

ETSI TS 151 010-1 V13.2.0 (2016-12)



**Digital cellular telecommunications system (Phase 2+) (GSM);
Mobile Station (MS) conformance specification;
Part 1: Conformance specification
(3GPP TS 51.010-1 version 13.2.0 Release 13)**



Reference

RTS/TSGR-0551010-1vd20

Keywords

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° 7803/88

Important notice

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

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

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

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

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

Copyright Notification

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

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

© European Telecommunications Standards Institute 2016.
All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and
of the 3GPP Organizational Partners.
GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Intellectual Property Rights

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

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

Foreword

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

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

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

Modal verbs terminology

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

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

Contents

| | |
|--|----|
| Intellectual Property Rights | 2 |
| Foreword..... | 2 |
| Modal verbs terminology..... | 2 |
| Foreword..... | 68 |
| 1 Scope | 69 |
| 2 References | 69 |
| 3 Definitions, conventions and applicability | 78 |
| 3.1 Mobile station definition and configurations..... | 78 |
| 3.2 Applicability..... | 79 |
| 3.2.1 Applicability of this specification | 79 |
| 3.2.1.1 MS equipped with a connector..... | 79 |
| 3.2.1.2 GPRS..... | 79 |
| 3.2.2 Applicability of the individual tests | 79 |
| 3.2.3 Applicability to terminal equipment | 79 |
| 3.3 Definitions..... | 79 |
| 3.4 Conventions for mathematical notations | 80 |
| 3.4.1 Mathematical signs | 80 |
| 3.4.2 Powers to the base 10..... | 80 |
| 3.5 Conventions on electrical terms | 80 |
| 3.5.1 Radio Frequency (RF) input signal level | 80 |
| 3.5.2 Reference sensitivity level | 81 |
| 3.5.3 Power level of fading signal | 81 |
| 3.6 Terms on test conditions..... | 81 |
| 3.6.1 Radio test conditions..... | 81 |
| 4 Test Equipment | 83 |
| 4.1 Terms used to describe test equipment in the present document..... | 83 |
| 4.2 Functional requirements of test equipment | 83 |
| 5 Testing methodology in general (layers 1, 2, and 3) | 83 |
| 5.1 Testing of optional functions and procedures..... | 83 |
| 5.2 Test interfaces and facilities | 83 |
| 5.3 Different protocol layers | 84 |
| 5.4 Information to be provided by the apparatus supplier | 84 |
| 5.5 Definitions of transmit and receive times | 84 |
| 6 Reference test methods..... | 84 |
| 6.1 General | 84 |
| 6.2 Choice of frequencies in the frequency hopping mode | 85 |
| 6.3 "Ideal" radio conditions..... | 86 |
| 6.4 Standard test signals | 86 |
| 6.5 Power (control) levels | 86 |
| 7 Implicit testing..... | 86 |
| 8 Measurement uncertainty | 86 |
| 9 Format of tests | 86 |
| 10 Generic call set up procedures..... | 89 |
| 10.1 Generic call set-up procedure for mobile terminating speech calls | 89 |
| 10.1.1 Initial conditions | 89 |
| 10.1.2 Definition of system information messages | 89 |
| 10.1.3 Procedure | 91 |
| 10.1.4 Specific message contents | 92 |
| 10.1a Generic call set-up procedure for mobile terminating signalling only connection..... | 93 |
| 10.1a.1 Initial conditions | 93 |

| | | |
|----------|---|-----|
| 10.1a.2 | Definition of system information messages | 94 |
| 10.1a.3 | Procedure | 94 |
| 10.1a.4 | Specific message contents | 94 |
| 10.2 | Generic call set-up procedure for mobile originating speech calls | 95 |
| 10.2.1 | Initial conditions | 95 |
| 10.2.2 | Definition of system information messages | 95 |
| 10.2.3 | Procedure | 95 |
| 10.2.4 | Specific message contents | 96 |
| 10.2a | Generic call set-up procedure for mobile originating signalling only connection | 97 |
| 10.2a.1 | Initial conditions | 97 |
| 10.2a.2 | Definition of system information messages | 97 |
| 10.2a.3 | Procedure | 97 |
| 10.2a.4 | Specific message contents | 98 |
| 10.3 | Generic call set-up procedure for mobile terminating data calls | 98 |
| 10.3.1 | Initial conditions | 98 |
| 10.3.2 | Definition of system information messages | 99 |
| 10.3.3 | Procedure | 99 |
| 10.3.4 | Specific message contents | 99 |
| 10.4 | Generic call set-up procedure for mobile originating data calls | 101 |
| 10.4.1 | Initial conditions | 101 |
| 10.4.2 | Definition of system information messages | 101 |
| 10.4.3 | Procedure | 101 |
| 10.4.4 | Specific message contents | 102 |
| 10.5 | Generic call set-up procedure for mobile terminating multislot configuration, minimum number of timeslots allocated | 104 |
| 10.5.1 | Initial conditions | 104 |
| 10.5.2 | Definition of system information messages | 104 |
| 10.5.3 | Procedure | 104 |
| 10.5.4 | Specific message contents | 105 |
| 10.6 | Generic call set-up procedure for mobile originating multislot configuration, minimum number of timeslots allocated | 107 |
| 10.6.1 | Initial conditions | 107 |
| 10.6.2 | Definition of system information messages | 107 |
| 10.6.3 | Procedure | 108 |
| 10.6.4 | Specific message contents | 108 |
| 10.7 | Generic procedure for GPRS downlink data transfer | 110 |
| 10.7.1 | Initial conditions | 110 |
| 10.7.2 | Definition of system information messages | 110 |
| 10.7.3 | Procedure | 110 |
| 10.7.4 | Specific message contents | 111 |
| 10.8 | Generic procedure for GPRS uplink data transfer | 111 |
| 10.8.1 | Initial conditions | 111 |
| 10.8.2 | Definition of system information messages | 111 |
| 10.8.3 | Procedure | 111 |
| 10.8.4 | Specific message contents | 112 |
| 10.9 | Void..... | 114 |
| 10.10 | Void..... | 114 |
| 11 | General tests | 114 |
| 11.1 | Verification of support and non-support of services (multiple numbering scheme or ISDN) | 114 |
| 11.1.1 | Mobile Terminated (MT) calls..... | 114 |
| 11.1.2 | Mobile Originated (MO) calls | 115 |
| 11.2 | Verification of support of the single numbering scheme | 116 |
| 11.3 | Verification of non-support of services (Advice of Charge Charging (AoCC))..... | 117 |
| 11.4 | Verification of non-support of services (call hold)..... | 118 |
| 11.5 | Verification of non-support of services (multiparty) | 119 |
| 11.6 | Verification of non-support of feature (Fixed Dialling Number (FDN)) | 120 |
| 11.7 | IMEI Security | 121 |
| 11.7.4 | Declaration..... | 121 |
| 11.8 | Coding of the Bearer Capability information element..... | 121 |
| 11.8.1 | Network to MS Direction | 122 |
| 11.8.1.1 | BS 21 to 26 - Asynchronous Service | 122 |

| | | |
|------------|--|-----|
| 11.8.1.1.1 | BS 21 | 122 |
| 11.8.1.1.2 | BS 22 | 125 |
| 11.8.1.1.3 | BS 24 | 126 |
| 11.8.1.1.4 | BS 25 | 126 |
| 11.8.1.1.5 | BS 26 | 126 |
| 11.8.1.1.6 | BS 23 | 126 |
| 11.8.1.2 | BS 31 to 34 - Synchronous Service..... | 127 |
| 11.8.1.2.1 | BS 32 | 127 |
| 11.8.1.2.2 | BS 31 | 131 |
| 11.8.1.2.3 | BS 33 | 131 |
| 11.8.1.2.4 | BS 34 | 132 |
| 11.8.1.3 | BS 61 - Alternate Speech / Data..... | 132 |
| 11.8.1.3.1 | Speech/Asynchronous Data, Transparent | 132 |
| 11.8.1.3.2 | Speech/Asynchronous Data, Non Transparent | 134 |
| 11.8.1.3.3 | Speech/Synchronous Data | 135 |
| 11.8.1.4 | BS 81 - Speech followed by Data | 136 |
| 11.8.1.4.1 | Speech followed by Asynchronous Data | 136 |
| 11.8.1.4.2 | Speech followed by Synchronous Data | 136 |
| 11.8.1.5 | TS 61 - Alternate Speech / Facsimile group 3..... | 136 |
| 11.8.1.5.1 | TS 61 - Alternate Speech / Facsimile group 3, Transparent | 137 |
| 11.8.1.5.2 | TS 61 - Alternate Speech / Facsimile group 3, Non-Transparent | 138 |
| 11.8.1.6 | TS 62 - Automatic Facsimile group 3 | 139 |
| 11.8.2 | MS to SS direction..... | 139 |
| 11.8.2.1 | BS 21 to 26 - Asynchronous Service | 139 |
| 11.8.2.1.1 | BS 21 | 140 |
| 11.8.2.1.2 | BS 22 | 143 |
| 11.8.2.1.3 | BS 24 | 144 |
| 11.8.2.1.4 | BS 25 | 144 |
| 11.8.2.1.5 | BS 26 | 144 |
| 11.8.2.1.6 | BS 23 | 144 |
| 11.8.2.2 | BS 31 to 34 - Synchronous Service..... | 145 |
| 11.8.2.2.1 | BS 32 | 145 |
| 11.8.2.2.2 | BS 31 | 149 |
| 11.8.2.2.3 | BS 33 | 149 |
| 11.8.2.2.4 | BS 34 | 150 |
| 11.8.2.3 | BS 41 to 46 - PAD Access Asynchronous | 150 |
| 11.8.2.3.1 | ²⁾ BS 41 | 150 |
| 11.8.2.3.2 | BS 42 | 151 |
| 11.8.2.3.3 | BS 44 | 152 |
| 11.8.2.3.4 | BS 45 | 152 |
| 11.8.2.3.5 | BS 46 | 152 |
| 11.8.2.3.6 | BS 43 | 152 |
| 11.8.2.4 | BS 51 to 53 - Packet Service Synchronous | 153 |
| 11.8.2.4.1 | 2) BS 51 | 153 |
| 11.8.2.4.2 | BS 52 | 153 |
| 11.8.2.4.3 | BS 53 | 153 |
| 11.8.2.5 | BS 61 - Alternate Speech / Data..... | 153 |
| 11.8.2.5.1 | Speech/Asynchronous Data, Transparent | 154 |
| 11.8.2.5.2 | Speech/Asynchronous Data, Non Transparent | 156 |
| 11.8.2.5.3 | Speech/Synchronous Data | 157 |
| 11.8.2.6 | BS 81 - Speech followed by Data | 159 |
| 11.8.2.6.1 | Speech followed by Asynchronous Data | 159 |
| 11.8.2.6.2 | Speech followed by Synchronous Data | 159 |
| 11.8.2.7 | TS 61 - Alternate Speech / Facsimile group 3..... | 159 |
| 11.8.2.7.1 | TS 61 - Alternate Speech / Facsimile group 3, Transparent | 160 |
| 11.8.2.7.2 | TS 61 - Alternate Speech / Facsimile group 3, Non Transparent | 161 |
| 11.8.2.8 | TS 62 - Automatic Facsimile group 3 | 161 |
| 11.8.2.9 | TS 11 and TS 12 - Speech..... | 162 |
| 11.8.2.9.1 | Support of only full/half rate speech version 1 | 162 |
| 11.8.2.9.2 | Support of speech full rate version 2 (Enhanced Full Rate) | 162 |
| 11.8.2.9.3 | Support of full rate speech version 2 (EFR) and full and/or half rate speech version 3 (AMR)...163 | |

| | | |
|--------|--|-----|
| 12 | Transceiver | 167 |
| 12.1 | Conducted spurious emissions | 167 |
| 12.1.1 | MS allocated a channel | 167 |
| 12.1.2 | MS in idle mode | 170 |
| 12.2 | Radiated spurious emissions | 172 |
| 12.2.1 | MS allocated a channel | 172 |
| 12.2.2 | MS in idle mode | 174 |
| 12.3 | Conducted spurious emissions for MS supporting the R-GSM or ER-GSM frequency band | 176 |
| 12.3.1 | MS allocated a channel | 176 |
| 12.3.2 | MS in idle mode | 178 |
| 12.4 | Radiated spurious emissions for MS supporting the R-GSM or ER-GSM frequency band | 179 |
| 12.4.1 | MS allocated a channel | 180 |
| 12.4.2 | MS in idle mode | 181 |
| 13 | Transmitter | 183 |
| 13.1 | Frequency error and phase error | 183 |
| 13.1.1 | Definition | 183 |
| 13.1.2 | Conformance requirement | 183 |
| 13.1.3 | Test purpose | 184 |
| 13.1.4 | Method of test | 184 |
| 13.1.5 | Test requirements | 186 |
| 13.1a | Frequency error in VAMOS configuration | 186 |
| 13.1b | Frequency error and phase error in TIGHTER configuration \ with legacy TSC in VAMOS mode | 188 |
| 13.2b | Frequency error under multipath and interference conditions in TIGHTER configuration \ with legacy TSC in VAMOS mode | 189 |
| 13.2 | Frequency error under multipath and interference conditions | 191 |
| 13.2.1 | Definition | 191 |
| 13.2.2 | Conformance requirement | 191 |
| 13.2.3 | Test purpose | 191 |
| 13.2.4 | Method of test | 192 |
| 13.2.5 | Test requirements | 193 |
| 13.2a | Frequency error under multipath and interference conditions in VAMOS configuration | 193 |
| 13.3 | Transmitter output power and burst timing | 195 |
| 13.3.1 | Definition | 195 |
| 13.3.2 | Conformance requirement | 196 |
| 13.3.3 | Test purpose | 197 |
| 13.3.4 | Methods of test | 198 |
| 13.3.5 | Test requirements | 201 |
| 13.4 | Output RF spectrum | 205 |
| 13.4.1 | Definition | 205 |
| 13.4.2 | Conformance requirement | 205 |
| 13.4.3 | Test purpose | 206 |
| 13.4.4 | Method of test | 206 |
| 13.4.5 | Test requirements | 209 |
| 13.5 | Void | 212 |
| 13.6 | Frequency error and phase error in HSCSD multislot configurations | 212 |
| 13.6.1 | Definition | 212 |
| 13.6.2 | Conformance requirement | 212 |
| 13.6.3 | Test purpose | 213 |
| 13.6.4 | Method of test | 213 |
| 13.6.5 | Test requirements | 215 |
| 13.7 | Transmitter output power and burst timing in HSCSD configurations | 216 |
| 13.7.1 | Definition | 216 |
| 13.7.2 | Conformance requirement | 216 |
| 13.7.3 | Test purpose | 217 |
| 13.7.4 | Methods of test | 218 |
| 13.7.5 | Test requirements | 221 |
| 13.8 | Output RF spectrum in HSCSD multislot configuration | 228 |
| 13.8.1 | Definition | 228 |
| 13.8.2 | Conformance requirement | 228 |
| 13.8.3 | Test purpose | 229 |
| 13.8.4 | Method of test | 229 |

| | | |
|--------------------|---|-----|
| 13.8.5 | Test requirements..... | 231 |
| 13.9 | Output RF spectrum for MS supporting the R-GSM or ER-GSM frequency band..... | 234 |
| 13.9.1 | Definition..... | 234 |
| 13.9.2 | Conformance requirement | 235 |
| 13.9.3 | Test purpose..... | 235 |
| 13.9.4 | Method of test | 235 |
| 13.9.5 | Test requirements..... | 237 |
| 13.10 | Void..... | 239 |
| 13.11 | Void..... | 239 |
| 13.12 | Void..... | 239 |
| 13.13 | Void..... | 239 |
| 13.14 | Void..... | 239 |
| 13.15 | Void..... | 239 |
| 13.16 | GPRS transmitter tests..... | 239 |
| 13.16.1 | Frequency error and phase error in GPRS multislot configuration..... | 239 |
| 13.16.2 | Transmitter output power in GPRS multislot configuration | 243 |
| 13.16.3 | Output RF spectrum in GPRS multislot configuration | 255 |
| 13.17 | EGPRS transmitter tests | 262 |
| 13.17.1 | Frequency error and Modulation accuracy in EGPRS Configuration..... | 262 |
| 13.17.1a | Frequency error and Modulation accuracy in EGPRS2A Configuration..... | 266 |
| 13.17.1b | Frequency error and Modulation accuracy in EC-GSM-IoT Configuration..... | 270 |
| 13.17.2 | Frequency error under multipath and interference conditions | 273 |
| 13.17.2a | Frequency error under multipath and interference conditions for EGPRS2A configuration | 276 |
| 13.17.3 | EGPRS Transmitter output power | 278 |
| 13.17.3a | Transmitter output power in EGPRS2A configuration | 287 |
| 13.17.3b | Transmitter output power in for EC-GSM-IoT configuration | 297 |
| 13.17.4 | Output RF spectrum in EGPRS configuration | 305 |
| 13.17.4a | Output RF spectrum in EGPRS2A configuration | 312 |
| 13.17.5 | Void | 323 |
| 14 | Receiver..... | 324 |
| 14.1 | Bad frame indication | 330 |
| 14.1.1 | Bad frame indication - TCH/FS | 330 |
| 14.1.2 | Bad frame indication - TCH/HS | 332 |
| 14.1.3 | Void | 334 |
| 14.1.4 | Void | 334 |
| 14.1.5 | Bad frame indication - TCH/AFS (Speech frame)..... | 334 |
| 14.1.6 | Bad frame indication - TCH/AHS | 336 |
| 14.1.6.1 | Bad frame indication - TCH/AHS - Random RF input | 336 |
| 14.1.7 | Void | 337 |
| 14.2 | Reference sensitivity | 337 |
| 14.2.1 | Reference sensitivity - TCH/FS | 337 |
| 14.2.1a | Reference sensitivity - TCH/FS in TIGHTER configuration..... | 339 |
| 14.2.2 | Reference sensitivity - TCH/HS (Speech frames) | 341 |
| 14.2.2a | Reference sensitivity - TCH/HS in TIGHTER configuration..... | 343 |
| 14.2.3 | Reference sensitivity - FACCH/F..... | 345 |
| 14.2.3a | Reference sensitivity - FACCH/F in TIGHTER configuration | 346 |
| 14.2.4 | Reference sensitivity - FACCH/H | 347 |
| 14.2.4a | Reference sensitivity - FACCH/H in TIGHTER configuration..... | 348 |
| 14.2.5 | Reference sensitivity - full rate data channels..... | 349 |
| 14.2.6 | Reference sensitivity - half rate data channels | 350 |
| 14.2.7 | Reference sensitivity - TCH/EFS..... | 351 |
| 14.2.7a | Reference sensitivity - TCH/EFS in TIGHTER configuration | 353 |
| 14.2.8 | Reference sensitivity - full rate data channels in multislot configuration | 355 |
| 14.2.9 | Reference sensitivity - TCH/FS for MS supporting the R-GSM or ER-GSM band | 356 |
| 14.2.10 | Reference sensitivity - TCH/AFS | 358 |
| 14.2.10a | Reference sensitivity - TCH/AFS in TIGHTER configuration..... | 361 |
| 14.2.11 to 14.2.17 | Void | 364 |
| 14.2.18 | Reference sensitivity - TCH/AHS | 364 |
| 14.2.18a | Reference sensitivity - TCH/AHS in TIGHTER configuration | 371 |
| 14.2.19 | Reference sensitivity - TCH/AFS-INB | 376 |
| 14.2.20 | Reference sensitivity - TCH/AHS-INB | 378 |

| | | |
|--------------------|--|-----|
| 14.2.21 | Reference sensitivity – O-TCH/AHS | 379 |
| 14.2.22 | Reference sensitivity – O-TCH/WFS | 382 |
| 14.2.23 | Reference sensitivity – O-TCH/WHS | 384 |
| 14.2.24 | Reference sensitivity - TCH/WFS | 387 |
| 14.2.24a | Reference sensitivity - TCH/WFS in TIGHTER configuration | 391 |
| 14.2.25 | Reference sensitivity – Repeated FACCH/F | 396 |
| 14.2.26 | Reference sensitivity – Repeated SACCH | 399 |
| 14.2.27 | Reference sensitivity - TCH/FS – DARP Phase II | 401 |
| 14.2.28 | Reference sensitivity TCH/HS in VAMOS configuration | 404 |
| 14.2.29 | Reference sensitivity TCH/EFS in VAMOS configuration | 409 |
| 14.2.30 | Reference sensitivity TCH/AFS in VAMOS configuration | 415 |
| 14.2.31 | Reference sensitivity TCH/AHS in VAMOS configuration | 421 |
| 14.2.32 | Reference sensitivity TCH/WFS in VAMOS configuration | 430 |
| 14.2.33 | Reference sensitivity FACCH/F performance in VAMOS configuration | 439 |
| 14.2.34 | Reference sensitivity – FACCH/H Performance in VAMOS configuration | 442 |
| 14.2.35 | Reference sensitivity SACCH performance in VAMOS configuration | 445 |
| 14.2.36 | Reference sensitivity – Repeated SACCH in VAMOS configuration | 449 |
| 14.2.37 | Reference sensitivity – Repeated FACCH/F in VAMOS configuration | 452 |
| 14.3 | Usable receiver input level range | 455 |
| 14.4 | Co-channel rejection | 456 |
| 14.4.1 | Co-channel rejection - TCH/FS | 456 |
| 14.4.1a | Co-channel rejection - TCH/FS in TIGHTER configuration | 458 |
| 14.4.2 | Co-channel rejection - TCH/HS | 459 |
| 14.4.2a | Co-channel rejection - TCH/HS in TIGHTER configuration | 461 |
| 14.4.3 | Void | 463 |
| 14.4.4 | Co-channel rejection - FACCH/F | 463 |
| 14.4.4a | Co-channel rejection - FACCH/F in TIGHTER configuration | 464 |
| 14.4.5 | Co-channel rejection - FACCH/H | 465 |
| 14.4.5a | Co-channel rejection - FACCH/H in TIGHTER configuration | 466 |
| 14.4.6 | Co-channel rejection - TCH/EFS | 467 |
| 14.4.6a | Co-channel rejection - TCH/EFS in TIGHTER configuration | 468 |
| 14.4.7 | Receiver performance in the case of frequency hopping and co-channel interference on one carrier | 470 |
| 14.4.8 | Co-channel rejection - TCH/AFS | 471 |
| 14.4.8a | Co-channel rejection - TCH/AFS in TIGHTER configuration | 476 |
| 14.4.9 to 14.4.15 | Void | 478 |
| 14.4.16 | Co-channel rejection - TCH/AHS | 478 |
| 14.4.16a | Co-channel rejection - TCH/AHS in TIGHTER configuration | 484 |
| 14.4.17 | Co-channel rejection - TCH/AFS-INB | 488 |
| 14.4.18 | Co-channel rejection - TCH/AHS-INB | 490 |
| 14.4.19 | Co-channel rejection - O-TCH/AHS | 492 |
| 14.4.20 | Co-channel rejection - O-TCH/AHS-INB | 495 |
| 14.4.21 | Co-channel rejection - O-FACCH/H | 497 |
| 14.4.22 to 14.4.23 | Void | 499 |
| 14.4.24 | Co-channel interference - O-TCH/WFS | 499 |
| 14.4.25 | Co-channel interference – O-TCH/WHS | 502 |
| 14.4.26 | Co-channel rejection - O-TCH/WFS-INB | 505 |
| 14.4.27 | Void | 507 |
| 14.4.28 | Co-channel rejection - TCH/WFS | 507 |
| 14.4.28a | Co-channel rejection - TCH/WFS in TIGHTER configuration | 512 |
| 14.4.29 | Co-channel interference - TCH/WFS-INB | 515 |
| 14.4.30 | Co-channel interference - O-FACCH/F | 517 |
| 14.4.31 | Co-channel rejection – Repeated FACCH/F | 519 |
| 14.4.32 | Co-channel rejection – Repeated SACCH | 522 |
| 14.5 | Adjacent channel rejection | 525 |
| 14.5.1 | Adjacent channel rejection - speech channels | 525 |
| 14.5.1.1 | TCH/FS | 525 |
| 14.5.1.1a | Adjacent Channel Interference - TCH/FS in TIGHTER configuration | 528 |
| 14.5.1.2 | TCH/AFS | 530 |
| 14.5.1.2a | Adjacent channel rejection - TCH/AFS in TIGHTER configuration | 535 |
| 14.5.1.3 | TCH/AHS | 539 |
| 14.5.1.3a | Adjacent channel rejection - TCH/AHS in TIGHTER configuration | 543 |
| 14.5.1.4 | O-TCH/AHS | 547 |

| | | |
|------------|--|-----|
| 14.5.1.5 | O-TCH/WFS | 550 |
| 14.5.1.6 | Adjacent channel interference O-TCH/WHS | 554 |
| 14.5.1.7 | TCH/WFS Adjacent Channel Interference | 557 |
| 14.5.1.7a | Adjacent Channel Interference - TCH/WFS in TIGHTER configuration | 561 |
| 14.5.2 | Adjacent channel rejection - control channels | 564 |
| 14.6 | Intermodulation rejection | 567 |
| 14.6.1 | Intermodulation rejection - speech channels | 567 |
| 14.6.2 | Intermodulation rejection - control channels | 568 |
| 14.7 | Blocking and spurious response | 570 |
| 14.7.1 | Blocking and spurious response - speech channels | 570 |
| 14.7.2 | Blocking and spurious response - control channels | 576 |
| 14.7.3 | Blocking and spurious response - speech channels for MS supporting the R-GSM or ER-GSM 900 band | 581 |
| 14.7.4 | Blocking and spurious response - control channels for MS supporting the R-GSM or ER-GSM 900 band | 584 |
| 14.8 | AM suppression | 587 |
| 14.8.1 | AM suppression - speech channels | 587 |
| 14.8.2 | AM suppression - control channels | 588 |
| 14.8.3 | AM suppression - packet channels | 590 |
| 14.9 | Paging performance at high input levels | 592 |
| 14.10 | Performance of the Codec Mode Request Generation for Adaptive Multi-Rate Codecs | 593 |
| 14.10.1 | Performance of the Codec Mode Request Generation – TCH/AFS | 593 |
| 14.10.2 | Performance of the Codec Mode Request Generation – TCH/AHS | 599 |
| 14.10.3 | Performance of the Codec Mode Request Generation – TCH/AFS - improved RX | 605 |
| 14.10.4 | Performance of the Codec Mode Request Generation – TCH/AHS – improved RX | 613 |
| 14.10.5 | Performance of the Codec Mode Request Generation – O-TCH/AHS | 621 |
| 14.10.6 | Performance of the Codec Mode Request Generation – O-TCH/WFS | 627 |
| 14.10.7 | Performance of the Codec Mode Request Generation – O-TCH/WHS | 633 |
| 14.10.8 | Performance of the Codec Mode Request Generation – TCH/WFS | 638 |
| 14.10.9 | Performance of the Codec Mode Request Generation – TCH/WFS - improved RX | 644 |
| 14.11 | DARP Phase 1 Speech bearer tests | 652 |
| 14.11.1 | TCH/FS | 652 |
| 14.11.1.1 | DTS-1 | 652 |
| 14.11.1.1a | DARP Phase 1 Speech bearer test TCH/FS DTS-1 in TIGHTER configuration | 655 |
| 14.11.2 | TCH/AFS | 657 |
| 14.11.2.1 | DTS-1 | 657 |
| 14.11.2.1a | DARP Phase 1 Speech bearer test TCH/AFS DTS-1 in TIGHTER configuration | 661 |
| 14.11.2.2 | DTS-4 | 664 |
| 14.11.2.2a | DARP Phase 1 Speech bearer test TCH-AFS DTS-4 in TIGHTER configuration | 667 |
| 14.11.2.3 | DTS-2/3/5 | 669 |
| 14.11.2.3a | DARP Phase 1 Speech bearer test TCH/AFS DTS-2/3/5 in TIGHTER configuration | 673 |
| 14.11.3 | TCH/AHS | 676 |
| 14.11.3.1 | DTS-1 | 676 |
| 14.11.3.1a | DARP Phase 1 Speech bearer test TCH/AHS DTS-1 in TIGHTER configuration | 680 |
| 14.11.3.2 | Void | 683 |
| 14.11.3.3 | DTS-2/3 | 683 |
| 14.11.3.3a | DARP Phase 1 Speech bearer test - TCH-AHS / DTS-2/3 in TIGHTER configuration | 687 |
| 14.12 | DARP Phase 1 Signalling bearer tests | 690 |
| 14.12.1 | FACCH/F | 690 |
| 14.12.1.1 | FACCH – DTS-1 | 690 |
| 14.12.1.2 | FACCH – DTS-2-3 | 694 |
| 14.12.1.2a | DARP Phase 1 Signalling bearer test - FACCH – DTS-2-3 in TIGHTER configuration | 697 |
| 14.13 | Void | 700 |
| 14.14 | Void | 700 |
| 14.15 | Void | 700 |
| 14.16 | GPRS receiver tests | 700 |
| 14.16.1 | Minimum Input level for Reference Performance | 702 |
| 14.16.1a | Minimum Input level for Reference Performance in TIGHTER configuration | 705 |
| 14.16.2 | Co-channel rejection | 710 |
| 14.16.2.1 | Co-channel rejection for packet channels | 710 |
| 14.16.2.1a | Co-channel rejection for packet channels – TIGHTER configuration | 712 |
| 14.16.3 | Acknowledged mode / Downlink TBF / I_LEVEL measurement report | 715 |

| | | |
|--------------|---|-----|
| 14.16.3.1 | Conformance requirements | 715 |
| 14.16.3.2 | References..... | 715 |
| 14.16.3.3 | Test purpose | 715 |
| 14.16.3.4 | Method of test | 716 |
| 14.16.3.5 | Initial Conditions..... | 716 |
| 14.16.3.6 | Void..... | 716 |
| 14.16.3.7 | Test Procedure..... | 716 |
| 14.16.4 | DARP Phase 1 GPRS tests | 717 |
| 14.16.4.1 | Synchronous single co-channel interferer (DTS-1)..... | 717 |
| 14.16.4.1a | Synchronous single co-channel interferer (DTS-1) in TIGHTER configuration | 719 |
| 14.16.4.2 | Synchronous multiple interferers (DTS-2 / DTS-3)..... | 721 |
| 14.16.4.2a | Synchronous multiple interferers (DTS-2 / DTS-3) in TIGHTER configuration | 724 |
| 14.16.5 | DARP Phase II GPRS tests..... | 726 |
| 14.16.5.1 | Synchronous single co-channel interferer (DTS-1)..... | 726 |
| 14.16.5.2 | Multiple interferers (DTS-2 / DTS-5) | 728 |
| 14.17 | ..... | 731 |
| 14.18 | EGPRS receiver tests..... | 731 |
| 14.18.1 | Minimum Input level for Reference Performance | 734 |
| 14.18.1a | Minimum Input level for Reference Performance in EGPRS2A Configuration..... | 739 |
| 14.18.1b | Minimum Input level for Reference Performance in TIGHTER configuration | 745 |
| 14.18.1c | Minimum Input level for Reference Performance – in TIGHTER configuration..... | 751 |
| 14.18.1d | Minimum Input level for Reference Performance in for EC-GSM-IoT Configuration | 757 |
| 14.18.2 | Co-channel rejection | 761 |
| 14.18.2a | Co-channel rejection in EGPRS2A..... | 764 |
| 14.18.2b | Co-channel rejection – in TIGHTER configuration..... | 770 |
| 14.18.2c | Co-channel rejection in EGPRS2A with TIGHTER configuration | 773 |
| 14.18.2d | Co-channel rejection in EC-GSM-IoT Configuration..... | 779 |
| 14.18.2d.1 | Definition | 779 |
| 14.18.2d.2 | Conformance requirement..... | 779 |
| 14.18.2d.3 | Test purpose | 781 |
| 14.18.2d.4 | Method of test | 781 |
| 14.18.2d.5 | Test requirements | 782 |
| 14.18.3 | Adjacent channel rejection..... | 783 |
| 14.18.3a | Adjacent channel rejection in EGPRS2A configuration | 787 |
| 14.18.3b | Adjacent channel rejection for packet channels in TIGHTER configuration | 794 |
| 14.18.3c | Adjacent channel rejection in EGPRS2A configuration with TIGHTER configuration..... | 800 |
| 14.18.3d | Adjacent channel rejection in DLMC configuration..... | 808 |
| 14.18.3e | Adjacent channel rejection in EC-GSM-IoT Configuration | 812 |
| 14.18.3e.1 | Definition | 812 |
| 14.18.3e.2 | Conformance requirement..... | 812 |
| 14.18.3e.3 | Test purpose | 814 |
| 14.18.3e.4 | Method of test | 814 |
| 14.18.3e.5 | Test requirements | 815 |
| 14.18.3e.5.1 | Fixed limit test with minimum number of samples | 815 |
| 14.18.3e.5.2 | Statistical test with early pass / fail decision | 816 |
| 14.18.4 | Intermodulation rejection..... | 816 |
| 14.18.4a | Intermodulation rejection in EGPRS2A configuration | 819 |
| 14.18.5 | Blocking and spurious response..... | 823 |
| 14.18.5a | Blocking and spurious response in EGPRS2A configuration | 832 |
| 14.18.5b | Blocking and spurious response in DLMC configuration..... | 843 |
| 14.18.6 | EGPRS Usable receiver input level range | 849 |
| 14.18.6a | EGPRS Usable receiver input level range in EGPRS2A Configuration..... | 851 |
| 14.18.7 | Incremental Redundancy Performance | 853 |
| 14.18.7a | Incremental Redundancy Performance in EGPRS2A configuration | 854 |
| 14.18.7b | Incremental Redundancy Performance in EC-GSM-IoT Configuration..... | 856 |
| 14.18.7b.1 | Definition | 856 |
| 14.18.7b.2 | Conformance requirement..... | 856 |
| 14.18.7b.3 | Test purpose | 857 |
| 14.18.7b.4 | Method of test | 857 |
| 14.18.8 | DARP Phase 1 EGPRS tests | 858 |
| 14.18.8.1 | Synchronous single co-channel interferer (DTS-1)..... | 858 |
| 14.18.8.1a | Synchronous single co-channel interferer (DTS-1) in TIGHTER configuration | 860 |

| | | |
|------------|---|------|
| 14.18.8.2 | Synchronous single co-channel interferer (DTS-2 / DTS-3)..... | 862 |
| 14.18.8.2a | Synchronous single co-channel interferer (DTS-2 / DTS-3) in TIGHTER configuration | 864 |
| 14.18.9 | DARP Phase II EGPRS tests | 867 |
| 14.18.9.1 | Synchronous single co-channel interferer (DTS-1)..... | 867 |
| 14.18.9.2 | Synchronous single co-channel interferer (DTS-1b)..... | 869 |
| 14.18.9.3 | Multiple interferers (DTS-2 / DTS-5) | 871 |
| 14.18.10 | Latency Reductions..... | 874 |
| 14.18.10.1 | Minimum Input level for Reference Performance for PAN | 874 |
| 14.19 | DARP Phase II Speech bearer tests..... | 877 |
| 14.19.1 | TCH/FS..... | 877 |
| 14.19.2 | TCH/AFS..... | 880 |
| 14.19.3 | TCH/AHS | 887 |
| 14.20 | VAMOS speech bearer tests..... | 893 |
| 14.20.1 | TCH HS – VDTS-1,VDTS-2/3 and VDTS-4 | 893 |
| 14.20.2 | TCH EFS – VDTS-1, VDTS-2/3 and VDTS-4..... | 906 |
| 14.20.3 | TCH AFS – VDTS-1, VDTS-2/3 and VDTS-4 | 919 |
| 14.20.4 | TCH AHS – VDTS-1,VDTS-2/3 and VDTS-4 | 937 |
| 14.20.5 | TCH WFS – VDTS-1, VDTS-2/3 and VDTS-4 | 953 |
| 14.20.6 | FACCH/F – VDTS-1 | 968 |
| 14.20.7 | FACCH/H – VDTS-1 | 971 |
| 14.20.8 | SACCH – VDTS-1 | 974 |
| 14.20.9 | Repeated FACCH/F – VDTS-1 | 978 |
| 14.20.10 | Repeated SACCH – VDTS-1..... | 981 |
| 14.20.11 | Downlink DTX TCH / AHS in VAMOS configuration | 984 |
| 15 | Timing advance and absolute delay | 987 |
| 15.1 | GSM Timing advance and absolute delay | 987 |
| 15.2 | Void..... | 988 |
| 15.3 | Void..... | 988 |
| 15.4 | Void..... | 988 |
| 15.5 | Void..... | 988 |
| 15.6 | GRPS Timing advance and absolute delay..... | 988 |
| 15.7 | ECSD Timing advance and absolute delay | 992 |
| 15.8 | EGPRS timing advance and absolute delay | 993 |
| 15.9 | Timing Advance whilst in DTM | 997 |
| 16 | Reception time tracking speed | 999 |
| 17 | Access times during handover..... | 1001 |
| 17.1 | Intra cell channel change | 1001 |
| 17.2 | Inter cell handover..... | 1004 |
| 18 | Temporary reception gaps | 1007 |
| 18.1 | Temporary reception gaps, single slot..... | 1007 |
| 18.2 | Temporary reception gaps in HSCSD multislot configurations | 1008 |
| 19 | Channel release after unrecoverable errors | 1009 |
| 19.1 | Channel release after unrecoverable errors - 1 | 1010 |
| 19.2 | Channel release after unrecoverable errors - 2 | 1011 |
| 19.3 | Channel release after unrecoverable errors - 3 | 1012 |
| 20 | Cell selection and reselection | 1013 |
| 20.1 | Cell selection | 1015 |
| 20.2 | Cell selection with varying signal strength values | 1016 |
| 20.3 | Basic cell reselection..... | 1018 |
| 20.4 | Cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters..... | 1021 |
| 20.5 | Cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages..... | 1022 |
| 20.6 | Cell reselection timings | 1024 |
| 20.7 | Priority of cells | 1025 |
| 20.8 | Cell reselection when C1 (serving cell) < 0 for 5 s | 1027 |
| 20.9 | Running average of the surrounding cell BCCH carrier signal levels..... | 1028 |
| 20.10 | Running average of the serving cell BCCH carrier signal level | 1029 |

