
**Celična omrežja IMT - Harmonizirani standard za dostop do radijskega spektra -
13. del: Uporabniška oprema za razviti prizemni radijski dostop za UMTS (E-UTRA)**

IMT cellular networks - Harmonised Standard for access to radio spectrum - Part 13:
Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE)

Sample Document

Ta slovenski standard je istoveten z: ETSI EN 301 908-13 V13.4.1 (2026-06)

ICS:

33.060.99	Druga oprema za radijske komunikacije	Other equipment for radiocommunications
33.070.99	Druge mobilne storitve	Other mobile services

oSIST prEN 301 908-13 V13.4.1:2026 en

Sample Document

get full document from standards.iteh.ai

Final draft **ETSI EN 301 908-13** V13.4.1 (2026-06)



**IMT cellular networks;
Harmonised Standard for access to radio spectrum;
Part 13: Evolved Universal Terrestrial Radio Access (E-UTRA)
User Equipment (UE)**

get full document from standards.iteh.ai

ReferenceREN/MSG-TFES-1512

Keywords3G, 3GPP, cellular, digital, E-UTRA, IMT, IMT-2000, IMT-Advanced, LTE, LTE-Advanced, mobile, radio, regulation, UMTS

ETSI650 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 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
[ETSI Search & Browse Standards](#) application.

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 prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#) repository.

Users should be aware that the present document may be revised or have its status changed, this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to
the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our
[Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.
In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

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

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2026.
All rights reserved.

Contents

Intellectual Property Rights	11
Foreword.....	11
Modal verbs terminology.....	12
Introduction	12
1 Scope	13
2 References	16
2.1 Normative references	16
2.2 Informative references.....	16
3 Definition of terms, symbols and abbreviations.....	18
3.1 Terms.....	18
3.2 Symbols.....	21
3.3 Abbreviations	23
4 Technical requirements specifications	25
4.1 Environmental profile.....	25
4.2 Conformance requirements	25
4.2.0 General.....	25
4.2.1 Introduction.....	25
4.2.2 Transmitter Maximum Output Power	26
4.2.2.1 Transmitter maximum output power for Single Carrier.....	26
4.2.2.1.1 Definition.....	26
4.2.2.1.2 Limits	26
4.2.2.1.3 Conformance	26
4.2.2.2 Transmitter output power for Carrier Aggregation (DL CA and UL CA)	26
4.2.2.2.1 Definition.....	26
4.2.2.2.2 Limits	27
4.2.2.2.3 Conformance	28
4.2.2.3 Transmitter output power for UL-MIMO	28
4.2.2.3.1 Definition.....	28
4.2.2.3.2 Limits	28
4.2.2.3.3 Conformance	28
4.2.2.4 Transmitter output power for category NB1	29
4.2.2.4.1 Definition.....	29
4.2.2.4.2 Limits	29
4.2.2.4.3 Conformance	29
4.2.2.5 Transmitter output power for UE category M1.....	29
4.2.2.5.1 Definition.....	29
4.2.2.5.2 Limits	29
4.2.2.5.3 Conformance	30
4.2.3 Transmitter Spectrum Emission Mask.....	30
4.2.3.1 Transmitter spectrum emission mask for Single Carrier.....	30
4.2.3.1.1 Definition.....	30
4.2.3.1.2 Limits	30
4.2.3.1.3 Conformance	31
4.2.3.2 Transmitter spectrum emission mask for Carrier Aggregation (DL CA and UL CA)	31
4.2.3.2.1 Definition.....	31
4.2.3.2.2 Limits	31
4.2.3.2.3 Conformance	33
4.2.3.3 Transmitter spectrum emission mask for UL-MIMO	33
4.2.3.3.1 Definition.....	33
4.2.3.3.2 Limits	34
4.2.3.3.3 Conformance	34
4.2.3.4 Transmitter spectrum emission mask for Multi-Cluster PUSCH within a component carrier	34
4.2.3.4.1 Definition.....	34
4.2.3.4.2 Limits	34

