



**SLOVENSKI STANDARD**  
**SIST EN 300 607-1 V5.8.1:2005**

**01-februar-2005**

---

8 ][ JhUb]WW ] b] hYY\_ca i b] UWg ] g]ghYa fUhU &ž! GdYw]\_UWUg\_`UXbcgh]  
a cV]bYdcgHUYfA G!%XY. GdYw]\_UWUg\_`UXbcgh]f, GA %%%\$!%fUh] ]WU) ", "%ž  
]nXU% - \*Ł

Digital cellular telecommunications system (Phase 2+) (GSM); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 5.8.1 Release 1996)

**iTeh STANDARD PREVIEW**  
**(standards.iteh.ai)**

[SIST EN 300 607-1 V5.8.1:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/417ec781-e6ba-47ce-9f47-07e813a9b/sist-en-300-607-1-v5-8-1-2005>

**Ta slovenski standard je istoveten z: EN 300 607-1 Version 5.8.1**

---

**ICS:**

33.070.50	Globalni sistem za mobilno telekomunikacijo (GSM)	Global System for Mobile Communication (GSM)
-----------	---	--

**SIST EN 300 607-1 V5.8.1:2005**

**en**

**iTeh STANDARD PREVIEW  
(standards.iteh.ai)**

SIST EN 300 607-1 V5.8.1:2005

<https://standards.iteh.ai/catalog/standards/sist/417ec781-e6ba-47ce-9f47-07e81b3a9b/sist-en-300-607-1-v5-8-1-2005>

# EN 300 607-1 V5.8.1 (1999-08)

European Standard (Telecommunications series)

## Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 5.8.1 Release 1996)

iTeh STANDARD PREVIEW  
(standards.iteh.ai)



GLOBAL SYSTEM FOR  
MOBILE COMMUNICATIONS

SIST EN 300 607-1 V5.8.1:2005

<https://standards.iteh.ai/catalog/standards/sist/417ec781-e6ba-47ce-9f47-07e81b3a9b/sist-en-300-607-1-v5-8-1-2005>



*European Telecommunications Standards Institute*

---

Reference

REN/SMG-071110QR6-1 (5mc92koo.PDF)

---

KeywordsDigital cellular telecommunications system,  
Global System for Mobile Communication (GSM)***ETSI Secretariat***

---

Postal address

F-06921 Sophia Antipolis Cedex - FRANCE

**iTeh STANDARDS PREVIEW**Office address  
650 Route des Lucioles - Sophia Antipolis

Valbonne - FRANCE

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

Siret N° 348 623 562 00017 - NAF 742 C

Association à but non lucratif enregistrée à la  
Sous-Préfecture de Grasse (06) N° 7803/88<https://standards.iteh.ai/catalog/standards/sist/417ec781-e6ba-47ce-9f47-07e81b3a9b/sist-en-300-607-1-v5-8-1-2005>

---

Internet

secretariat@etsi.fr

Individual copies of this ETSI deliverable  
can be downloaded from<http://www.etsi.org>If you find errors in the present document, send your  
comment to: editor@etsi.fr

---

***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.

© European Telecommunications Standards Institute 1999.  
 All rights reserved.

## Contents

Intellectual Property Rights.....	27
Foreword .....	27
1 Scope.....	28
2 Normative references .....	28
3 Definitions, conventions, and applicability .....	35
3.1 Mobile station definition and configurations .....	35
3.2 Applicability .....	35
3.2.1 Applicability of this specification.....	35
3.2.2 Applicability of the individual tests.....	35
3.2.3 Applicability to terminal equipment.....	63
3.3 Definitions .....	64
3.4 Conventions for mathematical notations .....	64
3.4.1 Mathematical signs.....	64
3.4.2 Powers to the base 10.....	64
3.5 Conventions on electrical terms .....	64
3.5.1 Radio Frequency (RF) input signal level.....	64
3.5.2 Reference sensitivity level.....	65
3.5.3 Power level of fading signal .....	65
3.6 Terms on test conditions .....	65
3.6.1 Radio test conditions.....	65
4 Test Equipment .....	67
4.1 Terms used to describe test equipment in this EN (standards.iteh.ai) .....	67
4.2 Functional requirements of test equipment .....	67
5 Testing methodology in general (layers 1, 2, 0 and 3) V5.8.1:2005 .....	67
5.1 Testing of optional functions and procedures standards/sist/417ec781-e6ba-47ce-9f47-.....	67
5.2 Test interfaces and facilities 7e8133a9b/sist-en-300-607-1-v5-8-1-2005 .....	67
5.3 Different protocol layers .....	68
5.4 Information to be provided by the apparatus supplier.....	68
5.5 Definitions of transmit and receive times.....	68
6 Reference test methods .....	68
6.1 General.....	68
6.2 Choice of frequencies in the frequency hopping mode .....	69
6.3 "Ideal" radio conditions .....	69
6.4 Standard test signals.....	69
6.5 Power (control) levels .....	69
7 Implicit testing .....	70
8 Measurement uncertainty .....	70
9 Format of tests.....	70
10 Generic call set up procedures .....	70
10.1 Generic call set-up procedure for mobile terminating speech calls.....	70
10.2 Generic call set-up procedure for mobile originating speech calls .....	76
10.3 Generic call set-up procedure for mobile terminating data calls .....	79
10.4 Generic call set-up procedure for mobile originating data calls.....	82
10.5 Generic call set-up procedure for mobile terminating multislot configuration, minimum number of timeslots allocated.....	86
10.6 Generic call set-up procedure for mobile originating multislot configuration, minimum number of timeslots allocated.....	89
11 General tests.....	93
11.1 Verification of support and non-support of services (multiple numbering scheme or ISDN) .....	93

