2.1	Minimum Requirements (In-band blocking).....	551
6.5GA.2.2	Minimum requirements (Narrow band blocking).....	552
6.5GA.3	Test purpose.....	553
6.5GA.4	Method of test	553
6.5GA.5	Test requirements.....	554
6.6	Spurious Response	556
6.6.1	Definition and applicability	556
6.6.2	Minimum Requirements	556
6.6.3	Test purpose.....	557
6.6.4	Method of test	557
6.6.5	Test requirements.....	557
6.6A	Spurious Response for DC-HSDPA	558
6.6A.1	Definition and applicability	558
6.6A.2	Minimum Requirements	558
6.6A.3	Test purpose.....	558
6.6A.4	Method of test	558
6.6A.5	Test requirements.....	559
6.6B	Spurious Response for DB-DC-HSDPA	560
6.6B.1	Definition and applicability	560
6.6B.2	Minimum Requirements	560
6.6B.3	Test purpose.....	560
6.6B.4	Method of test	560
6.6B.5	Test requirements.....	561
6.6C	Spurious Response for single band 4C-HSDPA.....	562

6.6C.1	Definition and applicability	562
6.6C.2	Minimum Requirements	562
6.6C.3	Test purpose.....	562
6.6C.4	Method of test	562
6.6C.5	Test requirements.....	563
6.6D	Spurious Response for dual band 4C-HSDPA	563
6.6D.1	Definition and applicability	563
6.6D.2	Minimum Requirements	564
6.6D.3	Test purpose.....	564
6.6D.4	Method of test	564
6.6D.5	Test requirements.....	565
6.6DA	Spurious Response for dual band 4C-HSDPA (3 carrier)	565
6.6DA.1	Definition and applicability	565
6.6DA.2	Minimum Requirements	565
6.6DA.3	Test purpose.....	566
6.6DA.4	Method of test	566
6.6DA.5	Test requirements.....	566
6.7	Intermodulation Characteristics.....	567
6.7.1	Definition and applicability	567
6.7.2	Minimum Requirements	567
6.7.3	Test purpose.....	568
6.7.4	Method of test	568
6.7.5	Test requirements.....	569
6.7A	Intermodulation Characteristics for DC-HSDPA	569
6.7A.1	Definition and applicability	569
6.7A.2	Minimum Requirements	570
6.7A.3	Test purpose.....	570
6.7A.4	Method of test	571
6.7A.5	Test requirements.....	571
6.7B	Intermodulation Characteristics for DB-DC-HSDPA	572
6.7B.1	Definition and applicability	572
6.7B.2	Minimum Requirements	573
6.7B.3	Test purpose.....	573
6.7B.4	Method of test	574
6.7B.5	Test requirements.....	574
6.7C	Intermodulation Characteristics for DC-HSUPA	575
6.7C.1	Definition and applicability	575
6.7C.2	Minimum Requirements	576
6.7C.3	Test purpose.....	577
6.7C.4	Method of test	577
6.7C.5	Test requirements.....	578
6.7D	Intermodulation Characteristics for single uplink single band 4C-HSDPA	580
6.7D.1	Definition and applicability	580
6.7D.2	Minimum Requirements	580
6.7D.3	Test purpose.....	581
6.7D.4	Method of test	581
6.7D.5	Test requirements.....	582
6.7E	Intermodulation Characteristics for single uplink dual band 4C-HSDPA	582
6.7E.1	Definition and applicability	582
6.7E.2	Minimum Requirements	582
6.7E.3	Test purpose.....	584
6.7E.4	Method of test	584
6.7E.5	Test requirements.....	585
6.7EA	Intermodulation Characteristics for single uplink dual band 4C-HSDPA (3 carrier)	587
6.7EA.1	Definition and applicability	587
6.7EA.2	Minimum Requirements	587
6.7EA.3	Test purpose.....	588
6.7EA.4	Method of test	589
6.7EA.5	Test requirements.....	589
6.8	Spurious Emissions	591
6.8.1	Definition and applicability	591
6.8.2	Minimum Requirements	591

6.8.3	Test purpose.....	592
6.8.4	Method of test	593
6.8.5	Test requirements.....	593
6.8A	Spurious Emissions for DB-DC-HSDPA	596
6.8A.1	Definition and applicability	596
6.8A.2	Minimum Requirements	596
6.8A.3	Test purpose.....	596
6.8A.4	Method of test	596
6.8A.5	Test requirements.....	596
7	Performance requirements.....	598
7.1	General	598
7.1.1	Measurement Configurations	598
7.1.2	Definition of Additive White Gaussian Noise (AWGN) Interferer	598
7.2	Demodulation in Static Propagation conditions	599
7.2.1	Demodulation of Dedicated Channel (DCH).....	599
7.2.1.1	Definition and applicability.....	599
7.2.1.2	Minimum requirements	599
7.2.1.3	Test purpose	599
7.2.1.4	Method of test	599
7.2.1.5	Test requirements	600
7.2.2	Demodulation of Dedicated Channel (DCH) when (DL_DCH_FET_Config) is configured by higher layers.....	600
7.2.2.1	Definition and applicability.....	600
7.2.2.2	Minimum requirements	601
7.2.2.3	Test purpose	601
7.2.2.4	Method of test	601
7.2.2.4.1	Initial conditions.....	601
7.2.2.4.2	Procedures	602
7.2.2.5	Test requirements	602
7.3	Demodulation of DCH in Multi-path Fading Propagation conditions.....	603
7.3.1	Single Link Performance	603
7.3.1.1	Definition and applicability.....	603
7.3.1.2	Minimum requirements	603
7.3.1.3	Test purpose	605
7.3.1.4	Method of test	605
7.3.1.5	Test requirements	606
7.3.2	Single Link Performance when (DL_DCH_FET_Config) is configured by higher layers	608
7.3.2.1	Definition and applicability.....	608
7.3.2.2	Minimum requirements	609
7.3.2.3	Test purpose	610
7.3.2.4	Method of test	610
7.3.2.4.1	Initial conditions.....	610
7.3.2.5	Test requirements	611
7.4	Demodulation of DCH in Moving Propagation conditions	613
7.4.1	Single Link Performance	613
7.4.1.1	Definition and applicability.....	613
7.4.1.2	Minimum requirements	613
7.4.1.3	Test purpose	614
7.4.1.4	Method of test	614
7.4.1.5	Test requirements	614
7.5	Demodulation of DCH in Birth-Death Propagation conditions.....	615
7.5.1	Single Link Performance	615
7.5.1.1	Definition and applicability.....	615
7.5.1.2	Minimum requirements	615
7.5.1.3	Test purpose	615
7.5.1.4	Method of test	615
7.5.1.5	Test requirements	616
7.5A	Demodulation of DCH in high speed train condition.....	616
7.5A.1	Single Link Performance	616
7.5A.1.1	Definition and applicability.....	616
7.5A.1.2	Minimum requirement	616

7.5A.1.3	Test purpose	617
7.5A.1.4	Method of test	617
7.5A.1.5	Test requirements	617
7.6	Demodulation of DCH in downlink Transmit diversity modes.....	618
7.6.1	Demodulation of DCH in open-loop transmit diversity mode.....	618
7.6.1.1	Definition and applicability.....	618
7.6.1.2	Minimum requirements	618
7.6.1.3	Test purpose	618
7.6.1.4	Method of test	618
7.6.1.5	Test Requirements.....	619
7.6.2	Demodulation of DCH in closed loop transmit diversity mode.....	620
7.6.2.1	Definition and applicability.....	620
7.6.2.2	Minimum requirements	620
7.6.2.3	Test purpose	621
7.6.2.4	Method of test	621
7.6.2.5	Test Requirements.....	622
7.6.3	Demodulation of DCH in Site Selection Diversity Transmission Power Control mode.....	623
7.6.3.1	Definition and applicability.....	623
7.6.3.2	Minimum requirements	623
7.6.3.3	Test purpose	624
7.6.3.4	Method of test	624
7.6.3.5	Test Requirements.....	627
7.7	Demodulation in Handover conditions.....	628
7.7.1	Demodulation of DCH in Inter-Cell Soft Handover (Release 5 and earlier)	628
7.7.1.1	Definition and applicability.....	628
7.7.1.2	Minimum requirements	628
7.7.1.3	Test purpose	629
7.7.1.4	Method of test	629
7.7.1.5	Test requirements	629
7.7.1A	Demodulation of DCH in Inter-Cell Soft Handover (Release 6 and later)	630
7.7.1A.1	Definition and applicability.....	630
7.7.1A.2	Minimum requirements	630
7.7.1A.3	Test purpose	631
7.7.1A.4	Method of test	631
7.7.1A.5	Test requirements	631
7.7.1B	Demodulation of DCH in Inter-Cell Soft Handover when (DL_DCH_FET_Config) is configured by higher layers.....	632
7.7.1B.1	Definition and applicability.....	632
7.7.1B.2	Minimum requirements	632
7.7.1B.3	Test purpose	633
7.7.1B.4	Method of test	633
7.7.1B.4.1	Initial conditions	633
7.7.1B.4.2	Procedures	633
7.7.1B.5	Test requirements	633
7.7.2	Combining of TPC commands from radio links of different radio link sets.....	634
7.7.2.1	Definition and applicability.....	634
7.7.2.2	Minimum requirements	634
7.7.2.3	Test purpose	635
7.7.2.4	Method of test	635
7.7.2.5	Test requirements	636
7.7.2A	Combining of TPC commands from radio links of different radio link sets when (DL_DCH_FET_Config) is configured by higher layers	637
7.7.2A.1	Definition and applicability.....	637
7.7.2A.2	Minimum requirements	637
7.7.2A.3	Test purpose	638
7.7.2A.4	Method of test	638
7.7.2A.4.1	Initial conditions	638
7.7.2A.4.2	Procedures	639
7.7.2A.5	Test requirements	640
7.7.3	Combining of reliable TPC commands from radio links of different radio link sets.....	641
7.7.3.1	Definition and applicability.....	641
7.7.3.2	Minimum requirements	641

7.7.3.3	Test purpose	641
7.7.3.4	Method of test	642
7.7.3.4.1	Test 1 Initial conditions	642
7.7.3.4.2	Test 1 Procedures	642
7.7.3.4.3	Test 2 Initial conditions	642
7.7.3.4.4	Test 2 Procedures	642
7.7.3.5	Test requirements	643
7.7.3A	Combining of reliable TPC commands from radio links of different radio link sets when DL_DCH_FET_Config [10] is configured by higher layers	644
7.7.3A.1	Definition and applicability.....	644
7.7.3A.2	Minimum requirements	644
7.7.3A.3	Test purpose	644
7.7.3A.4	Method of test	645
7.7.3A.4.1	Test 1 Initial conditions	645
7.7.3A.4.2	Test 1 Procedures	645
7.7.3A.4.3	Test 2 Initial conditions	645
7.7.3A.4.4	Test 2 Procedures	645
7.7.3A.5	Test requirements.....	646
7.8	Power control in downlink	647
7.8.1	Power control in the downlink, constant BLER target (Release 5 and earlier).....	648
7.8.1.1	Definition and applicability.....	648
7.8.1.2	Minimum requirements	648
7.8.1.3	Test purpose	648
7.8.1.4	Method of test	648
7.8.1.5	Test Requirements.....	649
7.8.1A	Power control in the downlink, constant BLER target (Release 6 and later).....	650
7.8.1A.1	Definition and applicability.....	650
7.8.1A.2	Minimum requirements	650
7.8.1A.3	Test purpose	650
7.8.1A.4	Method of test	650
7.8.1A.5	Test Requirements.....	651
7.8.1B	Power control in the downlink, constant BLER target when DL_DCH_FET_Config is configured by higher layers.....	652
7.8.1B.1	Definition and applicability.....	652
7.8.1B.2	Minimum requirements	652
7.8.1B.3	Test purpose	653
7.8.1B.4	Method of test	653
7.8.1B.5	Test Requirements.....	655
7.8.2	Power control in the downlink, initial convergence.....	657
7.8.2.1	Definition and applicability.....	657
7.8.2.2	Minimum requirements	657
7.8.2.3	Test purpose	658
7.8.2.4	Method of test	658
7.8.2.5	Test Requirements.....	658
7.8.2A	Power control in the downlink, initial convergence when DL_DCH_FET_Config is configured by higher layers.....	660
7.8.2A.1	Definition and applicability.....	660
7.8.2A.2	Minimum requirements	660
7.8.2A.3	Test purpose	661
7.8.2A.4	Method of test	661
7.8.2A.5	Test Requirements.....	662
7.8.3	Power control in the downlink, wind up effects (Release 5 and earlier).....	664
7.8.3.1	Definition and applicability.....	664
7.8.3.2	Minimum requirements	664
7.8.3.3	Test purpose	664
7.8.3.4	Method of test	664
7.8.3.5	Test Requirements.....	665
7.8.3A	Power control in the downlink, wind up effects (Release 6 and later).....	666
7.8.3A.1	Definition and applicability.....	666
7.8.3A.2	Minimum requirements	666
7.8.3A.3	Test purpose	667
7.8.3A.4	Method of test	667

7.8.3B	Power control in the downlink, wind up effects (Release 6 and later) when DL_DCH_FET_Config is configured by higher layers	668
7.8.3B.1	Definition and applicability.....	668
7.8.3B.2	Minimum requirements	668
7.8.3B.3	Test purpose	670
7.8.3B.4	Method of test	671
7.8.3B.4.1	Initial conditions.....	671
7.8.3B.4.2	Procedure.....	671
7.8.3B.5	Test Requirements.....	673
7.8.4	Power control in the downlink, different transport formats	675
7.8.4.1	Definition and applicability.....	675
7.8.4.2	Minimum requirements	675
7.8.4.3	Test purpose	676
7.8.4.4	Method of test	676
7.8.4.5	Test Requirements.....	677
7.8.4A	Power control in the downlink, different transport formats when DL_DCH_FET_Config is configured by higher layers	678
7.8.4A.1	Definition and applicability.....	678
7.8.4A.2	Minimum requirements	678
7.8.4A.3	Test purpose	679
7.8.4A.4	Method of test	679
7.8.4A.4.1	Initial conditions.....	679
7.8.4A.4.2	Procedure.....	680
7.8.4.5	Test Requirements.....	681
7.8.5	Power control in the downlink for F-DPCH	683
7.8.5.1	Definition and applicability.....	683
7.8.5.2	Minimum requirements	683
7.8.5.3	Test purpose	684
7.8.5.4	Method of test	684
7.8.5.5	Test Requirements.....	687
7.9	Downlink compressed mode	687
7.9.1	Single link performance (Release 5 and earlier).....	688
7.9.1.1	Definition and applicability.....	688
7.9.1.2	Minimum requirements	688
7.9.1.3	Test purpose	689
7.9.1.4	Method of test	689
7.9.1.5	Test requirements	689
7.9.1A	Single link performance (Release 6 and later).....	691
7.9.1A.1	Definition and applicability.....	691
7.9.1A.2	Minimum requirements	691
7.9.1A.3	Test purpose	691
7.9.1A.4	Method of test	692
7.9.1A.5	Test requirements	692
7.10	Blind transport format detection.....	693
7.10.1	Definition and applicability	693
7.10.2	Minimum requirements	693
7.10.3	Test purpose.....	694
7.10.4	Method of test	694
7.10.5	Test requirements.....	695
7.11	Demodulation of Paging Channel (PCH)	695
7.11.1	Definition and applicability	695
7.11.2	Minimum requirements	695
7.11.3	Test purpose.....	696
7.11.4	Method of test	696
7.11.5	Test requirements.....	699
7.12	Detection of Acquisition Indicator (AI)	699
7.12.1	Definition and applicability	699
7.12.2	Minimum requirements	700
7.12.3	Test purpose.....	700
7.12.4	Method of test	700
7.12.5	Test requirements.....	702
7.12A	Detection of E-DCH Acquisition Indicator (E-AI)	702