| | | |
|----------|--|------|
| 20.11 | Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list..... | 1030 |
| 20.12 | Decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers. | 1031 |
| 20.13 | Decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers..... | 1032 |
| 20.14 | Emergency calls | 1033 |
| 20.15 | Cell reselection due to MS rejection "LA not allowed" | 1034 |
| 20.16 | Downlink signalling failure..... | 1035 |
| 20.17 | Cell selection if no suitable cell found in 10 s..... | 1037 |
| 20.18 | Cell reselection due to MS rejection "Roaming not allowed in this LA" | 1037 |
| 20.19 | Cell selection on release of SDCCH and TCH..... | 1039 |
| 20.20 | Multiband cell selection and reselection | 1040 |
| 20.20.1 | Multiband cell selection and reselection / Cell Selection | 1040 |
| 20.20.2 | Multiband cell selection and reselection / Cell reselection | 1042 |
| 20.21 | R-GSM or ER-GSM cell selection and reselection | 1044 |
| 20.21.1 | R-GSM or ER-GSM cell selection | 1045 |
| 20.21.2 | R-GSM or ER-GSM cell selection with varying signal strength values | 1047 |
| 20.21.3 | R-GSM or ER-GSM basic cell reselection | 1049 |
| 20.21.4 | R-GSM or ER-GSM cell reselection using TEMPORARY_OFFSET, CELL_RESELECT_OFFSET, POWER_OFFSET and PENALTY_TIME parameters | 1051 |
| 20.21.5 | R-GSM or ER-GSM cell reselection using parameters transmitted in the System Information type 2bis, type 2ter, type 7 and type 8 messages | 1052 |
| 20.21.6 | R-GSM or ER-GSM cell reselection timings | 1054 |
| 20.21.7 | R-GSM or ER-GSM priority of cells | 1055 |
| 20.21.8 | R-GSM or ER-GSM cell reselection when C1 (serving cell) < 0 for 5 s..... | 1057 |
| 20.21.9 | R-GSM or ER-GSM running average of the surrounding cell BCCH carrier signal levels..... | 1058 |
| 20.21.10 | R-GSM or ER-GSM running average of the serving cell BCCH carrier signal level..... | 1059 |
| 20.21.11 | R-GSM or ER-GSM Updating the list of six strongest neighbour carriers and decoding the BCCH information of a new carrier on the list..... | 1060 |
| 20.21.12 | R-GSM or ER-GSM decoding the BCCH information of the neighbour carriers on the list of six strongest neighbour carriers..... | 1061 |
| 20.21.13 | R-GSM or ER-GSM decoding the BSIC of the neighbour carriers on the list of six strongest neighbour carriers | 1062 |
| 20.21.14 | R-GSM or ER-GSM emergency calls..... | 1063 |
| 20.21.15 | R-GSM or ER-GSM cell reselection due to MS rejection "LA not allowed" | 1064 |
| 20.21.16 | R-GSM or ER-GSM downlink signalling failure | 1066 |
| 20.21.17 | R-GSM or ER-GSM cell selection if no suitable cell found in 10 s | 1067 |
| 20.21.18 | R-GSM or ER-GSM cell reselection due to MS rejection "Roaming not allowed in this LA" | 1068 |
| 20.21.19 | R-GSM or ER-GSM cell selection on release of SDCCH and TCH | 1069 |
| 20.22 | GPRS Cell Selection and Reselection | 1070 |
| 20.22.1 | Void | 1072 |
| 20.22.2 | Void | 1072 |
| 20.22.3 | Void | 1072 |
| 20.22.4 | Void | 1072 |
| 20.22.5 | Void | 1072 |
| 20.22.6 | Void | 1072 |
| 20.22.7 | Void | 1072 |
| 20.22.8 | Cell selection when the best cell does not support GPRS | 1072 |
| 20.22.9 | Cell reselection when the best cell does not support GPRS..... | 1074 |
| 20.22.10 | Void | 1076 |
| 20.22.11 | Void | 1076 |
| 20.22.12 | Cell Selection on "LA Not Allowed" | 1076 |
| 20.22.13 | Void | 1077 |
| 20.22.14 | Void | 1077 |
| 20.22.15 | Cell Reselection/ ready state / no reselection..... | 1077 |
| 20.22.16 | Cell Reselection/ ready state/ Reselection and Cell update procedure | 1079 |
| 20.22.17 | C2 reselection in another RA - no cell reselection..... | 1080 |
| 20.22.18 | C2 reselection in another Routing Area - Routing Area Update..... | 1081 |
| 20.22.19 | Borders between routing areas - reselection of a GPRS cell in a homogenous network | 1083 |
| 20.22.20 | Void | 1084 |
| 20.22.21 | Void | 1084 |
| 20.22.22 | Cell Reselection with cells in different Routing area..... | 1084 |
| 20.22.23 | Void | 1086 |

| | | |
|-------------|--|------|
| 20.22.24 | Void | 1086 |
| 20.22.25 | Void | 1086 |
| 20.22.26 | Void | 1086 |
| 20.22.27 | Void | 1086 |
| 20.22.28 | Void | 1086 |
| 20.22.29 | Packet Measurement order procedure / Downlink transfer / Normal case/ 3G cell reselection dedicated parameters..... | 1086 |
| 20.22.29a | Packet Measurement order procedure / Downlink transfer / Normal case/ 3G cell reselection dedicated parameters with GEA2 and UEA2 ciphering..... | 1092 |
| 20.22.29b | Packet Measurement order procedure / Downlink transfer / Normal case/ 3G cell reselection dedicated parameters with GEA3 and UEA2 ciphering..... | 1092 |
| 20.22.29c | Packet Measurement order procedure / Downlink transfer / Normal case/ 3G cell reselection dedicated parameters with GEA4 and UEA2 ciphering..... | 1093 |
| 20.22.30 | Cell Reselection/usage of BA(GPRS)..... | 1093 |
| 20.22.30.1 | Cell Reselection/usage of BA(GPRS)/ Most suitable cell not in BA(GPRS) | 1093 |
| 20.22.30.2 | Cell Reselection / usage of BA(GPRS) / Change of BA(GPRS) | 1094 |
| 20.22.30.3 | Cell Reselection/usage of BA(GPRS)/ Measurement on first 32 entries. | 1095 |
| 20.22.31 | Network controlled cell reselection / Transfer mode | 1096 |
| 20.22.31.1 | Network controlled cell reselection / Downlink transfer / Normal case/ Location and Routing Area Update/ NMO I..... | 1096 |
| 20.22.31.2 | Network controlled cell reselection / Downlink transfer / Normal case/ Location and Routing Area Update/ NMO II | 1098 |
| 20.22.32 | Cell selection and Power Efficiency Operation | 1099 |
| 20.22.32.1 | PEO Reduced Monitoring – Reselection based on C1_DELTA | 1099 |
| 20.22.32.2 | PEO Reduced Monitoring – Downlink signalling Failure based on PEO_DSC | 1101 |
| 20.22.32.3 | PEO Reduced Monitoring – Reselection based on RCC change | 1103 |
| 20.22.33 | EC-GSM-IoT Reduced Monitoring | 1104 |
| 20.22.33.1 | EC-GSM-IoT Reduced Monitoring – Cell selection..... | 1104 |
| 20.22.33.2 | EC-GSM-IoT Reduced Monitoring – Reselection based on C1_DELTA and Downlink Signalling Failure | 1106 |
| 20.23 | Void..... | 1107 |
| 20.24 | SoLSA Cell Selection and Reselection | 1107 |
| 20.24.1 | SoLSA Cell Selection suitable cell | 1113 |
| 20.24.1.4.1 | SoLSA Cell Selection suitable cell / LSA identified by LSA ID | 1114 |
| 20.24.1.4.2 | SoLSA Cell Selection suitable cell / LSA identified by LAC + CI..... | 1115 |
| 20.24.1.4.3 | SoLSA Cell Selection suitable cell / LSA identified by CI | 1116 |
| 20.24.1.4.4 | SoLSA Cell Selection suitable cell / LSA identified by LAC | 1117 |
| 20.24.2 | SoLSA Cell (Re)Selection Emergency Call | 1119 |
| 20.24.3 | SoLSA Cell Reselection / idle mode support enabled | 1120 |
| 20.24.3.1 | General conformance requirement | 1120 |
| 20.24.3.2 | SoLSA Cell Reselection / idle mode support enabled / LSA Priority..... | 1122 |
| 20.24.3.3 | SoLSA Cell Reselection / idle mode support enabled / LSA Priority / different location area..... | 1124 |
| 20.24.3.4 | SoLSA Cell Reselection / idle mode support enabled / Priority Threshold | 1127 |
| 20.24.3.5 | SoLSA Cell Reselection / idle mode support enabled / LSA Priority / LSA_OFFSET | 1130 |
| 20.24.3.6 | SoLSA Cell Reselection / idle mode support enabled / LSA Priority / cell combinations..... | 1131 |
| 20.24.3.7 | SoLSA Cell Reselection / roaming | 1134 |
| 20.24.4 | SoLSA Cell Reselection / idle mode support / any value | 1136 |
| 20.24.5 | SoLSA Cell Reselection / LSA indication for idle mode..... | 1137 |
| 20.24.5.1 | General Definition..... | 1137 |
| 20.24.5.2 | General conformance requirement | 1138 |
| 20.24.5.3 | SoLSA Cell Reselection / LSA indication for idle mode / idle mode support enabled..... | 1138 |
| 20.24.5.4 | SoLSA Cell Reselection / LSA indication for idle mode / idle mode support disabled..... | 1139 |
| 20.25 | Intersystem Cell Reselection | 1140 |
| 20.25.1 | Definition of system information messages | 1141 |
| 20.25.2 | Intersystem Cell Reselection/Idle Mode/FDD_Qmin..... | 1143 |
| 20.25.3 | Intersystem Cell Reselection/Idle Mode/FDD_Qoffset | 1145 |
| 20.25.3a | Intersystem Cell Reselection/Idle Mode/TDD_Qoffset (1.28Mcps TDD) | 1147 |
| 20.25.4 | Intersystem Cell Reselection/Idle Mode/Qsearch_I..... | 1149 |
| 20.25.5 | Intersystem Cell Reselection / Idle Mode / High Priority | 1152 |
| 20.25.6 | Intersystem Cell Reselection / Idle Mode / Low Priority..... | 1153 |
| 20.25.7 | Intersystem Cell Reselection / Idle Mode / H_PRIO | 1155 |
| 20.26 | Decoding of BCCH including information for UTRAN TDD cells..... | 1157 |

| | | |
|--------------|---|------|
| 21 | Received signal measurements..... | 1160 |
| 21.1 | Signal strength..... | 1160 |
| 21.2 | Signal strength selectivity | 1164 |
| 21.3 | Signal quality under static conditions..... | 1167 |
| 21.3.1 | Signal quality under static conditions - TCH/FS no DTX | 1167 |
| 21.3.2 | Signal quality under static conditions - TCH/HS..... | 1169 |
| 21.3.3 | Signal quality under static conditions - TCH/AFS – DTX off..... | 1171 |
| 21.3.4 | Signal quality under static conditions - TCH/AHS - DTX Off..... | 1173 |
| 21.3.5 | Signal quality under static conditions - TCH/AFS – DTX on | 1176 |
| 21.3.6 | Signal quality under static conditions - TCH/AHS – DTX On..... | 1178 |
| 21.4 | Signal quality under TUhigh propagation conditions..... | 1180 |
| 21.4.1 | Signal quality under TUhigh propagation conditions - TCH/FS | 1180 |
| 21.4.2 | Signal quality under TUhigh propagation conditions - TCH/AFS..... | 1182 |
| 21.4.3 | Signal quality under TUhigh propagation conditions - TCH/AHS | 1184 |
| 21.4.4 | Signal quality under TU High propagation conditions - O-TCH/WFS..... | 1187 |
| 21.5 to 21.7 | Void..... | 1189 |
| 21.8 | GMSK_MEAN_BEP Measurement for PDTCH | 1189 |
| 21.9 | 8PSK_MEAN_BEP Measurement for PDTCH | 1192 |
| 21.10 | Measurement accuracy for inter-RAT system (TDD) | 1196 |
| 21.10.1 | 1.28Mcps TDD Option | 1196 |
| 21.10.1.1 | 1.28Mcps TDD / P-CCPCH RSCP Measurement absolute accuracy in AWGN propagation condition | 1196 |
| 21.11a | MEAN_BEP 16-QAM in EGPRS2-A Configuration | 1198 |
| 21.12a | MEAN_BEP 32-QAM in EGPRS2-A Configuration | 1201 |
| 21.13 | AQPSK_MEAN_BEP measurement for VAMOS I/II/III | 1204 |
| 22 | Transmit power control timing and confirmation | 1208 |
| 22.1 | Transmit power control timing and confirmation, single slot | 1208 |
| 22.2 | Void..... | 1210 |
| 22.3 | GPSPS Uplink Power Control - Use of α and Γ_{CH} parameters | 1210 |
| 22.4 | GPSPS Uplink Power Control - Independence of TS Power Control | 1213 |
| 22.5 | Void..... | 1215 |
| 22.6 | Normal transmit power control timing and confirmation in ECSD | 1215 |
| 22.7 | ECSD Fast Power Control (FPC) timing and interworking with normal power control | 1217 |
| 22.8 | EGPRS Uplink Power Control - Use of α and Γ_{CH} parameters..... | 1220 |
| 22.8a | EGPRS2A Uplink Power Control - Use of α and Γ_{CH} parameters | 1224 |
| 22.9 | EGPRS Uplink Power Control - Independence of TS Power Control..... | 1227 |
| 22.9a | EGPRS2A Uplink Power Control - Independence of TS Power Control..... | 1229 |
| 22.10 | Void..... | 1231 |
| 22.11 | Power control in exclusive allocation mode..... | 1231 |
| 22.12 | Downlink power control, PR mode A, GPRS TBF | 1232 |
| 22.13 | Enhanced Power Control (EPC) timing and measurement reporting in single slot operation..... | 1235 |
| 22.14 | Enhanced Power Control (EPC) timing and measurement reporting in multislot operation..... | 1238 |
| 23 | Single frequency reference | 1242 |
| 24 | Tests of the layer 1 signalling functions..... | 1242 |
| 25 | Tests of the layer 2 signalling functions..... | 1242 |
| 25.1 | Introduction, objective and scope | 1242 |
| 25.1.1 | General..... | 1242 |
| 25.1.2 | Test configurations | 1243 |
| 25.1.3 | Pre-conditions | 1243 |
| 25.1.4 | Layer 2 test frames..... | 1243 |
| 25.1.5 | Establishment of the dedicated physical resource..... | 1244 |
| 25.1.6 | Release of the dedicated physical resource..... | 1244 |
| 25.2 | Test sequences | 1244 |
| 25.2.1 | Initialization | 1246 |
| 25.2.1.1 | Initialization when contention resolution required..... | 1246 |
| 25.2.1.1.1 | Normal initialization..... | 1246 |
| 25.2.1.1.2 | Initialization failure | 1247 |
| 25.2.1.1.3 | Initialization denial | 1249 |
| 25.2.1.1.4 | Total initialization failure | 1250 |

| | | |
|------------|--|------|
| 25.2.1.2 | Initialization, contention resolution not required | 1251 |
| 25.2.1.2.1 | Normal initialization without contention resolution..... | 1251 |
| 25.2.1.2.2 | Initialization failure | 1252 |
| 25.2.1.2.3 | Initialization denial | 1253 |
| 25.2.1.2.4 | Total initialization failure | 1254 |
| 25.2.2 | Normal information transfer | 1255 |
| 25.2.2.1 | Sequence counting and I frame acknowledgements..... | 1255 |
| 25.2.2.2 | Receipt of an I frame in the timer recovery state | 1258 |
| 25.2.2.3 | Segmentation and concatenation..... | 1260 |
| 25.2.3 | Normal layer 2 disconnection | 1263 |
| 25.2.4 | Test of link failure | 1264 |
| 25.2.4.1 | I frame loss (MS to SS)..... | 1264 |
| 25.2.4.2 | RR response frame loss (SS to MS) | 1265 |
| 25.2.4.3 | RR response frame loss (MS to SS) | 1265 |
| 25.2.5 | Test of frame transmission with incorrect C/R values | 1266 |
| 25.2.5.1 | I frame with C bit set to zero..... | 1266 |
| 25.2.5.2 | SABM frame with C bit set to zero..... | 1267 |
| 25.2.6 | Test of errors in the control field | 1268 |
| 25.2.6.1 | N(S) sequence error..... | 1268 |
| 25.2.6.2 | N(R) sequence error | 1270 |
| 25.2.6.3 | Improper F bit | 1270 |
| 25.2.7 | Test on receipt of invalid frames | 1271 |
| 26 | Testing of layer 3 functions | 1276 |
| 26.1 | Default conditions and structured sequence of tests..... | 1276 |
| 26.1.1 | Default test conditions during layer 3 tests | 1276 |
| 26.1.2 | Structured sequence of the tests..... | 1281 |
| 26.1.3 | General rules for message parameters | 1281 |
| 26.1.4 | General rules for layer 3 testing..... | 1281 |
| 26.1.5 | Format of layer 3 test descriptions..... | 1282 |
| 26.2 | Initial tests | 1283 |
| 26.2.1 | Channel request | 1283 |
| 26.2.1.1 | Channel request / initial time | 1283 |
| 26.2.1.2 | Channel request / repetition time | 1284 |
| 26.2.1.3 | Channel request / random reference | 1286 |
| 26.2.2 | IMSI detach and IMSI attach..... | 1287 |
| 26.2.3 | Sequenced MM / CM message transfer | 1291 |
| 26.2.4 | Establishment cause | 1292 |
| 26.3 | Test of MS functions in idle mode | 1299 |
| 26.3.1 | Initial conditions | 1299 |
| 26.3.2 | MS indication of available PLMNs | 1305 |
| 26.3.3 | MS will send only if BSS is "on air" | 1305 |
| 26.3.4 | Manual mode of PLMN selection..... | 1306 |
| 26.4 | Lower layer failures in layer 3 testing | 1307 |
| 26.4.1 | Introduction..... | 1307 |
| 26.4.2 | Layer 1 reception failures | 1308 |
| 26.4.3 | Data link layer failures..... | 1308 |
| 26.4.4 | Lower layer failures, used for the tests in clause 25 | 1308 |
| 26.5 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions | 1308 |
| 26.5.1 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown protocol discriminator | 1308 |
| 26.5.2 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / TI and skip indicator | 1309 |
| 26.5.2.1 | TI and skip indicator / RR | 1309 |
| 26.5.2.1.1 | TI and skip indicator / RR / Idle Mode | 1309 |
| 26.5.2.1.2 | TI and skip indicator / RR / RR-Connection established..... | 1310 |
| 26.5.2.2 | TI and skip indicator / MM | 1312 |
| 26.5.2.3 | TI and skip indicator / CC | 1313 |
| 26.5.3 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / undefined or unexpected message type..... | 1315 |
| 26.5.3.1 | Undefined or unexpected message type / undefined message type / CC..... | 1315 |
| 26.5.3.2 | Undefined or unexpected message type / undefined message type / MM..... | 1316 |

| | | |
|------------|---|------|
| 26.5.3.3 | Undefined or unexpected message type / undefined message type / RR..... | 1317 |
| 26.5.3.4 | Undefined or unexpected message type / unexpected message type / CC | 1319 |
| 26.5.4 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unforeseen information elements in the non-imperative message part | 1320 |
| 26.5.4.1 | Unforeseen information elements in the non-imperative message part / duplicated information elements | 1320 |
| 26.5.5 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / non-semantical mandatory IE errors | 1321 |
| 26.5.5.1 | Non-semantical mandatory IE errors / RR | 1321 |
| 26.5.5.1.1 | Non-semantical mandatory IE errors / RR / missing mandatory IE error..... | 1321 |
| 26.5.5.1.2 | Non-semantical mandatory IE errors / RR / comprehension required..... | 1324 |
| 26.5.5.2 | Non-semantical mandatory IE errors / MM | 1325 |
| 26.5.5.2.1 | Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE..... | 1325 |
| 26.5.5.2.2 | Non-semantical mandatory IE errors / MM / syntactically incorrect mandatory IE..... | 1326 |
| 26.5.5.2.3 | Non-semantical mandatory IE errors / MM / comprehension required | 1327 |
| 26.5.5.3 | Non-semantical mandatory IE errors / CC | 1329 |
| 26.5.5.3.1 | Non-semantical mandatory IE errors / CC / missing mandatory IE | 1329 |
| 26.5.5.3.2 | Non-semantical mandatory IE errors / CC / comprehension required..... | 1331 |
| 26.5.6 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / unknown IE, comprehension not required | 1332 |
| 26.5.6.1 | Unknown information elements in the non-imperative message part / MM | 1332 |
| 26.5.6.1.1 | Unknown IE, comprehension not required / MM / IE unknown in the protocol | 1332 |
| 26.5.6.1.2 | Unknown IE, comprehension not required / MM / IE unknown in the message..... | 1333 |
| 26.5.6.2 | Unknown information elements in the non-imperative message part / CC | 1335 |
| 26.5.6.2.1 | Unknown information elements in the non-imperative message part / CC / Call establishment. | 1335 |
| 26.5.6.2.2 | Unknown information elements in the non-imperative message part / CC / disconnect | 1336 |
| 26.5.6.2.3 | Unknown information elements in the non-imperative message part / CC / release | 1337 |
| 26.5.6.2.4 | Unknown information elements in the non-imperative message part / CC / release complete.... | 1338 |
| 26.5.6.3 | Unknown IE in the non-imperative message part, comprehension not required / RR | 1339 |
| 26.5.7 | Handling of unknown, unforeseen, and erroneous protocol data, and of parallel transactions / spare bits | 1341 |
| 26.5.7.1 | Spare bits / RR | 1341 |
| 26.5.7.1.1 | Spare bits / RR / paging channel..... | 1341 |
| 26.5.7.1.2 | Spare bits / RR / BCCH..... | 1343 |
| 26.5.7.1.3 | Spare bits / RR / AGCH | 1344 |
| 26.5.7.1.4 | Spare bits / RR / Connected Mode | 1346 |
| 26.5.7.2 | Spare bits / MM..... | 1348 |
| 26.5.7.3 | Spare bits / CC | 1350 |
| 26.5.8 | Default contents of messages..... | 1352 |
| 26.6 | Test of the elementary procedures for radio resource management | 1354 |
| 26.6.1 | Immediate assignment | 1354 |
| 26.6.1.1 | Immediate assignment / SDCCH or TCH assignment | 1354 |
| 26.6.1.2 | Immediate assignment / extended assignment | 1355 |
| 26.6.1.3 | Immediate assignment / assignment rejection..... | 1357 |
| 26.6.1.4 | Immediate assignment / ignore assignment..... | 1359 |
| 26.6.1.5 | Immediate assignment after immediate assignment reject..... | 1360 |
| 26.6.1.6 | Immediate assignment / implicit rejection | 1362 |
| 26.6.1.7 | Void..... | 1363 |
| 26.6.2 | Test of paging | 1363 |
| 26.6.2.1 | Normal paging..... | 1364 |
| 26.6.2.1.1 | Paging / normal / type 1..... | 1364 |
| 26.6.2.1.2 | Paging / normal / type 2..... | 1366 |
| 26.6.2.1.3 | Paging / normal / type 3..... | 1368 |
| 26.6.2.2 | Paging / extended..... | 1369 |
| 26.6.2.3 | Paging / reorganization | 1372 |
| 26.6.2.3.1 | Paging / reorganization / procedure 1 | 1372 |
| 26.6.2.3.2 | Paging / reorganization / procedure 2 | 1375 |
| 26.6.2.4 | Paging / same as before..... | 1376 |
| 26.6.2.5 | Paging / multislot CCCH | 1377 |
| 26.6.2.6 | Paging / EAB active | 1378 |
| 26.6.3 | Test of measurement report | 1380 |
| 26.6.3.1 | Measurement / no neighbours | 1380 |

| | | |
|-------------|--|------|
| 26.6.3.2 | Measurement / all neighbours present..... | 1383 |
| 26.6.3.3 | Measurement / barred cells and non-permitted NCCs..... | 1387 |
| 26.6.3.4 | Measurement / DTX..... | 1390 |
| 26.6.3.5 | Measurement / Frequency Formats | 1393 |
| 26.6.3.6 | Measurement / multiband environment..... | 1397 |
| 26.6.3.7 | Measurement / new cell reporting | 1400 |
| 26.6.3.8 | Enhanced Measurement /all neighbours present | 1404 |
| 26.6.3.8.1 | Conformance requirements..... | 1404 |
| 26.6.3.8.2 | Test purpose | 1405 |
| 26.6.3.8.3 | Method of test..... | 1405 |
| 26.6.3.9 | Enhanced Measurement Report / Measurement Parameters | 1408 |
| 26.6.3.9.1 | Conformance requirements..... | 1408 |
| 26.6.3.9.2 | Test purpose | 1408 |
| 26.6.3.9.3 | Method of test..... | 1408 |
| 26.6.3.10 | Enhanced Measurement Report / EMR Reporting after Handover..... | 1411 |
| 26.6.3.10.1 | Conformance requirements..... | 1411 |
| 26.6.3.10.2 | Test purpose | 1412 |
| 26.6.3.10.3 | Method of test..... | 1412 |
| 26.6.4 | Test of the channel assignment procedure | 1414 |
| 26.6.4.1 | Dedicated assignment / successful case | 1414 |
| 26.6.4.2 | Dedicated assignment / failure | 1422 |
| 26.6.4.2.1 | Dedicated assignment / failure / failure during active state..... | 1422 |
| 26.6.4.2.2 | Dedicated assignment / failure / general case..... | 1423 |
| 26.6.5 | Test of handover | 1424 |
| 26.6.5.1 | Handover / successful / active call / non-synchronized..... | 1425 |
| 26.6.5.2 | Handover / successful / call under establishment / non-synchronized | 1435 |
| 26.6.5.3 | Handover / successful / active call / finely synchronized..... | 1450 |
| 26.6.5.4 | Handover / successful / call under establishment / finely synchronized | 1454 |
| 26.6.5.5 | Pre-synchronized handovers | 1464 |
| 26.6.5.5.1 | Handover / successful / active call / pre-synchronized / Timing Advance IE not included..... | 1464 |
| 26.6.5.5.2 | Handover / successful / call being established / pre-synchronized / timing advance IE is included / reporting of observed time difference requested..... | 1465 |
| 26.6.5.6 | Handover / successful / active call / pseudo synchronized..... | 1467 |
| 26.6.5.7 | Handover / successful / active call / non-synchronized / reporting of observed time difference requested | 1469 |
| 26.6.5.8 | Handover / layer 3 failure | 1471 |
| 26.6.5.9 | Handover / layer 1 failure | 1472 |
| 26.6.6 | Test of frequency redefinition..... | 1474 |
| 26.6.6.1 | Frequency redefinition | 1474 |
| 26.6.7 | Test of the channel mode modify procedure | 1477 |
| 26.6.7.1 | Test of the channel mode modify procedure / full rate..... | 1477 |
| 26.6.7.2 | Test of the channel mode modify procedure / half rate | 1479 |
| 26.6.8 | Test of ciphering mode setting..... | 1482 |
| 26.6.8.1 | Ciphering mode / start ciphering..... | 1482 |
| 26.6.8.2 | Ciphering mode / no ciphering..... | 1484 |
| 26.6.8.3 | Ciphering mode / old cipher key | 1485 |
| 26.6.8.4 | Ciphering mode / change of mode, algorithm and key..... | 1486 |
| 26.6.8.5 | Ciphering mode / IMEISV request..... | 1493 |
| 26.6.8.6 | Ciphering mode / Non support of algorithm A5/2 | 1495 |
| 26.6.8.7 | Ciphering mode with cipher key Kc ₁₂₈ | 1496 |
| 26.6.8.8 | Ciphering mode with cipher key Kc ₁₂₈ and algorithm changes..... | 1499 |
| 26.6.9 | Test of additional assignment | 1502 |
| 26.6.10 | Test of partial release..... | 1502 |
| 26.6.11 | Test of classmark | 1503 |
| 26.6.11.1 | Classmark change | 1517 |
| 26.6.11.2 | Classmark interrogation | 1519 |
| 26.6.11.3 | Classmark interrogation / UTRAN Classmark Change..... | 1521 |
| 26.6.11.4 | Early UTRAN Classmark Sending | 1522 |
| 26.6.12 | Test of channel release..... | 1524 |
| 26.6.12.1 | Channel release / SDCCH | 1524 |
| 26.6.12.2 | Channel release / SDCCH - no L2 ACK..... | 1526 |
| 26.6.12.3 | Channel release / TCH-F..... | 1527 |

| | | |
|--------------|--|------|
| 26.6.12.4 | Channel release / TCH-F - no L2 ACK..... | 1528 |
| 26.6.13 | Test of starting time | 1529 |
| 26.6.13.1 | Dedicated assignment with starting time / successful case / time not elapsed | 1531 |
| 26.6.13.2 | Dedicated assignment with starting time / successful case / time elapsed | 1533 |
| 26.6.13.3 | Dedicated assignment with starting time and frequency redefinition / failure case / time not elapsed..... | 1535 |
| 26.6.13.4 | Dedicated assignment with starting time and frequency redefinition / failure case / time elapsed ... | 1538 |
| 26.6.13.5 | Handover with starting time / successful case / time not elapsed..... | 1540 |
| 26.6.13.6 | Handover with starting time / successful case / time elapsed..... | 1542 |
| 26.6.13.7 | Handover with starting time and frequency redefinition / failure case / time not elapsed | 1544 |
| 26.6.13.8 | Handover with starting time and frequency redefinition / failure case / time elapsed | 1546 |
| 26.6.13.9 | Immediate assignment with starting time / successful case / time not elapsed | 1549 |
| 26.6.13.10 | Immediate assignment with starting time / successful case / time elapsed | 1550 |
| 26.6.14 | Default contents of GSM 900 layer 3 messages for RR tests | 1552 |
| 26.6.15 | Default contents of DCS 1 800 layer 3 messages for RR tests | 1561 |
| 26.6.16 | Default contents of GSM 450 layer 3 messages for RR tests | 1571 |
| 26.6.17 | Default contents of GSM 480 layer 3 messages for RR tests | 1580 |
| 26.6.18 | Default contents of PCS 1 900 layer 3 messages for RR tests..... | 1589 |
| 26.6.19 | Default contents of GSM 750 layer 3 messages for RR tests | 1599 |
| 26.6.20 | Default contents of GSM 850 layer 3 messages for RR tests | 1608 |
| 26.6.21 | Default contents of GSM 710 layer 3 messages for RR tests | 1617 |
| 26.6.22 | Default contents of T-GSM 810 layer 3 messages for RR tests..... | 1626 |
| 26.6.23 | Test of Repeated SACCH | 1635 |
| 26.6.23.1 | Repeated SACCH / Downlink Repeated SACCH..... | 1635 |
| 26.6.23.2 | Repeated SACCH / Uplink Repeated SACCH | 1637 |
| 26.6.23.3 | Repeated SACCH / Uplink Repeated SACCH with SAPI 3 frames..... | 1638 |
| 26.7 | Elementary procedures of mobility management | 1640 |
| 26.7.0 | Default contents of messages | 1640 |
| 26.7.1 | TMSI reallocation | 1643 |
| 26.7.2 | Authentication..... | 1645 |
| 26.7.2.1 | Authentication accepted | 1646 |
| 26.7.2.2 | Authentication rejected | 1647 |
| 26.7.2.3 | Authentication accepted with USIM | 1650 |
| 26.7.2.4 | Authentication not accepted by MS with USIM (MAC Failure) | 1651 |
| 26.7.2.5 | Authentication not accepted by MS with USIM (Synch Failure)..... | 1654 |
| 26.7.3 | Identification..... | 1656 |
| 26.7.3.1 | General Identification..... | 1656 |
| 26.7.3.2 | Handling of IMSI shorter than the maximum length | 1658 |
| 26.7.4 | Location updating | 1661 |
| 26.7.4.1 | Location updating / accepted..... | 1661 |
| 26.7.4.2 | Location updating / rejected..... | 1666 |
| 26.7.4.2.1 | Location updating / rejected / IMSI invalid..... | 1666 |
| 26.7.4.2.2 | Location updating / rejected / PLMN not allowed | 1669 |
| 26.7.4.2.3 | Location updating / rejected / location area not allowed | 1673 |
| 26.7.4.2.4 | Location updating / rejected / roaming not allowed in this location area | 1676 |
| 26.7.4.3 | Location updating / abnormal cases | 1683 |
| 26.7.4.3.1 | Location updating / abnormal cases / random access fails | 1683 |
| 26.7.4.3.2 | Location updating / abnormal cases / attempt counter less or equal to 4, LAI different | 1685 |
| 26.7.4.3.3 | Location updating / abnormal cases / attempt counter equal to 4..... | 1691 |
| 26.7.4.3.4 | Location updating / abnormal cases / attempt counter less or equal to 4, stored LAI equal to broadcast LAI | 1699 |
| 26.7.4.3.5 | Location updating / abnormal cases / Network reject with Extended Wait Timer | 1706 |
| 26.7.4.4 | Location updating / release / expiry of T3240 | 1708 |
| 26.7.4.5 | Location updating / periodic | 1709 |
| 26.7.4.5.1 | Location updating / periodic spread | 1709 |
| 26.7.4.5.2 | Location updating / periodic normal / test 1 | 1710 |
| 26.7.4.5.3 | Location updating / periodic normal / test 2 | 1712 |
| 26.7.4.5.4 | Location updating / periodic HPLMN search..... | 1714 |
| 26.7.4.5.4a | Location updating / periodic per-device timer..... | 1724 |
| 26.7.4.5.5 | Location Updating / Multi-Band PLMN selection between different ITU regions / | 1726 |
| 26.7.4.5.5.2 | Higher Priority PLMN / Automatic PLMN Selection Mode / Limited Service..... | 1728 |

| | | |
|--------------|--|------|
| 26.7.4.5.5.3 | Higher Priority PLMN / Automatic PLMN Selection Mode / Recovery from Lack of Service | 1730 |
| 26.7.4.5.5.4 | User Selection / Manual PLMN Selection Mode | 1731 |
| 26.7.4.5.6 | Location updating / periodic per-device timer | 1733 |
| 26.7.4.6 | Location updating / interworking of attach and periodic | 1734 |
| 26.7.5 | MM connection | 1736 |
| 26.7.5.1 | Introduction | 1736 |
| 26.7.5.2 | MM connection / establishment with cipher and repeated FACCH | 1736 |
| 26.7.5.3 | MM connection / establishment without cipher | 1738 |
| 26.7.5.4 | MM connection / establishment rejected | 1739 |
| 26.7.5.5 | MM connection / establishment rejected cause 4 | 1740 |
| 26.7.5.6 | MM connection / expiry T3230 | 1741 |
| 26.7.5.7 | MM connection / abortion by the network | 1742 |
| 26.7.5.7.1 | MM connection / abortion by the network / cause #6 | 1742 |
| 26.7.5.7.2 | MM connection / abortion by the network / cause not equal to #6 | 1746 |
| 26.7.5.8 | MM connection / follow-on request pending | 1747 |
| 26.7.5.8.1 | MM connection / follow-on request pending / test 1 | 1747 |
| 26.7.5.8.2 | MM connection / follow-on request pending / test 2 | 1748 |
| 26.7.5.8.3 | MM connection / follow-on request pending / test 3 | 1749 |
| 26.7.6 | Network Identity and Time zone (NITZ) | 1751 |
| 26.7.6.1 | NITZ and CS location update procedures | 1751 |
| 26.7.6.1.1 | NITZ / CS location update / Time zone, Time and DST Handling | 1751 |
| 26.8 | Tests related to circuit switched call control | 1756 |
| 26.8.1 | Circuit switched Call Control (CC) state machine verification | 1756 |
| 26.8.1.1 | General on CC state machine verification | 1756 |
| 26.8.1.2 | Establishment of an outgoing call | 1757 |
| 26.8.1.2.1 | Outgoing call / U0 null state | 1759 |
| 26.8.1.2.2 | Outgoing call / U0.1 MM connection pending | 1761 |
| 26.8.1.2.3 | Outgoing call / U1 call initiated | 1764 |
| 26.8.1.2.4 | Outgoing call / U3 MS originating call proceeding | 1773 |
| 26.8.1.2.5 | Outgoing call / U4 call delivered | 1789 |
| 26.8.1.2.6 | U10 call active | 1798 |
| 26.8.1.2.7 | U11 disconnect request | 1807 |
| 26.8.1.2.8 | U12 disconnect indication | 1813 |
| 26.8.1.2.9 | Outgoing call / U19 release request | 1818 |
| 26.8.1.3 | Establishment of an incoming call / Initial conditions | 1824 |
| 26.8.1.3.1 | Incoming call / U0 null state | 1826 |
| 26.8.1.3.2 | Incoming call / U6 call present | 1827 |
| 26.8.1.3.3 | Incoming call / U9 mobile terminating call confirmed | 1829 |
| 26.8.1.3.4 | Incoming call / U7 call received | 1836 |
| 26.8.1.3.5 | Incoming call / U8 connect request | 1846 |
| 26.8.1.4 | In call functions | 1857 |
| 26.8.1.4.1 | In-call functions / DTMF information transfer | 1857 |
| 26.8.1.4.2 | In-call functions / user notification | 1858 |
| 26.8.1.4.3 | In-call functions / channel changes | 1859 |
| 26.8.1.4.4 | In-call functions / MS terminated in-call modification | 1863 |
| 26.8.1.4.5 | In-call functions / MS originated in-call modification | 1865 |
| 26.8.2 | Call Re-establishment | 1879 |
| 26.8.2.1 | Call Re-establishment/call present, re-establishment allowed | 1879 |
| 26.8.2.2 | Call Re-establishment/call present, re-establishment not allowed | 1881 |
| 26.8.2.3 | Call Re-establishment/call under establishment, transmission stopped | 1882 |
| 26.8.3 | User to user signalling | 1884 |
| 26.8.4 | Default contents of message | 1886 |
| 26.9 | Structured procedures | 1892 |
| 26.9.1 | Structured procedures / general | 1892 |
| 26.9.2 | Structured procedures / MS originated call / early assignment | 1893 |
| 26.9.3 | Structured procedures / MS originated call / late assignment | 1895 |
| 26.9.4 | Structured procedures / MS terminated call / early assignment | 1897 |
| 26.9.5 | Structured procedures / MS terminated call / late assignment | 1900 |
| 26.9.6 | Structured procedures / emergency call | 1902 |
| 26.9.6.1 | Structured procedures / emergency call / idle updated | 1903 |
| 26.9.6.1.1 | Structured procedures / emergency call / idle updated / preferred channel rate | 1903 |

| | | |
|-------------|---|------|
| 26.9.6.1.2 | Structured procedures / emergency call / idle updated, non-preferred channel rate | 1905 |
| 26.9.6.1.3 | Structured procedures / emergency call / idle updated / EAB active..... | 1905 |
| 26.9.6.2 | Structured procedures / emergency call / idle, no IMSI..... | 1908 |
| 26.9.6.2.1 | Structured procedures / emergency call / idle, no IMSI / accept case | 1908 |
| 26.9.6.2.2 | Structured procedures / emergency call / idle, no IMSI / reject case..... | 1910 |
| 26.9.6a | Structured Calls / eCall..... | 1911 |
| 26.9.6a.1 | eCall with USIM | 1911 |
| 26.9.6a.1.1 | Void..... | 1911 |
| 26.9.6a.1.2 | Test eCall using eCall capable MS with 'eCall only' subscription on USIM | 1911 |
| 26.9.6a.1.3 | Manually initiated eCall using eCall capable MS with 'eCall only' subscription on USIM | 1914 |
| 26.9.6a.1.4 | Manually initiated eCall using eCall capable MS with eCall capable USIM | 1915 |
| 26.9.6a.1.5 | eCall Inactivity State after T3242 expires | 1918 |
| 26.9.6a.1.6 | Automatically initiated eCall..... | 1922 |
| 26.9.6a.1.7 | Reconfiguration eCall using eCall capable MS with 'eCall only' subscription on USIM..... | 1924 |
| 26.9.6a.1.8 | eCall Inactivity State after T3243 expires | 1926 |
| 26.9.7 | Directed Retry / Mobile Originated Call..... | 1929 |
| 26.9.8 | Directed Retry / Mobile Terminated Call | 1935 |
| 26.9.9 | Default contents of messages..... | 1941 |
| 26.10 | E-GSM or R-GSM or ER-GSM signalling..... | 1947 |
| 26.10.1 | E-GSM or R-GSM or ER-GSM signalling / general considerations | 1947 |
| 26.10.2 | E-GSM or R-GSM or ER-GSM signalling / RR..... | 1949 |
| 26.10.2.1 | E-GSM or R-GSM or ER-GSM signalling / RR / Measurement | 1949 |
| 26.10.2.2 | E-GSM or R-GSM or ER-GSM signalling / RR / Immediate assignment | 1956 |
| 26.10.2.3 | E-GSM or R-GSM or ER-GSM signalling / RR / channel assignment procedure..... | 1958 |
| 26.10.2.4 | E-GSM or R-GSM or ER-GSM signalling / RR / Handover | 1963 |
| 26.10.2.4.1 | E-GSM or R-GSM or ER-GSM signalling / RR / Handover / Successful handover..... | 1963 |
| 26.10.2.4.2 | E-GSM or R-GSM or ER-GSM signalling / RR / Handover / layer 1 failure | 1969 |
| 26.10.2.5 | E-GSM or R-GSM or ER-GSM signalling / RR / Frequency Redefinition | 1971 |
| 26.10.3 | E-GSM or R-GSM or ER-GSM signalling / Structured procedure..... | 1974 |
| 26.10.3.1 | E-GSM or R-GSM or ER-GSM signalling / Structured procedure / Mobile originated call..... | 1974 |
| 26.10.3.2 | E-GSM or R-GSM or ER-GSM signalling / Structured procedures / emergency call | 1976 |
| 26.10.3.3 | Default contents of messages | 1979 |
| 26.10.4 | E-GSM or R-GSM or ER-GSM signalling / Default message contents | 1980 |
| 26.11 | Multiband signalling..... | 1984 |
| 26.11.1 | General considerations..... | 1984 |
| 26.11.2 | Multiband signalling / RR..... | 1984 |
| 26.11.2.1 | Multiband signalling / RR / Immediate assignment procedure | 1984 |
| 26.11.2.2 | Multiband signalling / RR / Handover | 1993 |
| 26.11.2.2.1 | Multiband signalling / RR / Handover / successful / active call / non-synchronized | 1993 |
| 26.11.2.2.2 | Multiband signalling / RR / Handover / layer 1 failure | 2014 |
| 26.11.2.2.3 | Multiband signalling / RR / Handover / Multiband BCCH / successful / active call / non synchronized..... | 2020 |
| 26.11.2.2.4 | Multiband signalling / RR / Handover/ Multiband BCCH / Intracell Handover - Interband Assignment | 2037 |
| 26.11.2.3 | Multiband signalling / RR / Measurement reporting..... | 2058 |
| 26.11.3 | Multiband signalling / MM..... | 2074 |
| 26.11.3.1 | Multiband signalling / MM / Location updating | 2074 |
| 26.11.3.1.1 | Location updating / accepted | 2074 |
| 26.11.3.1.2 | Location updating / periodic | 2077 |
| 26.11.4 | Multiband signalling / CC..... | 2080 |
| 26.11.5 | Multiband signalling / Structured procedures | 2080 |
| 26.11.5.1 | Multiband signalling / Structured procedures / MS originated call / early assignment | 2080 |
| 26.11.5.2 | Structured procedures / MS terminated call / late assignment | 2090 |
| 26.11.6 | Multiband signalling / Default messages contents..... | 2100 |
| 26.12 | Enhanced Full Rate signalling..... | 2128 |
| 26.12.1 | EFR signalling/ test of the channel mode modify procedure | 2128 |
| 26.12.2 | EFR signalling/ tests of handover | 2131 |
| 26.12.2.1 | EFR signalling / Handover / active call / successful case | 2132 |
| 26.12.3 | EFR Signalling / Structured procedures / MS originated call / late assignment | 2142 |
| 26.12.4 | Structured procedures / MS terminated call / 1 early assignment..... | 2145 |
| 26.12.5 | Structured procedures / emergency call | 2148 |
| 26.12.6 | EFR Signalling / Directed Retry / Mobile Originated Call | 2151 |