11.1.1	Mobile Terminated (MT) calls.....	93
11.1.2	Mobile Originated (MO) calls.....	94
11.2	Verification of support of the single numbering scheme.....	95
11.3	Verification of non-support of services (Advice of Charge Charging (AoCC)).....	96
11.4	Verification of non-support of services (call hold) .....	98
11.5	Verification of non-support of services (multiparty).....	99
11.6	Verification of non-support of feature (Fixed Dialling Number (FDN)) .....	99
11.7	IMEI Security .....	100
11.8	Coding of the Bearer Capability information element .....	101
11.8.1	Network to MS Direction.....	102
11.8.1.1	BS 21 to 26 - Asynchronous Service .....	102
11.8.1.1.1	BS 21 .....	102
11.8.1.1.2	BS 22 .....	106
11.8.1.1.3	BS 24 .....	106
11.8.1.1.4	BS 25 .....	106
11.8.1.1.5	BS 26 .....	106
11.8.1.1.6	BS 23 .....	106
11.8.1.2	BS 31 to 34 - Synchronous Service .....	107
11.8.1.2.1	BS 32 .....	107
11.8.1.2.2	BS 31 .....	111
11.8.1.2.3	BS 33 .....	112
11.8.1.2.4	BS 34 .....	112
11.8.1.3	BS 61 - Alternate Speech / Data .....	112
11.8.1.3.1	Speech/Asynchronous Data, Transparent.....	113
11.8.1.3.2	Speech/Asynchronous Data, Non Transparent.....	115
11.8.1.3.3	Speech/Synchronous Data.....	117
11.8.1.4	BS 81 - Speech followed by Data .....	118
11.8.1.4.1	Speech followed by Asynchronous Data.....	118
11.8.1.4.2	Speech followed by Synchronous Data.....	118
11.8.1.5	TS 61 - Alternate Speech / Facsimile group 3 .....	118
11.8.1.5.1	TS 61 - Alternate Speech/Facsimile group 3,Transparent.....	119
11.8.1.5.2	TS 61 - Alternate Speech / Facsimile group 3/Non Transparent.....	120
11.8.1.6	TS 62 - Automatic Facsimile group 3.....	121
11.8.2	MS to SS direction .....	121
11.8.2.1	BS 21 to 26 - Asynchronous Service .....	121
11.8.2.1.1	BS 21 .....	122
11.8.2.1.2	BS 22 .....	126
11.8.2.1.3	BS 24 .....	126
11.8.2.1.4	BS 25 .....	126
11.8.2.1.5	BS 26 .....	126
11.8.2.1.6	BS 23 .....	126
11.8.2.2	BS 31 to 34 - Synchronous Service .....	127
11.8.2.2.1	BS 32 .....	127
11.8.2.2.2	BS 31 .....	131
11.8.2.2.3	BS 33 .....	132
11.8.2.2.4	BS 34 .....	132
11.8.2.3	BS 41 to 46 - PAD Access Asynchronous .....	133
11.8.2.3.1	<sup>2)</sup> BS 41.....	133
11.8.2.3.2	BS 42 .....	135
11.8.2.3.3	BS 44 .....	135
11.8.2.3.4	BS 45 .....	135
11.8.2.3.5	BS 46 .....	135
11.8.2.3.6	BS 43 .....	135
11.8.2.4	BS 51 to 53 - Packet Service Synchronous.....	136
11.8.2.4.1	<sup>2)</sup> BS 51.....	136
11.8.2.4.2	BS 52 .....	136
11.8.2.4.3	BS 53 .....	136
11.8.2.5	BS 61 - Alternate Speech / Data .....	137
11.8.2.5.1	Speech/Asynchronous Data, Transparent.....	137
11.8.2.5.2	Speech/Asynchronous Data, Non Transparent.....	139

11.8.2.5.3	Speech/Synchronous Data.....	141
11.8.2.6	BS 81 - Speech followed by Data.....	142
11.8.2.6.1	Speech followed by Asynchronous Data.....	142
11.8.2.6.2	Speech followed by Synchronous Data.....	142
11.8.2.7	TS 61 - Alternate Speech / Facsimile group 3 .....	142
11.8.2.7.1	TS 61 - Alternate Speech / Facsimile group 3, Transparent.....	143
11.8.2.7.2	TS 61 - Alternate Speech / Facsimile group 3, Non Transparent.....	144
11.8.2.8	TS 62 - Automatic Facsimile group 3 .....	145
11.8.2.9	TS 11 and TS 12- Speech .....	145
11.8.2.9.1	Support of only full/half rate speech version 1 .....	145
11.8.2.9.2	Support of speech full rate version 2 (Enhanced Full Rate).....	145
12	Transceiver.....	148
12.1	Conducted spurious emissions .....	148
12.1.1	MS allocated a channel .....	148
12.1.2	MS in idle mode .....	150
12.2	Radiated spurious emissions .....	151
12.2.1	MS allocated a channel .....	152
12.2.2	MS in idle mode .....	154
12.3	Conducted spurious emissions for MS supporting the R-GSM frequency band .....	155
12.3.1	MS allocated a channel .....	155
12.3.2	MS in idle mode .....	158
12.4	Radiated spurious emissions for MS supporting the R-GSM frequency band .....	159
12.4.1	MS allocated a channel .....	160
12.4.2	MS in idle mode .....	162
13	Transmitter .....	164
13.1	Frequency error and phase error .....	164
13.2	Frequency error under multipath and interference conditions .....	167
13.3	Transmitter output power and burst timing .....	169
13.4	Output RF spectrum .....	177
13.5	Intermodulation attenuation .....	183
13.6	Frequency error and phase error in HSCSD/multislot configurations .....	185
13.7	Transmitter output power and burst timing in HSCSD/multislot configurations .....	189
13.8	Output RF spectrum in HSCSD multislot configuration .....	196
13.9	Output RF spectrum for MS supporting the R-GSM band .....	203
14	Receiver .....	209
14.1	Bad frame indication.....	215
14.1.1	Bad frame indication - TCH/FS .....	215
14.1.1.1	Bad frame indication - TCH/FS - Random RF input .....	215
14.1.1.2	Bad frame indication - TCH/FS - Frequency hopping and downlink DTX .....	217
14.1.2	Bad frame indication - TCH/HS.....	218
14.1.2.1	Bad frame indication - TCH/HS - Random RF input.....	218
14.1.2.2	Bad frame indication - TCH/HS - Frequency hopping and downlink DTX.....	219
14.1.3	Bad frame indication - TCH/FS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network.....	220
14.1.4	Bad frame indication - TCH/HS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network.....	222
14.2	Reference sensitivity .....	225
14.2.1	Reference sensitivity - TCH/FS.....	225
14.2.2	Reference sensitivity - TCH/HS (Speech frames) .....	227
14.2.3	Reference sensitivity - FACCH/F.....	230
14.2.4	Reference sensitivity - FACCH/H.....	231
14.2.5	Reference sensitivity - full rate data channels .....	232
14.2.6	Reference sensitivity - half rate data channels.....	233
14.2.7	Reference sensitivity - TCH/EFS .....	234
14.2.8	Reference sensitivity - full rate data channels in multislot configuration .....	236
14.2.9	Reference sensitivity - TCH/FS for MS supporting the R-GSM band .....	238
14.3	Usable receiver input level range.....	240
14.4	Co-channel rejection .....	241

