



SLOVENSKI STANDARD
SIST EN 300 607-1 V8.1.1:2005

01-februar-2005

8][JhUb]WW] b] hYY_ca i b] UWg] g]ghYa fUhU &ž! GdYw]_UWUg_ UXbcghj
a cV]bYdcgHUYfA G!%XY. GdYw]_UWUg_ UXbcghj!f! GA %%%\$!%fUh] JWJ, %%z
]nXU% --Ł

Digital cellular telecommunications system (Phase 2+) (GSM); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 8.1.1 Release 1999)

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 300 607-1 V8.1.1:2005](#)

<https://standards.iteh.ai/catalog/standards/sist/ac13b445-944d-4388-9b94-0f6c19c24183/sist-en-300-607-1-v8-1-1-2005>

Ta slovenski standard je istoveten z: EN 300 607-1 Version 8.1.1

ICS:

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

SIST EN 300 607-1 V8.1.1:2005

en

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

SIST EN 300 607-1 V8.1.1:2005

<https://standards.iteh.ai/catalog/standards/sist/ac13b445-944d-4388-9b94-0f6c19c24183/sist-en-300-607-1-v8-1-1-2005>

ETSI EN 300 607-1 V8.1.1 (2000-10)

European Standard (Telecommunications series)

Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (GSM 11.10-1 version 8.1.1 Release 1999)

iTeh STANDARD PREVIEW
(standards.iteh.ai)



SIST EN 300 607-1 V8.1.1:2005

<https://standards.iteh.ai/catalog/standards/sist/ac13b445-944d-4388-9b94-0f6c19c24183/sist-en-300-607-1-v8-1-1-2005>



Reference

REN/SMG-071110Q8-1

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

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

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

Siret N° 348 623 562 00017 - NAF 742 C
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse 06 N° 7303/88**iTeh STANDARD PREVIEW**
(standards.iteh.ai)[SIST EN 300 607-1 V8.1.1:2005](#)<https://standards.iteh.ai/catalog/standards/sist/ac13b445-944d-4388-9b94-0f6c19c24183/sist-en-300-607-1-v8-1-1-2005>

Important notice

Individual copies of the present document can be downloaded from:
<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the PDF version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.
Information on the current status of this and other ETSI documents is available at <http://www.etsi.org/tb/status/>

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 2000.
All rights reserved.

Contents

Intellectual Property Rights	35
Foreword.....	35
1 Scope	36
2 References	36
3 Definitions, conventions, and applicability	42
3.1 Mobile station definition and configurations.....	42
3.2 Applicability.....	42
3.2.1 Applicability of this specification	42
3.2.2 Applicability of the individual tests	43
3.2.3 Applicability to terminal equipment	63
3.3 Definitions	63
3.4 Conventions for mathematical notations	63
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	64
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	66
4.1 Terms used to describe test equipment in the present document.....	66
4.2 Functional requirements of test equipment	66
5 Testing methodology in general (layers 1, 2, and 3) <small>SIST EN 300 607-1 V8.1.1:2005 https://standards.iteh.ai/catalog/standards/sist/ac136445-944d-4388-9b94-0f6c19c24183/sist-en-300-607-1-v8-1-1-2005</small>	66
5.1 Testing of optional functions and procedures.....	66
5.2 Test interfaces and facilities	67
5.3 Different protocol layers	67
5.4 Information to be provided by the apparatus supplier	67
5.5 Definitions of transmit and receive times.....	67
6 Reference test methods.....	68
6.1 General	68
6.2 Choice of frequencies in the frequency hopping mode	68
6.3 "Ideal" radio conditions.....	68
6.4 Standard test signals	69
6.5 Power (control) levels	69
7 Implicit testing.....	69
8 Measurement uncertainty	69
9 Format of tests	69
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	75
10.3 Generic call set-up procedure for mobile terminating data calls	78
10.4 Generic call set-up procedure for mobile originating data calls	80
10.5 Generic call set-up procedure for mobile terminating multislot configuration, minimum number of timeslots allocated	84
10.6 Generic call set-up procedure for mobile originating multislot configuration, minimum number of timeslots allocated	87
11 General tests	91
11.1 Verification of support and non-support of services (multiple numbering scheme or ISDN)	91
11.1.1 Mobile Terminated (MT) calls.....	91

