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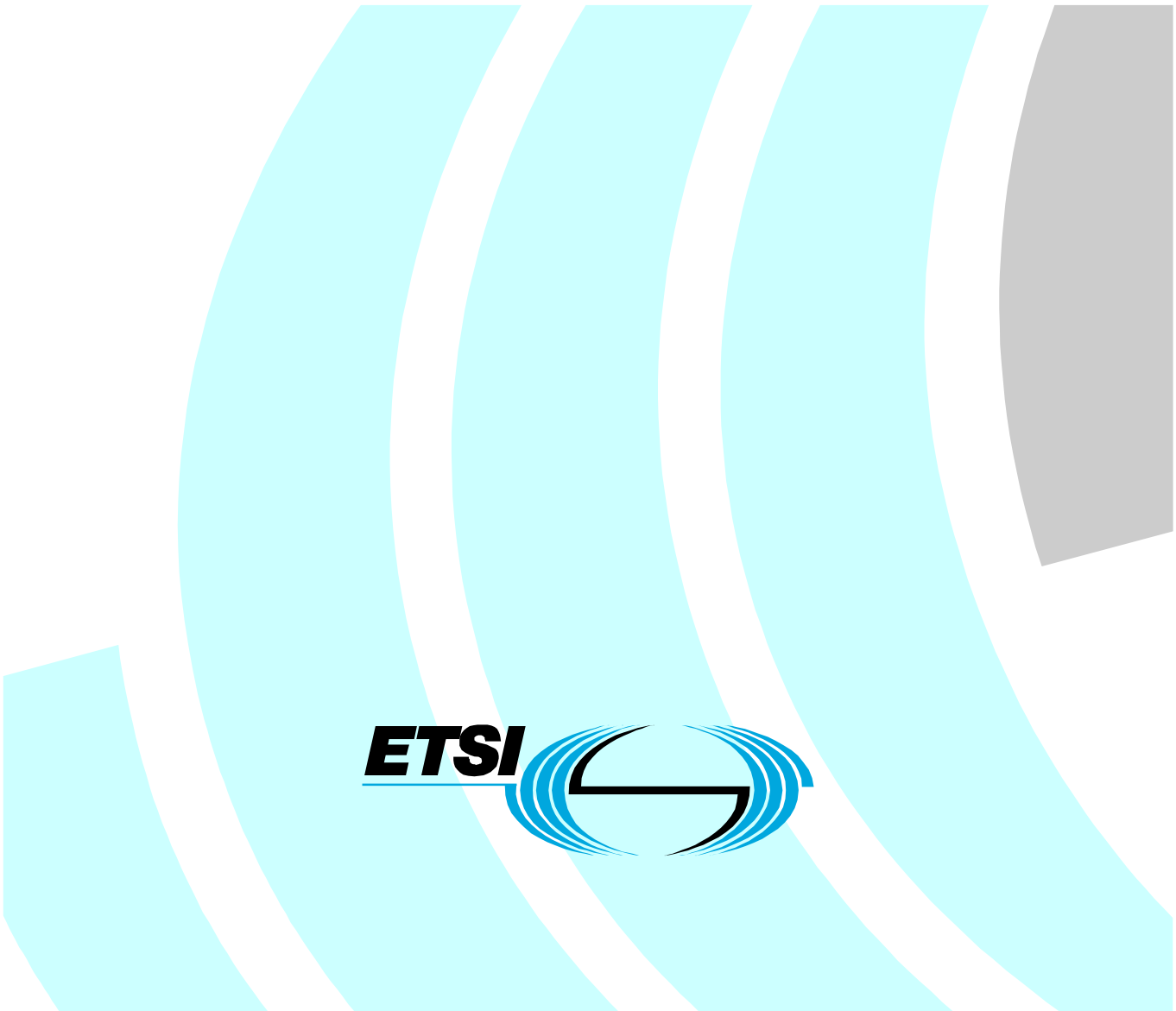
ETSI EN 301 025-2 V1.3.1 (2007-02)

Harmonized European Standard (Telecommunications series)

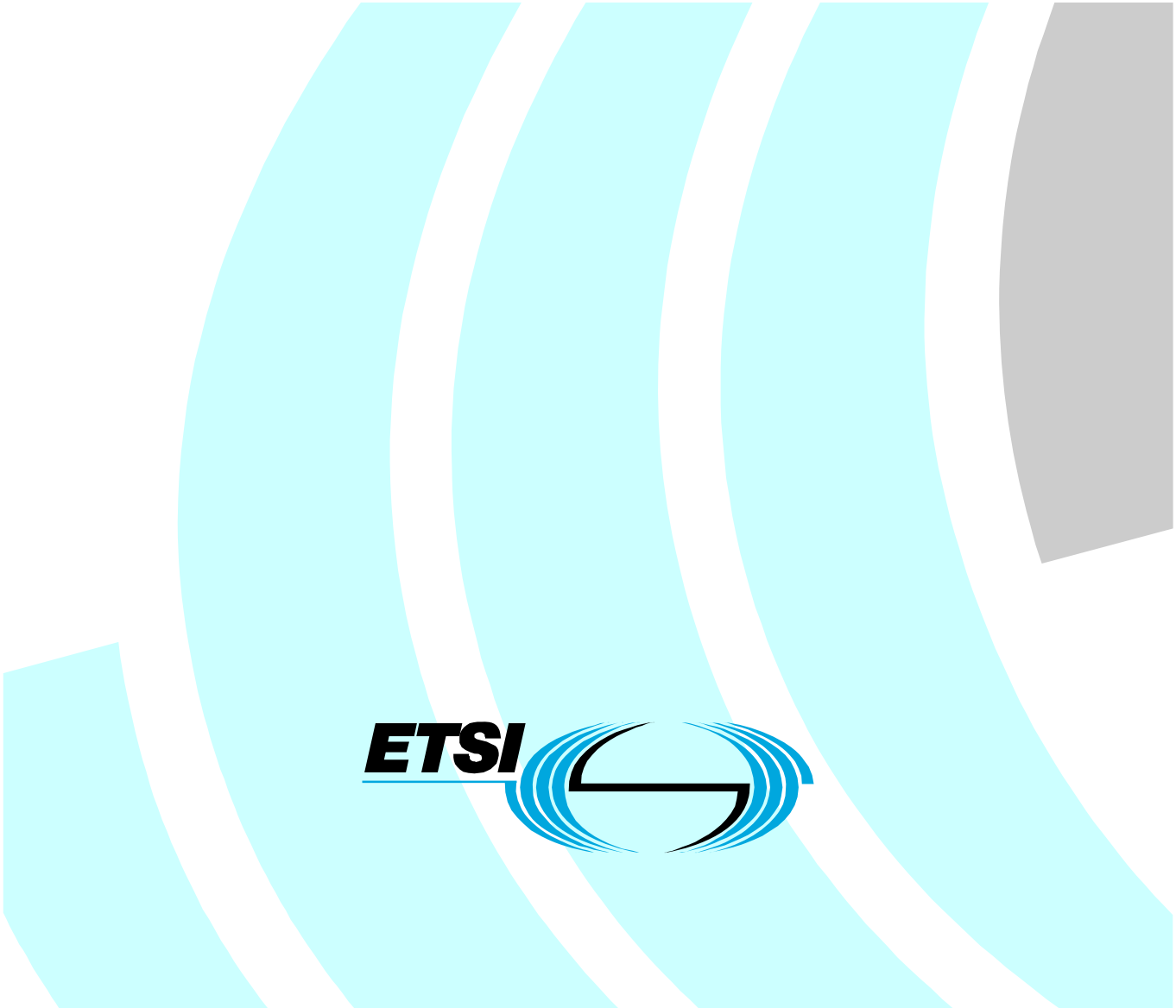
Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC); Part 2: Harmonized EN ~~under~~ article 3.2 of the R&TTE Directive



ETSI EN 301 025-2 V1.4.1 (2010-09)

Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC); Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive



Reference
REN/ERM-TG26-074-2

Keywords
maritime, radio, regulation, traffic, VHF

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Contents

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

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [6] (as amended) laying down a procedure for the provision of information in the field of technical standards and regulations.