14.4.1	Co-channel rejection - TCH/FS .....	241
14.4.2	Co-channel rejection - TCH/HS .....	243
14.4.3	Co-channel rejection - TCH/HS (SID frames) .....	245
14.4.4	Co-channel rejection - FACCH/F .....	247
14.4.5	Co-channel rejection - FACCH/H .....	248
14.4.6	Co-channel rejection - TCH/EFS .....	249
14.5	Adjacent channel rejection .....	251
14.5.1	Adjacent channel rejection - speech channels .....	251
14.5.2	Adjacent channel rejection - control channels .....	253
14.6	Intermodulation rejection .....	255
14.6.1	Intermodulation rejection - speech channels .....	255
14.6.2	Intermodulation rejection - control channels .....	257
14.7	Blocking and spurious response .....	258
14.7.1	Blocking and spurious response - speech channels .....	258
14.7.2	Blocking and spurious response - control channels .....	262
14.7.3	Blocking and spurious response - speech channels for MS supporting the R-GSM band .....	265
14.7.4	Blocking and spurious response - control channels for MS supporting the R-GSM band .....	268
14.8	AM suppression .....	271
14.8.1	AM suppression - speech channels .....	271
14.8.2	AM suppression - control channels .....	272
14.9	Paging performance at high input levels .....	274
15	Timing advance and absolute delay .....	275
16	Reception time tracking speed .....	277
17	Access times during handover .....	279
17.1	Intra cell channel change .....	279
17.2	Inter cell handover .....	281
18	Temporary reception gaps .....	284
18.1	Temporary reception gaps, single slot .....	284
18.2	Temporary reception gaps in HSCSD multislot configurations .....	285
19	Channel release after unrecoverable errors .....	288
19.1	Channel release after unrecoverable errors - 1 .....	288
19.2	Channel release after unrecoverable errors - 2 .....	289
19.3	Channel release after unrecoverable errors - 3 .....	290
20	Cell selection and reselection .....	292
20.1	Cell selection .....	293
20.2	Cell selection with varying signal strength values .....	295
20.3	Basic cell reselection .....	297
20.4	Cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters .....	299
20.5	Cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages .....	301
20.6	Cell reselection timings .....	303
20.7	Priority of cells .....	305
20.8	Cell reselection when C1 (serving cell) < 0 for 5 seconds .....	306
20.9	Running average of the surrounding cell BCCH carrier signal levels .....	307
20.10	Running average of the serving cell BCCH carrier signal level .....	309
20.11	Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list .....	310
20.12	Decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers .....	311
20.13	Decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers .....	312
20.14	Emergency calls .....	313
20.15	Cell reselection due to MS rejection "LA not allowed" .....	314
20.16	Downlink signalling failure .....	316
20.17	Cell selection if no suitable cell found in 10 s .....	317
20.18	Cell reselection due to MS rejection "Roaming not allowed in this LA" .....	318
20.19	Cell selection on release of SDCCH and TCH .....	320
20.20	Multiband cell selection and reselection .....	321