4.2.3.4.3	Conformance	34
4.2.3.5	Transmitter spectrum emission mask for category NB1	34
4.2.3.5.1	Definition.....	34
4.2.3.5.2	Limits	34
4.2.3.5.3	Conformance	34
4.2.4	Transmitter Spurious Emissions	35
4.2.4.1	Transmitter spurious emissions for Single Carrier	35
4.2.4.1.1	Definition.....	35
4.2.4.1.2	Limits	35
4.2.4.1.3	Conformance	39
4.2.4.2	Transmitter spurious emissions for Carrier Aggregation (DL CA and UL CA)	39
4.2.4.2.1	Definition.....	39
4.2.4.2.2	Limits	39
4.2.4.2.3	Conformance	44
4.2.4.3	Transmitter spurious emissions for UL-MIMO	44
4.2.4.3.1	Definition.....	44
4.2.4.3.2	Limits	45
4.2.4.3.3	Conformance	45
4.2.4.4	Transmitter spurious emissions for Multi-Cluster PUSCH within a component carrier	45
4.2.4.4.1	Definition.....	45
4.2.4.4.2	Limits	45
4.2.4.4.3	Conformance	45
4.2.4.5	Transmitter spurious emissions for category NB1	45
4.2.4.5.1	Definition.....	45
4.2.4.5.2	Limits	45
4.2.4.5.3	Conformance	46
4.2.5	Transmitter Minimum Output Power.....	46
4.2.5.1	Transmitter minimum output power for Single Carrier.....	46
4.2.5.1.1	Definition.....	46
4.2.5.1.2	Limits	46
4.2.5.1.3	Conformance	46
4.2.5.2	Transmitter minimum output power for Carrier Aggregation (DL CA and UL CA)	46
4.2.5.2.1	Definition.....	46
4.2.5.2.2	Limits	46
4.2.5.2.3	Conformance	47
4.2.5.3	Transmitter minimum output power for UL-MIMO	47
4.2.5.3.1	Definition.....	47
4.2.5.3.2	Limits	47
4.2.5.3.3	Conformance	47
4.2.5.4	Transmitter minimum output power for category NB1.....	47
4.2.5.4.1	Definition.....	47
4.2.5.4.2	Limits	47
4.2.5.4.3	Conformance	47
4.2.6	Receiver Adjacent Channel Selectivity (ACS)	48
4.2.6.1	Receiver Adjacent Channel Selectivity (ACS) for Single Carrier	48
4.2.6.1.1	Definition.....	48
4.2.6.1.2	Limits	48
4.2.6.1.3	Conformance	49
4.2.6.2	Receiver Adjacent Channel Selectivity (ACS) for Carrier Aggregation in DL-only bands	49
4.2.6.2.1	Definition.....	49
4.2.6.2.2	Limits	49
4.2.6.2.3	Conformance	50
4.2.6.3	Receiver Adjacent Channel Selectivity (ACS) for category NB1.....	50
4.2.6.3.1	Definition.....	50
4.2.6.3.2	Limits	50
4.2.6.3.3	Conformance	51
4.2.7	Receiver Blocking Characteristics	51
4.2.7.1	Receiver Blocking Characteristics for Single Carrier	51
4.2.7.1.1	Definition.....	51
4.2.7.1.2	Limits	51
4.2.7.1.3	Conformance	53
4.2.7.2	Receiver Blocking Characteristics for Carrier Aggregation in DL-only bands.....	53