| | | |
|-------------|--|------|
| 26.12.7 | EFR Signalling / Directed Retry / Mobile Terminated Call..... | 2154 |
| 26.12.8 | Default contents of layer 3 messages for Enhanced Full rate speech tests | 2160 |
| 26.13 | Multislot signalling..... | 2163 |
| 26.13.1 | Multislot signalling / RR..... | 2163 |
| 26.13.1.1 | Multislot signalling / RR / Measurement | 2163 |
| 26.13.1.1.1 | Multislot signalling / RR / Measurement / symmetric | 2163 |
| 26.13.1.1.2 | Multislot signalling / RR / Measurement / asymmetric | 2166 |
| 26.13.1.1.3 | Multislot signaling / RR / Measurement / asymmetric / change of the reported subchannel..... | 2170 |
| 26.13.1.2 | Multislot signalling / RR / Dedicated assignment | 2176 |
| 26.13.1.2.1 | Multislot signalling / RR / Dedicated assignment / successful case | 2176 |
| 26.13.1.2.2 | Multislot signalling / RR / Dedicated assignment / failure / general case | 2210 |
| 26.13.1.3 | Test of handover..... | 2245 |
| 26.13.1.3.1 | Multislot signalling / RR / Handover / successful / active call / non-synchronized | 2246 |
| 26.13.1.3.2 | Multislot signalling / RR / Handover / successful / call under establishment / non synchronized / resource upgrading | 2254 |
| 26.13.1.3.3 | Multislot signalling / RR / Handover / successful / active call / finely synchronized / resource downgrading | 2264 |
| 26.13.1.3.4 | Multislot signalling / RR / Handover / successful / call under establishment / finely synchronized / relocation of channels..... | 2271 |
| 26.13.1.3.5 | Multislot signalling / RR / Handover / successful / call under establishment / pre-synchronized / resource upgrading | 2286 |
| 26.13.1.4 | Multislot signalling / RR / Test of the channel mode modify procedure | 2294 |
| 26.13.1.5 | Multislot signalling / RR / Early classmark sending | 2296 |
| 26.13.1.6 | Default contents of layer 3 messages for RR tests | 2298 |
| 26.13.1.6.1 | Default contents of GSM 900 layer 3 messages for RR tests | 2298 |
| 26.13.1.6.2 | Default contents of DCS 1 800 layer 3 messages for RR tests | 2308 |
| 26.13.1.6.3 | Default contents of GSM 450 layer 3 messages for RR tests | 2320 |
| 26.13.1.6.4 | Default contents of GSM 480 layer 3 messages for RR tests | 2330 |
| 26.13.1.6.5 | Default contents of GSM 700 layer 3 messages for RR tests | 2341 |
| 26.13.1.6.6 | Default contents of GSM 850 layer 3 messages for RR tests | 2352 |
| 26.13.2 | Multislot signalling / CC..... | 2363 |
| 26.13.2.1 | Multislot signalling / CC / In-call functions | 2363 |
| 26.13.2.1.1 | Multislot signalling / CC / In-call functions / User initiated service level upgrade / successful | 2363 |
| 26.13.2.1.2 | Multislot signalling / CC / In-call functions / User initiated service level downgrade / successful..... | 2364 |
| 26.13.2.1.3 | Multislot signalling / CC / In-call functions / User initiated service level upgrade / Time-out of timer T323 | 2366 |
| 26.13.2.1.4 | Multislot signalling / CC / In-call functions / User initiated service level upgrade / modify reject | 2367 |
| 26.13.2.1.5 | Multislot signalling / CC / In call functions / contents of some of the messages | 2368 |
| 26.13.3 | Multislot signalling / Structured procedures | 2370 |
| 26.13.3.1 | Multislot signalling / Structured procedures / MS originated call / early assignment / HSCSD / non-transparent | 2370 |
| 26.13.3.2 | Multislot signalling / Structured procedures / MS originated call / late assignment / HSCSD / non-transparent | 2373 |
| 26.13.3.3 | Multislot signalling / Structured procedures / MS originated call / early assignment / HSCSD / Transparent | 2375 |
| 26.13.3.4 | Multislot signalling / Structured procedures / MS Terminated call / early assignment / HSCSD / non-transparent | 2378 |
| 26.13.3.5 | Multislot signalling / Structured procedures / MS Terminated call / early assignment / HSCSD / Transparent | 2382 |
| 26.13.3.6 | Default test conditions during layer 3 tests | 2385 |
| 26.13.3.7 | Default contents of messages | 2389 |
| 26.14 | VGCS and VBS Tests | 2395 |
| 26.14.1 | VGCS-VBS / Notification | 2396 |
| 26.14.1.1 | VGCS-VBS / Notification / notification indication | 2396 |
| 26.14.1.2 | VGCS-VBS / Notification / NCH position | 2400 |
| 26.14.1.3 | VGCS-VBS / Notification / Reduced NCH monitoring | 2401 |
| 26.14.1.4 | VGCS-VBS / Notification / Limited Service state | 2406 |
| 26.14.2 | VGCS-VBS / Paging | 2408 |
| 26.14.2.1 | VGCS-VBS / Paging / Paging indication | 2408 |
| 26.14.2.2 | VGCS-VBS / Paging / Notification | 2411 |

| | | |
|-------------|---|------|
| 26.14.3 | VGCS-VBS / RR Procedures..... | 2415 |
| 26.14.3.1 | VGCS-VBS / RR Procedures / frequency redefinition | 2415 |
| 26.14.3.2 | VGCS-VBS / RR Procedures / assignment | 2420 |
| 26.14.3.3 | VGCS-VBS / RR Procedures / handover / successful in group transmit mode | 2424 |
| 26.14.3.4 | VGCS-VBS / RR Procedures / handover / successful at group call establishment | 2429 |
| 26.14.3.5 | VGCS-VBS / RR Procedures / handover / failure..... | 2435 |
| 26.14.3.6 | VGCS-VBS / RR / Measurement Report..... | 2436 |
| 26.14.3.6.1 | Measurement / all neighbours present | 2436 |
| 26.14.4 | VGCS-VBS / Uplink Access and Uplink Reply Procedures | 2440 |
| 26.14.4.1 | VGCS-VBS / Uplink Access / uplink investigation..... | 2440 |
| 26.14.4.2 | Uplink Access / uplink access procedure..... | 2442 |
| 26.14.4.3 | VGCS-VBS / Uplink Reply in VGCS receive mode | 2444 |
| 26.14.5 | VGCS-VBS / Leaving Group Receive or Group Transmit Mode..... | 2446 |
| 26.14.5.1 | VGCS-VBS / Leaving group receive mode | 2446 |
| 26.14.5.2 | VGCS-VBS / Leaving group transmit mode..... | 2448 |
| 26.14.6 | VGCS-VBS / GCC-BCC Procedures | 2450 |
| 26.14.6.1 | VGCS-VBS / GCC-BCC Procedures / MO call establishment..... | 2450 |
| 26.14.6.2 | VGCS-VBS / GCC-BCC Procedures / Transaction Identifier | 2453 |
| 26.14.6.3 | VGCS-VBS / GCC-BCC Procedures / Call Termination / originator / group transmit mode..... | 2454 |
| 26.14.6.4 | VGCS-VBS / GCC-BCC Procedures / Call Termination / originator in group receive mode | 2456 |
| 26.14.6.5 | VGCS-VBS / GCC-BCC Procedures / Call Termination / not originator..... | 2458 |
| 26.14.6.6 | VGCS-VBS / GCC-BCC Procedures / GCC states..... | 2459 |
| 26.14.6.7 | VGCS-VBS / GCC-BCC Procedures / BCC states | 2462 |
| 26.14.7 | VGCS-VBS / Error Handling | 2463 |
| 26.14.7.1 | VGCS-VBS / Error Handling / short message length, unknown message type and TI..... | 2463 |
| 26.14.7.2 | VGCS-VBS / Error Handling / incorrect information elements..... | 2467 |
| 26.14.7.3 | VGCS-VBS / Messages not addressing VGCS receive mode | 2471 |
| 26.14.8 | VGCS-VBS / Structured Procedures | 2472 |
| 26.14.8.1 | VGCS-VBS / Structured Procedures / Very early and early assignment | 2472 |
| 26.14.9 | VGCS-VBS / Cell change..... | 2475 |
| 26.14.9.1 | VGCS-VBS / Cell Change / Same LA | 2475 |
| 26.14.9.2 | VGCS-VBS / Cell Change / Different LA | 2478 |
| 26.14.9.3 | VGCS-VBS / Cell Change / Different PLMN | 2481 |
| 26.14.10 | VGCS-VBS / Default Message Contents..... | 2484 |
| 26.14.11 | VGCS-VBS / User-to-Dispatcher Information | 2488 |
| 26.14.11.1 | VGCS-VBS / User-to-Dispatcher Information / BCC MO call | 2488 |
| 26.14.11.2 | VGCS-VBS / User-to-Dispatcher information / GCC MO call | 2490 |
| 26.14.11.3 | VGCS-VBS / User-to-Dispatcher information / Compressed user information in VBS fast call set-up..... | 2492 |
| 26.14.11.4 | VGCS-VBS / User-to-Dispatcher information / Compressed User-to-Dispatcher information in VGCS fast call set-up..... | 2494 |
| 26.15 | SoLSA signalling | 2496 |
| 26.15.1 | General considerations..... | 2496 |
| 26.15.1.1 | Default message content | 2496 |
| 26.15.1.2 | General initial conditions for SIM card..... | 2497 |
| 26.15.2 | SoLSA signalling / RR | 2497 |
| 26.15.2.1 | SoLSA signalling / RR / classmark interrogation | 2497 |
| 26.15.3 | SoLSA signalling / MM..... | 2499 |
| 26.15.3.1 | SoLSA signalling / MM / location updating | 2499 |
| 26.15.3.1.1 | Location updating / accepted | 2500 |
| 26.15.3.2 | SoLSA signalling / MM / MM information | 2503 |
| 26.15.4 | SoLSA signalling / CC | 2506 |
| 26.15.4.1 | SoLSA signalling / CC / call re-establishment / call present | 2506 |
| 26.15.5 | SoLSA signalling / structured procedures | 2509 |
| 26.15.5.1 | SoLSA signalling / structured procedures / MS originated call / early assignment | 2509 |
| 26.15.5.2 | SoLSA signalling / structured procedures / MS originated call / late assignment..... | 2512 |
| 26.15.5.3 | SoLSA signalling / structured procedures / MS terminated call / early assignment | 2515 |
| 26.15.5.4 | SoLSA signalling / structured procedures / MS terminated call / late assignment..... | 2518 |
| 26.15.5.5 | SoLSA signalling / structured procedures / emergency call / idle updated..... | 2521 |
| 26.15.5.6 | SoLSA signalling / structured procedures / emergency call / idle, no IMSI | 2524 |
| 26.16 | Adaptive Multi Rate Signalling..... | 2527 |
| 26.16.0 | Default contents of layer 3 messages for AMR signalling tests | 2527 |

| | | |
|------------|---|------|
| 26.16.1 | Void | 2527 |
| 26.16.2 | Inband Signalling, Uplink Codec Adaptation | 2527 |
| 26.16.3 | Structured procedures / MS terminated call / early assignment / no initial codec mode | 2530 |
| 26.16.3a | Structured procedures / MS terminated call / early assignment / specified initial codec mode | 2533 |
| 26.16.4 | Structured procedures / MS originated call / late assignment / specified initial codec mode | 2536 |
| 26.16.4a | Structured procedures / MS originated call / late assignment / no initial codec mode..... | 2539 |
| 26.16.5 | AMR signalling / Handover / active call / successful case | 2542 |
| 26.16.6 | Structured procedures / emergency call | 2558 |
| 26.16.7 | AMR Signalling / Directed Retry / Mobile Originated Call | 2560 |
| 26.16.8 | AMR Signalling / Directed Retry / Mobile Terminated Call..... | 2564 |
| 26.16.9 | AMR RATSCCH Protocol | 2570 |
| 26.16.9.1 | AMR Configuration Change (normal) | 2570 |
| 26.16.9.2 | AMR Configuration Change (abnormal) | 2573 |
| 26.16.9.3 | Codec Mode Phase Change (normal)..... | 2575 |
| 26.16.9.4 | Codec Mode Phase Change (abnormal) | 2577 |
| 26.16.9.5 | Threshold Change (normal) | 2578 |
| 26.16.9.6 | Threshold Change (abnormal)..... | 2580 |
| 26.16.9.7 | Unknown RATSCCH REQ Message..... | 2582 |
| 26.16.9.8 | Ignore subsequent REQ prior to expiry of REQ_Activation counter | 2584 |
| 26.16.9.9 | Initiation of Transaction with ACK_ERR or ACK_UNKNOWN | 2587 |
| 26.16.9.10 | Inversion of the Phase of the CMR/CMI..... | 2588 |
| 26.16.9.11 | Change of Active Codec Set | 2591 |
| 26.16.9.12 | Void..... | 2595 |
| 26.16.10 | AMR signalling/ test of the channel mode modify procedure | 2595 |
| 26.16.11 | Handover / layer 1 failure | 2598 |
| 26.17 | Adaptive Multi Rate Signalling – 8PSK..... | 2602 |
| 26.17.1 | Void | 2602 |
| 26.17.2 | Inband Signalling, Uplink Codec Adaptation | 2602 |
| 26.17.3 | 8-PSK AMR HR / Structured procedures / MS terminated call / early assignment / no initial codec mode | 2604 |
| 26.17.3a | 8-PSK AMR HR / Structured procedures / MS terminated call / early assignment / specified initial codec mode | 2607 |
| 26.17.4 | 8-PSK AMR HR / Structured procedures / MS originated call / late assignment / specified initial codec mode | 2610 |
| 26.17.4a | 8-PSK AMR HR / Structured procedures / MS originated call / late assignment / no initial codec mode | 2613 |
| 26.17.5 | Void | 2615 |
| 26.17.6 | 8-PSK AMR HR / Structured procedures / emergency call..... | 2615 |
| 26.17.7 | Void | 2617 |
| 26.17.8 | Void | 2617 |
| 26.17.9 | 8-PSK AMR HR / RATSCCH Protocol | 2618 |
| 26.17.9.1 | AMR Configuration Change (normal) | 2618 |
| 26.17.9.2 | AMR Configuration Change (abnormal) | 2620 |
| 26.17.9.3 | Codec Mode Phase Change (normal)..... | 2622 |
| 26.17.9.4 | Codec Mode Phase Change (abnormal) | 2624 |
| 26.17.9.5 | Threshold Change (normal) | 2626 |
| 26.17.9.6 | Threshold Change (abnormal)..... | 2628 |
| 26.17.9.7 | Unknown RATSCCH REQ Message..... | 2630 |
| 26.17.9.8 | Ignore subsequent REQ prior to expiry of REQ_Activation counter | 2632 |
| 26.17.9.9 | Initiation of Transaction with ACK_ERR or ACK_UNKNOWN | 2635 |
| 26.17.9.10 | Inversion of the Phase of the CMR/CMI..... | 2636 |
| 26.17.9.11 | Change of Active Codec Set | 2639 |
| 26.17.10 | 8-PSK AMR HR signalling/ test of the channel mode modify procedure | 2643 |
| 26.17.10.1 | Void..... | 2643 |
| 26.17.10.2 | 8-PSK AMR HR signalling/ test of the channel mode modify procedure/ half rate | 2643 |
| 26.18 | Dynamic ARFCN mapping tests | 2645 |
| 26.18.1 | Control of dynamic ARFCN mapping with SI14 and SI15 | 2645 |
| 26.19 | AMR WB - signalling | 2649 |
| 26.19.1 | Reserved for future use | 2649 |
| 26.19.2 | Reserved for future use | 2649 |
| 26.19.3 | Reserved for future use | 2649 |

| | | |
|------------|---|------|
| 26.19.3a | WB AMR / Structured procedures / MS terminated call / early assignment / specified initial codec mode | 2649 |
| 26.19.4 | Reserved for future use | 2653 |
| 26.19.5 | WB AMR / Adaptive Multi Rate Signalling / AMR signalling / Handover / active call / successful case | 2653 |
| 26.19.6 | Reserved for future use | 2675 |
| 26.19.7 | Reserved for future use | 2675 |
| 26.19.8 | Reserved for future use | 2675 |
| 26.19.9 | WB AMR RATSCCH Protocol | 2675 |
| 26.19.9.1 | WB AMR Configuration Change (normal) | 2675 |
| 26.19.9.2 | AMR WB Configuration Change (abnormal) | 2678 |
| 26.19.9.3 | Codec Mode Phase Change (normal) | 2680 |
| 26.19.9.4 | Reserved for future use | 2682 |
| 26.19.9.5 | Threshold Change (normal) | 2682 |
| 26.19.9.6 | Reserved for future use | 2685 |
| 26.19.9.7 | Reserved for future use | 2685 |
| 26.19.9.8 | Reserved for future use | 2685 |
| 26.19.9.9 | Reserved for future use | 2685 |
| 26.19.9.10 | Inversion of the Phase of the CMR/CMI | 2685 |
| 26.19.9.11 | Change of Active Codec Set | 2688 |
| 26.19.10 | AMR signalling/ test of the channel mode modify procedure | 2693 |
| 26.19.10.1 | WB AMR signalling test of the channel mode modify procedure / full rate | 2693 |
| 26.20 | Enhanced Power Control | 2695 |
| 26.20.1 | Enhanced Power Control / MS Supports EPC | 2695 |
| 26.21 | VAMOS Signalling | 2698 |
| 26.21.0 | General | 2698 |
| 26.21.1 | VAMOS Signalling / MS originated call FR / TSC assignment in ASSIGNMENT COMMAND | 2699 |
| 26.21.2 | VAMOS Signalling / MS Terminated call / Channel mode assignment in Channel Mode Modify | 2702 |
| 26.21.3 | ..... | 2706 |
| 26.21.4 | VAMOS Signalling / MS terminated call / Handover to VAMOS mode | 2706 |
| 26.21.5 | VAMOS Signalling / MT VAMOS call / TSC assignment in DTM Assignment Command | 2709 |
| 26.21.6 | VAMOS Signalling / MS originated call / Handover between different traffic rates | 2713 |
| 26.21.7 | VAMOS Signalling / Emergency call | 2716 |
| 26.21.8 | VAMOS Signalling / MS Originated call / Early assignment / Handover to different AMR codec rates | 2719 |
| 26.22 | Test of other features | 2722 |
| 26.22.1 | Layer 2 fill bits randomisation | 2722 |
| 27 | Testing of the SIM/ME interface | 2726 |
| 27.1 | MS identification by short IMSI | 2731 |
| 27.1.1 | MS identification by short IMSI - Normal case | 2731 |
| 27.1.1a | MS identification by short IMSI - for GPRS | 2732 |
| 27.1.2 | MS identification by short IMSI, Phase 1 DCS SIM | 2733 |
| 27.2 | MS identification by short TMSI | 2733 |
| 27.3 | MS identification by long TMSI | 2734 |
| 27.4 | MS identification by long IMSI, TMSI updating and cipher key sequence number assignment | 2736 |
| 27.5 | Forbidden PLMNs, location updating and undefined cipher key | 2738 |
| 27.5a | Forbidden PLMNs, GPRS attach | 2741 |
| 27.6 | MS updating forbidden PLMNs | 2745 |
| 27.6a | MS updating forbidden PLMNs - for GPRS | 2746 |
| 27.7 | MS deleting forbidden PLMNs | 2748 |
| 27.7a | MS deleting forbidden PLMNs - for GPRS | 2750 |
| 27.8 | MS updating the PLMN selector list | 2752 |
| 27.9 | MS recognizing the priority order of the PLMN selector list | 2753 |
| 27.10 | MS access control management | 2754 |
| 27.10a | MS access control management for GPRS | 2761 |
| 27.11 | Exchange protocol tests | 2764 |
| 27.11.1 | Character transmission | 2764 |
| 27.11.1.1 | Bit/character duration during the transmission from the ME to the SIM | 2764 |
| 27.11.1.2 | Bit/character duration during the transmission from the SIM simulator to the ME | 2765 |
| 27.11.1.3 | Inter-character delay | 2766 |
| 27.11.1.4 | Error handling during the transmission from the ME to the SIM | 2767 |

| | | |
|-------------|---|------|
| 27.11.1.5 | Error handling during transmission from the SIM to the ME | 2767 |
| 27.11.2 | Answer to reset (RST) | 2768 |
| 27.11.2.1 | Void..... | 2768 |
| 27.11.2.2 | Acceptance of SIMs with active low RST | 2768 |
| 27.11.2.3 | Characters of the answer to reset..... | 2768 |
| 27.11.2.4 | PPS procedure | 2770 |
| 27.11.2.5 | Reset repetition | 2770 |
| 27.11.2.6 | Speed Enhancement | 2771 |
| 27.11.3 | Command processing, procedure bytes | 2773 |
| 27.12 | Evaluation of directory characteristics | 2773 |
| 27.12.1 | Operating speed in authentication procedure..... | 2773 |
| 27.12.1a | Operating speed in authentication procedure - for GPRS | 2774 |
| 27.12.2 | Clock stop | 2775 |
| 27.13 | Mechanical tests | 2776 |
| 27.13.1 | Contact pressure..... | 2776 |
| 27.13.2 | Shape of contacts for IC card SIM card reader | 2777 |
| 27.14 | Secret code usage | 2777 |
| 27.14.1 | Entry of PIN..... | 2777 |
| 27.14.2 | Change of PIN | 2778 |
| 27.14.3 | Disabling the PIN | 2779 |
| 27.14.4 | PUK entry | 2780 |
| 27.14.5 | Entry of PIN2..... | 2781 |
| 27.14.6 | Change of PIN2 | 2781 |
| 27.14.7 | PUK2 entry | 2782 |
| 27.15 | Abbreviated Dialling Numbers (ADN) | 2783 |
| 27.16 | MMI reaction to SIM status encoding | 2785 |
| 27.17 | Electrical tests | 2785 |
| 27.17.1 | Test of the power transition phases..... | 2786 |
| 27.17.1.1 | Phase preceding ME power on..... | 2786 |
| 27.17.1.2 | Phase during SIM power on | 2786 |
| 27.17.1.3 | Phase during ME power off with clock stop forbidden..... | 2788 |
| 27.17.1.4 | Phase during ME power off with clock stop allowed..... | 2789 |
| 27.17.1.5 | SIM Type Recognition and Voltage Switching..... | 2791 |
| 27.17.1.5.1 | Reaction of 3V only MEs on SIM type recognition failure | 2791 |
| 27.17.1.5.2 | Reaction of 3V only MEs on type recognition of 5V only SIMs | 2792 |
| 27.17.1.5.3 | Reaction of 3V technology MEs on type recognition of 5V only SIMs | 2793 |
| 27.17.1.5.4 | Reaction of 3V technology MEs on type recognition of 3V technology SIMs | 2794 |
| 27.17.1.5.5 | Reaction of 1,8V only MEs on SIM type recognition failure | 2795 |
| 27.17.1.5.6 | Reaction of 1,8V only MEs on type recognition of 3V SIMs..... | 2796 |
| 27.17.1.5.7 | Reaction of 1,8V technology MEs on type recognition of 3V technology SIMs | 2796 |
| 27.17.1.5.8 | Reaction of 1,8V technology MEs on type recognition of 1,8V technology SIMs | 2797 |
| 27.17.2 | Electrical tests on each ME contact | 2798 |
| 27.17.2.1 | Electrical tests on contact C1 | 2799 |
| 27.17.2.1.1 | Test 1 | 2799 |
| 27.17.2.1.2 | Test 2 | 2800 |
| 27.17.2.2 | Electrical tests on contact C2 | 2803 |
| 27.17.2.3 | Electrical tests on contact C3 | 2804 |
| 27.17.2.4 | [Not used]..... | 2806 |
| 27.17.2.5 | Electrical tests on contact C7 | 2806 |
| 27.18 | Fixed Dialling Number (FDN) | 2809 |
| 27.18.1 | ME and SIM with FDN activated | 2809 |
| 27.18.1.1 | EF _{ADN} invalidated and not readable or updatable..... | 2809 |
| 27.18.1.2 | EF _{ADN} invalidated but readable and updatable | 2810 |
| 27.18.2 | ME and SIM with FDN deactivated | 2811 |
| 27.18.3 | Enabling, disabling and updating of FDN | 2812 |
| 27.19 | Phase identification | 2813 |
| 27.20 | SIM presence detection | 2814 |
| 27.21 | Advice of Charge (AoC) | 2815 |
| 27.21.1 | AoC not supported by SIM | 2815 |
| 27.21.2 | Maximum frequency of ACM updating..... | 2816 |
| 27.21.3 | Call terminated when ACM greater than ACMmax | 2818 |
| 27.21.4 | Response codes of increase command | 2820 |

| | | |
|------------|--|------|
| 28 | Test of autocalling restrictions | 2823 |
| 28.1 | General | 2823 |
| 28.2 | Constraining the access to a single number (3GPP TS 02.07 category 3)..... | 2823 |
| 28.3 | Constraining the access to a single number (3GPP TS 02.07 categories 1 and 2)..... | 2825 |
| 28.4 | Behaviour of the MS when its list of blacklisted numbers is full | 2827 |
| 29 | Testing of bearer services..... | 2829 |
| 29.1 | General | 2829 |
| 29.2 | Testing of transparent data services..... | 2830 |
| 29.2.1 | Verification of synchronization | 2830 |
| 29.2.2 | Filtering of channel control information for transparent BCs..... | 2833 |
| 29.2.3 | Correct Terminal Compatibility Decision..... | 2834 |
| 29.2.3.1 | Negotiation of Radio Channel Requirement (RCR)..... | 2834 |
| 29.2.3.2 | Negotiation of Connection Element (CE) | 2835 |
| 29.2.3.3 | Negotiation of Number of Stop Bits, Number of Data bits, and Parity..... | 2835 |
| 29.2.3.4 | Negotiation of Modem Type | 2836 |
| 29.2.3.5 | Negotiation of Intermediate Rate | 2837 |
| 29.2.3.6 | Negotiation of User Information Layer 2 Protocol | 2838 |
| 29.2.3.7 | Negotiation between TS 61 and TS 62: Mobile Originated call | 2838 |
| 29.2.3.8 | Negotiation between TS 61 and TS 62: Mobile Terminated call | 2839 |
| 29.2.4 | Data Rate Adaptation for Synchronous Transparent Bearer Capabilities | 2840 |
| 29.2.5 | Network Independent Clocking | 2841 |
| 29.2.6 | Asynchronous Transparent Bearer Capabilities | 2841 |
| 29.2.6.1 | Data Rate Adaptation | 2841 |
| 29.2.6.2 | Passage of the Break Signal | 2842 |
| 29.2.6.3 | Overspeed/Underspeed Handling (Local Terminal) | 2843 |
| 29.2.6.4 | Overspeed/Underspeed Handling (Remote Terminal) | 2844 |
| 29.2.7 | Interchange circuit mapping for transparent bearer capabilities | 2845 |
| 29.3 | Testing of non transparent data services (RLP tests)..... | 2846 |
| 29.3.1 | Initialization | 2846 |
| 29.3.1.1 | Normal initialization done by the MS | 2846 |
| 29.3.1.2 | Initialization failure | 2847 |
| 29.3.1.2.1 | Loss of UA frame | 2847 |
| 29.3.1.2.2 | Total loss of UA frame | 2849 |
| 29.3.2 | Data transfer..... | 2850 |
| 29.3.2.1 | Default conditions | 2850 |
| 29.3.2.2 | MS sends I+S frames | 2850 |
| 29.3.2.2.1 | N(S) sequence number | 2850 |
| 29.3.2.2.2 | Transmission window..... | 2851 |
| 29.3.2.2.3 | Busy condition..... | 2853 |
| 29.3.2.3 | SS sends I+S frames..... | 2855 |
| 29.3.2.3.1 | N(R) sequence number | 2855 |
| 29.3.2.3.2 | Busy condition..... | 2856 |
| 29.3.2.4 | SS rejects I+S frames | 2858 |
| 29.3.2.4.1 | REJ frame | 2858 |
| 29.3.2.4.2 | SREJ frame..... | 2860 |
| 29.3.2.4.3 | I+S reject frame | 2863 |
| 29.3.2.5 | MS rejects I+S frames..... | 2866 |
| 29.3.2.5.1 | Rejection with REJ or SREJ supervisory frames..... | 2866 |
| 29.3.2.5.2 | Retransmission of REJ or SREJ frames..... | 2872 |
| 29.3.2.5.3 | I+S reject frame | 2875 |
| 29.3.2.6 | Checkpoint recovery | 2878 |
| 29.3.2.6.1 | SS in checkpoint recovery mode | 2878 |
| 29.3.2.6.2 | End of the window..... | 2882 |
| 29.3.2.6.3 | End of a sequence | 2885 |
| 29.3.2.6.4 | Time-out of one frame | 2887 |
| 29.3.2.6.5 | No response to checkpointing..... | 2888 |
| 29.3.2.6.6 | Incorrect response to checkpointing | 2891 |
| 29.3.2.6.7 | Total loss of response to checkpointing..... | 2895 |
| 29.3.2.6.8 | Retransmission of a sequence | 2898 |
| 29.3.2.6.9 | N2 retransmission of a sequence | 2902 |
| 29.3.3 | Negotiation of the RLP parameters..... | 2906 |

| | | |
|------------|---|------|
| 29.3.3.1 | Negotiation initiated by the SS..... | 2906 |
| 29.3.3.2 | Negotiation initiated by the MS | 2911 |
| 29.3.3.3 | Collision of XID frames..... | 2916 |
| 29.3.3.4 | Loss of XID frames..... | 2921 |
| 29.3.3.5 | Total loss of XID frames..... | 2922 |
| 29.4 | Facsimile tests for the transparent network support | 2924 |
| 29.4.1 | General..... | 2924 |
| 29.4.2 | Mobile originated call..... | 2926 |
| 29.4.2.1 | Call establishment procedure | 2926 |
| 29.4.2.1.1 | Alternate speech / facsimile..... | 2926 |
| 29.4.2.1.2 | Automatic facsimile..... | 2927 |
| 29.4.2.2 | Pre-message procedure..... | 2928 |
| 29.4.2.3 | Message procedure..... | 2929 |
| 29.4.2.4 | Post-message procedure | 2931 |
| 29.4.2.5 | Call release procedure | 2932 |
| 29.4.2.6 | CTC processing - 4th PPR for the same block | 2932 |
| 29.4.2.7 | Transition from Facsimile to Speech - Procedure interrupt generated by receiving station..... | 2934 |
| 29.4.2.8 | Transition from Facsimile to Speech - Procedure interrupt generated by transmitting station | 2936 |
| 29.4.2.9 | Quality check | 2937 |
| 29.4.3 | Mobile terminated call..... | 2938 |
| 29.4.3.1 | Call Establishment Procedure | 2938 |
| 29.4.3.1.1 | Alternate Speech/Facsimile | 2938 |
| 29.4.3.1.2 | Automatic facsimile..... | 2940 |
| 29.4.3.2 | Pre-message procedure..... | 2941 |
| 29.4.3.3 | Message procedure..... | 2943 |
| 29.4.3.4 | Post-message procedure | 2944 |
| 29.4.3.5 | Call release procedure | 2945 |
| 29.4.3.6 | Speed conversion factor | 2945 |
| 29.4.3.7 | Quality Check | 2948 |
| 29.4.4 | Notes..... | 2948 |
| 30 | Speech teleservices..... | 2949 |
| 30.1 | Sending sensitivity/frequency response..... | 2949 |
| 30.2 | Sending loudness rating..... | 2951 |
| 30.3 | Receiving sensitivity/frequency response | 2952 |
| 30.4 | Receiving loudness rating | 2953 |
| 30.5 | Side tones | 2954 |
| 30.5.1 | Side Tone Masking Rating (STMR) | 2954 |
| 30.5.2 | Listener Side Tone Rating (LSTR) | 2955 |
| 30.6 | Telephone Acoustic coupling Loss (TAL) | 2956 |
| 30.6.1 | Echo Loss (EL) | 2956 |
| 30.6.2 | Stability margin | 2957 |
| 30.7 | Distortion..... | 2957 |
| 30.7.1 | Sending | 2957 |
| 30.7.2 | Receiving | 2958 |
| 30.8 | Sidetone distortion..... | 2959 |
| 30.9 | Out-of-band signals | 2960 |
| 30.9.1 | Sending | 2960 |
| 30.9.2 | Receiving | 2961 |
| 30.10 | Idle channel noise | 2962 |
| 30.10.1 | Sending | 2962 |
| 30.10.2 | Receiving | 2962 |
| 30.11 | Ambient Noise Rejection | 2963 |
| 30.12 | Sending sensitivity/frequency response..... | 2965 |
| 30.13 | Sending loudness rating..... | 2965 |
| 30.14 | Receiving sensitivity/frequency response | 2965 |
| 30.15 | Receiving loudness rating | 2967 |
| 30.16 | Side Tone Masking Rating (STMR) LRG..... | 2967 |
| 30.17 | Telephone Acoustic coupling Loss (TAL) | 2967 |
| 30.17.1 | Echo Loss (EL) | 2967 |
| 30.17.2 | Stability margin | 2968 |
| 30.18 | Sending Distortion..... | 2968 |

| | | |
|------------|---|------|
| 30.19 | Ambient Noise Rejection | 2969 |
| 30.20 | Side Tone Masking Rating (STMR) HATS | 2969 |
| 31 | Test of supplementary services | 2970 |
| 31.1 | Number identification supplementary services | 2970 |
| 31.1.1 | CLIP..... | 2970 |
| 31.1.1.1 | Normal operation | 2970 |
| 31.1.1.2 | Interrogation..... | 2971 |
| 31.1.1.2.1 | Interrogation accepted | 2971 |
| 31.1.1.2.2 | Interrogation rejected..... | 2972 |
| 31.1.2 | CLIR | 2974 |
| 31.1.2.1 | Normal operation - requesting presentation of CLI | 2974 |
| 31.1.2.2 | Normal operation - requesting restriction of CLI presentation | 2975 |
| 31.1.2.3 | Interrogation..... | 2976 |
| 31.1.2.3.1 | Interrogation accepted | 2976 |
| 31.1.2.3.2 | Interrogation rejected..... | 2977 |
| 31.1.3 | COLP | 2979 |
| 31.1.3.1 | Normal operation | 2979 |
| 31.1.3.2 | Interrogation..... | 2980 |
| 31.1.3.2.1 | Interrogation accepted | 2980 |
| 31.1.3.2.2 | Interrogation rejected | 2981 |
| 31.1.4 | COLR..... | 2983 |
| 31.1.4.1 | Interrogation..... | 2983 |
| 31.1.4.1.1 | Interrogation accepted | 2983 |
| 31.1.4.1.2 | Interrogation rejected..... | 2984 |
| 31.1.4.2 | Void..... | 2986 |
| 31.1.5 | CNAP..... | 2986 |
| 31.1.5.1.1 | Normal Operation – Name indication contained in Setup message..... | 2986 |
| 31.1.5.1.2 | Normal Operation – Name indication contained in Facility message..... | 2987 |
| 31.1.5.2.1 | Interrogation accepted | 2988 |
| 31.1.5.2.2 | Interrogation rejected..... | 2989 |
| 31.2 | Call offering supplementary services | 2991 |
| 31.2.1 | Call forwarding supplementary services..... | 2991 |
| 31.2.1.1 | Registration | 2991 |
| 31.2.1.1.1 | Registration accepted..... | 2991 |
| 31.2.1.1.2 | Registration rejected..... | 2994 |
| 31.2.1.2 | Erasure by the subscriber | 2997 |
| 31.2.1.2.1 | Erasure accepted..... | 2997 |
| 31.2.1.2.2 | Erasure rejected | 3000 |
| 31.2.1.3 | Activation..... | 3002 |
| 31.2.1.4 | Deactivation | 3005 |
| 31.2.1.5 | Invocation..... | 3007 |
| 31.2.1.6 | Interrogation..... | 3007 |
| 31.2.1.6.1 | Interrogation accepted | 3007 |
| 31.2.1.6.2 | Interrogation rejected..... | 3010 |
| 31.2.1.7 | Normal operation | 3012 |
| 31.2.1.7.1 | Served mobile subscriber side | 3012 |
| 31.2.1.7.2 | Forwarded-to mobile subscriber side..... | 3016 |
| 31.2.2 | Call transfer and mobile access hunting supplementary services | 3018 |
| 31.3 | Call completion supplementary services | 3018 |
| 31.3.1 | Call Waiting..... | 3018 |
| 31.3.1.1 | Waiting call indication and confirmation | 3018 |
| 31.3.1.2 | Normal operation with successful outcome | 3019 |
| 31.3.1.2.1 | Waiting call accepted; existing call released | 3019 |
| 31.3.1.2.2 | Waiting call accepted; existing call on hold | 3020 |
| 31.3.1.2.3 | Existing call released by user A; waiting call accepted | 3021 |
| 31.3.1.3 | Normal operation with unsuccessful outcome | 3022 |
| 31.3.1.3.1 | Waiting call released by subscriber B | 3022 |
| 31.3.1.3.2 | Waiting call released by calling user C | 3023 |
| 31.3.1.4 | Activation..... | 3024 |
| 31.3.1.5 | Deactivation | 3027 |
| 31.3.1.6 | Interrogation..... | 3030 |