20.20.1	Multiband cell selection and reselection / Cell Selection .....	321
20.20.2	Multiband cell selection and reselection / Cell reselection.....	323
20.21	R-GSM cell selection and reselection .....	325
20.21.1	R-GSM cell selection .....	326
20.21.2	R-GMS cell selection with varying signal strength values .....	328
20.21.3	R-GSM basic cell reselection.....	330
20.21.4	R-GSM cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters .....	332
20.21.5	R-GSM cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages .....	334
20.21.6	R-GSM cell reselection timings .....	335
20.21.7	R-GSM priority of cells.....	337
20.21.8	R-GSM cell reselection when C1 (serving cell) < 0 for 5 seconds.....	339
20.21.9	R-GSM running average of the surrounding cell BCCH carrier signal levels.....	340
20.21.10	R-GSM running average of the serving cell BCCH carrier signal level.....	341
20.21.11	Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list.....	342
20.21.12	R-GSM decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers.....	343
20.21.13	R-GSM decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers .....	344
20.21.14	R-GSM emergency calls.....	345
20.21.15	R-GSM cell reselection due to MS rejection "LA not allowed" .....	347
20.21.16	R-GSM downlink signalling failure .....	348
20.21.17	R-GSM cell selection if no suitable cell found in 10 s .....	350
20.21.18	R-GSM cell reselection due to MS rejection "Roaming not allowed in this LA" .....	351
20.21.19	R-GSM cell selection on release of SDCCH and TCH.....	352
21	Received signal measurements .....	354
21.1	Signal strength .....	354
21.2	Signal strength selectivity .....	357
21.3	Signal quality under static conditions .....	359
21.3.1	Signal quality under static conditions - TCH/FS.....	359
21.3.2	Signal quality under static conditions - TCH/HS.....	361
21.4	Signal quality under TU50 propagation conditions .....	363
21.5	Received signal measurements in HSCSD multislot configuration.....	365
22	Transmit power control timing and confirmation .....	370
22.1	Transmit power control timing and confirmation, single slot .....	370
22.2	Transmit power control timing and confirmation in HSCSD multislot configurations .....	372
23	Single frequency reference.....	374
24	Tests of the layer 1 signalling functions .....	374
25	Tests of the layer 2 signalling functions .....	375
25.1	Introduction, objective and scope .....	375
25.1.1	General .....	375
25.1.2	Test configurations.....	375
25.1.3	Pre-conditions .....	375
25.1.4	Layer 2 test frames .....	376
25.1.5	Establishment of the dedicated physical resource .....	376
25.1.6	Release of the dedicated physical resource .....	377
25.2	Test sequences .....	377
25.2.1	Initialization .....	378
25.2.1.1	Initialization when contention resolution required.....	378
25.2.1.1.1	Normal initialization .....	378
25.2.1.1.2	Initialization failure.....	379
25.2.1.1.2.1	Loss of UA frame .....	379
25.2.1.1.2.2	UA frame with different information field.....	380
25.2.1.1.2.3	Information frame and supervisory frames in response to an SABM frame.....	381
25.2.1.1.3	Initialization denial .....	382
25.2.1.1.4	Total initialization failure.....	383

25.2.1.2	Initialization, contention resolution not required .....	384
25.2.1.2.1	Normal initialization without contention resolution .....	384
25.2.1.2.2	Initialization failure .....	385
25.2.1.2.3	Initialization denial .....	386
25.2.1.2.4	Total initialization failure .....	387
25.2.2	Normal information transfer .....	388
25.2.2.1	Sequence counting and I frame acknowledgements .....	388
25.2.2.2	Receipt of an I frame in the timer recovery state .....	391
25.2.2.3	Segmentation and concatenation .....	393
25.2.3	Normal layer 2 disconnection .....	396
25.2.4	Test of link failure .....	397
25.2.4.1	I frame loss (MS to SS) .....	397
25.2.4.2	RR response frame loss (SS to MS) .....	398
25.2.4.3	RR response frame loss (MS to SS) .....	398
25.2.5	Test of frame transmission with incorrect C/R values .....	399
25.2.5.1	I frame with C bit set to zero .....	399
25.2.5.2	SABM frame with C bit set to zero .....	400
25.2.6	Test of errors in the control field .....	401
25.2.6.1	N(S) sequence error .....	401
25.2.6.2	N(R) sequence error .....	403
25.2.6.3	Improper F bit .....	404
25.2.7	Test on receipt of invalid frames .....	404
26	Testing of layer 3 functions .....	409
26.1	Default conditions and structured sequence of tests .....	409
26.1.1	Default test conditions during layer 3 tests .....	409
26.1.2	Structured sequence of the tests .....	410
26.1.3	General rules for message parameters .....	411
26.1.4	General rules for layer 3 testing .....	411
26.1.5	Format of layer 3 test descriptions .....	411
26.2	Initial tests .....	413
26.2.1	Channel request .....	413
26.2.1.1	Channel request / initial time .....	413
26.2.1.2	Channel request / repetition time .....	414
26.2.1.3	Channel request / random reference .....	416
26.2.2	IMSI detach and IMSI attach .....	417
26.2.3	Sequenced MM / CM message transfer .....	421
26.2.4	Establishment cause .....	422
26.3	Test of MS functions in idle mode .....	430
26.3.1	Initial conditions .....	430
26.3.2	MS indication of available PLMNs .....	432
26.3.3	MS will send only if BSS is "on air" .....	433
26.3.4	Manual mode of PLMN selection .....	433
26.4	Lower layer failures in layer 3 testing .....	436
26.4.1	Introduction .....	436
26.4.2	Layer 1 reception failures .....	436
26.4.3	Data link layer failures .....	436
26.4.4	Lower layer failures, used for the tests in clause 25 .....	436
26.5	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions .....	437
26.5.1	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown protocol discriminator .....	437
26.5.2	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / TI and skip indicator .....	438
26.5.2.1	TI and skip indicator / RR .....	438
26.5.2.1.1	TI and skip indicator / RR / Idle Mode .....	438
26.5.2.1.2	TI and skip indicator / RR / RR-Connection established .....	439
26.5.2.2	TI and skip indicator / MM .....	440
26.5.2.3	TI and skip indicator / CC .....	442
26.5.3	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / undefined or unexpected message type .....	444
26.5.3.1	Undefined or unexpected message type / undefined message type / CC .....	444