11.1.2	Mobile Originated (MO) calls	92
11.2	Verification of support of the single numbering scheme.....	93
11.3	Verification of non-support of services (Advice of Charge Charging (AoCC)).....	94
11.4	Verification of non-support of services (call hold).....	96
11.5	Verification of non-support of services (multiparty).....	96
11.6	Verification of non-support of feature (Fixed Dialling Number (FDN))	97
11.7	IMEI Security	98
11.8	Coding of the Bearer Capability information element.....	99
11.8.1	Network to MS Direction	100
11.8.1.1	BS 21 to 26 - Asynchronous Service	100
11.8.1.1.1	BS 21	100
11.8.1.1.2	BS 22	104
11.8.1.1.3	BS 24	104
11.8.1.1.4	BS 25	104
11.8.1.1.5	BS 26	104
11.8.1.1.6	BS 23	104
11.8.1.2	BS 31 to 34 - Synchronous Service.....	105
11.8.1.2.1	BS 32	105
11.8.1.2.2	BS 31	109
11.8.1.2.3	BS 33	110
11.8.1.2.4	BS 34	110
11.8.1.3	BS 61 - Alternate Speech / Data.....	110
11.8.1.3.1	Speech/Asynchronous Data, Transparent	111
11.8.1.3.2	Speech/Asynchronous Data, Non Transparent	113
11.8.1.3.3	Speech/Synchronous Data	115
11.8.1.4	BS 81 - Speech followed by Data	116
11.8.1.4.1	Speech followed by Asynchronous Data	116
11.8.1.4.2	Speech followed by Synchronous Data	116
11.8.1.5	TS 61 - Alternate Speech / Facsimile group 3	116
11.8.1.5.1	TS 61 - Alternate Speech / Facsimile group 3, Transparent	117
11.8.1.5.2	TS 61 - Alternate Speech / Facsimile group 3, Non-Transparent	118
11.8.1.6	TS 62 - Automatic Facsimile group 3 SIST EN 300 607-1 V8.1.1:2005	119
11.8.2	MS to SS direction.....	119
11.8.2.1	BS 21 to 26 - Asynchronous Service SIST EN 300 607-1 V8.1.1:2005	119
11.8.2.1.1	BS 21	120
11.8.2.1.2	BS 22	124
11.8.2.1.3	BS 24	124
11.8.2.1.4	BS 25	124
11.8.2.1.5	BS 26	124
11.8.2.1.6	BS 23	124
11.8.2.2	BS 31 to 34 - Synchronous Service.....	125
11.8.2.2.1	BS 32	125
11.8.2.2.2	BS 31	129
11.8.2.2.3	BS 33	130
11.8.2.2.4	BS 34	130
11.8.2.3	BS 41 to 46 - PAD Access Asynchronous	131
11.8.2.3.1	²⁾ BS 41	131
11.8.2.3.2	BS 42	133
11.8.2.3.3	BS 44	133
11.8.2.3.4	BS 45	133
11.8.2.3.5	BS 46	133
11.8.2.3.6	BS 43	133
11.8.2.4	BS 51 to 53 - Packet Service Synchronous	134
11.8.2.4.1	²⁾ BS 51	134
11.8.2.4.2	BS 52	134
11.8.2.4.3	BS 53	134
11.8.2.5	BS 61 - Alternate Speech / Data.....	135
11.8.2.5.1	Speech/Asynchronous Data, Transparent	135
11.8.2.5.2	Speech/Asynchronous Data, Non Transparent	138
11.8.2.5.3	Speech/Synchronous Data	140
11.8.2.6	BS 81 - Speech followed by Data	141
11.8.2.6.1	Speech followed by Asynchronous Data	141

11.8.2.6.2	Speech followed by Synchronous Data	141
11.8.2.7	TS 61 - Alternate Speech / Facsimile group 3.....	141
11.8.2.7.1	TS 61 - Alternate Speech / Facsimile group 3, Transparent	142
11.8.2.7.2	TS 61 - Alternate Speech / Facsimile group 3, Non Transparent	143
11.8.2.8	TS 62 - Automatic Facsimile group 3	144
11.8.2.9	TS 11 and TS 12- Speech.....	144
11.8.2.9.1	Support of only full/half rate speech version 1.....	144
11.8.2.9.2	Support of speech full rate version 2 (Enhanced Full Rate)	144
12	Transceiver	146
12.1	Conducted spurious emissions	146
12.1.1	MS allocated a channel.....	146
12.1.2	MS in idle mode.....	148
12.2	Radiated spurious emissions.....	149
12.2.1	MS allocated a channel.....	150
12.2.2	MS in idle mode.....	152
12.3	Conducted spurious emissions for MS supporting the R-GSM frequency band	153
12.3.1	MS allocated a channel.....	153
12.3.2	MS in idle mode.....	155
12.4	Radiated spurious emissions for MS supporting the R-GSM frequency band	157
12.4.1	MS allocated a channel.....	157
12.4.2	MS in idle mode.....	159
13	Transmitter	162
13.1	Frequency error and phase error.....	162
13.2	Frequency error under multipath and interference conditions.....	165
13.3	Transmitter output power and burst timing	167
13.4	Output RF spectrum	175
13.5	Intermodulation attenuation.....	180
13.6	Frequency error and phase error in HSCSD multislot configurations.....	181
13.7	Transmitter output power and burst timing in HSCSD configurations	185
13.8	Output RF spectrum in HSCSD multislot configuration.....	193
13.9	Output RF spectrum for MS supporting the R-GSM band	198
13.10	[Reserved for future GSM test]	204
13.11	[Reserved for future GSM test]	204
13.12	[Reserved for future GSM test]	204
13.13	[Reserved for future GSM test]	204
13.14	[Reserved for future GSM test]	204
13.15	[Reserved for future GSM test]	204
13.16	GPRS transmitter tests.....	204
13.16.1	Frequency error and phase error in GPRS multislot configuration.....	204
13.16.2	Transmitter output power in GPRS multislot configuration	207
13.16.3	Output RF spectrum in GPRS multislot configuration	215
14	Receiver.....	222
14.1	Bad frame indication	228
14.1.1	Bad frame indication - TCH/FS	228
14.1.1.1	Bad frame indication - TCH/FS - Random RF input	228
14.1.1.2	Bad frame indication - TCH/FS - Frequency hopping and downlink DTX	230
14.1.2	Bad frame indication - TCH/HS	231
14.1.2.1	Bad frame indication - TCH/HS - Random RF input	231
14.1.2.2	Bad frame indication - TCH/HS - Frequency hopping and downlink DTX	232
14.1.3	Bad frame indication - TCH/FS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network	233
14.1.4	Bad frame indication - TCH/HS - Frequency hopping and downlink DTX - Phase 2 MS in a phase 1 network	235
14.2	Reference sensitivity	237
14.2.1	Reference sensitivity - TCH/FS	237
14.2.2	Reference sensitivity - TCH/HS (Speech frames)	239
14.2.3	Reference sensitivity - FACCH/F	241
14.2.4	Reference sensitivity - FACCH/H	242
14.2.5	Reference sensitivity - full rate data channels.....	243
14.2.6	Reference sensitivity - half rate data channels.....	244

