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**Digital Terrestrial TV Transmitters;
Harmonised Standard covering the essential requirements
of article 3.2 of Directive 2014/53/EU**

Reference

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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.3] 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.

| National transposition dates | |
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Modal verbs terminology

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Introduction

The present document has been produced to update the existing standard in line with the requirements of article 3.2 of Directive 2014/53/EU [i.2].

1 Scope

The present document specifies technical characteristics and methods of measurements for digital terrestrial television transmitters as defined in table 1.1 and in table 1.2. The output power classification (table 1.1) and emission classification (table 1.2) are combined to define a transmitter category. For example, power classification H and emission classification 0 denotes a high power transmitter (category H0) whose OOB emissions comply with a non-critical mask.

Table 1.1: Transmitter power classification

| Power Class | Description | Notes |
|-------------|------------------------|---|
| H | High power transmitter | Transmitter with an output power ≥ 25 W operating in the VHF band (174 MHz to 230 MHz) or UHF band (470 MHz to 694 MHz). |
| L | Low power transmitter | Transmitter with an output power < 25 W operating in the VHF band (174 MHz to 230 MHz) or UHF band (470 MHz to 694 MHz). |

Table 1.2: Transmitter emission classification

| Emission Classification | Conformance approach | Notes |
|-------------------------|----------------------|--|
| 0 | Non critical mask | For high power transmitters, the mask defines the level of the OOB relative to the channel power (dBc). For low power transmitters the mask defines the absolute power limit of the OOB (dBm). The former approach is mandated by RRC-06 (non-critical case) [i.4] for transmitters subject to coordination. |
| 1 | Critical mask | A similar but more stringent approach based on RRC-06 (sensitive case) [i.4]. |
| 2 | Non-critical ACLR | A set of ACLR limits defining permitted relative emission levels into adjacent channels. |
| 3 | Critical ACLR | A set of more stringent ACLR limits defining permitted relative emission levels into adjacent channels. |

The present document covers the essential requirements of article 3.2 of Directive 2014/53/EU [i.2] under the conditions identified in annex A.

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.

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

- [1] Void.
- [2] Void.
- [3] Void.

- [4] Void.
- [5] CENELEC EN 55016-4-2:2011/A1:2014: "Specification for radio disturbance and immunity measuring apparatus and methods. Part 4-2: Uncertainties, statistics and limit modelling - Measurement instrumentation uncertainty".
- [6] Recommendation ITU-R SM.329-12 (09/2012): "Unwanted emissions in the spurious domain".

2.2 Informative references

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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] ETSI TR 101 290 (V1.2.1) (05-2001): "Digital Video Broadcasting (DVB); Measurement guidelines for DVB systems".
- [i.2] 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.3] 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.
- [i.4] ITU RRC-06: "Final Acts of the Regional Radiocommunication Conference for planning of the digital terrestrial broadcasting service in parts of Regions 1 and 3, in the frequency bands 174-230 MHz and 470-862 MHz", Geneva, 15 May - 16 June 2006.
- [i.5] The Paris climate agreement (COP21), December 2015.

NOTE: Available at http://ec.europa.eu/clima/policies/international/negotiations/future/index_en.htm.

- [i.6] ETSI EN 300 744 (V1.6.2) (10-2015): "Digital Video Broadcasting (DVB); Framing structure, channel coding and modulation for digital terrestrial television".
- [i.7] ETSI EN 302 755 (V1.4.1) (07-2015): "Digital Video Broadcasting (DVB); Frame structure channel coding and modulation for a second generation digital terrestrial television broadcasting system (DVB-T2)".
- [i.8] ETSI TR 100 028 (all parts) (V1.4.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".
- [i.9] ETSI TR 100 028-2 (V1.4.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2".

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