

3GPP TS 34.121-1 V11.1.1 (2013-10)

Technical Specification

**3rd Generation Partnership Project;
Technical Specification Group Radio Access Network;
User Equipment (UE) conformance specification;
Radio transmission and reception (FDD);
Part 1: Conformance specification
(Release 11)**



The present document has been developed within the 3rd Generation Partnership Project (3GPP™) and may be further elaborated for the purposes of 3GPP.

The present document has not been subject to any approval process by the 3GPP Organizational Partners and shall not be implemented. This Specification is provided for future development work within 3GPP only. The Organizational Partners accept no liability for any use of this Specification. Specifications and reports for implementation of the 3GPP™ system should be obtained via the 3GPP Organizational Partners' Publications Offices.

Keywords

Testing, UMTS

3GPP

Postal address

3GPP support office address

650 Route des Lucioles - Sophia Antipolis
Valbonne - FRANCE
Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Internet

<http://www.3gpp.org>

Copyright Notification

No part may be reproduced except as authorized by written permission.
The copyright and the foregoing restriction extend to reproduction in all media.

© 2013, 3GPP Organizational Partners (ARIB, ATIS, CCSA, ETSI, TTA, TTC).
All rights reserved.

Change the copyright date above as necessary.

UMTS™ is a Trade Mark of ETSI registered for the benefit of its members
3GPP™ is a Trade Mark of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners
LTE™ is a Trade Mark of ETSI currently being registered for the benefit of its Members and of the 3GPP Organizational Partners
GSM® and the GSM logo are registered and owned by the GSM Association

Contents

Foreword	52
Introduction	52
1 Scope	53
2 References.....	53
3 Definitions, symbols, abbreviations and equations	55
3.1 Definitions	55
3.2 Symbols.....	56
3.3 Abbreviations	56
3.4 Equations.....	57
4 Frequency bands and channel arrangement	59
4.1 General	59
4.2 Frequency bands.....	60
4.3 TX-RX frequency separation	61
4.4 Channel arrangement	61
4.4.1 Channel spacing	61
4.4.2 Channel raster	62
4.4.3 Channel number	62
4.4.4 UARFCN	64
4A Reference Conditions	65
4A.1 Generic setup procedures	65
4A.2 System information	65
4A.3 Message contents.....	65
4A.4 Measurement configurations	66
5 Transmitter Characteristics	66
5.1 General	66
5.2 Maximum Output Power.....	67
5.2.1 Definition and applicability	67
5.2.2 Minimum Requirements	68
5.2.3 Test purpose.....	69
5.2.4 Method of test.....	69
5.2.4.1 Initial conditions	69
5.2.4.2 Procedure.....	69
5.2.5 Test requirements	69
5.2A Maximum Output Power with HS-DPCCH (Release 5 only)	70
5.2A.1 Definition and applicability	70
5.2A.2 Minimum Requirements	70
5.2A.3 Test purpose.....	71
5.2A.4 Method of test.....	71
5.2A.4.1 Initial conditions	71
5.2A.4.2 Procedure.....	71
5.2A.5 Test requirements	71
5.2AA Maximum Output Power with HS-DPCCH (Release 6 and later)	72
5.2AA.1 Definition and applicability	72
5.2AA.2 Minimum Requirements	72
5.2AA.3 Test purpose.....	73
5.2AA.4 Method of test.....	73
5.2AA.4.1 Initial conditions	73
5.2AA.4.2 Procedure.....	73
5.2AA.5 Test requirements	74
5.2AB Maximum Output Power for OLTD.....	74
5.2AC Maximum Output Power for UL CLTD activation state 1	74
5.2AC.1 Definition and applicability	74
5.2AC.2 Minimum Requirements	75
5.2AC.3 Test purpose.....	75

5.2AC.4	Method of test.....	75
5.2.4.1	Initial conditions	75
5.2.4.2	Procedure.....	76
5.2AC.5	Test requirements	76
5.2AD	Maximum Output Power for UL CLTD activation state 2 and 3.....	77
5.2AD.1	Definition and applicability	77
5.2AD.2	Minimum Requirements	77
5.2AD.3	Test purpose.....	78
5.2AD.4	Method of test.....	78
5.2AD.4.1	Initial conditions	78
5.2AD.4.2	Procedure.....	78
5.2AD.5	Test requirements	78
5.2B	Maximum Output Power with HS-DPCCH and E-DCH.....	79
5.2B.1	Definition and applicability	79
5.2B.2	Minimum Requirements	79
5.2B.3	Test purpose.....	80
5.2B.4	Method of test.....	80
5.2B.4.1	Initial conditions	80
5.2B.4.2	Procedure.....	82
5.2B.5	Test requirements	83
5.2BA	UE Maximum Output Power for DC-HSUPA (QPSK).....	84
5.2BA.1	Definition and applicability	84
5.2BA.2	Minimum Requirements	84
5.2BA.3	Test purpose.....	85
5.2BA.4	Method of test.....	85
5.2BA.4.1	Initial conditions	85
5.2BA.4.2	Procedure.....	86
5.2BA.5	Test requirements	86
5.2BB	UE Maximum Output Power for DC-HSUPA (16QAM)	87
5.2BB.1	Definition and applicability	87
5.2BB.2	Minimum Requirements	87
5.2BB.3	Test purpose.....	88
5.2BB.4	Method of test.....	88
5.2BB.4.1	Initial conditions	88
5.2BB.4.2	Procedure.....	89
5.2BB.5	Test requirements	89
5.2BC	Maximum Output Power with HS-DPCCH and E-DCH for OLTD	89
5.2BD	Maximum Output Power with HS-DPCCH and E-DCH for UL CLTD activation state 1	89
5.2BD.1	Definition and applicability	90
5.2BD.2	Minimum Requirements	90
5.2BD.3	Test purpose.....	90
5.2BD.4	Method of test.....	91
5.2BD.4.1	Initial conditions	91
5.2BD.4.2	Procedure.....	92
5.2BD.4.2.1	Procedure for sub-test 1 to 4	92
5.2BD.5	Test requirements	93
5.2BE	Maximum Output Power with HS-DPCCH and E-DCH for UL CLTD activation state 2 and 3	94
5.2BE.1	Definition and applicability	94
5.2BE.2	Minimum Requirements	94
5.2BE.3	Test purpose.....	95
5.2BE.4	Method of test.....	95
5.2BE.4.1	Initial conditions	95
5.2BE.4.2	Procedure.....	97
5.2BE.4.2.1	Procedure for sub-test 1 to 4	97
5.2BE.5	Test requirements	97
5.2C	UE relative code domain power accuracy	98
5.2C.1	Definition and applicability	98
5.2C.2	Minimum Requirements	99
5.2C.3	Test purpose.....	99
5.2C.4	Method of test.....	99
5.2C.4.1	Initial conditions	99
5.2C.4.2	Procedure.....	99

5.2C.5	Test requirements	100
5.2CA	UE relative code domain power accuracy for OLTD	101
5.2CB	UE relative code domain power accuracy for UL CLTD activation state 1	101
5.2CB.1	Definition and applicability	101
5.2CB.2	Minimum Requirements	102
5.2CB.3	Test purpose	102
5.2CB.4	Method of test	102
5.2CB.4.1	Initial conditions	102
5.2CB.4.2	Procedure	103
5.2CB.5	Test requirements	104
5.2CC	UE relative code domain power accuracy for UL CLTD activation state 2 and 3	105
5.2CC.1	Definition and applicability	105
5.2CC.2	Minimum Requirements	105
5.2CC.3	Test purpose	105
5.2CC.4	Method of test	106
5.2CC.4.1	Initial conditions	106
5.2CC.4.2	Procedure	106
5.2CC.5	Test requirements	107
5.2D	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH	108
5.2D.1	Definition and applicability	108
5.2D.2	Minimum Requirements	108
5.2D.3	Test purpose	108
5.2D.4	Method of test	109
5.2D.4.1	Initial conditions	109
5.2D.4.2	Procedure	110
5.2D.5	Test requirements	111
5.2DA	UE Relative Code Domain Power Accuracy for DC-HSUPA with QPSK	112
5.2DA.1	Definition and applicability	112
5.2DA.2	Minimum Requirements	112
5.2DA.3	Test purpose	112
5.2DA.4	Method of test	113
5.2DA.4.1	Initial conditions	113
5.2DA.4.2	Procedure	113
5.2DA.5	Test requirements	114
5.2DB	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for OLTD	114
5.2DC	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for UL CLTD activation state 1	114
5.2DC.1	Definition and applicability	114
5.2DC.2	Minimum Requirements	115
5.2DC.3	Test purpose	115
5.2DC.4	Method of test	115
5.2DC.4.1	Initial conditions	115
5.2DC.4.2	Procedure	117
5.2DC.5	Test requirements	118
5.2DD	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH for UL CLTD activation state 2 and 3	118
5.2DD.1	Definition and applicability	118
5.2DD.2	Minimum Requirements	119
5.2DD.3	Test purpose	119
5.2DD.4	Method of test	119
5.2DD.4.1	Initial conditions	119
5.2DD.4.2	Procedure	121
5.2DD.5	Test requirements	122
5.2E	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM	122
5.2E.1	Definition and applicability	122
5.2E.2	Minimum Requirements	123
5.2E.3	Test purpose	123
5.2E.4	Method of test	123
5.2E.4.1	Initial conditions	123
5.2E.4.2	Procedure	124
5.2E.5	Test requirements	125
5.2EA	UE Relative Code Domain Power Accuracy for DC-HSUPA with 16QAM	126

5.2EA.1	Definition and applicability	126
5.2EA.2	Minimum Requirements	126
5.2EA.3	Test purpose.....	126
5.2EA.4	Method of test.....	127
5.2EA.4.1	Initial conditions	127
5.2EA.4.2	Procedure.....	127
5.2EA.5	Test requirements	128
5.2EB	FFS	128
5.2EC	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM for UL CLTD activation state 1	128
5.2EC.1	Definition and applicability	128
5.2EC.2	Minimum Requirements	129
5.2EC.3	Test purpose.....	129
5.2EC.4	Method of test.....	129
5.2EC.4.1	Initial conditions	129
5.2EC.4.2	Procedure.....	130
5.2EC.5	Test requirements	131
5.2ED	UE Relative Code Domain Power Accuracy for HS-DPCCH and E-DCH with 16QAM for UL CLTD activation state 2 and 3	132
5.2ED.1	Definition and applicability	132
5.2ED.2	Minimum Requirements	132
5.2ED.3	Test purpose.....	133
5.2ED.4	Method of test.....	133
5.2ED.4.1	Initial conditions	133
5.2ED.4.2	Procedure.....	134
5.2ED.5	Test requirements	135
5.3	Frequency Error	136
5.3.1	Definition and applicability	136
5.3.2	Minimum Requirements	136
5.3.3	Test purpose.....	136
5.3.4	Method of test.....	136
5.3.4.1	Initial conditions	136
5.3.4.2	Procedure.....	136
5.3.5	Test Requirements.....	137
5.3A	Frequency Error for DC-HSUPA	137
5.3A.1	Definition and applicability	137
5.3A.2	Minimum Requirements	137
5.3A.3	Test purpose.....	137
5.3A.4	Method of test.....	137
5.3A.4.1	Initial conditions	137
5.3A.4.2	Procedure.....	138
5.3A.5	Test Requirements.....	138
5.3C	Frequency Error for UL CLTD Activation state 1.....	138
5.3C.1	Definition and applicability	138
5.3C.2	Minimum Requirements	138
5.3C.3	Test purpose.....	138
5.3C.4	Method of test.....	139
5.3C.4.1	Initial conditions	139
5.3C.4.2	Procedure.....	139
5.3C.5	Test Requirements.....	139
5.3D	Frequency Error for UL CLTD Activation state 2 and 3.....	139
5.3D.1	Definition and applicability	139
5.3D.2	Minimum Requirements	140
5.3D.3	Test purpose.....	140
5.3D.4	Method of test.....	140
5.3D.4.1	Initial conditions	140
5.3D.4.2	Procedure.....	140
5.3D.5	Test Requirements.....	141
5.4	Output Power Dynamics in the Uplink.....	141
5.4.1	Open Loop Power Control in the Uplink	141
5.4.1.1	Definition and applicability.....	141
5.4.1.2	Minimum requirements.....	141

5.4.1.3	Test purpose.....	141
5.4.1.4	Method of test.....	141
5.4.1.5	Test requirements.....	143
5.4.1A	Open Loop Power Control in the Uplink for DC-HSUPA	143
5.4.1A.1	Definition and applicability.....	143
5.4.1A.2	Minimum requirements.....	143
5.4.1A.3	Test purpose.....	143
5.4.1A.4	Method of test.....	144
5.4.1A.5	Test requirements.....	145
5.4.2	Inner Loop Power Control in the Uplink	145
5.4.2.1	Definition and applicability.....	145
5.4.2.2	Minimum requirements.....	145
5.4.2.3	Test purpose.....	146
5.4.2.4	Method of test.....	146
5.4.2.5	Test requirements.....	150
5.4.2A	Inner Loop Power Control in the Uplink for DC-HSUPA	152
5.4.2A.1	Definition and applicability.....	152
5.4.2A.2	Minimum requirements.....	152
5.4.2A.3	Test purpose.....	153
5.4.2A.4	Method of test.....	154
5.4.2A.5	Test requirements.....	156
5.4.2B	FFS.....	157
5.4.2C	Inner Loop Power Control in the Uplink for UL CLTD activation state 1	157
5.4.2C.1	Definition and applicability.....	158
5.4.2C.2	Minimum requirements.....	158
5.4.2C.3	Test purpose.....	159
5.4.2C.4	Method of test.....	159
5.4.2C.4.1	Initial conditions	159
5.4.2C.4.2	Procedure.....	160
5.4.2C.5	Test requirements.....	163
5.4.2D	Inner Loop Power Control in the Uplink for UL CLTD activation state 2 and 3	165
5.4.2D.1	Definition and applicability.....	165
5.4.2D.2	Minimum requirements.....	165
5.4.2D.3	Test purpose.....	166
5.4.2D.4	Method of test.....	167
5.4.2D.4.1	Initial conditions	167
5.4.2D.4.2	Procedure.....	167
5.4.2D.5	Test requirements.....	170
5.4.3	Minimum Output Power	172
5.4.3.1	Definition and applicability.....	172
5.4.3.2	Minimum Requirements	172
5.4.3.3	Test purpose.....	172
5.4.3.4	Method of test.....	172
5.4.3.5	Test requirements.....	173
5.4.3A	Minimum Output Power for DC-HSUPA	173
5.4.3A.1	Definition and applicability.....	173
5.4.3A.2	Minimum Requirements	173
5.4.3A.3	Test purpose.....	173
5.4.3A.4	Method of test.....	173
5.4.3A.4.1	Initial conditions	173
5.4.3A.4.2	Procedure.....	174
5.4.3A.5	Test requirements.....	174
5.4.3B	Minimum Output Power for OLTLD	174
5.4.3C	Minimum Output Power for UL CLTD Activation state 1.....	174
5.4.3C.1	Definition and applicability.....	174
5.4.3C.2	Minimum Requirements	174
5.4.3C.3	Test purpose.....	175
5.4.3C.4	Method of test.....	175
5.4.3C.4.1	Initial conditions	175
5.4.3C.4.2	Procedure.....	175
5.4.3C.5	Test requirements.....	175
5.4.3D	Minimum Output Power for UL CLTD Activation state 2 and 3.....	175

5.4.3D.1	Definition and applicability	176
5.4.3D.2	Minimum Requirements	176
5.4.3D.3	Test purpose.....	176
5.4.3D.4	Method of test.....	176
5.4.3D.4.1	Initial conditions	176
5.4.3D.4.2	Procedure.....	176
5.4.3D.5	Test requirements.....	177
5.4.4	Out-of-synchronisation handling of output power	177
5.4.4.1	Definition and applicability.....	177
5.4.4.2	Minimum Requirements	177
5.4.4.3	Test purpose.....	179
5.4.4.4	Method of test.....	179
5.4.4.5	Test requirements.....	180
5.4.4A	Out-of-synchronization handling of output power for a UE which supports type1 for DCH.....	180
5.4.4A.1	Definition and applicability.....	180
5.4.4A.2	Minimum requirement	180
5.4.4A.3	Test purpose.....	182
5.4.4A.4	Method of test.....	182
5.4.4A.5	Test requirements.....	183
5.4.4B	FFS.....	184
5.4.4C	Out-of-synchronisation handling of output power for UL CLTD activation state 1	184
5.4.4C.1	Definition and applicability.....	184
5.4.4C.2	Minimum Requirements	184
5.4.4C.3	Test purpose.....	186
5.4.4C.4	Method of test.....	186
5.4.4C.5	Test requirements.....	186
5.4.4D	Out-of-synchronisation handling of output power for UL CLTD activation state 2 and 3	187
5.4.4D.1	Definition and applicability.....	187
5.4.4D.2	Minimum Requirements	187
5.4.4D.3	Test purpose.....	189
5.4.4D.4	Method of test.....	189
5.4.4D.5	Test requirements.....	189
5.5	Transmit ON/OFF Power	190
5.5.1	Transmit OFF Power	190
5.5.1.1	Definition and applicability.....	190
5.5.1.2	Minimum Requirements	190
5.5.1.3	Test purpose.....	190
5.5.1.4	Method of test.....	190
5.5.1.5	Test requirements.....	190
5.5.2	Transmit ON/OFF Time mask.....	190
5.5.2.1	Definition and applicability.....	190
5.5.2.2	Minimum requirements.....	190
5.5.2.3	Test purpose.....	193
5.5.2.4	Method of test.....	193
5.5.2.5	Test requirements.....	195
5.6	Change of TFC.....	195
5.6.1	Definition and applicability	195
5.6.2	Minimum requirements	195
5.6.3	Test purpose.....	197
5.6.4	Method of test.....	197
5.6.5	Test requirements	197
5.6AA	FFS.....	197
5.6AB	Change of TFC for UL CLTD activation state 1	197
5.6AB.1	Definition and applicability	198
5.6AB.2	Minimum requirements	198
5.6AB.3	Test purpose.....	200
5.6AB.4	Method of test.....	200
5.6AB.5	Test requirements	200
5.6AC	Change of TFC for UL CLTD activation state 2 and 3.....	200
5.6AC.1	Definition and applicability	201
5.6AC.2	Minimum requirements	201
5.6AC.3	Test purpose.....	203