14.2.7	Reference sensitivity - TCH/EFS.....	245
14.2.8	Reference sensitivity - full rate data channels in multislot configuration	247
14.2.9	Reference sensitivity - TCH/FS for MS supporting the R-GSM band.....	249
14.3	Usable receiver input level range	250
14.4	Co-channel rejection.....	252
14.4.1	Co-channel rejection - TCH/FS	252
14.4.2	Co-channel rejection - TCH/HS.....	254
14.4.3	Co-channel rejection - TCH/HS (SID frames).....	256
14.4.4	Co-channel rejection - FACCH/F.....	257
14.4.5	Co-channel rejection - FACCH/H	258
14.4.6	Co-channel rejection - TCH/EFS.....	259
14.4.7	Receiver performance in the case of frequency hopping and co-channel interference on one carrier	261
14.5	Adjacent channel rejection	262
14.5.1	Adjacent channel rejection - speech channels.....	262
14.5.2	Adjacent channel rejection - control channels	265
14.6	Intermodulation rejection	267
14.6.1	Intermodulation rejection - speech channels.....	267
14.6.2	Intermodulation rejection - control channels	268
14.7	Blocking and spurious response	270
14.7.1	Blocking and spurious response - speech channels.....	270
14.7.2	Blocking and spurious response - control channels	274
14.7.3	Blocking and spurious response - speech channels for MS supporting the R-GSM band	277
14.7.4	Blocking and spurious response - control channels for MS supporting the R-GSM band.....	280
14.8	AM suppression.....	283
14.8.1	AM suppression - speech channels.....	283
14.8.2	AM suppression - control channels.....	285
14.9	Paging performance at high input levels	286
14.10	[Reserved for future GSM test]	287
14.11	[Reserved for future GSM test]	287
14.12	[Reserved for future GSM test]	287
14.13	[Reserved for future GSM test]	287
14.14	[Reserved for future GSM test]	287
14.15	[Reserved for future GSM test]	287
14.16	GPRS receiver tests	287
14.16.1	Minimum Input level for Reference Performance	289
14.16.2	Co-channel rejection	293
14.16.2.1	Co-channel rejection for packet channels	293
15	Timing advance and absolute delay	296
15.6	GPRS Timing advance and absolute delay.....	297
16	Reception time tracking speed	301
17	Access times during handover.....	303
17.1	Intra cell channel change	303
17.2	Inter cell handover.....	305
18	Temporary reception gaps	308
18.1	Temporary reception gaps, single slot	308
18.2	Temporary reception gaps in HSCSD multislot configurations	309
19	Channel release after unrecoverable errors	312
19.1	Channel release after unrecoverable errors -1	312
19.2	Channel release after unrecoverable errors - 2	313
19.3	Channel release after unrecoverable errors - 3	314
20	Cell selection and reselection	316
20.1	Cell selection	318
20.2	Cell selection with varying signal strength values	319
20.3	Basic cell reselection	321
20.4	Cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters.....	323
20.5	Cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages	325