26.5.3.2	Undefined or unexpected message type / undefined message type / MM.....	445
26.5.3.3	Undefined or unexpected message type / undefined message type / RR.....	447
26.5.3.4	Undefined or unexpected message type / unexpected message type / CC .....	448
26.5.4	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unforeseen information elements in the non-imperative message part .....	449
26.5.4.1	Unforeseen information elements in the non-imperative message part / duplicated information elements.....	449
26.5.5	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / non-semantical mandatory IE errors.....	451
26.5.5.1	Non-semantical mandatory IE errors / RR.....	451
26.5.5.1.1	Non-semantical mandatory IE errors / RR / missing mandatory IE error.....	451
26.5.5.1.1.1	Non-semantical mandatory IE errors / RR / missing mandatory IE error / special case .....	451
26.5.5.1.1.2	Non-semantical mandatory IE errors / RR / missing mandatory IE error / general case .....	452
26.5.5.1.2	Non-semantical mandatory IE errors / RR / comprehension required.....	453
26.5.5.2	Non-semantical mandatory IE errors / MM .....	454
26.5.5.2.1	Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE.....	454
26.5.5.2.2	Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE.....	456
26.5.5.2.3	Non-semantical mandatory IE errors / MM / comprehension required.....	457
26.5.5.3	Non-semantical mandatory IE errors / CC.....	459
26.5.5.3.1	Non-semantical mandatory IE errors / CC / missing mandatory IE .....	459
26.5.5.3.1.1	Non-semantical mandatory IE errors / CC / missing mandatory IE / disconnect message .....	459
26.5.5.3.1.2	Non-semantical mandatory IE errors / CC / missing mandatory IE / general case .....	460
26.5.5.3.2	Non-semantical mandatory IE errors / CC / comprehension required.....	461
26.5.6	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown IE, comprehension not required.....	462
26.5.6.1	Unknown information elements in the non-imperative message part / MM .....	462
26.5.6.1.1	Unknown IE, comprehension not required / MM / IE unknown in the protocol .....	462
26.5.6.1.2	Unknown IE, comprehension not required / MM / IE unknown in the message .....	464
26.5.6.2	Unknown information elements in the non-imperative message part / CC .....	465
26.5.6.2.1	Unknown information elements in the non-imperative message part / CC / Call establishment ...	465
26.5.6.2.2	Unknown information elements in the non-imperative message part / CC / disconnect.....	466
26.5.6.2.3	Unknown information elements in the non-imperative message part / CC / release .....	467
26.5.6.2.4	Unknown information elements in the non-imperative message part / CC / release complete .....	469
26.5.6.3	Unknown IE in the non-imperative message part, comprehension not required / RR.....	470
26.5.7	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / spare bits.....	472
26.5.7.1	Spare bits / RR .....	472
26.5.7.1.1	Spare bits / RR / paging channel .....	472
26.5.7.1.2	Spare bits / RR / BCCH .....	473
26.5.7.1.3	Spare bits / RR / AGCH.....	474
26.5.7.1.4	Spare bits / RR / Connected Mode.....	477
26.5.7.2	Spare bits / MM .....	478
26.5.7.3	Spare bits / CC.....	480
26.5.8	Default contents of messages .....	482
26.6	Test of the elementary procedures for radio resource management .....	485
26.6.1	Immediate assignment .....	485
26.6.1.1	Immediate assignment / SDCCH or TCH assignment .....	485
26.6.1.2	Immediate assignment / extended assignment .....	486
26.6.1.3	Immediate assignment / assignment rejection .....	489
26.6.1.4	Immediate assignment / ignore assignment .....	490
26.6.1.5	Immediate assignment after immediate assignment reject .....	492
26.6.2	Test of paging .....	493
26.6.2.1	Normal paging .....	493
26.6.2.1.1	Paging / normal / type 1 .....	493
26.6.2.1.2	Paging / normal / type 2 .....	496
26.6.2.1.3	Paging / normal / type 3 .....	498
26.6.2.2	Paging / extended.....	499
26.6.2.3	Paging / reorganization .....	503
26.6.2.3.1	Paging / reorganization / procedure 1 .....	503
26.6.2.3.2	Paging / reorganization / procedure 2 .....	506