The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 1999/5/EC [1] of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive").

The present document is part 2 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM), VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC), as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN under article 3.2 of the R&TTE Directive".

Part 3: "Harmonized EN under article 3.3 (e) of the R&TTE Directive".

National transposition dates	
Date of adoption of this EN:	19 January 2007
Date of latest announcement of this EN (doa):	30 April 2007
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 October 2007
Date of withdrawal of any conflicting National Standard (dow):	31 October 2008

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The present document is intended to become a Harmonized Standard, the reference of which will be published in the Official Journal of the European Communities referencing the Directive 1999/5/EC [i.1] of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity ("the R&TTE Directive").

Technical specifications relevant to Directive 1999/5/EC [i.1] are given in annex A.

The present document is part 2 of a multi-part deliverable covering the VHF radiotelephone equipment for general communications and associated equipment for Class "D" Digital Selective Calling (DSC), as identified below:

Part 1: "Technical characteristics and methods of measurement";

Part 2: "Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive";

Part 3: "Harmonized EN covering the essential requirements of article 3.3(e) of the R&TTE Directive".

National transposition dates	
Date of adoption of this EN:	31 August 2010
Date of latest announcement of this EN (doa):	30 November 2010
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2011
Date of withdrawal of any conflicting National Standard (dow):	31 May 2011

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 R&TTE Directive. The modular structure is shown in EG 201 399 [i.4].

1 Scope

The present document covers the minimum requirements for general communication for shipborne fixed installations using a VHF radiotelephone operating in certain frequency bands allocated to the maritime mobile service using both 25 kHz and 12,5 kHz channels with associated equipment for DSC - class D.

The present document is intended to cover the provisions of Directive 1999/5/EC [1] (R&TTE Directive) Article 3.2, which states that "… radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of Article 3 of the R&TTE Directive [1] may apply to equipment within the scope of the present document.

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.

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.

[1] Directive 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).

[2] Council Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).

[3] Council Directive 73/23/EEC of 19 February 1973 on the harmonization of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (73/23/EEC) (LV Directive).

[4] ETSI EN 301 025-1 (V1.3.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class 'D" Digital Selective Calling (DSC); Part 1: Technical characteristics and methods of measurement".

[5] ETSI TR 100 028 (all parts) (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

[6] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.

[7] EC decision 2004/71/EC of 4 September 2003 on essential requirements relating to marine radio communication equipment which is intended to be used on non-SOLAS vessels and to participate in the Global Maritime Distress and Safety System (GMDSS).

1 Scope

The present document covers the minimum requirements for general communication for shipborne fixed installations using a VHF radiotelephone operating in certain frequency bands allocated to the maritime mobile service using either 25 kHz or 25 kHz and 12,5 kHz channels with associated equipment for DSC - class D.

The present document is intended to cover the provisions of Directive 1999/5/EC [i.1] (R&TTE Directive) article 3.2, which states that "… radio equipment shall be so constructed that it effectively uses the spectrum allocated to terrestrial/space radio communications and orbital resources so as to avoid harmful interference".

In addition to the present document, other ENs that specify technical requirements in respect of essential requirements under other parts of article 3 of the R&TTE Directive [i.1] may apply to equipment within the scope of the present document.

2 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 reference document (including any amendments) applies.

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

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2.1 Normative references

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

[1] ETSI EN 301 025-1 (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for Class 'D" Digital Selective Calling (DSC); Part 1: Technical characteristics and methods of measurement".

[2] ETSI TR 100 028 (all parts) (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

2.2 Informative references

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 1999/5/EC of the European Parliament and of the Council of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity (R&TTE Directive).

[i.2] Directive 98/34/EC of the European Parliament and of the Council of 22 June 1998 laying down a procedure for the provision of information in the field of technical standards and regulations.

[i.3] EC decision 2004/71/EC of 4 September 2003 on essential requirements relating to marine radio communication equipment which is intended to be used on non-SOLAS vessels and to participate in the Global Maritime Distress and Safety System (GMDSS).

[i.4] ETSI EG 201 399: "Electromagnetic compatibility and Radio spectrum Matters (ERM); A guide to the production of candidate Harmonized Standards for application under the R&TTE Directive".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [1] and the following apply:

carrier frequency: frequency to which the transmitter or receiver is tuned

class D: class D equipment is intended to provide minimum facilities for VHF DSC distress, urgency and safety as well as routine calling and reception, not necessarily in full accordance with IMO GMDSS carriage requirements for VHF installations

environmental profile: range of environmental conditions under which equipment within the scope of EN 301 025-2 is required to comply with the provisions of EN 301 025-2

frequency deviation: difference between the instantaneous frequency of the modulated RF signal and the carrier frequency

G2B: phase-modulation with digital information, with a sub-carrier for DSC operation

G3E: phase-modulation (frequency modulation with a pre-emphasis of 6 dB/octave) for speech

modulation index: ratio between the frequency deviation and the frequency of the modulation signal

supplier: entity referred to in the R&TTE Directive [1] responsible for the placing on the market of an equipment within the scope of the Directive

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

DSC	Digital Selective Calling
EMC	Electro-Magnetic Compatibility
GMDS	Global Maritime Distress and Safety System
IMO	International Maritime Organization
LV	Low Voltage
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
VHF	Very High Frequency
SOLAS	Safety of Life and Sea
SINAD	SIgnal, Noise And Distortion

4 Technical requirements specifications

4.1 Environmental profile

Tests defined in the present document shall be carried out at representative points within the boundary limits of the declared operational environmental profile which, as a minimum, shall be that specified in the test conditions contained in the present document.

As technical performance varies subject to environmental conditions, tests shall be carried out under a sufficient variety of environmental conditions as specified in the present document to give confidence of compliance for the affected technical requirements. These environmental conditions represent those required by Article 2 of EC decision 2004/71/EC [7] (which shall also be within the boundary limits of the declared operational environmental profile).