5.6AC.4	Method of test.....	203
5.6AC.5	Test requirements	203
5.7	Power setting in uplink compressed mode	203
5.7.1	Definition and applicability	203
5.7.2	Minimum requirements	204
5.7.3	Test purpose.....	206
5.7.4	Method of test.....	206
5.7.5	Test requirements	213
5.7A	HS-DPCCH power control	215
5.7A.1	Definition and applicability	215
5.7A.2	Minimum requirement.....	215
5.7A.3	Test purpose.....	216
5.7A.4	Method of test.....	216
5.7A.5	Test requirements	218
5.8	Occupied Bandwidth (OBW)	219
5.8.1	Definition and applicability	219
5.8.2	Minimum Requirements	219
5.8.3	Test purpose.....	219
5.8.4	Method of test.....	219
5.8.5	Test Requirements.....	220
5.8A	Occupied Bandwidth (OBW) for DC-HSUPA.....	220
5.8A.1	Definition and applicability	220
5.8A.2	Minimum Requirements	220
5.8A.3	Test purpose.....	220
5.8A.4	Method of test.....	220
5.8A.4.1	Initial conditions	220
5.8A.4.2	Procedure.....	221
5.8A.5	Test Requirements.....	221
5.9	Spectrum emission mask.....	222
5.9.1	Definition and applicability	222
5.9.2	Minimum Requirements	222
5.9.3	Test purpose.....	223
5.9.4	Method of test.....	223
5.9.4.1	Initial conditions	223
5.9.4.2	Procedure.....	223
5.9.5	Test requirements	224
5.9A	Spectrum Emission Mask with HS-DPCCH.....	225
5.9A.1	Definition and applicability	225
5.9A.2	Minimum Requirements	225
5.9A.3	Test purpose.....	226
5.9A.4	Method of test.....	226
5.9A.4.1	Initial conditions	226
5.9A.4.2	Procedure.....	227
5.9A.5	Test requirements	227
5.9B	Spectrum Emission Mask with E-DCH.....	229
5.9B.1	Definition and applicability	229
5.9B.2	Minimum Requirements	229
5.9B.3	Test purpose.....	230
5.9B.4	Method of test.....	230
5.9B.4.1	Initial conditions	230
5.9B.4.2	Procedure.....	231
5.9B.5	Test requirements	231
5.9C	Additional Spectrum Emission Mask for DC-HSUPA (QPSK)	233
5.9C.1	Definition and applicability	233
5.9C.2	Minimum Requirements	233
5.9C.3	Test purpose.....	233
5.9C.4	Method of test.....	234
5.9C.4.1	Initial conditions	234
5.9C.4.2	Procedure.....	234
5.9C.5	Test requirements	234
5.9D	Additional Spectrum Emission Mask for DC-HSUPA (16QAM)	235
5.9D.1	Definition and applicability	235

5.9D.2	Minimum Requirements	235
5.9D.3	Test purpose.....	236
5.9D.4	Method of test.....	236
5.9D.4.1	Initial conditions	236
5.9D.4.2	Procedure.....	237
5.9D.5	Test requirements	237
5.10	Adjacent Channel Leakage Power Ratio (ACLR)	237
5.10.1	Definition and applicability	237
5.10.2	Minimum Requirements	238
5.10.3	Test purpose.....	238
5.10.4	Method of test.....	238
5.10.5	Test requirements	239
5.10A	Adjacent Channel Leakage Power Ratio (ACLR) with HS-DPCCH.....	239
5.10A.1	Definition and applicability	239
5.10A.2	Minimum Requirements	239
5.10A.3	Test purpose.....	239
5.10A.4	Method of test.....	240
5.10A.5	Test requirements	241
5.10B	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH	241
5.10B.1	Definition and applicability	241
5.10B.2	Minimum Requirements	241
5.10B.3	Test purpose.....	241
5.10B.4	Method of test.....	242
5.10B.5	Test requirements	243
5.10C	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for DC-HSUPA (QPSK)	243
5.10C.1	Definition and applicability	243
5.10C.2	Minimum Requirements	243
5.10C.3	Test purpose.....	243
5.10C.4	Method of test.....	244
5.10C.5	Test requirements	244
5.10D	Adjacent Channel Leakage Power Ratio (ACLR) with E-DCH for DC-HSUPA (16QAM).....	245
5.10D.1	Definition and applicability	245
5.10D.2	Minimum Requirements	245
5.10D.3	Test purpose.....	245
5.10D.4	Method of test.....	245
5.10D.5	Test requirements	246
5.11	Spurious Emissions.....	246
5.11.1	Definition and applicability	246
5.11.2	Minimum Requirements	247
5.11.3	Test purpose.....	252
5.11.4	Method of test.....	252
5.11.5	Test requirements	253
5.11A	Spurious Emissions for DC-HSUPA	257
5.11A.1	Definition and applicability	257
5.11A.2	Minimum Requirements	257
5.11A.3	Test purpose.....	260
5.11A.4	Method of test.....	261
5.11A.5	Test requirements	261
5.12	Transmit Intermodulation.....	266
5.12.1	Definition and applicability	266
5.12.2	Minimum Requirements	266
5.12.3	Test purpose.....	266
5.12.4	Method of test.....	266
5.12.5	Test requirements	267
5.12A	Transmit Intermodulation for DC-HSUPA	267
5.12A.1	Definition and applicability	267
5.12A.2	Minimum Requirements for DC-HSUPA	267
5.12A.3	Test purpose.....	267
5.12A.4	Method of test.....	268
5.12A.5	Test requirements	268
5.13	Transmit Modulation	268
5.13.1	Error Vector Magnitude (EVM)	269

5.13.1.1	Definition and applicability	269
5.13.1.2	Minimum Requirements	269
5.13.1.3	Test purpose.....	269
5.13.1.4	Method of test.....	269
5.13.1.5	Test requirements.....	270
5.13.1A	Error Vector Magnitude (EVM) with HS-DPCCH	270
5.13.1A.1	Definition and applicability	270
5.13.1A.2	Minimum Requirements	270
5.13.1A.3	Test purpose.....	270
5.13.1A.4	Method of test.....	271
5.13.1A.5	Test requirements.....	272
5.13.1AA	Error Vector Magnitude (EVM) and phase discontinuity with HS-DPCCH	272
5.13.1AA.1	Definition and applicability	272
5.13.1AA.2	Minimum Requirements	273
5.13.1AA.3	Test purpose.....	273
5.13.1AA.4	Method of test.....	273
5.13.1AA.5	Test requirements.....	275
5.13.1AAA	EVM and IQ origin offset for HS-DPCCH and E-DCH with 16 QAM	275
5.13.1AAA.1	Definition and applicability	275
5.13.1AAA.2	Minimum requirement	276
5.13.1AAA.3	Test purpose.....	276
5.13.1AAA.4	Method of test.....	276
5.13.1AAA.5	Test requirements.....	278
5.13.2	Peak code domain error	278
5.13.2.1	Definition and applicability	278
5.13.2.2	Minimum Requirements	279
5.13.2.3	Test purpose.....	279
5.13.2.4	Method of test.....	279
5.13.2.5	Test requirements.....	279
5.13.2A	Relative Code Domain Error with HS-DPCCH.....	280
5.13.2A.1	Definition and applicability	280
5.13.2A.2	Minimum Requirements	280
5.13.2A.3	Test purpose.....	281
5.13.2A.4	Method of test.....	281
5.13.2B	Relative Code Domain Error with HS-DPCCH and E-DCH	282
5.13.2B.1	Definition and applicability	282
5.13.2B.2	Minimum Requirements	283
5.13.2B.3	Test purpose.....	283
5.13.2B.4	Method of test.....	283
5.13.2B.5	Test requirements.....	285
5.13.2BA	Relative Code Domain Error with HS-DPCCH and E-DCH for DC-HSUPA	286
5.13.2BA.1	Definition and applicability	286
5.13.2BA.2	Minimum Requirements	287
5.13.2BA.3	Test purpose.....	287
5.13.2BA.4	Method of test.....	287
5.13.2BA.5	Test requirements.....	288
5.13.2C	Relative Code Domain Error for HS-DPCCH and E-DCH with 16QAM	289
5.13.2C.1	Definition and applicability	289
5.13.2C.2	Minimum Requirements	290
5.13.2C.3	Test purpose.....	290
5.13.2C.4	Method of test.....	290
7)	Generate suitable TPC commands from the SS to set the output power of the UE to be in the range $-18\text{ dBm} \pm 2\text{ dB}$ and repeat steps 4 to 6.5.13.2C.5 Test requirements	292
5.13.2CA	Relative Code Domain Error for HS-DPCCH and E-DCH with 16QAM for DC-HSUPA.....	293
5.13.2CA.1	Definition and applicability	293
5.13.2CA.2	Minimum Requirements	293
5.13.2CA.3	Test purpose.....	294
5.13.2CA.4	Method of test.....	294
5.13.2CA.5	Test requirements.....	295
5.13.3	UE phase discontinuity.....	296
5.13.3.1	Definition and applicability.....	296
5.13.3.2	Minimum requirements.....	297

5.13.3.3	Test purpose.....	297
5.13.3.4	Method of test.....	297
5.13.3.5	Test requirements.....	299
5.13.4	PRA CH preamble quality	299
5.13.4.1	Definition and applicability.....	299
5.13.4.2	Minimum requirements.....	299
5.13.4.3	Test purpose.....	299
5.13.4.4	Method of test.....	299
5.13.4.5	Test requirements.....	301
5.13.5	In-band emission for DC-HSUPA.....	301
5.13.5.1	Definition and applicability.....	301
5.13.5.2	Minimum Requirements	301
5.13.5.3	Test purpose.....	301
5.13.5.4	Method of test.....	301
5.13.5.5	Test requirements.....	302
6	Receiver Characteristics	303
6.1	General	303
6.1A	Reference input power adjustment for a dual band device.....	304
6.2	Reference Sensitivity Level.....	304
6.2.1	Definition and applicability	304
6.2.2	Minimum Requirements	305
6.2.3	Test purpose.....	305
6.2.4	Method of test.....	305
6.2.5	Test requirements	306
6.2A	Reference Sensitivity Level for DC-HSDPA	307
6.2A.1	Definition and applicability	307
6.2A.2	Minimum Requirements	307
6.2A.3	Test purpose.....	307
6.2A.4	Method of test.....	307
6.2A.5	Test requirements	308
6.2B	Reference Sensitivity Level for DB-DC-HSDPA	309
6.2B.1	Definition and applicability	309
6.2B.2	Minimum Requirements	309
6.2B.3	Test purpose.....	310
6.2B.4	Method of test.....	310
6.2B.5	Test requirements	311
6.2C	Reference Sensitivity Level for Single band 4C-HSDPA	311
6.2C.1	Definition and applicability	311
6.2C.2	Minimum Requirements	311
6.2C.3	Test purpose.....	312
6.2C.4	Method of test.....	312
6.2C.4.2	Procedure.....	312
6.2C.5	Test requirements	312
6.2D	Reference Sensitivity Level for Dual band 4C-HSDPA	313
6.2D.1	Definition and applicability	313
6.2D.2	Minimum Requirements	313
6.2D.3	Test purpose.....	314
6.2D.4	Method of test.....	314
6.2D.5	Test requirements	314
6.2DA	Reference Sensitivity Level for Dual band 4C-HSDPA (3 carrier).....	315
6.2DA.1	Definition and applicability	315
6.2DA.2	Minimum Requirements	315
6.2DA.3	Test purpose.....	316
6.2DA.4	Method of test.....	316
6.2DA.5	Test requirements	316
6.3	Maximum Input Level.....	317
6.3.1	Definition and applicability	317
6.3.2	Minimum requirements	317
6.3.3	Test purpose.....	317
6.3.4	Method of test.....	317
6.3.5	Test requirements	318

6.3A	Maximum Input Level for HS-PDSCH Reception (16QAM)	318
6.3A.1	Definition and applicability	318
6.3A.2	Minimum requirements	318
6.3A.3	Test purpose.....	319
6.3A.4	Method of test.....	319
6.3A.5	Test requirements	320
6.3B	Maximum Input Level for HS-PDSCH Reception (64QAM)	320
6.3B.1	Definition and applicability	320
6.3B.2	Minimum requirements	320
6.3B.3	Test purpose.....	321
6.3B.4	Method of test.....	321
6.3B.5	Test requirements	323
6.3C	Maximum Input Level for DC-HSDPA Reception (16QAM)	323
6.3C.1	Definition and applicability	323
6.3C.2	Minimum requirements	323
6.3C.3	Test purpose.....	324
6.3C.4	Method of test.....	324
6.3C.5	Test requirements	325
6.3D	Maximum Input Level for DC-HSDPA Reception (64QAM)	325
6.3D.1	Definition and applicability	325
6.3D.2	Minimum requirements	325
6.3D.3	Test purpose.....	326
6.3D.4	Method of test.....	326
6.3D.5	Test requirements	327
6.3E	Maximum Input Level for DB-DC-HSDPA Reception (16QAM).....	327
6.3E.1	Definition and applicability	327
6.3E.2	Minimum requirements	327
6.3E.3	Test purpose.....	328
6.3E.4	Method of test.....	328
6.3E.5	Test requirements	329
6.3F	Maximum Input Level for DB-DC-HSDPA Reception (64QAM).....	329
6.3F.1	Definition and applicability	329
6.3F.2	Minimum requirements	329
6.3F.3	Test purpose.....	330
6.3F.4	Method of test.....	330
6.3F.5	Test requirements	331
6.3G	Maximum Input Level for 4C-HSDPA Reception (16QAM)	332
6.3G.1	Definition and applicability	332
6.3G.2	Minimum requirements	332
6.3G.3	Test purpose.....	332
6.3G.4	Method of test.....	332
6.3G.5	Test requirements	333
6.3GA	Maximum Input Level for 4C-HSDPA Reception (16QAM) (3 carrier)	334
6.3GA.1	Definition and applicability	334
6.3GA.2	Minimum requirements	334
6.3GA.3	Test purpose.....	334
6.3GA.4	Method of test.....	334
6.3GA.5	Test requirements	335
6.3H	Maximum Input Level for 4C-HSDPA Reception (64QAM)	336
6.3H.1	Definition and applicability	336
6.3H.2	Minimum requirements	336
6.3H.3	Test purpose.....	336
6.3H.4	Method of test.....	336
6.3H.5	Test requirements	338
6.3HA	Maximum Input Level for 4C-HSDPA Reception (64QAM) (3 carrier)	338
6.3HA.1	Definition and applicability	338
6.3HA.2	Minimum requirements	338
6.3HA.3	Test purpose.....	339
6.3HA.4	Method of test.....	339
6.3HA.5	Test requirements	340
6.4	Adjacent Channel Selectivity (ACS) (Rel-99 and Rel-4).....	341
6.4.1	Definition and applicability	341

6.4.2	Minimum Requirements	341
6.4.3	Test purpose.....	341
6.4.4	Method of test.....	342
6.4.5	Test requirements	342
6.4A	Adjacent Channel Selectivity (ACS) (Rel-5 and later releases).....	343
6.4A.1	Definition and applicability	343
6.4A.2	Minimum Requirements	343
6.4A.3	Test purpose.....	343
6.4A.4	Method of test.....	343
6.4A.5	Test requirements	344
6.4B	Adjacent Channel Selectivity (ACS) for DC-HSDPA	344
6.4B.1	Definition and applicability	344
6.4B.2	Minimum Requirements	345
6.4B.3	Test purpose.....	345
6.4B.4	Method of test.....	345
6.4B.5	Test requirements	346
6.4C	Adjacent Channel Selectivity (ACS) for DB-DC-HSDPA	347
6.4C.1	Definition and applicability	347
6.4C.2	Minimum Requirements	347
6.4C.3	Test purpose.....	348
6.4C.4	Method of test.....	348
6.4C.5	Test requirements	349
6.5	Blocking Characteristics	349
6.5.1	Definition and applicability	349
6.5.2	Minimum Requirements	349
6.5.2.1	Minimum Requirements (In-band blocking)	349
6.5.2.2	Minimum requirements (Out of-band blocking).....	351
6.5.2.3	Minimum requirements (Narrow band blocking)	353
6.5.3	Test purpose.....	353
6.5.4	Method of test.....	353
6.5.5	Test requirements	354
6.5A	Blocking Characteristics for DC-HSDPA	357
6.5A.1	Definition and applicability	357
6.5A.2	Minimum Requirements	358
6.5A.2.1	Minimum Requirements (In-band blocking)	358
6.5A.2.2	Minimum requirements (Out of-band blocking).....	359
6.5A.2.3	Minimum requirements (Narrow band blocking)	361
6.5A.3	Test purpose.....	361
6.5A.4	Method of test.....	361
6.5A.5	Test requirements	363
6.5B	Blocking Characteristics for DB-DC-HSDPA	366
6.5B.1	Definition and applicability	366
6.5B.2	Minimum Requirements	366
6.5B.2.1	Minimum Requirements (In-band blocking)	366
6.5B.2.2	Minimum requirements (Out of-band blocking).....	368
6.5B.2.3	Minimum requirements (Narrow band blocking)	368
6.5B.3	Test purpose.....	369
6.5B.4	Method of test.....	369
6.5B.5	Test requirements	370
6.5C	Blocking Characteristics for DC-HSUPA	372
6.5C.1	Definition and applicability	372
6.5C.2	Minimum Requirements	372
6.5C.2.1	Minimum Requirements (In-band blocking)	372
6.5C.2.2	Minimum requirements (Narrow band blocking)	374
6.5C.3	Test purpose.....	375
6.5C.4	Method of test.....	375
6.5C.5	Test requirements	376
6.5D	Blocking Characteristics for single Uplink Single band 4C-HSDPA	379
6.5D.1	Definition and applicability	379
6.5D.2	Minimum Requirements	379
6.5D.2.1	Minimum Requirements (In-band blocking)	379
6.5D.2.2	Minimum requirements (Out of-band blocking).....	380

6.5D.3	Test purpose.....	380
6.5D.4	Method of test.....	381
6.5D.4.1	Initial conditions	381
6.5D.4.2	Procedure.....	381
6.5D.5	Test requirements	381
6.5E	Blocking Characteristics for dual uplink single band 4C-HSDPA	383
6.5E.1	Definition and applicability	383
6.5E.2	Minimum Requirements	383
6.5E.2.1	Minimum Requirements (In-band blocking)	383
6.5E.3	Test purpose.....	383
6.5E.4	Method of test.....	384
6.5E.4.1	Initial conditions	384
6.5E.4.2	Procedure.....	384
6.5E.5	Test requirements	384
6.5F	Blocking Characteristics for single Uplink dual band 4C-HSDPA	385
6.5F.1	Definition and applicability	385
6.5F.2	Minimum Requirements	385
6.5F.2.1	Minimum Requirements (In-band blocking)	385
6.5F.2.2	Minimum requirements (Out of-band blocking)	386
6.5F.2.3	Minimum requirements (Narrow band blocking)	388
6.5F.3	Test purpose.....	388
6.5F.4	Method of test.....	388
6.5F.4.1	Initial conditions	388
6.5F.4.2	Procedure.....	389
6.5F.5	Test requirements	389
6.5FA	Blocking Characteristics for single Uplink dual band 4C-HSDPA (3 carrier)	392
6.5FA.1	Definition and applicability	392
6.5FA.2	Minimum Requirements	393
6.5FA.2.1	Minimum Requirements (In-band blocking)	393
6.5FA.2.2	Minimum requirements (Out of-band blocking)	393
6.5FA.2.3	Minimum requirements (Narrow band blocking)	395
6.5FA.3	Test purpose.....	396
6.5FA.4	Method of test.....	396
6.5FA.4.1	Initial conditions	396
6.5FA.4.2	Procedure.....	397
6.5FA.5	Test requirements	397
6.5G	Blocking Characteristics for dual uplink dual band 4C-HSDPA	400
6.5G.1	Definition and applicability	400
6.5G.2	Minimum Requirements	400
6.5G.2.1	Minimum Requirements (In-band blocking)	400
6.5G.2.2	Minimum requirements (Narrow band blocking)	402
6.5G.3	Test purpose.....	403
6.5G.4	Method of test.....	403
6.5G.5	Test requirements	404
6.5GA	Blocking Characteristics for dual uplink dual band 4C-HSDPA (3 carrier)	406
6.5GA.1	Definition and applicability	406
6.5GA.2	Minimum Requirements	406
6.5GA.2.1	Minimum Requirements (In-band blocking)	406
6.5GA.2.2	Minimum requirements (Narrow band blocking)	408
6.5GA.3	Test purpose.....	409
6.5GA.4	Method of test.....	409
6.5GA.5	Test requirements	410
6.6	Spurious Response.....	412
6.6.1	Definition and applicability	412
6.6.2	Minimum Requirements	412
6.6.3	Test purpose.....	413
6.6.4	Method of test.....	413
6.6.5	Test requirements	413
6.6A	Spurious Response for DC-HSDPA	414
6.6A.1	Definition and applicability	414
6.6A.2	Minimum Requirements	414
6.6A.3	Test purpose.....	414