20.6	Cell reselection timings	327
20.7	Priority of cells	329
20.8	Cell reselection when C1 (serving cell) < 0 for 5 seconds	330
20.9	Running average of the surrounding cell BCCH carrier signal levels	332
20.10	Running average of the serving cell BCCH carrier signal level	333
20.11	Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list.....	334
20.12	Decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers	335
20.13	Decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers	336
20.14	Emergency calls	337
20.15	Cell reselection due to MS rejection "LA not allowed"	338
20.16	Downlink signalling failure	340
20.17	Cell selection if no suitable cell found in 10 s.....	341
20.18	Cell reselection due to MS rejection "Roaming not allowed in this LA"	342
20.19	Cell selection on release of SDCCH and TCH.....	344
20.20	Multiband cell selection and reselection	345
20.20.1	Multiband cell selection and reselection / Cell Selection	345
20.20.2	Multiband cell selection and reselection / Cell reselection	347
20.21	R-GSM cell selection and reselection	349
20.21.1	R-GSM cell selection.....	350
20.21.2	R-GMS cell selection with varying signal strength values	352
20.21.3	R-GSM basic cell reselection.....	354
20.21.4	R-GSM cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters	356
20.21.5	R-GSM cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages	358
20.21.6	R-GSM cell reselection timings	359
20.21.7	R-GSM priority of cells	361
20.21.8	R-GSM cell reselection when C1 (serving cell) < 0 for 5 seconds	363
20.21.9	R-GSM running average of the surrounding cell BCCH carrier signal levels	364
20.21.10	R-GSM running average of the serving cell BCCH carrier signal level	365
20.21.11	Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list	366
20.21.12	R-GSM decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers	367
20.21.13	R-GSM decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers	368
20.21.14	R-GSM emergency calls	369
20.21.15	R-GSM cell reselection due to MS rejection "LA not allowed"	370
20.21.16	R-GSM downlink signalling failure	371
20.21.17	R-GSM cell selection if no suitable cell found in 10 s.....	373
20.21.18	R-GSM cell reselection due to MS rejection "Roaming not allowed in this LA"	374
20.21.19	R-GSM cell selection on release of SDCCH and TCH.....	375
20.22	GPRS Cell Selection and Reselection	376
20.22.1	Cell selection	378
20.22.2	Cell reselection in Packet Idle mode	380
20.22.3	Priority of cells	381
20.22.4	Cell re-selection with cells in different routing area	383
20.22.5	Network controlled Cell re-selection in Transfer Mode	384
20.22.6	Cell reselection timings	385
20.22.7	Downlink signalling failure	386
21	Received signal measurements	389
21.1	Signal strength	389
21.2	Signal strength selectivity	392
21.3	Signal quality under static conditions	394
21.3.1	Signal quality under static conditions - TCH/FS	394
21.3.2	Signal quality under static conditions - TCH/HS	396
21.4	Signal quality under TUhigh propagation conditions	398
21.5	Received signal measurements in HSCSD multislot configuration	400
21.5.1	Signal strength	400

22	Transmit power control timing and confirmation	404
22.1	Transmit power control timing and confirmation, single slot	404
22.2	Transmit power control timing and confirmation in HSCSD multislot configurations.....	405
22.2.1	Definition and applicability	405
22.2.2	Conformance requirement	406
22.2.3	Test purpose.....	406
22.2.4	Method of test	406
22.2.4.1	Initial conditions	406
22.2.4.2	Procedure	406
22.2.5	Test requirements.....	407
22.3	GPRS Uplink Power Control - Use of a and T _{CH} parameters	407
22.3.1	Definition and applicability	407
22.3.2	Conformance requirement	408
22.3.3	Test purpose.....	408
22.3.4	Method of test	408
22.3.4.1	Initial conditions	408
22.3.4.2	Procedure	409
22.3.5	Test requirements.....	410
22.4	GPRS Uplink Power Control - Independence of TS Power Control	411
22.4.1	Definition and applicability	411
22.4.2	Conformance requirement	411
22.4.3	Test purpose.....	411
22.4.4	Method of test	411
22.4.4.1	Initial conditions	411
22.4.4.2	Procedure	411
22.4.5	Test requirements.....	411
23	iTech STANDARD PREVIEW Single frequency reference.....	412
23.1	Definition and applicability	412
23.2	Conformance requirement	412
23.3	Test purpose	412
24	Tests of the layer 1 signalling functions.....	412
	SIST EN 300 607-1 V8.1.1:2005 https://standards.iteh.ai/catalog/standards/sist/ac136445-944d-4388-9b94-	
25	Tests of the layer 2 signalling functions.....	413
25.1	Introduction, objective and scope.....	413
25.1.1	General.....	413
25.1.2	Test configurations	413
25.1.3	Pre-conditions	413
25.1.4	Layer 2 test frames.....	414
25.1.5	Establishment of the dedicated physical resource.....	415
25.1.6	Release of the dedicated physical resource.....	415
25.2	Test sequences.....	415
25.2.1	Initialization	416
25.2.1.1	Initialization when contention resolution required.....	416
25.2.1.1.1	Normal initialization.....	416
25.2.1.1.2	Initialization failure	417
25.2.1.1.3	Initialization denial	420
25.2.1.1.4	Total initialization failure	421
25.2.1.2	Initialization, contention resolution not required	422
25.2.1.2.1	Normal initialization without contention resolution	422
25.2.1.2.2	Initialization failure	423
25.2.1.2.3	Initialization denial	424
25.2.1.2.4	Total initialization failure	425
25.2.2	Normal information transfer	426
25.2.2.1	Sequence counting and I frame acknowledgements.....	426
25.2.2.2	Receipt of an I frame in the timer recovery state	429
25.2.2.3	Segmentation and concatenation.....	431
25.2.3	Normal layer 2 disconnection	434
25.2.4	Test of link failure	434
25.2.4.1	I frame loss (MS to SS).....	434
25.2.4.2	RR response frame loss (SS to MS)	436
25.2.4.3	RR response frame loss (MS to SS)	436