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the terms and definitions given in the R&TTE Directive [i.1] and the following apply:

carrier frequency: frequency to which the transmitter or receiver is tuned

class D: class D equipment is intended to provide minimum facilities for VHF DSC distress, urgency and safety as well as routine calling and reception, not necessarily in full accordance with IMO GMDSS carriage requirements for VHF installations

environmental profile: range of environmental conditions under which equipment within the scope of the present document is required to comply with the provisions of the present document

frequency deviation: difference between the instantaneous frequency of the modulated RF signal and the carrier frequency

G2B: phase-modulation with digital information, with a sub-carrier for DSC operation

G3E: phase-modulation (frequency modulation with a pre-emphasis of 6 dB/octave) for speech

modulation index: ratio between the frequency deviation and the frequency of the modulation signal

supplier: entity referred to in the R&TTE Directive [i.1] responsible for the placing on the market of an equipment within the scope of the Directive

3.2 Abbreviations

For the purposes of the present document, the following abbreviations apply:

DSC	Digital Selective Calling
IMO	International Maritime Organization
R&TTE	Radio and Telecommunications Terminal Equipment
RF	Radio Frequency
SINAD	SIgnal, Noise And Distortion
SOLAS	Safety Of Life At Sea
VHF	Very High Frequency

4 Technical requirements specifications

4.1 Environmental profile

Tests defined in the present document shall be carried out at representative points within the boundary limits of the declared operational environmental profile which, as a minimum, shall be that specified in the test conditions contained in the present document.

As technical performance varies subject to environmental conditions, tests shall be carried out under a sufficient variety of environmental conditions as specified in the present document to give confidence of compliance for the affected technical requirements. These environmental conditions represent those required by article 2 of EC decision 2004/71/EC [i.3] (which shall also be within the boundary limits of the declared operational environmental profile).

4.2 Conformance requirements

4.2.1 Transmitter frequency error

4.2.1.1 Definition

The frequency error is defined in EN 301 025-1 [~~4~~], clause 8.1.1.

4.2.1.2 Limits

The transmitter frequency error limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.1.3.

4.2.1.3 Conformance

Conformance tests as defined in clause 5.3.1 shall be carried out.

4.2.2 Transmitter adjacent channel power

4.2.2.1 Definition

The adjacent channel power is defined in EN 301 025-1 [~~4~~], clause 8.7.1.

4.2.2.2 Limits

The transmitter adjacent channel power limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.7.3.

4.2.2.3 Conformance

Conformance tests as defined in clause 5.3.2 shall be carried out.

4.2.3 Transmitter conducted spurious emissions conveyed to the antenna

4.2.3.1 Definition

Conducted spurious emissions conveyed to the antenna are defined in EN 301 025-1 [~~4~~], clause 8.8.1.

4.2.3.2 Limit

The transmitter conducted spurious emissions conveyed to the antenna limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.8.3.

4.2.3.3 Conformance

Conformance tests as defined in clause 5.3.3 shall be carried out.

4.2.4 Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

4.2.4.1 Definitions

Cabinet radiation and conducted spurious emissions other than those conveyed to the antenna are defined in EN 301 025-1 [~~4~~], clause 8.9.1.

4.2 Conformance requirements

4.2.1 Transmitter frequency error

4.2.1.1 Definition

The frequency error is defined in EN 301 025-1 [1], clause 8.1.1.

4.2.1.2 Limits

The transmitter frequency error limit shall be as stated in EN 301 025-1 [1], clause 8.1.3.

4.2.1.3 Conformance

Conformance tests as defined in clause 5.3.1 shall be carried out.

4.2.2 Transmitter adjacent channel power

4.2.2.1 Definition

The adjacent channel power is defined in EN 301 025-1 [1], clause 8.7.1.

4.2.2.2 Limits

The transmitter adjacent channel power limit shall be as stated in EN 301 025-1 [1], clause 8.7.3.

4.2.2.3 Conformance

Conformance tests as defined in clause 5.3.2 shall be carried out.

4.2.3 Transmitter conducted spurious emissions conveyed to the antenna

4.2.3.1 Definition

Conducted spurious emissions conveyed to the antenna are defined in EN 301 025-1 [1], clause 8.8.1.

4.2.3.2 Limit

The transmitter conducted spurious emissions conveyed to the antenna limit shall be as stated in EN 301 025-1 [1], clause 8.8.3.

4.2.3.3 Conformance

Conformance tests as defined in clause 5.3.3 shall be carried out.

4.2.4 Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

4.2.4.1 Definitions

Cabinet radiation and conducted spurious emissions other than those conveyed to the antenna are defined in EN 301 025-1 [1], clause 8.9.1.

4.2.4.2 Limits

The transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.9.3.

4.2.4.3 Conformance

Conformance tests as defined in clause 5.3.4 shall be carried out.

4.2.5 Transient frequency behaviour of the transmitter

4.2.5.1 Definitions

The transient frequency behaviour of the transmitter is defined in EN 301 025-1 [~~4~~], clause 8.10.1.

4.2.5.2 Limits

The transient frequency behaviour of the transmitter limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.10.3.

4.2.5.3 Conformance

Conformance tests as defined in clause 5.3.5 shall be carried out.

4.2.6 Transmitter carrier power

4.2.6.1 Definition

The transmitter carrier power is defined in EN 301 025-1 [~~4~~], clause 8.2.1.

4.2.6.2 Limit

The transmitter carrier power limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.2.3.

4.2.6.3 Conformance

Conformance tests as defined in clause 5.3.6 shall be carried out.

4.2.7 Transmitter frequency deviation

4.2.7.1 Definition

The transmitter frequency deviation is defined in EN 301 025-1 [~~4~~], clause 8.3.1.

4.2.7.2 Limit

The transmitter frequency deviation limit shall be as stated in EN 301 025-1 [~~4~~], clauses 8.3.2.2 and 8.3.3.2.

4.2.7.3 Conformance

Conformance tests as defined in clause 5.3.7 shall be carried out.

4.2.8 DSC frequency error (demodulated DSC signal)

4.2.8.1 Definition

The DSC frequency error is defined in EN 301 025-1 [~~4~~], clause 8.12.1.

4.2.4.2 Limits

The transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna limit shall be as stated in EN 301 025-1 [1], clause 8.9.3.

4.2.4.3 Conformance

Conformance tests as defined in clause 5.3.4 shall be carried out.

4.2.5 Transient frequency behaviour of the transmitter

4.2.5.1 Definitions

The transient frequency behaviour of the transmitter is defined in EN 301 025-1 [1], clause 8.10.1.

4.2.5.2 Limits

The transient frequency behaviour of the transmitter limit shall be as stated in EN 301 025-1 [1], clause 8.10.3.

4.2.5.3 Conformance

Conformance tests as defined in clause 5.3.5 shall be carried out.

4.2.6 Transmitter carrier power

4.2.6.1 Definition

The transmitter carrier power is defined in EN 301 025-1 [1], clause 8.2.1.

4.2.6.2 Limit

The transmitter carrier power limit shall be as stated in EN 301 025-1 [1], clause 8.2.3.

4.2.6.3 Conformance

Conformance tests as defined in clause 5.3.6 shall be carried out.

4.2.7 Transmitter frequency deviation

4.2.7.1 Definition

The transmitter frequency deviation is defined in EN 301 025-1 [1], clause 8.3.1.

4.2.7.2 Limit

The transmitter frequency deviation limit shall be as stated in EN 301 025-1 [1], clauses 8.3.2.2 and 8.3.3.2.

4.2.7.3 Conformance

Conformance tests as defined in clause 5.3.7 shall be carried out.

4.2.8 DSC frequency error (demodulated DSC signal)

4.2.8.1 Definition

The DSC frequency error is defined in EN 301 025-1 [1], clause 8.12.1.

4.2.8.2 Limit

The DSC frequency error limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.12.3.

4.2.8.3 Conformance

Conformance tests as defined in clause 5.3.8 shall be carried out.

4.2.9 DSC modulation index

4.2.9.1 Definition

The DSC modulation index is defined in EN 301 025-1 [~~4~~], clause 8.13.1.