6.6A.4	Method of test.....	414
6.6A.5	Test requirements	415
6.6B	Spurious Response for DB-DC-HSDPA	416
6.6B.1	Definition and applicability	416
6.6B.2	Minimum Requirements	416
6.6B.3	Test purpose.....	416
6.6B.4	Method of test.....	416
6.6B.5	Test requirements	417
6.6C	Spurious Response for single band 4C-HSDPA	418
6.6C.1	Definition and applicability	418
6.6C.2	Minimum Requirements	418
6.6C.3	Test purpose.....	418
6.6C.4	Method of test.....	418
6.6C.5	Test requirements	419
6.6D	Spurious Response for dual band 4C-HSDPA	419
6.6D.1	Definition and applicability	419
6.6D.2	Minimum Requirements	420
6.6D.3	Test purpose.....	420
6.6D.4	Method of test.....	420
6.6D.5	Test requirements	421
6.6DA	Spurious Response for dual band 4C-HSDPA (3 carrier)	421
6.6DA.1	Definition and applicability	421
6.6DA.2	Minimum Requirements	421
6.6DA.3	Test purpose.....	422
6.6DA.4	Method of test.....	422
6.6DA.5	Test requirements	422
6.7	Intermodulation Characteristics	423
6.7.1	Definition and applicability	423
6.7.2	Minimum Requirements	423
6.7.3	Test purpose.....	424
6.7.4	Method of test.....	424
6.7.5	Test requirements	425
6.7A	Intermodulation Characteristics for DC-HSDPA.....	425
6.7A.1	Definition and applicability	425
6.7A.2	Minimum Requirements	426
6.7A.3	Test purpose.....	426
6.7A.4	Method of test.....	427
6.7A.5	Test requirements	427
6.7B	Intermodulation Characteristics for DB-DC-HSDPA	428
6.7B.1	Definition and applicability	428
6.7B.2	Minimum Requirements	429
6.7B.3	Test purpose.....	429
6.7B.4	Method of test.....	430
6.7B.5	Test requirements	430
6.7C	Intermodulation Characteristics for DC-HSUPA.....	431
6.7C.1	Definition and applicability	431
6.7C.2	Minimum Requirements	432
6.7C.3	Test purpose.....	433
6.7C.4	Method of test.....	433
6.7C.5	Test requirements	434
6.7D	Intermodulation Characteristics for single uplink single band 4C-HSDPA	436
6.7D.1	Definition and applicability	436
6.7D.2	Minimum Requirements	436
6.7D.3	Test purpose.....	437
6.7D.4	Method of test.....	437
6.7D.5	Test requirements	438
6.7E	Intermodulation Characteristics for single uplink dual band 4C-HSDPA	438
6.7E.1	Definition and applicability	438
6.7E.2	Minimum Requirements	438
6.7E.3	Test purpose.....	440
6.7E.4	Method of test.....	440
6.7E.5	Test requirements	441

6.7EA	Intermodulation Characteristics for single uplink dual band 4C-HSDPA (3 carrier).....	443
6.7EA.1	Definition and applicability	443
6.7EA.2	Minimum Requirements	443
6.7EA.3	Test purpose.....	444
6.7EA.4	Method of test.....	445
6.7EA.5	Test requirements	445
6.8	Spurious Emissions	447
6.8.1	Definition and applicability	447
6.8.2	Minimum Requirements	447
6.8.3	Test purpose.....	451
6.8.4	Method of test.....	451
6.8.5	Test requirements	452
7	Performance requirements	456
7.1	General	456
7.1.1	Measurement Configurations	456
7.1.2	Definition of Additive White Gaussian Noise (AWGN) Interferer	456
7.2	Demodulation in Static Propagation conditions	457
7.2.1	Demodulation of Dedicated Channel (DCH)	457
7.2.1.1	Definition and applicability.....	457
7.2.1.2	Minimum requirements.....	457
7.2.1.3	Test purpose.....	457
7.2.1.4	Method of test.....	457
7.2.1.5	Test requirements.....	458
7.3	Demodulation of DCH in Multi-path Fading Propagation conditions	458
7.3.1	Single Link Performance	458
7.3.1.1	Definition and applicability.....	458
7.3.1.2	Minimum requirements.....	459
7.3.1.3	Test purpose.....	461
7.3.1.4	Method of test.....	461
7.3.1.5	Test requirements.....	461
7.4	Demodulation of DCH in Moving Propagation conditions.....	464
7.4.1	Single Link Performance	464
7.4.1.1	Definition and applicability.....	464
7.4.1.2	Minimum requirements.....	464
7.4.1.3	Test purpose.....	465
7.4.1.4	Method of test.....	465
7.4.1.5	Test requirements.....	465
7.5	Demodulation of DCH in Birth-Death Propagation conditions	466
7.5.1	Single Link Performance	466
7.5.1.1	Definition and applicability.....	466
7.5.1.2	Minimum requirements.....	466
7.5.1.3	Test purpose.....	466
7.5.1.4	Method of test.....	466
7.5.1.5	Test requirements.....	467
7.5A	Demodulation of DCH in high speed train condition.....	467
7.5A.1	Single Link Performance	467
7.5A.1.1	Definition and applicability.....	467
7.5A.1.2	Minimum requirement.....	467
7.5A.1.3	Test purpose.....	468
7.5A.1.4	Method of test.....	468
7.5A.1.5	Test requirements.....	468
7.6	Demodulation of DCH in downlink Transmit diversity modes.....	469
7.6.1	Demodulation of DCH in open-loop transmit diversity mode	469
7.6.1.1	Definition and applicability.....	469
7.6.1.2	Minimum requirements.....	469
7.6.1.3	Test purpose.....	469
7.6.1.4	Method of test.....	469
7.6.1.5	Test Requirements	470
7.6.2	Demodulation of DCH in closed loop transmit diversity mode	471
7.6.2.1	Definition and applicability.....	471
7.6.2.2	Minimum requirements.....	471

7.6.2.3	Test purpose.....	472
7.6.2.4	Method of test.....	472
7.6.2.5	Test Requirements	473
7.6.3	Demodulation of DCH in Site Selection Diversity Transmission Power Control mode	474
7.6.3.1	Definition and applicability.....	474
7.6.3.2	Minimum requirements.....	474
7.6.3.3	Test purpose.....	475
7.6.3.4	Method of test.....	475
7.6.3.5	Test Requirements	478
7.7	Demodulation in Handover conditions.....	479
7.7.1	Demodulation of DCH in Inter-Cell Soft Handover (Release 5 and earlier)	479
7.7.1.1	Definition and applicability.....	479
7.7.1.2	Minimum requirements.....	479
7.7.1.3	Test purpose.....	480
7.7.1.4	Method of test.....	480
7.7.1.5	Test requirements.....	480
7.7.1A	Demodulation of DCH in Inter-Cell Soft Handover (Release 6 and later)	481
7.7.1A.1	Definition and applicability.....	481
7.7.1A.2	Minimum requirements.....	481
7.7.1A.3	Test purpose.....	482
7.7.1A.4	Method of test.....	482
7.7.1A.5	Test requirements.....	482
7.7.2	Combining of TPC commands from radio links of different radio link sets	483
7.7.2.1	Definition and applicability.....	483
7.7.2.2	Minimum requirements.....	483
7.7.2.3	Test purpose.....	484
7.7.2.4	Method of test.....	484
7.7.2.5	Test requirements.....	485
7.7.3	Combining of reliable TPC commands from radio links of different radio link sets.....	486
7.7.3.1	Definition and applicability.....	486
7.7.3.2	Minimum requirements.....	486
7.7.3.3	Test purpose.....	487
7.7.3.4	Method of test.....	487
7.7.3.4.1	Test 1 Initial conditions	487
7.7.3.4.2	Test 1 Procedures.....	487
7.7.3.4.3	Test 2 Initial conditions	487
7.7.3.4.4	Test 2 Procedures.....	488
7.7.3.5	Test requirements.....	488
7.8	Power control in downlink.....	489
7.8.1	Power control in the downlink, constant BLER target (Release 5 and earlier)	489
7.8.1.1	Definition and applicability.....	489
7.8.1.2	Minimum requirements.....	490
7.8.1.3	Test purpose.....	490
7.8.1.4	Method of test.....	490
7.8.1.5	Test Requirements	491
7.8.1A	Power control in the downlink, constant BLER target (Release 6 and later)	492
7.8.1A.1	Definition and applicability.....	492
7.8.1A.2	Minimum requirements.....	492
7.8.1A.3	Test purpose.....	492
7.8.1A.4	Method of test.....	492
7.8.1A.5	Test Requirements	493
7.8.2	Power control in the downlink, initial convergence.....	494
7.8.2.1	Definition and applicability.....	494
7.8.2.2	Minimum requirements.....	494
7.8.2.3	Test purpose.....	494
7.8.2.4	Method of test.....	494
7.8.2.5	Test Requirements	495
7.8.3	Power control in the downlink, wind up effects (Release 5 and earlier)	496
7.8.3.1	Definition and applicability	496
7.8.3.2	Minimum requirements.....	497
7.8.3.3	Test purpose.....	497
7.8.3.4	Method of test.....	497

7.8.3.5	Test Requirements	498
7.8.3A	Power control in the downlink, wind up effects (Release 6 and later)	499
7.8.3A.1	Definition and applicability	499
7.8.3A.2	Minimum requirements.....	499
7.8.3A.3	Test purpose.....	499
7.8.3A.4	Method of test.....	500
7.8.4	Power control in the downlink, different transport formats	501
7.8.4.1	Definition and applicability	501
7.8.4.2	Minimum requirements.....	501
7.8.4.3	Test purpose.....	502
7.8.4.4	Method of test.....	502
7.8.4.5	Test Requirements	503
7.8.5	Power control in the downlink for F-DPCH.....	503
7.8.5.1	Definition and applicability.....	503
7.8.5.2	Minimum requirements.....	504
7.8.5.3	Test purpose.....	504
7.8.5.4	Method of test.....	504
7.8.5.5	Test Requirements	507
7.9	Downlink compressed mode	507
7.9.1	Single link performance (Release 5 and earlier).....	508
7.9.1.1	Definition and applicability.....	508
7.9.1.2	Minimum requirements.....	508
7.9.1.3	Test purpose.....	509
7.9.1.4	Method of test.....	509
7.9.1.5	Test requirements	509
7.9.1A	Single link performance (Release 6 and later)	511
7.9.1A.1	Definition and applicability.....	511
7.9.1A.2	Minimum requirements.....	511
7.9.1A.3	Test purpose.....	511
7.9.1A.4	Method of test.....	512
7.9.1A.5	Test requirements.....	512
7.10	Blind transport format detection	513
7.10.1	Definition and applicability	513
7.10.2	Minimum requirements	513
7.10.3	Test purpose.....	514
7.10.4	Method of test.....	514
7.10.5	Test requirements	515
7.11	Demodulation of Paging Channel (PCH)	515
7.11.1	Definition and applicability	515
7.11.2	Minimum requirements	515
7.11.3	Test purpose.....	516
7.11.4	Method of test.....	516
7.11.5	Test requirements	519
7.12	Detection of Acquisition Indicator (AI)	519
7.12.1	Definition and applicability	519
7.12.2	Minimum requirements	520
7.12.3	Test purpose.....	520
7.12.4	Method of test.....	520
7.12.5	Test requirements	522
7.12A	Detection of E-DCH Acquisition Indicator (E-AI).....	522
7.12A.1	Definition and applicability	522
7.12A.2	Minimum requirements	522
7.12A.3	Test purpose.....	523
7.12A.4	Method of test.....	523
7.12A.5	Test requirements	524
7.13	UE UL power control operation with discontinuous UL DPCCCH transmission operation	525
7.13.1	Definition and applicability	525
7.13.2	Minimum requirement.....	525
7.13.3	Test purpose.....	525
7.13.4	Method of test.....	526
7.13.4.1	Initial conditions	526
7.13.4.2	Procedure.....	526

7.13.5.	Test Requirements	528
8	Requirements for support of RRM.....	529
8.1	General	529
8.1.1	Definition of Additive White Gaussian Noise (AWGN) Interferer.....	529
8.2	Idle Mode Tasks	529
8.2.1	Cell Selection.....	529
8.2.2	Cell Re-Selection.....	529
8.2.2.1	Scenario 1: Single carrier case.....	529
8.2.2.1.1	Definition and applicability.....	529
8.2.2.1.2	Minimum requirement	530
8.2.2.1.3	Test purpose.....	530
8.2.2.1.4	Method of test.....	530
8.2.2.1.5	Test requirements.....	533
8.2.2.2	Scenario 2: Multi carrier case.....	533
8.2.2.2.1	Definition and applicability.....	533
8.2.2.2.2	Minimum requirement	533
8.2.2.2.3	Test purpose.....	533
8.2.2.2.4	Method of test.....	534
8.2.2.2.5	Test requirements.....	536
8.2.3	UTRAN to GSM Cell Re-Selection	538
8.2.3.1	Scenario 1: Both UTRA and GSM level changed.....	538
8.2.3.1.1	Definition and applicability.....	538
8.2.3.1.2	Minimum requirement	538
8.2.3.1.3	Test purpose.....	538
8.2.3.1.4	Method of test.....	538
8.2.3.1.5	Test requirements.....	540
8.2.3.2	Scenario 2: Only UTRA level changed.....	541
8.2.3.2.1	Definition and applicability.....	541
8.2.3.2.2	Minimum requirement	541
8.2.3.2.3	Test purpose.....	541
8.2.3.2.4	Method of test.....	541
8.2.3.2.5	Test requirements.....	543
8.2.3.3	Scenario 3: HCS with only UTRA level changed.....	544
8.2.3.3.1	Definition and applicability.....	544
8.2.3.3.2	Minimum requirement	544
8.2.3.3.3	Test purpose.....	544
8.2.3.3.4	Method of test.....	544
8.2.3.3.5	Test requirements.....	546
8.2.4	FDD/TDD Cell Re-selection	547
8.2.4.1	Definition and applicability.....	547
8.2.4.1.1	3.84 Mcps TDD Option	547
8.2.4.1.2	1.28 Mcps TDD Option	547
8.2.4.2	Minimum requirement	548
8.2.4.3	Test purpose.....	548
8.2.4.4	Method of test.....	548
8.2.4.4.1	Initial conditions	548
8.2.4.4.1.1	3.84 Mcps TDD Option	548
8.2.4.4.1.2	1.28Mcps TDD Option	549
8.2.4.4.2	Procedures.....	550
8.2.4.5	Test requirements.....	550
8.2.5	UTRAN to E-UTRA Cell Re-Selection	551
8.2.5.1	E-UTRA is of higher priority.....	551
8.2.5.1.1	Definition and applicability.....	551
8.2.5.1.2	Minimum requirement	551
8.2.5.1.3	Test purpose.....	551
8.2.5.1.4	Method of test.....	551
8.2.5.1.5	Test requirements.....	554
8.2.5.2	E-UTRA is of lower priority	555
8.2.5.2.1	Definition and applicability.....	555
8.2.5.2.2	Minimum requirement	556
8.2.5.2.3	Test purpose.....	556

8.2.5.2.4	Method of test.....	556
8.2.5.2.5	Test requirements.....	559
8.2.5.3	RSRQ based reselection when E-UTRA FDD is of higher priority	560
8.2.5.3.1	Definition and applicability.....	560
8.2.5.3.2	Minimum requirement	560
8.2.5.3.3	Test purpose.....	560
8.2.5.3.4	Method of test.....	560
8.2.5.3.5	Test requirements.....	563
8.3	UTRAN Connected Mode Mobility	564
8.3.1	FDD/FDD Soft Handover.....	564
8.3.1.1	Definition and applicability.....	564
8.3.1.2	Minimum requirement	565
8.3.1.3	Test purpose.....	565
8.3.1.4	Method of test.....	565
8.3.1.5	Test requirements.....	570
8.3.2	FDD/FDD Hard Handover	571
8.3.2.1	FDD/FDD Hard Handover to intra-frequency cell	571
8.3.2.1.1	Definition and applicability.....	571
8.3.2.1.2	Minimum requirement	571
8.3.2.1.3	Test purpose.....	572
8.3.2.1.4	Method of test.....	572
8.3.2.1.5	Test requirements.....	578
8.3.2.2	FDD/FDD Hard Handover to inter-frequency cell	578
8.3.2.2.1	Definition and applicability.....	578
8.3.2.2.2	Minimum requirement	578
8.3.2.2.3	Test purpose.....	579
8.3.2.2.4	Method of test.....	579
8.3.2.2.5	Test requirements.....	584
8.3.3	FDD/TDD Handover.....	585
8.3.3.1	Definition and applicability.....	585
8.3.3.2	Minimum requirement	585
8.3.3.3	Test purpose.....	585
8.3.3.4	Method of test.....	585
8.3.3.5	Test requirements.....	590
8.3.4	Inter-system Handover from UTRAN FDD to GSM	591
8.3.4.1	Definition and applicability.....	591
8.3.4.2	Minimum requirement	591
8.3.4.3	Test purpose.....	591
8.3.4.4	Method of test.....	591
8.3.4.5	Test requirements.....	598
8.3.4a	Inter-system Handover from UTRAN FDD to E-UTRAN FDD.....	598
8.3.4a.1	Definition and applicability.....	599
8.3.4a.2	Minimum requirement	599
8.3.4a.3	Test purpose.....	599
8.3.4a.4	Method of test.....	599
8.3.4a.5	Test requirements.....	607
8.3.4b	Inter-system Handover from UTRAN FDD to E-UTRAN TDD	608
8.3.4b.1	Definition and applicability.....	608
8.3.4b.2	Minimum requirement	609
8.3.4b.3	Test purpose.....	609
8.3.4b.4	Method of test.....	609
8.3.4b.4.1	Initial conditions	609
8.3.4b.4.2	Procedure.....	611
8.3.4b.5	Test requirements.....	617
8.3.4c	Inter-system Handover from UTRAN FDD to E-UTRAN FDD: Unknown Target Cell.....	619
8.3.4c.1	Definition and applicability.....	619
8.3.4c.2	Minimum requirement	619
8.3.4c.3	Test purpose.....	619
8.3.4c.4	Method of test.....	619
8.3.4c.5	Test requirements.....	625
8.3.4d	Inter-system Handover from UTRAN FDD to E-UTRAN TDD; Unknown Target Cell	626
8.3.4d.1	Definition and applicability.....	626