25.2.5	Test of frame transmission with incorrect C/R values	437
25.2.5.1	I frame with C bit set to zero.....	437
25.2.5.2	SABM frame with C bit set to zero.....	438
25.2.6	Test of errors in the control field	439
25.2.6.1	N(S) sequence error.....	439
25.2.6.2	N(R) sequence error	441
25.2.6.3	Improper F bit	442
25.2.7	Test on receipt of invalid frames	442
26	Testing of layer 3 functions.....	447
26.1	Default conditions and structured sequence of tests.....	447
26.1.1	Default test conditions during layer 3 tests	447
26.1.2	Structured sequence of the tests	450
26.1.3	General rules for message parameters	450
26.1.4	General rules for layer 3 testing.....	451
26.1.5	Format of layer 3 test descriptions	451
26.2	Initial tests	453
26.2.1	Channel request	453
26.2.1.1	Channel request / initial time	453
26.2.1.2	Channel request / repetition time	454
26.2.1.3	Channel request / random reference	456
26.2.2	IMSI detach and IMSI attach.....	457
26.2.3	Sequenced MM / CM message transfer	461
26.2.4	Establishment cause	462
26.3	Test of MS functions in idle mode	471
26.3.1	Initial conditions	471
26.3.2	MS indication of available PLMNs	475
26.3.3	MS will send only if BSS is "on air"	476
26.3.4	Manual mode of PLMN selection	476
26.4	Lower layer failures in layer 3 testing	478
26.4.1	Introduction.....	478
26.4.2	Layer 1 reception failures	478
26.4.3	Data link layer failures	478
26.4.4	Lower layer failures, used for the tests in clause 25	478
26.5	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions	479
26.5.1	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown protocol discriminator	479
26.5.2	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / TI and skip indicator	480
26.5.2.1	TI and skip indicator / RR	480
26.5.2.1.1	TI and skip indicator / RR / Idle Mode	480
26.5.2.1.2	TI and skip indicator / RR / RR-Connection established	481
26.5.2.2	TI and skip indicator / MM	483
26.5.2.3	TI and skip indicator / CC	484
26.5.3	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / undefined or unexpected message type	486
26.5.3.1	Undefined or unexpected message type / undefined message type / CC	486
26.5.3.2	Undefined or unexpected message type / undefined message type / MM	487
26.5.3.3	Undefined or unexpected message type / undefined message type / RR	489
26.5.3.4	Undefined or unexpected message type / unexpected message type / CC	490
26.5.4	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unforeseen information elements in the non-imperative message part	491
26.5.4.1	Unforeseen information elements in the non-imperative message part / duplicated information elements	491
26.5.5	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / non-semantical mandatory IE errors	493
26.5.5.1	Non-semantical mandatory IE errors / RR	493
26.5.5.1.1	Non-semantical mandatory IE errors / RR / missing mandatory IE error	493
26.5.5.1.2	Non-semantical mandatory IE errors / RR / comprehension required	495
26.5.5.2	Non-semantical mandatory IE errors / MM	497
26.5.5.2.1	Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE	497
26.5.5.2.2	Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE	498