4.2.9.2 Limit

The DSC modulation index limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.13.3.

4.2.9.3 Conformance

Conformance tests as defined in clause 5.3.9 shall be carried out.

4.2.10 DSC modulation rate

4.2.10.1 Definition

The DSC modulation rate is defined in EN 301 025-1 [~~4~~], clause 8.14.1.

4.2.10.2 Limit

The DSC modulation rate limit shall be as stated in EN 301 025-1 [~~4~~], clause 8.14.3.

4.2.10.3 Conformance

Conformance tests as defined in clause 5.3.10 shall be carried out.

4.2.11 Receiver maximum usable sensitivity

4.2.11.1 Definition

The receiver maximum usable sensitivity of the receiver is defined in EN 301 025-1 [~~4~~], clause 9.3.1.

4.2.11.2 Limits

The receiver maximum usable sensitivity limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.3.3.

4.2.11.3 Conformance

Conformance tests as defined in clause 5.4.2 may be carried out.

4.2.12 Receiver co-channel rejection

4.2.12.1 Definition

The receiver co-channel rejection is defined in EN 301 025-1 [~~4~~], clause 9.4.1.

4.2.8.2 Limit

The DSC frequency error limit shall be as stated in EN 301 025-1 [1], clause 8.12.3.

4.2.8.3 Conformance

Conformance tests as defined in clause 5.3.8 shall be carried out.

4.2.9 DSC modulation index

4.2.9.1 Definition

The DSC modulation index is defined in EN 301 025-1 [1], clause 8.13.1.

4.2.9.2 Limit

The DSC modulation index limit shall be as stated in EN 301 025-1 [1], clause 8.13.3.

4.2.9.3 Conformance

Conformance tests as defined in clause 5.3.9 shall be carried out.

4.2.10 DSC modulation rate

4.2.10.1 Definition

The DSC modulation rate is defined in EN 301 025-1 [1], clause 8.14.1.

4.2.10.2 Limit

The DSC modulation rate limit shall be as stated in EN 301 025-1 [1], clause 8.14.3.

4.2.10.3 Conformance

Conformance tests as defined in clause 5.3.10 shall be carried out.

4.2.11 Receiver maximum usable sensitivity

4.2.11.1 Definition

The receiver maximum usable sensitivity of the receiver is defined in EN 301 025-1 [1], clause 9.3.1.

4.2.11.2 Limits

The receiver maximum usable sensitivity limit shall be as stated in EN 301 025-1 [1], clause 9.3.3.

4.2.11.3 Conformance

Conformance tests as defined in clause 5.4.2 may be carried out.

4.2.12 Receiver co-channel rejection

4.2.12.1 Definition

The receiver co-channel rejection is defined in EN 301 025-1 [1], clause 9.4.1.

4.2.12.2 Limit

The receiver co-channel rejection limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.4.3.

4.2.12.3 Conformance

Conformance tests as defined in clause 5.4.3 may be carried out.

4.2.13 Receiver adjacent channel selectivity

4.2.13.1 Definition

The adjacent channel selectivity is in EN 301 025-1 [~~4~~], clause 9.5.1 for the receiver and in EN 301 025-1 [~~4~~], clause 10.3.1 for the DSC receiver.

4.2.13.2 Limits

The adjacent channel selectivity limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.5.3 for the receiver and in EN 301 025-1 [~~4~~], clause 10.3.3 for the DSC receiver.

4.2.13.3 Conformance

Conformance tests as defined in clause 5.4.4 may be carried out.

4.2.14 Receiver spurious response rejection

4.2.14.1 Definition

The spurious response rejection is defined in EN 301 025-1 [~~4~~], clause 9.6.1.

4.2.14.2 Limit

The receiver spurious response rejection limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.6.3.

4.2.14.3 Conformance

Conformance tests as defined in clause 5.4.5 may be carried out.

4.2.15 Receiver intermodulation response

4.2.15.1 Definition

The intermodulation response is defined in EN 301 025-1 [~~4~~], clause 9.7.1 for the receiver and in EN 301 025-1 [~~4~~], clause 10.5.1 for the DSC receiver.

4.2.15.2 Limit

The intermodulation response limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.7.3 for the receiver and in EN 301 025-1 [~~4~~], clause 10.5.3 for the DSC receiver.

4.2.15.3 Conformance

Conformance tests as defined in clause 5.4.6 may be carried out.

4.2.12.2 Limit

The receiver co-channel rejection limit shall be as stated in EN 301 025-1 [1], clause 9.4.3.

4.2.12.3 Conformance

Conformance tests as defined in clause 5.4.3 may be carried out.

4.2.13 Receiver adjacent channel selectivity

4.2.13.1 Definition

The adjacent channel selectivity is in EN 301 025-1 [1], clause 9.5.1 for the receiver and in EN 301 025-1 [1], clause 10.3.1 for the DSC receiver.

4.2.13.2 Limits

The adjacent channel selectivity limit shall be as stated in EN 301 025-1 [1], clause 9.5.3 for the receiver and in EN 301 025-1 [1], clause 10.3.3 for the DSC receiver.

4.2.13.3 Conformance

Conformance tests as defined in clause 5.4.4 may be carried out.

4.2.14 Receiver spurious response rejection

4.2.14.1 Definition

The spurious response rejection is defined in EN 301 025-1 [1], clause 9.6.1.

4.2.14.2 Limit

The receiver spurious response rejection limit shall be as stated in EN 301 025-1 [1], clause 9.6.3.

4.2.14.3 Conformance

Conformance tests as defined in clause 5.4.5 may be carried out.

4.2.15 Receiver intermodulation response

4.2.15.1 Definition

The intermodulation response is defined in EN 301 025-1 [1], clause 9.7.1 for the receiver and in EN 301 025-1 [1], clause 10.5.1 for the DSC receiver.

4.2.15.2 Limit

The intermodulation response limit shall be as stated in EN 301 025-1 [1], clause 9.7.3 for the receiver and in EN 301 025-1 [1], clause 10.5.3 for the DSC receiver.

4.2.15.3 Conformance

Conformance tests as defined in clause 5.4.6 may be carried out.

4.2.16 Receiver blocking or desensitization

4.2.16.1 Definition

Blocking is defined in EN 301 025-1 [~~4~~], clause 9.8.1.

4.2.16.2 Limit

The receiver blocking or desensitization limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.8.3.

4.2.16.3 Conformance

Conformance tests as defined in clause 5.4.7 may be carried out.

4.2.17 Receiver spurious emissions at the antenna

4.2.17.1 Definition

Spurious emissions are defined in EN 301 025-1 [~~4~~], clause 9.9.1 for the receiver and in EN 301 025-1 [~~4~~], clause 10.7.1 for the DSC receiver.

4.2.17.2 Limit

The spurious emissions at the antenna limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.9.3 for the receiver and in EN 301 025-1 [~~4~~], clause 10.7.3 for the DSC receiver.

4.2.17.3 Conformance

Conformance tests as defined in clause 5.4.8 may be carried out.

4.2.18 Receiver cabinet radiated spurious emissions

4.2.18.1 Definition

The cabinet radiated spurious emissions are defined in EN 301 025-1 [~~4~~], clause 9.10.1 for the receiver and in EN 301 025-1 [~~4~~], clause 10.8.1 for the DSC receiver.