8.3.4d.2	Minimum requirement	626
8.3.4d.3	Test purpose.....	626
8.3.4d.4	Method of test.....	626
8.3.4d.4.1	Initial conditions	626
8.3.4d.4.2	Procedure.....	628
8.3.4d.5	Test requirements.....	632
8.3.5	Cell Re-selection in CELL_FACH	632
8.3.5.1	One frequency present in neighbour list	632
8.3.5.1.1	Definition and applicability	632
8.3.5.1.2	Minimum requirements.....	633
8.3.5.1.3	Test purpose.....	633
8.3.5.1.4	Method of test.....	633
8.3.5.1.5	Test requirements.....	635
8.3.5.2	Two frequencies present in the neighbour list	636
8.3.5.2.1	Definition and applicability	636
8.3.5.2.2	Minimum requirements.....	636
8.3.5.2.3	Test purpose.....	636
8.3.5.2.4	Method of test.....	637
8.3.5.2.5	Test requirements.....	640
8.3.5.3	Cell Reselection to GSM	640
8.3.5.3.1	Definition and applicability	640
8.3.5.3.2	Minimum requirements.....	640
8.3.5.3.3	Test purpose.....	641
8.3.5.3.4	Method of test.....	641
8.3.5.3.5	Test requirements.....	643
8.3.5.4	Cell Reselection during an MBMS session, two frequencies present in neighbour list	644
8.3.5.4.1	Definition and applicability	644
8.3.5.4.2	Minimum requirements.....	644
8.3.5.4.3	Test purpose.....	644
8.3.5.4.4	Method of test.....	644
8.3.5.4.5	Test requirements.....	649
8.3.6	Cell Re-selection in CELL_PCH.....	650
8.3.6.1	One frequency present in the neighbour list.....	650
8.3.6.1.1	Definition and applicability	650
8.3.6.1.2	Minimum requirements.....	650
8.3.6.1.3	Test purpose.....	650
8.3.6.1.4	Method of test.....	650
8.3.6.1.5	Test requirements.....	653
8.3.6.2	Two frequencies present in the neighbour list	653
8.3.6.2.1	Definition and applicability	653
8.3.6.2.2	Minimum requirement	653
8.3.6.2.3	Test purpose.....	654
8.3.6.2.4	Method of test.....	654
8.3.6.2.5	Test requirements.....	658
8.3.6.3	Cell re-selection during an MBMS session, one UTRAN inter-frequency and 2 GSM cells present in the neighbour list	659
8.3.6.3.1	Definition and applicability	659
8.3.6.3.2	Minimum requirement	659
8.3.6.3.3	Test purpose.....	659
8.3.6.3.4	Method of test.....	659
8.3.6.3.5	Test requirements.....	663
8.3.7	Cell Re-selection in URA_PCH	664
8.3.7.1	One frequency present in the neighbour list.....	664
8.3.7.1.1	Definition and applicability	664
8.3.7.1.2	Minimum requirement	664
8.3.7.1.3	Test purpose.....	665
8.3.7.1.4	Method of test.....	665
8.3.7.1.5	Test requirements.....	668
8.3.7.2	Two frequencies present in the neighbour list	668
8.3.7.2.1	Definition and applicability	668
8.3.7.2.2	Minimum requirement	668
8.3.7.2.3	Test purpose.....	669

8.3.7.2.4	Method of test.....	669
8.3.7.2.5	Test requirements.....	672
8.3.8	Serving HS-DSCH cell change.....	673
8.3.8.1	Definition and applicability.....	673
8.3.8.2	Minimum requirement.....	673
8.3.8.3	Test purpose.....	673
8.3.8.4	Method of test.....	673
8.3.8.4.1	Initial conditions.....	677
8.3.8.4.2	Procedure.....	677
8.3.8.5	Test requirements.....	686
8.3.9	Enhanced Serving HS-DSCH cell change.....	688
8.3.9.1	Definition and applicability.....	688
8.3.9.2	Minimum requirement.....	688
8.3.9.3	Test purpose.....	688
8.3.9.4	Method of test.....	689
8.3.9.4.1	Initial conditions.....	690
8.3.9.4.2	Procedure.....	690
8.3.9.5	Test requirements.....	698
8.3.10	System information acquisition for CSG cell.....	698
8.3.10.1	Intrafrequency System information acquisition for CSG cell.....	698
8.3.10.1.1	Definition and applicability.....	698
8.3.10.1.2	Minimum requirement.....	699
8.3.10.1.3	Test purpose.....	699
8.3.10.1.4	Method of test.....	699
8.3.10.1.5	Test requirements.....	703
8.3.10.2	Inter frequency System information acquisition for CSG cell.....	703
8.3.10.2.1	Definition and applicability.....	703
8.3.10.2.2	Minimum requirement.....	703
8.3.10.2.3	Test purpose.....	704
8.3.10.2.4	Method of test.....	704
8.3.10.2.5	Test requirements.....	710
8.4	RRC Connection Control.....	711
8.4.1	RRC Re-establishment delay.....	711
8.4.1.1	Test 1.....	711
8.4.1.1.1	Definition and applicability.....	711
8.4.1.1.2	Minimum requirement.....	711
8.4.1.1.3	Test purpose.....	711
8.4.1.1.4	Method of test.....	712
8.4.1.1.5	Test requirements.....	714
8.4.1.2	Test 2.....	714
8.4.1.2.1	Definition and applicability.....	714
8.4.1.2.2	Minimum requirement.....	714
8.4.1.2.3	Test purpose.....	715
8.4.1.2.4	Method of test.....	715
8.4.1.2.5	Test requirements.....	716
8.4.2	Random Access.....	717
8.4.2.1	Correct behaviour when receiving an ACK (Release 5 and earlier).....	717
8.4.2.1.1	Definition and applicability.....	717
8.4.2.1.2	Minimum Requirements.....	717
8.4.2.1.3	Test purpose.....	717
8.4.2.1.4	Method of test.....	717
8.4.2.1.5	Test requirements.....	719
8.4.2.1A	Correct behaviour when receiving an ACK (Release 6 and later).....	720
8.4.2.1A.1	Definition and applicability.....	720
8.4.2.1A.2	Minimum Requirements.....	720
8.4.2.1A.3	Test purpose.....	720
8.4.2.1A.4	Method of test.....	720
8.4.2.1A.5	Test requirements.....	722
8.4.2.2	Correct behaviour when receiving an NACK.....	723
8.4.2.2.1	Definition and applicability.....	723
8.4.2.2.2	Minimum Requirements.....	723
8.4.2.2.3	Test purpose.....	723

8.4.2.2.4	Method of test.....	723
8.4.2.2.5	Test requirements.....	723
8.4.2.3	Correct behaviour at Time-out	724
8.4.2.3.1	Definition and applicability.....	724
8.4.2.3.2	Minimum Requirements	724
8.4.2.3.3	Test purpose.....	724
8.4.2.3.4	Method of test.....	724
8.4.2.3.5	Test requirements.....	724
8.4.2.4	Correct behaviour when reaching maximum transmit power	724
8.4.2.4.1	Definition and applicability.....	724
8.4.2.4.2	Minimum Requirements	725
8.4.2.4.3	Test purpose.....	725
8.4.2.4.4	Method of test.....	725
8.4.2.4.5	Test requirements.....	726
8.4.3	Transport format combination selection in UE	726
8.4.3.1	Interactive or Background, PS, UL: 64 kbps	726
8.4.3.1.1	Definition and applicability.....	726
8.4.3.1.2	Minimum requirements.....	726
8.4.3.1.3	Test purpose.....	727
8.4.3.1.4	Method of test.....	727
8.4.3.1.5	Test requirements.....	730
8.4.3.1A	Interactive or Background, PS, UL: 64 kbps + Conversational / speech, CS, UL: 12.2kbps	730
8.4.3.1A.1	Definition and applicability.....	730
8.4.3.1A.2	Minimum requirements.....	730
8.4.3.1A.3	Test purpose.....	732
8.4.3.1A.4	Method of test.....	732
8.4.3.1A.5	Test requirements.....	735
8.4.4	E-TFC restriction in UE.....	735
8.4.4.1	10ms TTI E-DCH E-TFC restriction.....	736
8.4.4.1.1	Definition and applicability.....	736
8.4.4.1.2	Minimum requirements.....	736
8.4.4.1.3	Test Purpose.....	738
8.4.4.1.4	Method of test.....	738
8.4.4.1.5	Test Requirements	742
8.4.4.2	2ms TTI E-DCH E-TFC restriction	742
8.4.4.2.1	Definition and applicability.....	742
8.4.4.2.2	Minimum requirements.....	742
8.4.4.2.3	Test Purpose.....	745
8.4.4.2.4	Method of test.....	745
8.4.4.2.5	Test Requirements	749
8.5	Timing and Signalling Characteristics	749
8.5.1	UE Transmit Timing	749
8.5.1.1	Definition and applicability.....	749
8.5.1.2	Minimum requirements.....	750
8.5.1.3	Test purpose.....	751
8.5.1.4	Method of test.....	751
8.5.1.5	Test requirements.....	755
8.6	UE Measurements Procedures	756
8.6.1	FDD intra frequency measurements	756
8.6.1.1	Event triggered reporting in AWGN propagation conditions (R99)	756
8.6.1.1.1	Definition and applicability.....	756
8.6.1.1.2	Minimum requirements.....	756
8.6.1.1.3	Test purpose.....	757
8.6.1.1.4	Method of test.....	758
8.6.1.1.5	Test requirements.....	761
8.6.1.1A	Event triggered reporting in AWGN propagation conditions (Rel-4 and later).....	761
8.6.1.1A.1	Definition and applicability.....	761
8.6.1.1A.2	Minimum requirements.....	762
8.6.1.1A.3	Test purpose.....	763
8.6.1.1A.4	Method of test.....	763
8.6.1.1A.5	Test requirements.....	766
8.6.1.2	Event triggered reporting of multiple neighbours in AWGN propagation condition (R99)	767

8.6.1.2.1	Definition and applicability	767
8.6.1.2.2	Minimum requirements.....	767
8.6.1.2.3	Test purpose.....	767
8.6.1.2.4	Method of test.....	767
8.6.1.2.5	Test requirements	774
8.6.1.2A	Event triggered reporting of multiple neighbours in AWGN propagation condition (Rel-4 and later)	776
8.6.1.2A.1	Definition and applicability	776
8.6.1.2A.2	Minimum requirements.....	776
8.6.1.2A.3	Test purpose.....	776
8.6.1.2A.4	Method of test.....	776
8.6.1.2A.5	Test requirements	782
8.6.1.3	Event triggered reporting of two detectable neighbours in AWGN propagation condition (R99)	783
8.6.1.3.1	Definition and applicability	783
8.6.1.3.2	Minimum requirements.....	783
8.6.1.3.3	Test purpose.....	783
8.6.1.3.4	Method of test.....	783
8.6.1.3.5	Test requirements	789
8.6.1.3A	Event triggered reporting of two detectable neighbours in AWGN propagation condition (Rel-4 and later)	791
8.6.1.3A.1	Definition and applicability	791
8.6.1.3A.2	Minimum requirements.....	791
8.6.1.3A.3	Test purpose.....	791
8.6.1.3A.4	Method of test.....	791
8.6.1.3A.5	Test requirements	794
8.6.1.4	Void	795
8.6.1.4A	Correct reporting of neighbours in fading propagation condition (Rel-4 and later)	795
8.6.1.4A.1	Definition and applicability	795
8.6.1.4A.2	Minimum requirements.....	796
8.6.1.4A.3	Test purpose.....	796
8.6.1.4A.4	Method of test.....	796
8.6.1.4A.5	Test requirements	799
8.6.1.5	Event triggered reporting of multiple neighbour cells in Case 1 fading condition	800
8.6.1.5.1	Definition and applicability	800
8.6.1.5.2	Minimum requirements.....	800
8.6.1.5.3	Test purpose.....	800
8.6.1.5.4	Method of test.....	800
8.6.1.5.5	Test requirements	803
8.6.1.6	Event triggered reporting of multiple neighbour cells in Case 3 fading condition	804
8.6.1.6.1	Definition and applicability	804
8.6.1.6.2	Minimum requirements.....	804
8.6.1.6.3	Test purpose.....	804
8.6.1.6.4	Method of test.....	804
8.6.1.6.5	Test requirements	808
8.6.2	FDD inter frequency measurements	809
8.6.2.1	Correct reporting of neighbours in AWGN propagation condition (Release 5 and earlier)	809
8.6.2.1.1	Definition and applicability	809
8.6.2.1.2	Minimum requirements.....	809
8.6.2.1.3	Test purpose.....	810
8.6.2.1.4	Method of test.....	810
8.6.2.1.5	Test requirements	816
8.6.2.1A	Correct reporting of neighbours in AWGN propagation condition (Release 6 and later)	817
8.6.2.1A.1	Definition and applicability	817
8.6.2.1A.2	Minimum requirements.....	818
8.6.2.1A.3	Test purpose.....	818
8.6.2.1A.4	Method of test.....	819
8.6.2.1A.5	Test requirements	825
8.6.2.2	Correct reporting of neighbours in fading propagation condition (Release 5 only)	826
8.6.2.2.1	Definition and applicability	826
8.6.2.2.2	Minimum requirements.....	826
8.6.2.2.3	Test purpose.....	826
8.6.2.2.4	Method of test.....	826

8.6.2.2.4.1	Initial conditions	826
8.6.2.2.4.2	Procedure	827
8.6.2.2.5	Test requirements	831
8.6.2.2A	Correct reporting of neighbours in fading propagation condition (Release 6 and later)	831
8.6.2.2A.1	Definition and applicability	831
8.6.2.2A.2	Minimum requirements	831
8.6.2.2A.3	Test purpose	831
8.6.2.2A.4	Method of test	832
8.6.2.2A.4.1	Initial conditions	832
8.6.2.2A.4.2	Procedure	832
8.6.2.2A.5	Test requirements	836
8.6.2.3	Correct reporting of neighbours in fading propagation condition using TGL1=14	836
8.6.2.3.1	Definition and applicability	836
8.6.2.3.2	Minimum requirements	837
8.6.2.3.3	Test purpose	837
8.6.2.3.4	Method of test	837
8.6.2.3.4.1	Initial conditions	837
8.6.2.3.4.2	Procedure	838
8.6.2.3.5	Test requirements	841
8.6.3	TDD measurements	842
8.6.3.1	Correct reporting of TDD neighbours in AWGN propagation condition	842
8.6.3.1.1	Definition and applicability	842
8.6.3.1.2	Minimum requirement	842
8.6.3.1.2.1	3.84Mcps TDD option	842
8.6.3.1.2.2	1.28Mcps TDD option	843
8.6.3.1.3	Test purpose	844
8.6.3.1.4	Method of test	844
8.6.3.1.4.1	Initial conditions	844
8.6.3.1.4.1.1	3.84Mcps TDD option	844
8.6.3.1.4.1.2	1.28Mcps TDD option	846
8.6.3.1.5	Test requirements	851
8.6.4	GSM measurements	851
8.6.4.1	Correct reporting of GSM neighbours in AWGN propagation condition	851
8.6.4.1.1	Definition and applicability	851
8.6.4.1.2	Minimum requirements	852
8.6.4.1.3	Test purpose	852
8.6.4.1.4	Method of test	852
8.6.4.1.4.1	Test 1 initial conditions	852
8.6.4.1.4.2	Test 1 Procedure	853
8.6.4.1.4.3	Test 2 initial conditions	857
8.6.4.1.4.4	Test 2 Procedure	858
8.6.4.1.5	Test requirements	861
8.6.4.1.5.1	TEST 1 With BSIC verification required	861
8.6.4.1.5.2	TEST 2 Without BSIC verification required	861
8.6.5	Combined inter frequency and GSM measurements	862
8.6.5.1	Correct reporting of neighbours in AWGN propagation condition	862
8.6.5.1.1	Definition and applicability	862
8.6.5.1.2	Minimum requirement	862
8.6.5.1.3	Test purpose	863
8.6.5.1.4	Method of test	863
8.6.5.1.5	Test requirements	875
8.6.6	E-UTRAN Measurement	875
8.6.6.1	Correct reporting of E-UTRAN FDD neighbour in fading propagation condition	875
8.6.6.1.1	Definition and applicability	875
8.6.6.1.2	Minimum requirement	876
8.6.6.1.3	Test purpose	877
8.6.6.1.4	Method of test	877
8.6.6.1.5	Test requirements	882
8.6.6.2	Correct reporting of E-UTRAN TDD neighbour in fading propagation condition	884
8.6.6.2.1	Definition and applicability	884
8.6.6.2.2	Minimum requirement	885
8.6.6.2.3	Test purpose	885