| | | |
|------------|--|------|
| 31.3.1.6.1 | Interrogation accepted | 3030 |
| 31.3.1.6.2 | Interrogation rejected..... | 3032 |
| 31.3.2 | Call Hold..... | 3034 |
| 31.3.2.1 | Hold invocation | 3034 |
| 31.3.2.2 | Retrieve procedure..... | 3035 |
| 31.3.2.3 | Alternate from one call to the other..... | 3036 |
| 31.4 | Multi-party supplementary services | 3038 |
| 31.4.1 | Beginning the MultiParty service | 3038 |
| 31.4.1.1 | Beginning the MultiParty service, successful case..... | 3038 |
| 31.4.1.2 | Beginning the MultiParty service, unsuccessful case..... | 3039 |
| 31.4.1.3 | Beginning the MultiParty service, expiry of timer T(BuildMPTY)..... | 3041 |
| 31.4.2 | Managing an active MultiParty call | 3043 |
| 31.4.2.1 | Served mobile subscriber | 3043 |
| 31.4.2.1.1 | Put the MultiParty call on hold | 3043 |
| 31.4.2.1.2 | Create a private communication with one of the remote parties..... | 3047 |
| 31.4.2.1.3 | Terminate the entire MultiParty call..... | 3052 |
| 31.4.2.1.4 | Explicitly disconnect a remote party | 3053 |
| 31.4.2.2 | Remote parties..... | 3054 |
| 31.4.2.2.1 | Release from the MultiParty call | 3054 |
| 31.4.3 | Managing a held MultiParty call..... | 3055 |
| 31.4.3.1 | Retrieve the held MultiParty call | 3055 |
| 31.4.3.1.1 | Retrieve the held MultiParty call, successful case..... | 3055 |
| 31.4.3.1.2 | Retrieve the held MultiParty call, unsuccessful case..... | 3056 |
| 31.4.3.1.3 | Retrieve the held MultiParty call, expiry of timer T(RetrieveMPTY)..... | 3058 |
| 31.4.3.2 | Initiate a new call | 3060 |
| 31.4.3.3 | Process a call waiting request..... | 3061 |
| 31.4.3.4 | Terminate the held MultiParty call..... | 3062 |
| 31.4.4 | Managing a single call and a MultiParty call..... | 3063 |
| 31.4.4.1 | Served mobile subscriber | 3063 |
| 31.4.4.1.1 | Disconnect the single call | 3063 |
| 31.4.4.1.2 | Disconnect the MultiParty call | 3066 |
| 31.4.4.2 | Disconnect all calls | 3068 |
| 31.4.4.3 | Add the single call to the MPTY | 3069 |
| 31.4.4.3.1 | Add the single call to the MPTY, successful case | 3069 |
| 31.4.4.3.2 | Add the single call to the MPTY, maximum number of participants exceeded | 3071 |
| 31.4.4.4 | Alternate between the MPTY call and the single call | 3072 |
| 31.4.5 | Adding extra remote parties..... | 3074 |
| 31.5 | Community of interest supplementary services..... | 3076 |
| 31.6 | Charging supplementary services..... | 3076 |
| 31.6.1 | Advice of Charge Charging | 3076 |
| 31.6.1.1 | AoCC time related charging / MS originated call | 3076 |
| 31.6.1.2 | AoCC time related charging / MS terminated call | 3079 |
| 31.6.1.3 | AoCC volume related charging / MS originated call | 3081 |
| 31.6.1.4 | AoCC volume related charging / MS terminated call | 3081 |
| 31.6.1.5 | Change in charging information during a call | 3081 |
| 31.6.1.6 | Different formats of charging information | 3084 |
| 31.6.1.7 | AoCC on a Call Hold call | 3087 |
| 31.6.1.8 | AoCC on a Multi-party call..... | 3090 |
| 31.6.2 | Charge Storage..... | 3093 |
| 31.6.2.1 | Removal of SIM during an active call..... | 3093 |
| 31.6.2.2 | Interruption of power supply during an active call | 3096 |
| 31.6.2.3 | MS going out of coverage during an active AoCC call..... | 3097 |
| 31.6.2.4 | ACMmax operation / Mobile Originating..... | 3100 |
| 31.6.2.5 | ACMmax operation / Mobile Terminating | 3103 |
| 31.6.3 | Advice of Charge Information | 3106 |
| 31.6.3.1 | AoCI time related charging / MS originated call | 3106 |
| 31.6.3.2 | AoCI time related charging / MS terminated call | 3108 |
| 31.6.3.3 | AoCI volume related charging / MS originated call | 3110 |
| 31.6.3.4 | AoCI volume related charging / MS terminated call | 3110 |
| 31.6.3.5 | Change in charging information during a call..... | 3110 |
| 31.6.3.6 | Different formats of charging information | 3113 |
| 31.6.3.7 | AoCI on a Call Hold call..... | 3116 |

| | | |
|------------|--|------|
| 31.6.3.8 | AoCI on a Multi-party call | 3119 |
| 31.6.4 | Default contents of messages | 3122 |
| 31.7 | Additional information transfer supplementary services | 3123 |
| 31.8 | Call restriction supplementary services | 3124 |
| 31.8.1 | Registration of a password | 3124 |
| 31.8.1.1 | Registration accepted | 3124 |
| 31.8.1.2 | Registration rejected | 3126 |
| 31.8.1.2.1 | Rejection after invoke of the RegisterPassword operation | 3126 |
| 31.8.1.2.2 | Rejection after password check with negative result | 3128 |
| 31.8.1.2.3 | Rejection after new password mismatch | 3131 |
| 31.8.2 | Erasure | 3133 |
| 31.8.3 | Activation | 3133 |
| 31.8.3.1 | Activation accepted | 3133 |
| 31.8.3.2 | Activation rejected | 3136 |
| 31.8.3.2.1 | Rejection after invoke of ActivateSS operation | 3136 |
| 31.8.3.2.2 | Rejection after use of password procedure | 3138 |
| 31.8.4 | Deactivation | 3140 |
| 31.8.4.1 | Deactivation accepted | 3140 |
| 31.8.4.2 | Deactivation rejected | 3143 |
| 31.8.4.2.1 | Rejection after invoke of DeactivateSS operation | 3143 |
| 31.8.4.2.2 | Rejection after use of password procedure | 3145 |
| 31.8.5 | Invocation | 3147 |
| 31.8.6 | Interrogation | 3148 |
| 31.8.6.1 | Interrogation accepted | 3148 |
| 31.8.6.2 | Interrogation rejected | 3150 |
| 31.8.7 | Normal operation | 3153 |
| 31.9 | Handling of undefined (future) GSM supplementary services | 3154 |
| 31.9.1 | Mobile station initiated Unstructured supplementary service data operation | 3154 |
| 31.9.1.1 | ProcessUnstructuredSS-request/accepted | 3154 |
| 31.9.1.2 | ProcessUnstructuredSS-request/cross phase compatibility and error handling | 3160 |
| 31.9.2 | Network initiated unstructured supplementary service operations | 3165 |
| 31.9.2.1 | UnstructuredSS-Notify/accepted | 3165 |
| 31.9.2.2 | UnstructuredSS-Notify/rejected on user busy | 3167 |
| 31.9.2.3 | UnstructuredSS-Request/accepted | 3169 |
| 31.10 | MMI input for USSD | 3174 |
| 31.11 | Specific message contents and ASN.1 codings | 3175 |
| 31.12 | eMLPP Service | 3221 |
| 31.12.1 | eMLPP Service / priority level of MO call | 3221 |
| 31.12.2 | eMLPP Service / automatic answering point-to-point MT call | 3225 |
| 31.12.3 | eMLPP Service / automatic answering MT VGCS or VBS call | 3229 |
| 31.12.4 | eMLPP Service / registration | 3231 |
| 31.12.5 | eMLPP Service / interrogation | 3233 |
| 31.13 | Explicit Call Transfer (ECT) | 3235 |
| 31.13.1 | Explicit Call Transfer invocation | 3235 |
| 31.13.1.1 | Explicit Call Transfer invocation, successful case, both calls active, clearing using DISCONNECT | 3235 |
| 31.13.1.2 | Explicit Call Transfer invocation, successful case, both calls active, clearing using RELEASE | 3236 |
| 31.13.1.3 | Explicit Call Transfer invocation, successful case, both calls active, clearing using RELEASE COMPLETE | 3237 |
| 31.13.1.4 | Explicit Call Transfer invocation, successful case, second call alerting | 3239 |
| 31.13.1.5 | Explicit Call Transfer invocation, unsuccessful case | 3240 |
| 31.13.1.6 | Explicit Call Transfer invocation, expiry of T(ECT) | 3242 |
| 31.14 | User-to-User Signalling (UUS) | 3243 |
| 31.14.1 | UUS / Implicit UUS1 | 3244 |
| 31.14.1.1 | UUS / Implicit UUS1 / CC MO call | 3244 |
| 31.14.1.2 | UUS / Implicit UUS1 / CC MT call | 3247 |
| 31.14.1.3 | UUS / Implicit UUS1 / Interactions with Call Waiting and call HOLD supplementary services | 3251 |
| 31.15 | Follow Me (FM) | 3255 |
| 31.15.1 | Follow Me (FM) / Registration | 3255 |
| 31.15.2 | Follow Me (FM) / Interrogation | 3260 |
| 31.15.3 | Follow Me (FM) / Erasure | 3263 |

| | | |
|----------|---|------|
| 32 | Testing of speech transcoding functions | 3269 |
| 32.1 | Full Rate Downlink speech transcoding..... | 3269 |
| 32.2 | Full Rate Downlink receiver DTX functions..... | 3270 |
| 32.3 | Full Rate Uplink speech transcoding..... | 3273 |
| 32.4 | Full Rate Uplink transmitter DTX functions | 3274 |
| 32.5 | Full Rate Speech channel transmission delay..... | 3275 |
| 32.5.1 | Definition..... | 3275 |
| 32.5.2 | Conformance requirement | 3275 |
| 32.5.3 | Test purpose..... | 3275 |
| 32.5.4 | Downlink processing delay..... | 3275 |
| 32.5.5 | Downlink coding delay..... | 3276 |
| 32.5.6 | Uplink processing delay..... | 3276 |
| 32.5.7 | Uplink coding delay..... | 3277 |
| 32.6 | Half Rate Downlink speech transcoding | 3277 |
| 32.7 | Half Rate Downlink receiver DTX functions | 3278 |
| 32.8 | Half Rate Uplink speech transcoding | 3279 |
| 32.9 | Half Rate Uplink transmitter DTX functions | 3280 |
| 32.10 | Half Rate Speech channel transmission delay | 3282 |
| 32.10.1 | Definition..... | 3282 |
| 32.10.2 | Conformance requirement | 3282 |
| 32.10.3 | Test purpose..... | 3282 |
| 32.10.4 | Downlink processing delay..... | 3282 |
| 32.10.5 | Downlink coding delay..... | 3283 |
| 32.10.6 | Uplink processing delay..... | 3283 |
| 32.10.7 | Uplink coding delay..... | 3284 |
| 32.11 | Intra cell channel change from a TCH/HS to a TCH/FS | 3284 |
| 32.12 | Intra cell channel change from a TCH/FS to a TCH/HS | 3286 |
| 33 | Mobile station features | 3288 |
| 33.1 | Entry and display of called number..... | 3288 |
| 33.2 | Indication of call progress signals | 3289 |
| 33.2.1 | Definition..... | 3289 |
| 33.2.2 | Conformance requirement | 3290 |
| 33.2.3 | Test purpose..... | 3290 |
| 33.2.4 | Ringing tone..... | 3290 |
| 33.2.5 | Busy tone | 3290 |
| 33.2.6 | Congestion tone | 3291 |
| 33.2.7 | Authentication failure tone | 3291 |
| 33.2.8 | Number unobtainable tone..... | 3291 |
| 33.2.9 | Call dropped tone..... | 3292 |
| 33.3 | Network selection / indication..... | 3292 |
| 33.4 | Invalid and blocked PIN indicators | 3297 |
| 33.5 | Service indicator..... | 3297 |
| 33.6 | Subscription identity management | 3298 |
| 33.7 | Barring of outgoing calls..... | 3299 |
| 33.8 | Prevention of unauthorized calls | 3299 |
| 34 | Short message service (SMS)..... | 3300 |
| 34.1 | General | 3300 |
| 34.2 | Short message service point to point | 3300 |
| 34.2.1 | SMS mobile terminated | 3300 |
| 34.2.2 | SMS mobile originated | 3305 |
| 34.2.3 | Test of memory full condition and memory available notification:..... | 3310 |
| 34.2.4 | Test of the status report capabilities and of SMS-COMMAND: | 3314 |
| 34.2.5 | Test of message class 0 to 3 | 3317 |
| 34.2.5.1 | Short message class 0..... | 3317 |
| 34.2.5.2 | Test of class 1 short messages..... | 3319 |
| 34.2.5.3 | Test of class 2 short messages..... | 3321 |
| 34.2.5.4 | Test of class 3 short messages..... | 3324 |
| 34.2.6 | Test of short message type 0 (Ph2, R96...R99 and REL-4) | 3324 |
| 34.2.6a | Test of short message type 0 (\geq REL 5)..... | 3326 |
| 34.2.7 | Test of the replace mechanism for SM type 1-7 | 3329 |

| | | |
|-------------|---|------|
| 34.2.8 | Test of the reply path scheme | 3332 |
| 34.2.9 | Multiple SMS mobile originated | 3335 |
| 34.2.9.1 | MS in idle mode | 3335 |
| 34.2.9.2 | MS in active mode | 3339 |
| 34.3 | Short message service cell broadcast | 3341 |
| 34.4 | Short message service point to point over GPRS | 3343 |
| 34.4.1 | SMS mobile terminated | 3343 |
| 34.4.2 | SMS mobile originated | 3347 |
| 34.4.3 | Test of the status report capabilities and of SMS-COMMAND over GPRS: | 3351 |
| 34.4.4 | Test of capabilities of simultaneously receiving a short message whilst sending a mobile originated short message | 3353 |
| 34.4.5 | Void | 3354 |
| 34.4.6 | Concatenated MO SMS over GPRS | 3354 |
| 34.4.7 | Concatenated MT SMS over GPRS | 3356 |
| 34.4.8 | Short Messaging Service – Handling of unknown, unforeseen, and erroneous protocol data | 3358 |
| 34.4.8.1 | CP Error Handling | 3358 |
| 34.4.8.2 | RP Error Handling | 3360 |
| 34.5 | Default message contents | 3364 |
| 35 | Low battery voltage detection | 3366 |
| 36 | Individual equipment type requirements and interworking - special conformance testing functions | 3367 |
| 37 to 39 | Void | 3367 |
| 40 | GPRS default conditions, message contents and macros | 3368 |
| 40.1 | Default test conditions | 3368 |
| 40.1.1 | Default settings for cell A | 3369 |
| 40.1.2 | Default settings for cell B | 3373 |
| 40.1.3 | Default settings for cell C | 3373 |
| 40.1.4 | Default settings for cell D | 3374 |
| 40.1.5 | Default settings for cell E | 3375 |
| 40.1.6 | Default settings for cell F | 3376 |
| 40.1a | EC-GSM-IoT Default test conditions | 3377 |
| 40.2 | Default message contents | 3378 |
| 40.2.1 | System Information messages | 3378 |
| 40.2.1.1 | Cell A | 3378 |
| 40.2.1.2 | Cell B | 3382 |
| 40.2.1.3 | Cell C | 3383 |
| 40.2.1.4 | Cell D | 3384 |
| 40.2.1.5 | Cell E | 3386 |
| 40.2.1.6 | Cell F | 3388 |
| 40.2.2 | Packet System Information messages on PACCH | 3390 |
| 40.2.3 | Default contents of Layer 2 messages | 3391 |
| 40.2.4 | Default contents of Layer 3 messages | 3394 |
| 40.2.4.1 | ACTIVATE PDP CONTEXT ACCEPT message: | 3395 |
| 40.2.4.2 | ACTIVATE PDP CONTEXT REJECT message: | 3395 |
| 40.2.4.3 | ATTACH ACCEPT message: | 3395 |
| 40.2.4.4 | ATTACH REJECT message: | 3395 |
| 40.2.4.5 | AUTHENTICATION AND CIPHERING REJECT message: | 3395 |
| 40.2.4.6 | AUTHENTICATION AND CIPHERING REQUEST message: | 3396 |
| 40.2.4.7 | CHANNEL RELEASE message: | 3396 |
| 40.2.4.8 | DEACTIVATE PDP CONTEXT ACCEPT message: | 3396 |
| 40.2.4.9 | DETACH ACCEPT message (for mobile terminated detach): | 3396 |
| 40.2.4.10 | DETACH REQUEST message (mobile terminated detach): | 3396 |
| 40.2.4.11 | GMM INFORMATION message: | 3396 |
| 40.2.4.12 | GMM STATUS message: | 3396 |
| 40.2.4.13 | IDENTITY REQUEST message: | 3397 |
| 40.2.4.14 | IMMEDIATE ASSIGNMENT messages | 3397 |
| 40.2.4.14.1 | IMMEDIATE ASSIGNMENT message (Packet Downlink Construction): | 3397 |
| 40.2.4.14.2 | IMMEDIATE ASSIGNMENT message (Packet Uplink construction): | 3398 |
| 40.2.4.14.3 | IMMEDIATE ASSIGNMENT message (Single block allocation construction): | 3399 |
| 40.2.4.15 | IMMEDIATE ASSIGNMENT EXTENDED message: | 3399 |

| | | |
|------------|---|------|
| 40.2.4.16 | IMMEDIATE ASSIGNMENT REJECT message:..... | 3400 |
| 40.2.4.17 | MODIFY PDP CONTEXT REQUEST message:..... | 3400 |
| 40.2.4.18 | PAGING REQUEST TYPE 1 message: | 3400 |
| 40.2.4.19 | PAGING REQUEST TYPE 2 message: | 3401 |
| 40.2.4.20 | PAGING REQUEST TYPE 3 message: | 3401 |
| 40.2.4.21 | PDCH ASSIGNMENT COMMAND message (downlink): | 3402 |
| 40.2.4.22 | REQUEST PDP CONTEXT ACTIVATION message (mobile originated detach):..... | 3402 |
| 40.2.4.23 | ROUTING AREA UPDATE ACCEPT message: | 3403 |
| 40.2.4.24 | ROUTING AREA UPDATE REJECT message:..... | 3403 |
| 40.2.4.25 | RR-CELL CHANGE ORDER message: | 3403 |
| 40.2.4.26 | SM STATUS message: | 3403 |
| 40.2.4.27 | DETACH ACCEPT message (for mobile orginated detach): | 3403 |
| 40.2.4.28 | DTM Assignment Command | 3404 |
| 40.2.4.29 | DTM Reject..... | 3405 |
| 40.2.4.30 | Packet Notification..... | 3405 |
| 40.2.4.31 | Packet Assignment..... | 3406 |
| 40.2.4.32 | Assignment Command | 3407 |
| 40.2.4.33 | Handover Command | 3407 |
| 40.2.4.34 | Physical Information | 3407 |
| 40.2.4.35 | Connect Acknowledge | 3408 |
| 40.2.4.36 | Location Updating Accept | 3408 |
| 40.2.4.37 | System Information Type 6..... | 3408 |
| 40.2.4.38 | DTM Information..... | 3409 |
| 40.2.4.39 | PS Handover | 3409 |
| 40.2a | EC-GSM-IoT Default message contents | 3409 |
| 40.2a.1 | EC-GSM-IoT System Information messages..... | 3409 |
| 40.2a.1.1 | EC System information type 1 (Instance 1) | 3409 |
| 40.2a.1.2 | EC System information type 2 (Instance 1) | 3410 |
| 40.2a.1.3 | EC System information type 3 (Instance 1) | 3411 |
| 40.2a.1.4 | EC System information type 4 | 3411 |
| 40.2a.2 | EC default contents of Layer 2 messages | 3411 |
| 40.2a.2.1 | EC-PAGING REQUEST | 3411 |
| 40.2a.2.2 | EC-IMMEDIATE ASSIGNMENT TYPE 1 | 3412 |
| 40.2a.2.3 | EC-IMMEDIATE ASSIGNMENT TYPE 2 | 3412 |
| 40.2a.2.4 | EC-IMMEDIATE ASSIGNMENT REJECT | 3413 |
| 40.2a.2.5 | EC-DOWNLINK ASSIGNMENT | 3413 |
| 40.3 | Default GPRS Conditions and Message Contents for the Higher Layer Test Cases | 3414 |
| 40.3.1 | Default Test Conditions for the Higher Layer Test Cases | 3414 |
| 40.3.2 | Default Message for the Higher Layer Test Cases..... | 3414 |
| 40.3.2.1 | Default Contents of System Information Messages for the Higher Layer Test Cases | 3414 |
| 40.3.3 | Contents Of Packet System Information Messages for the Higher Layer Test Cases | 3415 |
| 40.3.4 | Contents of Layer 2 Messages for the Higher Layer Test Cases | 3415 |
| 40.3.5 | Contents of Layer 3 Messages for the Higher Layer Test Cases | 3415 |
| 40.3.6 | Timer tolerance for higher layer test cases | 3416 |
| 40.4 | Macros | 3416 |
| 40.4.1 | Overview | 3416 |
| 40.4.1.1 | Definition | 3416 |
| 40.4.1.2 | Syntax | 3416 |
| 40.4.1.2.1 | Message contents | 3416 |
| 40.4.1.2.2 | Message sequence | 3416 |
| 40.4.2 | Default message contents..... | 3417 |
| 40.4.3 | Macro message sequences | 3418 |
| 40.4.3.1 | Acknowledged downlink data..... | 3418 |
| 40.4.3.2 | Classmark and measurement..... | 3418 |
| 40.4.3.3 | Downlink data | 3418 |
| 40.4.3.4 | Downlink data transfer | 3418 |
| 40.4.3.5 | Measurement reporting | 3419 |
| 40.4.3.6 | Uplink data transfer..... | 3419 |
| 40.4.3.7 | Uplink dynamic allocation one phase access | 3420 |
| 40.4.3.8 | Uplink dynamic allocation one phase access with contention resolution..... | 3420 |
| 40.4.3.9 | Uplink dynamic allocation two phase access | 3421 |
| 40.4.3.10 | Completion of uplink RLC data block transfer | 3421 |

| | | |
|------------|---|------|
| 40.4.3.11 | Void..... | 3423 |
| 40.4.3.12 | Void..... | 3423 |
| 40.4.3.13 | Void..... | 3423 |
| 40.4.3.14 | Downlink TBF establishment..... | 3423 |
| 40.4.3.15 | PDP Context Activation..... | 3423 |
| 40.4.3.16 | PDP Context Deactivation | 3423 |
| 40.4.3.17 | Inter-SGSN Routing Area Update..... | 3424 |
| 40.4.3.17a | Inter-SGSN Routing Area Update – with PSHO | 3425 |
| 40.4.3.18 | PDP Context Modification..... | 3425 |
| 40.4.3.19 | Location Update Procedure..... | 3426 |
| 40.4.3.20 | MT Call in GPRS cell | 3426 |
| 40.4.3.21 | Uplink data..... | 3428 |
| 40.4.3.22 | Bring MS in the active state (U10)..... | 3429 |
| 40.4.3.23 | Completion of uplink RLC data block transfer in extended dynamic mode | 3430 |
| 40.5 | Test PDP contexts | 3430 |
| 41 | GPRS Paging, TBF establishment/release and DCCH related procedures | 3437 |
| 41.1 | RR / Paging | 3437 |
| 41.1.1 | Void | 3437 |
| 41.1.2 | Void | 3437 |
| 41.1.3 | Void | 3437 |
| 41.1.4 | Void | 3437 |
| 41.1.5 | RR / Paging / on CCCH for GPRS service | 3437 |
| 41.1.5.1 | RR / Paging / on CCCH for GPRS service / normal paging | 3437 |
| 41.1.5.1.1 | RR / Paging / on CCCH for GPRS service / normal paging with P-TMSI successful | 3437 |
| 41.1.5.1.2 | RR / Paging / on CCCH for GPRS service / normal paging with IMSI successful | 3440 |
| 41.1.5.1.3 | RR / Paging / on CCCH for GPRS service / normal paging with P-TMSI ignored..... | 3442 |
| 41.1.5.2 | RR / Paging / on CCCH for GPRS service / extended paging | 3444 |
| 41.1.5.2.1 | RR / Paging / on CCCH for GPRS service / extended paging with P-TMSI successful | 3444 |
| 41.1.5.3 | RR / Paging / on CCCH for GPRS service / paging reorganisation | 3446 |
| 41.1.5.4 | RR / Paging / on CCCH for GPRS service / default message contents..... | 3449 |
| 41.1.6 | Void | 3450 |
| 41.2 | RR procedures on CCCH related to temporary block flow establishment | 3450 |
| 41.2.1 | Permission to access the network | 3450 |
| 41.2.1.1 | Permission to access the network / priority classes..... | 3450 |
| 41.2.2 | Initiation of the packet access procedure | 3451 |
| 41.2.2.1 | Initiation of the packet access procedure / establishment causes | 3451 |
| 41.2.2.2 | Random references for single block packet access | 3453 |
| 41.2.2.3 | Random references for one phase packet access..... | 3454 |
| 41.2.2.4 | Initiation of the packet access procedure / timer T3146..... | 3455 |
| 41.2.2.5 | Initiation of the packet access procedure / Request Reference..... | 3457 |
| 41.2.3 | Packet immediate assignment / One phase packet access | 3458 |
| 41.2.3.1 | Two-message assignment / Successful case..... | 3458 |
| 41.2.3.2 | Two-message assignment / Failure cases..... | 3459 |
| 41.2.3.3 | Packet uplink assignment / Polling bit set..... | 3462 |
| 41.2.3.4 | One phase packet access / Contention resolution / Successful case | 3463 |
| 41.2.3.5 | One phase packet access / Contention resolution / TLLI mismatch..... | 3464 |
| 41.2.3.6 | One phase packet access / Contention resolution / Counter N3104 | 3465 |
| 41.2.3.7 | One phase packet access / Contention resolution / Timer T3166..... | 3466 |
| 41.2.3.8 | One phase packet access / Contention resolution / 4 access repetition attempts | 3468 |
| 41.2.3.9 | One phase packet access / TBF starting time | 3470 |
| 41.2.3.10 | One phase packet access / Timing Advance Index present | 3472 |
| 41.2.3.11 | One phase packet access / Timing Advance Index not present | 3474 |
| 41.2.4 | Packet immediate assignment / Single block packet access | 3475 |
| 41.2.4.1 | Single block packet access / Packet Resource Request..... | 3475 |
| 41.2.4.2 | Single block packet access / Packet Measurement Report..... | 3476 |
| 41.2.5 | Packet immediate assignment / Packet access rejection | 3477 |
| 41.2.5.1 | Packet access rejection / wait indication | 3477 |
| 41.2.5.2 | Packet access rejection / assignment before T3142 expires | 3478 |
| 41.2.6 | Packet downlink assignment procedure using CCCH | 3480 |
| 41.2.6.1 | Initiation of packet downlink assignment procedure / MS listens to correct CCCH block | 3480 |
| 41.2.6.2 | Initiation of packet downlink assignment procedure / timer T3190..... | 3481 |

| | | |
|--------------|--|------|
| 41.2.6.3 | Initiation of packet downlink assignment procedure / TBF starting time | 3482 |
| 41.2.6.4 | Initiation of packet downlink assignment procedure / incorrect TFI | 3483 |
| 41.2.7 | Single block packet downlink assignment | 3484 |
| 41.2.7.1 | Single block packet downlink assignment / TBF Starting Time | 3484 |
| 41.2.7.2 | Single block packet downlink assignment / MS returns to packet idle mode | 3485 |
| 41.2.8 | Macros and default message contents | 3487 |
| 41.2.8.1 | Macros..... | 3487 |
| 41.2.8.1.1 | GPRS attach procedure..... | 3487 |
| 41.2.8.1.2 | Uplink data transfer | 3488 |
| 41.2.8.1.3 | Downlink data transfer | 3489 |
| 41.3 | MAC/RLC Release..... | 3496 |
| 41.3.1 | TBF Release / Uplink / Normal / MS initiated | 3496 |
| 41.3.1.1 | TBF Release / Uplink / Normal / MS initiated / Acknowledged mode..... | 3496 |
| 41.3.1.2 | TBF Release / Uplink / Normal / MS initiated / Unacknowledged mode | 3500 |
| 41.3.1.3 | TBF Release / Uplink / Normal / MS initiated / Channel coding change during countdown | 3503 |
| 41.3.1.4 | TBF release / Uplink / Normal / MS initiated / Whilst in DTM | 3505 |
| 41.3.2 | TBF Release / Uplink / Normal / Network initiated | 3506 |
| 41.3.2.1 | TBF Release / Uplink / Normal / Network initiated / Acknowledged mode..... | 3506 |
| 41.3.2.2 | TBF Release / Uplink / Normal / Network initiated / Unacknowledged mode | 3508 |
| 41.3.2.3 | TBF release / Uplink / Normal / Network initiated / Whilst in DTM | 3510 |
| 41.3.3 | TBF Release / Uplink / Network initiated / Abnormal release | 3513 |
| 41.3.4 | TBF Release / Downlink / Normal / Network initiated | 3514 |
| 41.3.4.1 | TBF Release / Downlink / Normal / Network initiated / Acknowledged mode..... | 3514 |
| 41.3.4.2 | TBF Release / Downlink / Normal / Network initiated / Unacknowledged mode | 3517 |
| 41.3.4.3 | TBF release / Downlink / Normal / Network initiated / Whilst in DTM | 3519 |
| 41.3.5 | PDCH Release | 3521 |
| 41.3.5.1 | Void..... | 3521 |
| 41.3.5.2 | PDCH Release / With TIMESLOTS_AVAILABLE..... | 3521 |
| 41.3.6 | TBF Release / Extended Uplink | 3525 |
| 41.3.6.1 | TBF Release / Extended Uplink / Recalculation of CV before CV = 0 | 3525 |
| 41.3.6.2 | TBF Release / Extended Uplink / Recalculation of CV after CV = 0 | 3526 |
| 41.3.6.3 | TBF Release / Extended Uplink / CS change order while CV=0..... | 3528 |
| 41.3.6.4 | TBF Release / Extended Uplink / TBF reconfigure by PACKET TIMESLOT RECONFIGURE .. | 3530 |
| 41.3.6.5 | TBF Release / Extended Uplink / TBF reconfigure by PACKET UPLINK ASSIGNMENT..... | 3533 |
| 41.3.6.6 | Extended Uplink TBF / Cell Change while in Extended Uplink/ No Packet Neighbouring Cell Data | 3536 |
| 41.3.6.7 | Extended Uplink TBF / Cell Change failure while in Extended Uplink/ No Packet Neighbouring Cell Data | 3539 |
| 41.3.6.8 | Extended Uplink TBF / Cell Change while in Extended Uplink/ With Packet Neighbouring Cell Data | 3542 |
| 41.3.6.9 | TBF Release / Extended Uplink / Change of RLC mode / Normal release..... | 3546 |
| 41.3.6.10 | TBF Release / Extended Uplink / Change of RLC mode / Abnormal release..... | 3549 |
| 41.3.7 | Void | 3552 |
| 41.4 | Void..... | 3552 |
| 41.5 | Dual transfer mode | 3552 |
| 41.5.1 | PS establishment whilst in dedicated mode | 3552 |
| 41.5.1.1 | Uplink TBF establishment | 3552 |
| 41.5.1.1.1 | Uplink TBF establishment with no reallocation of CS resources | 3552 |
| 41.5.1.1.1.1 | Uplink TBF establishment with no reallocation of CS resources / Successful case / Uplink resources assigned..... | 3552 |
| 41.5.1.1.2 | Uplink TBF establishment with no reallocation of CS resources / Successful case / Downlink resources assigned..... | 3554 |
| 41.5.1.1.3 | Uplink TBF establishment with no reallocation of CS resources / Abnormal cases / DTM reject | 3556 |
| 41.5.1.1.4 | Uplink TBF establishment with no reallocation of CS resources / Abnormal cases / Inter System to UTRAN Handover Command..... | 3557 |
| 41.5.1.1.5 | Uplink TBF establishment with no reallocation of CS resources / Abnormal cases / Assignment Command..... | 3562 |
| 41.5.1.1.6 | Uplink TBF establishment with no reallocation of CS resources / Abnormal cases / Handover Command | 3564 |
| 41.5.1.1.7 | Uplink TBF establishment with no reallocation of CS resources / Abnormal cases / Channel Release..... | 3566 |

| | | |
|----------------|--|------|
| 41.5.1.1.2 | Uplink TBF establishment with reallocation of CS resources | 3567 |
| 41.5.1.1.2.1 | Uplink TBF establishment with reallocation of CS resources / Successful case | 3567 |
| 41.5.1.1.2.2 | Uplink TBF establishment with reallocation of CS resources / Abnormal case / Assignment Failure | 3568 |
| 41.5.1.1.2.3 | Uplink TBF establishment with reallocation of CS resources / Abnormal case / Multislot class violation | 3570 |
| 41.5.1.1.2.3.1 | Void..... | 3570 |
| 41.5.1.1.2.3.2 | Void..... | 3570 |
| 41.5.1.1.2.3.3 | Void..... | 3570 |
| 41.5.1.1.2.3.4 | Uplink TBF establishment with reallocation of CS resources / Abnormal case / Multislot class violation / Single slot allocation..... | 3570 |
| 41.5.1.1.2.3.5 | Uplink TBF establishment with reallocation of CS resources / Abnormal case / Multislot class violation / Incorrect Allocation | 3572 |
| 41.5.1.1.3 | Uplink TBF establishment required whilst DTM is not supported in cell | 3573 |
| 41.5.1.2 | Downlink TBF establishment..... | 3574 |
| 41.5.1.2.1 | Whilst in Ready State | 3574 |
| 41.5.1.2.1.1 | Downlink TBF establishment in Ready State / Successful case | 3574 |
| 41.5.1.2.1.2 | Downlink TBF establishment in Ready State / Abnormal cases / No cell allocation available | 3576 |
| 41.5.1.2.2 | Whilst in Standby State / Packet Notification | 3577 |
| 41.5.2 | CS establishment whilst in packet transfer mode | 3578 |
| 41.5.2.1 | MT CS establishment whilst in packet transfer mode with a downlink TBF established | 3578 |
| 41.5.2.2 | MT CS establishment whilst in packet transfer mode with a uplink TBF established | 3581 |
| 41.5.2.3 | MO CS establishment whilst in packet transfer mode with uplink and downlink TBFs established | 3583 |
| 41.5.2.4 | MO CS establishment whilst in packet transfer mode and DTM is not supported in current cell | 3584 |
| 41.5.3 | PS establishment whilst in dual transfer mode | 3586 |
| 41.5.3.1 | Uplink TBF establishment with a downlink TBF established..... | 3586 |
| 41.5.3.1.1 | Uplink TBF establishment with a downlink TBF established and no PS downlink reallocation | 3586 |
| 41.5.3.1.2 | Uplink TBF establishment with a downlink TBF established and PS downlink reallocation | 3588 |
| 41.5.3.2 | Downlink TBF establishment with a uplink established | 3590 |
| 41.5.3.2.1 | Downlink TBF establishment with a uplink TBF established and no PS uplink reallocation | 3590 |
| 41.5.3.2.2 | Downlink TBF establishment with a uplink TBF established and PS uplink reallocation | 3591 |
| 41.5.4 | Enhanced DTM CS Establishment | 3593 |
| 41.5.4.1 | MT Call Establishment - No Reallocation of PS Resources | 3593 |
| 41.5.4.2 | MT Call Establishment - Reallocation of PS Resources - Allocation of New Downlink TBF | 3594 |
| 41.5.4.3 | MT Call Establishment - Allocation of CS Resources Only - Downlink TBF..... | 3596 |
| 41.5.4.4 | MO Call Establishment - No Reallocation of PS Resources | 3598 |
| 41.5.4.5 | MO Call Establishment - Reallocation of PS Resources..... | 3600 |
| 41.5.4.6 | MO Call Establishment - Allocation of CS Resources Only - Downlink TBF | 3602 |
| 41.5.4.7 | MO Call Establishment – IMMEDIATE ASSIGNMENT REJECT | 3604 |
| 41.5.4.8 | MO Call Establishment - Dedicated Channel Establishment Failure | 3610 |
| 41.5.5 | Enhanced DTM CS Release..... | 3613 |
| 41.5.5.1 | SI Acquisition - No Reallocation of PS Resources | 3613 |
| 41.5.5.2 | Reallocation of PS Resources for Uplink and Downlink TBFs | 3617 |
| 41.5.5.3 | Change of LA in NW Mode II | 3620 |
| 41.5.5.4 | Change of LA in NW Mode I..... | 3624 |
| 41.6 | Intra SGSN PS Handover | 3627 |
| 41.6.1 | Intra SGSN PS Handover / Synchronized cell case | 3627 |
| 41.6.1.1 | Intra SGSN PS Handover / Synchronized cell case / successful | 3627 |
| 41.6.1.2 | Intra SGSN PS Handover / Synchronized cell case / Abnormal Case / T3218 expiry | 3629 |
| 41.6.1.3 | Intra SGSN PS Handover / Synchronized cell case / Abnormal Case / Minimum set of SI not available | 3631 |
| 41.6.2 | Intra SGSN PS Handover / Pre-synchronized cell case | 3633 |
| 41.6.2.1 | Intra SGSN PS Handover / Pre-synchronized cell case / successful / RLC reset | 3633 |
| 41.6.2.2 | Intra SGSN PS Handover / Pre-synchronized cell case / Frequency parameters / successful..... | 3635 |
| 41.6.3 | Intra SGSN PS Handover / Non synchronized cell case | 3639 |
| 41.6.3.1 | Intra SGSN PS Handover / Non synchronized cell case / PS Handover Access (8-bit / 11-bit format) / successful | 3639 |
| 41.6.3.2 | Intra SGSN PS Handover / Non synchronized cell case / Different RA / successful..... | 3642 |
| 41.6.3.3 | Intra SGSN PS Handover / Non synchronized cell case / Abnormal Case / T3216 expiry | 3645 |
| 41.7 | PEO - Power Efficiency Operation | 3647 |
| 41.7.1 | Macros and default message contents | 3647 |