4.2.18.2 Limit

The cabinet radiated spurious emissions limit shall be as stated in EN 301 025-1 [~~4~~], clause 9.10.3 for the receiver and in EN 301 025-1 [~~4~~], clause 10.8.3 for the DSC receiver.

4.2.18.3 Conformance

Conformance tests as defined in clause 5.4.9 may be carried out.

4.2.19 DSC receiver maximum usable sensitivity

4.2.19.1 Definition

The maximum usable sensitivity of the DSC receiver is defined in EN 301 025-1 [~~4~~], clause 10.1.1.

4.2.19.2 Limits

The DSC receiver maximum usable sensitivity limit shall be as stated in EN 301 025-1 [~~4~~], clause 10.1.3.

4.2.16 Receiver blocking or desensitization

4.2.16.1 Definition

Blocking is defined in EN 301 025-1 [1], clause 9.8.1.

4.2.16.2 Limit

The receiver blocking or desensitization limit shall be as stated in EN 301 025-1 [1], clause 9.8.3.

4.2.16.3 Conformance

Conformance tests as defined in clause 5.4.7 may be carried out.

4.2.17 Receiver spurious emissions at the antenna

4.2.17.1 Definition

Spurious emissions are defined in EN 301 025-1 [1], clause 9.9.1 for the receiver and in EN 301 025-1 [1], clause 10.7.1 for the DSC receiver.

4.2.17.2 Limit

The spurious emissions at the antenna limit shall be as stated in EN 301 025-1 [1], clause 9.9.3 for the receiver and in EN 301 025-1 [1], clause 10.7.3 for the DSC receiver.

4.2.17.3 Conformance

Conformance tests as defined in clause 5.4.8 may be carried out.

4.2.18 Receiver cabinet radiated spurious emissions

4.2.18.1 Definition

The cabinet radiated spurious emissions are defined in EN 301 025-1 [1], clause 9.10.1 for the receiver and in EN 301 025-1 [1], clause 10.8.1 for the DSC receiver.

4.2.18.2 Limit

The cabinet radiated spurious emissions limit shall be as stated in EN 301 025-1 [1], clause 9.10.3 for the receiver and in EN 301 025-1 [1], clause 10.8.3 for the DSC receiver.

4.2.18.3 Conformance

Conformance tests as defined in clause 5.4.9 may be carried out.

4.2.19 DSC receiver maximum usable sensitivity

4.2.19.1 Definition

The maximum usable sensitivity of the DSC receiver is defined in EN 301 025-1 [1], clause 10.1.1.

4.2.19.2 Limits

The DSC receiver maximum usable sensitivity limit shall be as stated in EN 301 025-1 [1], clause 10.1.3.

4.2.19.3 Conformance

Conformance tests as defined in clause 5.4.10 may be carried out.

4.2.20 DSC receiver co-channel rejection

4.2.20.1 Definition

The co-channel rejection of the DSC receiver is defined in EN 301 025-1 [~~4~~], clause 10.2.1.

4.2.20.2 Limits

The DSC receiver co-channel rejection limit shall be as stated in EN 301 025-1 [~~4~~], clause 10.2.3.

4.2.20.3 Conformance

Conformance tests as defined in clause 5.4.11 may be carried out.

4.2.21 DSC receiver spurious response and blocking immunity

4.2.21.1 Definition

The spurious response and blocking immunity of the DSC receiver is defined in EN 301 025-1 [~~4~~], clause 10.4.1.

4.2.21.2 Limits

The DSC receiver spurious response and blocking immunity limit shall be as stated in EN 301 025-1 [~~4~~], clause 10.4.3.

4.2.21.3 Conformance

Conformance tests as defined in clause 5.4.12 may be carried out.

5 Testing for compliance with technical requirements

5.1 Test conditions, power supply and ambient temperatures

These shall be as described in EN 301 025-1 [~~4~~], clauses 6.1 to 6.9 and 6.11 to 6.14.

5.2 Interpretation of the measurement results

The interpretation of the results recorded in a test report for the measurements described in the present document shall be as follows:

- the measured value related to the corresponding limit will be used to decide whether an equipment meets the requirements of the present document;
- the value of the measurement uncertainty for the measurement of each parameter shall be included in the test report;
- the recorded value of the measurement uncertainty shall be, for each measurement, equal to or lower than the figures in table 1.

4.2.19.3 Conformance

Conformance tests as defined in clause 5.4.10 may be carried out.

4.2.20 DSC receiver co-channel rejection

4.2.20.1 Definition

The co-channel rejection of the DSC receiver is defined in EN 301 025-1 [1], clause 10.2.1.

4.2.20.2 Limits

The DSC receiver co-channel rejection limit shall be as stated in EN 301 025-1 [1], clause 10.2.3.

4.2.20.3 Conformance

Conformance tests as defined in clause 5.4.11 may be carried out.

4.2.21 DSC receiver spurious response and blocking immunity

4.2.21.1 Definition

The spurious response and blocking immunity of the DSC receiver is defined in EN 301 025-1 [1], clause 10.4.1.

4.2.21.2 Limits

The DSC receiver spurious response and blocking immunity limit shall be as stated in EN 301 025-1 [1], clause 10.4.3.

4.2.21.3 Conformance

Conformance tests as defined in clause 5.4.12 may be carried out.

5 Testing for compliance with technical requirements

5.1 Test conditions, power supply and ambient temperatures

These shall be as described in EN 301 025-1 [1], clauses 6.1 to 6.9 and 6.11 to 6.14.

5.2 Interpretation of the measurement results

The interpretation of the results recorded in a test report for the measurements described in the present document shall be as follows:

- the measured value related to the corresponding limit will be used to decide whether an equipment meets the requirements of the present document;
- the value of the measurement uncertainty for the measurement of each parameter shall be included in the test report;
- the recorded value of the measurement uncertainty shall be, for each measurement, equal to or lower than the figures in table 1.

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028 [~~5~~] and shall correspond to an expansion factor (coverage factor) k = 1,96 or k = 2 (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table 1 is based on such expansion factors.

Table 1: Maximum values of absolute measurement uncertainties

Parameter	Maximum uncertainty
Radio Frequency (RF)	±1 x 10^{-7}
RF power/level	±0,75 dB
Maximum frequency deviation: - within 300 Hz to 6 kHz of modulation frequency - within 6 kHz to 25 kHz of modulation frequency	 ±5 % ±3 dB
Deviation limitation	±5 %
Adjacent channel power	±5 dB
Conducted spurious emission of transmitter	±4 dB
Sensitivity at 20 dB SINAD	±3 dB
Conducted emission of receiver	±3 dB
Two-signal measurement	±4 dB
Three-signal measurement	±3 dB
Transmitter transient time	±20 %
Transmitter transient frequency	±250 Hz

5.3 Essential radio test suites

5.3.1 Transmitter frequency error

The test method specified in EN 301 025-1 [~~4~~], clause 8.1.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.1.2 in order to prove compliance with the requirement.

5.3.2 Transmitter adjacent channel power

The test method specified in EN 301 025-1 [~~4~~], clause 8.7.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.2.2 in order to prove compliance with the requirement.

5.3.3 Transmitter conducted spurious emissions conveyed to the antenna

The test method specified in EN 301 025-1 [~~4~~], clause 8.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.3.2 in order to prove compliance with the requirement.