8.6.6.2.4	Method of test.....	885
8.6.6.2.5	Test requirements.....	890
8.6.7	Combined Inter-frequency and E-UTRAN measurements	891
8.6.7.1	Correct reporting of E-UTRA FDD neighbours in fading propagation condition.....	891
8.6.7.1.1	Definition and applicability.....	891
8.6.7.1.2	Minimum requirement	892
8.6.7.1.3	Test purpose.....	894
8.6.7.1.4	Method of test.....	894
8.6.7.1.5	Test requirements.....	900
8.6.7.2	Correct reporting of E-UTRA TDD neighbours in Fading propagation condition	902
8.6.7.2.1	Definition and applicability.....	902
8.6.7.2.2	Minimum requirement	902
8.6.7.2.3	Test purpose.....	903
8.6.7.2.4	Method of test.....	903
8.6.7.2.5	Test requirements.....	911
8.7	Measurements Performance Requirements	913
8.7.1	CPICH RSCP.....	913
8.7.1.1	Intra frequency measurements accuracy	913
8.7.1.1.1	Absolute accuracy requirement	913
8.7.1.1.2	Relative accuracy requirement	918
8.7.1.2	Inter frequency measurement accuracy.....	921
8.7.1.2.1	Relative accuracy requirement	921
8.7.2	CPICH Ec/Io	928
8.7.2.1	Intra frequency measurements accuracy	928
8.7.2.1.1	Absolute accuracy requirement	928
8.7.2.1.2	Relative accuracy requirement	933
8.7.2.2	Inter frequency measurement accuracy.....	937
8.7.2.2.1	Absolute accuracy requirement	937
8.7.2.2.2	Relative accuracy requirement	937
8.7.3	UTRA Carrier RSSI.....	944
8.7.3.1	Absolute measurement accuracy requirement	944
8.7.3.1.1	Definition and applicability.....	944
8.7.3.1.2	Minimum Requirements	944
8.7.3.1.3	Test purpose.....	944
8.7.3.1.4	Method of test.....	944
8.7.3.1.5	Test requirements.....	948
8.7.3.2	Relative measurement accuracy requirement.....	950
8.7.3.2.1	Definition and applicability.....	950
8.7.3.2.2	Minimum Requirements	950
8.7.3.2.3	Test purpose.....	950
8.7.3.2.4	Method of test.....	950
8.7.3.2.5	Test requirements.....	954
8.7.3A	GSM Carrier RSSI.....	956
8.7.3A.1	Definition and applicability.....	956
8.7.3A.2	Minimum Requirements	956
8.7.3A.3	Test purpose.....	957
8.7.3A.4	Method of test.....	957
8.7.3A.4.1	Initial conditions	957
8.7.3A.4.2	Procedure.....	960
8.7.3A.5	Test requirements.....	963
8.7.3B	Transport channel BLER	965
8.7.3C	UE transmitted power (R99 and Rel-4 only).....	965
8.7.3C.1	Definition and applicability.....	965
8.7.3C.2	Minimum requirements.....	966
8.7.3C.3	Test purpose.....	966
8.7.3C.4	Method of test.....	966
8.7.3C.4.1	Initial conditions	966
8.7.3C.4.2	Procedure.....	967
8.7.3C.5	Test requirements.....	969
8.7.3D	UE transmitted power (Rel-5 and later)	969
8.7.3D.1	Definition and applicability.....	969
8.7.3D.2	Minimum requirements.....	969

8.7.3D.3	Test purpose.....	970
8.7.3D.4	Method of test.....	970
8.7.3D.4.1	Initial conditions	970
8.7.3D.4.2	Procedure.....	971
8.7.3D.5	Test requirements.....	974
8.7.4	SFN-CFN observed time difference	974
8.7.4.1	Intra frequency measurement requirement	974
8.7.4.1.1	Definition and applicability	974
8.7.4.1.2	Minimum requirements.....	975
8.7.4.1.3	Test Purpose.....	975
8.7.4.1.4	Method of test.....	975
8.7.4.1.5	Test requirements.....	978
8.7.4.2	Inter frequency measurement requirement	979
8.7.4.2.1	Definition and applicability.....	979
8.7.4.2.2	Minimum requirements.....	979
8.7.4.2.3	Test purpose.....	980
8.7.4.2.4	Method of test.....	980
8.7.4.2.5	Test requirements	984
8.7.5	SFN-SFN observed time difference	986
8.7.5.1	SFN-SFN observed time difference type 1	986
8.7.5.1.1	Definition and applicability	986
8.7.5.1.2	Minimum requirements	986
8.7.5.1.3	Test purpose.....	986
8.7.5.1.4	Method of test.....	987
8.7.5.1.5	Test requirements	989
8.7.5.2	SFN-SFN observed time difference type 2 without IPDL period active.....	991
8.7.5.2.1	Definition and applicability	991
8.7.5.2.2	Minimum requirements.....	991
8.7.5.2.3	Test purpose and Environment.....	991
8.7.5.3	SFN-SFN observed time difference type 2 with IPDL period active	992
8.7.5.3.1	Definition and applicability	992
8.7.5.3.2	Minimum requirements.....	992
8.7.5.3.3	Test purpose and Environment.....	993
8.7.6	UE Rx-Tx time difference	994
8.7.6.1	UE Rx-Tx time difference type 1 (Release 5 and earlier).....	994
8.7.6.1.1	Definition and applicability	994
8.7.6.1.2	Minimum requirements.....	994
8.7.6.1.3	Test purpose.....	994
8.7.6.1.4	Method of test.....	995
8.7.6.1.5	Test requirements	997
8.7.6.1A	UE Rx-Tx time difference type 1 (Release 6 and later)	998
8.7.6.1A.1	Definition and applicability	998
8.7.6.1A.2	Minimum requirements.....	998
8.7.6.1A.3	Test purpose.....	999
8.7.6.1A.4	Method of test.....	999
8.7.6.1A.5	Test requirements	1001
8.7.6.2	UE Rx-Tx time difference type 2.....	1002
8.7.6.2.1	Definition and applicability	1002
8.7.6.2.2	Minimum requirements.....	1003
8.7.6.2.3	Test purpose.....	1003
8.7.7	Observed time difference to GSM cell (R99 and Rel-4 only)	1003
8.7.8	P-CCPCH RSCP	1004
8.7.8.1	Absolute measurement accuracy	1004
8.7.8.1.1	Definition and applicability	1004
8.7.8.1.2	Minimum Requirements	1004
8.7.8.1.3	Test purpose.....	1004
8.7.8.1.4	Method of test.....	1005
8.7.8.1.5	Test requirements	1009
8.7.9	UE Transmission Power Headroom.....	1009
8.7.9.1	Definition and applicability	1009
8.7.9.2	Minimum Requirements	1009
8.7.9.3	Test purpose.....	1010

8.7.9.4	Method of test.....	1010
8.7.9.4.1	Initial conditions	1010
8.7.9.4.2	Test procedure	1012
8.7.9.5	Test requirements.....	1013
8.7.10	E-UTRAN FDD RSRP absolute accuracy.....	1013
8.7.10.1	Definition and applicability.....	1013
8.7.10.2	Minimum Requirements	1013
8.7.10.3	Test purpose.....	1014
8.7.10.4	Method of test.....	1014
8.7.10.5	Test requirements.....	1020
8.7.11	E-UTRAN TDD RSRP absolute accuracy	1022
8.7.11.1	Definition and applicability.....	1022
8.7.11.2	Minimum Requirements	1022
8.7.11.3	Test purpose.....	1023
8.7.11.4	Method of test.....	1023
8.7.11.5	Test requirements.....	1027
8.7.12	E-UTRAN FDD RSRQ absolute accuracy.....	1029
8.7.12.1	Definition and applicability.....	1029
8.7.12.2	Minimum Requirements	1029
8.7.12.3	Test purpose.....	1030
8.7.12.4	Method of test.....	1030
8.7.12.5	Test requirements.....	1034
8.7.13	E-UTRAN TDD RSRQ absolute accuracy.....	1036
8.7.13.1	Definition and applicability.....	1036
8.7.13.2	Minimum Requirements	1036
8.7.13.3	Test purpose.....	1037
8.7.13.4	Method of test.....	1037
8.7.13.5	Test requirements.....	1043
9	Performance requirements for HSDPA.....	1046
9.1	General	1046
9.2	Demodulation of HS-DSCH (Fixed Reference Channel).....	1046
9.2.1	Single Link Performance	1056
9.2.1A	Single Link Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1056
9.2.1A.1	Definition and applicability.....	1056
9.2.1A.2	Minimum requirements.....	1056
9.2.1A.3	Test purpose.....	1057
9.2.1A.4	Method of test.....	1057
9.2.1A.4.1	Initial conditions	1057
9.2.1A.4.2	Procedure.....	1058
9.2.1A.5	Test Requirements	1058
9.2.1B	Single Link Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5.....	1060
9.2.1B.1	Definition and applicability.....	1060
9.2.1B.2	Minimum requirements.....	1060
9.2.1B.3	Test purpose.....	1061
9.2.1B.4	Method of test.....	1061
9.2.1B.4.1	Initial conditions	1061
9.2.1B.4.2	Procedure.....	1061
9.2.1B.5	Test Requirements	1062
9.2.1C	Single Link Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3.....	1063
9.2.1C.1	Definition and applicability.....	1063
9.2.1C.2	Minimum requirements.....	1063
9.2.1C.3	Test purpose.....	1065
9.2.1C.4	Method of test.....	1065
9.2.1C.4.1	Initial conditions	1065
9.2.1C.4.2	Procedure.....	1065
9.2.1C.5	Test Requirements	1066
9.2.1D	Single Link Performance - Enhanced Performance Requirements Type 1 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1067
9.2.1D.1	Definition and applicability.....	1067
9.2.1D.2	Minimum requirements.....	1068
9.2.1D.3	Test purpose.....	1069

9.2.1D.4	Method of test.....	1069
9.2.1D.4.1	Initial conditions	1069
9.2.1D.4.2	Procedure.....	1070
9.2.1D.5	Test Requirements	1070
9.2.1E	Single Link Performance - Enhanced Performance Requirements Type 1- QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1071
9.2.1E.1	Definition and applicability.....	1071
9.2.1E.2	Minimum requirements.....	1071
9.2.1E.3	Test purpose.....	1073
9.2.1E.4	Method of test.....	1074
9.2.1E.4.1	Initial conditions	1074
9.2.1E.4.2	Procedure.....	1074
9.2.1E.5	Test Requirements	1074
9.2.1F	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1076
9.2.1F.1	Definition and applicability.....	1076
9.2.1F.2	Minimum requirements.....	1076
9.2.1F.3	Test purpose.....	1078
9.2.1F.4	Method of test.....	1078
9.2.1F.4.1	Initial conditions	1078
9.2.1F.4.2	Procedure.....	1079
9.2.1F.5	Test Requirements	1079
9.2.1FA	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A.....	1080
9.2.1FA.1	Definition and applicability.....	1080
9.2.1FA.2	Minimum requirements.....	1080
9.2.1FA.3	Test purpose.....	1082
9.2.1FA.4	Method of test.....	1082
9.2.1FA.4.1	Initial conditions	1082
9.2.1FA.4.2	Procedure.....	1083
9.2.1FA.5	Test Requirements	1083
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.....	1085
9.2.1FB.1	Definition and applicability.....	1085
9.2.1FB.2	Minimum requirements.....	1085
9.2.1FB.3	Test purpose.....	1087
9.2.1FB.4	Method of test.....	1087
9.2.1FB.4.1	Initial conditions	1087
9.2.1FB.4.2	Procedure.....	1088
9.2.1FB.5	Test Requirements	1088
9.2.1FC	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6B/3B	1089
9.2.1FC.1	Definition and applicability.....	1089
9.2.1FC.2	Minimum requirements.....	1090
9.2.1FC.3	Test purpose.....	1091
9.2.1FC.4	Method of test.....	1092
9.2.1FC.4.1	Initial conditions	1092
9.2.1FC.4.2	Procedure.....	1092
9.2.1FC.5	Test Requirements	1092
9.2.1FD	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6C/3C	1094
9.2.1FD.1	Definition and applicability.....	1094
9.2.1FD.2	Minimum requirements.....	1094
9.2.1FD.3	Test purpose.....	1096
9.2.1FD.4	Method of test.....	1096
9.2.1FD.4.1	Initial conditions	1096
9.2.1FD.4.2	Procedure.....	1097
9.2.1FD.5	Test Requirements	1097
9.2.1G	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1099
9.2.1G.1	Definition and applicability.....	1099
9.2.1G.2	Minimum requirements.....	1099

9.2.1G.3	Test purpose.....	1101
9.2.1G.4	Method of test.....	1101
9.2.1G.4.1	Initial conditions	1101
9.2.1G.4.2	Procedure.....	1102
9.2.1G.5	Test Requirements	1102
9.2.1GA	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6A/3A	1104
9.2.1GA.1	Definition and applicability.....	1104
9.2.1GA.2	Minimum requirements.....	1104
9.2.1GA.3	Test purpose.....	1107
9.2.1GA.4	Method of test.....	1107
9.2.1GA.4.1	Initial conditions	1107
9.2.1GA.4.2	Procedure.....	1108
9.2.1GA.5	Test Requirements	1108
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	1110
9.2.1GB.1	Definition and applicability.....	1110
9.2.1GB.2	Minimum requirements.....	1110
9.2.1GB.3	Test purpose.....	1113
9.2.1GB.4	Method of test.....	1113
9.2.1GB.4.1	Initial conditions	1113
9.2.1GB.4.2	Procedure.....	1114
9.2.1GB.5	Test Requirements	1114
9.2.1GC	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6B/3B	1116
9.2.1GC.1	Definition and applicability.....	1116
9.2.1GC.2	Minimum requirements.....	1116
9.2.1GC.3	Test purpose.....	1119
9.2.1GC.4	Method of test.....	1119
9.2.1GC.4.1	Initial conditions	1119
9.2.1GC.4.2	Procedure.....	1120
9.2.1GC.5	Test Requirements	1120
9.2.1GD	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6C/3C	1122
9.2.1GD.1	Definition and applicability.....	1122
9.2.1GD.2	Minimum requirements.....	1122
9.2.1GD.3	Test purpose.....	1125
9.2.1GD.4	Method of test.....	1125
9.2.1GD.4.1	Initial conditions	1125
9.2.1GD.4.2	Procedure.....	1126
9.2.1GD.5	Test Requirements	1126
9.2.1H	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8	1128
9.2.1H.1	Definition and applicability.....	1128
9.2.1H.2	Minimum requirements.....	1128
9.2.1H.3	Test purpose.....	1129
9.2.1H.4	Method of test.....	1129
9.2.1H.4.1	Initial conditions	1129
9.2.1H.4.2	Procedure.....	1131
9.2.1H.5	Test Requirements	1131
9.2.1HA	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8 A.....	1131
9.2.1HA.1	Definition and applicability.....	1131
9.2.1HA.2	Minimum requirements.....	1131
9.2.1HA.3	Test purpose.....	1132
9.2.1HA.4	Method of test.....	1132
9.2.1HA.4.1	Initial conditions	1132
9.2.1HA.4.2	Procedure.....	1133
9.2.1HA.5	Test Requirements	1133
9.2.1HB	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8 A for DB-DC-HSDPA	1134
9.2.1HB.1	Definition and applicability.....	1134

9.2.1HB.2	Minimum requirements.....	1134
9.2.1HB.3	Test purpose.....	1135
9.2.1HB.4	Method of test.....	1135
9.2.1HB.4.1	Initial conditions	1135
9.2.1HB.4.2	Procedure.....	1136
9.2.1HB.5	Test Requirements	1136
9.2.1HC	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8B	1137
9.2.1HC.1	Definition and applicability.....	1137
9.2.1HC.2	Minimum requirements.....	1137
9.2.1HC.3	Test purpose.....	1138
9.2.1HC.4	Method of test.....	1138
9.2.1HC.4.1	Initial conditions	1138
9.2.1HC.4.2	Procedure.....	1139
9.2.1HC.5	Test Requirements	1139
9.2.1HD	Single Link Performance - Enhanced Performance Requirements Type 2 - 64QAM, Fixed Reference Channel (FRC) H-Set 8C	1140
9.2.1HD.1	Definition and applicability.....	1140
9.2.1HD.2	Minimum requirements.....	1140
9.2.1HD.3	Test purpose.....	1141
9.2.1HD.4	Method of test.....	1141
9.2.1HD.4.1	Initial conditions	1141
9.2.1HD.4.2	Procedure.....	1142
9.2.1HD.5	Test Requirements	1142
9.2.1I	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8	1143
9.2.1I.1	Definition and applicability.....	1143
9.2.1I.2	Minimum requirements.....	1143
9.2.1I.3	Test purpose.....	1144
9.2.1I.4	Method of test.....	1144
9.2.1I.4.1	Initial conditions	1144
9.2.1I.4.2	Procedure.....	1145
9.2.1I.5	Test Requirements	1146
9.2.1IA	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8A	1146
9.2.1IA.1	Definition and applicability.....	1146
9.2.1IA.2	Minimum requirements.....	1146
9.2.1IA.3	Test purpose.....	1147
9.2.1IA.4	Method of test.....	1147
9.2.1IA.4.1	Initial conditions	1147
9.2.1IA.4.2	Procedure.....	1148
9.2.1IA.5	Test Requirements	1148
9.2.1IB	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8A for DB-DC-HSDPA	1149
9.2.1IB.1	Definition and applicability.....	1149
9.2.1IB.2	Minimum requirements.....	1149
9.2.1IB.3	Test purpose.....	1150
9.2.1IB.4	Method of test.....	1150
9.2.1IB.4.1	Initial conditions	1150
9.2.1IB.4.2	Procedure.....	1151
9.2.1IB.5	Test Requirements	1151
9.2.1IC	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8B	1152
9.2.1IC.1	Definition and applicability.....	1152
9.2.1IC.2	Minimum requirements.....	1152
9.2.1IC.3	Test purpose.....	1153
9.2.1IC.4	Method of test.....	1153
9.2.1IC.4.1	Initial conditions	1153
9.2.1IC.4.2	Procedure.....	1154
9.2.1IC.5	Test Requirements	1154
9.2.1ID	Single Link Performance - Enhanced Performance Requirements Type 3 - 64QAM, Fixed Reference Channel (FRC) H-Set 8C	1155

9.2.11D.1	Definition and applicability.....	1155
9.2.11D.2	Minimum requirements.....	1155
9.2.11D.3	Test purpose.....	1156
9.2.11D.4	Method of test.....	1156
9.2.11D.4.1	Initial conditions	1156
9.2.11D.4.2	Procedure.....	1157
9.2.11D.5	Test Requirements	1157
9.2.11J	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10.....	1158
9.2.11J.1	Definition and applicability.....	1158
9.2.11J.2	Minimum requirements.....	1158
9.2.11J.3	Test purpose.....	1159
9.2.11J.4	Method of test.....	1159
9.2.11J.4.1	Initial conditions	1159
9.2.11J.4.2	Procedure.....	1160
9.2.11J.5	Test Requirements	1161
9.2.11A	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A	1161
9.2.11A.1	Definition and applicability.....	1161
9.2.11A.2	Minimum requirements.....	1161
9.2.11A.3	Test purpose.....	1163
9.2.11A.4	Method of test.....	1163
9.2.11A.4.1	Initial conditions	1163
9.2.11A.4.2	Procedure.....	1164
9.2.11A.5	Test Requirements	1164
9.2.11B	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A DB-DC-HSDPA	1165
9.2.11B.1	Definition and applicability.....	1165
9.2.11B.2	Minimum requirements.....	1165
9.2.11B.3	Test purpose.....	1166
9.2.11B.4	Method of test.....	1166
9.2.11B.4.1	Initial conditions	1166
9.2.11B.4.2	Procedure.....	1167
9.2.11B.5	Test Requirements	1167
9.2.11C	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10B.....	1168
9.2.11C.1	Definition and applicability.....	1168
9.2.11C.2	Minimum requirements.....	1168
9.2.11C.3	Test purpose.....	1170
9.2.11C.4	Method of test.....	1170
9.2.11C.4.1	Initial conditions	1170
9.2.11C.4.2	Procedure.....	1171
9.2.11C.5	Test Requirements	1171
9.2.11D	Single Link Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10C.....	1172
9.2.11D.1	Definition and applicability.....	1172
9.2.11D.2	Minimum requirements.....	1172
9.2.11D.3	Test purpose.....	1173
9.2.11D.4	Method of test.....	1173
9.2.11D.4.1	Initial conditions	1173
9.2.11D.4.2	Procedure.....	1174
9.2.11D.5	Test Requirements	1174
9.2.11K	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10.....	1175
9.2.11K.1	Definition and applicability.....	1175
9.2.11K.2	Minimum requirements.....	1175
9.2.11K.3	Test purpose.....	1177
9.2.11K.4	Method of test.....	1177
9.2.11K.4.1	Initial conditions	1177
9.2.11K.4.2	Procedure.....	1178
9.2.11K.5	Test Requirements	1178