| | | |
|------------|--|------|
| 41.7.1.1 | Macros..... | 3647 |
| 41.7.1.2 | GPRS Attach Procedure for PEO | 3647 |
| 41.7.2 | Paging | 3649 |
| 41.7.2.1 | PEO Paging / Ready Timer Expiration | 3649 |
| 41.7.2.2 | PEO Paging / PSM and eDRX | 3650 |
| 41.7.2.3 | PEO Paging / PEO_BCCH_CHANGE_MARK | 3652 |
| 41.7.3 | Extended Uplink TBF..... | 3653 |
| 41.7.3.1 | PEO / Extended UL TBF | 3653 |
| 41.8 | EC-GSM-IoT procedures | 3657 |
| 41.8.1 | EC-GSM-IoT / Packet Access | 3657 |
| 41.8.1.1 | EC-GSM-IoT / Packet Access / EC-BCCH CHANGE MARK..... | 3657 |
| 41.8.1.2 | EC-GSM-IoT / Packet Access / EC-GSM-IoT / RACH Access allowed / Packet Access on RACH | 3659 |
| 41.8.1.3 | EC-GSM-IoT / Packet Access / EC-GSM-IoT / 1TS EC-RACH Mapping / CC1..... | 3660 |
| 41.8.1.4 | EC-GSM-IoT / Packet Access / EC-GSM-IoT / 1TS EC-RACH Mapping / Access Timeslots field = 0 | 3662 |
| 41.8.1.5 | EC-GSM-IoT / Packet Access / EC-GSM-IoT / 2TS EC-RACH Mapping | 3663 |
| 41.8.1.6 | EC-GSM-IoT / Packet Access / Implicit Reject..... | 3665 |
| 41.8.1.7 | EC-GSM-IoT / Packet Access / Legacy Implicit Reject | 3667 |
| 41.8.1.7.1 | Conformance requirements..... | 3667 |
| 41.8.1.7.2 | Test purpose | 3668 |
| 41.8.1.7.3 | Method of test..... | 3668 |
| 41.8.2 | EC-GSM-IoT / Paging | 3669 |
| 41.8.2.1 | EC-GSM-IoT / Paging / normal paging | 3669 |
| 41.8.2.2 | EC-GSM-IoT / Paging / normal paging / with eDRX or eDRX and PSM | 3672 |
| 41.8.2.2.1 | Conformance requirements..... | 3672 |
| 41.8.2.1.2 | Test purpose | 3673 |
| 41.8.2.2.3 | Method of test..... | 3674 |
| 41.8.3 | ..... | 3676 |
| 41.8.4 | EC-GSM-IoT / Coverage Class | 3676 |
| 41.8.4.0 | EC-GSM-IoT / Coverage Class / Default Conditions | 3676 |
| 41.8.4.1 | EC-GSM-IoT / Coverage Class / Paging Extension..... | 3676 |
| 41.8.4.1.1 | Conformance requirement | 3676 |
| 41.8.4.1.2 | Test purpose | 3677 |
| 41.8.4.1.3 | Method of test..... | 3677 |
| 41.8.4.2 | EC-GSM-IoT / Coverage Class / UL Coverage Class selection | 3679 |
| 41.8.4.2.1 | Conformance requirement | 3679 |
| 41.8.4.2.2 | Test purpose | 3680 |
| 41.8.4.2.3 | Method of test..... | 3680 |
| 41.8.4.3 | EC-GSM-IoT / Coverage Class / DL Coverage Class selection / RLA_EC | 3681 |
| 41.8.4.3.1 | Conformance requirement | 3681 |
| 41.8.4.3.2 | Test purpose | 3683 |
| 41.8.4.3.3 | Method of test..... | 3683 |
| 41.8.4.4 | EC-GSM-IoT / Coverage Class / DL Coverage Class selection / SLA..... | 3684 |
| 41.8.4.4.1 | Conformance requirement | 3684 |
| 41.8.4.4.2 | Test purpose | 3685 |
| 41.8.4.4.3 | Method of test..... | 3685 |
| 41.8.4.5 | EC-GSM-IoT / Coverage Class / UL Coverage Class Adaptation..... | 3686 |
| 41.8.4.5.1 | Conformance requirement | 3686 |
| 41.8.4.5.2 | Test purpose | 3687 |
| 41.8.4.5.3 | Method of test..... | 3687 |
| 41.8.4.6 | EC-GSM-IoT / Coverage Class / DL Coverage Class Update | 3688 |
| 41.8.4.6.1 | Conformance requirement | 3688 |
| 41.8.4.6.2 | Test purpose | 3689 |
| 41.8.4.6.3 | Method of test..... | 3689 |
| 42 | Test of Medium Access Control (MAC) protocol..... | 3693 |
| 42.1 | Test of Medium Access Control (MAC) Procedures | 3693 |
| 42.1.1 | Void | 3693 |
| 42.1.2 | Packet Uplink/Downlink Assignment..... | 3693 |
| 42.1.2.1 | Packet uplink assignment procedure | 3693 |
| 42.1.2.1.1 | Void..... | 3693 |

| | | |
|----------------|---|------|
| 42.1.2.1.2 | Void..... | 3693 |
| 42.1.2.1.3 | Void..... | 3693 |
| 42.1.2.1.4 | Void..... | 3693 |
| 42.1.2.1.5 | Void..... | 3693 |
| 42.1.2.1.6 | Void..... | 3693 |
| 42.1.2.1.7 | Void..... | 3693 |
| 42.1.2.1.8 | Void..... | 3693 |
| 42.1.2.1.9 | Packet Uplink Assignment / Two phase access..... | 3693 |
| 42.1.2.1.9.1 | Void..... | 3693 |
| 42.1.2.1.9.2 | Packet Uplink Assignment / Two phase access / Contention resolution | 3693 |
| 42.1.2.1.9.2.1 | Packet Uplink Assignment / Two phase access / Contention resolution / Expiry of timer T3168 | 3693 |
| 42.1.2.1.9.2.2 | Packet Uplink Assignment / Two phase access / Contention resolution / TLLI mismatch | 3694 |
| 42.1.2.1.9.3 | Packet Uplink Assignment / Two phase access / Packet Resource Request / No respond to Packet Downlink Assignment | 3696 |
| 42.1.2.1.10 | Packet Uplink Assignment / Abnormal cases..... | 3697 |
| 42.1.2.1.10.1 | Packet Uplink Assignment / Abnormal cases / Incorrect PDCH assignment | 3697 |
| 42.1.2.1.10.2 | Packet Uplink Assignment / Abnormal cases / Expiry of timer T3164..... | 3698 |
| 42.1.2.2 | Packet Downlink Assignment | 3700 |
| 42.1.2.2.1 | Packet Downlink Assignment / Response to poll bit..... | 3700 |
| 42.1.2.2.2 | Void..... | 3701 |
| 42.1.2.2.3 | Void..... | 3701 |
| 42.1.2.2.4 | Packet Downlink Assignment / Response to Packet Polling..... | 3701 |
| 42.1.2.2.5 | Void..... | 3703 |
| 42.1.2.2.6 | Packet Downlink Assignment Timing Advance / TA value field not provided | 3703 |
| 42.2 | Void..... | 3704 |
| 42.3 | Dynamic Allocation in Packet Transfer Mode | 3704 |
| 42.3.1 | Dynamic Allocation / Uplink Transfer | 3704 |
| 42.3.1.1 | Dynamic Allocation / Uplink Transfer / Normal | 3704 |
| 42.3.1.1.1 | Dynamic Allocation / Uplink Transfer / Normal / Successful..... | 3704 |
| 42.3.1.1.2 | Void..... | 3707 |
| 42.3.1.1.3 | Dynamic Allocation / Uplink Transfer / Normal / Starting frame number encoding | 3707 |
| 42.3.1.1.4 | Dynamic Allocation / Uplink Transfer / Normal / Starting time | 3708 |
| 42.3.1.1.5 | Void..... | 3712 |
| 42.3.1.1.6 | Dynamic Allocation / Uplink Transfer / Normal / T3180 expiry | 3712 |
| 42.3.1.1.7 | Dynamic Allocation / Uplink Transfer / Normal / PACCH operation..... | 3714 |
| 42.3.1.1.8 | Dynamic Allocation / Uplink Transfer / Normal / Two uplink timeslots | 3715 |
| 42.3.1.1.9 | Void..... | 3717 |
| 42.3.1.1.10 | Dynamic Allocation / Uplink Transfer / Normal / USF assigned with MCS-1 to MCS-4 | 3717 |
| 42.3.1.2 | Dynamic Allocation / Uplink Transfer / Abnormal | 3718 |
| 42.3.1.2.1 | Void..... | 3718 |
| 42.3.1.2.2 | Void..... | 3718 |
| 42.3.1.2.3 | Void..... | 3718 |
| 42.3.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment (concurrent)..... | 3718 |
| 42.3.2.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal | 3718 |
| 42.3.2.1.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal / Successful..... | 3718 |
| 42.3.2.1.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal / Multislot capabilities | 3722 |
| 42.3.2.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal | 3731 |
| 42.3.2.2.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal / with random access..... | 3731 |
| 42.3.2.2.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal / Continuation of normal operation..... | 3735 |
| 42.3.3 | Dynamic Allocation / Resource reallocation | 3736 |
| 42.3.3.1 | Dynamic Allocation / Resource reallocation / Successful..... | 3736 |
| 42.3.3.1.1 | Dynamic Allocation / Resource reallocation / Successful / Higher throughput class or higher radio priority..... | 3737 |
| 42.3.3.1.2 | Dynamic Allocation / Resource reallocation / Successful / Lower throughput class | 3740 |
| 42.3.3.1.3 | Dynamic Allocation / Resource reallocation / Successful / Different RLC mode and higher radio priority..... | 3743 |
| 42.3.3.2 | Dynamic Allocation / Resource reallocation / Abnormal | 3746 |

| | | |
|------------|--|------|
| 42.3.3.2.1 | Dynamic Allocation / Resource reallocation / Abnormal / T3168 expiry | 3746 |
| 42.3.3.2.2 | Dynamic Allocation / Resource reallocation / Abnormal / Invalid assignment..... | 3748 |
| 42.3.3.3 | Dynamic Allocation / Resource reallocation / Reject | 3752 |
| 42.3.3.4 | Dynamic Allocation / Resource reallocation / Successful / Lower Coding Scheme Command | 3754 |
| 42.3.4 | Default message contents..... | 3757 |
| 42.4 | Measurement reports and Cell change order procedures..... | 3757 |
| 42.4.1 | Measurement reports..... | 3757 |
| 42.4.1.1 | Network Control measurement reporting / Uplink / Normal case..... | 3757 |
| 42.4.1.2 | Network Control measurement reporting / Idle mode / New cell reselection | 3760 |
| 42.4.1.3 | Network Control measurement reporting / Downlink transfer / Normal case..... | 3763 |
| 42.4.1.4 | Network Control measurement reporting / Uplink transfer / Continuation in Idle mode..... | 3766 |
| 42.4.1.5 | Network Control measurement reporting / Idle mode / DSC failure/ reselection. | 3769 |
| 42.4.2 | Cell change order procedures..... | 3771 |
| 42.4.2.1 | Cell change order procedure / Uplink transfer | 3771 |
| 42.4.2.1.1 | Cell change order procedure / Uplink transfer / Normal case..... | 3771 |
| 42.4.2.1.2 | Void..... | 3773 |
| 42.4.2.1.3 | Cell change order procedure / Uplink transfer / Failure cases / REJECT from the new cell..... | 3773 |
| 42.4.2.1.4 | Cell change order procedure / Uplink transfer / Failure cases / Contention resolution failure.... | 3776 |
| 42.4.2.1.5 | Void..... | 3780 |
| 42.4.2.1.6 | Cell change order procedure / Uplink transfer / Failure cases / Frequency not implemented | 3780 |
| 42.4.2.2 | Cell change order procedure / Downlink transfer | 3781 |
| 42.4.2.2.1 | Cell change order procedure / Downlink transfer / Normal case..... | 3781 |
| 42.4.2.2.2 | Cell change order procedure / Downlink transfer / Failure cases / REJECT from the new cell.. | 3784 |
| 42.4.2.2.3 | Cell change order procedure / Downlink transfer / Failure cases / Frequency not implemented | 3786 |
| 42.4.2.3 | Cell change order procedure / Simultaneous uplink and downlink transfer..... | 3788 |
| 42.4.2.3.1 | Cell change order procedure / Simultaneous uplink and downlink transfer / Normal case | 3788 |
| 42.4.2.3.2 | Void..... | 3792 |
| 42.4.2.3.3 | Void..... | 3792 |
| 42.4.2.3.4 | Packet Measurement order procedure / Downlink transfer / Normal case/ Routing Area Update/ NMO II | 3792 |
| 42.4.2.3.5 | Packet Measurement order procedure / Downlink transfer / Normal case/ Routing Area Update/ NMO I..... | 3795 |
| 42.4.2.3.6 | MT CS establishment whilst in NC2 with a downlink TBF established | 3798 |
| 42.4.2.3.7 | MT CS establishment whilst in NC2 with a uplink TBF established | 3800 |
| 42.4.3 | Macros and Default Message contents..... | 3803 |
| 42.4.3.1 | Macros..... | 3803 |
| 42.4.3.1.1 | Void..... | 3803 |
| 42.4.3.1.2 | Void..... | 3803 |
| 42.4.3.2 | Default Messages | 3803 |
| 42.4.3.2.1 | PACKET CELL CHANGE ORDER message | 3803 |
| 42.4.3.2.2 | PACKET CELL CHANGE FAILURE message | 3803 |
| 42.4.3.2.3 | PACKET MEASUREMENT ORDER message | 3804 |
| 42.4.4 | Cell Change Order Procedures without PBCCH | 3804 |
| 42.4.4.1 | Network Controlled Cell Reselection – Packet Measurement Order Procedure | 3804 |
| 42.4.4.2 | Network Controlled Cell Reselection/validity of reselection parameters/MS enters standby state.. | 3805 |
| 42.4.4.3 | Network Control measurement reporting / Idle mode / Returning to Broadcast parameters | 3807 |
| 42.4.4.4 | Void..... | 3809 |
| 42.4.4.5 | Network Control measurement reporting / Idle mode / Reselection due to RA failure | 3809 |
| 42.4.5 | Network Assisted Cell Change | 3810 |
| 42.4.5.1 | Network Assisted Cell Change / Expiry of T3206..... | 3810 |
| 42.4.5.2 | Network Assisted Cell Change / No Packet Neighbouring Cell Data and Packet Cell Change Continue..... | 3812 |
| 42.4.5.3 | Void..... | 3814 |
| 42.4.5.4 | Network Assisted Cell Change / Packet Neighbour Cell Data and Packet Cell Change Order | 3814 |
| 42.4.5.5 | Network Assisted Cell Change / Expiry of T3208 and T3210..... | 3821 |
| 42.4.5.6 | Network Assisted Cell Change / Entering packet idle mode..... | 3824 |
| 42.4.5.7 | Network Assisted Cell Change / CCN not supported towards target cell | 3826 |
| 42.4.5.8 | Network Assisted Cell Change / NC mode change..... | 3829 |
| 42.4.5.9 | Network Assisted Cell Change / NC mode change / Packet Neighbour Cell Data | 3831 |
| 42.4.6 | Packet Enhanced Measurement Report (PEMR) | 3838 |
| 42.4.6.1 | Network Control PEMR – Activation with SI Messages | 3838 |
| 42.4.6.2 | Void..... | 3841 |

| | | |
|------------|---|------|
| 42.4.6.3 | Network Control PEMR – Packet Measurement Order | 3841 |
| 42.4.6.4 | Network Control PEMR – Uplink Data Transfer..... | 3845 |
| 42.4.6.5 | Network Control PEMR – Downlink Data Transfer..... | 3849 |
| 42.4.6.6 | Network Control PEMR / Packet Cell Change Order | 3853 |
| 42.4.6.7 | Void..... | 3855 |
| 42.4.7 | Inter-RAT (GPRS to UTRAN) Cell Change Order | 3855 |
| 42.4.7.1 | Inter-RAT Cell Change Order (Known Cell) – Uplink Data Transfer..... | 3855 |
| 42.4.7.2 | Inter-RAT Cell Change Order (Unknown Cell) – Uplink Data Transfer | 3858 |
| 42.4.7.3 | Inter-RAT Cell Change Order (Known Cell) – Downlink Data Transfer | 3859 |
| 42.4.7.4 | Inter-RAT Cell Change Order (Known Cell) – Simultaneous uplink and downlink transfer | 3862 |
| 42.4.7.5 | Inter-RAT (GPRS to UTRAN) Cell Change Order (Known cell) / Failure | 3865 |
| 42.4.7.5.1 | Inter-RAT (GPRS to UTRAN) Cell Change Order (Known cell) / Failure / Uplink transfer / T3174 expiry | 3865 |
| 42.4.7.5.2 | Inter-RAT (GPRS to UTRAN) Cell Change Order (Known cell) / Failure / Downlink transfer / REJECT from target UTRAN cell with Inter-RAT info set to GSM. | 3867 |
| 42.4.8 | NC2 Procedures | 3870 |
| 42.4.8.1 | NC2 and DRX | 3870 |
| 42.4.8.1.1 | NC2 and DRX / NC_NON_DRX_PERIOD / Respect of NC2 non-DRX mode period | 3870 |
| 42.4.8.1.2 | NC2 and DRX / NC_NON_DRX_PERIOD / NC2 non-DRX mode period ordered in Packet Cell Change Order | 3873 |
| 42.4.8.1.3 | Void..... | 3876 |
| 42.4.8.1.4 | NC2 and DRX / NC_NON_DRX_PERIOD / NC2 non-DRX mode period broadcast in SI2Quater..... | 3876 |
| 42.4.8.1.5 | Void..... | 3881 |
| 42.4.8.1.6 | NC2 and DRX / NC_NON_DRX_PERIOD / NC2 non-DRX mode period / PBCCH absent / Default Value | 3881 |
| 42.4.8.2 | User Data vs Measurement Report Sending / Conflict situation..... | 3885 |
| 42.4.8.2.1 | Void..... | 3885 |
| 42.4.8.2.2 | User Data vs Measurement Report Sending / Conflict situation / Expiry of T3192 and T3158.. | 3885 |
| 42.4.8.2.3 | User Data vs Measurement Report Sending / Conflict situation / Expiry of T3182 and T3158.. | 3887 |
| 42.4.8.2.4 | User Data vs Measurement Report Sending / Conflict situation / Random Access procedure for PMR sending and User Data transmission..... | 3891 |
| 42.4.8.3 | Network Control measurement reporting and Dedicated connection..... | 3893 |
| 42.4.8.3.1 | Network Control measurement reporting / Dedicated connection / Timer Ready expiry..... | 3893 |
| 42.4.8.3.2 | Network Control measurement reporting / Dedicated connection / Different NC parameters / No T3158 expiry..... | 3895 |
| 42.4.8.3.3 | Network Control measurement reporting / Dedicated connection / Handover / No T3158 expiry..... | 3898 |
| 42.4.8.3.4 | Network Control measurement reporting / Dedicated connection / Different NC parameters / T3158 expiry | 3901 |
| 42.4.8.3.5 | Network Control measurement reporting / Dedicated connection / Handover / T3158 expiry .. | 3904 |
| 42.4.8.3.6 | Network Control measurement reporting / Dedicated connection / Assignment Reject/ | 3907 |
| 42.4.8.4 | Network Control measurement reporting / NC_FREQUENCY_LIST | 3908 |
| 42.4.8.4.1 | Network Control measurement reporting / NC_FREQUENCY_LIST / NC_FREQUENCY_LIST in Packet measurement order..... | 3908 |
| 42.4.8.4.2 | Void..... | 3914 |
| 42.4.8.4.3 | Network Control measurement reporting / NC_FREQUENCY_LIST / PMO with empty NC_FREQUENCY_LIST/ Return to BA(GPRS). | 3914 |
| 42.4.8.4.4 | Network Control measurement reporting / NC_FREQUENCY_LIST / Changes in BA(GPRS)/ Return to BA(GPRS)..... | 3917 |
| 42.4.8.4.5 | Network Control measurement reporting / NC_FREQUENCY_LIST / Dedicated connection/ Return to BA(GPRS)..... | 3920 |
| 42.4.8.4.6 | Network Control measurement reporting / NC_FREQUENCY_LIST / PMO sent in multiple instances | 3922 |
| 42.4.8.4.7 | Network Control measurement reporting / NC_FREQUENCY_LIST / same cell present twice in the list..... | 3926 |
| 42.4.8.5 | NC2 and DTM | 3928 |
| 42.4.8.5.1 | Ignoring Packet Measurement Order and Packet Cell Change Order whilst in DTM | 3928 |
| 42.5 | Downlink Transfer | 3930 |
| 42.5.1 | Downlink Transfer / Normal Operation..... | 3930 |
| 42.5.1.1 | Void..... | 3930 |
| 42.5.1.2 | Downlink Transfer/ Normal Operation / Without TBF starting time..... | 3930 |

| | | |
|------------|--|------|
| 42.5.2 | Downlink Transfer / Polling | 3932 |
| 42.5.2.1 | Downlink Transfer/ Polling/ Normal operation/RLC data block | 3932 |
| 42.5.2.2 | Downlink Transfer/ Polling/ Packet Polling Request/ Access Burst format | 3933 |
| 42.5.2.3 | Downlink Transfer/ Polling/ Packet Polling Request/ Control block format | 3934 |
| 42.5.3 | Downlink Transfer / T3190 Expiry / Initial allocation | 3936 |
| 42.5.3.1 | Downlink Transfer/ T3190 Expiry / Initial allocation / Restart with valid RLC data block | 3936 |
| 42.5.4 | Downlink Transfer / T3190 Expiry / Resource reallocation | 3938 |
| 42.5.4.1 | Downlink Transfer/ T3190 Expiry / Resource reallocation / Without TBF starting time | 3938 |
| 42.5.4.2 | Downlink Transfer/ T3190 Expiry / Resource reallocation / With TBF starting time | 3940 |
| 42.5.4.3 | Downlink Transfer/ T3190 Expiry / Resource reallocation / Restart with valid RLC data block | 3941 |
| 42.5.5 | Downlink Transfer / Reestablishment..... | 3943 |
| 42.5.5.1 | Downlink Transfer/ Reestablishment/ T3192 Expiry..... | 3943 |
| 42.5.5.2 | Downlink Transfer/ Reestablishment/ Packet Downlink Assignment | 3946 |
| 42.5.5.3 | Void..... | 3948 |
| 42.6 | MAC Modes whilst in DTM | 3948 |
| 42.6.1 | Exclusive allocation in single-slot configuration..... | 3948 |
| 42.6.2 | Void | 3949 |
| 42.6.3 | Void | 3949 |
| 42.7 | Packet assignment/ TA Value | 3949 |
| 42.7.1 | Void | 3949 |
| 42.7.2 | Packet Assignment / TA Value/TA not present in Packet uplink assignment sent On the PACCH | 3949 |
| 42.7.3 | Packet Assignment / TA Value/ PACKET POWER CONTROL/TIMING ADVANCE during contention resolution..... | 3950 |
| 42.7.4 | Packet Assignment / TA Value/TAI present/ multislot capabilities | 3952 |
| 42.7.5 | Packet Assignment / TA Value/ Update of TA using PACKET POWER CONTROL/TIMING ADVANCE..... | 3953 |
| 42.7.6 | Packet Uplink Assignment / Timing Advance / TA Index change | 3955 |
| 42.7.7 | Void | 3956 |
| 42.8 | Dynamic allocation/ Downlink Transfer with Uplink TBF Establishment/ T3168 | 3956 |
| 42.8.1 | Dynamic Allocation/ Downlink Transfer with Uplink TBF Establishment/ T3168/ Expiry | 3956 |
| 42.8.2 | Dynamic Allocation/ Downlink Transfer with Uplink TBF Establishment/ T3168/ Stop with Packet Uplink Assignment | 3958 |
| 42.8.3 | Dynamic Allocation/ Downlink Transfer with Uplink TBF Establishment/ T3168/Packet Access Reject/ With WAIT_INDICATION | 3960 |
| 42.8.4 | Dynamic Allocation/ Downlink Transfer with Uplink TBF Establishment/ T3168/Packet Access Reject/No WAIT_INDICATION | 3962 |
| 42.8.5 | Dynamic Allocation/ Downlink Transfer with Uplink TBF Establishment/T3168/Packet Access Reject/With Polling..... | 3963 |
| 42.9 | Extended Dynamic Allocation in Packet Transfer Mode | 3965 |
| 42.9.1 | Default message contents..... | 3965 |
| 42.9.2 | Extended Dynamic Allocation / Uplink Transfer | 3970 |
| 42.9.2.1 | Extended Dynamic Allocation / Uplink Transfer / Normal | 3970 |
| 42.9.2.1.1 | Extended Dynamic Allocation / Uplink Transfer / Normal / Successful..... | 3970 |
| 42.9.2.1.2 | Extended Dynamic Allocation / Uplink Transfer / Normal / USF_GRANULARITY = 4 blocks | 3973 |
| 42.9.2.1.3 | Extended Dynamic Allocation / Uplink Transfer / Normal / Allocation via polling mechanism | 3975 |
| 42.9.2.1.4 | Extended Dynamic Allocation / Uplink Transfer / Normal / PACCH operation in downlink | 3979 |
| 42.9.2.1.5 | Extended Dynamic Allocation / Uplink Transfer / Normal / Polling for PDAN | 3984 |
| 42.9.2.2 | Extended Dynamic Allocation / Uplink Transfer / Configuration Change | 3986 |
| 42.9.2.2.1 | Extended Dynamic Allocation / Uplink Transfer / configuration change / Changes in the Allocation from Dynamic to Extended Dynamic. | 3986 |
| 42.9.2.2.2 | Extended Dynamic Allocation / Uplink Transfer / configuration change / Changes in the Allocation from Extended Dynamic to Dynamic. | 3989 |
| 42.9.2.2.3 | Extended Dynamic Allocation / Uplink Transfer / configuration change / Reduction in number of uplink slots using PACKET UPLINK ASSIGNMENT..... | 3992 |
| 42.9.2.2.4 | Extended Dynamic Allocation / Uplink Transfer / configuration change / Reduction in number of uplink slots using PACKET PDCH RELEASE..... | 3995 |
| 42.9.2.2.5 | Extended Dynamic Allocation / Uplink Transfer / configuration change / Increase in number of uplink slots. | 3998 |
| 42.9.3 | Extended Dynamic Allocation / Shifted USF | 4001 |
| 42.9.3.1 | Extended Dynamic Allocation / Shifted USF / Normal | 4001 |
| 42.9.3.1.1 | Extended Dynamic Allocation / Shifted USF / Normal / PACCH management..... | 4001 |

| | | |
|-------------|--|------|
| 42.9.3.1.2 | Extended Dynamic Allocation / Shifted USF / Normal / USF assignment on 2 nd PDCH | 4002 |
| 42.9.3.1.3 | Extended Dynamic Allocation / Shifted USF / Normal / Release of 2 nd PDCH..... | 4004 |
| 42.10 | EC-GSM-IoT..... | 4007 |
| 42.10.1 | EC-GSM-IoT / Packet Uplink Assignment | 4007 |
| 42.10.1.1 | EC-GSM-IoT / Packet Uplink Assignment /Successful / CCCH..... | 4007 |
| 42.10.1.1.1 | Conformance requirements..... | 4007 |
| 42.10.1.1.2 | Test purpose | 4007 |
| 42.10.1.1.3 | Method of test..... | 4007 |
| 42.10.1.2 | EC-GSM-IoT / Packet Uplink Assignment /Successful / During Downlink ongoing..... | 4008 |
| 42.10.1.2.1 | Conformance requirements..... | 4008 |
| 42.10.1.2.2 | Test purpose | 4009 |
| 42.10.1.2.3 | Method of test..... | 4009 |
| 42.10.1.3 | EC-GSM-IoT / Packet Uplink Assignment /Resource Assignment | 4010 |
| 42.10.1.3.1 | Conformance requirements..... | 4010 |
| 42.10.1.3.2 | Test purpose | 4011 |
| 42.10.1.3.3 | Method of test..... | 4011 |
| 42.10.1.4 | EC-GSM-IoT / Packet Uplink Assignment /Resource Assignment / Gap | 4012 |
| 42.10.1.4.1 | Conformance requirements..... | 4012 |
| 42.10.1.4.2 | Test purpose | 4013 |
| 42.10.1.4.3 | Method of test..... | 4013 |
| 42.10.1.5 | EC-GSM-IoT / Packet Uplink Assignment /Downlink Coverage Class Adaptation/ T3248..... | 4014 |
| 42.10.1.5.1 | Conformance requirements..... | 4014 |
| 42.10.1.5.2 | Test purpose | 4015 |
| 42.10.1.5.3 | Method of test..... | 4015 |
| 42.10.1.6 | EC-GSM-IoT / Packet Uplink Assignment /Downlink Coverage Class Adaptation/ T3248 or T3228 Expiry | 4016 |
| 42.10.1.6.1 | Conformance requirements..... | 4016 |
| 42.10.1.6.2 | Test purpose | 4016 |
| 42.10.1.6.3 | Method of test..... | 4016 |
| 42.10.2 | EC-GSM-IoT / Packet Downlink Assignment..... | 4018 |
| 42.10.2.1 | EC-GSM-IoT / Packet Downlink Assignment / Successful / T3238 | 4018 |
| 42.10.2.1.1 | Conformance requirements..... | 4018 |
| 42.10.2.1.2 | Test purpose | 4018 |
| 42.10.2.1.3 | Method of test..... | 4018 |
| 42.10.3.1 | EC-GSM-IoT / Contention resolution / Enhanced Access Burst procedure | 4020 |
| 42.10.3.1.1 | Conformance requirements..... | 4020 |
| 42.10.3.1.2 | Test purpose | 4020 |
| 42.10.3.1.3 | Method of test..... | 4020 |
| 43 | RLC Test Cases..... | 4022 |
| 43.1 | Acknowledged Mode | 4022 |
| 43.1.1 | Acknowledged mode / Uplink TBF | 4022 |
| 43.1.1.1 | Acknowledged mode / Uplink TBF / Send state variable V(S) | 4022 |
| 43.1.1.2 | Acknowledged mode / Uplink TBF / Transmit window size | 4023 |
| 43.1.1.3 | Acknowledged mode / Uplink TBF / Acknowledge state variable V(A)..... | 4025 |
| 43.1.1.4 | Acknowledged mode / Uplink TBF / Negatively acknowledged RLC data blocks | 4028 |
| 43.1.1.5 | Acknowledged mode / Uplink TBF / Invalid Negative Acknowledgment | 4030 |
| 43.1.1.6 | Acknowledged mode / Uplink TBF / Decoding of Received Block Bitmap..... | 4031 |
| 43.1.2 | Acknowledged mode / Downlink TBF | 4033 |
| 43.1.2.1 | Acknowledged mode / Downlink TBF / Receive state variable V(R) | 4033 |
| 43.1.2.2 | Acknowledged mode / Downlink TBF / Receive window state variable V(Q) | 4034 |
| 43.1.2.3 | Acknowledged mode / Downlink TBF / Re-assembly of RLC data blocks | 4035 |
| 43.1.2.4 | Acknowledged mode / Downlink TBF / Re-assembly / Length Indicator | 4036 |
| 43.2 | Control Blocks..... | 4038 |
| 43.2.1 | Control Blocks Re-assembly..... | 4038 |
| 43.3 | Default Message Contents and Macros | 4040 |
| 43.3.1 | Message Contents | 4040 |
| 43.3.2 | Macros | 4041 |
| 43.3.2.1 | Macro for uplink dynamic allocation two phase access (PBCCH not present)..... | 4041 |
| 43.3.2.2 | Macro for downlink TBF establishment (PBCCH not present) | 4041 |
| 43.4 | ..... | 4041 |
| 43.4.1 | ..... | 4041 |

| | | |
|-------------|---|-------------|
| 43.4.1.1 | EC-GSM-IoT / Acknowledged mode / EC Uplink TBF / Transmit window size..... | 4041 |
| 43.4.1.1.1 | Conformance requirements..... | 4041 |
| 43.4.1.2 | Test purpose | 4042 |
| 43.4.1.3 | Method of test..... | 4042 |
| 43.4.1.2 | EC-GSM-IoT / Packet transfer/ EC Uplink TBF/ Verification of Coding Schemes..... | 4043 |
| 43.4.1.2.1 | Conformance requirements..... | 4043 |
| 43.4.1.2.2 | Test purpose | 4043 |
| 43.4.1.2.3 | Method of test..... | 4043 |
| 43.4.2.1 | EC-GSM-IoT / Packet transfer / EC Downlink TBF / Decoding of Coding Schemes | 4044 |
| 44 | Test case requirements for GPRS mobility management..... | 4046 |
| 44.1 | Default conditions and default messages..... | 4046 |
| 44.2 | Elementary procedures of GPRS mobility management | 4046 |
| 44.2.1 | GPRS attach procedure..... | 4047 |
| 44.2.1.1 | Normal GPRS attach..... | 4047 |
| 44.2.1.1.1 | GPRS attach / accepted | 4047 |
| 44.2.1.1a | GPRS attach / accepted / Attach with IMSI | 4049 |
| 44.2.1.1b | GPRS attach / accepted / PSM | 4051 |
| 44.2.1.1.2 | GPRS attach / rejected / IMSI invalid / illegal MS..... | 4053 |
| 44.2.1.1.3 | GPRS attach / rejected / IMSI invalid / GPRS services not allowed..... | 4056 |
| 44.2.1.1.4 | GPRS attach / rejected / PLMN not allowed | 4058 |
| 44.2.1.1.5 | GPRS attach / rejected / roaming not allowed in this location area..... | 4061 |
| 44.2.1.1.6 | GPRS attach / abnormal cases / access barred due to access class control..... | 4069 |
| 44.2.1.1.7 | GPRS attach / abnormal cases / change of cell into new routing area..... | 4072 |
| 44.2.1.1.8 | GPRS attach / abnormal cases / power off | 4074 |
| 44.2.1.1.9 | GPRS attach / abnormal cases / GPRS detach procedure collision | 4076 |
| 44.2.1.1.10 | GPRS attach / rejected / GPRS services not allowed in this PLMN..... | 4077 |
| 44.2.1.1.11 | GPRS attach / access barred due to EAB | 4080 |
| 44.2.1.1.12 | GPRS attach / eDRX | 4083 |
| 44.2.1.2 | Combined GPRS attach..... | 4085 |
| 44.2.1.2.1 | Combined GPRS attach / GPRS and non-GPRS attach accepted..... | 4085 |
| 44.2.1.2.2 | Combined GPRS attach / GPRS only attach accepted..... | 4088 |
| 44.2.1.2.3 | Combined GPRS attach / GPRS attach while IMSI attach..... | 4093 |
| 44.2.1.2.3a | Combined GPRS attach / NMO-I enabled in MS..... | 4095 |
| 44.2.1.2.3b | Combined GPRS attach / PSM | 4096 |
| 44.2.1.2.4 | Combined GPRS attach / rejected / IMSI invalid / illegal ME | 4098 |
| 44.2.1.2.5 | Combined GPRS attach / rejected / GPRS services and non-GPRS services not allowed | 4101 |
| 44.2.1.2.6 | Combined GPRS attach / rejected / GPRS services not allowed..... | 4104 |
| 44.2.1.2.7 | Combined GPRS attach / rejected / location area not allowed | 4107 |
| 44.2.1.2.7a | Combined GPRS attach / rejected / network reject with Extended Wait Timer | 4110 |
| 44.2.1.2.8 | Combined GPRS attach / abnormal cases / attempt counter check / miscellaneous reject causes | 4112 |
| 44.2.1.2.9 | Combined GPRS attach / abnormal cases / GPRS detach procedure collision..... | 4115 |
| 44.2.1.2.10 | Combined GPRS attach / eDRX..... | 4117 |
| 44.2.2 | GPRS detach procedure | 4119 |
| 44.2.2.1 | MS initiated GPRS detach procedure..... | 4119 |
| 44.2.2.1.1 | GPRS detach / power off / accepted | 4119 |
| 44.2.2.1.2 | GPRS detach / accepted..... | 4120 |
| 44.2.2.1.3 | GPRS detach / abnormal cases / attempt counter check / procedure timeout | 4122 |
| 44.2.2.1.4 | GPRS detach / abnormal cases / GMM common procedure collision..... | 4125 |
| 44.2.2.1.5 | GPRS detach / power off / accepted | 4126 |
| 44.2.2.1.6 | GPRS detach / accepted / GPRS/IMSI detach | 4128 |
| 44.2.2.1.7 | GPRS detach / accepted / IMSI detach | 4129 |
| 44.2.2.1.8 | GPRS detach / abnormal cases / change of cell into new routing area | 4132 |
| 44.2.2.1.9 | GPRS detach / abnormal cases / GPRS detach procedure collision | 4133 |
| 44.2.2.2 | Network initiated GPRS detach procedure | 4135 |
| 44.2.2.2.1 | GPRS detach / re-attach not required / accepted | 4135 |
| 44.2.2.2.2 | GPRS detach / rejected / IMSI invalid / GPRS services not allowed | 4137 |
| 44.2.2.2.3 | GPRS detach / IMSI detach / accepted..... | 4139 |
| 44.2.2.2.4 | GPRS detach / re-attach requested / accepted | 4140 |
| 44.2.2.2.5 | GPRS detach / rejected / location area not allowed | 4143 |
| 44.2.2.2.6 | GPRS detach / rejected / GPRS services not allowed in this PLMN..... | 4147 |

| | | |
|--------------|--|------|
| 44.2.3 | Routing area updating procedure | 4150 |
| 44.2.3.1 | Normal routing area updating | 4150 |
| 44.2.3.1.1 | Routing area updating / accepted..... | 4150 |
| 44.2.3.1.1a | Routing area updating / accepted / old P-TMSI | 4153 |
| 44.2.3.1.1b | Routing area updating / accepted / PSM..... | 4155 |
| 44.2.3.1.2 | Routing area updating / rejected / IMSI invalid / illegal ME..... | 4159 |
| 44.2.3.1.3 | Routing area updating / rejected / MS identity cannot be derived by the network | 4161 |
| 44.2.3.1.4 | Routing area updating / rejected / location area not allowed | 4162 |
| 44.2.3.1.5 | Routing area updating / abnormal cases / attempt counter check / miscellaneous reject causes .. | 4165 |
| 44.2.3.1.6 | Routing area updating / abnormal cases / change of cell into new routing area | 4169 |
| 44.2.3.1.7 | Routing area updating / abnormal cases / change of cell during routing area updating procedure | 4171 |
| 44.2.3.1.8 | Routing area updating / abnormal cases / P-TMSI reallocation procedure collision..... | 4173 |
| 44.2.3.1.9 | Routing area updating / abnormal cases / Network reject with Extended Wait Timer | 4174 |
| 44.2.3.1.10 | Routing area updating / eDRX | 4178 |
| 44.2.3.1.11 | Routing area updating / eDRX / Usage condition change | 4180 |
| 44.2.3.2 | Combined routing area updating | 4181 |
| 44.2.3.2.1 | Combined routing area updating / combined RA/LA accepted..... | 4181 |
| 44.2.3.2.2 | Combined routing area updating / MS in CS operation at change of RA..... | 4184 |
| 44.2.3.2.3 | Combined routing area updating / RA only accepted..... | 4187 |
| 44.2.3.2.3a | Combined routing area updating / PSM | 4193 |
| 44.2.3.2.4 | Combined routing area updating / rejected / PLMN not allowed | 4195 |
| 44.2.3.2.5 | Combined routing area updating / rejected / roaming not allowed in this location area..... | 4198 |
| 44.2.3.2.6 | Combined routing area updating / abnormal cases / access barred due to access class control... | 4205 |
| 44.2.3.2.7 | Combined routing area updating / abnormal cases / attempt counter check / procedure timeout..... | 4209 |
| 44.2.3.2.8 | Combined routing area updating / abnormal cases / change of cell into new routing area..... | 4213 |
| 44.2.3.2.9 | Combined routing area updating / abnormal cases / change of cell during routing area updating procedure | 4215 |
| 44.2.3.2.10 | Combined routing area updating / abnormal cases / GPRS detach procedure collision | 4217 |
| 44.2.3.2.11 | Combined routing area updating / eDRX | 4220 |
| 44.2.3.3 | Periodic routing area updating | 4221 |
| 44.2.3.3.1 | Periodic routing area updating / accepted..... | 4221 |
| 44.2.3.3.2 | Periodic routing area updating / accepted / T3312 default value..... | 4223 |
| 44.2.3.3.2a | Periodic routing area updating / accepted / per-device value | 4225 |
| 44.2.3.3.2b | Periodic routing area updating / accepted / PSM / T3312 Extended Value | 4227 |
| 44.2.3.3.3 | Periodic routing area updating / no cell available / network mode I | 4231 |
| 44.2.3.3.4 | Periodic routing area updating / no cell available..... | 4232 |
| 44.2.3.3.5 | Periodic routing area updating / eDRX | 4234 |
| 44.2.4 | P-TMSI reallocation | 4236 |
| 44.2.5 | GPRS authentication and ciphering | 4238 |
| 44.2.5.1 | Test of authentication..... | 4238 |
| 44.2.5.1.1 | Authentication accepted | 4239 |
| 44.2.5.1.2 | Authentication rejected..... | 4240 |
| 44.2.5.1.3 | Authentication accepted with USIM | 4243 |
| 44.2.5.2 | Test of ciphering mode setting | 4245 |
| 44.2.5.2.1 | Ciphering mode / start ciphering | 4245 |
| 44.2.5.2.2 | Ciphering mode / stop ciphering..... | 4248 |
| 44.2.5.2.3 | Ciphering mode / IMEISV request | 4251 |
| 44.2.5.2.4 | Ciphering mode/Cipher key Kc ₁₂₈ and algorithm changes | 4254 |
| 44.2.5.2.5 | Ciphering mode / Non support of GEA1 | 4257 |
| 44.2.5.2.5.1 | Conformance requirement | 4257 |
| 44.2.5.2.5.2 | Test Purpose..... | 4258 |
| 44.2.5.2.5.3 | Method of Test..... | 4258 |
| 44.2.6 | Identification procedure..... | 4259 |
| 44.2.6.1 | General Identification..... | 4259 |
| 44.2.7 | GMM READY timer handling | 4260 |
| 44.2.8 | DTM mobility management..... | 4268 |
| 44.2.8.1 | Change of cell between two LAs in idle mode..... | 4268 |
| 44.2.8.1.1 | Change of cell between two LAs in idle mode / RAU completes first | 4268 |
| 44.2.8.1.2 | Change of cell between two LAs in idle mode / LAU completes first / SS releases channel..... | 4269 |
| 44.2.8.1.3 | Change of cell between two LAs in idle mode / LAU completes first / SS maintains channel... | 4270 |