26.5.5.2.3	Non-semantical mandatory IE errors / MM / comprehension required	499
26.5.5.3	Non-semantical mandatory IE errors / CC	501
26.5.5.3.1	Non-semantical mandatory IE errors / CC / missing mandatory IE	501
26.5.5.3.2	Non-semantical mandatory IE errors / CC / comprehension required	503
26.5.6	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown IE, comprehension not required	504
26.5.6.1	Unknown information elements in the non-imperative message part / MM	504
26.5.6.1.1	Unknown IE, comprehension not required / MM / IE unknown in the protocol	504
26.5.6.1.2	Unknown IE, comprehension not required / MM / IE unknown in the message	506
26.5.6.2	Unknown information elements in the non-imperative message part / CC	507
26.5.6.2.1	Unknown information elements in the non-imperative message part / CC / Call establishment	507
26.5.6.2.2	Unknown information elements in the non-imperative message part / CC / disconnect	508
26.5.6.2.3	Unknown information elements in the non-imperative message part / CC / release	509
26.5.6.2.4	Unknown information elements in the non-imperative message part / CC / release complete	511
26.5.6.3	Unknown IE in the non-imperative message part, comprehension not required / RR	512
26.5.7	Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / spare bits	514
26.5.7.1	Spare bits / RR	514
26.5.7.1.1	Spare bits / RR / paging channel	514
26.5.7.1.2	Spare bits / RR / BCCH	515
26.5.7.1.3	Spare bits / RR / AGCH	516
26.5.7.1.4	Spare bits / RR / Connected Mode	518
26.5.7.2	Spare bits / MM	520
26.5.7.3	Spare bits / CC	522
26.5.8	Default contents of messages	524
26.6	Test of the elementary procedures for radio resource management	526
26.6.1	Immediate assignment	526
26.6.1.1	Immediate assignment / SDCCH or TCH assignment	526
26.6.1.2	Immediate assignment / extended assignment	527
26.6.1.3	Immediate assignment / assignment rejection	529
26.6.1.4	Immediate assignment / ignore assignment	531
26.6.1.5	Immediate assignment after SIST EN 300 607-1 V8.1.1:2005 reject	533
26.6.2	Test of paging https://standards.iteh.ai/catalog/standards/sist/ac13b445-944d-4388-9b94-0fbfc19c24183/sist-en-300-607-1-v8-1-1-2005	534
26.6.2.1	Normal paging	534
26.6.2.1.1	Paging / normal / type 1	534
26.6.2.1.2	Paging / normal / type 2	537
26.6.2.1.3	Paging / normal / type 3	539
26.6.2.2	Paging / extended	540
26.6.2.3	Paging / reorganization	543
26.6.2.3.1	Paging / reorganization / procedure 1	543
26.6.2.3.2	Paging / reorganization / procedure 2	546
26.6.2.4	Paging / same as before	547
26.6.2.5	Paging / multislot CCCH	548
26.6.3	Test of measurement report	549
26.6.3.1	Measurement / no neighbours	549
26.6.3.2	Measurement / all neighbours present	554
26.6.3.3	Measurement / barred cells and non-permitted NCCs	560
26.6.3.4	Measurement / DTX	566
26.6.3.5	Measurement / Frequency Formats	573
26.6.3.6	Measurement / multiband environment	579
26.6.3.7	Measurement / new cell reporting	588
26.6.4	Test of the channel assignment procedure	598
26.6.4.1	Dedicated assignment / successful case	598
26.6.4.2	Dedicated assignment / failure	615
26.6.4.2.1	Dedicated assignment / failure / failure during active state	615
26.6.4.2.2	Dedicated assignment / failure / general case	616
26.6.5	Test of handover	618
26.6.5.1	Handover / successful / active call / non-synchronized	619
26.6.5.2	Handover / successful / call under establishment / non-synchronized	644
26.6.5.3	Handover / successful / active call / finely synchronized	677
26.6.5.4	Handover / successful / call under establishment / finely synchronized	686
26.6.5.5	Pre-synchronized handovers	705

26.6.5.5.1	Handover / successful / active call / pre-synchronized / Timing Advance IE not included.....	705
26.6.5.2	Handover / successful / call being established / pre-synchronized / timing advance IE is included / reporting of observed time difference requested.....	707
26.6.5.6	Handover / successful / active call / pseudo synchronized.....	709
26.6.5.7	Handover / successful / active call / non-synchronized / reporting of observed time difference requested	711
26.6.5.8	Handover / layer 3 failure	713
26.6.5.9	Handover / layer 1 failure	714
26.6.6	Test of frequency redefinition.....	715
26.6.6.1	Frequency redefinition	715
26.6.7	Test of the channel mode modify procedure.....	725
26.6.7.1	Test of the channel mode modify procedure / full rate.....	725
26.6.7.2	Test of the channel mode modify procedure / half rate.....	727
26.6.8	Test of ciphering mode setting.....	730
26.6.8.1	Ciphering mode / start ciphering.....	730
26.6.8.2	Ciphering mode / no ciphering.....	731
26.6.8.3	Ciphering mode / old cipher key	732
26.6.8.4	Ciphering mode / change of mode, algorithm and key.....	734
26.6.8.5	Ciphering mode / IMEISV request.....	743
26.6.9	Test of additional assignment	745
26.6.10	Test of partial release.....	745
26.6.11	Test of classmark	745
26.6.11.1	Classmark change	745
26.6.11.2	Classmark interrogation	747
26.6.12	Test of channel release.....	749
26.6.12.1	Channel release / SDCCH	749
26.6.12.2	Channel release / SDCCH no L2 ACK	751
26.6.12.3	Channel release / TCH-F	752
26.6.12.4	Channel release / TCH-F - no L2 ACK	753
26.6.13	Test of starting time	755
26.6.13.1	Dedicated assignment with starting time / successful case / time not elapsed	757
26.6.13.2	Dedicated assignment with starting time / successful case / time elapsed	759
26.6.13.3	Dedicated assignment with starting time and frequency redefinition / failure case / time not elapsed..... 0fb19c24183/sist-en-300-607-1-v8.1.1-2005	760
26.6.13.4	Dedicated assignment with starting time and frequency redefinition / failure case / time elapsed	763
26.6.13.5	Handover with starting time / successful case / time not elapsed.....	765
26.6.13.6	Handover with starting time / successful case / time elapsed.....	767
26.6.13.7	Handover with starting time and frequency redefinition / failure case / time not elapsed	769
26.6.13.8	Handover with starting time and frequency redefinition / failure case / time elapsed	772
26.6.13.9	Immediate assignment with starting time / successful case / time not elapsed	775
26.6.13.10	Immediate assignment with starting time / successful case / time elapsed	776
26.6.14	Default contents of GSM 900 layer 3 messages for RR tests	778
26.6.15	Default contents of DCS 1 800 layer 3 messages for RR tests	788
26.6.16	Default contents of GSM 450 layer 3 messages for RR tests	798
26.6.17	Default contents of GSM 480 layer 3 messages for RR tests	808
26.7	Elementary procedures of mobility management	819
26.7.1	TMSI reallocation	819
26.7.2	Authentication.....	822
26.7.2.1	Authentication accepted	822
26.7.2.2	Authentication rejected	823
26.7.3	Identification.....	826
26.7.3.1	General Identification.....	826
26.7.3.2	Handling of IMSI shorter than the maximum length	828
26.7.4	Location updating	831
26.7.4.1	Location updating / accepted.....	831
26.7.4.2	Location updating / rejected.....	836
26.7.4.2.1	Location updating / rejected / IMSI invalid.....	836
26.7.4.2.2	Location updating / rejected / PLMN not allowed	839
26.7.4.2.3	Location updating / rejected / location area not allowed	843
26.7.4.2.4	Location updating / rejected / roaming not allowed in this location area	846
26.7.4.3	Location updating / abnormal cases	853
26.7.4.3.1	Location updating / abnormal cases / random access fails	853