9.2.1KA	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A	1179
9.2.1KA.1	Definition and applicability	1179
9.2.1KA.2	Minimum requirements	1179
9.2.1KA.3	Test purpose	1180
9.2.1KA.4	Method of test	1180
9.2.1KA.4.1	Initial conditions	1180
9.2.1KA.4.2	Procedure	1181
9.2.1KA.5	Test Requirements	1181
9.2.1KB	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10A for DB-DC-HSDPA	1182
9.2.1KB.1	Definition and applicability	1182
9.2.1KB.2	Minimum requirements	1182
9.2.1KB.3	Test purpose	1183
9.2.1KB.4	Method of test	1184
9.2.1KB.4.1	Initial conditions	1184
9.2.1KB.4.2	Procedure	1185
9.2.1KB.5	Test Requirements	1185
9.2.1KC	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10B	1186
9.2.1KC.1	Definition and applicability	1186
9.2.1KC.2	Minimum requirements	1186
9.2.1KC.3	Test purpose	1187
9.2.1KC.4	Method of test	1187
9.2.1KC.4.1	Initial conditions	1187
9.2.1KC.4.2	Procedure	1188
9.2.1KC.5	Test Requirements	1188
9.2.1KD	Single Link Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 10C	1189
9.2.1KD.1	Definition and applicability	1189
9.2.1KD.2	Minimum requirements	1189
9.2.1KD.3	Test purpose	1190
9.2.1KD.4	Method of test	1191
9.2.1KD.4.1	Initial conditions	1191
9.2.1KD.4.2	Procedure	1191
9.2.1KD.5	Test Requirements	1192
9.2.1L	Single Link Performance - Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6	1192
9.2.1L.1	Definition and applicability	1192
9.2.1L.2	Minimum requirements	1193
9.2.1L.3	Test purpose	1193
9.2.1L.4	Method of test	1193
9.2.1L.5	Test Requirements	1195
9.2.1LA	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6A	1196
9.2.1LA.1	Definition and applicability	1196
9.2.1LA.2	Minimum requirements	1196
9.2.1LA.3	Test purpose	1197
9.2.1LA.4	Method of test	1197
9.2.1LA.5	Test Requirements	1198
9.2.1LB	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6A for DB-DC-HSDPA	1199
9.2.1LB.1	Definition and applicability	1199
9.2.1LB.2	Minimum requirements	1199
9.2.1LB.3	Test purpose	1200
9.2.1LB.4	Method of test	1200
9.2.1LB.5	Test Requirements	1201
9.2.1LC	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6B	1202
9.2.1LC.1	Definition and applicability	1202
9.2.1LC.2	Minimum requirements	1202
9.2.1LC.3	Test purpose	1203
9.2.1LC.4	Method of test	1203
9.2.1LC.5	Test Requirements	1204

9.2.1LD	Enhanced Performance Requirements Type 3i - QPSK, Fixed Reference Channel (FRC) H-Set 6C	1205
9.2.1LD.1	Definition and applicability	1205
9.2.1LD.2	Minimum requirements.....	1205
9.2.1LD.3	Test purpose.....	1206
9.2.1LD.4	Method of test.....	1206
9.2.1LD.5	Test Requirements	1207
9.2.2	Open Loop Diversity Performance	1208
9.2.2A	Open Loop Diversity Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1208
9.2.2A.1	Definition and applicability	1208
9.2.2A.2	Minimum requirements.....	1208
9.2.2A.3	Test purpose.....	1210
9.2.2A.4	Method of test.....	1210
9.2.2B	Open Loop Diversity Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5	1213
9.2.2B.1	Definition and applicability	1213
9.2.2B.2	Minimum requirements.....	1213
9.2.2B.3	Test purpose.....	1214
9.2.2B.4	Method of test.....	1214
9.2.2C	Open Loop Diversity Performance - Enhanced Performance Requirements Type 1 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1216
9.2.2C.1	Definition and applicability	1216
9.2.2C.2	Minimum requirements.....	1217
9.2.2C.3	Test purpose.....	1218
9.2.2C.4	Method of test.....	1218
9.2.2D	Open Loop Diversity Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3.....	1221
9.2.2D.1	Definition and applicability	1221
9.2.2D.2	Minimum requirements.....	1221
9.2.2D.3	Test purpose.....	1223
9.2.2D.4	Method of test.....	1223
9.2.2D.4.1	Initial conditions	1223
9.2.2D.4.2	Procedure.....	1224
9.2.2D.5	Test Requirements	1225
9.2.2E	Open Loop Diversity Performance - Enhanced Performance Requirements Type 3 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3.....	1226
9.2.2E.1	Definition and applicability	1226
9.2.2E.2	Minimum requirements.....	1226
9.2.2E.3	Test purpose.....	1228
9.2.2E.4	Method of test.....	1228
9.2.2E.4.1	Initial conditions	1228
9.2.2E.4.2	Procedure.....	1229
9.2.2E.5	Test Requirements	1229
9.2.3	Closed Loop Diversity Performance	1230
9.2.3A	Closed Loop Diversity Performance - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3 ..	1230
9.2.3A.1	Definition and applicability	1230
9.2.3A.2	Minimum requirements.....	1231
9.2.3A.3	Test purpose.....	1232
9.2.3A.4	Method of test.....	1232
9.2.3A.4.1	Initial conditions	1232
9.2.3A.4.2	Procedure.....	1233
9.2.3A.5	Test Requirements	1234
9.2.3B	Closed Loop Diversity Performance - QPSK, Fixed Reference Channel (FRC) H-Set 4/5	1235
9.2.3B.1	Definition and applicability	1235
9.2.3B.2	Minimum requirements.....	1235
9.2.3B.3	Test purpose.....	1236
9.2.3B.4	Method of test.....	1236
9.2.3B.4.1	Initial conditions	1236
9.2.3B.4.2	Procedure.....	1238
9.2.3B.5	Test Requirements	1238
9.2.3C	Closed Loop Diversity Performance Enhanced Performance Requirements Type 1, QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 1/2/3.....	1239
9.2.3C.1	Definition and applicability	1239
9.2.3C.2	Minimum requirements.....	1239

9.2.3C.3	Test purpose.....	1241
9.2.3C.4	Method of test.....	1241
9.2.3C.4.1	Initial conditions	1241
9.2.3C.4.2	Procedure.....	1242
9.2.3C.5	Test Requirements	1242
9.2.3D	Closed Loop Diversity Performance - Enhanced Performance Requirements Type 2 - QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 6/3	1244
9.2.3D.1	Definition and applicability.....	1244
9.2.3D.2	Minimum requirements.....	1244
9.2.3D.3	Test purpose.....	1247
9.2.3D.4	Method of test.....	1247
9.2.3D.4.1	Initial conditions	1247
9.2.3D.4.2	Procedure.....	1248
9.2.3D.5	Test Requirements	1248
9.2.3E	Closed Loop Diversity Performance Enhanced Performance Requirements Type 3, QPSK/16QAM, Fixed Reference Channel (FRC) H-Set 3.....	1250
9.2.3E.1	Definition and applicability.....	1250
9.2.3E.2	Minimum requirements.....	1250
9.2.3E.3	Test purpose.....	1252
9.2.3E.4	Method of test.....	1252
9.2.3E.4.1	Initial conditions	1252
9.2.3E.4.2	Procedure.....	1253
9.2.3E.5	Test Requirements	1254
9.2.4	MIMO Performance.....	1255
9.2.4A	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9	1255
9.2.4A.1	Definition and applicability.....	1255
9.2.4A.2	Minimum requirements.....	1255
9.2.4A.3	Test purpose.....	1256
9.2.4A.4	Method of test.....	1256
9.2.4A.4.1	Initial conditions	1256
9.2.4A.4.2	Procedure.....	1257
9.2.4A.5	Test Requirements	1258
9.2.4B	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11	1258
9.2.4B.1	Definition and applicability.....	1258
9.2.4B.2	Minimum requirements.....	1258
9.2.4B.3	Test purpose.....	1259
9.2.4B.4	Method of test.....	1259
9.2.4B.4.1	Initial conditions	1259
9.2.4B.4.2	Procedure.....	1260
9.2.4B.5	Test Requirements	1260
9.2.4C	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A	1261
9.2.4C.1	Definition and applicability.....	1261
9.2.4C.2	Minimum requirements.....	1261
9.2.4C.3	Test purpose.....	1262
9.2.4C.4	Method of test.....	1262
9.2.4C.4.1	Initial conditions	1262
9.2.4C.4.2	Procedure.....	1264
9.2.4C.5	Test Requirements	1264
9.2.4CA	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A for DB DC-HSDPA	1265
9.2.4CA.1	Definition and applicability.....	1265
9.2.4CA.2	Minimum requirements.....	1265
9.2.4CA.3	Test purpose.....	1266
9.2.4CA.4	Method of test.....	1266
9.2.4CA.4.1	Initial conditions	1266
9.2.4CA.4.2	Procedure.....	1267
9.2.4CA.5	Test Requirements	1267
9.2.4D	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A	1268
9.2.4D.1	Definition and applicability.....	1268
9.2.4D.2	Minimum requirements.....	1268
9.2.4D.3	Test purpose.....	1269
9.2.4D.4	Method of test.....	1269
9.2.4D.4.1	Initial conditions	1269

9.2.4D.4.2	Procedure.....	1270
9.2.4D.5	Test Requirements	1270
9.2.4DA	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A for DB DC-HSDPA	1271
9.2.4DA.1	Definition and applicability.....	1271
9.2.4DA.2	Minimum requirements.....	1271
9.2.4DA.3	Test purpose.....	1272
9.2.4DA.4	Method of test.....	1272
9.2.4DA.4.1	Initial conditions	1272
9.2.4DA.4.2	Procedure.....	1273
9.2.4DA.5	Test Requirements	1273
9.2.4E	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9 Asymmetric CPICHs	1274
9.2.4E.1	Definition and applicability.....	1274
9.2.4E.2	Minimum requirements.....	1274
9.2.4E.3	Test purpose.....	1275
9.2.4E.4	Method of test.....	1275
9.2.4E.4.1	Initial conditions	1275
9.2.4E.4.2	Procedure.....	1276
9.2.4E.5	Test Requirements	1277
9.2.4F	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11 Asymmetric CPICHs	1277
9.2.4F.1	Definition and applicability.....	1277
9.2.4F.2	Minimum requirements.....	1277
9.2.4F.3	Test purpose.....	1278
9.2.4F.4	Method of test.....	1278
9.2.4F.4.1	Initial conditions	1278
9.2.4F.4.2	Procedure.....	1279
9.2.4F.5	Test Requirements	1279
9.2.4G	MIMO Performance - Fixed Reference Channel (FRC) H-Set 9A Asymmetric CPICHs	1280
9.2.4G.1	Definition and applicability.....	1280
9.2.4G.2	Minimum requirements.....	1280
9.2.4G.3	Test purpose.....	1281
9.2.4G.4	Method of test.....	1281
9.2.4G.4.1	Initial conditions	1281
9.2.4G.4.2	Procedure.....	1283
9.2.4G.5	Test Requirements	1283
9.2.4H	MIMO Performance - Fixed Reference Channel (FRC) H-Set 11A Asymmetric CPICHs	1284
9.2.4H.1	Definition and applicability.....	1284
9.2.4H.2	Minimum requirements.....	1284
9.2.4H.3	Test purpose.....	1285
9.2.4H.4	Method of test.....	1285
9.2.4H.4.1	Initial conditions	1285
9.2.4H.4.2	Procedure.....	1286
9.2.4H.5	Test Requirements	1286
9.3	Reporting of Channel Quality Indicator	1287
9.3.1	Single Link Performance - AWGN Propagation Conditions.....	1287
9.3.1.1	Definition and applicability.....	1287
9.3.1.2	Minimum requirements.....	1288
9.3.1.3	Test purpose.....	1288
9.3.1.4	Method of test.....	1289
9.3.1.4.1	Initial conditions	1289
9.3.1.4.2	Procedure.....	1289
9.3.1.5	Test Requirements	1290
9.3.1A	Single Link Performance - AWGN Propagation Conditions, 64QAM	1290
9.3.1A.1	Definition and applicability.....	1290
9.3.1A.2	Minimum requirements.....	1290
9.3.1A.3	Test purpose.....	1291
9.3.1A.4	Method of test.....	1291
9.3.1A.4.1	Initial conditions	1291
9.3.1A.4.2	Procedure.....	1292
9.3.1A.5	Test Requirements	1294
9.3.1B	Single Link Performance - AWGN Propagation Conditions, DC-HSDPA requirements.....	1294
9.3.1B.1	Definition and applicability.....	1294
9.3.1B.2	Minimum requirements.....	1295

9.3.1B.3	Test purpose.....	1295
9.3.1B.4	Method of test.....	1296
9.3.1B.4.1	Initial conditions	1296
9.3.1B.4.2	Procedure.....	1296
9.3.1B.5	Test Requirements	1298
9.3.1BA	Single Link Performance - AWGN Propagation Conditions, DB-DC-HSDPA requirements	1298
9.3.1BA.1	Definition and applicability	1298
9.3.1BA.2	Minimum requirements.....	1298
9.3.1BA.4	Method of test.....	1299
9.3.1BA.4.1	Initial conditions	1299
9.3.1BA.4.2	Procedure.....	1300
9.3.1BA.5	Test Requirements	1301
9.3.1BB	Single Link Performance - AWGN Propagation Conditions, 4C-HSDPA requirements (3 Carriers)	1302
9.3.1BB.1	Definition and applicability	1302
9.3.1BB.2	Minimum requirements.....	1302
9.3.1BB.4	Method of test.....	1303
9.3.1BB.4.1	Initial conditions	1303
9.3.1BB.4.2	Procedure.....	1303
9.3.1BB.5	Test Requirements	1304
9.3.1BC	Single Link Performance - AWGN Propagation Conditions, 4C-HSDPA requirements	1304
9.3.1BC.1	Definition and applicability	1304
9.3.1BC.2	Minimum requirements.....	1305
9.3.1BC.4	Method of test.....	1305
9.3.1BC.4.1	Initial conditions	1305
9.3.1BC.4.2	Procedure.....	1306
9.3.1BC.5	Test Requirements	1307
9.3.2AB	Single Link Performance - Fading Propagation Conditions, 4C-HSDPA requirements(3 Carriers).....	1307
9.3.2AB.1	Definition and applicability	1307
9.3.2AB.2	Minimum requirements.....	1307
9.3.2AB.3	Test purpose.....	1308
9.3.2AB.4	Method of test.....	1308
9.3.2AB.4.1	Initial conditions	1308
9.3.2AB.4.2	Procedure.....	1309
9.3.2AB.5	Test Requirements	1310
9.3.2AC	Single Link Performance - Fading Propagation Conditions, 4C-HSDPA requirements	1310
9.3.2AC.1	Definition and applicability	1310
9.3.2AC.2	Minimum requirements.....	1310
9.3.2AC.3	Test purpose.....	1311
9.3.2AC.4	Method of test.....	1311
9.3.2AC.4.1	Initial conditions	1311
9.3.2AC.4.2	Procedure.....	1312
9.3.2AC.5	Test Requirements	1313
9.3.1C	Single Link Performance - AWGN Propagation Conditions, Periodically Varying Radio Conditions ..	1313
9.3.1C.1	Definition and applicability	1313
9.3.1C.2	Minimum requirements.....	1313
9.3.1C.3	Test purpose.....	1315
9.3.1C.4	Method of test.....	1316
9.3.1C.4.1	Initial conditions	1316
9.3.1C.4.2	Procedure.....	1316
9.3.1C.5	Test Requirements	1317
9.3.2	Single Link Performance - Fading Propagation Conditions	1317
9.3.2.1	Definition and applicability	1317
9.3.2.2	Minimum requirements.....	1317
9.3.2.3	Test purpose.....	1318
9.3.2.4	Method of test.....	1318
9.3.2.4.1	Initial conditions	1318
9.3.2.4.2	Procedure.....	1319
9.3.2.5	Test Requirements	1320
9.3.2A	Single Link Performance - Fading Propagation Conditions, DC-HSDPA requirements	1320
9.3.2A.1	Definition and applicability	1320
9.3.2A.2	Minimum requirements.....	1320
9.3.2A.3	Test purpose.....	1321

9.3.2A.4	Method of test.....	1321
9.3.2A.4.1	Initial conditions	1321
9.3.2A.4.2	Procedure.....	1322
9.3.2A.5	Test Requirements	1324
9.3.2AA	Single Link Performance - Fading Propagation Conditions, DB-DC-HSDPA requirements.....	1324
9.3.2AA.1	Definition and applicability.....	1324
9.3.2AA.2	Minimum requirements.....	1324
9.3.2AA.3	Test purpose.....	1325
9.3.2AA.4	Method of test.....	1325
9.3.2AA.4.1	Initial conditions	1325
9.3.2AA.4.2	Procedure.....	1326
9.3.2AA.5	Test Requirements	1328
9.3.2B	Single Link Performance - Fading Propagation Conditions, 64QAM	1328
9.3.2B.1	Definition and applicability.....	1328
9.3.2B.2	Minimum requirements.....	1328
9.3.2B.3	Test purpose.....	1329
9.3.2B.4	Method of test.....	1329
9.3.2B.4.1	Initial conditions	1329
9.3.2B.4.2	Procedure.....	1330
9.3.2B.5	Test Requirements	1332
9.3.3	Open Loop Diversity Performance - AWGN Propagation Conditions.....	1332
9.3.3.1	Definition and applicability.....	1332
9.3.3.2	Minimum requirements.....	1333
9.3.3.3	Test purpose.....	1333
9.3.3.4	Method of test.....	1333
9.3.3.4.1	Initial conditions	1333
9.3.3.4.2	Procedure.....	1334
9.3.3.5	Test Requirements	1336
9.3.4	Open Loop Diversity Performance - Fading Propagation Conditions	1336
9.3.4.1	Definition and applicability.....	1336
9.3.4.2	Minimum requirements.....	1336
9.3.4.3	Test purpose.....	1337
9.3.4.4	Method of test.....	1337
9.3.4.4.1	Initial conditions	1337
9.3.4.4.2	Procedure.....	1338
9.3.4.5	Test Requirements	1340
9.3.5	Closed Loop Diversity Performance - AWGN Propagation Conditions	1340
9.3.5.1	Definition and applicability.....	1340
9.3.5.2	Minimum requirements.....	1340
9.3.5.3	Test purpose.....	1341
9.3.5.4	Method of test.....	1341
9.3.5.4.1	Initial conditions	1341
9.3.5.4.2	Procedure.....	1342
9.3.5.5	Test Requirements	1344
9.3.6	Closed Loop Diversity Performance - Fading Propagation Conditions	1344
9.3.6.1	Definition and applicability.....	1344
9.3.6.2	Minimum requirements.....	1344
9.3.6.3	Test purpose.....	1345
9.3.6.4	Method of test.....	1345
9.3.6.4.1	Initial conditions	1345
9.3.6.4.2	Procedure.....	1346
9.3.6.5	Test Requirements	1348
9.3.7	MIMO Performance - Reporting of Channel Quality Indicator.....	1348
9.3.7A	MIMO Single Stream Fading Conditions	1348
9.3.7A.1	Definition and applicability.....	1348
9.3.7A.2	Minimum requirements.....	1349
9.3.7A.3	Test purpose.....	1350
9.3.7A.4	Method of test.....	1350
9.3.7A.4.1	Initial conditions	1350
9.3.7A.4.2	Procedure.....	1350
9.3.7A.5	Test Requirements	1351
9.3.7B	MIMO Dual Stream Fading Conditions	1351