4.2.7.2.1	Definition.....	53
4.2.7.2.2	Limits	53
4.2.7.2.3	Conformance	56
4.2.7.3	Receiver Blocking Characteristics for category NB1	57
4.2.7.3.1	Definition.....	57
4.2.7.3.2	Limits	57
4.2.7.3.3	Conformance	58
4.2.8	Receiver Spurious Response.....	58
4.2.8.1	Receiver Spurious Response for Single Carrier	58
4.2.8.1.1	Definition.....	58
4.2.8.1.2	Limits	58
4.2.8.1.3	Conformance	58
4.2.8.2	Receiver Spurious Response for Carrier Aggregation in DL-only bands	59
4.2.8.2.1	Definition.....	59
4.2.8.2.2	Limits	59
4.2.8.2.3	Conformance	59
4.2.8.3	Receiver Spurious Response for category NB1	59
4.2.8.3.1	Definition.....	59
4.2.8.3.2	Limits	59
4.2.8.3.3	Conformance	59
4.2.9	Receiver Intermodulation Characteristic	60
4.2.9.1	Receiver Intermodulation Characteristics for Single Carrier	60
4.2.9.1.1	Definition.....	60
4.2.9.1.2	Limits	60
4.2.9.1.3	Conformance	60
4.2.9.2	Receiver Intermodulation Characteristics for Carrier Aggregation in DL-only bands.....	61
4.2.9.2.1	Definition.....	61
4.2.9.2.2	Limits	61
4.2.9.2.3	Conformance	61
4.2.9.3	Receiver Intermodulation Characteristics for category NB1	61
4.2.9.3.1	Definition.....	61
4.2.9.3.2	Limits	62
4.2.9.3.3	Conformance	62
4.2.10	Receiver Spurious Emissions.....	62
4.2.10.1	Receiver Spurious Emissions for Single Carrier	62
4.2.10.1.1	Definition.....	62
4.2.10.1.2	Limits	62
4.2.10.1.3	Conformance	62
4.2.10.2	Receiver Spurious Emissions in DL-only bands	62
4.2.10.2.1	Definition.....	62
4.2.10.2.2	Limits	63
4.2.10.2.3	Conformance	63
4.2.11	Transmitter Adjacent Channel Leakage Power Ratio	63
4.2.11.1	Transmitter adjacent channel leakage power ratio for Single Carrier	63
4.2.11.1.1	Definition.....	63
4.2.11.1.2	Limits	63
4.2.11.1.3	Conformance	64
4.2.11.2	Transmitter adjacent channel leakage power ratio for Carrier Aggregation (DL CA and UL CA).....	64
4.2.11.2.1	Definition.....	64
4.2.11.2.2	Limits for CA UTRA.....	66
4.2.11.2.3	Limits for CA E-UTRA.....	67
4.2.11.2.4	Conformance	67
4.2.11.3	Transmitter adjacent channel leakage power ratio for UL-MIMO.....	67
4.2.11.3.1	Definition.....	67
4.2.11.3.2	Limits	68
4.2.11.3.3	Conformance	69
4.2.11.4	Transmitter adjacent channel leakage power ratio for Multi-Cluster PUSCH within a component carrier	69
4.2.11.4.1	Definition.....	69
4.2.11.4.2	Limits	69
4.2.11.4.3	Conformance	69
4.2.11.5	Transmitter adjacent channel leakage power ratio for category NB1	70