26.7.4.3.2	Location updating / abnormal cases / attempt counter less or equal to 4, LAI different	855
26.7.4.3.3	Location updating / abnormal cases / attempt counter equal to 4.....	860
26.7.4.3.4	Location updating / abnormal cases / attempt counter less or equal to 4, stored LAI equal to broadcast LAI	867
26.7.4.4	Location updating / release / expiry of T3240	873
26.7.4.5	Location updating / periodic	874
26.7.4.5.1	Location updating / periodic spread	874
26.7.4.5.2	Location updating / periodic normal / test 1	876
26.7.4.5.3	Location updating / periodic normal / test 2	878
26.7.4.5.4	Location updating / periodic HPLMN search.....	881
26.7.4.6	Location updating / interworking of attach and periodic	885
26.7.5	MM connection.....	886
26.7.5.1	Introduction	886
26.7.5.2	MM connection / establishment with cipher	887
26.7.5.3	MM connection / establishment without cipher	888
26.7.5.4	MM connection / establishment rejected.....	889
26.7.5.5	MM connection / establishment rejected cause 4.....	890
26.7.5.6	MM connection / expiry T3230	892
26.7.5.7	MM connection / abortion by the network	893
26.7.5.7.1	MM connection / abortion by the network / cause #6	893
26.7.5.7.2	MM connection / abortion by the network / cause not equal to #6.....	896
26.7.5.8	MM connection / follow-on request pending	897
26.7.5.8.1	MM connection / follow-on request pending / test 1	897
26.7.5.8.2	MM connection / follow-on request pending / test 2.....	898
26.7.5.8.3	MM connection / follow-on request pending / test 3	900
26.7.6	Default contents of messages.....	901
26.8	Tests related to circuit switched call control	905
26.8.1	Circuit switched Call Control (CC) state machine verification	905
26.8.1.1	General on CC state machine verification.....	905
26.8.1.2	Establishment of an outgoing call	906
26.8.1.2.1	Outgoing call / U0 null state.....	908
26.8.1.2.2	Outgoing call / U0.1 MM connection pending.....	909
26.8.1.2.3	Outgoing call / U1 call initiated.....	913
26.8.1.2.4	Outgoing call / U3 MS originating call proceeding.....	922
26.8.1.2.5	Outgoing call / U4 call delivered.....	938
26.8.1.2.6	U10 call active	948
26.8.1.2.7	U11 disconnect request.....	956
26.8.1.2.8	U12 disconnect indication	962
26.8.1.2.9	Outgoing call / U19 release request.....	967
26.8.1.3	Establishment of an incoming call / Initial conditions	974
26.8.1.3.1	Incoming call / U0 null state.....	976
26.8.1.3.2	Incoming call / U6 call present.....	977
26.8.1.3.3	Incoming call / U9 mobile terminating call confirmed.....	979
26.8.1.3.4	Incoming call / U7 call received.....	988
26.8.1.3.5	Incoming call / U8 connect request	998
26.8.1.4	In call functions.....	1009
26.8.1.4.1	In-call functions / DTMF information transfer.....	1009
26.8.1.4.2	In-call functions / user notification.....	1011
26.8.1.4.3	In-call functions / channel changes.....	1012
26.8.1.4.4	In-call functions / MS terminated in-call modification.....	1016
26.8.1.4.5	In-call functions / MS originated in-call modification	1017
26.8.2	Call Re-establishment	1033
26.8.2.1	Call Re-establishment/call present, re-establishment allowed	1033
26.8.2.2	Call Re-establishment/call present, re-establishment not allowed	1035
26.8.2.3	Call Re-establishment/call under establishment, transmission stopped	1036
26.8.3	User to user signalling	1037
26.8.4	Default contents of message	1039
26.9	Structured procedures.....	1047
26.9.1	Structured procedures / general	1047
26.9.2	Structured procedures / MS originated call / early assignment.....	1048
26.9.3	Structured procedures / MS originated call / late assignment	1050
26.9.4	Structured procedures / MS terminated call / early assignment.....	1052