26.6.2.4	Paging / same as before .....	507
26.6.2.5	Paging / multislot CCCH .....	508
26.6.3	Test of measurement report .....	510
26.6.3.1	Measurement / no neighbours .....	510
26.6.3.2	Measurement / all neighbours present .....	513
26.6.3.3	Measurement / barred cells and non-permitted NCCs .....	518
26.6.3.4	Measurement / DTX .....	522
26.6.3.5	Measurement / Frequency Formats .....	527
26.6.3.6	Measurement / multiband environment .....	531
26.6.4	Test of the channel assignment procedure .....	536
26.6.4.1	Dedicated assignment / successful case .....	536
26.6.4.2	Dedicated assignment / failure .....	548
26.6.4.2.1	Dedicated assignment / failure / failure during active state .....	548
26.6.4.2.2	Dedicated assignment / failure / general case .....	550
26.6.5	Test of handover .....	551
26.6.5.1	Handover / successful / active call / non-synchronized .....	552
26.6.5.2	Handover / successful / call under establishment / non-synchronized .....	567
26.6.5.3	Handover / successful / active call / finely synchronized .....	587
26.6.5.4	Handover / successful / call under establishment / finely synchronized .....	592
26.6.5.5	Pre-synchronized handovers .....	602
26.6.5.5.1	Handover / successful / active call / pre-synchronized / Timing Advance IE not included .....	602
26.6.5.5.2	Handover / successful / call being established / pre-synchronized / timing advance IE is included / reporting of observed time difference requested .....	604
26.6.5.6	Handover / successful / active call / pseudo synchronized .....	606
26.6.5.7	Handover / successful / active call / non-synchronized / reporting of observed time difference requested .....	608
26.6.5.8	Handover / layer 3 failure .....	610
26.6.5.9	Handover / layer 1 failure .....	611
26.6.6	Test of frequency redefinition .....	612
26.6.6.1	Frequency redefinition .....	612
26.6.7	Test of the channel mode modify procedure .....	618
26.6.7.1	Test of the channel mode modify procedure / full rate .....	618
26.6.7.2	Test of the channel mode modify procedure / half rate .....	620
26.6.8	Test of ciphering mode setting .....	622
26.6.8.1	Ciphering mode / start ciphering .....	623
26.6.8.2	Ciphering mode / no ciphering .....	624
26.6.8.3	Ciphering mode / old cipher key .....	626
26.6.8.4	Ciphering mode / change of mode, algorithm and key .....	627
26.6.8.5	Ciphering mode / IMEISV request .....	635
26.6.9	Test of additional assignment .....	637
26.6.10	Test of partial release .....	637
26.6.11	Test of classmark .....	637
26.6.11.1	Classmark change .....	637
26.6.11.2	Classmark interrogation .....	639
26.6.12	Test of channel release .....	640
26.6.12.1	Channel release / SDCCH .....	640
26.6.12.2	Channel release / SDCCH - no L2 ACK .....	642
26.6.12.3	Channel release / TCH-F .....	643
26.6.12.4	Channel release / TCH-F - no L2 ACK .....	644
26.6.13	Test of starting time .....	646
26.6.13.1	Dedicated assignment with starting time / successful case / time not elapsed .....	647
26.6.13.2	Dedicated assignment with starting time / successful case / time elapsed .....	649
26.6.13.3	Dedicated assignment with starting time and frequency redefinition / failure case / time not elapsed .....	651
26.6.13.4	Dedicated assignment with starting time and frequency redefinition / failure case / time elapsed .....	654
26.6.13.5	Handover with starting time / successful case / time not elapsed .....	656
26.6.13.6	Handover with starting time / successful case / time elapsed .....	659
26.6.13.7	Handover with starting time and frequency redefinition / failure case / time not elapsed .....	661
26.6.13.8	Handover with starting time and frequency redefinition / failure case / time elapsed .....	663
26.6.13.9	Immediate assignment with starting time / successful case / time not elapsed .....	666

26.6.13.10	Immediate assignment with starting time / successful case / time elapsed.....	668
26.6.14	Default contents of GSM 900 layer 3 messages for RR tests .....	670
26.6.15	Default contents of DCS 1 800 layer 3 messages for RR tests .....	681
26.7	Elementary procedures of mobility management .....	693
26.7.1	TMSI reallocation .....	693
26.7.2	Authentication .....	696
26.7.2.1	Authentication accepted.....	696
26.7.2.2	Authentication rejected.....	697
26.7.3	Identification .....	700
26.7.3.1	General Identification .....	700
26.7.3.2	Handling of IMSI shorter than the maximum length .....	702
26.7.4	Location updating.....	705
26.7.4.1	Location updating / accepted .....	705
26.7.4.2	Location updating / rejected .....	711
26.7.4.2.1	Location updating / rejected / IMSI invalid .....	711
26.7.4.2.2	Location updating / rejected / PLMN not allowed .....	714
26.7.4.2.3	Location updating / rejected / location area not allowed.....	718
26.7.4.2.4	Location updating / rejected / roaming not allowed in this location area.....	721
26.7.4.3	Location updating / abnormal cases.....	728
26.7.4.3.1	Location updating / abnormal cases / random access fails .....	728
26.7.4.3.2	Location updating / abnormal cases / attempt counter less or equal to 4, LAI different .....	730
26.7.4.3.3	Location updating / abnormal cases / attempt counter equal to 4.....	736
26.7.4.3.4	Location updating / abnormal cases / attempt counter less or equal to 4, stored LAI equal to broadcast LAI .....	744
26.7.4.4	Location updating / release / expiry of T3240 .....	752
26.7.4.5	Location updating / periodic.....	753
26.7.4.5.1	Location updating periodic spread.....	753
26.7.4.5.2	Location updating / periodic normal / test 1.....	755
26.7.4.5.3	Location updating / periodic normal / test 2.....	757
26.7.4.5.4	Location updating / periodic HPLMN search .....	760
26.7.4.5.4.1	Location updating / periodic HPLMN search / MS waits time T .....	760
26.7.4.5.4.2	Location updating / periodic HPLMN search / MS in manual mode.....	761
26.7.4.5.4.3	Location updating / periodic HPLMN search / MS waits at least two minutes and at most T minutes.....	763
26.7.4.6	Location updating / interworking of attach and periodic .....	764
26.7.5	MM connection .....	766
26.7.5.1	Introduction .....	766
26.7.5.2	MM connection / establishment with cipher .....	766
26.7.5.3	MM connection / establishment without cipher .....	768
26.7.5.4	MM connection / establishment rejected .....	769
26.7.5.5	MM connection / establishment rejected cause 4 .....	770
26.7.5.6	MM connection / expiry T3230 .....	771
26.7.5.7	MM connection / abortion by the network.....	772
26.7.5.7.1	MM connection / abortion by the network / cause #6 .....	772
26.7.5.7.2	MM connection / abortion by the network / cause not equal to #6 .....	775
26.7.5.8	MM connection / follow-on request pending.....	776
26.7.5.8.1	MM connection / follow-on request pending / test 1.....	776
26.7.5.8.2	MM connection / follow-on request pending / test 2.....	777
26.7.5.8.3	MM connection / follow-on request pending / test 3.....	779
26.7.6	Default contents of messages .....	780
26.8	Tests related to circuit switched call control.....	784
26.8.1	Circuit switched Call Control (CC) state machine verification .....	784
26.8.1.1	General on CC state machine verification .....	784
26.8.1.2	Establishment of an outgoing call .....	785
26.8.1.2.1	Outgoing call / U0 null state .....	787
26.8.1.2.1.1	Outgoing call / U0 null state / MM connection requested .....	787
26.8.1.2.2	Outgoing call / U0.1 MM connection pending.....	788
26.8.1.2.2.1	Outgoing call / U0.1 MM connection pending / CM service rejected .....	788
26.8.1.2.2.2	Outgoing call / U0.1 MM connection pending / CM service accepted.....	790
26.8.1.2.2.3	Outgoing call / U0.1 MM connection pending / lower layer failure .....	791