9.3.7B.1	Definition and applicability.....	1351
9.3.7B.2	Minimum requirements.....	1352
9.3.7B.3	Test purpose.....	1353
9.3.7B.4	Method of test.....	1353
9.3.7B.4.1	Initial conditions	1353
9.3.7B.4.2	Procedure.....	1354
9.3.7B.5	Test Requirements	1355
9.3.7C	MIMO Dual Stream Fading Conditions - UE categories 19-20.....	1355
9.3.7C.1	Definition and applicability.....	1355
9.3.7C.2	Minimum requirements.....	1356
9.3.7C.3	Test purpose.....	1357
9.3.7C.4	Method of test.....	1358
9.3.7C.4.1	Initial conditions	1358
9.3.7C.4.2	Procedure.....	1358
9.3.7C.5	Test Requirements	1359
9.3.7D	MIMO Dual Stream Static Orthogonal Conditions - UE categories 15-20	1359
9.3.7D.1	Definition and applicability.....	1359
9.3.7D.2	Minimum requirements.....	1360
9.3.7D.3	Test purpose.....	1360
9.3.7D.4	Method of test.....	1360
9.3.7D.4.1	Initial conditions	1360
9.3.7D.4.2	Procedure.....	1361
9.3.7D.5	Test Requirements	1362
9.3.7E	MIMO Dual Stream Static Orthogonal Conditions - UE categories 19-20	1362
9.3.7E.1	Definition and applicability.....	1362
9.3.7E.2	Minimum requirements.....	1362
9.3.7E.3	Test purpose.....	1363
9.3.7E.4	Method of test.....	1363
9.3.7E.4.1	Initial conditions	1363
9.3.7E.4.2	Procedure.....	1364
9.3.7E.5	Test Requirements	1365
9.3.7F	MIMO Single Stream Fading Conditions - Asymmetric CPICHs	1365
9.3.7F.1	Definition and applicability.....	1365
9.3.7F.2	Minimum requirements.....	1365
9.3.7F.3	Test purpose.....	1366
9.3.7F.4	Method of test.....	1366
9.3.7F.4.1	Initial conditions	1366
9.3.7F.4.2	Procedure.....	1367
9.3.7F.5	Test Requirements	1368
9.3.7G	MIMO Dual Stream Fading Conditions - Asymmetric CPICHs	1368
9.3.7G.1	Definition and applicability.....	1368
9.3.7G.2	Minimum requirements.....	1369
9.3.7G.3	Test purpose.....	1370
9.3.7G.4	Method of test.....	1370
9.3.7G.4.1	Initial conditions	1370
9.3.7G.4.2	Procedure.....	1371
9.3.7G.5	Test Requirements	1372
9.3.7H	MIMO Dual Stream Fading Conditions - UE categories 19-20 - Asymmetric CPICHs	1372
9.3.7H.1	Definition and applicability.....	1372
9.3.7H.2	Minimum requirements.....	1373
9.3.7H.3	Test purpose.....	1374
9.3.7H.4	Method of test.....	1375
9.3.7H.4.1	Initial conditions	1375
9.3.7H.4.2	Procedure.....	1375
9.3.7H.5	Test Requirements	1376
9.3.7I	MIMO Dual Stream Static Orthogonal Conditions - UE categories 15-20 - Asymmetric CPICHs	1376
9.3.7I.1	Definition and applicability.....	1376
9.3.7I.2	Minimum requirements.....	1377
9.3.7I.3	Test purpose.....	1377
9.3.7I.4	Method of test.....	1377
9.3.7I.4.1	Initial conditions	1377
9.3.7I.4.2	Procedure.....	1378

9.3.7I.5	Test Requirements	1379
9.3.7J	MIMO Dual Stream Static Orthogonal Conditions - UE categories 19-20- Asymmetric CPICHs	1379
9.3.7J.1	Definition and applicability	1379
9.3.7J.2	Minimum requirements.....	1379
9.3.7J.3	Test purpose.....	1380
9.3.7J.4	Method of test.....	1380
9.3.7J.4.1	Initial conditions	1380
9.3.7J.4.2	Procedure.....	1381
9.3.7J.5	Test Requirements	1382
9.4	HS-SCCH Detection Performance	1382
9.4.1	Single Link Performance	1382
9.4.1.1	Definition and applicability.....	1382
9.4.1.2	Minimum requirements.....	1382
9.4.1.3	Test purpose.....	1383
9.4.1.4	Method of test.....	1383
9.4.1.4.1	Initial conditions	1383
9.4.1.4.2	Procedure.....	1383
9.4.1.5	Test Requirements	1383
9.4.1A	Single Link Performance - Enhanced Performance Requirements Type 1	1384
9.4.1A.1	Definition and applicability.....	1384
9.4.1A.2	Minimum requirements.....	1385
9.4.1A.3	Test purpose.....	1385
9.4.1A.4	Method of test.....	1385
9.4.1A.4.1	Initial conditions	1385
9.4.1A.4.2	Procedure.....	1386
9.4.1A.5	Test Requirements	1386
9.4.2	Open Loop Diversity Performance	1387
9.4.2.1	Definition and applicability.....	1387
9.4.2.2	Minimum requirements.....	1387
9.4.2.3	Test purpose.....	1387
9.4.2.4	Method of test.....	1387
9.4.2.4.1	Initial conditions	1387
9.4.2.4.2	Procedure.....	1388
9.4.2.5	Test Requirements	1389
9.4.2A	Open Loop Diversity Performance - Enhanced Performance Requirements Type 1	1390
9.4.2A.1	Definition and applicability.....	1390
9.4.2A.2	Minimum requirements.....	1390
9.4.2A.3	Test purpose.....	1390
9.4.2A.4	Method of test.....	1391
9.4.2A.4.1	Initial conditions	1391
9.4.2A.4.2	Procedure.....	1391
9.4.2A.5	Test Requirements	1392
9.4.3	HS-SCCH Type 3 Performance	1392
9.4.3.1	Definition and applicability.....	1392
9.4.3.2	Minimum requirements.....	1393
9.4.3.3	Test purpose.....	1394
9.4.3.4	Method of test.....	1394
9.4.3.4.1	Initial conditions	1394
9.4.3.4.2	Procedure.....	1394
9.4.3.5	Test Requirements	1395
9.4.3A	HS-SCCH Type 3 Performance -STTD disabled- Asymmetric CPICHs	1396
9.4.3A.1	Definition and applicability.....	1396
9.4.3A.2	Minimum requirements.....	1396
9.4.3A.3	Test purpose.....	1397
9.4.3A.4	Method of test.....	1397
9.4.3A.4.1	Initial conditions	1397
9.4.3A.5	Test Requirements	1398
9.4.3B	HS-SCCH Type 3 Performance -STTD enabled- Asymmetric CPICHs.....	1399
9.4.3B.1	Definition and applicability.....	1399
9.4.3B.2	Minimum requirements.....	1400
9.4.3B.3	Test purpose.....	1401
9.4.3B.4	Method of test.....	1401

9.4.3B.4.1	Initial conditions	1401
9.4.3B.4.2	Procedure.....	1401
9.4.3B.5	Test Requirements	1402
9.4.4	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction.....	1403
9.4.4.1	Definition and applicability.....	1403
9.4.4.2	Minimum requirements.....	1403
9.4.4.3	Test purpose.....	1404
9.4.4.4	Method of test.....	1404
9.4.4.4.1	Initial conditions	1404
9.4.4.4.2	Procedure.....	1404
9.4.4.5	Test Requirements	1405
9.4.4A	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction- Enhanced Performance Requirements Type 1.....	1405
9.4.4A.1	Definition and applicability.....	1405
9.4.4A.2	Minimum requirements.....	1406
9.4.4A.3	Test purpose.....	1406
9.4.4A.4	Method of test.....	1406
9.4.4A.4.1	Initial conditions	1406
9.4.4A.4.2	Procedure.....	1407
9.4.4A.5	Test Requirements	1407
9.4.4B	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD disabled- asymmetric CPICHs	1408
9.4.4B.1	Definition and applicability.....	1408
9.4.4B.2	Minimum requirements.....	1408
9.4.4B.3	Test purpose.....	1409
9.4.4B.4	Method of test.....	1409
9.4.4B.4.1	Initial conditions	1409
9.4.4B.4.2	Procedure.....	1409
9.4.4B.5	Test Requirements	1410
9.4.4C	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD disabled- asymmetric CPICHs- Enhanced Performance Requirements Type 1.....	1410
9.4.4C.1	Definition and applicability.....	1410
9.4.4C.2	Minimum requirements.....	1411
9.4.4C.3	Test purpose.....	1411
9.4.4C.4	Method of test.....	1411
9.4.4C.4.1	Initial conditions	1411
9.4.4C.4.2	Procedure.....	1412
9.4.4C.5	Test Requirements	1412
9.4.4D	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD enabled- asymmetric CPICHs	1413
9.4.4D.1	Definition and applicability.....	1413
9.4.4D.2	Minimum requirements.....	1413
9.4.4D.3	Test purpose.....	1414
9.4.4D.4	Method of test.....	1414
9.4.4D.4.1	Initial conditions	1414
9.4.4D.4.2	Procedure.....	1414
9.4.4D.5	Test Requirements	1415
9.4.4E	HS-SCCH Type 3 Performance for MIMO only with single-stream restriction-STTD enabled- asymmetric CPICHs- Enhanced Performance Requirements Type 1.....	1415
9.4.4E.1	Definition and applicability.....	1415
9.4.4E.2	Minimum requirements.....	1416
9.4.4E.3	Test purpose.....	1416
9.4.4E.4	Method of test.....	1416
9.4.4E.4.1	Initial conditions	1416
9.4.4E.4.2	Procedure.....	1417
9.4.4E.5	Test Requirements	1417
9.5	HS-SCCH-less demodulation of HS-DSCH (Fixed Reference Channel).....	1418
9.5.1	Requirement QPSK, Fixed Reference Channel (FRC) H-Set 7.....	1418
9.5.1.1	Definition and applicability.....	1418
9.5.1.2	Minimum requirements.....	1418
9.5.1.3	Test purpose.....	1419
9.5.1.4	Method of test.....	1419

9.5.1.5	Test Requirements	1420
9.5.1A	Requirement QPSK, Fixed Reference Channel (FRC) H-Set 7 - Enhanced Performance Requirements Type 1.....	1420
9.5.1A.1	Definition and applicability.....	1420
9.5.1A.2	Minimum requirements.....	1421
9.5.1A.3	Test purpose.....	1421
9.5.1A.4	Method of test.....	1421
9.5.1A.5	Test Requirements	1422
9.6	HS-DSCH and HS-SCCH reception in CELL-FACH state.....	1423
9.6.1	Single link HS-DSCH Demodulation performance in CELL_FACH state	1423
9.6.1.1	Definition and applicability.....	1423
9.6.1.2	Minimum requirement QPSK, Fixed Reference Channel (FRC) H-Set 3	1423
9.6.1.3	Test purpose.....	1424
9.6.1.4	Method of test.....	1424
9.6.1.5	Test Requirements	1425
9.6.2	Single link HS-SCCH Detection performance in CELL_FACH state.....	1425
9.6.2.1	Definition and applicability.....	1425
9.6.2.2	Minimum requirement	1425
9.6.2.3	Test purpose.....	1426
9.6.2.4	Method of test.....	1426
9.6.2.5	Test Requirements	1426
10	Performance requirement (E-DCH).....	1428
10.1	General	1428
10.2	Detection of E-DCH HARQ ACK Indicator Channel (E-HICH).....	1428
10.2.1	Single link performance	1428
10.2.1.1	Single link performance (10ms TTI).....	1428
10.2.1.1.1	Definition and applicability.....	1428
10.2.1.1.2	Minimum requirement	1428
10.2.1.1.3	Test purpose.....	1429
10.2.1.1.4	Method of test.....	1429
10.2.1.1.4.1	Initial conditions	1429
10.2.1.1.4.2	Procedure	1430
10.2.1.1.5.	Test requirements	1431
10.2.1.1A	Single link performance (10ms TTI, Type 1)	1431
10.2.1.1A.1	Definition and applicability.....	1431
10.2.1.1A.2	Minimum requirement	1431
10.2.1.1A.3	Test purpose.....	1432
10.2.1.1A.4	Method of test.....	1432
10.2.1.1A.4.1	Initial conditions	1432
10.2.1.1A.4.2	Procedure	1432
10.2.1.1A.5.	Test requirements	1433
10.2.1.2	Single link performance (2ms TTI)	1433
10.2.1.2.1	Definition and applicability.....	1433
10.2.1.2.2	Minimum requirement	1433
10.2.1.2.3	Test purpose.....	1434
10.2.1.2.4	Method of test.....	1434
10.2.1.2.4.1	Initial conditions	1434
10.2.1.2.4.2	Procedure	1435
10.2.1.2.5.	Test requirements.....	1436
10.2.1.2A	Single link performance (2ms TTI, Type 1)	1436
10.2.1.2A.1	Definition and applicability.....	1436
10.2.1.2A.2	Minimum requirement	1436
10.2.1.2A.3	Test purpose.....	1437
10.2.1.2A.4	Method of test.....	1437
10.2.1.2A.4.1	Initial conditions	1437
10.2.1.2A.4.2	Procedure	1437
10.2.1.2A.5.	Test requirements	1438
10.2.2	Detection in Inter-Cell Handover conditions	1438
10.2.2.1	RLS not containing the Serving E-DCH cell	1438
10.2.2.1.1	RLS not containing the Serving E-DCH cell (10ms TTI)	1438
10.2.2.1.1.1	Definition and applicability	1438

10.2.2.1.1.2	Minimum requirement	1439
10.2.2.1.1.3	Test Purpose	1439
10.2.2.1.1.4	Method of test	1440
10.2.2.1.1.5	Test Requirements	1442
10.2.2.1.1A	RLS not containing the Serving E-DCH cell (10ms TTI, Type 1)	1443
10.2.2.1.1A.1	Definition and applicability	1443
10.2.2.1.1A.2	Minimum requirement	1443
10.2.2.1.1A.3	Test Purpose	1444
10.2.2.1.1A.4	Method of test	1444
10.2.2.1.1A.5	Test Requirements	1446
10.2.2.1.2	RLS not containing the Serving E-DCH cell (2ms TTI)	1447
10.2.2.1.2.1	Definition and applicability	1447
10.2.2.1.2.2	Minimum requirement	1447
10.2.2.1.2.3	Test Purpose	1448
10.2.2.1.2.4	Method of test	1448
10.2.2.1.2.4.1	Initial conditions	1448
10.2.2.1.2.4.2	Procedure	1449
10.2.2.1.2.5	Test Requirements	1451
10.2.2.1.2A	RLS not containing the Serving E-DCH cell (2ms TTI, Type 1)	1452
10.2.2.1.2A.1	Definition and applicability	1452
10.2.2.1.2A.2	Minimum requirement	1452
10.2.2.1.2A.3	Test Purpose	1453
10.2.2.1.2A.4	Method of test	1453
10.2.2.1.2A.4.1	Initial conditions	1453
10.2.2.1.2A.4.2	Procedure	1454
10.2.2.1.2A.5	Test Requirements	1455
10.2.2.2	RLS containing the Serving E-DCH cell	1456
10.2.2.2.1	RLS containing the Serving E-DCH cell (10ms TTI)	1456
10.2.2.2.1.1	Definition and applicability	1456
10.2.2.2.1.2	Minimum requirement	1456
10.2.2.2.1.3	Test purpose	1457
10.2.2.2.1.4	Method of test	1457
10.2.2.2.1.4.1	Initial conditions	1457
10.2.2.2.1.4.2	Procedure	1458
10.2.2.2.1.5	Test requirements	1460
10.2.2.2.1A	RLS containing the Serving E-DCH cell (10ms TTI, Type 1)	1461
10.2.2.2.1A.1	Definition and applicability	1461
10.2.2.2.1A.2	Minimum requirement	1462
10.2.2.2.1A.3	Test purpose	1462
10.2.2.2.1A.4	Method of test	1462
10.2.2.2.1A.4.1	Initial conditions	1462
10.2.2.2.1A.4.2	Procedure	1463
10.2.2.2.1A.5	Test requirements	1464
10.2.2.2.2	RLS containing the Serving E-DCH cell (2ms TTI)	1465
10.2.2.2.2.1	Definition and applicability	1465
10.2.2.2.2.2	Minimum requirement	1465
10.2.2.2.2.3	Test purpose	1466
10.2.2.2.2.4	Method of test	1466
10.2.2.2.2.4.1	Initial conditions	1466
10.2.2.2.2.4.2	Procedure	1467
10.2.2.2.2.5	Test requirements	1469
10.2.2.2.2A	RLS containing the Serving E-DCH cell (2ms TTI, Type 1)	1470
10.2.2.2.2A.1	Definition and applicability	1470
10.2.2.2.2A.2	Minimum requirement	1470
10.2.2.2.2A.3	Test purpose	1471
10.2.2.2.2A.4	Method of test	1471
10.2.2.2.2A.4.1	Initial conditions	1471
10.2.2.2.2A.4.2	Procedure	1472
10.2.2.2.2A.5	Test requirements	1473
10.3	Detection of E-DCH Relative Grant Channel (E-RGCH)	1474
10.3.1	Single link performance	1474
10.3.1.1	Single link performance (10ms TTI)	1474