7.12A.1	Definition and applicability	702
7.12A.2	Minimum requirements.....	702
7.12A.3	Test purpose.....	703
7.12A.4	Method of test	703
7.12A.5	Test requirements.....	704
7.13	UE UL power control operation with discontinuous UL DPCCH transmission operation	705
7.13.1	Definition and applicability	705
7.13.2	Minimum requirement	705
7.13.3	Test purpose.....	705
7.13.4	Method of test	706
7.13.4.1	Initial conditions	706
7.13.4.2	Procedure	706
7.13.5.	Test Requirements.....	708
8	Requirements for support of RRM.....	709
8.1	General	709
8.1.1	Definition of Additive White Gaussian Noise (AWGN) Interferer	709
8.1.2	Groups of E-UTRA bands	709
8.2	Idle Mode Tasks	710
8.2.1	Cell Selection.....	710
8.2.2	Cell Re-Selection	710
8.2.2.1	Scenario 1: Single carrier case	710
8.2.2.1.1	Definition and applicability	710
8.2.2.1.2	Minimum requirement	710
8.2.2.1.3	Test purpose	711
8.2.2.1.4	Method of test.....	711
8.2.2.1.5	Test requirements	714
8.2.2.2	Scenario 2: Multi carrier case.....	714
8.2.2.2.1	Definition and applicability	714
8.2.2.2.2	Minimum requirement	714
8.2.2.2.3	Test purpose	714
8.2.2.2.4	Method of test.....	715
8.2.2.2.5	Test requirements	717
8.2.3	UTRAN to GSM Cell Re-Selection.....	719
8.2.3.1	Scenario 1: Both UTRA and GSM level changed.....	719
8.2.3.1.1	Definition and applicability	719
8.2.3.1.2	Minimum requirement	719
8.2.3.1.3	Test purpose	719
8.2.3.1.4	Method of test.....	719
8.2.3.1.5	Test requirements	721
8.2.3.2	Scenario 2: Only UTRA level changed.....	722
8.2.3.2.1	Definition and applicability	722
8.2.3.2.2	Minimum requirement	722
8.2.3.2.3	Test purpose	722
8.2.3.2.4	Method of test.....	722
8.2.3.2.5	Test requirements	724
8.2.3.3	Scenario 3: HCS with only UTRA level changed	725
8.2.3.3.1	Definition and applicability	725
8.2.3.3.2	Minimum requirement	725
8.2.3.3.3	Test purpose	725
8.2.3.3.4	Method of test.....	725
8.2.3.3.5	Test requirements	727
8.2.4	FDD/TDD Cell Re-selection.....	728
8.2.4.1	Definition and applicability.....	728
8.2.4.1.1	3.84 Mcps TDD Option.....	728
8.2.4.1.2	1.28 Mcps TDD Option.....	728
8.2.4.2	Minimum requirement	729
8.2.4.3	Test purpose	729
8.2.4.4	Method of test	729
8.2.4.4.1	Initial conditions	729
8.2.4.4.1.1	3.84 Mcps TDD Option	729
8.2.4.4.1.2	1.28 Mcps TDD Option	730

8.2.4.4.2	Procedures	731
8.2.4.5	Test requirements	731
8.2.5	UTRAN to E-UTRA Cell Re-Selection.....	732
8.2.5.1	E-UTRA is of higher priority.....	732
8.2.5.1.1	Definition and applicability.....	732
8.2.5.1.2	Minimum requirement.....	732
8.2.5.1.3	Test purpose	732
8.2.5.1.4	Method of test.....	732
8.2.5.1.5	Test requirements	735
8.2.5.2	E-UTRA is of lower priority	736
8.2.5.2.1	Definition and applicability	736
8.2.5.2.2	Minimum requirement.....	737
8.2.5.2.3	Test purpose	737
8.2.5.2.4	Method of test.....	737
8.2.5.2.5	Test requirements	740
8.2.5.3	RSRQ based reselection when E-UTRA FDD is of higher priority.....	741
8.2.5.3.1	Definition and applicability	741
8.2.5.3.2	Minimum requirement.....	741
8.2.5.3.3	Test purpose	741
8.2.5.3.4	Method of test.....	741
8.2.5.3.5	Test requirements	746
8.3	UTRAN Connected Mode Mobility	747
8.3.1	FDD/FDD Soft Handover	747
8.3.1.1	Definition and applicability.....	747
8.3.1.2	Minimum requirement	748
8.3.1.3	Test purpose	748
8.3.1.4	Method of test	748
8.3.1.5	Test requirements	753
8.3.2	FDD/FDD Hard Handover.....	754
8.3.2.1	FDD/FDD Hard Handover to intra-frequency cell.....	754
8.3.2.1.1	Definition and applicability	754
8.3.2.1.2	Minimum requirement	754
8.3.2.1.3	Test purpose	755
8.3.2.1.4	Method of test.....	755
8.3.2.1.5	Test requirements	761
8.3.2.2	FDD/FDD Hard Handover to inter-frequency cell.....	761
8.3.2.2.1	Definition and applicability	761
8.3.2.2.2	Minimum requirement	761
8.3.2.2.3	Test purpose	762
8.3.2.2.4	Method of test.....	762
8.3.2.2.5	Test requirements	767
8.3.3	FDD/TDD Handover	768
8.3.3.1	Definition and applicability	768
8.3.3.2	Minimum requirement	768
8.3.3.3	Test purpose	768
8.3.3.4	Method of test	768
8.3.3.5	Test requirements	773
8.3.4	Inter-system Handover from UTRAN FDD to GSM.....	774
8.3.4.1	Definition and applicability	774
8.3.4.2	Minimum requirement.....	774
8.3.4.3	Test purpose	774
8.3.4.4	Method of test.....	774
8.3.4.5	Test requirements	781
8.3.4a	Inter-system Handover from UTRAN FDD to E-UTRAN FDD	781
8.3.4a.1	Definition and applicability	781
8.3.4a.2	Minimum requirement.....	782
8.3.4a.3	Test purpose	782
8.3.4a.4	Method of test.....	782
8.3.4a.5	Test requirements	790
8.3.4b	Inter-system Handover from UTRAN FDD to E-UTRAN TDD.....	791
8.3.4b.1	Definition and applicability.....	791
8.3.4b.2	Minimum requirement	792

8.3.4b.3	Test purpose	792
8.3.4b.4	Method of test	792
8.3.4b.4.1	Initial conditions.....	792
8.3.4b.4.2	Procedure.....	794
8.3.4b.5	Test requirements	800
8.3.4c	Inter-system Handover from UTRAN FDD to E-UTRAN FDD: Unknown Target Cell	802
8.3.4c.1	Definition and applicability.....	802
8.3.4c.2	Minimum requirement	802
8.3.4c.3	Test purpose	802
8.3.4c.4	Method of test	802
8.3.4c.5	Test requirements	808
8.3.4d	Inter-system Handover from UTRAN FDD to E-UTRAN TDD; Unknown Target Cell	809
8.3.4d.1	Definition and applicability.....	809
8.3.4d.2	Minimum requirement	809
8.3.4d.3	Test purpose	809
8.3.4d.4	Method of test	809
8.3.4d.4.1	Initial conditions.....	809
8.3.4d.4.2	Procedure.....	811
8.3.4d.5	Test requirements	815
8.3.5	Cell Re-selection in CELL_FACH	815
8.3.5.1	One frequency present in neighbour lis and FACH measurement occasions configured.....	815
8.3.5.1.1	Definition and applicability	815
8.3.5.1.2	Minimum requirements	816
8.3.5.1.3	Test purpose	816
8.3.5.1.4	Method of test.....	816
8.3.5.1.5	Test requirements	818
8.3.5.1a	One frequency present in neighbour list and HS-DSCH DRX configured	819
8.3.5.1a.1	Definition and applicability	819
8.3.5.1a.2	Minimum requirements	819
8.3.5.1a.3	Test purpose	819
8.3.5.1a.4	Method of test.....	820
8.3.5.1a.5	Test requirements	822
8.3.5.2	Two frequencies present in the neighbour list and FACH measurement occasions configured.....	823
8.3.5.2.1	Definition and applicability	823
8.3.5.2.2	Minimum requirements	823
8.3.5.2.3	Test purpose	823
8.3.5.2.4	Method of test.....	824
8.3.5.2.5	Test requirements	827
8.3.5.2a	Two frequencies present in the neighbour list and HS-DSCH DRX configured (Absolute priority levels not configured).....	827
8.3.5.2a.1	Definition and applicability	827
8.3.5.2a.2	Minimum requirements	827
8.3.5.2a.3	Test purpose	828
8.3.5.2a.4	Method of test.....	828
8.3.5.2a.5	Test requirements	830
8.3.5.2b	Two frequencies present in the neighbour list and HS-DSCH DRX configured (Absolute priority levels configured).....	831
8.3.5.2b.1	Definition and applicability	831
8.3.5.2b.2	Minimum requirements	831
8.3.5.2b.3	Test purpose	831
8.3.5.2b.4	Method of test.....	832
8.3.5.2b.5	Test requirements	834
8.3.5.2c	Two frequencies present in the neighbour list and HS-DSCH 2 nd DRX configured (Absolute priority levels not configured).....	835
8.3.5.2c.1	Definition and applicability	835
8.3.5.2c.2	Minimum requirements	835
8.3.5.2c.3	Test purpose	835
8.3.5.2c.4	Method of test.....	836
8.3.5.2c.5	Test requirements	838
8.3.5.2d	Two frequencies present in the neighbour list and HS-DSCH 2 nd DRX configured (Absolute priority levels configured).....	839
8.3.5.2d.1	Definition and applicability	839

8.3.5.2d.2	Minimum requirements	839
8.3.5.2d.3	Test purpose	840
8.3.5.2d.4	Method of test.....	840
8.3.5.2d.5	Test requirements	843
8.3.5.3	Cell Reselection to GSM.....	844
8.3.5.3.1	Definition and applicability	844
8.3.5.3.2	Minimum requirements	844
8.3.5.3.3	Test purpose	845
8.3.5.3.4	Method of test.....	845
8.3.5.3.5	Test requirements	847
8.3.5.4	Cell Reselection during an MBMS session, two frequencies present in neighbour list	848
8.3.5.4.1	Definition and applicability	848
8.3.5.4.2	Minimum requirements	848
8.3.5.4.3	Test purpose	848
8.3.5.4.4	Method of test.....	849
8.3.5.4.5	Test requirements	853
8.3.5.5	UTRAN to E-UTRA Cell Reselection	854
8.3.5.5.1	Reselection to E-UTRA FDD when HS-DSCH DRX is configured (E-UTRA has higher priority).....	854
8.3.5.5.1.1	Definition and applicability	854
8.3.5.5.1.1	Minimum requirements.....	854
8.3.5.5.1.3	Test purpose	854
8.3.5.5.1.4	Method of test	854
8.3.5.5.1.4.1	Initial conditions.....	854
8.3.5.5.1.4.2	Procedure.....	857
8.3.5.5.1.5	Test requirements.....	858
8.3.5.5.2	Reselection to E-UTRA FDD when HS-DSCH DRX is configured (E-UTRA has lower priority).....	860
8.3.5.5.2.1	Definition and applicability	860
8.3.5.5.2.1	Minimum requirements.....	860
8.3.5.5.2.3	Test purpose	860
8.3.5.5.2.4	Method of test	860
8.3.5.5.2.4.1	Initial conditions.....	860
8.3.5.5.2.4.2	Procedure.....	863
8.3.5.5.2.5	Test requirements.....	864
8.3.5.5.3	Reselection to E-UTRA FDD when HS-DSCH 2nd DRX is configured (E-UTRA has higher priority).....	866
8.3.5.5.3.1	Definition and applicability	866
8.3.5.5.3.1	Minimum requirements.....	866
8.3.5.5.3.3	Test purpose	867
8.3.5.5.3.4	Method of test	867
8.3.5.5.3.4.1	Initial conditions.....	867
8.3.5.5.3.4.2	Procedure.....	870
8.3.5.5.1.5	Test requirements.....	871
8.3.5.5.4	Reselection to E-UTRA TDD when HS-DSCH DRX is configured (E-UTRA has higher priority).....	873
8.3.5.5.4.1	Definition and applicability	873
8.3.5.5.4.1	Minimum requirements.....	873
8.3.5.5.4.3	Test purpose	874
8.3.5.5.4.4	Method of test	874
8.3.5.5.4.4.1	Initial conditions.....	874
8.3.5.5.4.4.2	Procedure.....	877
8.3.5.5.4.5	Test requirements.....	877
8.3.5.5.5	Reselection to E-UTRA TDD when HS-DSCH DRX is configured (E-UTRA has lower priority).....	878
8.3.5.5.5.1	Definition and applicability	878
8.3.5.5.5.1	Minimum requirements.....	878
8.3.5.5.5.3	Test purpose	879
8.3.5.5.5.4	Method of test	879
8.3.5.5.5.4.1	Initial conditions.....	879
8.3.5.5.5.4.2	Procedure.....	882
8.3.5.5.5.5	Test requirements.....	882

8.3.5.5.6	Reselection to E-UTRA TDD when HS-DSCH 2 nd DRX is configured (E-UTRA has higher priority).....	883
8.3.5.5.6.1	Definition and applicability	883
8.3.5.5.6.2	Minimum requirements.....	883
8.3.5.5.6.3	Test purpose.....	884
8.3.5.5.6.4	Method of test	884
8.3.5.5.6.4.1	Initial conditions.....	884
8.3.5.5.6.4.2	Procedure.....	887
8.3.5.5.6.5	Test requirements.....	887
8.3.6	Cell Re-selection in CELL_PCH	889
8.3.6.1	One frequency present in the neighbour list.....	889
8.3.6.1.1	Definition and applicability	889
8.3.6.1.2	Minimum requirements	889
8.3.6.1.3	Test purpose	889
8.3.6.1.4	Method of test.....	889
8.3.6.1.5	Test requirements	893
8.3.6.2	Two frequencies present in the neighbour list.....	893
8.3.6.2.1	Definition and applicability	893
8.3.6.2.2	Minimum requirement.....	893
8.3.6.2.3	Test purpose	894
8.3.6.2.4	Method of test.....	894
8.3.6.2.5	Test requirements	898
8.3.6.3	Cell re-selection during an MBMS session, one UTRAN inter-frequency and 2 GSM cells present in the neighbour list	899
8.3.6.3.1	Definition and applicability	899
8.3.6.3.2	Minimum requirement.....	899
8.3.6.3.3	Test purpose	899
8.3.6.3.4	Method of test.....	899
8.3.6.3.5	Test requirements	903
8.3.7	Cell Re-selection in URA_PCH.....	904
8.3.7.1	One frequency present in the neighbour list.....	904
8.3.7.1.1	Definition and applicability	904
8.3.7.1.2	Minimum requirement.....	904
8.3.7.1.3	Test purpose	905
8.3.7.1.4	Method of test.....	905
8.3.7.1.5	Test requirements	908
8.3.7.2	Two frequencies present in the neighbour list.....	908
8.3.7.2.1	Definition and applicability	908
8.3.7.2.2	Minimum requirement.....	908
8.3.7.2.3	Test purpose	909
8.3.7.2.4	Method of test.....	909
8.3.7.2.5	Test requirements	912
8.3.8	Serving HS-DSCH cell change	913
8.3.8.1	Definition and applicability.....	913
8.3.8.2	Minimum requirement	913
8.3.8.3	Test purpose	913
8.3.8.4	Method of test	913
8.3.8.4.1	Initial conditions.....	917
8.3.8.4.2	Procedure.....	917
8.3.8.5	Test requirements	926
8.3.9	Enhanced Serving HS-DSCH cell change	928
8.3.9.1	Definition and applicability.....	928
8.3.9.2	Minimum requirement	928
8.3.9.3	Test purpose	928
8.3.9.4	Method of test	929
8.3.9.4.1	Initial conditions.....	930
8.3.9.4.2	Procedure.....	930
8.3.9.5	Test requirements	938
8.3.10	System information acquisition for CSG cell	938
8.3.10.1	Intrafrequency System information acquisition for CSG cell	938
8.3.10.1.1	Definition and applicability	938
8.3.10.1.2	Minimum requirement.....	939