26.8.1.2.3	Outgoing call / U1 call initiated .....	792
26.8.1.2.3.1	Outgoing call / U1 call initiated / receiving CALL PROCEEDING .....	792
26.8.1.2.3.2	Outgoing call / U1 call initiated / rejecting with RELEASE COMPLETE .....	793
26.8.1.2.3.3	Outgoing call / U1 call initiated / T303 expiry .....	795
26.8.1.2.3.4	Outgoing call / U1 call initiated / lower layer failure .....	796
26.8.1.2.3.5	Outgoing call / U1 call initiated / receiving ALERTING .....	797
26.8.1.2.3.6	Outgoing call / U1 call initiated / entering state U10 .....	798
26.8.1.2.3.7	Outgoing call / U1 call initiated / unknown message received .....	799
26.8.1.2.4	Outgoing call / U3 MS originating call proceeding .....	801
26.8.1.2.4.1	Outgoing call / U3 MS originating call proceeding / ALERTING received .....	801
26.8.1.2.4.2	Outgoing call / U3 MS originating call proceeding / CONNECT received.....	802
26.8.1.2.4.3	Outgoing call / U3 MS originating call proceeding / PROGRESS received without in band information .....	803
26.8.1.2.4.4	Outgoing call / U3 MS originating call proceeding / PROGRESS with in band information .	804
26.8.1.2.4.5	Outgoing call / U3 MS originating call proceeding / DISCONNECT with in band tones.....	806
26.8.1.2.4.6	Outgoing call / U3 MS originating call proceeding / DISCONNECT without in band tones..	807
26.8.1.2.4.7	Outgoing call / U3 MS originating call proceeding / RELEASE received.....	809
26.8.1.2.4.8	Outgoing call / U3 MS originating call proceeding / termination requested by the user .....	810
26.8.1.2.4.9	Outgoing call / U3 MS originating call proceeding / traffic channel allocation .....	811
26.8.1.2.4.10	Outgoing call / U3 MS originating call proceeding / timer T310 time-out.....	812
26.8.1.2.4.11	Outgoing call / U3 MS originating call proceeding / lower layer failure.....	813
26.8.1.2.4.12	Outgoing call / U3 MS originating call proceeding / unknown message received .....	815
26.8.1.2.4.13	Outgoing call / U3 MS originating call proceeding / Internal alerting indication.....	816
26.8.1.2.5	Outgoing call / U4 call delivered .....	817
26.8.1.2.5.1	Outgoing call / U4 call delivered / CONNECT received .....	817
26.8.1.2.5.2	Outgoing call / U4 call delivered / termination requested by the user .....	818
26.8.1.2.5.3	Outgoing call / U4 call delivered / DISCONNECT with in band tones .....	819
26.8.1.2.5.4	Outgoing call / U4 call delivered / DISCONNECT without in band tones .....	821
26.8.1.2.5.5	Outgoing call / U4 call delivered / RELEASE received.....	822
26.8.1.2.5.6	Outgoing call / U4 call delivered / lower layer failure .....	823
26.8.1.2.5.7	Outgoing call / U4 call delivered / traffic channel allocation .....	825
26.8.1.2.5.8	Outgoing call / U4 call delivered / unknown message received .....	826
26.8.1.2.6	U10 call active ..07e81b3a9b/sist en 300-607-1 v5.8-1-2005.....	827
26.8.1.2.6.1	U10 call active / termination requested by the user.....	827
26.8.1.2.6.2	U10 call active / RELEASE received.....	828
26.8.1.2.6.3	U10 call active / DISCONNECT with in band tones .....	829
26.8.1.2.6.4	U10 call active / DISCONNECT without in band tones .....	831
26.8.1.2.6.5	U10 call active / RELEASE COMPLETE received.....	832
26.8.1.2.6.6	U10 call active / SETUP received.....	833
26.8.1.2.7	U11 disconnect request .....	835
26.8.1.2.7.1	U11 disconnect request / clear collision .....	835
26.8.1.2.7.2	U11 disconnect request / RELEASE received.....	836
26.8.1.2.7.3	U11 disconnect request / timer T305 time-out .....	838
26.8.1.2.7.4	U11 disconnect request / lower layer failure .....	839
26.8.1.2.7.5	U11 disconnect request / unknown message received .....	840
26.8.1.2.8	U12 disconnect indication.....	841
26.8.1.2.8.1	U12 disconnect indication / call releasing requested by the user.....	841
26.8.1.2.8.2	U12 disconnect indication / RELEASE received .....	842
26.8.1.2.8.3	U12 disconnect indication / lower layer failure .....	844
26.8.1.2.8.4	U12 disconnect indication / unknown message received .....	845
26.8.1.2.9	Outgoing call / U19 release request .....	846
26.8.1.2.9.1	Outgoing call / U19 release request / timer T308 time-out.....	846
26.8.1.2.9.2	Outgoing call / U19 release request / 2nd timer T308 time-out.....	848
26.8.1.2.9.3	Outgoing call / U19 release request / RELEASE received.....	849
26.8.1.2.9.4	Outgoing call / U19 release request / RELEASE COMPLETE received .....	850
26.8.1.2.9.5	Outgoing call / U19 release request / lower layer failure .....	852
26.8.1.3	Establishment of an incoming call / Initial conditions .....	853
26.8.1.3.1	Incoming call / U0 null state .....	855
26.8.1.3.1.1	Incoming call / U0 null state / SETUP received with a non supported bearer capability .....	855
26.8.1.3.2	Incoming call / U6 call present .....	857