10.3.1.1.1	Definition and applicability	1474
10.3.1.1.2	Minimum requirement	1474
10.3.1.1.3	Test purpose.....	1475
10.3.1.1.4	Method of test.....	1475
10.3.1.1.4.1	Initial conditions	1475
10.3.1.1.4.2	Procedure	1476
10.3.1.1.5	Test requirements	1477
10.3.1.1A	Single link performance (10ms TTI, Type 1)	1478
10.3.1.1A.1	Definition and applicability	1478
10.3.1.1A.2	Minimum requirement	1478
10.3.1.1A.3	Test purpose.....	1478
10.3.1.1A.4	Method of test.....	1479
10.3.1.1A.4.1	Initial conditions	1479
10.3.1.1A.4.2	Procedure	1479
10.3.1.1A.5	Test requirements	1480
10.3.1.2	Single link performance (2ms TTI)	1481
10.3.1.2.1	Definition and applicability	1481
10.3.1.2.2	Minimum requirement	1481
10.3.1.2.3	Test purpose.....	1482
10.3.1.2.4	Method of test.....	1482
10.3.1.2.4.1	Initial conditions	1482
10.3.1.2.4.2	Procedure	1482
10.3.1.2.5	Test requirements	1484
10.3.1.2A	Single link performance (2ms TTI, Type 1)	1485
10.3.1.2A.1	Definition and applicability	1485
10.3.1.2A.2	Minimum requirement	1485
10.3.1.2A.3	Test purpose.....	1485
10.3.1.2A.4	Method of test.....	1485
10.3.1.2A.4.1	Initial conditions	1485
10.3.1.2A.4.2	Procedure	1486
10.3.1.2A.5	Test requirements	1487
10.3.2	Detection in Inter-Cell Handover conditions	1488
10.3.2.1	Definition and applicability	1488
10.3.2.2	Minimum requirement for Non-serving E-DCH RL	1488
10.3.2.3	Test Purpose.....	1488
10.3.2.4	Method of test.....	1489
10.3.2.4.1	Initial conditions	1489
10.3.2.4.2	Procedure.....	1489
10.3.2.5	Test Requirements	1492
10.3.2A	Detection in Inter-Cell Handover conditions (Type 1).....	1493
10.3.2A.1	Definition and applicability	1493
10.3.2A.2	Minimum requirement for Non-serving E-DCH RL	1494
10.3.2A.3	Test Purpose.....	1494
10.3.2A.4	Method of test.....	1494
10.3.2A.4.1	Initial conditions	1494
10.3.2A.4.2	Procedure.....	1495
10.3.2A.5	Test Requirements	1497
10.4	Demodulation of E-DCH Absolute Grant Channel (E-AGCH)	1498
10.4.1	Single link performance	1498
10.4.1.1	Definition and applicability	1498
10.4.1.2	Minimum requirement	1498
10.4.1.3	Test Purpose.....	1499
10.4.1.4	Method of test.....	1499
10.4.1.4.1	Initial conditions	1499
10.4.1.4.2	Procedure.....	1499
10.4.1.5	Test Requirements	1500
10.4.1A	Single link performance (Type 1)	1501
10.4.1A.1	Definition and applicability	1501
10.4.1A.2	Minimum requirement	1501
10.4.1A.3	Test Purpose.....	1501
10.4.1A.4	Method of test.....	1501
10.4.1A.4.1	Initial conditions	1501

10.4.1A.4.2	Procedure.....	1502
10.4.1A.5	Test Requirements	1502
11	Performance requirement (MBMS)	1503
11.1	General	1503
11.2	Demodulation of MTCH	1503
11.2.1	Definition and applicability	1503
11.2.2	Minimum requirement.....	1503
11.2.3	Test Purpose.....	1504
11.2.4	Method of test.....	1504
11.2.4.1	Initial conditions	1504
11.2.4.2	Procedure.....	1505
11.2.5	Test Requirements.....	1506
11.2A	Demodulation of MTCH - Enhanced Performance Requirements Type 1.....	1507
11.2A.1	Definition and applicability	1507
11.2A.2	Minimum requirement.....	1507
11.2A.3	Test Purpose.....	1507
11.2A.4	Method of test.....	1507
11.2A.4.1	Initial conditions	1507
11.2A.4.2	Procedure.....	1508
11.2A.5	Test Requirements.....	1509
11.3	Demodulation of MTCH and cell identification	1510
11.3.1	Definition and applicability	1510
11.3.2	Minimum requirements	1510
11.3.3	Test purpose.....	1511
11.3.4	Method of test.....	1511
11.3.5	Test requirements	1513
Annex A (informative):	Connection Diagrams.....	1514
Annex B (normative):	Global In-Channel TX-Test.....	1552
B.1	General.....	1552
B.2	Definition of the process.....	1552
B.2.1	Basic principle	1552
B.2.2	Output signal of the TX under test	1552
B.2.3	Reference signal.....	1552
B.2.4	void	1553
B.2.5	Classification of measurement results.....	1553
B.2.6	Process definition to achieve results f , t , φ , g_1 , g_2 , and O	1553
B.2.6.1	Decision Point Power	1554
B.2.6.2	Measured total power of all active codes	1554
B.2.6.3	Code-Domain Power	1554
B.2.6.4	Code-Domain Power of the varied reference signal	1555
B.2.7	Process definition to achieve results EVM, PCDE, RCDE.....	1555
B.2.7.1	Error Vector Magnitude (EVM)	1555
B.2.7.2	Code Domain Error Power	1556
B.2.7.3	Relative Code Domain Error (RCDE).....	1556
B.3	Notes.....	1557
Annex C (normative):	Measurement channels.....	1560
C.1	General.....	1560
C.2	UL reference measurement channel.....	1560
C.2.1	UL reference measurement channel (12,2 kbps).....	1560
C.2.2	UL reference measurement channel (64 kbps).....	1561
C.2.3	UL reference measurement channel (144 kbps).....	1563
C.2.4	UL reference measurement channel (384 kbps).....	1565
C.2.5	UL reference measurement channel (768 kbps).....	1567
C.2.6	UL E-DCH reference measurement channel for DC-HSUPA using BPSK modulation	1569
C.2.7	UL E-DCH reference measurement channel for DC-HSUPA using 16QAM modulation.....	1570

C.2.8	Combinations of UL E-DCH reference measurement channel for DC-HSUPA tests.....	1571
C.3	DL reference measurement channel.....	1571
C.3.1	DL reference measurement channel (12.2 kbps).....	1571
C.3.1A	DL reference measurement channel (0 kbps and 12.2 kbps).....	1573
C.3.2	DL reference measurement channel (64 kbps).....	1575
C.3.3	DL reference measurement channel (144 kbps).....	1577
C.3.4	DL reference measurement channel (384 kbps).....	1579
C.3.5	DL reference measurement channel 2 (64 kbps).....	1581
C.4	Reference measurement channel for BTFD performance requirements	1582
C.4.1	UL reference measurement channel for BTFD performance requirements	1582
C.4.2	DL reference measurement channel for BTFD performance requirements	1585
C.4.3	Reference parameters for discontinuous UL DPCCCH transmission.....	1588
C.5	DL reference compressed mode parameters	1588
C.6	Auxiliary measurement channels.....	1591
C.6.1	Introduction	1591
C.6.2	Channel combinations for BLER measurements	1592
C.6.3	UL auxiliary reference measurement channel (TM, 12.2 kbps, no CRC)	1593
C.6.3A	UL auxiliary reference measurement channel (TM, 0 kbps and 12.2 kbps, no CRC).....	1593
C.6.4	Void	1594
C.6.5	Void	1594
C.6.6	Void	1594
C.6.7	UL AUXMC AM 12.2 kbps	1595
C.6.8	UL AUXMC AM 12.2 kbps(DCCH with TB size of 148bit).....	1595
C.7	DL reference parameters for PCH tests.....	1596
C.8	DL reference channel parameters for HSDPA tests.....	1596
C.8.1	Fixed Reference Channel (FRC).....	1596
C.8.1.1	Fixed Reference Channel Definition H-Set 1/1A/1B/1C	1596
C.8.1.2	Fixed Reference Channel Definition H-Set 2.....	1597
C.8.1.3	Fixed Reference Channel Definition H-Set 3/3A/3B/3C	1598
C.8.1.4	Fixed Reference Channel Definition H-Set 4.....	1599
C.8.1.5	Fixed Reference Channel Definition H-Set 5.....	1600
C.8.1.6	Fixed Reference Channel Definition H-Set 6/6A/6B/6C	1601
C.8.1.7	Fixed Reference Channel Definition H-Set 7.....	1602
C.8.1.8	Fixed Reference Channel Definition H-Set 8/8A/8B/8C	1603
C.8.1.9	Fixed Reference Channel Definition H-Set 9/9A/9B/9C	1604
C.8.1.10	Fixed Reference Channel Definition H-Set 10/10A/10B/10C	1605
C.8.1.11	Fixed Reference Channel Definition H-Set 11/11A/11B/11C	1607
C.8.1.12	Fixed Reference Channel Definition H-Set 12	1608
C.9	Downlink reference channel dummy DCCH transmission on DCH.....	1609
C.9A	MAC header transmission on HS-DSCH	1609
C.10	UL reference channel parameters for HSDPA tests.....	1609
C.10.1	UL reference measurement channel for HSDPA tests	1609
C.11	Reference channel parameters for E-DCH tests.....	1610
C.11.1	UL reference measurement channel for E-DCH tests.....	1610
C.11.2	DL reference measurement channel for E-DCH tests.....	1611
C.11.3	RLC SDU size for E-DCH tests.....	1611
C.11A	Reference channel parameters for DC-HSUPA tests	1613
C.11A.1	UL reference measurement channel for DC-HSUPA tests	1613
C.11A.2	DL reference measurement channel for DC-HSUPA tests	1614
C.11A.3	RLC SDU size for DC-HSUPA tests.....	1614
C.12	DL reference parameters for MBMS tests	1615
C.12.1	MTCH	1615
C.12.2	Combined MTCH demodulation and cell identification	1615

Annex D (normative):	Propagation Conditions	1616
D.1	General.....	1616
D.1.1	Definition of Additive White Gaussian Noise (AWGN) Interferer	1616
D.2	Propagation Conditions	1616
D.2.1	Static propagation condition.....	1616
D.2.2	Multi-path fading propagation conditions.....	1616
D.2.3	Moving propagation conditions	1618
D.2.4	Birth-Death propagation conditions	1618
D.2.4A	High speed train conditions	1619
D.2.5	Conditions for HSDPA enhanced performance requirements type 1 with UE receiver diversity	1620
D.2.6	Conditions for HSDPA enhanced performance requirements type 3 with UE receiver diversity	1620
D.2.7	Conditions for open and closed loop diversity performance	1620
D.2.8	Conditions for MBMS enhanced performance requirements type 1 with UE receiver diversity	1620
D.2.9	MIMO propagation conditions.....	1621
D.2.9.1	MIMO Single Stream Fading Conditions	1621
D.2.9.2	MIMO Dual Stream Fading Conditions.....	1622
D.2.9.3	MIMO Dual Stream Static Orthogonal Conditions	1623
Annex E (normative):	Downlink Physical Channels	1624
E.1	General.....	1624
E.2	Connection Set-up for non-HSDPA test cases	1624
E.2.1	Measurement without dedicated connection.....	1624
E.3	During connection for non-HSDPA test cases	1624
E.3.1	Measurement of Tx Characteristics	1625
E.3.2	Measurement of Rx Characteristics	1625
E.3.3	Measurement of Performance requirements	1625
E.3.4	Connection with open-loop transmit diversity mode	1627
E.3.5	Connection with closed loop transmit diversity mode	1628
E.3.6	OCNS Definition	1628
E.4	W-CDMA Modulated Interferer for non-HSDPA test cases	1629
E.5	HSDPA DL Physical channels	1629
E.5.0	Downlink Physical Channels for connection set-up.....	1629
E.5.1	Downlink Physical Channels for measurement.....	1629
E.5.2	HSDPA OCNS Definition	1638
E.5.3	Downlink Physical Channels for measurement including test tolerances	1639
E.5.4	Downlink Physical Channels for Transmitter Characteristics with HS-DPCCH.....	1641
E.5A	E-DCH with HSDPA DL Physical channels	1642
E.5A.0	Downlink Physical Channels for connection set-up.....	1642
E.5A.1	Downlink Physical Channels for measurement.....	1642
E.5A.2	E-DCH OCNS Definition	1644
E.5B	MBMS DL Physical channels	1645
E.5B.1	Downlink Physical Channels for connection set-up.....	1645
E.5C	F-DPCH with HSDPA DL Physical channels	1645
E.5C.0	Downlink Physical Channels for connection set-up.....	1645
E.5C.1	Downlink Physical Channels for measurement.....	1645
E.5D	HSDPA and E-DCH DL Physical channels with discontinuous UL DPCCCH transmission.....	1647
E.5D.0	Downlink Physical Channels for connection set-up.....	1647
E.5D.1	Downlink Physical Channels for measurement.....	1647
E.5E	Test Definition for Enhanced Performance Type 3i	1648
E.5E.1	Transmitted code and power characteristics for serving cell.....	1649
E.5E.2	Transmitted code and power characteristics for interfering cells	1651
E.5E.3	Model for power control sequence generation	1651
E.6	Downlink Physical Channels Code Allocation (This clause is informative)	1653
E.6.1	Downlink Physical Channels Code Allocation for non-HSDPA test cases	1653

E.6.2	Downlink Physical Channels Code Allocation for HSDPA test cases.....	1655
E.6.3	Downlink Physical Channels Code Allocation for E-DCH test cases.....	1659
E.6.4	Downlink Physical Channels Code Allocation for MBMS test cases.....	1661
Annex F (normative): General test conditions and declarations		1663
F.1	Acceptable uncertainty of Test System	1663
F.1.1	Measurement of test environments.....	1663
F.1.2	Measurement of transmitter	1664
F.1.3	Measurement of receiver	1668
F.1.4	Performance requirement	1673
F.1.5	Requirements for support of RRM	1679
F.1.6	Performance requirement (HSDPA)	1705
F.1.7	Performance requirement (E-DCH)	1711
F.1.8	Performance requirement (MBMS).....	1714
F.2	Test Tolerances (This clause is informative)	1715
F.2.1	Transmitter.....	1715
F.2.2	Receiver.....	1718
F.2.3	Performance requirements	1720
F.2.4	Requirements for support of RRM	1722
F.2.5	Performance requirements (HSDPA).....	1731
F.2.6	Performance requirements (E-DCH).....	1734
F.2.7	Performance requirements (MBMS)	1735
F.3	Interpretation of measurement results	1735
F.4	Derivation of Test Requirements (This clause is informative).....	1735
F.4.1	Transmitter.....	1736
F.4.2	Receiver.....	1747
F.4.3	Performance requirements	1753
F.4.4	Requirements for support of RRM	1762
F.4.5	Performance requirements (HSDPA).....	1795
F.4.6	Performance requirements (E-DCH).....	1803
F.4.7	Performance requirements (MBMS)	1806
F.5	Acceptable uncertainty of Test Equipment (This clause is informative).....	1806
F.5.1	Transmitter measurements	1807
F.5.2	Receiver measurements.....	1809
F.5.3	Performance measurements	1810
F.5.4	Requirements for support of RRM	1810
F.5.5	Performance measurements (HSDPA)	1811
F.5.6	Performance measurements (E-DCH)	1813
F.5.7	Performance measurements (MBMS).....	1814
F.6	General rules for statistical testing	1814
F.6.1	Statistical testing of receiver BER/BLER performance	1814
F.6.1.1	Error Definition	1814
F.6.1.2	Test Method	1814
F.6.1.3	Test Criteria.....	1814
F.6.1.4	Calculation assumptions	1815
F.6.1.4.1	Statistical independence.....	1815
F.6.1.4.2	Applied formulas	1815
F.6.1.4.3	Approximation of the distribution.....	1815
F.6.1.5	Definition of good pass fail decision.	1815
F.6.1.6	Good balance between test time and statistical significance	1816
F.6.1.7	Pass fail decision rules	1817
F.6.1.8	Test conditions for BER, BLER, RLC SDU Error Rate tests	1818
F.6.1.9	Practical Use (informative).....	1821
F.6.1.10	Dual limit BLER tests	1823
F.6.1.10.1	Description of the parameters for dual limit BLER tests	1824
F.6.1.10.2	Pass fail decision rules	1826
F.6.1.10.3	Test conditions for dual limit BLER tests	1827
F.6.1.10.4	Test conditions for dual limit TPC Command Error Rate tests	1828

F.6.2	Statistical testing of RRM delay performance	1828
F.6.2.1	Test Method	1828
F.6.2.2	Bad Delay Ratio (ER)	1828
F.6.2.3	Test Criteria	1828
F.6.2.4	Calculation assumptions	1828
F.6.2.4.1	Statistical independence	1828
F.6.2.4.2	Applied formulas	1829
F.6.2.4.3	Approximation of the distribution	1829
F.6.2.5	Definition of good pass fail decision	1829
F.6.2.6	Good balance between test-time and statistical significance	1830
F.6.2.7	Pass fail decision rules	1830
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	1830
F.6.2.9	Practical Use (informative)	1834
F.6.3	Statistical Testing of HSDPA Receiver Performance	1835
F.6.3.1	Definition	1835
F.6.3.2	Mapping throughput to block error ratio	1835
F.6.3.3	Bad DUT factor	1836
F.6.3.3.1	Bad DUT factor, range of applicability	1837
F.6.3.4	Minimum Test time	1838
F.6.3.5	Test conditions for HSDPA Receiver Performance	1840
F.6.4	Statistical testing of performance requirement (E-DCH and MBMS)	1861
F.6.4.1	Test Method	1861
F.6.4.2	Bad Result Ratio (ER)	1861
F.6.4.3	Mapping of E-DCH and MBMS tests to RRM tests (F.6.2) and HSDPA tests (F.6.3)	1861
F.6.4.4	Test conditions for E-DCH tests and MBMS	1862
Annex G (normative):	Environmental conditions	1863
G.1	General	1863
G.2	Environmental requirements	1863
G.2.1	Temperature	1863
G.2.2	Voltage	1863
G.2.3	Vibration	1864
G.2.4	Specified frequency range	1864
Annex H (normative):	UE Capabilities (FDD)	1865
H.1	Void	1865
H.2	Void	1865
Annex I (normative):	Default Message Contents	1866
	Contents of MEASUREMENT REPORT message for Intra frequency test cases	1866
	Contents of MEASUREMENT REPORT message for Inter frequency test cases	1867
	Contents of MEASUREMENT REPORT message for inter – RAT test cases	1868
	Contents of RRC CONNECTION SETUP message: UM (Transition to CELL_DCH)	1868
	Contents of RADIO BEARER SETUP message: AM or UM (HSDPA)	1868
	Contents of Master Information Block PLMN type is the case of GSM-MAP	1869
	Contents of Scheduling Block 1 (FDD)	1869
	Contents of Scheduling Block 1 (FDD)	1870
	Contents of Scheduling Block 1 (FDD)	1870
	Contents of System Information Block type 11 (FDD)	1871
	Contents of System Information Block type 11 (FDD)	1872
	Contents of System Information Block type 11 (FDD)	1872
	Contents of System Information Block type 11 (FDD)	1873
	Contents of Scheduling Block 1 (FDD)	1873
	Contents of System Information Block type 11 (FDD)	1874
	Contents of System Information Block type 11 (FDD)	1875
	Contents of Scheduling Block 1 (FDD)	1876
	Contents of System Information Block type 11 (FDD)	1876
	Contents of System Information Block type 11 (FDD)	1877

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..... 1881

Annex J (informative): Information about special regional application of test cases and requirements 1884

J.1 Japan..... 1884

Annex K (normative): Cell configuration mapping 1885

Annex L (informative): Change history 1890