| | | |
|--------------|--|------|
| 44.2.8.2 | Void..... | 4272 |
| 44.2.9 | Network Identity and Timezone (NITZ)..... | 4272 |
| 44.2.9.1 | NITZ and GPRS procedures | 4272 |
| 44.2.9.1.1 | NITZ / GPRS / Timezone, Time and DST Handling..... | 4272 |
| 44.2.9.1.2 | NITZ / GPRS / NITZ Parameters / Storage / Deletion | 4275 |
| 44.2.9.1.3 | NITZ / GPRS / MM and GMM Signalling..... | 4277 |
| 44.2.10 | MS Radio Access Capability Interrogation | 4282 |
| 44.2.11 | Cell Notification | 4283 |
| 45 | Session Management Procedures | 4288 |
| 45.1 | Definition | 4288 |
| 45.2 | PDP context activation | 4288 |
| 45.2.1 | Initiated by the mobile station..... | 4288 |
| 45.2.1.1 | Attach initiated by context activation/QoS Offered by Network is the QoS Requested | 4288 |
| 45.2.1.2 | QoS Offered by Network is a lower QoS..... | 4290 |
| 45.2.1.2.1 | QoS Accepted by MS | 4290 |
| 45.2.1.2.2 | QoS Rejected by MS | 4291 |
| 45.2.2 | PDP context activation requested by the network, successful and unsuccessful | 4293 |
| 45.2.3 | Void | 4296 |
| 45.2.4 | Abnormal cases..... | 4296 |
| 45.2.4.1 | T3380 Expiry | 4296 |
| 45.2.4.2 | Collision of MS initiated and network requested PDP context activation | 4298 |
| 45.2.4.3 | Network initiated PDP context activation request for an already activated PDP context (on the MS side) | 4300 |
| 45.2.4.4 | Network reject with Extended Wait Timer | 4301 |
| 45.2.5 | Secondary PDP context activation procedures | 4303 |
| 45.2.5.1 | Successful Secondary PDP Context Activation Procedure Initiated by the MS | 4303 |
| 45.2.5.1.1 | QoS Offered by Network is the QoS Requested..... | 4303 |
| 45.2.5.1.2 | QoS Offered by Network is a lower QoS | 4304 |
| 45.2.5.1.2.1 | QoS accepted by MS..... | 4304 |
| 45.2.5.1.2.2 | QoS rejected by MS | 4306 |
| 45.2.5.2 | Unsuccessful Secondary PDP Context Activation Procedure Initiated by the MS | 4307 |
| 45.2.5.3 | Abnormal cases..... | 4308 |
| 45.2.5.3.1 | T3380 Expiry..... | 4308 |
| 45.3 | PDP context modification procedure..... | 4310 |
| 45.3.1 | Network initiated PDP context modification | 4310 |
| 45.3.2 | MS initiated PDP context modification | 4312 |
| 45.3.2.1 | MS initiated PDP Context Modification accepted by network | 4312 |
| 45.3.2.2 | MS initiated PDP Context Modification not accepted by the network | 4313 |
| 45.3.3 | Abnormal cases..... | 4315 |
| 45.3.3.1 | T3381 Expiry | 4315 |
| 45.3.3.2 | Collision of MS and network initiated PDP context modification procedures..... | 4316 |
| 45.4 | PDP context deactivation procedure..... | 4318 |
| 45.4.1 | PDP context deactivation initiated by the MS | 4318 |
| 45.4.2 | PDP context deactivation initiated by the network | 4320 |
| 45.4.3 | Abnormal cases..... | 4323 |
| 45.4.3.1 | T3390 Expiry | 4323 |
| 45.4.3.2 | Collision of MS and network initiated PDP context deactivation requests | 4325 |
| 45.4.4 | PDP context deactivation initiated by the network / Tear down indicator..... | 4327 |
| 45.5 | Unknown or Unforeseen Transaction Identifier/Non-semantical Mandatory Information Element Errors | 4328 |
| 45.5.1 | Error cases | 4328 |
| 46 | LLC and SNDCP Tests | 4334 |
| 46.1 | LLC Tests | 4334 |
| 46.1.1 | Default Conditions | 4335 |
| 46.1.2 | Test cases | 4335 |
| 46.1.2.1 | Unacknowledged data transfer | 4335 |
| 46.1.2.1.1 | Data transmission in protected mode..... | 4335 |
| 46.1.2.1.2 | Data transmission in unprotected mode..... | 4336 |
| 46.1.2.1.3 | Reception of I frame in ADM..... | 4337 |
| 46.1.2.2 | Acknowledged data transfer | 4338 |
| 46.1.2.2.1 | Link establishment..... | 4338 |

| | | |
|--------------|--|------|
| 46.1.2.2.1.1 | Link establishment from MS to SS..... | 4338 |
| 46.1.2.2.1.2 | Link establishment from SS to MS..... | 4339 |
| 46.1.2.2.1.3 | Loss of UA frame | 4340 |
| 46.1.2.2.1.4 | Total loss of UA frame | 4341 |
| 46.1.2.2.1.5 | DM response..... | 4342 |
| 46.1.2.2.2 | MS sends I+S frames..... | 4343 |
| 46.1.2.2.2.1 | Checking N(S)..... | 4343 |
| 46.1.2.2.2.2 | Busy condition at the peer, with RR sent for resumption of transmission..... | 4344 |
| 46.1.2.2.2.3 | Busy condition at the peer, with ACK sent for resumption of transmission..... | 4346 |
| 46.1.2.2.2.4 | SACK frame | 4348 |
| 46.1.2.2.3 | Reception of I + S frames at the MS..... | 4349 |
| 46.1.2.2.3.1 | Checking N(R) | 4349 |
| 46.1.2.2.3.2 | MS handling busy condition during bi-directional data transfer | 4350 |
| 46.1.2.2.3.3 | SACK frame | 4352 |
| 46.1.2.2.3.4 | ACK frame | 4353 |
| 46.1.2.2.4 | Link Reestablishment | 4354 |
| 46.1.2.2.4.1 | Reestablishment due to reception of SABM..... | 4354 |
| 46.1.2.2.4.2 | Reestablishment due to N200 failures | 4356 |
| 46.1.2.2.4.3 | Reestablishment due to reception of DM | 4357 |
| 46.1.2.3 | Collision of commands and responses | 4358 |
| 46.1.2.3.1 | Collision of SABM..... | 4358 |
| 46.1.2.3.2 | Collision of SABM and DISC | 4359 |
| 46.1.2.3.3 | Collision of SABM and XID commands..... | 4360 |
| 46.1.2.4 | Unsolicited response frames..... | 4361 |
| 46.1.2.4.1 | Unsolicited DM | 4361 |
| 46.1.2.5 | FRMR frames..... | 4362 |
| 46.1.2.5.1 | Sending FRMR due to undefined command control field | 4362 |
| 46.1.2.5.2 | Sending FRMR due to reception of an S frame with incorrect length..... | 4363 |
| 46.1.2.5.3 | Sending FRMR due to reception of an I frame information field exceeding the maximum length | 4364 |
| 46.1.2.5.4 | Frame reject condition during establishment of ABM | 4366 |
| 46.1.2.6 | Multiple Connections | 4367 |
| 46.1.2.6.1 | Simultaneous acknowledged and unacknowledged data transfer on the same SAPI | 4367 |
| 46.1.2.6.2 | Simultaneous acknowledged and unacknowledged data transfer on different SAPIS | 4368 |
| 46.1.2.7 | XID Negotiation..... | 4369 |
| 46.1.2.7.1 | Negotiation initiated by the SS during ABM, for T200 and N200 | 4369 |
| 46.1.2.7.2 | Negotiation initiated by the SS during ADM, for N201-I | 4370 |
| 46.1.2.7.3 | Negotiation initiated by the SS (using XID, for IOV-UI) | 4371 |
| 46.1.2.7.4 | Negotiation initiated by the SS (during ADM, for N201-U)..... | 4372 |
| 46.1.2.7.5 | Negotiation initiated by the SS (during ADM, for IOV-UI)..... | 4373 |
| 46.1.2.7.6 | Negotiation initiated by the SS (during ABM, for Reset) | 4376 |
| 46.1.2.7.7 | XID command with unrecognised type field | 4378 |
| 46.1.2.7.8 | XID Response with out of range values | 4379 |
| 46.2 | SNDCP Tests..... | 4380 |
| 46.2.1 | Default Conditions | 4380 |
| 46.2.2 | Test cases | 4380 |
| 46.2.2.1 | Data transfer | 4380 |
| 46.2.2.1.1 | Mobile originated normal data transfer with LLC in acknowledged mode | 4380 |
| 46.2.2.1.2 | Mobile originated normal data transfer with LLC in unacknowledged mode | 4382 |
| 46.2.2.1.3 | Usage of acknowledged mode for data transmission before and after PDP Context modification, on different SAPIS | 4384 |
| 46.2.2.1.4 | Reset indication during unacknowledged mode | 4386 |
| 46.2.2.1.5 | Reset indication during acknowledged mode | 4387 |
| 46.2.2.1.6 | Inter SGSN (with NAS container / new Routing Area / SGSN indicated Reset) PS Handover / Synchronized cell case / successful | 4389 |
| 46.2.2.2 | Segmentation..... | 4390 |
| 46.2.2.2.1 | LLC link re-establishment on reception of SN-DATA PDU with F=0 in ack mode in the Receive First Segment state..... | 4390 |
| 46.2.2.2.2 | LLC link re-establishment on receiving second segment with F=1 and with different PCOMP and DCOMP values in the acknowledged mode data transfer..... | 4391 |
| 46.2.2.2.3 | Single segment N-PDU from MS | 4392 |
| 46.2.2.3 | Link Release..... | 4393 |

| | | |
|------------|--|-------------|
| 46.2.2.3.1 | LLC link release on receiving DM from the SS during link establishment..... | 4393 |
| 46.2.2.4 | XID negotiation..... | 4394 |
| 46.2.2.4.1 | Response from MS on receiving XID request from the SS | 4394 |
| 46.2.2.4.2 | Response from MS on receiving an XID request from the SS with an unassigned entity number..... | 4396 |
| 46.2.2.4.3 | Response from MS on receiving an XID response from the SS with unrecognised type field.... | 4397 |
| 46.2.2.5 | LLC link release on receiving "Invalid XID response" from the network during link establishment procedure..... | 4398 |
| 47 | Dual Transfer Mode | 4399 |
| 47.1 | Reallocation of CS resources..... | 4399 |
| 47.1.1 | Reallocation of CS resources / Assignment Command | 4399 |
| 47.1.2 | Reallocation of CS resources / Handover Command..... | 4401 |
| 47.1.3 | Intra frequency reallocation of CS resources / DTM Assignment Command..... | 4404 |
| 47.1.4 | Inter frequency reallocation of CS resources / DTM Assignment Command..... | 4405 |
| 47.2 | Release of CS resources | 4408 |
| 47.2.1 | Mobile originating CS release | 4408 |
| 47.3 | Handover | 4409 |
| 47.3.1 | Handover to same routeing area | 4409 |
| 47.3.1.1 | Handover to same routeing area whilst in dedicated mode & MM Ready / Completed on the main DCCH..... | 4409 |
| 47.3.1.2 | Handover to same routeing area whilst in DTM with downlink TBF Established..... | 4411 |
| 47.3.1.3 | Handover to same routeing area whilst in DTM with both DL & UL TBFs..... | 4413 |
| 47.3.1.3.1 | Handover to same routeing area whilst in DTM with both DL & UL TBFs / Successful case .. | 4413 |
| 47.3.1.3.2 | Handover to same routeing area whilst in DTM with both DL & UL TBFs / Abnormal case / Handover Failure | 4416 |
| 47.3.2 | Handover to different routeing area whilst in DM | 4419 |
| 47.3.2.1 | Handover to different routeing area whilst in DM / Performed on main DCCH / RAU complete before CS release | 4419 |
| 47.3.2.2 | Handover to different routeing area whilst in DM / Performed on main DCCH / CS release before RAU complete | 4420 |
| 47.3.3 | Handover to different routeing area whilst in DTM | 4422 |
| 47.3.3.1 | Handover to different routeing area whilst in DTM / Performed on TBFs | 4422 |
| 47.3.3.1.1 | Handover to different routeing area whilst in DTM / Performed on TBFs / RAU complete before CS release | 4422 |
| 47.3.3.1.2 | Handover to different routeing area whilst in DTM / Performed on TBFs / CS release before RAU complete | 4425 |
| 47.3.4 | Handover to UTRAN while in DTM | 4428 |
| 47.3.4.1 | Handover to UTRAN while in DTM / Downlink TBF | 4428 |
| 47.3.4.2 | Handover to UTRAN while in DTM / Uplink TBF..... | 4434 |
| 47.4 | Session Management | 4440 |
| 47.4.1 | PDP Context Activation / Performed on main DCCH and TBFs | 4440 |
| 48 to 49 | Void | 4444 |
| 50 | EGPRS Default Conditions, Message Contents and Macros | 4445 |
| 50.1 | EGPRS Default Test Conditions | 4445 |
| 50.2 | EGPRS Default Message Contents..... | 4445 |
| 50.2.1 | EGPRS System Information Messages..... | 4445 |
| 50.2.2 | EGPRS Packet System Information messages..... | 4446 |
| 50.2.2.1 | Cell A | 4446 |
| 50.2.3 | EGPRS default contents of Layer 2 messages | 4446 |
| 50.2.3.1 | PACKET UPLINK ASSIGNMENT message..... | 4447 |
| 50.2.3.2 | PACKET DOWNLINK ASSIGNMENT message | 4448 |
| 50.2.4 | EGPRS Default contents of Layer 3 messages | 4448 |
| 50.2.4.1 | IMMEDIATE ASSIGNMENT messages | 4449 |
| 50.2.4.1.1 | IMMEDIATE ASSIGNMENT message (Packet Downlink Construction)..... | 4449 |
| 50.2.4.1.2 | IMMEDIATE ASSIGNMENT message (Packet Uplink construction): | 4450 |
| 50.2.4.1.3 | IMMEDIATE ASSIGNMENT message (Multiblock allocation construction):..... | 4451 |
| 50.2.4.2 | IMMEDIATE ASSIGNMENT REJECT message..... | 4451 |
| 50.2.4.3 | PDCH ASSIGNMENT COMMAND message (downlink) | 4452 |
| 50.2.4.4 | DTM Assignment Command | 4452 |
| 50.2.4.5 | IMMEDIATE PACKET ASSIGNMENT messages | 4453 |

| | | |
|------------|---|------|
| 50.2.4.5.1 | IMMEDIATE PACKET ASSIGNMENT message (IPA Downlink Assignment) | 4453 |
| 50.2.4.5.2 | IMMEDIATE PACKET ASSIGNMENT message (IPA Uplink Assignment):..... | 4454 |
| 50.2.4.5.3 | IMMEDIATE PACKET ASSIGNMENT message (IPA Single Block Uplink Assignment):..... | 4455 |
| 50.3 | Default EGPRS Conditions, Message Contents and Macros for the Higher Layer Test Cases..... | 4456 |
| 50.4 | EGPRS Macros | 4456 |
| 50.4.1 | Overview | 4456 |
| 50.4.2 | EGPRS Default Message Contents | 4456 |
| 50.4.3 | EGPRS Macro Message Sequences | 4456 |
| 50.4.3.1 | Acknowledged downlink data..... | 4456 |
| 50.4.3.2 | Downlink data transfer | 4456 |
| 50.4.3.3 | Uplink data transfer..... | 4457 |
| 50.4.3.4 | Uplink dynamic allocation one phase access | 4458 |
| 50.4.3.5 | Uplink dynamic allocation one phase access with contention resolution..... | 4458 |
| 50.4.3.6 | Uplink dynamic allocation two phase access | 4459 |
| 50.4.3.7 | Void..... | 4460 |
| 50.4.3.8 | Void..... | 4460 |
| 50.4.3.9 | Void..... | 4460 |
| 50.4.3.10 | Downlink TBF establishment..... | 4460 |
| 50.4.3.10A | Uplink data..... | 4460 |
| 50.4.3.11 | GPRS Attach using EGPRS messages on CCCH | 4460 |
| 50.4.3.12 | Void..... | 4461 |
| 50.4.3.13 | PDP Context Activation On CCCH | 4461 |
| 50.4.3.14 | Void..... | 4464 |
| 50.4.3.15 | PDP Context Activation, IPA capable MS..... | 4464 |
| 50.5 | Test PDP contexts | 4464 |
| 51 | EGPRS Paging, TBF establishment/release and DCCH related procedures | 4466 |
| 51.1 | RR / Paging | 4466 |
| 51.1.1 | Void | 4466 |
| 51.1.2 | Void | 4466 |
| 51.1.3 | Void | 4466 |
| 51.1.4 | Void | 4466 |
| 51.1.5 | RR / Paging / on CCCH for EGPRS service..... | 4466 |
| 51.1.5.1 | RR / Paging / on CCCH for EGPRS service / normal paging | 4466 |
| 51.1.5.1.1 | RR / Paging / on CCCH for EGPRS service / normal paging with P-TMSI successful | 4466 |
| 51.1.5.1.2 | RR / Paging / on CCCH for EGPRS service / normal paging with IMSI successful..... | 4470 |
| 51.1.5.1.3 | RR / Paging / on CCCH for EGPRS service / normal paging with P-TMSI ignored | 4472 |
| 51.1.5.2 | RR / Paging / on CCCH for EGPRS service / extended paging | 4475 |
| 51.1.5.2.1 | RR / Paging / on CCCH for EGPRS service / extended paging with P-TMSI successful | 4475 |
| 51.1.5.3 | RR / Paging / on CCCH for EGPRS service / paging reorganisation | 4477 |
| 51.1.5.4 | RR / Paging / on CCCH for EGPRS service / default message contents | 4481 |
| 51.1.6 | Void | 4481 |
| 51.2 | RR procedures on CCCH related to temporary block flow establishment | 4481 |
| 51.2.1 | Permission to access the network | 4481 |
| 51.2.1.1 | Permission to access the network / priority classes..... | 4481 |
| 51.2.2 | Initiation of the packet access procedure | 4482 |
| 51.2.2.1 | Initiation of the packet access procedure / establishment causes | 4482 |
| 51.2.2.2 | Random references for two phase packet access..... | 4484 |
| 51.2.2.3 | Random references for one phase packet access and for Access Type 'signalling' | 4485 |
| 51.2.2.4 | Initiation of the packet access procedure / timer T3146..... | 4487 |
| 51.2.2.5 | Initiation of the packet access procedure / Request Reference..... | 4489 |
| 51.2.2.6 | Two phase packet access / establishment cause | 4491 |
| 51.2.2.7 | Initiation of the packet access procedure by IPA capable MS / IMMEDIATE PACKET ASSIGNMENT message configured initially and later not configured on MS own Paging sub- channel | 4492 |
| 51.2.2.8 | Initiation of the packet access procedure by IPA capable MS / IMMEDIATE PACKET ASSIGNMENT message not configured initially and later configured on MS own Paging sub- channel | 4495 |
| 51.2.3 | Packet immediate assignment / One phase packet access | 4498 |
| 51.2.3.1 | Two-message assignment / Successful case..... | 4498 |
| 51.2.3.2 | Two-message assignment / Failure cases | 4499 |
| 51.2.3.3 | Packet uplink assignment / Polling bit set | 4502 |

| | | |
|--------------------------|---|------|
| 51.2.3.4 | One phase packet access / Contention resolution / Successful case | 4503 |
| 51.2.3.5 | One phase packet access / Contention resolution / TLLI mismatch..... | 4504 |
| 51.2.3.6 | One phase packet access / Contention resolution / Counter N3104 | 4506 |
| 51.2.3.7 | One phase packet access / Contention resolution / Timer T3166..... | 4507 |
| 51.2.3.8 | One phase packet access / Contention resolution / 4 access repetition attempts | 4510 |
| 51.2.3.9 | One phase packet access / TBF starting time | 4511 |
| 51.2.3.10 | One phase packet access / Timing Advance Index present | 4514 |
| 51.2.3.11 | One phase packet access / Timing Advance Index not present..... | 4515 |
| 51.2.3.12 | Packet Immediate Assignment by IPA Capable MS / One phase packet access / IPA uplink assignment..... | 4516 |
| 51.2.3.13 | Packet Immediate Assignment by IPA Capable MS / One phase packet access / IPA uplink assignment / Consecutive EGPRS Packet Channel Requests | 4517 |
| 51.2.3.14 | Packet Immediate Assignment by IPA Capable MS / One phase packet access / IPA uplink assignment / Radio_Access_Capability_bit set..... | 4519 |
| 51.2.3.15 | Packet Immediate Assignment by IPA Capable MS / One phase packet access / IPA uplink assignment / Multiple MS devices | 4520 |
| 51.2.3.16 | Packet Immediate Assignment by IPA Capable MS / One phase packet access / IPA uplink assignment / Multiple MS devices / Radio_Access_Capability_bit set | 4522 |
| 51.2.3.17 | Packet Immediate Assignment by IPA capable MS/ one phase packet access /IPA uplink assignment/ Multiple MS devices/ Identical Random Reference and FN Offset | 4524 |
| 51.2.3.18 | Packet Immediate Assignment by IPA capable MS/ single block packet access /IPA single block uplink assignment | 4525 |
| 51.2.3.19 | Packet Immediate Assignment by IPA capable MS/ single block packet access /IPA single block uplink assignment/Consecutive EGPRS Packet Channel Requests | 4526 |
| 51.2.3.20 | Packet Immediate Assignment by IPA capable MS/single block packet access/IPA single block uplink assignment/Multiple MS devices | 4528 |
| 51.2.3.21 | Packet Immediate Assignment by IPA capable MS/single block packet access /IPA single block uplink assignment/ Multiple MS devices/Identical Random Reference and FN Offset..... | 4531 |
| 51.2.3.22 | Packet Immediate Assignment by IPA capable MS / single block packet access / IPA single block uplink assignment / Multiple MS devices / Order of addressed devices | 4534 |
| 51.2.4 | Packet immediate assignment / Multiblock packet access..... | 4538 |
| 51.2.4.1 | Multiblock packet access / Packet Resource Request | 4538 |
| 51.2.4.2 | Void..... | 4539 |
| 51.2.5 | Packet immediate assignment / Packet access rejection | 4539 |
| 51.2.5.1 | Packet access rejection / wait indication | 4539 |
| 51.2.5.2 | Packet access rejection / assignment before T3142 expires | 4541 |
| 51.2.5.3 | Packet access rejection / Interpretation of Extended RA i / Correct value of Extended RA i..... | 4543 |
| 51.2.5.4 | Packet access rejection / Interpretation of Extended RA i / Extended RA i not included | 4545 |
| 51.2.6 | Packet downlink assignment procedure using CCCH | 4547 |
| 51.2.6.1 | Initiation of packet downlink assignment procedure / MS listens to correct CCCH block..... | 4547 |
| 51.2.6.2 | Initiation of packet downlink assignment procedure / timer T3190..... | 4548 |
| 51.2.6.3 | Initiation of packet downlink assignment procedure / TBF starting time | 4550 |
| 51.2.6.4 | Initiation of packet downlink assignment procedure / incorrect TFI | 4552 |
| 51.2.6.5 | Initiation of the packet downlink assignment procedure by IPA capable MS/IPA downlink assignment..... | 4553 |
| 51.2.6.6 | Initiation of the packet downlink assignment procedure by IPA capable MS/IPA downlink assignment/ Multiple MS devices | 4555 |
| 51.2.6.7 to 51.2.6.8 FFS | ..... | 4559 |
| 51.2.6.9 | Initiation of both the packet uplink and downlink assignment procedure by IPA capable MS/Simultaneous IPA uplink and downlink assignment..... | 4559 |
| 51.3 | MAC/RLC Release..... | 4562 |
| 51.3.1 | TBF Release / Uplink / Normal / MS initiated | 4563 |
| 51.3.1.1 | TBF Release / Uplink / Normal / MS initiated / Acknowledged mode..... | 4563 |
| 51.3.1.2 | TBF Release / Uplink / Normal / MS initiated / Unacknowledged mode | 4567 |
| 51.3.1.3 | TBF Release / Uplink / Normal / MS initiated / Channel coding change during countdown | 4569 |
| 51.3.2 | TBF Release / Uplink / Normal / Network initiated | 4572 |
| 51.3.2.1 | TBF Release / Uplink / Normal / Network initiated / Acknowledged mode..... | 4572 |
| 51.3.2.2 | TBF Release / Uplink / Normal / Network initiated / Unacknowledged mode | 4573 |
| 51.3.3 | TBF Release / Uplink / Network initiated / Abnormal release | 4575 |
| 51.3.4 | TBF Release / Downlink / Normal / Network initiated | 4576 |
| 51.3.4.1 | TBF Release / Downlink / Normal / Network initiated / Acknowledged mode..... | 4576 |
| 51.3.4.2 | TBF Release / Downlink / Normal / Network initiated / Unacknowledged mode | 4579 |

| | | |
|----------------|---|------|
| 51.3.5 | PDCH Release | 4582 |
| 51.3.5.1 | Void..... | 4582 |
| 51.3.5.2 | PDCH Release / With TIMESLOTS_AVAILABLE..... | 4582 |
| 51.3.6 | TBF Release / Extended Uplink | 4586 |
| 51.3.6.1 | TBF Release / Extended Uplink / Recalculation of CV before CV = 0 | 4586 |
| 51.3.6.2 | TBF Release / Extended Uplink / Recalculation of CV after CV = 0 | 4587 |
| 51.3.6.3 | TBF Release / Extended Uplink / MCS change order while CV=0 | 4589 |
| 51.3.6.4 | TBF Release / Extended Uplink / TBF reconfigure by PACKET TIMESLOT RECONFIGURE .. | 4592 |
| 51.3.6.5 | TBF Release / Extended Uplink / TBF reconfigure by PACKET UPLINK ASSIGNMENT..... | 4595 |
| 51.3.6.6 | Extended Uplink TBF / Cell Change while in Extended Uplink/ No Packet Neighbouring Cell Data | 4598 |
| 51.3.6.7 | Extended Uplink TBF / Cell Change failure while in Extended Uplink/ No Packet Neighbouring Cell Data | 4601 |
| 51.3.6.8 | Extended Uplink TBF / Cell Change while in Extended Uplink/ With Packet Neighbouring Cell Data | 4604 |
| 51.3.6.9 | TBF Release / Extended Uplink / Change of RLC mode / Normal release..... | 4608 |
| 51.3.6.10 | TBF Release / Extended Uplink / Change of RLC mode / Abnormal release..... | 4611 |
| 51.3.7 | Void | 4614 |
| 51.4 | Void..... | 4614 |
| 51.5 | EGPRS Dual transfer mode..... | 4614 |
| 51.5.1 | PS establishment whilst in dedicated mode | 4614 |
| 51.5.1.1 | Uplink TBF establishment | 4614 |
| 51.5.1.1.1 | Uplink TBF establishment with no reallocation of CS resources | 4614 |
| 51.5.1.1.1.1 | Uplink TBF establishment with no reallocation of CS resources / Successful case / Uplink resources assigned..... | 4614 |
| 51.5.1.1.1.2 | Uplink TBF establishment with no reallocation of CS resources / Successful case / Downlink resources assigned..... | 4616 |
| 51.5.1.1.2 | Uplink TBF establishment with reallocation of CS resources | 4619 |
| 51.5.1.1.2.1 | Uplink TBF establishment with reallocation of CS resources / Successful case | 4619 |
| 51.5.1.2 | Downlink TBF establishment..... | 4620 |
| 51.5.1.2.1 | Whilst in Ready State | 4620 |
| 51.5.1.2.1.1 | Downlink TBF establishment in Ready State / Successful case | 4620 |
| 51.5.2 | Void | 4622 |
| 51.5.3 | PS establishment whilst in dual transfer mode | 4622 |
| 51.5.3.1 | Uplink TBF establishment with a downlink TBF established..... | 4622 |
| 51.5.3.1.1 | Uplink TBF establishment with a downlink TBF established and no PS downlink reallocation | 4622 |
| 51.5.3.2 | Downlink TBF establishment with a uplink established | 4624 |
| 51.5.3.2.1 | Downlink TBF establishment with a uplink TBF established and no PS uplink reallocation | 4624 |
| 51.6 | Dynamic ARFCN mapping tests | 4626 |
| 51.6.1 | Void | 4626 |
| 52 | EGPRS Test of Medium Access Control (MAC) protocol | 4627 |
| 52.1 | Test of Medium Access Control (MAC) Procedures | 4627 |
| 52.1.1 | Void | 4627 |
| 52.1.2 | Packet Uplink/Downlink Assignment..... | 4627 |
| 52.1.2.1 | Packet uplink assignment procedure | 4627 |
| 52.1.2.1.1 | Void..... | 4627 |
| 52.1.2.1.2 | Void..... | 4627 |
| 52.1.2.1.3 | Void..... | 4627 |
| 52.1.2.1.4 | Void..... | 4627 |
| 52.1.2.1.5 | Void..... | 4627 |
| 52.1.2.1.6 | Void..... | 4627 |
| 52.1.2.1.7 | Void..... | 4627 |
| 52.1.2.1.8 | Void..... | 4627 |
| 52.1.2.1.9 | Packet Uplink Assignment / Two phase access..... | 4627 |
| 52.1.2.1.9.1 | Void..... | 4627 |
| 52.1.2.1.9.2 | Packet Uplink Assignment / Two phase access / Contention resolution | 4627 |
| 52.1.2.1.9.2.1 | Packet Uplink Assignment / Two phase access / Contention resolution / Expiry of timer T3168..... | 4627 |
| 52.1.2.1.9.2.2 | Packet Uplink Assignment / Two phase access / Contention resolution / TLLI in Packet Resource Request message | 4628 |

| | | |
|----------------|---|------|
| 52.1.2.1.9.2.3 | Packet Uplink Assignment / Two phase access / Contention resolution / TLLI mismatch | 4631 |
| 52.1.2.1.9.3 | Packet Uplink Assignment / Two phase access / Radio Access Capabilities | 4632 |
| 52.1.2.1.9.4 | Packet Uplink Assignment / Two phase access / Radio Access Capabilities/ Frequency band not supported | 4635 |
| 52.1.2.1.9.5 | Packet Uplink Assignment / Two phase access / Packet Resource Request / No respond to Packet Downlink Assignment | 4637 |
| 52.1.2.1.10 | Packet Uplink Assignment / Abnormal cases..... | 4638 |
| 52.1.2.1.10.1 | Packet Uplink Assignment / Abnormal cases / Incorrect PDCH assignment | 4638 |
| 52.1.2.1.10.2 | Packet Uplink Assignment / Abnormal cases / Expiry of timer T3164..... | 4639 |
| 52.1.2.2 | Packet Downlink Assignment | 4640 |
| 52.1.2.2.1 | Packet Downlink Assignment / Response to poll bit..... | 4640 |
| 52.1.2.2.2 | Void..... | 4642 |
| 52.1.2.2.3 | Void..... | 4642 |
| 52.1.2.2.4 | Packet Downlink Assignment / Response to Packet Polling..... | 4642 |
| 52.1.2.2.5 | Void..... | 4644 |
| 52.1.2.2.6 | Packet Downlink Assignment Timing Advance / TA value field not provided | 4644 |
| 52.2 | Void..... | 4645 |
| 52.3 | EGPRS Testcases for Dynamic Allocation in Packet Transfer Mode..... | 4645 |
| 52.3.1 | Dynamic Allocation / Uplink Transfer | 4645 |
| 52.3.1.1 | Dynamic Allocation / Uplink Transfer / Normal | 4645 |
| 52.3.1.1.1 | Dynamic Allocation / Uplink Transfer / Normal / Successful..... | 4645 |
| 52.3.1.1.2 | Void..... | 4648 |
| 52.3.1.1.3 | Dynamic Allocation / Uplink Transfer / Normal / Starting frame number encoding | 4648 |
| 52.3.1.1.4 | Dynamic Allocation / Uplink Transfer / Normal / Starting time | 4649 |
| 52.3.1.1.5 | Void..... | 4653 |
| 52.3.1.1.6 | Dynamic Allocation / Uplink Transfer / Normal / T3180 expiry | 4653 |
| 52.3.1.1.7 | Dynamic Allocation / Uplink Transfer / Normal / PACCH operation..... | 4656 |
| 52.3.1.1.8 | Dynamic Allocation / Uplink Transfer / Normal / Two uplink timeslots | 4657 |
| 52.3.1.1.9 | Void..... | 4659 |
| 52.3.1.2 | Dynamic Allocation / Uplink Transfer / Abnormal | 4659 |
| 52.3.1.2.1 | Void..... | 4659 |
| 52.3.1.2.2 | Void..... | 4659 |
| 52.3.1.2.3 | Void..... | 4659 |
| 52.3.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment (concurrent)..... | 4659 |
| 52.3.2.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal | 4659 |
| 52.3.2.1.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal / Successful..... | 4659 |
| 52.3.2.1.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Normal / Multislot capabilities | 4663 |
| 52.3.2.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal | 4672 |
| 52.3.2.2.1 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal / with random access..... | 4672 |
| 52.3.2.2.2 | Dynamic Allocation / Uplink Transfer with Downlink TBF establishment / Abnormal / Continuation of normal operation..... | 4677 |
| 52.3.3 | Dynamic Allocation / Resource reallocation | 4678 |
| 52.3.3.1 | Dynamic Allocation / Resource reallocation / Successful..... | 4678 |
| 52.3.3.1.1 | Dynamic Allocation / Resource reallocation / Successful / Higher throughput class or higher radio priority..... | 4678 |
| 52.3.3.1.2 | Dynamic Allocation / Resource reallocation / Successful / Lower throughput class | 4681 |
| 52.3.3.1.3 | Dynamic Allocation / Resource reallocation / Successful / Different RLC mode and higher radio priority..... | 4684 |
| 52.3.3.2 | Dynamic Allocation / Resource reallocation / Abnormal | 4686 |
| 52.3.3.2.1 | Dynamic Allocation / Resource reallocation / Abnormal / T3168 expiry | 4686 |
| 52.3.3.2.2 | Dynamic Allocation / Resource reallocation / Abnormal / Invalid assignment..... | 4689 |
| 52.3.3.3 | Dynamic Allocation / Resource reallocation / Reject | 4693 |
| 52.3.4 | Default message contents..... | 4695 |
| 52.4 | Void..... | 4696 |
| 52.5 | EGPRS Downlink Transfer | 4696 |
| 52.5.1 | Void | 4696 |
| 52.5.2 | Void | 4696 |
| 52.5.3 | Void | 4696 |

| | | |
|------------|--|------|
| 52.5.4 | Void | 4696 |
| 52.5.5 | Downlink Transfer / Reestablishment..... | 4696 |
| 52.5.5.1 | Downlink Transfer/ Reestablishment/ T3192 Expiry..... | 4696 |
| 52.5.5.2 | Downlink Transfer/ Reestablishment/ Packet Downlink Assignment | 4698 |
| 52.5.5.3 | Void..... | 4701 |
| 52.6 | EGPRS Packet Access for signalling | 4701 |
| 52.6.1 | EGPRS Packet Access for signalling / EGPRS Packet Channel Request not supported / CCCH case .. | 4701 |
| 52.6.2 | EGPRS Packet Access for signalling / EGPRS Packet Channel Request supported / CCCH case | 4703 |
| 52.6.3 | Void | 4706 |
| 52.6.4 | Void | 4706 |
| 52.6.5 | EGPRS Packet Access for signalling / EGPRS Packet Channel Request supported / low access priority | 4706 |
| 52.7 | Void..... | 4707 |
| 52.8 | One phase access/ CONTENTION_RESOLUTION_TLLI..... | 4707 |
| 52.8.1 | One phase access/ CONTENTION_RESOLUTION_TLLI / Contention Resolution | 4707 |
| 52.8.1.1 | Void..... | 4707 |
| 52.8.1.2 | Void..... | 4707 |
| 52.8.1.3 | Void..... | 4707 |
| 52.8.1.4 | Void..... | 4707 |
| 52.8.1.5 | Void..... | 4707 |
| 52.8.1.6 | One phase access/ PBCCH not present/ CONTENTION_RESOLUTION_TLLI / Contention resolution / Inclusion of TLLI in RLC data blocks | 4707 |
| 52.8.1.7 | One phase access/ PBCCH not present / CONTENTION_RESOLUTION_TLLI / Contention resolution / Counter N3104 | 4710 |
| 52.8.1.8 | One phase access/ PBCCH not present / CONTENTION_RESOLUTION_TLLI / Contention resolution / Timer T3166 | 4711 |
| 52.8.1.9 | One phase access/ PBCCH not present / CONTENTION_RESOLUTION_TLLI / Contention resolution / TLLI mismatch..... | 4714 |
| 52.8.1.10 | One phase access/ PBCCH not present / CONTENTION_RESOLUTION_TLLI / Contention resolution / 4 access repetition attempts..... | 4715 |
| 52.8.1.11 | Void..... | 4717 |
| 52.8.1.12 | One phase access/PBCCH absent/CONTENTION_RESOLUTION_TLLI/ Contention resolution / Successful Resource Reallocation..... | 4717 |
| 52.9 | Extended Dynamic Allocation in Packet Transfer Mode | 4719 |
| 52.9.1 | Default message contents..... | 4719 |
| 52.9.2 | Extended Dynamic Allocation / Uplink Transfer | 4724 |
| 52.9.2.1 | Extended Dynamic Allocation / Uplink Transfer / Normal | 4724 |
| 52.9.2.1.1 | Extended Dynamic Allocation / Uplink Transfer / Normal / Successful..... | 4724 |
| 52.9.2.1.2 | Extended Dynamic Allocation / Uplink Transfer / Normal / USF_GRANULARITY = 4 blocks | 4727 |
| 52.9.2.1.4 | Extended Dynamic Allocation / Uplink Transfer / Normal / PACCH operation in downlink | 4730 |
| 52.9.2.1.5 | Extended Dynamic Allocation / Uplink Transfer / Normal / Polling for EPDAN | 4735 |
| 52.10 | ..... | 4737 |
| 52.10.1 | Verification of support of the IPA capability / EGPRS Packet Channel Request supported | 4737 |
| 52.10.2 | EGPRS Packet Access for one phase access by IPA capable MS / EGPRS Packet Channel Request supported / CCCH case | 4738 |
| 52.10.3 | EGPRS Packet Access for two phase access by IPA capable MS / EGPRS Packet Channel Request supported / CCCH case | 4740 |
| 52.10.4 | EGPRS Packet Access for signalling by IPA capable MS / EGPRS Packet Channel Request supported / CCCH case | 4741 |
| 53 | Test of EGPRS Radio Link Control (RLC) Protocol | 4743 |
| 53.1 | Acknowledged Mode | 4743 |
| 53.1.1 | Acknowledged Mode/ Uplink TBF | 4743 |
| 53.1.1.1 | Acknowledged Mode/ Uplink TBF/ Send State Variable V(S) | 4743 |
| 53.1.1.2 | Acknowledged Mode/ Uplink TBF/ Acknowledge State Variable V(A)..... | 4744 |
| 53.1.1.3 | Acknowledged Mode/ Uplink TBF/ Window Size/ Default Value..... | 4747 |
| 53.1.1.4 | Acknowledged Mode/ Uplink TBF/ Window Size/ Assigned Value | 4749 |
| 53.1.1.5 | Acknowledged mode/ Uplink TBF/ Invalid Negative Acknowledgement | 4751 |
| 53.1.1.6 | Acknowledged Mode/ Uplink TBF/ Countdown Value..... | 4753 |
| 53.1.1.7 | Acknowledged Mode/ Uplink TBF/ Interpretation of Receive Block Bitmap | 4755 |
| 53.1.1.8 | Acknowledged Mode/ Uplink TBF/ Pre-emptive Transmission/ Default Mode..... | 4757 |