8.3.10.1.3	Test purpose	939
8.3.10.1.4	Method of test.....	939
8.3.10.1.5	Test requirements	943
8.3.10.2	Inter frequency System information acquisition for CSG cell	943
8.3.10.2.1	Definition and applicability.....	943
8.3.10.2.2	Minimum requirement.....	943
8.3.10.2.3	Test purpose	944
8.3.10.2.4	Method of test.....	944
8.3.10.2.5	Test requirements	950
8.4	RRC Connection Control	951
8.4.1	RRC Re-establishment delay	951
8.4.1.1	Test 1.....	951
8.4.1.1.1	Definition and applicability.....	951
8.4.1.1.2	Minimum requirement.....	951
8.4.1.1.3	Test purpose	951
8.4.1.1.4	Method of test.....	952
8.4.1.1.5	Test requirements	954
8.4.1.2	Test 2.....	954
8.4.1.2.1	Definition and applicability.....	954
8.4.1.2.2	Minimum requirement.....	954
8.4.1.2.3	Test purpose	955
8.4.1.2.4	Method of test.....	955
8.4.1.2.5	Test requirements	956
8.4.2	Random Access	957
8.4.2.1	Correct behaviour when receiving an ACK (Release 5 and earlier)	957
8.4.2.1.1	Definition and applicability.....	957
8.4.2.1.2	Minimum Requirements	957
8.4.2.1.3	Test purpose	957
8.4.2.1.4	Method of test.....	957
8.4.2.1.5	Test requirements	959
8.4.2.1A	Correct behaviour when receiving an ACK (Release 6 and later).....	960
8.4.2.1A.1	Definition and applicability.....	960
8.4.2.1A.2	Minimum Requirements	960
8.4.2.1A.3	Test purpose	960
8.4.2.1A.4	Method of test.....	960
8.4.2.1A.5	Test requirements	962
8.4.2.2	Correct behaviour when receiving an NACK	963
8.4.2.2.1	Definition and applicability	963
8.4.2.2.2	Minimum Requirements	963
8.4.2.2.3	Test purpose	963
8.4.2.2.4	Method of test.....	963
8.4.2.2.5	Test requirements	963
8.4.2.3	Correct behaviour at Time-out	964
8.4.2.3.1	Definition and applicability	964
8.4.2.3.2	Minimum Requirements	964
8.4.2.3.3	Test purpose	964
8.4.2.3.4	Method of test.....	964
8.4.2.3.5	Test requirements	964
8.4.2.4	Correct behaviour when reaching maximum transmit power	964
8.4.2.4.1	Definition and applicability	964
8.4.2.4.2	Minimum Requirements	965
8.4.2.4.3	Test purpose	965
8.4.2.4.4	Method of test.....	965
8.4.2.4.5	Test requirements	966
8.4.3	Transport format combination selection in UE	966
8.4.3.1	Interactive or Background, PS, UL: 64 kbps.....	966
8.4.3.1.1	Definition and applicability	966
8.4.3.1.2	Minimum requirements	966
8.4.3.1.3	Test purpose	967
8.4.3.1.4	Method of test.....	967
8.4.3.1.5	Test requirements	970
8.4.3.1A	Interactive or Background, PS, UL: 64 kbps + Conversational / speech, CS, UL: 12.2kbps.....	970

8.4.3.1A.1	Definition and applicability	970
8.4.3.1A.2	Minimum requirements	970
8.4.3.1A.3	Test purpose	972
8.4.3.1A.4	Method of test.....	972
8.4.3.1A.5	Test requirements	975
8.4.4	E-TFC restriction in UE.....	976
8.4.4.1	10ms TTI E-DCH E-TFC restriction	976
8.4.4.1.1	Definition and applicability	976
8.4.4.1.2	Minimum requirements	976
8.4.4.1.3	Test Purpose	978
8.4.4.1.4	Method of test.....	978
8.4.4.1.5	Test Requirements	982
8.4.4.2	2ms TTI E-DCH E-TFC restriction	982
8.4.4.2.1	Definition and applicability	982
8.4.4.2.2	Minimum requirements	982
8.4.4.2.3	Test Purpose	985
8.4.4.2.4	Method of test.....	985
8.4.4.2.5	Test Requirements	989
8.5	Timing and Signalling Characteristics	989
8.5.1	UE Transmit Timing.....	989
8.5.1.1	Definition and applicability.....	989
8.5.1.2	Minimum requirements	990
8.5.1.3	Test purpose	991
8.5.1.4	Method of test	991
8.5.1.5	Test requirements	995
8.6	UE Measurements Procedures.....	996
8.6.1	FDD intra frequency measurements	996
8.6.1.1	Event triggered reporting in AWGN propagation conditions (R99)	996
8.6.1.1.1	Definition and applicability	996
8.6.1.1.2	Minimum requirements	996
8.6.1.1.3	Test purpose	997
8.6.1.1.4	Method of test.....	998
8.6.1.1.5	Test requirements	1001
8.6.1.1A	Event triggered reporting in AWGN propagation conditions (Rel-4 and later)	1001
8.6.1.1A.1	Definition and applicability	1001
8.6.1.1A.2	Minimum requirements	1002
8.6.1.1A.3	Test purpose	1003
8.6.1.1A.4	Method of test.....	1003
8.6.1.1A.5	Test requirements	1006
8.6.1.2	Event triggered reporting of multiple neighbours in AWGN propagation condition (R99).....	1007
8.6.1.2.1	Definition and applicability	1007
8.6.1.2.2	Minimum requirements	1007
8.6.1.2.3	Test purpose	1007
8.6.1.2.4	Method of test.....	1007
8.6.1.2.5	Test requirements	1014
8.6.1.2A	Event triggered reporting of multiple neighbours in AWGN propagation condition (Rel-4 and later)	1016
8.6.1.2A.1	Definition and applicability	1016
8.6.1.2A.2	Minimum requirements	1016
8.6.1.2A.3	Test purpose	1016
8.6.1.2A.4	Method of test.....	1016
8.6.1.2A.5	Test requirements	1022
8.6.1.3	Event triggered reporting of two detectable neighbours in AWGN propagation condition (R99)....	1023
8.6.1.3.1	Definition and applicability	1023
8.6.1.3.2	Minimum requirements	1023
8.6.1.3.3	Test purpose	1023
8.6.1.3.4	Method of test.....	1023
8.6.1.3.5	Test requirements	1029
8.6.1.3A	Event triggered reporting of two detectable neighbours in AWGN propagation condition (Rel-4 and later)	1031
8.6.1.3A.1	Definition and applicability	1031
8.6.1.3A.2	Minimum requirements	1031

8.6.1.3A.3	Test purpose	1031
8.6.1.3A.4	Method of test.....	1031
8.6.1.3A.5	Test requirements	1034
8.6.1.4	Void.....	1035
8.6.1.4A	Correct reporting of neighbours in fading propagation condition (Rel-4 and later)	1035
8.6.1.4A.1	Definition and applicability	1035
8.6.1.4A.2	Minimum requirements	1036
8.6.1.4A.3	Test purpose	1036
8.6.1.4A.4	Method of test.....	1036
8.6.1.4A.5	Test requirements	1039
8.6.1.5	Event triggered reporting of multiple neighbour cells in Case 1 fading condition.....	1040
8.6.1.5.1	Definition and applicability	1040
8.6.1.5.2	Minimum requirements	1040
8.6.1.5.3	Test purpose	1040
8.6.1.5.4	Method of test.....	1040
8.6.1.5.5	Test requirements	1043
8.6.1.6	Event triggered reporting of multiple neighbour cells in Case 3 fading condition.....	1044
8.6.1.6.1	Definition and applicability	1044
8.6.1.6.2	Minimum requirements	1044
8.6.1.6.3	Test purpose	1044
8.6.1.6.4	Method of test.....	1044
8.6.1.6.5	Test requirements	1048
8.6.2	FDD inter frequency measurements	1049
8.6.2.1	Correct reporting of neighbours in AWGN propagation condition (Release 5 and earlier)	1049
8.6.2.1.1	Definition and applicability	1049
8.6.2.1.2	Minimum requirements	1049
8.6.2.1.3	Test purpose	1050
8.6.2.1.4	Method of test.....	1050
8.6.2.1.5	Test requirements	1056
8.6.2.1A	Correct reporting of neighbours in AWGN propagation condition (Release 6 and later)	1057
8.6.2.1A.1	Definition and applicability	1057
8.6.2.1A.2	Minimum requirements	1058
8.6.2.1A.3	Test purpose	1058
8.6.2.1A.4	Method of test.....	1059
8.6.2.1A.5	Test requirements	1065
8.6.2.2	Correct reporting of neighbours in fading propagation condition (Release 5 only)	1066
8.6.2.2.1	Definition and applicability	1066
8.6.2.2.2	Minimum requirements	1066
8.6.2.2.3	Test purpose	1066
8.6.2.2.4	Method of test.....	1066
8.6.2.2.4.1	Initial conditions	1066
8.6.2.2.4.2	Procedure	1067
8.6.2.2.5	Test requirements	1071
8.6.2.2A	Correct reporting of neighbours in fading propagation condition (Release 6 and later)	1071
8.6.2.2A.1	Definition and applicability	1071
8.6.2.2A.2	Minimum requirements	1071
8.6.2.2A.3	Test purpose	1071
8.6.2.2A.4	Method of test.....	1072
8.6.2.2A.4.1	Initial conditions	1072
8.6.2.2A.4.2	Procedure	1072
8.6.2.2A.5	Test requirements	1076
8.6.2.3	Correct reporting of neighbours in fading propagation condition using TGL1=14.....	1076
8.6.2.3.1	Definition and applicability	1076
8.6.2.3.2	Minimum requirements	1077
8.6.2.3.3	Test purpose	1077
8.6.2.3.4	Method of test.....	1077
8.6.2.3.4.1	Initial conditions	1077
8.6.2.3.4.2	Procedure	1078
8.6.2.3.5	Test requirements	1081
8.6.3	TDD measurements	1082
8.6.3.1	Correct reporting of TDD neighbours in AWGN propagation condition.....	1082
8.6.3.1.1	Definition and applicability	1082

8.6.3.1.2	Minimum requirement	1082
8.6.3.1.2.1	3.84Mcps TDD option	1082
8.6.3.1.2.2	1.28Mcps TDD option	1083
8.6.3.1.3	Test purpose	1084
8.6.3.1.4	Method of test.....	1084
8.6.3.1.4.1	Initial conditions.....	1084
8.6.3.1.4.1.1	3.84Mcps TDD option	1084
8.6.3.1.4.1.2	1.28Mcps TDD option	1086
8.6.3.1.5	Test requirements	1091
8.6.4	GSM measurements.....	1091
8.6.4.1	Correct reporting of GSM neighbours in AWGN propagation condition	1091
8.6.4.1.1	Definition and applicability	1091
8.6.4.1.2	Minimum requirements	1092
8.6.4.1.3	Test purpose	1092
8.6.4.1.4	Method of test.....	1092
8.6.4.1.4.1	Test 1 initial conditions.....	1092
8.6.4.1.4.2	Test 1 Procedure	1093
8.6.4.1.4.3	Test 2 initial conditions.....	1097
8.6.4.1.4.4	Test 2 Procedure	1098
8.6.4.1.5	Test requirements	1101
8.6.4.1.5.1	TEST 1 With BSIC verification required.....	1101
8.6.4.1.5.2	TEST 2 Without BSIC verification required	1101
8.6.5	Combined inter frequency and GSM measurements	1102
8.6.5.1	Correct reporting of neighbours in AWGN propagation condition.....	1102
8.6.5.1.1	Definition and applicability	1102
8.6.5.1.2	Minimum requirement.....	1102
8.6.5.1.3	Test purpose	1103
8.6.5.1.4	Method of test.....	1103
8.6.5.1.5	Test requirements	1115
8.6.6	E-UTRAN Measurement	1115
8.6.6.1	Correct reporting of E-UTRAN FDD neighbour in fading propagation condition in CELL_DCH ..	1115
8.6.6.1.1	Definition and applicability	1115
8.6.6.1.2	Minimum requirement.....	1116
8.6.6.1.3	Test purpose	1116
8.6.6.1.4	Method of test.....	1116
8.6.6.1.5	Test requirements	1121
8.6.6.2	Correct reporting of E-UTRAN TDD neighbour in fading propagation condition in CELL_DCH..	1123
8.6.6.2.1	Definition and applicability	1123
8.6.6.2.2	Minimum requirement.....	1124
8.6.6.2.3	Test purpose	1124
8.6.6.2.4	Method of test.....	1124
8.6.6.2.5	Test requirements	1129
8.6.7	Combined Inter-frequency and E-UTRAN measurements	1130
8.6.7.1	Correct reporting of E-UTRA FDD neighbours in fading propagation condition	1130
8.6.7.1.1	Definition and applicability	1130
8.6.7.1.2	Minimum requirement.....	1131
8.6.7.1.3	Test purpose	1132
8.6.7.1.4	Method of test.....	1132
8.6.7.1.5	Test requirements	1138
8.6.7.2	Correct reporting of E-UTRA TDD neighbours in Fading propagation condition	1140
8.6.7.2.1	Definition and applicability	1140
8.6.7.2.2	Minimum requirement.....	1140
8.6.7.2.3	Test purpose	1141
8.6.7.2.4	Method of test.....	1141
8.6.7.2.5	Test requirements	1148
8.7	Measurements Performance Requirements	1150
8.7.1	CPICH RSCP	1150
8.7.1.1	Intra frequency measurements accuracy	1150
8.7.1.1.1	Absolute accuracy requirement	1150
8.7.1.1.2	Relative accuracy requirement	1155
8.7.1.2	Inter frequency measurement accuracy	1158
8.7.1.2.1	Relative accuracy requirement	1158

8.7.2	CPICH Ec/Io.....	1165
8.7.2.1	Intra frequency measurements accuracy	1165
8.7.2.1.1	Absolute accuracy requirement	1165
8.7.2.1.2	Relative accuracy requirement	1170
8.7.2.2	Inter frequency measurement accuracy.....	1173
8.7.2.2.1	Absolute accuracy requirement	1173
8.7.2.2.2	Relative accuracy requirement	1173
8.7.3	UTRA Carrier RSSI.....	1179
8.7.3.1	Absolute measurement accuracy requirement.....	1180
8.7.3.1.1	Definition and applicability.....	1180
8.7.3.1.2	Minimum Requirements	1180
8.7.3.1.3	Test purpose	1180
8.7.3.1.4	Method of test.....	1180
8.7.3.1.5	Test requirements	1184
8.7.3.2	Relative measurement accuracy requirement.....	1185
8.7.3.2.1	Definition and applicability.....	1185
8.7.3.2.2	Minimum Requirements	1185
8.7.3.2.3	Test purpose	1186
8.7.3.2.4	Method of test.....	1186
8.7.3.2.5	Test requirements	1190
8.7.3A	GSM Carrier RSSI.....	1191
8.7.3A.1	Definition and applicability.....	1191
8.7.3A.2	Minimum Requirements.....	1191
8.7.3A.3	Test purpose	1193
8.7.3A.4	Method of test	1193
8.7.3A.4.1	Initial conditions.....	1193
8.7.3A.4.2	Procedure.....	1195
8.7.3A.5	Test requirements.....	1198
8.7.3B	Transport channel BLER	1200
8.7.3C	UE transmitted power (R99 and Rel-4 only)	1200
8.7.3C.1	Definition and applicability.....	1200
8.7.3C.2	Minimum requirements	1201
8.7.3C.3	Test purpose	1201
8.7.3C.4	Method of test	1201
8.7.3C.4.1	Initial conditions.....	1201
8.7.3C.4.2	Procedure.....	1202
8.7.3C.5	Test requirements	1204
8.7.3D	UE transmitted power (Rel-5 and later).....	1204
8.7.3D.1	Definition and applicability.....	1204
8.7.3D.2	Minimum requirements	1204
8.7.3D.3	Test purpose	1205
8.7.3D.4	Method of test	1205
8.7.3D.4.1	Initial conditions.....	1205
8.7.3D.4.2	Procedure.....	1206
8.7.3D.5	Test requirements	1209
8.7.4	SFN-CFN observed time difference	1209
8.7.4.1	Intra frequency measurement requirement.....	1209
8.7.4.1.1	Definition and applicability.....	1209
8.7.4.1.2	Minimum requirements	1210
8.7.4.1.3	Test Purpose	1210
8.7.4.1.4	Method of test.....	1210
8.7.4.1.5	Test requirements	1212
8.7.4.2	Inter frequency measurement requirement.....	1214
8.7.4.2.1	Definition and applicability	1214
8.7.4.2.2	Minimum requirements	1214
8.7.4.2.3	Test purpose	1214
8.7.4.2.4	Method of test.....	1214
8.7.4.2.5	Test requirements	1218
8.7.5	SFN-SFN observed time difference	1220
8.7.5.1	SFN-SFN observed time difference type 1	1220
8.7.5.1.1	Definition and applicability	1220
8.7.5.1.2	Minimum requirements	1220