4.2.11.5.1	Definition.....	70
4.2.11.5.2	Limits	70
4.2.11.5.3	Conformance	70
4.2.12	Receiver Reference Sensitivity Level	70
4.2.12.0	General	70
4.2.12.1	Receiver Reference Sensitivity Level for Single Carrier	70
4.2.12.1.1	Definition.....	70
4.2.12.1.2	Limits	70
4.2.12.1.3	Conformance	71
4.2.12.2	Receiver Reference Sensitivity Level for Carrier Aggregation in DL-only bands.....	71
4.2.12.2.1	Definition.....	71
4.2.12.2.2	Limits	71
4.2.12.2.3	Conformance	72
4.2.12.3	Receiver Reference Sensitivity Level for category NB1.....	72
4.2.12.3.1	Definition.....	72
4.2.12.3.2	Limits	73
4.2.12.3.3	Conformance	73
4.2.12.4	Receiver Reference Sensitivity Level for UE category 0.....	73
4.2.12.4.1	Definition.....	73
4.2.12.4.2	Limits	73
4.2.12.4.3	Conformance	74
4.2.12.5	Receiver Reference Sensitivity Level for UE category M1	74
4.2.12.5.1	Definition.....	74
4.2.12.5.2	Limits	74
4.2.12.5.3	Conformance	75
4.2.13	Receiver Total Radiated Sensitivity (TRS).....	75
4.2.13.0	Applicability.....	75
4.2.13.1	Definition	75
4.2.13.2	Limits	76
4.2.13.3	Conformance.....	77
4.2.14	Total Radiated Power (TRP).....	77
4.2.14.0	Applicability.....	77
4.2.14.1	Definition	77
4.2.14.2	Limits	78
5	Testing for compliance with technical requirements.....	79
5.1	Environmental conditions for testing	79
5.2	Void.....	79
5.3	Essential radio test suites.....	79
5.3.0	General.....	79
5.3.1	Transmitter Maximum Output Power	79
5.3.1.1	Transmitter maximum output power for Single Carrier	79
5.3.1.1.1	Method of test.....	79
5.3.1.1.2	Test requirements	80
5.3.1.2	Transmitter maximum output power for intra-band contiguous Carrier Aggregation (DL CA and UL CA)	80
5.3.1.2.1	Method of test.....	80
5.3.1.2.2	Test requirements	81
5.3.1.2A	Transmitter maximum output power for inter-band Carrier Aggregation (DL CA and UL CA).....	81
5.3.1.2A.1	Method of test.....	81
5.3.1.2A.2	Test requirements	82
5.3.1.3	Transmitter maximum output power for UL-MIMO	82
5.3.1.3.1	Method of test.....	82
5.3.1.3.2	Test requirements	83
5.3.1.4	Transmitter maximum output power for category NB1	83
5.3.1.4.1	Method of Test	83
5.3.1.4.2	Test requirements	83
5.3.1.5	Transmitter maximum output power for UE category 0	84
5.3.1.5.1	Method of test.....	84
5.3.1.5.2	Test requirements	84
5.3.1.6	Transmitter maximum output power for UE category M1.....	84
5.3.1.6.1	Method of test.....	84

5.3.1.6.2	Test requirements	85
5.3.2	Transmitter Spectrum Emission Mask.....	85
5.3.2.1	Transmitter spectrum emission mask for Single Carrier	85
5.3.2.1.1	Method of test.....	85
5.3.2.1.2	Test requirements	86
5.3.2.2	Transmitter spectrum emission mask for intra-band contiguous Carrier Aggregation (DL CA and UL CA)	86
5.3.2.2.1	Method of test.....	86
5.3.2.2.2	Test requirements	87
5.3.2.2A	Transmitter spectrum emission mask for inter-band Carrier Aggregation (DL CA and UL CA)	87
5.3.2.2A.1	Method of test.....	87
5.3.2.2A.2	Test requirements	88
5.3.2.3	Transmitter spectrum emission mask for UL-MIMO	88
5.3.2.3.1	Method of test.....	88
5.3.2.3.2	Test requirements	89
5.3.2.4	Transmitter spectrum emission mask for Multi-Cluster PUSCH within a component carrier	89
5.3.2.4.1	Method of test.....	89
5.3.2.4.2	Test requirements	89
5.3.2.5	Transmitter spectrum emission mask for category NB1	90
5.3.2.5.1	Method of test.....	90
5.3.2.5.2	Test requirements	90
5.3.2.6	Transmitter spectrum emission mask for UE category 0	91
5.3.2.6.1	Method of test.....	91
5.3.2.6.2	Test requirements	91
5.3.2.7	Transmitter spectrum emission mask for UE category M1	91
5.3.2.7.1	Method of test.....	91
5.3.2.7.2	Test requirements	92
5.3.3	Transmitter Spurious Emissions	92
5.3.3.1	Transmitter spurious emissions for Single Carrier	92
5.3.3.1.1	Method of test.....	92
5.3.3.1.2	Test requirements	93
5.3.3.2	Transmitter spurious emissions for intra-band contiguous Carrier Aggregation (DL CA and UL CA).....	93
5.3.3.2.1	Method of test.....	93
5.3.3.2.2	Test requirements	94
5.3.3.2A	Transmitter spurious emissions for inter-band Carrier Aggregation (DL CA and UL CA)	94
5.3.3.2A.1	Method of test.....	94
5.3.3.2A.2	Test requirements	95
5.3.3.3	Transmitter spurious emissions for UL-MIMO	95
5.3.3.3.1	Method of test.....	95
5.3.3.3.2	Test requirements	96
5.3.3.4	Transmitter spurious emissions for Multi-Cluster PUSCH within a component carrier	96
5.3.3.4.1	Method of test.....	96
5.3.3.4.2	Test requirements	97
5.3.3.5	Transmitter spurious emissions for category NB1	97
5.3.3.5.1	Method of test.....	97
5.3.3.5.2	Test requirements	98
5.3.3.6	Transmitter spurious emissions for UE category 0	98
5.3.3.6.1	Method of test.....	98
5.3.3.6.2	Test requirements	98
5.3.3.7	Transmitter spurious emissions for UE category M1	99
5.3.3.7.1	Method of test.....	99
5.3.3.7.2	Test requirements	100
5.3.4	Transmitter Minimum Output Power.....	100
5.3.4.1	Transmitter minimum output power for Single Carrier.....	100
5.3.4.1.1	Method of test.....	100
5.3.4.1.2	Test requirements	100
5.3.4.2	Transmitter minimum output power for intra-band contiguous Carrier Aggregation (DL CA and UL CA)	101
5.3.4.2.1	Method of test.....	101
5.3.4.2.2	Test requirements	101
5.3.4.2A	Transmitter minimum output power for inter-band Carrier Aggregation (DL CA and UL CA).....	102