5.3.4 Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

The test method specified in EN 301 025-1 [~~4~~], clause 8.9.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.4.2 in order to prove compliance with the requirement.

5.3.5 Transient behaviour of the transmitter

The test method specified in EN 301 025-1 [~~4~~], clause 8.10.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.5.2 in order to prove compliance with the requirement.

5.3.6 Transmitter carrier power

The test method specified in EN 301 025-1 [~~4~~], clause 8.2.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.6.2 in order to prove compliance with the requirement.

For the test methods, according to the present document, the measurement uncertainty figures shall be calculated in accordance with TR 100 028 [2] and shall correspond to an expansion factor (coverage factor) k = 1,96 or k = 2 (which provide confidence levels of respectively 95 % and 95,45 % in the case where the distributions characterizing the actual measurement uncertainties are normal (Gaussian)).

Table 1 is based on such expansion factors.

Table 1: Maximum values of absolute measurement uncertainties

Parameter	Maximum uncertainty
Radio Frequency (RF)	±1 x 10^{-7}
RF power/level	±0,75 dB
Maximum frequency deviation: - within 300 Hz to 6 kHz of modulation frequency - within 6 kHz to 25 kHz of modulation frequency	 ±5 % ±3 dB
Deviation limitation	±5 %
Adjacent channel power	±5 dB
Conducted spurious emission of transmitter	±4 dB
Sensitivity at 20 dB SINAD	±3 dB
Conducted emission of receiver	±3 dB
Two-signal measurement	±4 dB
Three-signal measurement	±3 dB
Transmitter transient time	±20 %
Transmitter transient frequency	±250 Hz

5.3 Essential radio test suites

5.3.1 Transmitter frequency error

The test method specified in EN 301 025-1 [1], clause 8.1.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.1.2 in order to prove compliance with the requirement.

5.3.2 Transmitter adjacent channel power

The test method specified in EN 301 025-1 [1], clause 8.7.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.2.2 in order to prove compliance with the requirement.

5.3.3 Transmitter conducted spurious emissions conveyed to the antenna

The test method specified in EN 301 025-1 [1], clause 8.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.3.2 in order to prove compliance with the requirement.

5.3.4 Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

The test method specified in EN 301 025-1 [1], clause 8.9.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.4.2 in order to prove compliance with the requirement.

5.3.5 Transient behaviour of the transmitter

The test method specified in EN 301 025-1 [1], clause 8.10.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.5.2 in order to prove compliance with the requirement.

5.3.6 Transmitter carrier power

The test method specified in EN 301 025-1 [1], clause 8.2.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.6.2 in order to prove compliance with the requirement.

5.3.7 Transmitter frequency deviation

The test method specified in EN 301 025-1 [~~4~~], clauses 8.3.2.1 and 8.3.3.1 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.7.2 in order to prove compliance with the requirement.

5.3.8 DSC frequency error (demodulated DSC signal)

The test method specified in EN 301 025-1 [~~4~~], clause 8.12.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.8.2 in order to prove compliance with the requirement.

5.3.9 DSC modulation index

The test method specified in EN 301 025-1 [~~4~~], clause 8.13.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.9.2 in order to prove compliance with the requirement.

5.3.10 DSC modulation rate

The test method specified in EN 301 025-1 [~~4~~], clause 8.14.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.10.2 in order to prove compliance with the requirement.

5.4 Other test suites

5.4.1 General

The requirements in clauses 4.2.11 to 4.2.21 inclusive have been set on the assumption that the test specifications in clauses 5.4.2 to 5.4.12 will be used to verify the performance of the equipment.

5.4.2 Receiver maximum usable sensitivity

The test method specified in EN 301 025-1 [~~4~~], clause 9.3.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.11.2 in order to prove compliance with the requirement.

5.4.3 Receiver co-channel rejection

The test method specified in EN 301 025-1 [~~4~~], clause 9.4.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.12.2 in order to prove compliance with the requirement.

5.4.4 Receiver adjacent channel selectivity

The test methods specified in EN 301 025-1 [~~4], clause~~ 9.5.2 and 10.3.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.13.2 in order to prove compliance with the requirement.

5.4.5 Receiver spurious response rejection

The test method specified in EN 301 025-1 [~~4~~], clause 9.6.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.14.2 in order to prove compliance with the requirement.

5.4.6 Receiver intermodulation response

The test methods specified in EN 301 025-1 [~~4], clause~~ 9.7.2 and 10.5.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.15.2 in order to prove compliance with the requirement.

5.3.7 Transmitter frequency deviation

The test method specified in EN 301 025-1 [1], clauses 8.3.2.1 and 8.3.3.1 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.7.2 in order to prove compliance with the requirement.

5.3.8 DSC frequency error (demodulated DSC signal)

The test method specified in EN 301 025-1 [1], clause 8.12.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.8.2 in order to prove compliance with the requirement.

5.3.9 DSC modulation index

The test method specified in EN 301 025-1 [1], clause 8.13.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.9.2 in order to prove compliance with the requirement.

5.3.10 DSC modulation rate

The test method specified in EN 301 025-1 [1], clause 8.14.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.10.2 in order to prove compliance with the requirement.

5.4 Other test suites

5.4.1 General

The requirements in clauses 4.2.11 to 4.2.21 inclusive have been set on the assumption that the test specifications in clauses 5.4.2 to 5.4.12 will be used to verify the performance of the equipment.

5.4.2 Receiver maximum usable sensitivity

The test method specified in EN 301 025-1 [1], clause 9.3.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.11.2 in order to prove compliance with the requirement.

5.4.3 Receiver co-channel rejection

The test method specified in EN 301 025-1 [1], clause 9.4.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.12.2 in order to prove compliance with the requirement.

5.4.4 Receiver adjacent channel selectivity

The test methods specified in EN 301 025-1 [1], clauses 9.5.2 and 10.3.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.13.2 in order to prove compliance with the requirement.

5.4.5 Receiver spurious response rejection

The test method specified in EN 301 025-1 [1], clause 9.6.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.14.2 in order to prove compliance with the requirement.

5.4.6 Receiver intermodulation response

The test methods specified in EN 301 025-1 [1], clauses 9.7.2 and 10.5.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.15.2 in order to prove compliance with the requirement.

5.4.7 Receiver blocking or desensitization

The test method specified in EN 301 025-1 [~~4~~], clause 9.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.16.2 in order to prove compliance with the requirement.

5.4.8 Receiver spurious emissions at the antenna

The test methods specified in EN 301 025-1 [~~4~~], ~~clause~~ 9.9.2 and 10.7.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.17.2 in order to prove compliance with the requirement.

5.4.9 Receiver cabinet radiated spurious emissions

The test methods specified in EN 301 025-1 [~~4~~], ~~clause~~ 9.10.2 and 10.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.18.2 in order to prove compliance with the requirement.

5.4.10 DSC receiver maximum usable sensitivity

The test method specified in EN 301 025-1 [~~4~~], clause 10.1.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.19.2 in order to prove compliance with the requirement.

5.4.11 DSC receiver co-channel rejection

The test method specified in EN 301 025-1 [~~4~~], clause 10.2.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.20.2 in order to prove compliance with the requirement.

5.4.12 DSC receiver spurious response and blocking immunity

The test method specified in EN 301 025-1 [~~4~~], clause 10.4.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.21.2 in order to prove compliance with the requirement.

