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STN	**Elektromagnetická kompatibilita (EMC), norma na rádiové zariadenia a služby Časť 50: Osobitné podmienky na základňovú stanicu (BS), opakovač a podporné zariadenia bunkových komunikácií Harmonizovaná norma vzťahujúca sa na základné požiadavky podľa článku 3.1(b) smernice 2014/53/EÚ**	**STN EN 301 489-50 V2.2.1** 87 1489

ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 50: Specific conditions for Cellular Communication Base Station (BS), repeater and ancillary equipment; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/19

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standard for radio equipment and services;
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Base Station (BS), repeater and ancillary equipment;
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of article 3.1(b) of Directive 2014/53/EU**

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Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.15] 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.1].

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 has been produced to rationalize the current ETSI EN 301 489 series [i.9] of EMC standards by collating the EMC requirements for Digital Cellular Communication Base Station (BS), repeater and ancillary Equipment into a single standard, there are no technical changes to product EMC Test requirements. The present document has been produced to replace ETSI EN 301 489-8 [i.9] (GSM/EDGE), ETSI EN 301 489-23 [i.9] (WCDMA and LTE, UTRA/E-UTRA), ETSI EN 301 489-26 [i.9] CDMA, 2000 1x and those parts of ETSI EN 301 489-4 [i.9] which pertain to OFDMA WMAN BS and to incorporate MSR and OFDMA WMAN.

The present document is part 50 of a multi-part deliverable. Full details of the entire series can be found in part 1 [1].

National transposition dates	
Date of adoption of this EN:	12 June 2017
Date of latest announcement of this EN (doa):	31 July 2019
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 January 2020
Date of withdrawal of any conflicting National Standard (dow):	31 January 2021

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.

1 Scope

The present document specifies technical characteristics and methods of measurements for equipment the following equipment types:

1) digital cellular base station equipment;

2) repeaters;

3) associated ancillary equipment.

Including individually and combinations of:

- UTRA, WCDMA (IMT-2000 Direct Spread, W-CDMA, UMTS);
- E-UTRA, LTE (IMT-2000 and IMT advanced);
- GSM (IMT-2000 SC, Technology GSM/EDGE);
- MSR (IMT-2000 and IMT advanced, combination of technologies above);
- OFDMA WMAN (IMT-2000 OFDMA, OFDMA WMAN);
- CDMA (CDMA2000 - IMT MC, CDMA2000 1X).

Technical specifications related to the antenna port and emissions from the enclosure port of radio equipment (base station (BS), and repeaters) are not included in the present document. Such technical specifications are found in the relevant product standards for the effective use of the radio spectrum.

Examples of base station equipment covered by the present document are given in annex B.

In case of differences (for instance concerning special conditions, definitions, abbreviations) between the present document and ETSI EN 301 489-1 [1], the provisions of the present document take precedence.

The present document covers the essential requirements of article 3.1(b) of Directive 2014/53/EU under the conditions identified in annex A.

Technical specifications related to the antenna port of radio equipment and radiated emissions from the enclosure port of radio equipment and combinations of radio and associated ancillary equipment are given in the harmonised product standards ETSI EN 301 908-1 [28] or ETSI EN 301 502 [8] for the effective and efficient use of the radio spectrum.

2 References

2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at http://docbox.etsi.org/Reference.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are necessary for the application of the present document.

[1] ETSI EN 301 489-1 (V2.2.0) (03-2017): "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements; Harmonised Standard covering the essential requirements of article 3.1(b) of Directive 2014/53/EU and the essential requirements of article 6 of Directive 2014/30/EU".

[2] ETSI TS 125 141 (V12.6.0) (01-2015): "Universal Mobile Telecommunications System (UMTS); Base Station (BS) conformance testing (FDD) (3GPP TS 25.141 version 12.6.0 Release 12)".

[3] ETSI TS 125 142 (V12.1.0) (01-2015): "Universal Mobile Telecommunications System (UMTS); Base Station (BS) conformance testing (TDD) (3GPP TS 25.142 version 12.1.0 Release 12)".

[4] ETSI TS 125 143 (V12.1.0) (01-2015): "Universal Mobile Telecommunications System (UMTS); UTRA repeater conformance testing (3GPP TS 25.143 version 12.1.0 Release 12)".

[5] ETSI TS 136 104 (V12.8.0) (07-2015): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) radio transmission and reception (3GPP TS 36.104 version 12.8.0 Release 12)".

[6] ETSI TS 136 141 (V12.8.0) (07-2015): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); Base Station (BS) conformance testing (3GPP TS 36.141 version 12.8.0 Release 12)".

[7] ETSI TS 145 008 (V12.4.0) (01-2015): "Digital cellular telecommunications system (Phase 2+); Radio subsystem link control (3GPP TS 45.008 version 12.4.0 Release 12)".

[8] ETSI EN 301 502 (V12.5.1) (07-2016): "Global System for Mobile communications (GSM); Base Station (BS) equipment; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU".

[9] ETSI TS 151 021 (V12.3.0) (01-2015): "Digital cellular telecommunications system (Phase 2+); Base Station System (BSS) equipment specification; Radio aspects (3GPP TS 51.021 version 12.3.0 Release 12)".

[10] Void.

[11] Void.

[12] ETSI TS 137 141 (V12.8.0) (07-2015): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) conformance testing (3GPP TS 37.141 version 12.8.0 Release 12)".