5.3.4.2A.1	Method of test.....	102
5.3.4.2A.2	Test requirements	102
5.3.4.3	Transmitter minimum output power for UL-MIMO	103
5.3.4.3.1	Method of test.....	103
5.3.4.3.2	Test requirements	103
5.3.4.4	Transmitter minimum output power for category NB1.....	103
5.3.4.4.1	Method of test.....	103
5.3.4.4.2	Test requirements	104
5.3.4.5	Transmitter minimum output power for UE category 0	104
5.3.4.5.1	Method of test.....	104
5.3.4.5.2	Test requirements	105
5.3.4.6	Transmitter minimum output power for UE category M1	105
5.3.4.6.1	Method of test.....	105
5.3.4.6.2	Test requirements	105
5.3.5	Receiver Adjacent Channel Selectivity (ACS)	106
5.3.5.1	Receiver Adjacent Channel Selectivity (ACS) for Single Carrier	106
5.3.5.1.1	Method of test.....	106
5.3.5.1.2	Test requirements	107
5.3.5.2	Receiver Adjacent Channel Selectivity (ACS) for Carrier Aggregation in DL-only bands.....	107
5.3.5.2.1	Method of test.....	107
5.3.5.2.2	Test requirements	108
5.3.5.3	Receiver Adjacent Channel Selectivity (ACS) for category NB1.....	108
5.3.5.3.1	Method of test.....	108
5.3.5.3.2	Test requirements	110
5.3.5.4	Receiver Adjacent Channel Selectivity (ACS) for UE category 0	110
5.3.5.4.1	Method of test.....	110
5.3.5.4.2	Test requirements	110
5.3.5.5	Receiver Adjacent Channel Selectivity (ACS) for UE category M1	110
5.3.5.5.1	Method of test.....	110
5.3.5.5.2	Test requirements	111
5.3.6	Receiver Blocking Characteristics	111
5.3.6.1	Receiver Blocking Characteristics for Single Carrier	111
5.3.6.1.1	Method of test.....	111
5.3.6.1.2	Test requirements	113
5.3.6.2	Receiver Blocking Characteristics for Carrier Aggregation in DL-only bands.....	113
5.3.6.2.1	Method of test.....	113
5.3.6.2.2	Test requirements	115
5.3.6.3	Receiver Blocking Characteristics for category NB1	116
5.3.6.3.1	Method of test.....	116
5.3.6.3.2	Test requirements	117
5.3.6.4	Receiver Blocking Characteristics for UE category 0.....	117
5.3.6.4.1	Method of test.....	117
5.3.6.4.2	Test requirements	117
5.3.6.5	Receiver Blocking Characteristics for UE category M1	118
5.3.6.5.1	Method of test.....	118
5.3.6.5.2	Test requirements	120
5.3.7	Receiver Spurious Response.....	120
5.3.7.1	Receiver Spurious Response for Single Carrier	120
5.3.7.1.1	Method of test.....	120
5.3.7.1.2	Test requirements	120
5.3.7.2	Receiver Spurious Response for Carrier Aggregation in DL-only bands	120
5.3.7.2.1	Method of test.....	120
5.3.7.2.2	Test requirements	121
5.3.7.3	Receiver Spurious Response for category NB1	121
5.3.7.3.1	Method of test.....	121
5.3.7.3.2	Test requirements	121
5.3.7.4	Receiver Spurious Response for UE category 0.....	122
5.3.7.4.1	Method of test.....	122
5.3.7.4.2	Test requirements	122
5.3.7.5	Receiver Spurious Response for UE category M1	122
5.3.7.5.1	Method of test.....	122
5.3.7.5.2	Test requirements	122