8.7.5.1.3	Test purpose	1220
8.7.5.1.4	Method of test.....	1221
8.7.5.1.5	Test requirements	1223
8.7.5.2	SFN-SFN observed time difference type 2 without IPDL period active.....	1225
8.7.5.2.1	Definition and applicability.....	1225
8.7.5.2.2	Minimum requirements	1225
8.7.5.2.3	Test purpose and Environment	1225
8.7.5.3	SFN-SFN observed time difference type 2 with IPDL period active	1226
8.7.5.3.1	Definition and applicability.....	1226
8.7.5.3.2	Minimum requirements	1226
8.7.5.3.3	Test purpose and Environment	1227
8.7.6	UE Rx-Tx time difference	1228
8.7.6.1	UE Rx-Tx time difference type 1 (Release 5 and earlier)	1228
8.7.6.1.1	Definition and applicability.....	1228
8.7.6.1.2	Minimum requirements	1228
8.7.6.1.3	Test purpose	1228
8.7.6.1.4	Method of test.....	1228
8.7.6.1.5	Test requirements	1230
8.7.6.1A	UE Rx-Tx time difference type 1 (Release 6 and later)	1232
8.7.6.1A.1	Definition and applicability.....	1232
8.7.6.1A.2	Minimum requirements	1232
8.7.6.1A.3	Test purpose	1232
8.7.6.1A.4	Method of test.....	1232
8.7.6.1A.5	Test requirements	1234
8.7.6.2	UE Rx-Tx time difference type 2	1236
8.7.6.2.1	Definition and applicability.....	1236
8.7.6.2.2	Minimum requirements	1236
8.7.6.2.3	Test purpose	1236
8.7.7	Observed time difference to GSM cell (R99 and Rel-4 only).....	1237
8.7.8	P-CCPCH RSCP	1237
8.7.8.1	Absolute measurement accuracy.....	1237
8.7.8.1.1	Definition and applicability.....	1237
8.7.8.1.2	Minimum Requirements	1237
8.7.8.1.3	Test purpose	1238
8.7.8.1.4	Method of test.....	1238
8.7.8.1.5	Test requirements	1242
8.7.9	UE Transmission Power Headroom.....	1242
8.7.9.1	Definition and applicability.....	1242
8.7.9.2	Minimum Requirements.....	1242
8.7.9.3	Test purpose	1243
8.7.9.4	Method of test	1243
8.7.9.4.1	Initial conditions.....	1243
8.7.9.4.2	Test procedure	1245
8.7.9.5	Test requirements.....	1246
8.7.10	E-UTRAN FDD RSRP absolute accuracy (CELL_DCH).....	1246
8.7.10.1	Definition and applicability	1246
8.7.10.2	Minimum Requirements	1246
8.7.10.3	Test purpose	1247
8.7.10.4	Method of test.....	1247
8.7.10.5	Test requirements	1251
8.7.11	E-UTRAN TDD RSRP absolute accuracy (CELL_DCH).....	1253
8.7.11.1	Definition and applicability	1253
8.7.11.2	Minimum Requirements	1254
8.7.11.3	Test purpose	1254
8.7.11.4	Method of test.....	1254
8.7.11.5	Test requirements	1258
8.7.12	E-UTRAN FDD RSRQ absolute accuracy (CELL_DCH)	1260
8.7.12.1	Definition and applicability	1260
8.7.12.2	Minimum Requirements	1260
8.7.12.3	Test purpose	1261
8.7.12.4	Method of test.....	1261
8.7.12.5	Test requirements	1265

8.7.13	E-UTRAN TDD RSRQ absolute accuracy (CELL_DCH)	1267
8.7.13.1	Definition and applicability	1267
8.7.13.2	Minimum Requirements	1267
8.7.13.3	Test purpose	1268
8.7.13.4	Method of test	1268
8.7.13.5	Test requirements	1272
9	Performance requirements for HSDPA	1275
9.1	General	1275
9.2	Demodulation of HS-DSCH (Fixed Reference Channel)	1275
9.2.1	Single Link Performance	1285
9.2.1A	Single Link Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3	1285
9.2.1A.1	Definition and applicability	1285
9.2.1A.2	Minimum requirements	1285
9.2.1A.3	Test purpose	1287
9.2.1A.4	Method of test	1287
9.2.1A.4.1	Initial conditions	1287
9.2.1A.4.2	Procedure	1287
9.2.1A.5	Test Requirements	1287
9.2.1B	Single Link Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5	1289
9.2.1B.1	Definition and applicability	1289
9.2.1B.2	Minimum requirements	1289
9.2.1B.3	Test purpose	1290
9.2.1B.4	Method of test	1290
9.2.1B.4.1	Initial conditions	1290
9.2.1B.4.2	Procedure	1290
9.2.1B.5	Test Requirements	1291
9.2.1C	Single Link Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1292
9.2.1C.1	Definition and applicability	1292
9.2.1C.2	Minimum requirements	1292
9.2.1C.3	Test purpose	1294
9.2.1C.4	Method of test	1294
9.2.1C.4.1	Initial conditions	1294
9.2.1C.4.2	Procedure	1294
9.2.1C.5	Test Requirements	1295
9.2.1D	Single Link Performance - Enhanced Performance Requirements Type 1 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3	1296
9.2.1D.1	Definition and applicability	1296
9.2.1D.2	Minimum requirements	1297
9.2.1D.3	Test purpose	1298
9.2.1D.4	Method of test	1298
9.2.1D.4.1	Initial conditions	1298
9.2.1D.4.2	Procedure	1299
9.2.1D.5	Test Requirements	1299
9.2.1E	Single Link Performance - Enhanced Performance Requirements Type 1- QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1300
9.2.1E.1	Definition and applicability	1300
9.2.1E.2	Minimum requirements	1300
9.2.1E.3	Test purpose	1302
9.2.1E.4	Method of test	1303
9.2.1E.4.1	Initial conditions	1303
9.2.1E.4.2	Procedure	1303
9.2.1E.5	Test Requirements	1303
9.2.1F	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1305
9.2.1F.1	Definition and applicability	1305
9.2.1F.2	Minimum requirements	1305
9.2.1F.3	Test purpose	1307
9.2.1F.4	Method of test	1307
9.2.1F.4.1	Initial conditions	1307
9.2.1F.4.2	Procedure	1308
9.2.1F.5	Test Requirements	1308

9.2.1FA	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A.....	1309
9.2.1FA.1	Definition and applicability.....	1309
9.2.1FA.2	Minimum requirements	1309
9.2.1FA.3	Test purpose	1311
9.2.1FA.4	Method of test	1311
9.2.1FA.4.1	Initial conditions.....	1311
9.2.1FA.4.2	Procedure.....	1312
9.2.1FA.5	Test Requirements.....	1312
9.2.1FB	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A for DB-DC-HSDPA	1314
9.2.1FB.1	Definition and applicability.....	1314
9.2.1FB.2	Minimum requirements	1314
9.2.1FB.3	Test purpose	1316
9.2.1FB.4	Method of test	1316
9.2.1FB.4.1	Initial conditions.....	1316
9.2.1FB.4.2	Procedure.....	1317
9.2.1FB.5	Test Requirements.....	1317
9.2.1FC	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6B/3B	1318
9.2.1FC.1	Definition and applicability.....	1318
9.2.1FC.2	Minimum requirements	1319
9.2.1FC.3	Test purpose	1320
9.2.1FC.4	Method of test	1321
9.2.1FC.4.1	Initial conditions.....	1321
9.2.1FC.4.2	Procedure.....	1321
9.2.1FC.5	Test Requirements.....	1321
9.2.1FD	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6C/3C	1323
9.2.1FD.1	Definition and applicability.....	1323
9.2.1FD.2	Minimum requirements	1323
9.2.1FD.3	Test purpose	1325
9.2.1FD.4	Method of test	1325
9.2.1FD.4.1	Initial conditions.....	1325
9.2.1FD.4.2	Procedure.....	1326
9.2.1FD.5	Test Requirements.....	1326
9.2.1G	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1328
9.2.1G.1	Definition and applicability.....	1328
9.2.1G.2	Minimum requirements	1328
9.2.1G.3	Test purpose	1330
9.2.1G.4	Method of test	1330
9.2.1G.4.1	Initial conditions.....	1330
9.2.1G.4.2	Procedure.....	1331
9.2.1G.5	Test Requirements.....	1331
9.2.1GA	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A.....	1333
9.2.1GA.1	Definition and applicability.....	1333
9.2.1GA.2	Minimum requirements	1333
9.2.1GA.3	Test purpose	1336
9.2.1GA.4	Method of test	1336
9.2.1GA.4.1	Initial conditions.....	1336
9.2.1GA.4.2	Procedure.....	1337
9.2.1GA.5	Test Requirements	1337
9.2.1GB	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A for DB-DC-HSDPA	1339
9.2.1GB.1	Definition and applicability.....	1339
9.2.1GB.2	Minimum requirements	1339
9.2.1GB.3	Test purpose	1342
9.2.1GB.4	Method of test	1342
9.2.1GB.4.1	Initial conditions.....	1342
9.2.1GB.4.2	Procedure.....	1343

9.2.1GB.5	Test Requirements	1343
9.2.1GC	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6B/3B	1345
9.2.1GC.1	Definition and applicability.....	1345
9.2.1GC.2	Minimum requirements	1345
9.2.1GC.3	Test purpose	1348
9.2.1GC.4	Method of test	1348
9.2.1GC.4.1	Initial conditions.....	1348
9.2.1GC.4.2	Procedure.....	1349
9.2.1GC.5	Test Requirements	1349
9.2.1GD	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6C/3C	1351
9.2.1GD.1	Definition and applicability.....	1351
9.2.1GD.2	Minimum requirements	1351
9.2.1GD.3	Test purpose	1354
9.2.1GD.4	Method of test	1354
9.2.1GD.4.1	Initial conditions.....	1354
9.2.1GD.4.2	Procedure.....	1355
9.2.1GD.5	Test Requirements	1355
9.2.1H	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8	1357
9.2.1H.1	Definition and applicability.....	1357
9.2.1H.2	Minimum requirements	1357
9.2.1H.3	Test purpose	1358
9.2.1H.4	Method of test	1358
9.2.1H.4.1	Initial conditions.....	1358
9.2.1H.4.2	Procedure.....	1360
9.2.1H.5	Test Requirements.....	1360
9.2.1HA	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8 A	1360
9.2.1HA.1	Definition and applicability.....	1360
9.2.1HA.2	Minimum requirements	1360
9.2.1HA.3	Test purpose	1361
9.2.1HA.4	Method of test	1361
9.2.1HA.4.1	Initial conditions.....	1361
9.2.1HA.4.2	Procedure.....	1362
9.2.1HA.5	Test Requirements	1362
9.2.1HB	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8 A for DB-DC-HSDPA	1363
9.2.1HB.1	Definition and applicability.....	1363
9.2.1HB.2	Minimum requirements	1363
9.2.1HB.3	Test purpose	1364
9.2.1HB.4	Method of test	1364
9.2.1HB.4.1	Initial conditions.....	1364
9.2.1HB.4.2	Procedure.....	1365
9.2.1HB.5	Test Requirements	1365
9.2.1HC	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8B	1366
9.2.1HC.1	Definition and applicability.....	1366
9.2.1HC.2	Minimum requirements	1366
9.2.1HC.3	Test purpose	1367
9.2.1HC.4	Method of test	1367
9.2.1HC.4.1	Initial conditions.....	1367
9.2.1HC.4.2	Procedure.....	1368
9.2.1HC.5	Test Requirements	1368
9.2.1HD	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8C	1369
9.2.1HD.1	Definition and applicability.....	1369
9.2.1HD.2	Minimum requirements	1369
9.2.1HD.3	Test purpose	1370
9.2.1HD.4	Method of test	1370
9.2.1HD.4.1	Initial conditions.....	1370

9.2.1HD.4.2	Procedure.....	1371
9.2.1HD.5	Test Requirements	1371
9.2.1I	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8.....	1372
9.2.1I.1	Definition and applicability.....	1372
9.2.1I.2	Minimum requirements.....	1372
9.2.1I.3	Test purpose	1373
9.2.1I.4	Method of test	1373
9.2.1I.4.1	Initial conditions.....	1373
9.2.1I.4.2	Procedure.....	1374
9.2.1I.5	Test Requirements.....	1375
9.2.1IA	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8A.....	1375
9.2.1IA.1	Definition and applicability.....	1375
9.2.1IA.2	Minimum requirements.....	1375
9.2.1IA.3	Test purpose	1376
9.2.1IA.4	Method of test	1376
9.2.1IA.4.1	Initial conditions.....	1376
9.2.1IA.4.2	Procedure.....	1377
9.2.1IA.5	Test Requirements	1377
9.2.1IB	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8A for DB-DC-HSDPA	1378
9.2.1IB.1	Definition and applicability.....	1378
9.2.1IB.2	Minimum requirements.....	1378
9.2.1IB.3	Test purpose	1379
9.2.1IB.4	Method of test	1379
9.2.1IB.4.1	Initial conditions.....	1379
9.2.1IB.4.2	Procedure.....	1380
9.2.1IB.5	Test Requirements	1380
9.2.1IC	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8B	1381
9.2.1IC.1	Definition and applicability.....	1381
9.2.1IC.2	Minimum requirements.....	1381
9.2.1IC.3	Test purpose	1382
9.2.1IC.4	Method of test	1382
9.2.1IC.4.1	Initial conditions.....	1382
9.2.1IC.4.2	Procedure.....	1383
9.2.1IC.5	Test Requirements	1383
9.2.1ID	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8C	1384
9.2.1ID.1	Definition and applicability.....	1384
9.2.1ID.2	Minimum requirements.....	1384
9.2.1ID.3	Test purpose	1385
9.2.1ID.4	Method of test	1385
9.2.1ID.4.1	Initial conditions.....	1385
9.2.1ID.4.2	Procedure.....	1386
9.2.1ID.5	Test Requirements	1386
9.2.1J	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10	1387
9.2.1J.1	Definition and applicability.....	1387
9.2.1J.2	Minimum requirements	1387
9.2.1J.3	Test purpose	1388
9.2.1J.4	Method of test	1388
9.2.1J.4.1	Initial conditions.....	1388
9.2.1J.4.2	Procedure.....	1389
9.2.1J.5	Test Requirements	1390
9.2.1JA	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A.....	1390
9.2.1JA.1	Definition and applicability.....	1390
9.2.1JA.2	Minimum requirements	1390
9.2.1JA.3	Test purpose	1392
9.2.1JA.4	Method of test	1392