26.9.5	Structured procedures / MS terminated call / late assignment	1055
26.9.6	Structured procedures / emergency call	1058
26.9.6.1	Structured procedures / emergency call / idle updated.....	1058
26.9.6.1.1	Structured procedures / emergency call / idle updated / preferred channel rate	1058
26.9.6.1.2	Structured procedures / emergency call / idle updated, non-preferred channel rate	1061
26.9.6.2	Structured procedures / emergency call / idle, no IMSI.....	1061
26.9.6.2.1	Structured procedures / emergency call / idle, no IMSI / accept case	1061
26.9.6.2.2	Structured procedures / emergency call / idle, no IMSI / reject case.....	1063
26.9.7	Directed Retry / Mobile Originated Call.....	1065
26.9.8	Directed Retry / Mobile Terminated Call	1075
26.9.9	Default contents of messages.....	1087
26.10	E-GSM or R-GSM signalling	1094
26.10.1	E-GSM or R-GSM signalling / general considerations.....	1094
26.10.2	E-GSM or R-GSM signalling / RR	1096
26.10.2.1	E-GSM or R-GSM signalling / RR / Measurement.....	1096
26.10.2.2	E-GSM or R-GSM signalling / RR / Immediate assignment	1103
26.10.2.3	E-GSM or R-GSM signalling / RR / channel assignment procedure	1105
26.10.2.4	E-GSM or R-GSM signalling / RR / Handover	1109
26.10.2.4.1	E-GSM or R-GSM signalling / RR / Handover / Successful handover	1109
26.10.2.4.2	E-GSM or R-GSM signalling / RR / Handover / layer 1 failure.....	1115
26.10.2.5	E-GSM or R-GSM signalling / RR / Frequency Redefinition.....	1117
26.10.3	E-GSM or R-GSM signalling / Structured procedure.....	1120
26.10.3.1	E-GSM or R-GSM signalling / Structured procedure / Mobile originated call.....	1121
26.10.3.2	E-GSM or R-GSM signalling / Structured procedures / emergency call	1123
26.10.3.3	Default contents of messages	1126
26.10.4	E-GSM or R-GSM signalling / Default message contents.....	1127
26.11	Multiband signalling	1132
26.11.1	General considerations.....	1132
26.11.2	Multiband signalling / RR.....	1132
26.11.2.1	Multiband signalling / RR / Immediate assignment procedure	1132
26.11.2.2	Multiband signalling / RR / Handover	1139
26.11.2.2.1	Multiband signalling / RR / Handover / successful active call / non-synchronized	1139
26.11.2.2.2	Multiband signalling / RR / Handover / layer 1 failure	1154
26.11.2.2.3	Multiband signalling / RR / Handover / Multiband BCCH / successful / active call / non synchronized.....	1159
26.11.2.2.4	Multiband signalling / RR / Handover/ Multiband BCCH / Intracell Handover - Interband Assignment	1172
26.11.2.3	Multiband signalling / RR / Measurement reporting.....	1191
26.11.3	Multiband signalling / MM.....	1201
26.11.3.1	Multiband signalling / MM / Location updating	1201
26.11.3.1.1	Location updating / accepted.....	1201
26.11.3.1.2	Location updating / periodic.....	1204
26.11.4	Multiband signalling / CC.....	1207
26.11.5	Multiband signalling / Structured procedures	1207
26.11.5.1	Multiband signalling / Structured procedures / MS originated call / early assignment	1207
26.11.5.2	Structured procedures / MS terminated call / late assignment	1215
26.11.6	Multiband signalling / Default messages contents	1223
26.12	Enhanced Full Rate signalling	1244
26.12.1	EFR signalling/ test of the channel mode modify procedure	1244
26.12.2	EFR signalling/ tests of handover	1247
26.12.2.1	EFR signalling / Handover / active call / successful case	1248
26.12.3	EFR Signalling / Structured procedures / MS originated call / late assignment	1280
26.12.4	Structured procedures / MS terminated call / 1 early assignment.....	1283
26.12.5	Structured procedures / emergency call	1286
26.12.6	EFR Signalling / Directed Retry / Mobile Originated Call	1289
26.12.7	EFR Signalling / Directed Retry / Mobile Terminated Call.....	1296
26.12.8	Default contents of layer 3 messages for Enhanced Full rate speech tests	1304
26.13	Multislot signalling	1311
26.13.1	Multislot signalling / RR	1311
26.13.1.1	Multislot signalling / RR / Measurement	1311
26.13.1.1.1	Multislot signalling / RR / Measurement / symmetric	1311
26.13.1.1.2	Multislot signalling / RR / Measurement / asymmetric	1317