5.3.8	Receiver Intermodulation Characteristics	123
5.3.8.1	Receiver Intermodulation Characteristics for Single Carrier	123
5.3.8.1.1	Method of test.....	123
5.3.8.1.2	Test requirements	123
5.3.8.2	Receiver Intermodulation Characteristics for Carrier Aggregation in DL-only bands.....	124
5.3.8.2.1	Method of test.....	124
5.3.8.2.2	Test requirements	125
5.3.8.3	Receiver Intermodulation Characteristics for category NB1	125
5.3.8.3.1	Test requirements	125
5.3.8.3.2	Test requirements	125
5.3.8.4	Receiver Intermodulation Characteristics for UE category 0.....	126
5.3.8.4.1	Method of test.....	126
5.3.8.4.2	Test requirements	126
5.3.8.5	Receiver Intermodulation Characteristics for UE category M1	126
5.3.8.5.1	Method of test.....	126
5.3.8.5.2	Test requirements	127
5.3.9	Receiver Spurious Emissions.....	127
5.3.9.1	Receiver Spurious Emissions for Single Carrier	127
5.3.9.1.1	Method of test.....	127
5.3.9.1.2	Test requirements	128
5.3.9.2	Receiver Spurious Emissions in DL-only bands.....	128
5.3.9.2.1	Method of test.....	128
5.3.9.2.2	Test requirements	129
5.3.9.3	Receiver Spurious Emissions for UE category 0	129
5.3.9.3.1	Method of test.....	129
5.3.9.3.2	Test requirements	129
5.3.9.4	Receiver Spurious Emissions for UE category M1.....	129
5.3.9.4.1	Method of test.....	129
5.3.9.4.2	Test requirements	130
5.3.9.5	Receiver Spurious Emissions for UE category NB1.....	130
5.3.9.5.1	Method of test.....	130
5.3.9.5.2	Test requirements	130
5.3.10	Transmitter Adjacent Channel Leakage Power Ratio	130
5.3.10.1	Transmitter adjacent channel leakage power ratio for Single Carrier	130
5.3.10.1.1	Method of test.....	130
5.3.10.1.2	Test requirements	131
5.3.10.2	Transmitter adjacent channel leakage power ratio for intra-band contiguous Carrier Aggregation (DL CA and UL CA).....	132
5.3.10.2.1	Method of test.....	132
5.3.10.2.2	Test requirements	133
5.3.10.2A	Transmitter adjacent channel leakage power ratio for inter-band Carrier Aggregation (DL CA and UL CA).....	133
5.3.10.2A.1	Method of test.....	133
5.3.10.2A.2	Test requirements	134
5.3.10.3	Transmitter adjacent channel leakage power ratio for UL-MIMO.....	134
5.3.10.3.1	Method of test.....	134
5.3.10.3.2	Test requirements	135
5.3.10.4	Transmitter adjacent channel leakage power ratio for Multi-Cluster PUSCH within a component carrier	135
5.3.10.4.1	Method of test.....	135
5.3.10.4.2	Test requirements	136
5.3.10.5	Transmitter adjacent channel leakage power ratio for category NB1	136
5.3.10.5.1	Method of test.....	136
5.3.10.5.2	Test requirements	137
5.3.10.6	Transmitter adjacent channel leakage power ratio for UE category 0.....	137
5.3.10.6.1	Method of test.....	137
5.3.10.6.2	Test requirements	138
5.3.10.7	Transmitter adjacent channel leakage power ratio for UE category M1	138
5.3.10.7.1	Method of test.....	138
5.3.10.7.2	Test requirements	139
5.3.11	Receiver Reference Sensitivity Level	139
5.3.11.1	Receiver Reference Sensitivity Level for Single Carrier	139