| | | |
|-----------|--|------|
| 53.1.1.9 | Acknowledged Mode/ Uplink TBF/ Pre-emptive Transmission Bit Set to '1'..... | 4759 |
| 53.1.1.10 | Acknowledged Mode/ Uplink TBF/ Pre-emptive Transmission Bit Set to '0'/ PENDING_ACK Blocks | 4762 |
| 53.1.1.11 | Acknowledged Mode/ Uplink TBF/ Pre-emptive Transmission Bit Set to '0'/ Negative Acknowledgement..... | 4763 |
| 53.1.1.12 | Acknowledged Mode/ Uplink TBF/ Retransmission/ Split RLC Data Block | 4766 |
| 53.1.1.13 | Acknowledged Mode/ Uplink TBF/ Calculation of BSN2 | 4767 |
| 53.1.1.14 | Acknowledged Mode/ Uplink TBF/ Verification of Coding Schemes | 4769 |
| 53.1.1.15 | Acknowledged Mode/ Uplink TBF/ Recalculation of CV on MCS change..... | 4772 |
| 53.1.1.16 | Acknowledged Mode/ Uplink TBF/ Retransmission/ Padding in the Data Field..... | 4775 |
| 53.1.1.17 | Acknowledged Mode/ Uplink TBF/ Retransmission/ Puncturing Scheme Cycle | 4777 |
| 53.1.1.18 | EGPRS Acknowledged mode / Uplink TBF / Link Adaptation Procedure for retransmission..... | 4780 |
| 53.1.1.19 | EGPRS Acknowledged mode / Uplink TBF / Link Adaptation Procedure for initial transmission.. | 4786 |
| 53.1.1.20 | Acknowledged Mode/ Uplink TBF/ Retransmission/ MCS Selection without Re-segmentation | 4788 |
| 53.1.1.21 | Acknowledged Mode/ Uplink TBF/ Initial Puncturing Scheme After MCS Switching | 4794 |
| 53.1.1.22 | Acknowledged Mode/ Uplink TBF/ Recalculation of CV on TBC change | 4795 |
| 53.1.1.23 | Acknowledged Mode/ Uplink TBF/ Interpretation of Compressed Bitmap..... | 4798 |
| 53.1.1.24 | Acknowledged Mode/ Uplink TBF/ Interpretation of PBSN..... | 4799 |
| 53.1.1.25 | Acknowledged Mode/ Uplink TBF/ TBF Reallocation/Window Size..... | 4803 |
| 53.1.2 | Acknowledged Mode/ Downlink TBF..... | 4807 |
| 53.1.2.1 | Acknowledged Mode/ Downlink TBF/ Receive State Variable V(R) | 4807 |
| 53.1.2.2 | Acknowledged Mode/ Downlink TBF/ Receive Window State Variable V(Q) | 4808 |
| 53.1.2.3 | Acknowledged Mode/ Downlink TBF/ Window Size/ Default Value | 4810 |
| 53.1.2.4 | Acknowledged Mode/ Downlink TBF/ Window Size/ Assigned Value | 4814 |
| 53.1.2.5 | Acknowledged Mode/ Downlink TBF/ BOW | 4816 |
| 53.1.2.6 | Acknowledged Mode/ Downlink TBF/ EOW | 4817 |
| 53.1.2.7 | Acknowledged Mode/ Downlink TBF/ Measurement Report | 4819 |
| 53.1.2.8 | Acknowledged Mode/ Downlink TBF/ Generation of Bitmap | 4820 |
| 53.1.2.9 | Acknowledged Mode/ Downlink TBF/ Interpretation of BSN2 | 4821 |
| 53.1.2.10 | Acknowledged Mode/ Downlink TBF/ Split RLC Data Block..... | 4823 |
| 53.1.2.11 | Acknowledged Mode/ Downlink TBF/ First Partial Bitmap and Next Partial Bitmap | 4824 |
| 53.1.2.12 | Acknowledged Mode/ Downlink TBF/ Decoding of Coding Schemes | 4825 |
| 53.1.2.13 | Void..... | 4827 |
| 53.1.2.14 | Acknowledged Mode/ Downlink TBF/ Received Bitmap/ Compressed..... | 4827 |
| 53.1.2.15 | Acknowledged Mode/ Downlink TBF/ Received Bitmap/ Uncompressed..... | 4828 |
| 53.1.2.16 | Acknowledged Mode/ Downlink TBF/ Received Block Bitmap/ Compressed Bitmap Starting Colour Code | 4830 |
| 53.1.2.17 | Acknowledged Mode/ Downlink TBF/ Received Block Bitmap/ Terminating Code and Make-up Code | 4831 |
| 53.1.2.18 | Acknowledged Mode/ Downlink TBF/ Retransmission/ Padding | 4832 |
| 53.1.2.19 | Acknowledged Mode/ Downlink TBF/ TBF Reallocation/Window Size..... | 4834 |
| 53.2 | Unacknowledged Mode..... | 4836 |
| 53.2.1 | Unacknowledged Mode/ Uplink TBF..... | 4836 |
| 53.2.1.1 | Unacknowledged Mode/ Uplink TBF/ Stall Indicator | 4836 |
| 53.2.1.2 | Unacknowledged Mode/ Uplink TBF/ RBB and SSN | 4838 |
| 53.2.2 | Unacknowledged Mode/ Downlink TBF..... | 4839 |
| 53.2.2.1 | Unacknowledged Mode/ Downlink TBF/ V(R) and V(Q) | 4839 |
| 53.3 | Default Message Contents and Macros | 4840 |
| 53.3.1 | Message Contents | 4840 |
| 53.3.2 | Macros | 4841 |
| 53.3.2.1 | Macro for uplink dynamic allocation two phase access | 4841 |
| 53.3.2.2 | Macro for downlink TBF establishment (PBCCH not present) | 4841 |
| 53.3.2.3 | Macro for downlink TBF establishment using ACCESS TYPE = "signalling" (PBCCH not present)..... | 4842 |
| 54 to 56 | Void | 4843 |
| 57 | EGPRS Dual Transfer Mode | 4843 |
| 57.1 | Reallocation of CS resources..... | 4843 |
| 57.1.1 | Void | 4843 |
| 57.1.2 | Void | 4843 |
| 57.1.3 | Intra frequency reallocation of CS resources / DTM Assignment Command..... | 4843 |

| | | |
|----------|---|------|
| 57.1.4 | Inter frequency reallocation of CS resources / DTM Assignment Command..... | 4845 |
| 57.2 | Release of CS resources | 4847 |
| 57.2.1 | Network originating CS release | 4847 |
| 58 | Void..... | 4849 |
| 58a | Latency reductions | 4849 |
| 58a.1 | FANR Fast Ack/Nack reporting | 4849 |
| 58a.1.1 | Uplink TBF, SSN based PAN Format | 4849 |
| 58a.1.2 | Uplink TBF, SSN based PAN Format, with Concurrent Downlink TBF | 4852 |
| 58a.1.3 | Uplink TBF, Time based PAN Format | 4856 |
| 58a.1.4 | Uplink TBF, Time based PAN Format, with Concurrent Downlink TBF | 4861 |
| 58a.1.5 | Concurrent Uplink and Downlink TBFs, Discrimination of PAN Information from Different PDCH or PDCH Pairs | 4864 |
| 58a.1.6 | Concurrent Uplink and Downlink TBFs, Mobile Coding and Puncturing Schemes..... | 4868 |
| 58a.1.7 | Concurrent Uplink and Downlink TBFs, Choice of MCS for Uplink Data Block Re-Transmission with PAN Field Present | 4874 |
| 58a.1.8 | Uplink TBF, Handling of Erroneous PAN Fields,SSN Based Format | 4878 |
| 58a.1.9 | Uplink TBF, Handling of Erroneous PAN Fields,Time Based Format | 4881 |
| 58a.1.10 | Downlink TBF, with Concurrent Uplink TBF, Polled FANR | 4885 |
| 58a.1.11 | Downlink TBF, with Concurrent Uplink TBF, Event Based FANR, Out of Sequence Condition | 4888 |
| 58a.1.12 | Downlink TBF, with Concurrent Uplink TBF, Event Based FANR, Corrupted RLC Data Part with Event-based Fast Ack/Nack reporting | 4890 |
| 58a.1.13 | Downlink TBF, with Concurrent Uplink TBF, Event Based and Polled FANR Combined | 4893 |
| 58a.1.14 | Downlink TBF, with and without Concurrent Uplink TBF, CES/P Polling Response..... | 4896 |
| 58a.1.15 | Downlink TBF, with Concurrent Uplink TBF, Transmission of Other Messages in Response to Polling for PAN, PACKET CS REQUEST | 4900 |
| 58a.1.16 | Downlink TBF, with Concurrent Uplink TBF, Transmission of Other Messages in Response to Polling for PAN, PACKET CELL CHANGE NOTIFICATION | 4903 |
| 58a.1.17 | Downlink TBF, with and without Concurrent Uplink TBF, PAN Reaction Time, Polled PANR Polled Fast Ack/Nack reporting..... | 4907 |
| 58a.1.18 | Downlink TBF, with Concurrent Uplink TBF, PAN Reaction Time, Event Based FANR..... | 4910 |
| 58a.1.19 | Concurrent Uplink and Downlink TBFs, FANR/PAN, RLC Unacknowledged Mode..... | 4914 |
| 58a.2 | EGPRS test cases for RTTI Configuration..... | 4916 |
| 58a.2.1 | Uplink RTTI TBF/ Default PDCH pair configuration/ Dynamic Allocation / BTTI USF Mode | 4916 |
| 58a.2.2 | Uplink RTTI TBF/ default PDCH pair configuration/Dynamic Allocation/ RTTI USF Mode | 4918 |
| 58a.2.3 | Uplink RTTI TBF/default PDCH pair configuration/Extended Dynamic Allocation /BTTI USF | 4923 |
| 58a.2.4 | Uplink RTTI TBF/default PDCH pair configuration/Extended Dynamic Allocation /RTTI USF | 4926 |
| 58a.2.5 | Uplink RTTI TBF/Default PDCH pair configuration/Dynamic Allocation/USF Mode reconfiguration..... | 4931 |
| 58a.2.6 | Uplink RTTI TBF / One Phase Access Request by Reduced Latency MS / CCCH Case / Contention Resolution | 4934 |
| 58a.2.7 | Concurrent RTTI TBF / Channel Quality Reporting | 4937 |
| 58a.2.8 | Downlink RTTI TBF / default PDCH pair configuration/CCCH case | 4940 |
| 58a.2.9 | Concurrent RTTI TBFs / Explicit PDCH Pair Configuration | 4941 |
| 58a.2.10 | Concurrent RTTI TBF / Change in TTI configuration | 4945 |
| 58a.2.11 | Concurrent RTTI TBF / Downlink Dual Carrier configuration | 4948 |
| 58a.2.12 | Concurrent RTTI TBF / Dual Transfer Mode..... | 4952 |
| 58b | Downlink Dual Carrier and Downlink Multi Carrier | 4957 |
| 58b.1 | Downlink Dual Carrier Reconfiguration | 4957 |
| 58b.1.1 | Single Carrier Uplink TBF with no Downlink TBF/ DLDC TBF established / No change in Uplink TBF | 4957 |
| 58b.1.1a | Single Carrier Uplink TBF with no Downlink TBF/ DLMC TBF established / No change in Uplink TBF | 4960 |
| 58b.1.2 | Single Carrier concurrent TBF to DLDC TBF/ Uplink DLDC TBF (on both carrier 1 and carrier 2)/ Reconfigured back to single Carrier Concurrent TBF | 4963 |
| 58b.1.2a | Single Carrier concurrent TBF to DLMC TBF/ Uplink DLMC TBF (on both carrier 1 and carrier 2)/ Reconfigured back to single Carrier Concurrent TBF | 4980 |
| 58b.1.3 | Single Carrier Concurrent TBF/Downlink TBF reconfigured to DLDC configuration / Uplink single carrier TBF reallocated to Carrier 2/Uplink modified to Dual Carrier | 4992 |
| 58b.1.3a | Single Carrier Concurrent TBF/Downlink TBF reconfigured to DLMC configuration / Uplink single carrier TBF reallocated to Carrier 2/Uplink modified to Multi Carrier | 4995 |

| | | |
|--------------------|--|------|
| 58b.1.4 | Single Carrier Uplink TBF with no Downlink TBF / DLDC TBF established / Uplink DLDC TBF (on both carrier 1 and carrier 2)/ Uplink TBF Reconfigured to Single Carrier TBF | 4998 |
| 58b.1.4a | Single Carrier Uplink TBF with no Downlink TBF / DLMC TBF established / Uplink DLMC TBF (on both carrier 1 and carrier 2)/ Uplink TBF Reconfigured to Single Carrier TBF | 5004 |
| 58b.1.5 | Single Carrier Downlink TBF with No Uplink TBF/ Downlink reconfigured to DLDC TBF/ Uplink TBF established | 5011 |
| 58b.1.5a | Single Carrier Downlink TBF with No Uplink TBF/ Downlink reconfigured to DLMC TBF/ Uplink TBF established | 5015 |
| 58b.2 | Concurrent Downlink Dual Carrier TBF..... | 5019 |
| 58b.2.1 | Concurrent Downlink Dual Carrier TBF/ Reconfigure Frequency Parameters | 5019 |
| 58b.2.1a | Concurrent Downlink Multi Carrier TBF/ Reconfigure Frequency Parameters | 5030 |
| 58b.2.2 | Concurrent Downlink Dual Carrier TBF/ Change in Modulation and Coding Schemes | 5037 |
| 58b.2.2a | Concurrent Downlink Multi Carrier TBF/ Change in Modulation and Coding Schemes | 5042 |
| 58b.2.3 | Concurrent Downlink Dual Carrier TBF/ Frequency Hopping | 5047 |
| 58b.2.3a | Concurrent Downlink Multi Carrier TBF / Frequency Hopping | 5063 |
| 58b.2.4 | Concurrent Downlink Dual Carrier TBF/ Downlink Dual Carrier Configuration / Channel Quality Reporting | 5078 |
| 58b.2.4a | Concurrent Downlink Multi Carrier TBF / Downlink Multi Carrier Configuration / Channel Quality Reporting | 5083 |
| 58b.2.5 | Concurrent Downlink Dual Carrier TBF / Downlink Dual Carrier Configuration in Dual Transfer Mode..... | 5090 |
| 58b.2.6 | Concurrent Downlink Dual Carrier TBF/ Extended Dynamic Allocation..... | 5092 |
| 58b.2.6a | Concurrent Downlink Multi Carrier TBF / Extended Dynamic allocation..... | 5096 |
| 58b.2.7 | Concurrent Downlink Dual Carrier TBF / Downlink Dual Carrier Configuration/ Extended RLC/MAC control message segmentation | 5103 |
| 58b.2.7a | Concurrent Downlink Multi Carrier TBF / Downlink Multi Carrier Configuration/ Extended RLC/MAC control message segmentation | 5107 |
| 58b.2.8 | Concurrent Downlink Dual Carrier TBF/ Dual Carrier Uplink TBF/ USF granularity 4 | 5112 |
| 58b.2.8a | Concurrent Downlink Multi Carrier TBF/ Multi Carrier Uplink TBF/ USF granularity 4 | 5114 |
| 58b.2.9 | Concurrent Downlink Multi Carrier TBF / Frequency Hopping, Carrier selection | 5118 |
| 58b.2.10 | Concurrent Downlink Multi Carrier TBF / Downlink Multi Carrier Configuration / Channel Quality Reporting with UFPS..... | 5128 |
| 58b.2.11 | ..... | 5136 |
| 58b.2.12 | ..... | 5136 |
| 58b.2.13 | Concurrent Downlink DLMC configuration using Non-contiguous intra-band reception | 5136 |
| 58b.2.14 | Concurrent Downlink DLMC configuration using Inter-band reception..... | 5145 |
| 58b.3 | DLDC Configuration / Abnormal Case..... | 5154 |
| 58b.3.1 | DLDC Configuration / Abnormal Case / DLDC Assignment Multislot Class Violations..... | 5154 |
| 58b.3.1a | DLMC Configuration / Abnormal Case / DLMC Assignment Multislot Class Violations | 5160 |
| 58b.3.2 | DLDC Configuration / Abnormal Case/ Frequencies not within same band/ Access Retry | 5163 |
| 58b.3.2a | DLMC Configuration / Abnormal Case/ Frequencies not within same band/ Access Retry | 5168 |
| 58b.3.3 | DLDC Configuration / Abnormal case/ DLDC Configuration Supported / UL Single Carrier TBF / Frequency violations..... | 5174 |
| 58b.3.4 | DLMC Assignment abnormal Flexible resource assignment | 5179 |
| 58b.3.5 | DLMC Assignment abnormal case single carrier fallback | 5183 |
| 58c | EGPRS2 | 5187 |
| 58c.1 | Concurrent EGPRS2 TBF | 5187 |
| 58c.1.1a | Concurrent EGPRS2A TBF using RTTI Latency reduction..... | 5187 |
| 58c.2.1a | Acknowledged Mode/ Uplink TBF/ Countdown Value, in EGPRS2A | 5189 |
| 58c.2.2a | Acknowledged Mode/ Uplink TBF/ Retransmission/ Split RLC Data Block, in EGPRS2-A | 5191 |
| 58c.2 | Uplink EGPRS2 TBF | 5193 |
| 58c.2.1 to 58c.2.4 | Void | 5193 |
| 58c.2.4a | Acknowledged Mode/ Uplink TBF/ Verification of new coding schemes for EGPRS2A | 5193 |
| 58c.2.5a | Acknowledged Mode/ Uplink TBF/ Recalculation of CV on MCS change for EGPRS2A | 5197 |
| 58c.2.6 | Void | 5201 |
| 58c.2.7 | Void | 5201 |
| 58c.2.7a | EGPRS Acknowledged mode / Uplink TBF / Retransmission/ UAS or MCS Selection with Re-segmentation, in EGPRS2A..... | 5201 |
| 58c.2.8 | Void | 5207 |
| 58c.2.8a | Acknowledged Mode/ Uplink TBF/ Link Adaptation Procedure for Initial Transmission in EGPRS2A | 5207 |

| | | |
|-----------|--|------|
| 58c.2.9 | Void | 5209 |
| 58c.2.9a | Acknowledged Mode/ Uplink TBF/ Retransmission/ MCS or UAS Selection without Re-segmentation, in EGPRS2A..... | 5209 |
| 58c.2.10 | Void | 5215 |
| 58c.2.10a | Acknowledged Mode/ Uplink TBF/ Initial Puncturing Scheme After MCS Switching, in EGPRS2A.. | 5215 |
| 58c.3 | Downlink EGPRS2 TBF | 5218 |
| 58c.3.1 | Void | 5218 |
| 58c.3.2 | Void | 5218 |
| 58c.3.2a | Acknowledged Mode/ Downlink TBF/ Split RLC Data Block, in EGPRS2A | 5218 |
| 58c.3.3a | Acknowledged Mode / Downlink TBF / Decoding of Coding Schemes, in EGPRS2-A | 5219 |
| 58c.3.4a | Acknowledged Mode / Downlink TBF / Retransmission / Padding in EGPRS2-A | 5221 |
| 58c.3.5a | Acknowledged Mode / Downlink TBF / First Partial Bitmap and Next Partial Bitmap in EGPRS2-A .. | 5222 |
| 58d | EFTA..... | 5226 |
| 58d.1 | Concurrent EFTA TBF..... | 5226 |
| 58d.1.1 | EFTA / Extended Dynamic Allocation/Concurrent TBF..... | 5226 |
| 58d.1.2 | EFTA / Acknowledge mode/ Concurrent TBF/ pre-emptive retransmission..... | 5229 |
| 58d.1.3 | EFTA / Concurrent TBF / PAN Polling..... | 5231 |
| 58d.1.4 | EFTA / Concurrent TBF / Polling | 5233 |
| 58d.1.5 | EFTA/Downlink TBF/8 TS | 5235 |
| 58e | DTR..... | 5238 |
| 58e.1 | DTR with Uplink TBF / PACKET UPLINK ACK/NACK message with DTR information / Resumption to normal operation | 5238 |
| 58e.2 | DTR with Downlink TBF / RLC data block with DTR information / Resumption to normal operation | 5240 |
| 58e.3 | DTR with Concurrent TBF / RLC data block with DTR information / Resumption to normal operation | 5241 |
| 59 | Void..... | 5244 |
| 60 | Inter-system hard handover from GSM to UTRAN..... | 5244 |
| 60.1 | Inter system handover to UTRAN/From GSM/Speech/Success | 5247 |
| 60.1a | Inter system handover to UTRAN/From GSM/Speech/Success with A5/3 and UEA2/UIA2 ciphering | 5254 |
| 60.1b | Inter system handover to UTRAN/From GSM/Speech/Success with A5/4 and UEA2/UIA2 ciphering | 5254 |
| 60.2a | Inter system handover to UTRAN/From GSM/Data/Same data rate/Success..... | 5255 |
| 60.2b | Inter system handover to UTRAN/From GSM/Data/Same data rate/Extended Rates/Success..... | 5264 |
| 60.3a | Inter system handover to UTRAN/From GSM/Data/Data rate upgrading/Success..... | 5266 |
| 60.3b | Inter system handover to UTRAN/From GSM/Data/Data rate upgrading/Extended Rates/Success..... | 5268 |
| 60.4 | Inter system handover to UTRAN/From GSM/SDCCH/CC Establishment/Success..... | 5270 |
| 60.5 | Inter system handover to UTRAN/From GSM/Speech/Blind HO/Success..... | 5275 |
| 60.6 | Inter system handover to UTRAN/From GSM/Speech/Failure | 5276 |
| 60.7 | Inter system handover to UTRAN/From GSM/Failure/Cause: Frequency not implemented..... | 5278 |
| 60.8 | Inter system handover to UTRAN/From GSM/Failure/Cause: UTRAN configuration unknown | 5280 |
| 60.9 | Inter system handover to UTRAN/From GSM/Failure/Cause: Protocol Error | 5283 |
| 60.10 | Inter system handover to UTRAN/From GSM/Integrity Protection Activation..... | 5284 |
| 61-69 | Void..... | 5288 |
| 70 | Location Services | 5289 |
| 70.1 | Default conditions during LCS tests..... | 5289 |
| 70.1.1 | Default conditions during EOTD tests..... | 5289 |
| 70.1.2 | Default conditions during A-GPS signalling tests | 5289 |
| 70.1.3 | Default conditions during A-GNSS signalling tests | 5289 |
| 70.2 | EOTD Network Induced Location Request..... | 5289 |
| 70.2.1 | LCS Network Induced Emergency Call on an SDCCH / idle, no IMSI for Mobiles supporting MS-Assisted EOTD | 5289 |
| 70.2.2 | Void | 5293 |
| 70.2.3 | Network Induced Location Request Emergency Call on an SDCCH for MS-Assisted EOTD Mobiles | 5293 |
| 70.2.4 | Emergency Call NI-LR while Voice is Through Connected for Mobiles supporting MS-Assisted EOTD..... | 5296 |
| 70.3 | Mobile Originating Location Request..... | 5299 |
| 70.3.1 | MO_LR Basic Self Location Request..... | 5299 |
| 70.3.1.1 | MO_LR Basic Self Location Request In Idle Mode (Normal Case)..... | 5299 |
| 70.3.1.2 | MO_LR Basic Self Location Request In Dedicated Mode (Normal case)..... | 5302 |
| 70.3.2 | MO_LR Transfer to 3 rd Party..... | 5304 |

| | | |
|------------|--|------|
| 70.3.3 | MO_LR Autonomous Location | 5307 |
| 70.3.4 | MO_LR Positioning Measurement | 5309 |
| 70.3.4.1 | MO_LR Positioning Measurement / Protocol Error | 5309 |
| 70.3.4.2 | MO_LR Positioning Measurement / Location Error | 5312 |
| 70.3.4.3 | MO_LR Positioning Measurement / Multiple RRLP REQUEST with same Reference Number | 5315 |
| 70.3.4.4 | MO_LR Positioning Measurement / Multiple RRLP REQUEST with different Reference Number | 5317 |
| 70.3.4.5 | MO_LR Positioning Measurement / RR Management Commands | 5320 |
| 70.4 | Mobile Terminated Location Request for Mobiles supporting MS-Assisted EOTD | 5323 |
| 70.4.1 | MT-LR Location Notification for MS-Assisted EOTD | 5323 |
| 70.4.2 | MT-LR Privacy Options for Mobiles supporting MS-Assisted EOTD | 5325 |
| 70.4.2.1 | MT-LR Privacy Options/ Verification – Location Allowed If No Response for mobiles supporting MS-Assisted EOTD | 5326 |
| 70.4.2.2 | MT-LR Privacy Options/ Verification – Location Not Allowed If No Response for Mobiles supporting MS-Assisted EOTD | 5329 |
| 70.5 | Void..... | 5333 |
| 70.6 | E-OTD Timing Measurement Accuracy | 5333 |
| 70.6.1 | E-OTD Accuracy, Sensitivity Performance Tests using GMSK Signals..... | 5333 |
| 70.6.2 | E-OTD Accuracy, Interference Performance Tests | 5335 |
| 70.6.3 | E-OTD Accuracy, Multipath Performance Test using GMSK Modulated Signals | 5337 |
| 70.6.4 | E-OTD Accuracy, Interference Performance Tests, 8PSK BCCH | 5340 |
| 70.6.5 | E-OTD Accuracy, Multipath Performance Test, 8PSK BCCH | 5342 |
| 70.6.6 | E-OTD Accuracy, Sensitivity Performance Tests for 8PSK Modulated signals | 5345 |
| 70.7 | Assisted GPS Network Induced Tests | 5347 |
| 70.7.1 | Void | 5347 |
| 70.7.2 | Void | 5347 |
| 70.7.3 | Void | 5347 |
| 70.7.4 | Network Induced Location Request Emergency Call on TCH Radio Channel | 5347 |
| 70.7.4.1 | Network Induced Location Request Emergency Call on TCH Radio Channel for Mobiles Supporting MS-Based GPS | 5347 |
| 70.7.4.2 | Network Induced Location Request Emergency Call on TCH Radio Channel for mobiles supporting MS-Assisted GPS | 5352 |
| 70.7.4.3 | Network Induced Location Request Emergency Call on TCH Radio Channel, no IMSI for Mobiles Supporting MS-Based GPS | 5358 |
| 70.7.4.4 | Network Induced Location Request Emergency Call on TCH Radio Channel, no IMSI for mobiles supporting MS-Assisted GPS | 5363 |
| 70.8 | Assisted GPS Mobile Originated Tests | 5369 |
| 70.8.1 | Basic Self Location | 5369 |
| 70.8.2 | Basic Self Location in Dedicated Mode | 5375 |
| 70.8.3 | Transfer to 3 rd Party | 5380 |
| 70.8.4 | MO-LR Positioning Measurement | 5386 |
| 70.8.4.1 | MO-LR Positioning Measurement / Protocol Error | 5386 |
| 70.8.4.2 | MO-LR Positioning Measurement / Location Error | 5392 |
| 70.8.4.2.1 | Location Error: Requested Method not Supported | 5392 |
| 70.8.4.2.2 | Location Error: GPS Assistance Data Missing | 5398 |
| 70.8.4.3 | MO-LR Positioning Measurement / Multiple RRLP Requests with Same Reference Number | 5403 |
| 70.8.4.4 | MO-LR Positioning Measurement / Multiple RRLP Requests with Different Reference Number | 5408 |
| 70.8.4.5 | MO-LR Positioning Measurement / RR Management Commands | 5417 |
| 70.8.5 | MO_LR Basic Self Location Request for MS-Based AGPS | 5425 |
| 70.8.5.1 | MO_LR Basic Self Location Request in Idle Mode (Normal Case) | 5425 |
| 70.8.5.2 | MO_LR Basic Self Location Request in Dedicated Mode (Normal case) | 5428 |
| 70.8.5.3 | MO_LR Basic Self Location Request in Idle Mode (Alternative Case) | 5431 |
| 70.8.5.4 | MO_LR Basic Self Location Request in Dedicated Mode (Alternative Case) | 5438 |
| 70.8.6 | MO-LR Transfer to 3 rd Party for MS-Based A-GPS | 5444 |
| 70.9 | Assisted GPS Mobile Terminated Tests | 5450 |
| 70.9.1 | MT-LR Location Notification | 5450 |
| 70.9.1.1 | MT-LR Location Notification for Mobiles Supporting MS-Based GPS | 5450 |
| 70.9.1.2 | MT-LR Location Notification for Mobiles Supporting MS-Assisted GPS | 5452 |
| 70.9.2 | MT-LR Privacy Options/Verification – Location Allowed If No Response | 5455 |
| 70.9.2.1 | MT-LR Privacy Options/Verification– Location Allowed If No Response for mobiles supporting MS-Based GPS | 5455 |

| | | |
|-----------|---|------|
| 70.9.2.2 | MT-LR Privacy Options/Verification– Location Allowed If No Response for Mobiles Supporting MS-Assisted GPS | 5459 |
| 70.9.3 | MT-LR Privacy Options/Verification – Location Not Allowed If No Response..... | 5463 |
| 70.9.3.1 | MT-LR Privacy Options/Verification– Location Not Allowed If No Response for Mobiles Supporting MS-Based GPS | 5463 |
| 70.9.3.2 | MT-LR Privacy Options/Verification– Location Not Allowed If No Response for mobiles supporting MS-Assisted GPS..... | 5467 |
| 70.9.4 | MT-LR / RRLP Error Handling for MS-Based A-GPS..... | 5471 |
| 70.9.4.1 | RRLP Protocol Error..... | 5471 |
| 70.9.4.2 | RRLP Location Error – Requested Method Not Supported | 5476 |
| 70.9.4.3 | RRLP Location Error – GPS Assistance Data Missing..... | 5481 |
| 70.9.4.4 | Multiple RRLP Requests with same Reference Number | 5485 |
| 70.9.4.5 | Multiple RRLP Requests with different Reference Number..... | 5491 |
| 70.9.4.6 | RR Management Commands | 5498 |
| 70.10 | Conventional GPS Network Induced Tests | 5506 |
| 70.10.1 | Void | 5506 |
| 70.10.2 | Network Induced Location Request Emergency Call on TCH Radio Channel | 5506 |
| 70.10.2.1 | Network Induced Location Request Emergency Call on TCH Radio Channel for Mobiles Supporting Conventional GPS | 5506 |
| 70.11 | A-GPS Minimum Performance tests | 5509 |
| 70.11.1 | Abbreviations..... | 5509 |
| 70.11.2 | GPS test conditions..... | 5510 |
| 70.11.3 | GSM test conditions..... | 5510 |
| 70.11.4 | A-GPS test conditions..... | 5510 |
| 70.11.5 | Sensitivity | 5513 |
| 70.11.5.1 | Sensitivity Coarse Time Assistance | 5513 |
| 70.11.5.2 | Sensitivity Fine Time Assistance | 5515 |
| 70.11.6 | Nominal Accuracy | 5518 |
| 70.11.7 | Dynamic Range | 5520 |
| 70.11.8 | Multi-Path scenario..... | 5522 |
| 70.12 | Assisted GNSS General Procedures | 5524 |
| 70.12.1 | Positioning Capability Transfer procedure | 5524 |
| 70.13 | Assisted GNSS Network Induced Location Request (NI-LR) | 5527 |
| 70.13.1 | NI-LR / Emergency Call on TCH Radio Channel for Mobiles Supporting MS-Based GNSS | 5527 |
| 70.13.2 | NI-LR / Emergency Call on TCH Radio Channel for Mobiles Supporting MS-Assisted GNSS | 5535 |
| 70.14 | Assisted GNSS Mobile Originated Location Request (MO-LR) | 5543 |
| 70.14.1 | MO-LR / Idle mode for Mobiles Supporting MS-Assisted GNSS | 5543 |
| 70.14.2 | MO-LR / Idle mode for Mobiles Supporting MS-Based GNSS / Assistance Data Request..... | 5551 |
| 70.14.3 | MO-LR / Idle mode for Mobiles Supporting MS-Based GNSS / Location Estimate Request | 5555 |
| 70.14.4 | MO-LR / Dedicated Mode for Mobiles Supporting MS-Assisted GNSS | 5562 |
| 70.14.5 | MO-LR / Dedicated Mode for Mobiles Supporting MS-Based GNSS / Assistance Data Request..... | 5570 |
| 70.14.6 | MO-LR / Dedicated Mode for Mobiles Supporting MS-Based GNSS / Location Estimate request | 5575 |
| 70.14.7 | ..... | 5582 |
| 70.14.8 | MO-LR / Location Error..... | 5582 |
| 70.14.8.1 | MO-LR / Location Error / Requested Method not supported | 5582 |
| 70.14.8.2 | MO-LR / Location Error / GNSS Assistance Data Missing..... | 5590 |
| 70.14.9 | MO-LR / Multiple RRLP Requests with Same Reference Number and Extended Reference Number.. | 5598 |
| 70.14.10 | MO-LR / Multiple RRLP Requests with Different Reference Number | 5606 |
| 70.14.11 | MO-LR / Multiple RRLP Requests with Different Extended Reference Number | 5617 |
| 70.14.12 | MO-LR / RR Management Commands | 5628 |
| 70.15 | Assisted GNSS Mobile Terminated Location Request (MT-LR)..... | 5639 |
| 70.15.1 | MT-LR / Location Notification | 5639 |
| 70.15.2 | MT-LR / Notification and Verification / Location Allowed If No Response | 5642 |
| 70.15.3 | MT-LR / Notification and Verification / Location Not Allowed If No Response | 5646 |
| 70.15.4 | Void | 5650 |
| 70.15.5 | MT-LR / Location Error | 5650 |
| 70.15.5.1 | MT-LR / Location Error / Requested Method not Supported | 5650 |
| 70.15.5.2 | Location Error: GNSS Assistance Data Missing..... | 5657 |
| 70.15.6 | MT-LR / Multiple RRLP Requests with Same Reference Number and Extended Reference Number .. | 5661 |
| 70.15.7 | MT-LR / Multiple RRLP Requests with Different Reference Number | 5669 |
| 70.15.8 | MT-LR / Multiple RRLP Requests with Different Extended Reference Number | 5679 |
| 70.15.9 | MT-LR / RR Management Commands | 5689 |

| | | |
|------------|--|------|
| 70.16 | A-GNSS Minimum Performance tests | 5699 |
| 70.16.1 | Abbreviations..... | 5699 |
| 70.16.2 | GNSS test conditions | 5700 |
| 70.16.3 | GSM and other test conditions..... | 5701 |
| 70.16.4 | A-GNSS test conditions..... | 5701 |
| 70.16.5 | Sensitivity | 5705 |
| 70.16.5.1 | Sensitivity Coarse Time Assistance | 5705 |
| 70.16.5.2 | Sensitivity Fine Time Assistance | 5709 |
| 70.16.6 | Nominal Accuracy | 5712 |
| 70.16.7 | Dynamic Range | 5715 |
| 70.16.8 | Multi-Path scenario..... | 5719 |
| 80 | Generic Access default conditions, message contents and macros | 5723 |
| 80.1 | Default test conditions..... | 5723 |
| 80.1.1 | Unlicensed Radio Access..... | 5723 |
| 80.1.1.1 | IEEE 802.11 | 5723 |
| 80.1.1.2 | Bluetooth..... | 5723 |
| 80.1.2 | Protocol Settings | 5723 |
| 80.1.2.1 | Dynamic Host Configuration Protocol - DHCP | 5723 |
| 80.1.2.2 | Domain Name System – DNS..... | 5723 |
| 80.1.2.2.1 | Public DNS Server | 5723 |
| 80.1.2.2.2 | DNS associated with GANC | 5724 |
| 80.1.2.3 | Secure Gateway (SEGW)..... | 5724 |
| 80.1.2.4 | Generic Access Network Controller (GANC)..... | 5724 |
| 80.1.2.5 | Secure Internet Protocol - IPsec | 5724 |
| 80.2 | Default message contents | 5724 |
| 80.3 | Macros | 5724 |
| 80.3.1 | Overview | 5724 |
| 80.3.1.1 | Definition | 5724 |
| 80.3.1.2 | Syntax | 5725 |
| 80.3.1.2.1 | Message contents | 5725 |
| 80.3.1.2.2 | Message sequence | 5725 |
| 80.3.2 | Default message contents..... | 5726 |
| 80.3.3 | Macro message sequences | 5726 |
| 80.3.3.1 | Location Update Procedure..... | 5726 |
| 80.3.3.1.1 | GAN A/Gb Mode Location Update Procedure..... | 5726 |
| 80.3.3.1.2 | GAN Iu Mode Location Update Procedure | 5726 |
| 80.4 | Test PDP contexts | 5727 |
| 81 | GAN Discovery and Registration Procedures..... | 5727 |
| 81.1 | Discovery Procedure | 5727 |
| 81.1.1 | Discovery Procedure, Accepted..... | 5727 |
| 81.1.1.1 | Discovery Procedure, MS holds the IP address of the provisioning SEGW and FQDN of provisioning GANC, provisioning GANC and default GANC belong to the same SEGW | 5727 |
| 81.1.1.2 | Discovery procedure, the MS holds the FQDN of the provisioning SEGW and IP address of the provisioning GANC, provisioning GANC and default GANC belong to different SEGWs..... | 5729 |
| 81.1.1.3 | Discovery procedure, the MS is not provisioned with information about the provisioning GANC or its SEGW | 5731 |
| 81.1.2 | Discovery Procedure, Rejected..... | 5733 |
| 81.1.2.1 | Discovery Procedure, Discovery Reject, Network Congestion..... | 5733 |
| 81.1.2.2 | Discovery Procedure, Discovery Reject, IMSI not allowed..... | 5734 |
| 81.1.2.3 | Void..... | 5736 |
| 81.1.3 | Discovery Procedure, Abnormal Cases | 5736 |
| 81.1.3.1 | Discovery Procedure, TU3901/TU3903 Expires | 5736 |
| 81.1.3.2 | Void..... | 5738 |
| 81.1.3.3 | Void..... | 5738 |
| 81.1.3.4 | Void..... | 5738 |
| 81.1.3.5 | Void..... | 5738 |
| 81.1.3.6 | Void..... | 5738 |
| 81.1.3.7 | SEGW certificate checking, the MS holds the “invalid” FQDN of the provisioning SEGW | 5738 |
| 81.2 | Registration Procedure | 5740 |
| 81.2.1 | Registration Procedure, Accepted..... | 5740 |