9.2.1JA.4.1	Initial conditions.....	1392
9.2.1JA.4.2	Procedure.....	1393
9.2.1JA.5	Test Requirements.....	1393
9.2.1JB	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A DB-DC-HSDPA	1394
9.2.1JB.1	Definition and applicability.....	1394
9.2.1JB.2	Minimum requirements.....	1394
9.2.1JB.3	Test purpose	1395
9.2.1JB.4	Method of test	1395
9.2.1JB.4.1	Initial conditions.....	1395
9.2.1JB.4.2	Procedure.....	1396
9.2.1JB.5	Test Requirements.....	1396
9.2.1JC	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10B	1397
9.2.1JC.1	Definition and applicability.....	1397
9.2.1JC.2	Minimum requirements.....	1397
9.2.1JC.3	Test purpose	1399
9.2.1JC.4	Method of test	1399
9.2.1JC.4.1	Initial conditions.....	1399
9.2.1JC.4.2	Procedure.....	1400
9.2.1JC.5	Test Requirements.....	1400
9.2.1JD	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10C	1401
9.2.1JD.1	Definition and applicability.....	1401
9.2.1JD.2	Minimum requirements.....	1401
9.2.1JD.3	Test purpose	1402
9.2.1JD.4	Method of test	1402
9.2.1JD.4.1	Initial conditions.....	1402
9.2.1JD.4.2	Procedure.....	1403
9.2.1JD.5	Test Requirements.....	1403
9.2.1K	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10	1404
9.2.1K.1	Definition and applicability.....	1404
9.2.1K.2	Minimum requirements	1404
9.2.1K.3	Test purpose	1406
9.2.1K.4	Method of test	1406
9.2.1K.4.1	Initial conditions.....	1406
9.2.1K.4.2	Procedure.....	1407
9.2.1K.5	Test Requirements.....	1407
9.2.1KA	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A	1408
9.2.1KA.1	Definition and applicability.....	1408
9.2.1KA.2	Minimum requirements	1408
9.2.1KA.3	Test purpose	1409
9.2.1KA.4	Method of test	1409
9.2.1KA.4.1	Initial conditions.....	1409
9.2.1KA.4.2	Procedure.....	1410
9.2.1KA.5	Test Requirements.....	1410
9.2.1KB	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A for DB-DC-HSDPA	1411
9.2.1KB.1	Definition and applicability.....	1411
9.2.1KB.2	Minimum requirements	1411
9.2.1KB.3	Test purpose	1412
9.2.1KB.4	Method of test	1413
9.2.1KB.4.1	Initial conditions.....	1413
9.2.1KB.4.2	Procedure.....	1414
9.2.1KB.5	Test Requirements.....	1414
9.2.1KC	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10B	1415
9.2.1KC.1	Definition and applicability.....	1415
9.2.1KC.2	Minimum requirements	1415
9.2.1KC.3	Test purpose	1416

9.2.1KC.4	Method of test	1416
9.2.1KC.4.1	Initial conditions.....	1416
9.2.1KC.4.2	Procedure.....	1417
9.2.1KC.5	Test Requirements.....	1417
9.2.1KD	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10C.....	1418
9.2.1KD.1	Definition and applicability.....	1418
9.2.1KD.2	Minimum requirements.....	1418
9.2.1KD.3	Test purpose	1419
9.2.1KD.4	Method of test	1420
9.2.1KD.4.1	Initial conditions.....	1420
9.2.1KD.4.2	Procedure.....	1420
9.2.1KD.5	Test Requirements.....	1421
9.2.1L	Single Link Performance - Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6.....	1421
9.2.1L.1	Definition and applicability.....	1421
9.2.1L.2	Minimum requirements.....	1422
9.2.1L.3	Test purpose	1422
9.2.1L.4	Method of test	1422
9.2.1L.5	Test Requirements.....	1424
9.2.1LA	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6A.....	1425
9.2.1LA.1	Definition and applicability.....	1425
9.2.1LA.2	Minimum requirements.....	1425
9.2.1LA.3	Test purpose	1426
9.2.1LA.4	Method of test	1426
9.2.1LA.5	Test Requirements.....	1427
9.2.1LB	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6A for DB-DC-HSDPA.....	1428
9.2.1LB.1	Definition and applicability.....	1428
9.2.1LB.2	Minimum requirements.....	1428
9.2.1LB.3	Test purpose	1429
9.2.1LB.4	Method of test	1429
9.2.1LB.5	Test Requirements.....	1430
9.2.1LC	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6B	1431
9.2.1LC.1	Definition and applicability.....	1431
9.2.1LC.2	Minimum requirements.....	1431
9.2.1LC.3	Test purpose	1432
9.2.1LC.4	Method of test	1432
9.2.1LC.5	Test Requirements.....	1433
9.2.1LD	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6C	1434
9.2.1LD.1	Definition and applicability.....	1434
9.2.1LD.2	Minimum requirements.....	1434
9.2.1LD.3	Test purpose	1435
9.2.1LD.4	Method of test	1435
9.2.1LD.5	Test Requirements.....	1436
9.2.1M	Single Link Performance - Enhanced Performance Requirements Type 3i – 16QAM/QPSK, Fixed Reference Channel (FRC) H-Set 6 for Multiflow HSDPA (2 cells).....	1437
9.2.1M.1	Definition and applicability.....	1437
9.2.1M.2	Minimum requirements	1437
9.2.1M.3	Test purpose	1438
9.2.1M.4	Method of test	1438
9.2.1M.4.1	Initial conditions.....	1438
9.2.1M.4.2	Procedure.....	1439
9.2.1M.5	Test Requirements.....	1439
9.2.1MA	Single Link Performance - Enhanced Performance Requirements Type 3i – 16QAM/QPSK, Fixed Reference Channel (FRC) H-Set 6 for Multiflow HSDPA (3 cells).....	1440
9.2.1MA.1	Definition and applicability.....	1440
9.2.1MA.2	Minimum requirements	1440
9.2.1MA.3	Test purpose	1441
9.2.1MA.4	Method of test	1441
9.2.1MA.4.1	Initial conditions.....	1441
9.2.1MA.4.2	Procedure.....	1442

9.2.1MA.5	Test Requirements.....	1442
9.2.2	Open Loop Diversity Performance	1443
9.2.2A	Open Loop Diversity Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1443
9.2.2A.1	Definition and applicability.....	1443
9.2.2A.2	Minimum requirements	1443
9.2.2A.3	Test purpose	1445
9.2.2A.4	Method of test	1445
9.2.2B	Open Loop Diversity Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5.....	1448
9.2.2B.1	Definition and applicability.....	1448
9.2.2B.2	Minimum requirements	1448
9.2.2B.3	Test purpose	1449
9.2.2B.4	Method of test	1449
9.2.2C	Open Loop Diversity Performance - Enhanced Performance Requirements Type 1 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3	1451
9.2.2C.1	Definition and applicability.....	1451
9.2.2C.2	Minimum requirements	1452
9.2.2C.3	Test purpose	1453
9.2.2C.4	Method of test	1453
9.2.2D	Open Loop Diversity Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3	1456
9.2.2D.1	Definition and applicability.....	1456
9.2.2D.2	Minimum requirements	1456
9.2.2D.3	Test purpose	1458
9.2.2D.4	Method of test	1458
9.2.2D.4.1	Initial conditions.....	1458
9.2.2D.4.2	Procedure.....	1459
9.2.2D.5	Test Requirements	1460
9.2.2E	Open Loop Diversity Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3	1461
9.2.2E.1	Definition and applicability.....	1461
9.2.2E.2	Minimum requirements	1461
9.2.2E.3	Test purpose	1463
9.2.2E.4	Method of test	1463
9.2.2E.4.1	Initial conditions.....	1463
9.2.2E.4.2	Procedure.....	1464
9.2.2E.5	Test Requirements	1464
9.2.3	Closed Loop Diversity Performance.....	1465
9.2.3A	Closed Loop Diversity Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3 ..	1465
9.2.3A.1	Definition and applicability.....	1465
9.2.3A.2	Minimum requirements	1466
9.2.3A.3	Test purpose	1467
9.2.3A.4	Method of test	1467
9.2.3A.4.1	Initial conditions.....	1467
9.2.3A.4.2	Procedure.....	1468
9.2.3A.5	Test Requirements.....	1469
9.2.3B	Closed Loop Diversity Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5.....	1470
9.2.3B.1	Definition and applicability.....	1470
9.2.3B.2	Minimum requirements	1470
9.2.3B.3	Test purpose	1471
9.2.3B.4	Method of test	1471
9.2.3B.4.1	Initial conditions.....	1471
9.2.3B.4.2	Procedure.....	1473
9.2.3B.5	Test Requirements.....	1473
9.2.3C	Closed Loop Diversity Performance Enhanced Performance Requirements Type 1, QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3	1474
9.2.3C.1	Definition and applicability.....	1474
9.2.3C.2	Minimum requirements	1474
9.2.3C.3	Test purpose	1476
9.2.3C.4	Method of test	1476
9.2.3C.4.1	Initial conditions.....	1476
9.2.3C.4.2	Procedure.....	1477
9.2.3C.5	Test Requirements.....	1477

9.2.3D	Closed Loop Diversity Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1479
9.2.3D.1	Definition and applicability.....	1479
9.2.3D.2	Minimum requirements	1479
9.2.3D.3	Test purpose	1482
9.2.3D.4	Method of test	1482
9.2.3D.4.1	Initial conditions.....	1482
9.2.3D.4.2	Procedure.....	1483
9.2.3D.5	Test Requirements.....	1483
9.2.3E	Closed Loop Diversity Performance Enhanced Performance Requirements Type 3, QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3	1485
9.2.3E.1	Definition and applicability.....	1485
9.2.3E.2	Minimum requirements	1485
9.2.3E.3	Test purpose	1487
9.2.3E.4	Method of test	1487
9.2.3E.4.1	Initial conditions.....	1487
9.2.3E.4.2	Procedure.....	1488
9.2.3E.5	Test Requirements.....	1489
9.2.4	MIMO Performance.....	1490
9.2.4A	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9.....	1490
9.2.4A.1	Definition and applicability.....	1490
9.2.4A.2	Minimum requirements	1490
9.2.4A.3	Test purpose	1491
9.2.4A.4	Method of test	1491
9.2.4A.4.1	Initial conditions.....	1491
9.2.4A.4.2	Procedure.....	1492
9.2.4A.5	Test Requirements	1493
9.2.4B	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11.....	1493
9.2.4B.1	Definition and applicability.....	1493
9.2.4B.2	Minimum requirements	1493
9.2.4B.3	Test purpose	1494
9.2.4B.4	Method of test	1494
9.2.4B.4.1	Initial conditions.....	1494
9.2.4B.4.2	Procedure.....	1495
9.2.4B.5	Test Requirements	1495
9.2.4C	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A.....	1496
9.2.4C.1	Definition and applicability.....	1496
9.2.4C.2	Minimum requirements	1496
9.2.4C.3	Test purpose	1497
9.2.4C.4	Method of test	1497
9.2.4C.4.1	Initial conditions.....	1497
9.2.4C.4.2	Procedure.....	1499
9.2.4C.5	Test Requirements	1499
9.2.4CA	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A for DB DC-HSDPA.....	1500
9.2.4CA.1	Definition and applicability.....	1500
9.2.4CA.2	Minimum requirements	1500
9.2.4CA.3	Test purpose	1501
9.2.4CA.4	Method of test	1501
9.2.4CA.4.1	Initial conditions.....	1501
9.2.4CA.4.2	Procedure.....	1502
9.2.4CA.5	Test Requirements	1502
9.2.4D	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A.....	1503
9.2.4D.1	Definition and applicability.....	1503
9.2.4D.2	Minimum requirements	1503
9.2.4D.3	Test purpose	1504
9.2.4D.4	Method of test	1504
9.2.4D.4.1	Initial conditions.....	1504
9.2.4D.4.2	Procedure.....	1505
9.2.4D.5	Test Requirements	1505
9.2.4DA	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A for DB DC-HSDPA.....	1506
9.2.4DA.1	Definition and applicability.....	1506
9.2.4DA.2	Minimum requirements	1506

9.2.4DA.3	Test purpose	1507
9.2.4DA.4	Method of test	1507
9.2.4DA.4.1	Initial conditions.....	1507
9.2.4DA.4.2	Procedure.....	1508
9.2.4DA.5	Test Requirements.....	1508
9.2.4E	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9 Asymmetric CPICHs.....	1509
9.2.4E.1	Definition and applicability.....	1509
9.2.4E.2	Minimum requirements	1509
9.2.4E.3	Test purpose	1510
9.2.4E.4	Method of test	1510
9.2.4E.4.1	Initial conditions.....	1510
9.2.4E.4.2	Procedure.....	1511
9.2.4E.5	Test Requirements	1512
9.2.4F	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11 Asymmetric CPICHs.....	1512
9.2.4F.1	Definition and applicability.....	1512
9.2.4F.2	Minimum requirements	1512
9.2.4F.3	Test purpose	1513
9.2.4F.4	Method of test	1513
9.2.4F.4.1	Initial conditions.....	1513
9.2.4F.4.2	Procedure.....	1514
9.2.4F.5	Test Requirements	1514
9.2.4G	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A Asymmetric CPICHs.....	1515
9.2.4G.1	Definition and applicability.....	1515
9.2.4G.2	Minimum requirements	1515
9.2.4G.3	Test purpose	1516
9.2.4G.4	Method of test	1516
9.2.4G.4.1	Initial conditions.....	1516
9.2.4G.4.2	Procedure.....	1518
9.2.4G.5	Test Requirements.....	1518
9.2.4H	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A Asymmetric CPICHs.....	1519
9.2.4H.1	Definition and applicability.....	1519
9.2.4H.2	Minimum requirements	1519
9.2.4H.3	Test purpose	1520
9.2.4H.4	Method of test	1520
9.2.4H.4.1	Initial conditions.....	1520
9.2.4H.4.2	Procedure.....	1521
9.2.4H.5	Test Requirements	1521
9.3	Reporting of Channel Quality Indicator	1522
9.3.1	Single Link Performance - AWGN Propagation Conditions	1522
9.3.1.1	Definition and applicability.....	1522
9.3.1.2	Minimum requirements	1523
9.3.1.3	Test purpose	1523
9.3.1.4	Method of test	1524
9.3.1.4.1	Initial conditions.....	1524
9.3.1.4.2	Procedure.....	1524
9.3.1.5	Test Requirements	1525
9.3.1A	Single Link Performance - AWGN Propagation Conditions, 64QAM.....	1525
9.3.1A.1	Definition and applicability.....	1525
9.3.1A.2	Minimum requirements	1525
9.3.1A.3	Test purpose	1526
9.3.1A.4	Method of test	1526
9.3.1A.4.1	Initial conditions.....	1526
9.3.1A.4.2	Procedure.....	1527
9.3.1A.5	Test Requirements	1529
9.3.1B	Single Link Performance - AWGN Propagation Conditions, DC-HSDPA requirements.....	1529
9.3.1B.1	Definition and applicability.....	1529
9.3.1B.2	Minimum requirements	1530
9.3.1B.3	Test purpose	1530
9.3.1B.4	Method of test	1531
9.3.1B.4.1	Initial conditions.....	1531
9.3.1B.4.2	Procedure.....	1531
9.3.1B.5	Test Requirements	1533

9.3.1BA	Single Link Performance - AWGN Propagation Conditions, DB-DC-HSDPA requirements.....	1533
9.3.1BA.1	Definition and applicability.....	1533
9.3.1BA.2	Minimum requirements.....	1533
9.3.1BA.4	Method of test	1534
9.3.1BA.4.1	Initial conditions.....	1534
9.3.1BA.4.2	Procedure.....	1535
9.3.1BA.5	Test Requirements.....	1536
9.3.1BB	Single Link Performance - AWGN Propagation Conditions, 4C-HSDPA requirements (3 Carriers)	1537
9.3.1BB.1	Definition and applicability.....	1537
9.3.1BB.2	Minimum requirements.....	1537
9.3.1BB.4	Method of test	1538
9.3.1BB.4.1	Initial conditions.....	1538
9.3.1BB.4.2	Procedure.....	1538
9.3.1BB.5	Test Requirements.....	1539
9.3.1BC	Single Link Performance - AWGN Propagation Conditions, 4C-HSDPA requirements	1539
9.3.1BC.1	Definition and applicability.....	1539
9.3.1BC.2	Minimum requirements.....	1540
9.3.1BC.4	Method of test	1540
9.3.1BC.4.1	Initial conditions.....	1540
9.3.1BC.4.2	Procedure.....	1541
9.3.1BC.5	Test Requirements.....	1542
9.3.2AB	Single Link Performance - Fading Propagation Conditions, 4C-HSDPA requirements(3 Carriers)	1542
9.3.2AB.1	Definition and applicability.....	1542
9.3.2AB.2	Minimum requirements	1542
9.3.2AB.3	Test purpose	1543
9.3.2AB.4	Method of test	1543
9.3.2AB.4.1	Initial conditions.....	1543
9.3.2AB.4.2	Procedure.....	1544
9.3.2AB.5	Test Requirements.....	1545
9.3.2AC	Single Link Performance - Fading Propagation Conditions, 4C-HSDPA requirements.....	1545
9.3.2AC.1	Definition and applicability.....	1545
9.3.2AC.2	Minimum requirements	1545
9.3.2AC.3	Test purpose	1546
9.3.2AC.4	Method of test	1546
9.3.2AC.4.1	Initial conditions.....	1546
9.3.2AC.4.2	Procedure.....	1547
9.3.2AC.5	Test Requirements.....	1548
9.3.1C	Single Link Performance - AWGN Propagation Conditions, Periodically Varying Radio Conditions ..	1548
9.3.1C.1	Definition and applicability.....	1548
9.3.1C.2	Minimum requirements	1548
9.3.1C.3	Test purpose	1550
9.3.1C.4	Method of test	1551
9.3.1C.4.1	Initial conditions.....	1551
9.3.1C.4.2	Procedure.....	1551
9.3.1C.5	Test Requirements.....	1552
9.3.2	Single Link Performance - Fading Propagation Conditions	1552
9.3.2.1	Definition and applicability.....	1552
9.3.2.2	Minimum requirements	1552
9.3.2.3	Test purpose	1553
9.3.2.4	Method of test	1553
9.3.2.4.1	Initial conditions.....	1553
9.3.2.4.2	Procedure.....	1554
9.3.2.5	Test Requirements.....	1555
9.3.2A	Single Link Performance - Fading Propagation Conditions, DC-HSDPA requirements.....	1555
9.3.2A.1	Definition and applicability.....	1555
9.3.2A.2	Minimum requirements	1555
9.3.2A.3	Test purpose	1556
9.3.2A.4	Method of test	1556
9.3.2A.4.1	Initial conditions.....	1556
9.3.2A.4.2	Procedure.....	1557
9.3.2A.5	Test Requirements.....	1559
9.3.2AA	Single Link Performance - Fading Propagation Conditions, DB-DC-HSDPA requirements	1559