5.3.11.1.1	Method of test.....	139
5.3.11.1.2	Test requirements	139
5.3.11.2	Receiver Reference Sensitivity Level for Carrier Aggregation in DL-only bands.....	140
5.3.11.2.1	Method of test.....	140
5.3.11.2.2	Test requirements	141
5.3.11.3	Receiver Reference Sensitivity Level for category NB1.....	141
5.3.11.3.1	Method of test.....	141
5.3.11.3.2	Test requirements	141
5.3.11.4	Receiver Reference Sensitivity Level for UE category 0.....	141
5.3.11.4.1	Method of test.....	141
5.3.11.4.2	Test requirements	142
5.3.11.5	Receiver Reference Sensitivity Level for UE category M1	142
5.3.11.5.1	Method of test.....	142
5.3.11.5.2	Test requirements	143
5.3.12	Receiver Total Radiated Sensitivity (TRS).....	143
5.3.12.1	Method of test	143
5.3.12.1.1	Initial conditions	143
5.3.12.1.2	Procedure.....	143
5.3.12.2	Test requirements	143
5.3.13	Total Radiated Power (TRP).....	143
5.3.13.1	Method of test	143
5.3.13.1.1	Initial conditions	143
5.3.13.1.2	Procedure.....	143
5.3.13.2	Test requirements	144

Annex A (informative):	Relationship between the present document and the essential requirements of Directive 2014/53/EU	145
-------------------------------	---	------------

Annex B (normative):	Environmental profile	147
-----------------------------	------------------------------------	------------

B.1	General	147
B.1.1	Introduction	147
B.1.2	Temperature	147
B.1.3	Voltage	147
B.1.4	Test environment.....	148

Annex C (informative):	Selection of receiver parameters.....	149
-------------------------------	--	------------

C.0	Introduction	149
C.1	Receiver sensitivity	149
C.2	Receiver co-channel rejection	149
C.3	Receiver adjacent channel selectivity.....	149
C.4	Receiver spurious response rejection	149
C.5	Receiver blocking.....	149
C.6	Receiver radio-frequency intermodulation.....	150
C.7	Receiver dynamic range	150
C.8	Receiver unwanted emissions in the spurious domain	150

Annex D (informative):	Maximum measurement uncertainty	151
-------------------------------	--	------------

Annex E (informative):	Bibliography	152
-------------------------------	---------------------------	------------

Annex F (informative):	Change history	153
-------------------------------	-----------------------------	------------

History	154
---------------	-----

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 IPR online database](#).

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

Trademarks

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

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™**, **LTE™** and **5G™** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Foreword

This final draft Harmonised European Standard (EN) has been produced by ETSI Technical Committee Mobile Standards Group (MSG), and is now submitted for the Vote phase of the ETSI Standardisation Request deliverable Approval Procedure (SRdAP).

For non-EU countries the present document may be used for regulatory (Type Approval) purposes.

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.9] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.2].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A-1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive and associated EFTA regulations.

The present document is part 13 of a multi-part deliverable. Full details of the entire series can be found in part 1 [i.12].

This version of the harmonised standard includes the following revisions:

- Extension of Over The Air (OTA) antenna performance requirements in terms of Receiver Total Radiated Sensitivity (TRS) and Total Radiated Power (TRP) for devices over 72 mm wide;
- The essential change applicable to 3GPP release 13:
 - The power class 2 requirements for band 41.