26.8.1.3.2.1	Incoming call / U6 call present / automatic call rejection.....	857
26.8.1.3.3	Incoming call / U9 mobile terminating call confirmed.....	858
26.8.1.3.3.1	Incoming call / U9 mobile terminating call confirmed / alerting or immediate connecting....	858
26.8.1.3.3.2	Incoming call / U9 mobile terminating call confirmed / TCH assignment .....	859
26.8.1.3.3.3	Incoming call / U9 mobile terminating call confirmed / termination requested by the user ...	860
26.8.1.3.3.4	Incoming call / U9 mobile terminating call confirmed / DISCONNECT received .....	862
26.8.1.3.3.5	Incoming call / U9 mobile terminating call confirmed / RELEASE received .....	863
26.8.1.3.3.6	Incoming call / U9 mobile terminating call confirmed / lower layer failure.....	864
26.8.1.3.3.7	Incoming call / U9 mobile terminating call confirmed / unknown message received.....	866
26.8.1.3.4	Incoming call / U7 call received .....	867
26.8.1.3.4.1	Incoming call / U7 call received / call accepted .....	867
26.8.1.3.4.2	Incoming call / U7 call received / termination requested by the user .....	868
26.8.1.3.4.3	Incoming call / U7 call received / DISCONNECT received .....	869
26.8.1.3.4.4	Incoming call / U7 call received / RELEASE received.....	870
26.8.1.3.4.5	Incoming call / U7 call received / lower layer failure.....	872
26.8.1.3.4.6	Incoming call / U7 call received / unknown message received .....	873
26.8.1.3.4.7	Incoming call / U7 call received / TCH assignment .....	874
26.8.1.3.4.8	Incoming call / U7 call received / RELEASE COMPLETE received .....	875
26.8.1.3.5	Incoming call / U8 connect request.....	877
26.8.1.3.5.1	Incoming call / U8 connect request / CONNECT acknowledged.....	877
26.8.1.3.5.2	Incoming call / U8 connect request / timer T313 time-out .....	878
26.8.1.3.5.3	Incoming call / U8 connect request / termination requested by the user .....	879
26.8.1.3.5.4	Incoming call / U8 connect request / DISCONNECT received with in-band information .....	880
26.8.1.3.5.5	Incoming call / U8 connect request / DISCONNECT received without in-band information .....	882
26.8.1.3.5.6	Incoming call / U8 connect request / RELEASE received .....	883
26.8.1.3.5.7	Incoming call / U8 connect request / lower layer failure .....	884
26.8.1.3.5.8	Incoming call / U8 connect request / TCH assignment.....	885
26.8.1.3.5.9	Incoming call / U8 connect request / unknown message received .....	887
26.8.1.4	In call functions .....	888
26.8.1.4.1	In-call functions / DTMF information transfer.....	888
26.8.1.4.1.1	In-call functions / DTMF information transfer / basic procedures .....	888
26.8.1.4.2	In-call functions / user notification .....	889
26.8.1.4.2.1	In-call functions / User notification / MS terminated .....	890
26.8.1.4.3	In-call functions / channel changes .....	891
26.8.1.4.3.1	In-call functions / channel changes / a successful channel change in active state/ Handover and Assignment Command .....	891
26.8.1.4.3.2	In-call functions / channel changes / an unsuccessful channel change in active mode/ Handover and Assignment Command .....	893
26.8.1.4.4	In-call functions / MS terminated in-call modification .....	894
26.8.1.4.4.1	In-call functions / MS terminated in-call modification / modify when new mode is not supported .....	894
26.8.1.4.5	In-call functions / MS originated in-call modification .....	896
26.8.1.4.5.1	In-call functions / MS originated in-call modification / a successful case of modifying .....	896
26.8.1.4.5.2	In-call functions / MS originated in-call modification / modify rejected.....	898
26.8.1.4.5.3	In-call functions / MS originated in-call modification / an abnormal case of acceptance .....	899
26.8.1.4.5.4	In-call functions / MS originated in-call modification / an abnormal case of rejection.....	901
26.8.1.4.5.5	In-call functions / MS originated in-call modification / time-out of timer T323 .....	902
26.8.1.4.5.6	In-call functions / MS originated in-call modification / a successful channel change in state mobile originating modify .....	904
26.8.1.4.5.7	In-call functions / MS originated in-call modification / an unsuccessful channel change in state mobile originating modify .....	905
26.8.1.4.5.8	In-call functions / MS originated in-call modification / unknown message received .....	907
26.8.1.4.5.9	In-call functions / MS originated in-call modification / a release complete received .....	908
26.8.1.4.5.10	In-call functions/MS originated in-call modification/contents of some of the messages .....	910
26.8.2	Call Re-establishment.....	912
26.8.2.1	Call Re-establishment/call present, re-establishment allowed .....	912
26.8.2.2	Call Re-establishment/call present, re-establishment not allowed .....	914
26.8.2.3	Call Re-establishment/call under establishment, transmission stopped .....	915
26.8.3	User to user signalling.....	917