5.4.7 Receiver blocking or desensitization

The test method specified in EN 301 025-1 [1], clause 9.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.16.2 in order to prove compliance with the requirement.

5.4.8 Receiver spurious emissions at the antenna

The test methods specified in EN 301 025-1 [1], clauses 9.9.2 and 10.7.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.17.2 in order to prove compliance with the requirement.

5.4.9 Receiver cabinet radiated spurious emissions

The test methods specified in EN 301 025-1 [1], clauses 9.10.2 and 10.8.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.18.2 in order to prove compliance with the requirement.

5.4.10 DSC receiver maximum usable sensitivity

The test method specified in EN 301 025-1 [1], clause 10.1.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.19.2 in order to prove compliance with the requirement.

5.4.11 DSC receiver co-channel rejection

The test method specified in EN 301 025-1 [1], clause 10.2.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.20.2 in order to prove compliance with the requirement.

5.4.12 DSC receiver spurious response and blocking immunity

The test method specified in EN 301 025-1 [1], clause 10.4.2 shall be carried out. The results obtained shall be compared to the limits in clause 4.2.21.2 in order to prove compliance with the requirement.

Annex A (normative): HS ~~Requirement~~ and conformance Test specifications Table (HS-RTT)

The HS Requirements and conformance Test specifications Table (HS-RTT) in table A.1 serves a number of purposes, as follows:

- it provides a statement of all the ~~essential~~ requirements in words and by cross reference to ~~a specific clause in the present document or to a specific clause in a specific referenced document;~~
- it provides a statement of all the test procedures corresponding to those ~~essential~~ requirements by cross reference to specific clause(s) in the present document or to ~~a~~ specific clause(s) in specific referenced document(s);
- it qualifies each requirement to be either:
  - Unconditional: meaning that the requirement applies in all circumstances, or
  - Conditional: meaning that the requirement is dependent on the manufacturer having chosen to support optional functionality defined within the schedule.
- in the case of Conditional requirements, it associates the requirement with the particular optional service or functionality;
- it qualifies each test procedure to be either:
  - Essential: meaning that it is included with the Essential Radio Test Suite and therefore the requirement shall be demonstrated to be met in accordance with the referenced procedures;
  - Other: meaning that the test procedure is illustrative but other means of demonstrating compliance with the requirement are permitted.

Table A.1: HS Requirements and conformance Test specifications Table (HS-RTT)

Harmonized Standard EN 301 025-2 The following ~~technical~~ requirements and test specifications are relevant to the presumption of conformity under ~~Article~~ 3.2 of the R&TTE Directive						
~~Technical~~ Requirement ~~reference~~			**~~Technical~~ Requirement Conditionality**		**Test Specification**	
No	**Description**	**Reference: Clause No**	**U/C**	**Condition**	**E/O**	**Reference: Clause No**
1	Transmitter frequency error	4.2.1	U		E	5.3.1
2	Transmitter adjacent channel power	4.2.2	U		E	5.3.2
3	Transmitter conducted spurious emissions conveyed to the antenna	4.2.3	U		E	5.3.3
4	Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna	4.2.4	U		E	5.3.4

Annex A (normative): HS Requirements and conformance Test specifications Table (HS-RTT)

The HS Requirements and conformance Test specifications Table (HS-RTT) in table A.1 serves a number of purposes, as follows:

- it provides a statement of all the requirements in words and by cross reference to (a) specific clause(s) in the present document or to (a) specific clause(s) in (a) specific referenced document(s);
- it provides a statement of all the test procedures corresponding to those requirements by cross reference to (a) specific clause(s) in the present document or to (a) specific clause(s) in (a) specific referenced document(s);
- it qualifies each requirement to be either:
  - Unconditional: meaning that the requirement applies in all circumstances, or
  - Conditional: meaning that the requirement is dependent on the manufacturer having chosen to support optional functionality defined within the schedule.
- in the case of Conditional requirements, it associates the requirement with the particular optional service or functionality;
- it qualifies each test procedure to be either:
  - Essential: meaning that it is included with the Essential Radio Test Suite and therefore the requirement shall be demonstrated to be met in accordance with the referenced procedures;
  - Other: meaning that the test procedure is illustrative but other means of demonstrating compliance with the requirement are permitted.

Table A.1: HS Requirements and conformance Test specifications Table (HS-RTT)

Harmonized Standard EN 301 025-2 The following requirements and test specifications are relevant to the presumption of conformity under article 3.2 of the R&TTE Directive						
Requirement			**Requirement Conditionality**		**Test Specification**	
No	**Description**	**Reference: Clause No**	**U/C**	**Condition**	**E/O**	**Reference: Clause No**
1	Transmitter frequency error	4.2.1	U		E	5.3.1
2	Transmitter adjacent channel power	4.2.2	U		E	5.3.2
3	Transmitter conducted spurious emissions conveyed to the antenna	4.2.3	U		E	5.3.3
4	Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna	4.2.4	U		E	5.3.4
5	Transient frequency behaviour of the transmitter	4.2.5	U		E	5.3.5
6	Transmitter carrier power	4.2.6	U		E	5.3.6
7	Transmitter frequency deviation	4.2.7	U		E	5.3.7
8	DSC frequency error (demodulated DSC signal)	4.2.8	U		E	5.3.8
9	DSC modulation index	4.2.9	U		E	5.3.9
10	DSC modulation rate	4.2.10	U		E	5.3.10

Harmonized Standard EN 301 025-2 The following technical requirements and test specifications are relevant to the presumption of conformity under Article 3.2 of the R&TTE Directive						
Technical Requirement reference			**Technical Requirement Conditionality**		**Test Specification**	
5	Transient frequency behaviour of the transmitter	4.2.5	U		E	5.3.5
6	Transmitter carrier power	4.2.6	U		E	5.3.6
7	Transmitter frequency deviation	4.2.7	U		E	5.3.7
8	DSC frequency error (demodulated DSC signal)	4.2.8	U		E	5.3.8
9	DSC modulation index	4.2.9	U		E	5.3.9
10	DSC modulation rate	4.2.10	U		E	5.3.10
11	Receiver maximum useable sensitivity	4.2.11	U		O	5.4.2
12	Receiver co-channel rejection	4.2.12	U		O	5.4.3
13	Receiver adjacent channel selectivity	4.2.13	U		O	5.4.4
14	Receiver spurious response rejection	4.2.14	U		O	5.4.5
15	Receiver inter-modulation response	4.2.15	U		O	5.4.6
16	Receiver blocking or desen-sitization	4.2.16	U		O	5.4.7
17	Receiver spurious emissions at the antenna	4.2.17	U		O	5.4.8
18	Receiver cabinet radiated spurious emissions	4.2.18	U		O	5.4.9
19	DSC receiver maximum useable sensitivity	4.2.19	U		O	5.4.10
20	DSC receiver co-channel rejection	4.2.20	U		O	5.4.11
21	DSC receiver spurious response and blocking immunity	4.2.21	U		O	5.4.12

Harmonized Standard EN 301 025-2 The following requirements and test specifications are relevant to the presumption of conformity under article 3.2 of the R&TTE Directive						
Requirement			Requirement Conditionality		Test Specification	
11	Receiver maximum useable sensitivity	4.2.11	U		O	5.4.2
12	Receiver co-channel rejection	4.2.12	U		O	5.4.3
13	Receiver adjacent channel selectivity	4.2.13	U		O	5.4.4
14	Receiver spurious response rejection	4.2.14	U		O	5.4.5
15	Receiver inter-modulation response	4.2.15	U		O	5.4.6
16	Receiver blocking or desensitization	4.2.16	U		O	5.4.7
17	Receiver spurious emissions at the antenna	4.2.17	U		O	5.4.8
18	Receiver cabinet radiated spurious emissions	4.2.18	U		O	5.4.9
19	DSC receiver maximum useable sensitivity	4.2.19	U		O	5.4.10
20	DSC receiver co-channel rejection	4.2.20	U		O	5.4.11
21	DSC receiver spurious response and blocking immunity	4.2.21	U		O	5.4.12

Key to columns:

Requirement:

No A unique identifier for one row of the table which may be used to identify an essential requirement or its test specification.