Proposed national transposition dates	
Date of latest announcement of this EN (doa):	3 months after ETSI publication
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	6 months after doa
Date of withdrawal of any conflicting National Standard (dow):	18 months after doa

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.

Introduction

The present document is part of a set of standards developed by ETSI and is designed to fit in a modular structure to cover all radio and telecommunications terminal equipment within the scope of the Radio Equipment Directive [i.2]. The present document is produced following the guidance in ETSI EG 203 336 [i.3] as applicable.

Sample Document

get full document from standards.iteh.ai

1 Scope

The present document applies to the following radio equipment type:

- User Equipment for Evolved Universal Terrestrial Radio Access (E-UTRA).

This radio equipment type is capable of operating in all or any part of the frequency bands given in tables from 1-1 through 1-5.

Table 1-1: E-UTRA UE operating bands

E-UTRA Band	Direction of UE transmission	E-UTRA operating bands	Related EC/ECC decision
1	Transmit	1 920 MHz to 1 980 MHz	[i.21] and [i.22]
	Receive	2 110 MHz to 2 170 MHz	
3	Transmit	1 710 MHz to 1 785 MHz	[i.19] and [i.20]
	Receive	1 805 MHz to 1 880 MHz	
7	Transmit	2 500 MHz to 2 570 MHz	[i.24] and [i.25]
	Receive	2 620 MHz to 2 690 MHz	
8	Transmit	880 MHz to 915 MHz	[i.19] and [i.20]
	Receive	925 MHz to 960 MHz	
20	Transmit	832 MHz to 862 MHz	[i.6] and [i.7]
	Receive	791 MHz to 821 MHz	
22	Transmit	3 410 MHz to 3 490 MHz	[i.26] and [i.27]
	Receive	3 510 MHz to 3 590 MHz	
28 (see note 6)	Transmit	703 MHz to 748 MHz	[i.14] and [i.15]
	Receive	758 MHz to 803 MHz	
31	Transmit	452,5 MHz to 457,5 MHz	[i.16]
	Receive	462,5 MHz to 467,5 MHz	
32 (see note 1) (see note 2)	Transmit	N/A	[i.17] and [i.18]
	Receive	1 452 MHz to 1 496 MHz	
33	Transmit and Receive	1 900 MHz to 1 920 MHz	[i.22]
34	Transmit and Receive	2 010 MHz to 2 025 MHz	[i.22]
38	Transmit and Receive	2 570 MHz to 2 620 MHz	[i.24] and [i.25]
40	Transmit and Receive	2 300 MHz to 2 400 MHz	[i.23]
41 (note 7)	Transmit and Receive	2 496 MHz to 2 690 MHz	[i.24] and [i.25]
42	Transmit and Receive	3 400 MHz to 3 600 MHz	[i.26] and [i.27]
43	Transmit and Receive	3 600 MHz to 3 800 MHz	[i.26] and [i.27]
46 (see note 3) (see note 4)	Transmit and Receive	5 150 MHz to 5 925 MHz	[i.29] and [i.30]
65 (see note 5)	Transmit	1 920 MHz to 2 010 MHz	[i.21], [i.22] and [i.28]
	Receive	2 110 MHz to 2 200 MHz	
67	Transmit	N/A	[i.14] and [i.15]
	Receive	738 MHz to 758 MHz	
68	Transmit	698 MHz to 728 MHz	[i.14], [i.15] and [i.31]
	Receive	753 MHz to 783 MHz	
69 (see note 1)	Transmit	N/A	[i.24] and [i.25]
	Receive	2 570 MHz to 2 620 MHz	
72	Transmit	451 MHz to 456 MHz	[i.16]
	Receive	461 MHz to 466 MHz	
87	Transmit	410 MHz to 415 MHz	[i.16]
	Receive	420 MHz to 425 MHz	
88	Transmit	412 MHz to 417 MHz	[i.16]
	Receive	422 MHz to 427 MHz	