9.3.2AA.1	Definition and applicability.....	1559
9.3.2AA.2	Minimum requirements	1559
9.3.2AA.3	Test purpose	1560
9.3.2AA.4	Method of test	1560
9.3.2AA.4.1	Initial conditions.....	1560
9.3.2AA.4.2	Procedure.....	1561
9.3.2AA.5	Test Requirements.....	1563
9.3.2B	Single Link Performance - Fading Propagation Conditions, 64QAM	1563
9.3.2B.1	Definition and applicability.....	1563
9.3.2B.2	Minimum requirements	1563
9.3.2B.3	Test purpose	1564
9.3.2B.4	Method of test	1564
9.3.2B.4.1	Initial conditions.....	1564
9.3.2B.4.2	Procedure.....	1565
9.3.2B.5	Test Requirements.....	1567
9.3.2C	Single Link Performance - Fading Propagation Conditions, Multiflow HSDPA requirements (2 Cells).....	1567
9.3.2C.1	Definition and applicability.....	1568
9.3.2C.2	Minimum requirements	1568
9.3.2C.3	Test purpose	1569
9.3.2C.4	Method of test	1569
9.3.2C.4.1	Initial conditions.....	1569
9.3.2C.4.2	Procedure.....	1569
9.3.2C.5	Test Requirements.....	1571
9.3.2CA	Single Link Performance - Fading Propagation Conditions, Multiflow HSDPA requirements (3 Cells).....	1571
9.3.2CA.1	Definition and applicability.....	1571
9.3.2CA.2	Minimum requirements	1571
9.3.2CA.3	Test purpose	1573
9.3.2CA.4	Method of test	1573
9.3.2CA.4.1	Initial conditions.....	1573
9.3.2CA.4.2	Procedure.....	1573
9.3.2CA.5	Test Requirements.....	1575
9.3.3	Open Loop Diversity Performance - AWGN Propagation Conditions	1575
9.3.3.1	Definition and applicability	1575
9.3.3.2	Minimum requirements	1575
9.3.3.3	Test purpose	1576
9.3.3.4	Method of test	1576
9.3.3.4.1	Initial conditions.....	1576
9.3.3.4.2	Procedure.....	1576
9.3.3.5	Test Requirements.....	1579
9.3.4	Open Loop Diversity Performance - Fading Propagation Conditions	1579
9.3.4.1	Definition and applicability	1579
9.3.4.2	Minimum requirements	1579
9.3.4.3	Test purpose	1580
9.3.4.4	Method of test	1580
9.3.4.4.1	Initial conditions.....	1580
9.3.4.4.2	Procedure.....	1581
9.3.4.5	Test Requirements.....	1583
9.3.5	Closed Loop Diversity Performance - AWGN Propagation Conditions	1583
9.3.5.1	Definition and applicability	1583
9.3.5.2	Minimum requirements	1583
9.3.5.3	Test purpose	1584
9.3.5.4	Method of test	1584
9.3.5.4.1	Initial conditions.....	1584
9.3.5.4.2	Procedure.....	1585
9.3.5.5	Test Requirements.....	1587
9.3.6	Closed Loop Diversity Performance - Fading Propagation Conditions	1587
9.3.6.1	Definition and applicability	1587
9.3.6.2	Minimum requirements	1587
9.3.6.3	Test purpose	1588
9.3.6.4	Method of test	1588

9.3.6.4.1	Initial conditions.....	1588
9.3.6.4.2	Procedure.....	1589
9.3.6.5	Test Requirements.....	1591
9.3.7	MIMO Performance - Reporting of Channel Quality Indicator.....	1591
9.3.7A	MIMO Single Stream Fading Conditions	1591
9.3.7A.1	Definition and applicability.....	1591
9.3.7A.2	Minimum requirements.....	1592
9.3.7A.3	Test purpose	1593
9.3.7A.4	Method of test	1593
9.3.7A.4.1	Initial conditions.....	1593
9.3.7A.4.2	Procedure.....	1593
9.3.7A.5	Test Requirements.....	1594
9.3.7B	MIMO Dual Stream Fading Conditions.....	1594
9.3.7B.1	Definition and applicability.....	1594
9.3.7B.2	Minimum requirements.....	1595
9.3.7B.3	Test purpose	1596
9.3.7B.4	Method of test	1596
9.3.7B.4.1	Initial conditions.....	1596
9.3.7B.4.2	Procedure.....	1597
9.3.7B.5	Test Requirements.....	1598
9.3.7C	MIMO Dual Stream Fading Conditions - UE categories 19-20.....	1598
9.3.7C.1	Definition and applicability.....	1598
9.3.7C.2	Minimum requirements.....	1599
9.3.7C.3	Test purpose	1600
9.3.7C.4	Method of test	1601
9.3.7C.4.1	Initial conditions.....	1601
9.3.7C.4.2	Procedure.....	1601
9.3.7C.5	Test Requirements.....	1602
9.3.7D	MIMO Dual Stream Static Orthogonal Conditions - UE categories 15-20.....	1602
9.3.7D.1	Definition and applicability.....	1602
9.3.7D.2	Minimum requirements.....	1603
9.3.7D.3	Test purpose	1603
9.3.7D.4	Method of test	1603
9.3.7D.4.1	Initial conditions.....	1603
9.3.7D.4.2	Procedure.....	1604
9.3.7D.5	Test Requirements.....	1605
9.3.7E	MIMO Dual Stream Static Orthogonal Conditions - UE categories 19-20.....	1605
9.3.7E.1	Definition and applicability.....	1605
9.3.7E.2	Minimum requirements.....	1605
9.3.7E.3	Test purpose	1606
9.3.7E.4	Method of test	1606
9.3.7E.4.1	Initial conditions.....	1606
9.3.7E.4.2	Procedure.....	1607
9.3.7E.5	Test Requirements.....	1608
9.3.7F	MIMO Single Stream Fading Conditions - Asymmetric CPICHs.....	1608
9.3.7F.1	Definition and applicability.....	1608
9.3.7F.2	Minimum requirements.....	1608
9.3.7F.3	Test purpose	1609
9.3.7F.4	Method of test	1609
9.3.7F.4.1	Initial conditions.....	1609
9.3.7F.4.2	Procedure.....	1610
9.3.7F.5	Test Requirements.....	1611
9.3.7G	MIMO Dual Stream Fading Conditions- Asymmetric CPICHs	1611
9.3.7G.1	Definition and applicability.....	1611
9.3.7G.2	Minimum requirements	1612
9.3.7G.3	Test purpose	1613
9.3.7G.4	Method of test	1613
9.3.7G.4.1	Initial conditions.....	1613
9.3.7G.4.2	Procedure.....	1614
9.3.7G.5	Test Requirements.....	1615
9.3.7H	MIMO Dual Stream Fading Conditions - UE categories 19-20 - Asymmetric CPICHs	1615
9.3.7H.1	Definition and applicability.....	1615

9.3.7H.2	Minimum requirements	1616
9.3.7H.3	Test purpose	1617
9.3.7H.4	Method of test	1618
9.3.7H.4.1	Initial conditions.....	1618
9.3.7H.4.2	Procedure.....	1618
9.3.7H.5	Test Requirements.....	1619
9.3.7I	MIMO Dual Stream Static Orthogonal Conditions - UE categories 15-20 - Asymmetric CPICHs	1619
9.3.7I.1	Definition and applicability.....	1619
9.3.7I.2	Minimum requirements	1620
9.3.7I.3	Test purpose	1620
9.3.7I.4	Method of test	1620
9.3.7I.4.1	Initial conditions.....	1620
9.3.7I.4.2	Procedure.....	1621
9.3.7I.5	Test Requirements.....	1622
9.3.7J	MIMO Dual Stream Static Orthogonal Conditions - UE categories 19-20- Asymmetric CPICHs	1622
9.3.7J.1	Definition and applicability.....	1622
9.3.7J.2	Minimum requirements	1622
9.3.7J.3	Test purpose	1623
9.3.7J.4	Method of test	1623
9.3.7J.4.1	Initial conditions.....	1623
9.3.7J.4.2	Procedure.....	1624
9.3.7J.5	Test Requirements.....	1625
9.4	HS-SCCH Detection Performance	1625
9.4.1	Single Link Performance	1625
9.4.1.1	Definition and applicability.....	1625
9.4.1.2	Minimum requirements	1625
9.4.1.3	Test purpose	1626
9.4.1.4	Method of test	1626
9.4.1.4.1	Initial conditions.....	1626
9.4.1.4.2	Procedure.....	1626
9.4.1.5	Test Requirements.....	1626
9.4.1A	Single Link Performance - Enhanced Performance Requirements Type 1	1627
9.4.1A.1	Definition and applicability.....	1627
9.4.1A.2	Minimum requirements	1628
9.4.1A.3	Test purpose	1628
9.4.1A.4	Method of test	1628
9.4.1A.4.1	Initial conditions.....	1628
9.4.1A.4.2	Procedure.....	1629
9.4.1A.5	Test Requirements.....	1629
9.4.2	Open Loop Diversity Performance	1630
9.4.2.1	Definition and applicability.....	1630
9.4.2.2	Minimum requirements	1630
9.4.2.3	Test purpose	1630
9.4.2.4	Method of test	1630
9.4.2.4.1	Initial conditions.....	1630
9.4.2.4.2	Procedure.....	1631
9.4.2.5	Test Requirements.....	1632
9.4.2A	Open Loop Diversity Performance - Enhanced Performance Requirements Type 1	1632
9.4.2A.1	Definition and applicability.....	1632
9.4.2A.2	Minimum requirements	1633
9.4.2A.3	Test purpose	1633
9.4.2A.4	Method of test	1633
9.4.2A.4.1	Initial conditions.....	1633
9.4.2A.4.2	Procedure.....	1633
9.4.2A.5	Test Requirements.....	1634
9.4.3	HS-SCCH Type 3 Performance	1635
9.4.3.1	Definition and applicability.....	1635
9.4.3.2	Minimum requirements	1635
9.4.3.3	Test purpose	1636
9.4.3.4	Method of test	1636
9.4.3.4.1	Initial conditions.....	1636
9.4.3.4.2	Procedure.....	1637

9.4.3.5	Test Requirements.....	1637
9.4.3A	HS-SCCH Type 3 Performance -STTD disabled- Asymmetric CPICHs	1638
9.4.3A.1	Definition and applicability.....	1638
9.4.3A.2	Minimum requirements	1639
9.4.3A.3	Test purpose	1640
9.4.3A.4	Method of test	1640
9.4.3A.4.1	Initial conditions.....	1640
9.4.3A.5	Test Requirements.....	1641
9.4.3B	HS-SCCH Type 3 Performance -STTD enabled- Asymmetric CPICHs	1642
9.4.3B.1	Definition and applicability.....	1642
9.4.3B.2	Minimum requirements	1642
9.4.3B.3	Test purpose	1643
9.4.3B.4	Method of test	1643
9.4.3B.4.1	Initial conditions	1643
9.4.3B.4.2	Procedure	1644
9.4.3B.5	Test Requirements.....	1644
9.4.4	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction.....	1646
9.4.4.1	Definition and applicability.....	1646
9.4.4.2	Minimum requirements	1646
9.4.4.3	Test purpose	1647
9.4.4.4	Method of test	1647
9.4.4.4.1	Initial conditions.....	1647
9.4.4.4.2	Procedure	1647
9.4.4.5	Test Requirements.....	1647
9.4.4A	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction- Enhanced Performance Requirements Type 1.....	1648
9.4.4A.1	Definition and applicability.....	1648
9.4.4A.2	Minimum requirements	1648
9.4.4A.3	Test purpose	1649
9.4.4A.4	Method of test	1649
9.4.4A.4.1	Initial conditions.....	1649
9.4.4A.4.2	Procedure	1649
9.4.4A.5	Test Requirements.....	1650
9.4.4B	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD disabled-asymmetric CPICHs	1651
9.4.4B.1	Definition and applicability.....	1651
9.4.4B.2	Minimum requirements	1651
9.4.4B.3	Test purpose	1652
9.4.4B.4	Method of test	1652
9.4.4B.4.1	Initial conditions.....	1652
9.4.4B.4.2	Procedure	1652
9.4.4B.5	Test Requirements.....	1653
9.4.4C	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD disabled-asymmetric CPICHs- Enhanced Performance Requirements Type 1	1653
9.4.4C.1	Definition and applicability.....	1653
9.4.4C.2	Minimum requirements	1654
9.4.4C.3	Test purpose	1654
9.4.4C.4	Method of test	1654
9.4.4C.4.1	Initial conditions.....	1654
9.4.4C.4.2	Procedure	1655
9.4.4C.5	Test Requirements.....	1655
9.4.4D	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD enabled-asymmetric CPICHs	1656
9.4.4D.1	Definition and applicability.....	1656
9.4.4D.2	Minimum requirements	1656
9.4.4D.3	Test purpose	1657
9.4.4D.4	Method of test	1657
9.4.4D.4.1	Initial conditions.....	1657
9.4.4D.4.2	Procedure	1657
9.4.4D.5	Test Requirements.....	1658
9.4.4E	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD enabled-asymmetric CPICHs- Enhanced Performance Requirements Type 1	1658