[13] Void.

[14] Void.

[15] ETSI EN 301 908-20 (V6.3.1) (05-2016): "IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 20: OFDMA TDD WMAN (Mobile WiMAXTM) TDD Base Stations (BS)".

[16] ETSI EN 301 908-22 (V6.1.1) (07-2016): "IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 22: OFDMA TDD WMAN (Mobile WiMAXTM) FDD Base Stations (BS)".

[17] Void.

[18] TIA-97 (2014): "Recommended Minimum Performance Standard for cdma2000 Spread Spectrum Base Stations".

[19] TIA-2000 Series, Revision F: "Introduction to CDMA2000 spread spectrum systems **Includes TIA-2000.1 (2013), TIA-2000.2 (2014), TIA-2000.3 (2014), TIA-2000.4 (2014), and TIA-2000.5 (2014)**".

[20] Void.

[21] Void.

[22] ETSI TS 125 101 (V12.8.0) (07-2015): "Universal Mobile Telecommunications System (UMTS); User Equipment (UE) radio transmission and reception (FDD) (3GPP TS 25.101 version 12.8.0 Release 12)".

[23] ETSI TS 125 102 (V12.0.0) (10-2014): "Universal Mobile Telecommunications System (UMTS); User Equipment (UE) radio transmission and reception (TDD) (3GPP TS 25.102 version 12.0.0 Release 12)".

[24] ETSI TS 136 101 (V12.8.0) (09-2015): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); User Equipment (UE) radio transmission and reception (3GPP TS 36.101 version 12.8.0 Release 12)".

[25] ETSI TS 136 143 (V12.1.0) (02-2015): "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); FDD repeater conformance testing (3GPP TS 36.143 version 12.1.0 Release 12)".

[26] ETSI TS 151 010-1 (V12.4.0) (06-2015): "Digital cellular telecommunications system (Phase 2+); Mobile Station (MS) conformance specification; Part 1: Conformance specification (3GPP TS 51.010-1 version 12.4.0 Release 12)".

[27] ETSI TS 137 113 (V12.3.0) (02-2015): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) Electromagnetic Compatibility (EMC) (3GPP TS 37.113 version 12.3.0 Release 12)".

[28] ETSI EN 301 908-1 (V11.1.1) (07-2016): "IMT cellular networks; Harmonised Standard covering the essential requirements of article 3.2 of the Directive 2014/53/EU; Part 1: Introduction and common requirements".

2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non-specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 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] ETSI TS 137 104 (V12.8.0) (07-2015): "Digital cellular telecommunications system (Phase 2+); Universal Mobile Telecommunications System (UMTS); LTE; E-UTRA, UTRA and GSM/EDGE; Multi-Standard Radio (MSR) Base Station (BS) radio transmission and reception (3GPP TS 37.104 version 12.8.0 Release 12)".

[i.3] ETSI TS 125 104: "Universal Mobile Telecommunications System (UMTS); Base Station (BS) radio transmission and reception (FDD) (3GPP TS 25.104)".

[i.4] ETSI TS 125 105: "Universal Mobile Telecommunications System (UMTS); Base Station (BS) radio transmission and reception (TDD) (3GPP TS 25.105)".

[i.5] ETSI TS 125 106: "Universal Mobile Telecommunications System (UMTS); UTRA repeater radio transmission and reception (3GPP TS 25.106)".

[i.6] ETSI TS 136 106: "LTE; Evolved Universal Terrestrial Radio Access (E-UTRA); FDD repeater radio transmission and reception (3GPP TS 36.106)".

[i.7] ETSI EN 301 908-5 (V5.2.1) (09-2011): "IMT cellular networks; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive; Part 5: CDMA Multi-Carrier (cdma2000) Base Stations (BS)".

[i.8] ETSI EN 301 908-7 (V4.2.1) (03-2010): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Base Stations (BS), Repeaters and User Equipment (UE) for IMT-2000 Third-Generation cellular networks; Part 7: Harmonized EN for IMT-2000, CDMA TDD (UTRA TDD and E-UTRA TDD) (BS) covering the essential requirements of article 3.2 of the R&TTE Directive".

[i.9] ETSI EN 301 489 (all parts): "ElectroMagnetic Compatibility (EMC) standard for radio equipment and services".

[i.10] ETSI EN 302 544-1 (V1.1.2) (01-2010): "Broadband Data Transmission Systems operating in the 2 500 MHz to 2 690 MHz frequency band; Part 1: TDD Base Stations; Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive".

[i.11] ETSI EN 301 449 (V1.1.1) (07-2006): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Harmonized EN for CDMA spread spectrum base stations operating in the 450 MHz cellular band (CDMA 450) and 410, 450 and 870 MHz PAMR bands (CDMA-PAMR) covering essential requirements of article 3.2 of the R&TTE Directive".

[i.12] ETSI EN 302 426 (V1.1.1) (09-2006): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Harmonized EN for CDMA spread spectrum Repeaters operating in the 450 MHz cellular band (CDMA450) and the 410 MHz, 450 MHz and 870 MHz PAMR bands (CDMA-PAMR) covering essential requirements of article 3.2 of the R&TTE Directive".

[i.13] Void.

[i.14] Recommendation ITU-R SM.329-12: "Unwanted emissions in the spurious domain".

[i.15] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.