| | | |
|-----------|---|------|
| 81.2.1.1 | Registration Procedure, MS in GSM Coverage, Serving GANC for CGI Known..... | 5740 |
| 81.2.1.2 | Registration Procedure, MS in GSM Coverage, Serving GANC for CGI Not Known; MS not in GSM Coverage, Serving GANC for AP Known..... | 5741 |
| 81.2.1.3 | Void..... | 5743 |
| 81.2.1.4 | Registration Procedure, MS Holds The IP Address to The serving SEGW And The FQDN to The Serving GANC..... | 5743 |
| 81.2.1.5 | Registration Procedure, MS Holds The FQDN to The serving SEGW And The IP Address to The Serving GANC..... | 5744 |
| 81.2.1.6 | Registration Procedure, MS is capable of GAN A/Gb mode and GAN Iu mode, directed to operate in GAN A/Gb mode..... | 5746 |
| 81.2.1.7 | Registration Procedure, MS is capable of GAN A/Gb mode and GAN Iu mode, directed to operate in GAN Iu mode | 5747 |
| 81.2.1.8 | Registration Procedure, MS is capable of GAN A/Gb mode and GAN Iu mode, no GAN Mode Indicator IE in GA-RC REGISTER ACCEPT | 5748 |
| 81.2.1.9 | Registration Procedure, MS is capable of GAN Iu mode only, no GAN Mode Indicator IE in GA-RC REGISTER ACCEPT | 5750 |
| 81.2.1.10 | Registration Procedure, MS is capable of GAN Iu mode only, GAN Mode Indicator IE in GA- RC REGISTER ACCEPT indicates that MS shall use GAN A/Gb mode | 5751 |
| 81.2.1.11 | Registration Procedure, MS is capable of GAN Iu mode (only) is directed to operate in GAN Iu mode..... | 5753 |
| 81.2.2 | Registration Procedure, Redirected | 5754 |
| 81.2.2.1 | Registration Procedure, Redirected, Not Possible to Reuse Secure Connection..... | 5754 |
| 81.2.2.2 | Registration Procedure, Redirected, Current And Received GANC Belongs to The Same SEGW, IP Address Matches..... | 5755 |
| 81.2.2.3 | Registration Procedure, Redirected, Current And Received GANC Belongs to The Same SEGW, FQDN Matches | 5757 |
| 81.2.3 | Registration Procedure, Rejected..... | 5758 |
| 81.2.3.1 | Registration Procedure, Registration rejected, Network congestion | 5758 |
| 81.2.3.2 | Registration Procedure, Registration rejected, AP not allowed | 5759 |
| 81.2.3.3 | Registration Procedure, Registration rejected, Location not allowed | 5761 |
| 81.2.3.4 | Registration Procedure, Registration rejected, IMSI not allowed | 5763 |
| 81.2.3.5 | Void..... | 5765 |
| 81.2.3.6 | Registration Procedure, Registration rejected, invalid GANC..... | 5765 |
| 81.2.3.7 | Registration Procedure, Registration rejected, Geo location not known..... | 5767 |
| 81.2.4 | Registration Procedure, Abnormal Cases | 5769 |
| 81.2.4.1 | Registration Procedure, TU3904/TU3905 expiry, Serving GANC | 5769 |
| 81.2.4.2 | Registration Procedure, Registration Rejected, Network Congestion, Persistent Fault | 5770 |
| 81.2.4.3 | Void..... | 5772 |
| 81.2.4.4 | Void..... | 5772 |
| 81.2.4.5 | Void..... | 5772 |
| 81.2.4.6 | Void..... | 5772 |
| 81.2.4.7 | Void..... | 5772 |
| 81.2.5 | Registration Procedure, Register Update | 5772 |
| 81.2.5.1 | Registration Procedure, Register Update, Rejected | 5772 |
| 81.2.5.2 | Registration Procedure, Register Update, Redirection..... | 5774 |
| 81.2.6 | Registration Procedure, Deregister | 5775 |
| 81.2.6.1 | Registration Procedure, Deregister, Network Congestion, MS in State GA-CSR DEDICATED..... | 5775 |
| 81.2.6.2 | Registration Procedure, Deregister, AP Not Allowed, MS in State GA-RC REGISTERED..... | 5776 |
| 81.2.6.3 | Registration Procedure, Deregister, Location Not Allowed, MS in State GA-CSR IDLE | 5777 |
| 81.2.6.4 | Registration Procedure, Deregister, IMSI Not Allowed..... | 5779 |
| 81.2.6.5 | Registration Procedure, Deregister, Unspecified | 5780 |
| 81.2.6.6 | Registration Procedure, Deregister, Unspecified, Persistent Fault, Default GANC | 5782 |
| 81.2.6.7 | Registration Procedure, Deregister, Invalid GANC, Serving GANC | 5784 |
| 81.2.6.8 | Registration Procedure, Deregister, Geo Location Not Known | 5785 |
| 81.2.6.9 | Registration Procedure, Deregister, MS Initiated..... | 5787 |
| 81.2.6.10 | Registration Procedure, Deregister, Network Congestion, MS in State GA-RRC CONNECTED..... | 5788 |
| 81.3 | Lower Layer Faults | 5789 |
| 81.3.1 | TCP Reset | 5789 |
| 81.3.1.1 | TCP Reset, Successful Re-establishment, MS in State GA-CSR DEDICATED | 5789 |
| 81.3.1.2 | TCP Reset, Unsuccessful Re-establishment, MS in State GA-CSR IDLE | 5790 |
| 81.3.1.3 | TCP Reset, Successful Re-establishment, MS in State GA-RRC-CONNECTED (CS domain) | 5791 |
| 81.3.1.4 | TCP Reset, Successful Re-establishment, MS in State GA-RRC-CONNECTED (PS domain) | 5792 |

| | | |
|----------|---|------|
| 81.3.1.5 | TCP Reset, Unsuccessful Re-establishment, MS in State GA-RRC-IDLE (CS and PS domains)..... | 5793 |
| 81.3.2 | Lower Layer Faults, MS is Registered..... | 5794 |
| 81.3.2.1 | IPSec Tunnel Failure, MS in State GA-CSR IDLE | 5794 |
| 81.3.2.2 | TCP Failure, MS in State GA-CSR DEDICATED | 5796 |
| 81.3.2.3 | IPSec Tunnel Failure, MS in State GA-RRC-IDLE (CS and PS domains)..... | 5797 |
| 81.3.2.4 | TCP Failure, MS in State GA-RRC-CONNECTED (CS domain) | 5798 |
| 81.3.2.5 | TCP Failure, MS in State GA-RRC-CONNECTED (PS domain)..... | 5799 |
| 82 | GAN CS Domain Procedures..... | 5801 |
| 82.1 | GA-CSR connection establishment | 5801 |
| 82.1.1 | GA-CSR connection establishment / successful case | 5801 |
| 82.1.1.1 | GA-CSR connection establishment, Upper Layer Message Transmission and GA-CRS connection release by GANC | 5801 |
| 82.1.2 | GA-CSR connection establishment / negative cases | 5802 |
| 82.1.2.1 | GA-CSR REQUEST rejected..... | 5802 |
| 82.1.2.2 | MS receives GA-CSR REQUEST ACCEPT message after TU3908 expiry | 5804 |
| 82.2 | Upper layer message transmission | 5806 |
| 82.2.1 | Upper layer message transmission / successful cases | 5806 |
| 82.2.1.1 | Void..... | 5806 |
| 82.2.2 | Upper layer message transmission / negative cases | 5806 |
| 82.2.2.1 | MS receives GA-CSR DL DIRECT TRANSFER message when not in GA-CSR- DEDICATED state..... | 5806 |
| 82.3 | Paging for CS domain | 5807 |
| 82.3.1 | Paging for CS domain / successful case..... | 5807 |
| 82.3.1.1 | Paging for CS domain | 5807 |
| 82.3.2 | Paging for CS domain / negative cases | 5808 |
| 82.3.2.1 | Void..... | 5808 |
| 82.3.2.2 | MS receives GA-CSR PAGING REQUEST when TU3908 is active | 5808 |
| 82.3.2.3 | MS receives GA-CSR PAGING REQUEST when in GA-CSR DEDICATED state | 5810 |
| 82.3.2.4 | MS receives GA-CSR PAGING REQUEST when in GA-RC REGISTERED state | 5811 |
| 82.4 | Traffic Channel assignment..... | 5812 |
| 82.4.1 | Traffic Channel assignment / successful cases | 5812 |
| 82.4.1.1 | Traffic Channel assignment | 5812 |
| 82.4.1.2 | Traffic Channel assignment and Release | 5812 |
| 82.4.2 | Traffic Channel assignment / negative cases | 5814 |
| 82.4.2.1 | MS fails to establish the traffic channel | 5814 |
| 82.5 | Release of GA-CSR..... | 5815 |
| 82.5.1 | Release of GA-CSR | 5815 |
| 82.5.1.1 | Void..... | 5815 |
| 82.5.1.2 | Void..... | 5815 |
| 82.6 | Classmark Indication..... | 5815 |
| 82.6.1 | Classmark Indication Procedure | 5815 |
| 82.6.1.1 | Classmark Indication, Initiation of Classmark Interrogation by MS..... | 5815 |
| 82.7 | Handover to GAN | 5816 |
| 82.7.1 | Handover to GAN / successful cases | 5816 |
| 82.7.1.1 | Handover from GERAN to GAN | 5816 |
| 82.7.1.2 | Handover from GERAN to GAN signalling case | 5818 |
| 82.7.1.3 | Handover from UTRAN to GAN | 5819 |
| 82.7.2 | Handover to GAN / negative cases | 5822 |
| 82.7.2.1 | Void..... | 5822 |
| 82.7.2.2 | TU3920 expires during handover procedure | 5822 |
| 82.8 | Handover from GAN..... | 5824 |
| 82.8.1 | Handover from GAN / successful cases | 5824 |
| 82.8.1.1 | Handover from GAN to GERAN..... | 5824 |
| 82.8.1.2 | Handover from GAN to UTRAN | 5826 |
| 82.8.2 | Handover from GAN / negative cases | 5828 |
| 82.8.2.1 | Connection establishment fails on GERAN cell | 5828 |
| 82.8.2.2 | Handover command with non-supported configuration..... | 5830 |
| 82.9 | Ciphering Configuration Procedure..... | 5831 |
| 82.9.1 | Ciphering Configuration Procedure, Normal cases | 5831 |
| 82.9.1.1 | Ciphering Configuration Procedure | 5831 |
| 82.9.1.2 | Void..... | 5833 |

| | | |
|-----------|---|------|
| 82.9.2 | Ciphering Configuration Procedure, Abnormal cases..... | 5833 |
| 82.9.2.1 | Ciphering Configuration Procedure, Invalid Ciphering Mode Command | 5833 |
| 82.10 | Channel mode modify procedure | 5834 |
| 82.10.1 | Channel mode modify procedure / successful cases | 5834 |
| 82.10.1.1 | Channel mode modify / successful case..... | 5834 |
| 82.10.2 | Channel mode modify procedure / negative cases..... | 5835 |
| 82.10.2.1 | Channel mode modify indicates non-supported mode | 5835 |
| 83 | GAN PS Domain Procedures | 5836 |
| 83.1 | GA-PSR Transport Channel Activation & Deactivation Procedures | 5836 |
| 83.1.1 | GA-PSR Transport Channel Activation & Deactivation Procedures, Normal Cases | 5836 |
| 83.1.1.1 | MS Initiated GA-PSR TC Activation..... | 5836 |
| 83.1.2 | GA-PSR Transport Channel Activation & Deactivation Procedures, Abnormal Cases | 5838 |
| 83.1.2.1 | GA-PSR TC Activation Collision | 5838 |
| 83.1.2.2 | GANC Rejects GA-PSR TC Activation..... | 5839 |
| 83.1.3 | Network Initiated GA-PSR Transport Channel Activation, Normal Case..... | 5840 |
| 83.1.3.1 | Processing of the GA-PSR TC Activation Request by the MS | 5840 |
| 83.1.4 | Network Initiated GA-PSR Transport Channel Activation, Abnormal Cases | 5842 |
| 83.1.4.1 | Void..... | 5842 |
| 83.1.4.2 | MS Rejects GA-PSR TC Activation when the GPRS Service is suspended..... | 5842 |
| 83.1.4.3 | MS Receives GA-PSR TC Activation Request while GA-PSR TC active | 5843 |
| 83.1.5 | MS Initiated Deactivation of GA-PSR Transport Channel, Normal Case | 5845 |
| 83.1.5.1 | GA-PSR TC Deactivation Initiation by the MS | 5845 |
| 83.1.6 | MS Initiated Deactivation of GA-PSR Transport Channel, Abnormal Cases..... | 5846 |
| 83.1.6.1 | Uplink User Data Transfer is initiated while GA-PSR TC Deactivation is in Progress..... | 5846 |
| 83.1.6.2 | Downlink User Data Transfer is received while the GA-PSR TC Deactivation is in Progress..... | 5848 |
| 83.1.6.3 | Unexpected GA-PSR-DEACTIVATE-UTC-ACK response | 5849 |
| 83.1.6.4 | Unexpected GA-PSR-ACTIVATE-UTC-REQ..... | 5850 |
| 83.1.7 | GANC Initiated Deactivation of GA-PSR Transport Channel, Normal Case..... | 5851 |
| 83.1.7.1 | GA-PSR TC Deactivation Initiation by the GANC | 5851 |
| 83.1.8 | Void | 5853 |
| 83.2 | GA-PSR GPRS User Data Transport | 5853 |
| 83.2.1 | GA-PSR GPRS User Data Transport , Normal Cases | 5853 |
| 83.2.1.1 | MS Initiates Uplink GPRS User Data Transfer..... | 5853 |
| 83.2.2 | GA-PSR GPRS User Data Transport , Abnormal Cases | 5854 |
| 83.2.2.1 | Void..... | 5854 |
| 83.2.2.2 | Void..... | 5854 |
| 83.2.2.3 | MS Receives a Downlink Message to Initiate Uplink GPRS User Data Transfer while the GA-PSR TC activation Procedure is in progress | 5854 |
| 83.3 | Packet paging for packet service | 5855 |
| 83.3.1 | PS Paging Request Processed by the MS, Normal Case | 5855 |
| 83.3.1.1 | PS Paging Request Processed by the MS | 5855 |
| 83.4 | GPRS Suspend Procedure | 5856 |
| 83.4.1 | GPRS Suspension Initiation by the MS, normal Case | 5856 |
| 83.4.1.1 | GPRS Suspension Initiation by the MS | 5856 |
| 83.5 | Downlink Flow Control..... | 5858 |
| 83.5.1 | Initiation of the Downlink Flow Control and Processing of the TU4003 Timer Expiry by the MS, Normal Case | 5858 |
| 83.5.1.1 | Initiation of the Downlink Flow Control and Processing of the TU4003 Timer Expiry by the MS .. | 5858 |
| 83.6 | Uplink Flow Control | 5859 |
| 83.6.1 | Processing of the Uplink Flow Control Request by the MS, Normal Case | 5859 |
| 83.6.1.1 | Processing of the Uplink Flow Control Request by the MS..... | 5859 |
| 83.6.2 | Processing of the Uplink Flow Control Request by the MS, Abnormal Cases | 5860 |
| 83.6.2.1 | GA-PSR TC in not Active..... | 5860 |
| 84 | GAN Iu Mode Procedures | 5862 |
| 84.1 | Macros for GAN Iu mode | 5862 |
| 84.2 | GA-RRC connection establishment | 5862 |
| 84.2.1 | GA-RRC connection establishment / successful case..... | 5862 |
| 84.2.1.1 | GA-RRC connection establishment, Upper Layer Message Transmission and GA-RRC connection release by GANC (CS domain) | 5862 |

| | | |
|-----------|---|------|
| 84.2.1.2 | GA-RRC connection establishment, Upper Layer Message Transmission and GA-RRC connection release by GANC (PS domain) | 5864 |
| 84.2.2 | GA-RRC connection establishment / negative cases | 5866 |
| 84.2.2.1 | GA-RRC REQUEST rejected (CS domain) | 5866 |
| 84.2.2.2 | MS receives GA-RRC REQUEST ACCEPT message after TU5908 expiry (CS domain) | 5868 |
| 84.2.2.3 | GA-RRC REQUEST rejected (PS domain) | 5870 |
| 84.2.2.4 | MS receives GA-RRC REQUEST ACCEPT message after TU5908 expiry (PS domain) | 5872 |
| 84.3 | Upper layer message transmission | 5874 |
| 84.3.1 | Upper layer message transmission / successful cases | 5874 |
| 84.3.1.1 | Void..... | 5874 |
| 84.3.2 | Upper layer message transmission / negative cases | 5874 |
| 84.3.2.1 | MS receives GA-RRC DLINK DIRECT TRANSFER message when not in GA-RRC-CONNECTED state (CS domain) | 5874 |
| 84.3.2.2 | MS receives GA-RRC DLINK DIRECT TRANSFER message when not in GA-RRC-CONNECTED state (PS domain) | 5875 |
| 84.4 | Paging..... | 5876 |
| 84.4.1 | Paging for CS domain / successful cases | 5876 |
| 84.4.1.1 | Paging for CS domain | 5876 |
| 84.4.2 | Paging for CS domain / negative cases | 5878 |
| 84.4.2.1 | Void..... | 5878 |
| 84.4.2.2 | Paging for CS domain / negative cases / MS receives GA-RRC PAGING REQUEST when TU5908 is active | 5878 |
| 84.4.2.3 | Paging for CS domain / negative cases / MS receives GA-RRC PAGING REQUEST when in GA-RRC-CONNECTED state | 5880 |
| 84.4.2.4 | Paging for CS domain / negative cases / MS receives GA-RRC PAGING REQUEST when in GA-RC REGISTERED state..... | 5881 |
| 84.4.3 | Paging for PS domain / successful cases | 5883 |
| 84.4.3.1 | Paging for PS domain..... | 5883 |
| 84.4.4 | Paging for PS domain / negative cases | 5884 |
| 84.4.4.1 | Void..... | 5884 |
| 84.4.4.2 | Paging for PS domain / negative cases / MS receives GA-RRC PAGING REQUEST when TU5908 is active | 5884 |
| 84.4.4.3 | Paging for PS domain / negative cases / MS receives GA-RRC PAGING REQUEST when in GA-RRC-CONNECTED state | 5886 |
| 84.4.4.4 | Paging for PS domain / negative cases / MS receives GA-RRC PAGING REQUEST when in GA-RC REGISTERED state..... | 5887 |
| 84.5 | Traffic Channel assignment..... | 5889 |
| 84.5.1 | CS Traffic Channel assignment / successful cases | 5889 |
| 84.5.1.1 | CS Traffic Channel assignment and Release | 5889 |
| 84.5.2 | CS Traffic Channel assignment / negative cases | 5891 |
| 84.5.2.1 | MS fails to establish the CS traffic channel | 5891 |
| 84.5.3 | PS Traffic Channel assignment / successful cases | 5893 |
| 84.5.3.1 | PS Traffic Channel assignment and Release | 5893 |
| 84.5.4 | PS Traffic Channel assignment / negative cases..... | 5895 |
| 84.5.4.1 | MS fails to establish the PS traffic channel..... | 5895 |
| 84.6 | Release of GA-RRC | 5897 |
| 84.7 | Void..... | 5897 |
| 84.8 | Void..... | 5897 |
| 84.9 | Security Mode Control Procedure | 5897 |
| 84.9.1 | Security Mode Control Procedure / successful cases..... | 5897 |
| 84.9.1.1 | Security Mode Control Procedure (CS domain) | 5897 |
| 84.9.1.2 | Security Mode Control Procedure (PS domain)..... | 5899 |
| 84.10 | Channel modify procedure | 5900 |
| 84.10.1 | CS channel modify procedure / successful cases | 5900 |
| 84.10.1.1 | CS channel modify / successful case..... | 5900 |
| 84.10.2 | CS channel modify procedure / negative cases | 5902 |
| 84.10.2.1 | CS channel modify requests illegal change to parameter..... | 5902 |
| 84.10.3 | PS channel modify procedure / successful cases | 5904 |
| 84.10.3.1 | PS channel modify / successful case | 5904 |
| 84.10.4 | PS channel modify procedure / negative cases | 5906 |
| 84.10.4.1 | PS channel modify requests illegal change to parameter | 5906 |
| 84.11 | Deactivate channel procedure..... | 5908 |

| | | |
|-----------------------------|---|-------------|
| 84.11.1 | CS deactivate channel procedure / successful cases | 5908 |
| 84.11.1.1 | CS deactivate channel request from GANC | 5908 |
| 84.11.1.2 | CS deactivate channel request from MS | 5909 |
| 84.11.2 | CS deactivate channel procedure / negative cases | 5911 |
| 84.11.2.1 | TU5002 timer expires | 5911 |
| 84.11.3 | PS deactivate channel procedure / successful cases..... | 5913 |
| 84.11.3.1 | PS deactivate channel request from GANC | 5913 |
| 84.11.3.2 | PS deactivate channel request from MS..... | 5914 |
| 84.11.4 | PS deactivate channel procedure / negative cases..... | 5916 |
| 84.11.4.1 | TU5002 timer expires | 5916 |
| 90 | Text Telephony (TTY) Services..... | 5918 |
| 90.1 | Transmission of CTM Bearer Code | 5918 |
| 90.1.1 | Mobile Originated TTY Call | 5918 |
| 90.1.2 | Mobile Terminated TTY Call | 5919 |
| Annex 1 (normative): | Reference test methods..... | 5921 |
| A1.1 | General Conditions (GC)..... | 5921 |
| A1.1.1 | Outdoor test site and general arrangements for measurements involving the use of radiated fields (GC4).5921 | 5921 |
| A1.1.2 | Anechoic shielded chamber (GC5)..... | 5921 |
| A1.1.3 | Temporary antenna connector (GC7)..... | 5922 |
| A1.1.4 | Temporary antenna connector characteristics | 5922 |
| A1.1.5 | Calibration of the temporary antenna connector | 5923 |
| A1.1.5.1 | Antenna radiation pattern..... | 5923 |
| A1.1.5.2 | Test range calibration..... | 5925 |
| A1.1.5.3 | Temporary antenna connector coupling factor | 5925 |
| A1.1.6 | Connection of devices with multiple antennae..... | 5926 |
| A1.1.6.1 | DARP phase 2 MS..... | 5926 |
| A1.1.6.2 | VAMOS III MS | 5926 |
| A1.2 | Normal and extreme Test Conditions (TC)..... | 5926 |
| A1.2.1 | Power sources and ambient temperatures (TC2)..... | 5926 |
| A1.2.2 | Normal test conditions (TC2.1)..... | 5927 |
| A1.2.3 | Extreme test conditions (TC2.2)..... | 5927 |
| A1.2.4 | Vibration requirements (TC4) | 5928 |
| Annex 2: | Void | 5929 |
| Annex 3: | Protocol implementation information..... | 5930 |
| A3.1 | Protocol Implementation Conformance Statement (PICS) | 5930 |
| A3.1.1 | LAPDm protocol (3GPP TS 04.05 and 04.06)..... | 5930 |
| A3.1.1.1 | Simplified protocol - 3GPP TS 04.06 clause 6 | 5930 |
| A3.1.1.2 | Management of SAPI = 3 - 3GPP TS 04.11 subclause 2.3 | 5930 |
| A3.1.2 | Mobility management..... | 5930 |
| A3.1.2.1 | IMSI detach initiation by the MS - 3GPP TS 04.08 / 3GPP TS 24.008 subclause 4.3.4.1 | 5930 |
| A3.1.2.2 | IMSI detach completion by the MS - 3GPP TS 04.08 / 3GPP TS 24.008 subclause 4.3.4.3..... | 5930 |
| A3.1.2.3 | MM specific procedures - 3GPP TS 04.08 / 3GPP TS 24.008 subclauses 4.4 and 4.5.1.1 | 5930 |
| A3.1.2.4 | Receiving an MM STATUS message - 3GPP TS 04.08 / 3GPP TS 24.008 subclause 4.6 | 5930 |
| A3.1.3 | Call control | 5931 |
| A3.1.3.1 | Status enquiry procedures - 3GPP TS 04.08 / 3GPP TS 24.008 subclause 5.5.3.1..... | 5931 |
| A3.1.3.2 | Receiving a STATUS message by a CC entity - 3GPP TS 04.08 / 3GPP TS 24.008 subclause 5.5.3.2.5931 | 5931 |
| A3.1.3.3 | Called side compatibility checking - 3GPP TS 04.08 / 3GPP TS 24.008 clause B.3 | 5931 |
| A3.1.3.4 | Disconnect on incoming call..... | 5931 |
| A3.1.4 | Layer 1 | 5931 |
| A3.1.4.1 | Optional storage of BCCH carrier information - 3GPP TS 05.08 subclause 6.3 | 5931 |
| A3.1.5 | Autocalling - (ref.: 3GPP TS 02.07, annex 1) | 5931 |
| A3.1.6 | Transient states | 5931 |
| A3.2 | Protocol Implementation Extra Information for Testing (PIXIT) | 5932 |
| A3.2.0 | Introduction | 5932 |
| A3.2.1 | Basic characteristics | 5932 |
| A3.2.1.1 | Type of antenna | 5932 |

| | | |
|------------|--|------|
| A3.2.1.2 | Power supply | 5933 |
| A3.2.1.3 | Power class of the MS | 5933 |
| A3.2.1.4 | Channel modes supported | 5933 |
| A3.2.1.5 | Teleservices supported | 5933 |
| A3.2.1.6 | Supplementary services supported | 5933 |
| A3.2.1.7 | Bearer services supported | 5933 |
| A3.2.1.8 | SIM removal | 5934 |
| A3.2.1.9 | Classmark | 5934 |
| A3.2.1.10 | Type of SIM/ME interface (ref. 3GPP TS 11.11 and 3GPP TS 11.12) | 5935 |
| A3.2.1.11 | Multislot class | 5935 |
| A3.2.2 | Man machine interface | 5935 |
| A3.2.2.1 | Mobile station features | 5935 |
| A3.2.2.2 | Short message service | 5936 |
| A3.2.2.3 | Supplementary services | 5936 |
| A3.2.2.3.1 | Call forwarding | 5936 |
| A3.2.2.3.2 | Call restriction | 5936 |
| A3.2.2.3.3 | Handling of (undefined) GSM supplementary services | 5937 |
| A3.2.3 | Electrical Man Machine Interface (EMMI) | 5937 |
| A3.2.3.1 | Methods supported for activation/deactivation of EMMI | 5937 |
| A3.2.3.2 | Transmission rate supported by the ME on the EMMI | 5937 |
| A3.2.3.3 | Layer 3 messages supported on the EMMI | 5937 |
| A3.2.3.4 | Keystroke sequence messages | 5937 |
| A3.2.3.5 | Internal malfunction detected messages | 5937 |
| A3.2.4 | Digital Audio Interface (DAI) | 5937 |
| A3.2.5 | Characteristics related to bearer services or teleservices | 5938 |
| A3.2.5.1 | Access interface | 5938 |
| A3.2.5.2 | Configuration of the MT | 5938 |
| A3.2.5.3 | Capability information | 5938 |
| A3.2.5.4 | Subaddress or DDI number | 5938 |
| A3.2.5.5 | User to user signalling | 5938 |
| A3.2.5.6 | Data call set-up and data call clearing | 5938 |
| A3.2.5.7 | Characteristics of non-transparent data services | 5939 |
| A3.2.5.8 | Possible ways of setting-up a call from either an external interface or internally | 5939 |
| A3.2.5.9 | Application layer causing automatic call termination | 5939 |
| A3.2.5.10 | Call re-establishment for MS not supporting speech | 5939 |
| A3.2.6 | International mobile station equipment identity | 5939 |
| A3.2.7 | Receiver intermediate frequencies | 5939 |
| A3.2.8 | Artificial ear | 5939 |

Annex 4: Test SIM Parameters.....5943

| | | |
|---------|--|------|
| A4.1 | Introduction | 5943 |
| A4.1.1 | Definitions | 5943 |
| A4.1.2 | Definition of the test algorithm for authentication | 5943 |
| A4.2 | Default Parameters for the test SIM | 5943 |
| A4.3 | Default settings for the Elementary Files (EFs) | 5943 |
| A4.3.1 | EF _{ICCID} (ICC Identification) | 5944 |
| A4.3.2 | EF _{LP} (Language preference) | 5944 |
| A4.3.3 | EF _{IMSI} (IMSI) | 5944 |
| A4.3.4 | EF _{Kc} (Ciphering key Kc) | 5944 |
| A4.3.5 | EF _{PLMNsel} (PLMN selector) | 5944 |
| A4.3.6 | EF _{HPLMN} (HPLMN search period) | 5945 |
| A4.3.7 | EF _{ACMmax} (ACM maximum value) | 5945 |
| A4.3.8 | EF _{SST} (SIM service table) | 5945 |
| A4.3.9 | EF _{ACM} (Accumulated call meter) | 5946 |
| A4.3.10 | EF _{PUCT} (Price per unit and currency table) | 5946 |
| A4.3.11 | EF _{CBMI} (Cell broadcast Message Identifier Selection) | 5946 |
| A4.3.12 | EF _{BCCH} (Broadcast control channels) | 5946 |
| A4.3.13 | EF _{ACC} (Access control class) | 5947 |
| A4.3.14 | EF _{FPLMN} (Forbidden PLMNs) | 5947 |
| A4.3.15 | EF _{LOCI} (Location information) | 5947 |

| | | |
|------------------|---|-------------|
| A4.3.16 | EF _{AD} (Administrative data) | 5948 |
| A4.3.17 | EF _{Phase} (Phase identification) | 5948 |
| A4.3.18 | EF _{ADN} (Abbreviated dialling numbers) | 5948 |
| A4.3.19 | EF _{FDN} (Fixed dialling numbers) | 5948 |
| A4.3.20 | EF _{SMS} (Short messages)..... | 5948 |
| A4.3.21 | EF _{CCP} (Capability configuration parameters) | 5948 |
| A4.3.22 | EF _{MSISDN} (MSISDN)..... | 5948 |
| A4.3.23 | EF _{SMSP} (Short message service parameters) | 5948 |
| A4.3.24 | EF _{SMSS} (SMS status)..... | 5948 |
| A4.3.25 | EF _{EXT1} (Extension 1) | 5949 |
| A4.3.26 | EF _{EXT2} (Extension 2) | 5949 |
| A4.3.27 | EF _{VGCS} (Voice Group Call Service) | 5949 |
| A4.3.28 | EF _{VGCSS} (Voice Group Call Service Status) | 5950 |
| A4.3.29 | EF _{VBBS} (Voice Broadcast Service) | 5950 |
| A4.3.30 | EF _{VBSS} (Voice Broadcast Service Status) | 5951 |
| A4.3.31 | EF _{eMLPP} (enhanced Multi Level Pre-emption and Priority) | 5951 |
| A4.3.32 | EF _{AAeM} (Automatic Answer for eMLPP Service)..... | 5951 |
| A4.3.33 | EF _{KcGPRS} (GPRS Ciphering key KcGPRS) | 5951 |
| A4.3.34 | EF _{LOCIGPRS} (GPRS location information)..... | 5952 |
| Annex 4A: | Test USIM Parameters | 5953 |
| Annex 5: | Test equipment..... | 5954 |
| A5.1 | Introduction | 5954 |
| A5.1.1 | General | 5954 |
| A5.1.2 | Test equipment terms | 5954 |
| A5.1.3 | Confidence level..... | 5954 |
| A5.2 | Standard test signals | 5955 |
| A5.3 | SS functional requirements | 5955 |
| A5.3.1 | Level setting range | 5955 |
| A5.3.2 | Level Measurement / operation range | 5955 |
| A5.3.3 | MS power supply interface..... | 5956 |
| A5.3.4 | MS antenna interface..... | 5956 |
| A5.3.4.1 | Uplink receiver error..... | 5956 |
| A5.3.4.2 | Power and Power versus time measurements | 5956 |
| A5.3.4.3 | Wideband selective power measurement..... | 5959 |
| A5.3.4.4 | Inband selective power measurements..... | 5959 |
| A5.3.4.5 | Modulation accuracy and frequency error measurements..... | 5960 |
| A5.3.4.6 | RF delay measurements relative to nominal times | 5960 |
| A5.3.4.7 | The wanted signal or traffic channel of serving cell | 5960 |
| A5.3.4.8 | The first interfering signal or traffic channel of the first adjacent cell..... | 5962 |
| A5.3.4.9 | The second interfering signal..... | 5962 |
| A5.3.4.10 | BCCH carriers of serving and adjacent cells | 5963 |
| A5.3.4.11 | The wide frequency range signal | 5964 |
| A5.3.4.12 | The multipath fading function | 5965 |
| A5.3.5 | MS audio interface and DAI..... | 5965 |
| A5.3.5.1 | General uncertainties | 5965 |
| A5.3.5.2 | Analogue single test tone | 5965 |
| A5.3.5.3 | Delay measurement between Um and DAI..... | 5965 |
| A5.4 | SIM simulator functional requirements..... | 5965 |
| A5.4.1 | General | 5965 |
| A5.4.2 | Contacts C1, C2, C6, C7 | 5966 |
| A5.4.2.1 | Default measurement / setting uncertainties | 5966 |
| A5.4.2.2 | Contact C1 | 5966 |
| A5.4.2.3 | Contact C7 | 5967 |
| A5.4.3 | Contact C3..... | 5968 |
| A5.4.4 | Definition of timing..... | 5968 |
| A5.5 | A-GPS and A-GNSS Minimum Performance Test System requirements | 5968 |
| A5.5.1 | Test System Uncertainty for A-GPS and A-GNSS Minimum Performance tests..... | 5968 |

| | | |
|--------------------------------|---|-------------|
| A5.5.2 | Test Parameter Relaxations (This clause is informative)..... | 5970 |
| A5.5.3 | Interpretation of measurement results..... | 5971 |
| A5.5.4 | Derivation of Test Requirements (This clause is informative) | 5972 |
| Annex 6 (informative): | E-OTD Accuracy Measurement Test Environment | 5975 |
| A6.1 | Recommended Timing Accuracy Test Environment (Unassisted) | 5975 |
| A6.2 | Recommended Timing Accuracy Test Environment (Assisted) | 5976 |
| Annex 7 (informative): | General rules for statistical testing..... | 5980 |
| A7.1 | Statistical testing of receiver performance | 5980 |
| A7.1.1 | Basics | 5980 |
| A7.1.1.1 | Definition of (error) events | 5980 |
| A7.1.1.2 | Test Method..... | 5980 |
| A7.1.1.3 | Test Criteria | 5980 |
| A7.1.1.4 | Calculation assumptions | 5981 |
| A7.1.1.4.1 | Statistical independence | 5981 |
| A7.1.1.4.2 | Applied formulas..... | 5981 |
| A7.1.2 | Definition of good pass fail decision..... | 5982 |
| A7.1.3 | Implementation..... | 5983 |
| A7.1.3.1 | Proceeding | 5983 |
| A7.1.3.2 | Limit lines | 5983 |
| A7.1.4 | Good balance between test time and statistical significance | 5986 |
| A7.1.5 | Minimum and maximum expected duration of tests | 5987 |
| A7.2 | Statistical testing of 2 D position error and TTFF for A-GPS and A-GNSS Minimum Performance test cases..... | 5987 |
| A7.2.1 | Test Method..... | 5987 |
| A7.2.2 | Error Ratio (ER) | 5988 |
| A7.2.3 | Test Design..... | 5988 |
| A7.2.3.1 | Confidence level | 5988 |
| A7.2.3.2 | Introduction: Supplier Risk versus Customer Risk | 5988 |
| A7.2.3.3 | Supplier Risk versus Customer Risk..... | 5989 |
| A7.2.3.4 | Introduction: Standard test versus early decision concept | 5989 |
| A7.2.3.5 | Standard test versus early decision concept..... | 5990 |
| A7.2.3.6 | Selectivity | 5990 |
| A7.2.3.7 | Design of the test | 5991 |
| A7.2.4 | Pass fail decision | 5992 |
| A7.2.4.1 | Numerical definition of the pass fail limits..... | 5992 |
| A7.2.4.2 | Pass fail decision rules..... | 5992 |
| A7.2.4.3 | Background information to the pass fail limits | 5993 |
| Annex 8: | Void | 5994 |
| Annex 9 (normative): | GAN certificate | 5995 |
| A9.1 | Files relating to GAN certificate for testing | 5995 |
| A9.1.1 | Overview and usage of certificate files | 5995 |
| A9.1.2 | Privacy of private keys and usage of certificate | 5995 |
| Annex 10 (informative): | Repeated SACCH Layer 1 Test Method: | 5996 |
| A10.1 | Details on Repeated SACCH Testing | 5996 |
| Annex B (informative): | Change history | 5999 |
| History | 6127 | |

Foreword

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

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

Version x.y.z

where:

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

The present document is part 1 of a multi-part deliverable covering the Digital cellular telecommunications system (GSM Phase2 and Phase 2+ Releases 1996, 1997, 1998, 1999, 3GPP Release 4, 3GPP Release 5, 3GPP Release 6, 3GPP Release 7, 3GPP Release 8, 3GPP Release 9, 3GPP Release 10, 3GPP Release 11 and 3GPP Release 12); Mobile Station (MS) conformance specification, as identified below:

Part 1: Conformance specification

Reference: 3GPP TS 51.010-1.

Part 2: Protocol Implementation Conformance Statement (PICS) proforma specification.
Reference: 3GPP TS 51.010-2.

Part 3: Layer 3 (L3) Abstract Test Suite (ATS).
Reference: 3GPP TS 51.010-3 v6.3.0 (NOTE 1).

Part 4: SIM Application Toolkit conformance specification.
Reference: 3GPP TS 51.010--4.

Part 5: Inter-RAT (GERAN to UTRAN) Abstract Test Suite (ATS)
Reference: 3GPP TS 51.010-5.

Part 7: Location Services (LCS) test scenarios and assistance data.
Reference: 3GPP TS 51.010-7.

NOTE 1: GP-25: TTCN is not maintained after v6.3.0, and is henceforward to be considered an example test suite rather than the conformance tests

1 Scope

The present document describes the technical characteristics and methods of test for Mobile Stations (MS), for the Pan European digital cellular communications system and Personal Communication Systems (PCS) operating in the 400 MHz, 700 MHz, 810 MHz, 850 MHz, 900 MHz, 1 800 MHz and 1 900 MHz band (GSM 450, GSM 480, GSM 710, GSM 750, T-GSM 810, GSM 850, R-GSM 900, ER-GSM 900, GSM 900, DCS 1 800 and PCS 1 900), standardized by ETSI Special Mobile Group (SMG).

The present document is valid for MS implemented according to GSM Phase2 or Phase2+ R96, or R97, or R98, or R99 or 3GPP Release 4 or 3GPP Release 5 or 3GPP Release 6, 3GPP Release 7, 3GPP Release 8, 3GPP Release 9, 3GPP Release 10, 3GPP Release 11 or 3GPP Release 12.

A subset of the tests is referenced in the GSM Common Technical Regulations (CTR_s) and is used for regulatory conformance testing according to the EEC procedures for Telecommunications Terminal Equipment (TTE) type approval (EC Directive 91/263/EEC; also known as the "Terminal Directive" or "Second Phase Directive"). The remaining tests can be used to verify conformance with the GSM core technical specifications for those requirements that are not considered "essential" in the sense of the EC Directive 91/263/EEC (Article 4).

The present document covers the minimum characteristics considered necessary in order to provide sufficient performance for mobile equipment and to prevent interference to other services or to other users, and to the PLMNs.

It does not necessarily include all the characteristics which may be required by a user or subscriber, nor does it necessarily represent the optimum performance achievable.

It applies to the public land mobile radio service in the GSM systems named above, using constant envelope modulation and operating on radio frequencies in the frequency bands listed above respectively with a channel separation of 200 kHz and carrying 8 full rate channels or 16 half rate channels per carrier according to the TDMA principle.

The present document is part of the GSM-series of technical specifications. The present document neither replaces any of the other GSM technical specifications or GSM related ETS_s or EN_s, nor is it created to provide full understanding of (or parts of) GSM systems. The present document lists the requirements, and provides the methods of test for testing a MS for conformance to the GSM standard.

For a full description of the system, reference should be made to all the GSM technical specifications or GSM related ETS_s or EN_s. Clause 2 provides a complete list of the GSM technical specifications, GSM related ETS_s, EN_s, and ETR_s, on which this conformance test specifications is based.

The present document applies to the unit which includes the hardware to establish a connection across the radio interface.

If there is a difference between this conformance document, and any other GSM technical specification or GSM related ETS or EN, or 3GPP TS, then the other GSM technical specification or GSM related ETS or EN or 3GPP TS shall prevail.

2 References

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

- References are either specific (identified by date of publication and/or edition number or version number) or non-specific.
- For a specific reference, subsequent revisions do not apply.
- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the relevant Release*.
 - For a GSM Phase 2+ Release 12 MS, references to GSM documents are to version 12.x.y, when available.
 - For a GSM Phase 2+ Release 11 MS, references to GSM documents are to version 11.x.y, when available.