9.4.4E.1	Definition and applicability.....	1658
9.4.4E.2	Minimum requirements	1659
9.4.4E.3	Test purpose	1659
9.4.4E.4	Method of test	1659
9.4.4E.4.1	Initial conditions.....	1659
9.4.4E.4.2	Procedure.....	1660
9.4.4E.5	Test Requirements.....	1660
9.5	HS-SCCH-less demodulation of HS-DSCH (Fixed Reference Channel).....	1661
9.5.1	Requirement QPSK, Fixed Reference Channel (FRC) H-Set 7.....	1661
9.5.1.1	Definition and applicability.....	1661
9.5.1.2	Minimum requirements	1661
9.5.1.3	Test purpose	1662
9.5.1.4	Method of test	1662
9.5.1.5	Test Requirements.....	1663
9.5.1A	Requirement QPSK, Fixed Reference Channel (FRC) H-Set 7 - Enhanced Performance Requirements Type 1	1663
9.5.1A.1	Definition and applicability.....	1663
9.5.1A.2	Minimum requirements	1664
9.5.1A.3	Test purpose	1664
9.5.1A.4	Method of test	1664
9.5.1A.5	Test Requirements.....	1665
9.6	HS-DSCH and HS-SCCH reception in CELL-FACH state	1666
9.6.1	Single link HS-DSCH Demodulation performance in CELL_FACH state	1666
9.6.1.1	Definition and applicability.....	1666
9.6.1.2	Minimum requirement QPSK, Fixed Reference Channel (FRC) H-Set 3.....	1666
9.6.1.3	Test purpose	1667
9.6.1.4	Method of test	1667
9.6.1.5	Test Requirements.....	1668
9.6.2	Single link HS-SCCH Detection performance in CELL_FACH state	1668
9.6.2.1	Definition and applicability.....	1668
9.6.2.2	Minimum requirement	1668
9.6.2.3	Test purpose	1669
9.6.2.4	Method of test	1669
9.6.2.5	Test Requirements.....	1669
10	Performance requirement (E-DCH)	1671
10.1	General	1671
10.2	Detection of E-DCH HARQ ACK Indicator Channel (E-HICH).....	1671
10.2.1	Single link performance	1671
10.2.1.1	Single link performance (10ms TTI).....	1671
10.2.1.1.1	Definition and applicability.....	1671
10.2.1.1.2	Minimum requirement	1671
10.2.1.1.3	Test purpose	1672
10.2.1.1.4	Method of test.....	1672
10.2.1.1.4.1	Initial conditions	1672
10.2.1.1.4.2	Procedure	1673
10.2.1.1.5.	Test requirements	1674
10.2.1.1A	Single link performance (10ms TTI, Type 1).....	1674
10.2.1.1A.1	Definition and applicability.....	1674
10.2.1.1A.2	Minimum requirement	1674
10.2.1.1A.3	Test purpose	1675
10.2.1.1A.4	Method of test.....	1675
10.2.1.1A.4.1	Initial conditions	1675
10.2.1.1A.4.2	Procedure	1675
10.2.1.1A.5.	Test requirements	1676
10.2.1.2	Single link performance (2ms TTI).....	1676
10.2.1.2.1	Definition and applicability.....	1676
10.2.1.2.2	Minimum requirement	1676
10.2.1.2.3	Test purpose	1677
10.2.1.2.4	Method of test.....	1677
10.2.1.2.4.1	Initial conditions	1677
10.2.1.2.4.2	Procedure	1678

10.2.1.2.5.	Test requirements	1679
10.2.1.2A	Single link performance (2ms TTI, Type 1).....	1679
10.2.1.2A.1	Definition and applicability	1679
10.2.1.2A.2	Minimum requirement.....	1679
10.2.1.2A.3	Test purpose	1680
10.2.1.2A.4	Method of test.....	1680
10.2.1.2A.4.1	Initial conditions	1680
10.2.1.2A.4.2	Procedure	1680
10.2.1.2A.5.	Test requirements	1681
10.2.2	Detection in Inter-Cell Handover conditions	1681
10.2.2.1	RLS not containing the Serving E-DCH cell	1681
10.2.2.1.1	RLS not containing the Serving E-DCH cell (10ms TTI)	1681
10.2.2.1.1.1	Definition and applicability	1681
10.2.2.1.1.2	Minimum requirement	1682
10.2.2.1.1.3	Test Purpose.....	1682
10.2.2.1.1.4	Method of test	1683
10.2.2.1.1.5	Test Requirements	1685
10.2.2.1.1A	RLS not containing the Serving E-DCH cell (10ms TTI, Type 1)	1686
10.2.2.1.1A.1	Definition and applicability	1686
10.2.2.1.1A.2	Minimum requirement	1686
10.2.2.1.1A.3	Test Purpose.....	1687
10.2.2.1.1A.4	Method of test	1687
10.2.2.1.1A.5	Test Requirements	1689
10.2.2.1.2	RLS not containing the Serving E-DCH cell (2ms TTI)	1690
10.2.2.1.2.1	Definition and applicability	1690
10.2.2.1.2.2	Minimum requirement	1690
10.2.2.1.2.3	Test Purpose.....	1691
10.2.2.1.2.4	Method of test	1691
10.2.2.1.2.4.1	Initial conditions.....	1691
10.2.2.1.2.4.2	Procedure.....	1692
10.2.2.1.2.5	Test Requirements	1694
10.2.2.1.2A	RLS not containing the Serving E-DCH cell (2ms TTI, Type 1)	1695
10.2.2.1.2A.1	Definition and applicability	1695
10.2.2.1.2A.2	Minimum requirement	1695
10.2.2.1.2A.3	Test Purpose.....	1696
10.2.2.1.2A.4	Method of test	1696
10.2.2.1.2A.4.1	Initial conditions.....	1696
10.2.2.1.2A.4.2	Procedure.....	1697
10.2.2.1.2A.5	Test Requirements	1698
10.2.2.2	RLS containing the Serving E-DCH cell	1699
10.2.2.2.1	RLS containing the Serving E-DCH cell (10ms TTI)	1699
10.2.2.2.1.1	Definition and applicability	1699
10.2.2.2.1.2	Minimum requirement	1699
10.2.2.2.1.3	Test purpose.....	1700
10.2.2.2.1.4	Method of test	1700
10.2.2.2.1.4.1	Initial conditions.....	1700
10.2.2.2.1.4.2	Procedure.....	1701
10.2.2.2.1.5	Test requirements.....	1703
10.2.2.2.1A	RLS containing the Serving E-DCH cell (10ms TTI, Type 1)	1704
10.2.2.2.1A.1	Definition and applicability	1704
10.2.2.2.1A.2	Minimum requirement	1705
10.2.2.2.1A.3	Test purpose.....	1705
10.2.2.2.1A.4	Method of test	1705
10.2.2.2.1A.4.1	Initial conditions.....	1705
10.2.2.2.1A.4.2	Procedure.....	1706
10.2.2.2.1A.5	Test requirements.....	1707
10.2.2.2.2	RLS containing the Serving E-DCH cell (2ms TTI)	1708
10.2.2.2.2.1	Definition and applicability	1708
10.2.2.2.2.2	Minimum requirement	1708
10.2.2.2.2.3	Test purpose.....	1709
10.2.2.2.2.4	Method of test	1709
10.2.2.2.2.4.1	Initial conditions.....	1709

10.2.2.2.4.2	Procedure.....	1710
10.2.2.2.5	Test requirements.....	1712
10.2.2.2A	RLS containing the Serving E-DCH cell (2ms TTI, Type 1)	1713
10.2.2.2A.1	Definition and applicability	1713
10.2.2.2A.2	Minimum requirement	1713
10.2.2.2A.3	Test purpose.....	1714
10.2.2.2A.4	Method of test	1714
10.2.2.2A.4.1	Initial conditions.....	1714
10.2.2.2A.4.2	Procedure.....	1715
10.2.2.2A.5	Test requirements.....	1716
10.3	Detection of E-DCH Relative Grant Channel (E-RGCH)	1717
10.3.1	Single link performance.....	1717
10.3.1.1	Single link performance (10ms TTI).....	1717
10.3.1.1.1	Definition and applicability	1717
10.3.1.1.2	Minimum requirement	1717
10.3.1.1.3	Test purpose	1718
10.3.1.1.4	Method of test.....	1718
10.3.1.1.4.1	Initial conditions	1718
10.3.1.1.4.2	Procedure	1719
10.3.1.1.5	Test requirements	1720
10.3.1.1A	Single link performance (10ms TTI, Type 1).....	1721
10.3.1.1A.1	Definition and applicability	1721
10.3.1.1A.2	Minimum requirement	1721
10.3.1.1A.3	Test purpose	1721
10.3.1.1A.4	Method of test.....	1722
10.3.1.1A.4.1	Initial conditions	1722
10.3.1.1A.4.2	Procedure	1722
10.3.1.1A.5	Test requirements	1723
10.3.1.2	Single link performance (2ms TTI).....	1724
10.3.1.2.1	Definition and applicability	1724
10.3.1.2.2	Minimum requirement.....	1724
10.3.1.2.3	Test purpose	1725
10.3.1.2.4	Method of test.....	1725
10.3.1.2.4.1	Initial conditions	1725
10.3.1.2.4.2	Procedure	1725
10.3.1.2.5	Test requirements	1727
10.3.1.2A	Single link performance (2ms TTI, Type 1).....	1728
10.3.1.2A.1	Definition and applicability	1728
10.3.1.2A.2	Minimum requirement.....	1728
10.3.1.2A.3	Test purpose	1728
10.3.1.2A.4	Method of test.....	1728
10.3.1.2A.4.1	Initial conditions	1728
10.3.1.2A.4.2	Procedure	1729
10.3.1.2A.5	Test requirements	1730
10.3.2	Detection in Inter-Cell Handover conditions	1731
10.3.2.1	Definition and applicability.....	1731
10.3.2.2	Minimum requirement for Non-serving E-DCH RL	1731
10.3.2.3	Test Purpose.....	1731
10.3.2.4	Method of test	1732
10.3.2.4.1	Initial conditions	1732
10.3.2.4.2	Procedure	1732
10.3.2.5	Test Requirements.....	1735
10.3.2A	Detection in Inter-Cell Handover conditions (Type 1)	1736
10.3.2A.1	Definition and applicability.....	1736
10.3.2A.2	Minimum requirement for Non-serving E-DCH RL	1737
10.3.2A.3	Test Purpose.....	1737
10.3.2A.4	Method of test	1737
10.3.2A.4.1	Initial conditions	1737
10.3.2A.4.2	Procedure	1738
10.3.2A.5	Test Requirements.....	1740
10.4	Demodulation of E-DCH Absolute Grant Channel (E-AGCH)	1741
10.4.1	Single link performance.....	1741

10.4.1.1	Definition and applicability.....	1741
10.4.1.2	Minimum requirement	1741
10.4.1.3	Test Purpose.....	1742
10.4.1.4	Method of test	1742
10.4.1.4.1	Initial conditions.....	1742
10.4.1.4.2	Procedure.....	1742
10.4.1.5	Test Requirements.....	1743
10.4.1A	Single link performance (Type 1).....	1744
10.4.1A.1	Definition and applicability.....	1744
10.4.1A.2	Minimum requirement	1744
10.4.1A.3	Test Purpose.....	1744
10.4.1A.4	Method of test	1744
10.4.1A.4.1	Initial conditions.....	1744
10.4.1A.4.2	Procedure.....	1745
10.4.1A.5	Test Requirements.....	1745
11	Performance requirement (MBMS).....	1746
11.1	General	1746
11.2	Demodulation of MTCH	1746
11.2.1	Definition and applicability	1746
11.2.2	Minimum requirement	1746
11.2.3	Test Purpose.....	1747
11.2.4	Method of test	1747
11.2.4.1	Initial conditions	1747
11.2.4.2	Procedure	1748
11.2.5	Test Requirements	1749
11.2A	Demodulation of MTCH - Enhanced Performance Requirements Type 1	1750
11.2A.1	Definition and applicability	1750
11.2A.2	Minimum requirement	1750
11.2A.3	Test Purpose.....	1750
11.2A.4	Method of test	1750
11.2A.4.1	Initial conditions	1750
11.2A.4.2	Procedure	1751
11.2A.5	Test Requirements	1752
11.3	Demodulation of MTCH and cell identification.....	1753
11.3.1	Definition and applicability	1753
11.3.2	Minimum requirements	1753
11.3.3	Test purpose.....	1754
11.3.4	Method of test	1754
11.3.5	Test requirements.....	1756
Annex A (informative):	Connection Diagrams	1757
Annex B (normative):	Global In-Channel TX-Test	1796
B.1	General	1796
B.2	Definition of the process	1796
B.2.1	Basic principle.....	1796
B.2.2	Output signal of the TX under test	1796
B.2.3	Reference signal	1796
B.2.4	void.....	1797
B.2.5	Classification of measurement results	1797
B.2.6	Process definition to achieve results f, t, φ, g ₁ , g ₂ , and O	1797
B.2.6.1	Decision Point Power.....	1798
B.2.6.2	Measured total power of all active codes.....	1798
B.2.6.3	Code-Domain Power.....	1798
B.2.6.4	Code-Domain Power of the varied reference signal	1799
B.2.7	Process definition to achieve results EVM, PCDE, RCDE	1799
B.2.7.1	Error Vector Magnitude (EVM)	1799
B.2.7.2	Code Domain Error Power	1800
B.2.7.3	Relative Code Domain Error (RCDE)	1800

B.3 Notes.....	1801
Annex C (normative): Measurement channels	1804
C.1 General	1804
C.2 UL reference measurement channel	1804
C.2.1 UL reference measurement channel (12,2 kbps).....	1804
C.2.2 UL reference measurement channel (64 kbps)	1805
C.2.3 UL reference measurement channel (144 kbps)	1807
C.2.4 UL reference measurement channel (384 kbps)	1809
C.2.5 UL reference measurement channel (768 kbps)	1811
C.2.6 UL E-DCH reference measurement channel for DC-HSUPA using BPSK modulation	1813
C.2.7 UL E-DCH reference measurement channel for DC-HSUPA using 16QAM modulation.....	1814
C.2.8 Combinations of UL E-DCH reference measurement channel for DC-HSUPA tests	1815
C.3 DL reference measurement channel	1815
C.3.1 DL reference measurement channel (12.2 kbps).....	1815
C.3.1A DL reference measurement channel (0 kbps and 12.2 kbps).....	1817
C.3.2 DL reference measurement channel (64 kbps)	1819
C.3.3 DL reference measurement channel (144 kbps)	1821
C.3.4 DL reference measurement channel (384 kbps)	1823
C.3.5 DL reference measurement channel 2 (64 kbps).....	1825
C.4 Reference measurement channel for BTFD performance requirements	1826
C.4.1 UL reference measurement channel for BTFD performance requirements.....	1826
C.4.2 DL reference measurement channel for BTFD performance requirements.....	1829
C.4.3 Reference parameters for discontinuous UL DPCCH transmission	1832
C.5 DL reference compressed mode parameters.....	1832
C.6 Auxiliary measurement channels	1835
C.6.1 Introduction	1835
C.6.2 Channel combinations for BLER measurements.....	1836
C.6.3 UL auxiliary reference measurement channel (TM, 12.2 kbps, no CRC)	1837
C.6.3A UL auxiliary reference measurement channel (TM, 0 kbps and 12.2 kbps, no CRC)	1837
C.6.4 Void.....	1838
C.6.5 Void.....	1838
C.6.6 Void.....	1838
C.6.7 UL AUXMC AM 12.2 kbps.....	1839
C.6.8 UL AUXMC AM 12.2 kbps(DCCH with TB size of 148bit)	1839
C.7 DL reference parameters for PCH tests.....	1840
C.8 DL reference channel parameters for HSDPA tests	1840
C.8.1 Fixed Reference Channel (FRC)	1840
C.8.1.1 Fixed Reference Channel Definition H-Set 1/1A/1B/1C.....	1840
C.8.1.2 Fixed Reference Channel Definition H-Set 2	1841
C.8.1.3 Fixed Reference Channel Definition H-Set 3/3A/3B/3C.....	1842
C.8.1.4 Fixed Reference Channel Definition H-Set 4	1843
C.8.1.5 Fixed Reference Channel Definition H-Set 5	1844
C.8.1.6 Fixed Reference Channel Definition H-Set 6/6A/6B/6C.....	1845
C.8.1.7 Fixed Reference Channel Definition H-Set 7	1846
C.8.1.8 Fixed Reference Channel Definition H-Set 8/8A/8B/8C.....	1847
C.8.1.9 Fixed Reference Channel Definition H-Set 9/9A/9B/9C.....	1848
C.8.1.10 Fixed Reference Channel Definition H-Set 10/10A/10B/10C.....	1849
C.8.1.11 Fixed Reference Channel Definition H-Set 11/11A/11B/11C.....	1851
C.8.1.12 Fixed Reference Channel Definition H-Set 12	1852
C.9 Downlink reference channel dummy DCCH transmission on DCH.....	1853
C.9A MAC header transmission on HS-DSCH	1853
C.10 UL reference channel parameters for HSDPA tests	1853
C.10.1 UL reference measurement channel for HSDPA tests.....	1853
C.10.2 UL reference measurement channel for HSDPA tests with UL OLTD/CLTD	1854

C.11 Reference channel parameters for E-DCH tests	1856
C.11.1 UL reference measurement channel for E-DCH tests	1856
C.11.1A UL reference measurement channel for E-DCH tests with UL OLTD/CLTD	1857
C.11.2 DL reference measurement channel for E-DCH tests	1859
C.11.3 RLC SDU size for E-DCH tests	1859
C.11A..... Reference channel parameters for DC-HSUPA tests.....	1861
C.11A.1 UL reference measurement channel for DC-HSUPA tests.....	1861
C.11A.2 DL reference measurement channel for DC-HSUPA tests.....	1862
C.11A.3 RLC SDU size for DC-HSUPA tests	1862
C.12 DL reference parameters for MBMS tests.....	1863
C.12.1 MTCH	1863
C.12.2 Combined MTCH demodulation and cell identification	1863

Annex D (normative): Propagation Conditions.....1864

D.1 General	1864
D.1.1 Definition of Additive White Gaussian Noise (AWGN) Interferer.....	1864
D.2 Propagation Conditions	1864
D.2.1 Static propagation condition.....	1864
D.2.2 Multi-path fading propagation conditions	1864
D.2.3 Moving propagation conditions.....	1866
D.2.4 Birth-Death propagation conditions	1866
D.2.4A High speed train conditions	1867
D.2.5 Conditions for HSDPA enhanced performance requirements type 1 with UE receiver diversity	1868
D.2.6 Conditions for HSDPA enhanced performance requirements type 3 with UE receiver diversity	1868
D.2.7 Conditions for open and closed loop diversity performance	1868
D.2.8 Conditions for MBMS enhanced performance requirements type 1 with UE receiver diversity	1868
D.2.9 MIMO propagation conditions	1869
D.2.9.1 MIMO Single Stream Fading Conditions	1869
D.2.9.2 MIMO Dual Stream Fading Conditions.....	1870
D.2.9.3 MIMO Dual Stream Static Orthogonal Conditions	1871

Annex E (normative): Downlink Physical Channels.....1872

E.1 General	1872
E.2 Connection Set-up for non-HSDPA test cases	1872
E.2.1 Measurement without dedicated connection	1872
E.3 During connection for non-HSDPA test cases	1872
E.3.1 Measurement of Tx Characteristics.....	1873
E.3.2 Measurement of Rx Characteristics.....	1873
E.3.3 Measurement of Performance requirements	1873
E.3.4 Connection with open-loop transmit diversity mode.....	1875
E.3.5 Connection with closed loop transmit diversity mode.....	1876
E.3.6 OCNS Definition.....	1876
E.4 W-CDMA Modulated Interferer for non-HSDPA test cases.....	1877
E.5 HSDPA DL Physical channels	1877
E.5.0 Downlink Physical Channels for connection set-up	1877
E.5.1 Downlink Physical Channels for measurement	1877
E.5.2 HSDPA OCNS Definition.....	1886
E.5.3 Downlink Physical Channels for measurement including test tolerances	1887
E.5.4 Downlink Physical Channels for Transmitter Characteristics with HS-DPCCH	1889
E.5A E-DCH with HSDPA DL Physical channels.....	1890
E.5A.0 Downlink Physical Channels for connection set-up	1890
E.5A.1 Downlink Physical Channels for measurement	1890
E.5A.2 E-DCH OCNS Definition.....	1892
E.5B MBMS DL Physical channels	1893

E.5B.1	Downlink Physical Channels for connection set-up	1893
E.5C	F-DPCH with HSDPA DL Physical channels.....	1893
E.5C.0	Downlink Physical Channels for connection set-up	1893
E.5C.1	Downlink Physical Channels for measurement	1893
E.5D	HSDPA and E-DCH DL Physical channels with discontinuous UL DPCCH transmission	1895
E.5D.0	Downlink Physical Channels for connection set-up	1895
E.5D.1	Downlink Physical Channels for measurement	1895
E.5E	Test Definition for Enhanced Performance Type 3i.....	1896
E.5E.1	Transmitted code and power characteristics for serving cell.....	1897
E.5E.2	Transmitted code and power characteristics for interfering cells	1899
E.5E.3	Model for power control sequence generation	1899
E.5F	Test Definition for MultiFlow HSDPA	1900
E.5F.1	Test configuration when 2 cells are configured in Multiflow mode	1900
E.5F.2	Test configuration when 3 cells are configured in Multiflow mode	1902
E.5F.3	Test configuration when 4 cells are configured in Multiflow mode	1902
E.6	Downlink Physical Channels Code Allocation (This clause is informative)	1902
E.6.1	Downlink Physical Channels Code Allocation for non-HSDPA test cases.....	1902
E.6.2	Downlink Physical Channels Code Allocation for HSDPA test cases	1905
E.6.3	Downlink Physical Channels Code Allocation for E-DCH test cases	1909
E.6.4	Downlink Physical Channels Code Allocation for MBMS test cases	1911

Annex F (normative): General test conditions and declarations1913

F.1	Acceptable uncertainty of Test System	1913
F.1.1	Measurement of test environments.....	1913
F.1.2	Measurement of transmitter.....	1914
F.1.3	Measurement of receiver	1921
F.1.4	Performance requirement	1926
F.1.5	Requirements for support of RRM	1934
F.1.6	Performance requirement (HSDPA).....	1960
F.1.7	Performance requirement (E-DCH).....	1966
F.1.8	Performance requirement (MBMS).....	1969
F.2	Test Tolerances (This clause is informative).....	1970
F.2.1	Transmitter	1970
F.2.2	Receiver.....	1975
F.2.3	Performance requirements.....	1977
F.2.4	Requirements for support of RRM	1981
F.2.5	Performance requirements (HSDPA)	1990
F.2.6	Performance requirements (E-DCH)	1993
F.2.7	Performance requirements (MBMS)	1994
F.3	Interpretation of measurement results	1994
F.4	Derivation of Test Requirements (This clause is informative).....	1994
F.4.1	Transmitter	1995
F.4.2	Receiver.....	2019
F.4.3	Performance requirements.....	2025
F.4.4	Requirements for support of RRM	2039
F.4.5	Performance requirements (HSDPA)	2074
F.4.6	Performance requirements (E-DCH)	2082
F.4.7	Performance requirements (MBMS)	2085
F.5	Acceptable uncertainty of Test Equipment (This clause is informative)	2085
F.5.1	Transmitter measurements.....	2086
F.5.2	Receiver measurements.....	2088
F.5.3	Performance measurements.....	2089
F.5.4	Requirements for support of RRM	2089
F.5.5	Performance measurements (HSDPA)	2090
F.5.6	Performance measurements (E-DCH)	2092
F.5.7	Performance measurements (MBMS)	2093

F.6	General rules for statistical testing	2093
F.6.1	Statistical testing of receiver BER/BLER performance	2093
F.6.1.1	Error Definition	2093
F.6.1.2	Test Method.....	2093
F.6.1.3	Test Criteria	2093
F.6.1.4	Calculation assumptions	2094
F.6.1.4.1	Statistical independence	2094
F.6.1.4.2	Applied formulas.....	2094
F.6.1.4.3	Approximation of the distribution.....	2094
F.6.1.5	Definition of good pass fail decision.	2094
F.6.1.6	Good balance between test time and statistical significance.....	2095
F.6.1.7	Pass fail decision rules.....	2096
F.6.1.8	Test conditions for BER, BLER, RLC SDU Error Rate tests	2097
F.6.1.9	Practical Use (informative)	2100
F.6.1.10	Dual limit BLER tests.....	2102
F.6.1.10.1	Description of the parameters for dual limit BLER tests	2103
F.6.1.10.2	Pass fail decision rules	2105
F.6.1.10.3	Test conditions for dual limit BLER tests	2106
F.6.1.10.4	Test conditions for dual limit TPC Command Error Rate tests.....	2107
F.6.2	Statistical testing of RRM delay performance.....	2107
F.6.2.1	Test Method.....	2107
F.6.2.2	Bad Delay Ratio (ER)	2107
F.6.2.3	Test Criteria	2107
F.6.2.4	Calculation assumptions	2107
F.6.2.4.1	Statistical independence	2107
F.6.2.4.2	Applied formulas.....	2108
F.6.2.4.3	Approximation of the distribution.....	2108
F.6.2.5	Definition of good pass fail decision	2108
F.6.2.6	Good balance between test-time and statistical significance	2109
F.6.2.7	Pass fail decision rules.....	2109
F.6.2.8	Test conditions for RRM delay tests, Combining of TPC commands test 1, Demodulation of Paging channel and Detection of acquisition indicator tests and UE measurement performance tests.....	2109
F.6.2.9	Practical Use (informative)	2113
F.6.3	Statistical Testing of HSDPA Receiver Performance	2114
F.6.3.1	Definition.....	2114
F.6.3.2	Mapping throughput to block error ratio.....	2115
F.6.3.3	Bad DUT factor	2115
F.6.3.3.1	Bad DUT factor, range of applicability	2116
F.6.3.4	Minimum Test time	2117
F.6.3.5	Test conditions for HSDPA Receiver Performance	2119
F.6.4	Statistical testing of performance requirement (E-DCH and MBMS).....	2140
F.6.4.1	Test Method.....	2140
F.6.4.2	Bad Result Ratio (ER)	2140
F.6.4.3	Mapping of E-DCH and MBMS tests to RRM tests (F.6.2) and HSDPA tests (F.6.3)	2140
F.6.4.4	Test conditions for E-DCH tests and MBMS	2141
Annex G (normative):	Environmental conditions	2142
G.1	General	2142
G.2	Environmental requirements	2142
G.2.1	Temperature	2142
G.2.2	Voltage	2142
G.2.3	Vibration.....	2143
G.2.4	Specified frequency range	2143
Annex H (normative):	UE Capabilities (FDD).....	2144
H.1	Void.....	2144
H.2	Void.....	2144
Annex I (normative):	Default Message Contents	2145

Contents of MEASUREMENT REPORT message for Intra frequency test cases.....	2145
Contents of MEASUREMENT REPORT message for Inter frequency test cases.....	2146
Contents of MEASUREMENT REPORT message for inter – RAT test cases.....	2147
Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)	2147
Contents of RADIO BEARER SETUP message: AM or UM (HSDPA).....	2147
Contents of Master Information Block PLMN type is the case of GSM-MAP	2148
Contents of Scheduling Block 1 (FDD)	2148
Contents of Scheduling Block 1 (FDD)	2149
Contents of Scheduling Block 1 (FDD)	2149
Contents of System Information Block type 11 (FDD).....	2150
Contents of System Information Block type 11 (FDD).....	2151
Contents of System Information Block type 11 (FDD).....	2151
Contents of System Information Block type 11 (FDD).....	2152
Contents of Scheduling Block 1 (FDD)	2152
Contents of System Information Block type 11 (FDD).....	2153
Contents of System Information Block type 11 (FDD).....	2154
Contents of Scheduling Block 1 (FDD)	2155
Contents of System Information Block type 11 (FDD).....	2155
Contents of System Information Block type 11 (FDD).....	2156
Contents of ACTIVE SET UPDATE message for test cases with SHO in clauses 7.7.1, 7.7.1A, 7.7.2, and 7.7.3.	2160

Annex J (informative): Information about special regional application of test cases and requirements.....	2163
---	-------------

J.1 Japan.....	2163
-------------------	------

Annex K (normative): Cell configuration mapping	2164
---	-------------

Annex L (normative): Conditions for RRM requirements applicability for operating bands .	2169
--	-------------

L.1 Conditions for Idle mode tasks.....	2169
L.1.1 Conditions for measurements of inter-RAT E-UTRA cells	2169
L.2 Conditions for UE Measurements Procedures	2169
L.2.1 Conditions for E-UTRAN measurements.....	2169
L.3 Conditions for Measurement Performance for UE.....	2170
L.3.1 Conditions for intra frequency CPICH RSCP measurements accuracy	2170
L.3.2 Conditions for intra frequency CPICH RSCP relative measurements accuracy.....	2170
L.3.3 Conditions for inter frequency CPICH RSCP relative measurements accuracy.....	2171
L.3.4 Conditions for intra frequency CPICH Ec/Io measurements accuracy.....	2171
L.3.5 Conditions for intra frequency CPICH Ec/Io relative measurements accuracy.....	2171
L.3.6 Conditions for inter frequency CPICH Ec/Io measurements accuracy.....	2171
L.3.7 Conditions for inter frequency CPICH Ec/Io relative measurements accuracy.....	2171
L.3.8 Conditions for intra frequency SFN-SFN observed time difference	2171
L.3.9 Conditions for inter frequency SFN-SFN observed time difference	2172
L.3.10 Conditions for SFN-SFN observed time difference type 1.....	2172
L.3.11 Conditions for intra frequency SFN-SFN observed time difference type 2 without or with IPDL period active	2172
L.3.12 Conditions for inter frequency SFN-SFN observed time difference type 2	2172
L.4 Conditions for UTRAN Connected mode mobility.....	2172
L.4.1 Conditions for identification of a new CGI of inter-RAT E-UTRA cell with autonomous gaps	2172

Annex M (informative): Change history	2174
---	-------------

History	2218
---------------	------

Foreword

This Technical Specification has been produced by the 3rd Generation Partnership Project (3GPP).

The contents of the present document are subject to continuing work within the TSG and may change following formal TSG approval. Should the TSG modify the contents of the present document, it will be re-released by the TSG with an identifying change of release date and an increase in version number as follows:

Version x.y.z

where:

- x the first digit:
 - 1 presented to TSG for information;
 - 2 presented to TSG for approval;
 - 3 or greater indicates TSG approved document under change control.
- y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.
- z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

The present document is part 1 of a multi-parts TS:

3GPP TS 34.121-1: User Equipment (UE) conformance specification; Radio transmission and reception (FDD); Part 1: Conformance specification.

3GPP TS 34.121-2 [32]: User Equipment (UE) conformance specification; Radio transmission and reception (FDD); Part 2: Implementation Conformance Statement (ICS).

NOTE: TS 34.121 has been converted to multipart TS with version 7.0.0. Previous versions are a single part standard 34.121.

1 Scope

The present document specifies the UTRA measurement procedures for the conformance test of the user equipment (UE) that contain transmitting characteristics, receiving characteristics and performance requirements in addition to requirements for support of RRM (Radio Resource Management) in FDD mode. In addition it specifies conformance testing of RRM requirements for support of E-UTRA when the UE operates in UTRA mode.

NOTE: Conformance testing of RRM requirements for support of UTRA when the UE operates in E-UTRA mode are specified in TS 36.521-3 [38].

The requirements are listed in different clauses only if the corresponding parameters deviate. More generally, tests are only applicable to those mobiles that are intended to support the appropriate functionality. To indicate the circumstances in which tests apply, this is noted in the "*definition and applicability*" part of the test.

For example only Release 5 and later UE declared to support HSDPA shall be tested for this functionality. In the event that for some tests different conditions apply for different releases, this is indicated within the text of the test itself.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document in the same Release as the present document unless the context in which the reference is made suggests a different Release is relevant (information on the applicable release in a particular context can be found in e.g. test case title, description or applicability, message description or content).
 - For a Release 1999 UE, references to 3GPP documents are to version 3.x.y.
 - For a Release 4 UE, references to 3GPP documents are to version 4.x.y.
 - For a Release 5 UE, references to 3GPP documents are to version 5.x.y.
 - For a Release 6 UE, references to 3GPP documents are to version 6.x.y.
 - For a Release 7 UE, references to 3GPP documents are to version 7.x.y.
 - For a Release 8 UE, references to 3GPP documents are to version 8.x.y.
 - For a Release 9 UE, references to 3GPP documents are to version 9.x.y.

- [1] 3GPP TS 25.101: "UE Radio transmission and reception (FDD)".
- [2] 3GPP TS 25.133: "Requirements for Support of Radio Resource Management (FDD)".
- [3] 3GPP TS 34.108: "Common Test Environments for User Equipment (UE) Conformance Testing".
- [4] 3GPP TS 34.109: "Terminal logical test interface; Special conformance testing functions".
- [5] 3GPP TS 25.214: "Physical layer procedures (FDD)".
- [6] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".
- [7] 3GPP TR 25.990: "Vocabulary".
- [8] 3GPP TS 25.331: "Radio Resource Control (RRC); Protocol Specification".
- [9] 3GPP TS 25.433: "UTRAN Iub Interface NBAP Signalling".