Description A textual reference to the requirement.

Clause Number Identification of clause(s) defining the essential requirement in the present document unless another document is referenced explicitly.

Requirement Conditionality:

U/C Indicates whether the requirement is to be *unconditionally* applicable (U) or is *conditional* upon the manufacturers claimed functionality of the equipment (C).

Condition Explains the conditions when the requirement shall or shall not be applicable for a technical requirement which is classified "conditional".

Test Specification:

E/O Indicates whether the test specification forms part of the *Essential Radio Test Suite* (E) or whether it is one of the Other Test Suite (O).

NOTE: All tests whether "E" or "O" are relevant to the requirements. Rows designated "E" collectively make up the Essential Radio Test Suite; those designated "O" make up the Other Test Suite; for those designated "X" there is no test specified corresponding to the requirement. The completion of all tests classified "E" as specified with satisfactory outcomes is a necessary condition for a presumption of conformity. Compliance with requirements associated with tests classified "O" or "X" is a necessary condition for presumption of conformity, although conformance with the requirement may be claimed by an equivalent test or by manufacturer's assertion supported by appropriate entries in the technical construction file.

Clause Number Identification of clause(s) defining the test specification in the present document unless another document is referenced explicitly. Where no test is specified (that is, where the previous field is "X") this field remains blank.

Key to columns:

Essential Requirement:

No A unique identifier for one row of the table which may be used to identify an essential requirement or its test specification.

Description A textual reference to the requirement.

Clause Number Identification of clause(s) defining the essential requirement in the present document unless another document is referenced explicitly.

Conditionality:

U/C Indicates whether the requirement is to be *unconditionally* applicable (U) or is *conditional* upon the suppliers claimed functionality of the equipment (C).

Condition Explains the conditions when the requirement shall or shall not be applicable for a technical requirement which is classified "conditional".

Test Specification:

E/O Indicates whether the test specification forms part of the *Essential Radio Test Suite* (E) or whether it is one of the Other Test Suite (O).

NOTE: All tests whether "E" or "O" are relevant to the requirements. Rows designated "E" collectively make up the Essential Radio Test Suite; those designated "O" make up the Other Test Suite; for those designated "X" there is no test specified corresponding to the requirement. All tests classified "E" shall be performed as specified with satisfactory outcomes is a necessary condition for a presumption of conformity. Requirements associated with tests classified "O" or "X" must be complied with as a necessary condition for presumption of conformity, although conformance with the requirement may be claimed by an equivalent test or by manufacturer's assertion supported by appropriate entries in the technical construction file.

Clause Number Identification of clause(s) defining the test specification in the present, document unless another document is referenced explicitly. Where no test is specified (that is, where the previous field is "X") this field remains blank.

Annex B (informative): The EN title in the official languages

The enlargement of the European Union (EU) resulted in a requirement from the EU for a larger number of languages for the translation of the titles of Harmonized Standards and mandated ENs that are to be listed in the Official Journal to support the implementation of this legislation.

For this reason the title translation concerning the present document can be consulted via the e-approval application.

Annex B (informative): The EN title in the official languages

Language	EN title
Bulgaria	Електромагнитна съвместимост и въпроси на радиоспектъра (ERM). VHF радиотелефони за далекосъобщения с общо предназначение и съответни съоръжения за клас "D" цифрово селективно избиране (DSC). Част 2: Хармонизиран европейски стандарт (EN) според член 3.2 от Директивата за радиосъоръжения и крайни далекосвобщителни устройства (R&TTED)
Czech	Elektromagnetická kompatibilita a rádiové spektrum (ERM) - Radiotelefonní zařízení VHF pro všeobecnou komunikaci a přidružená zařízení třídy D s digitálním selektivním voláním (DSC) - Část 2: Harmonizovaná EN podle článku 3.2 Směrnice R&TTE
Danish	Elektromagnetisk kompatibilitet og Radiospektrum Anliggender (ERM); VHF radiotelefoni udstyr til generel kommunikation og tilknyttet udstyr til "Klasse D" Digitale, selektive opkald (DSC); Del 2: Harmoniseret EN, som dækker de væsentlige krav i R&TTE direktivets artikel 3.2
Dutch	Elektromagnetische compatibiliteit en radiospectrum zaken (ERM); VHF radiotelefonie apparatuur tbv algemene communicatie en bijbehorende apparatuur voor klasse "D" Digital Selective Calling (DSC); Deel 2: Geharmoniseerde EN welke invulling geeft aan de wezenlijke vereisten, neergelegd in artikel 3.2 va de R&TTE Directive
English	Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF radiotelephone equipment for general communications and associated equipment for class "D" Digital Selective Calling (DSC); Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
Estonian	Elektromagnetilise ühilduvuse ja raadiospektri küsimused (ERM); Üldise sidepidamise VHF raadiotelefoniseadmed ja klassi D digitaalselektiivväljakutse (DSC) lisaseadmed; Osa 2: Harmoneeritud EN R&TTE direktiivi artikli 3.2 alusel
Finnish	Sähkömagneettinen yhteensopivuus ja radiospektriasiat (ERM); Yleisen liikenteen meri-VHF -radiopuhelimet ja D-luokan digitaalisen selektiivikutsun (DSC) lisälaitteet; Osa 2: Harmonisoitu EN R&TTE - direktiivin artiklan 3.2 olennaisten vaatimusten mukaisesti
French	CEM et spectre radioélectrique (ERM) - Appareils de radiotéléphone en VHF pour la téléphonie générale et appareils associés pour Appel numérique sélectif (DSC) de classe "D" - Partie 2: EN harmonisée de l'article 3.2 de la Directive R&TTE
German	Elektromagnetische Verträglichkeit und Funkspektrumangelegenheiten (ERM); UKW-Sprechfunkanlagen des mobilen Seefunkdienstes für "allgemeine Kommunikation" mit Zusatzeinrichtung für den digitalen Selektivruf (DSC) Klasse D; Teil 2: Harmonisierte Europäische Norm (EN) mit wesentlichen Anforderungen nach R&TTE-Richtlinie Artikel 3.2
Greek	Ηλεκτρομαγνητική Συμβατότητα και Θέματα Ραδιοφάσματος (ERM) - Συσκευή ραδιοτηλεφώνου VHF για γενικές επικοινωνίες και συσχετισμένος εξοπλισμός για ψηφιακή επιλεκτική κλήση (DSC) κατηγορίας D - Μέρος 2: Εναρμονισμένο EN για την κάλυψη του άρθρου 3.2 της Οδηγίας R&TTE
Hungarian	Elektromágneses összeférhetőségi és rádióspektrumügyek (ERM). Általános kommunikációs célú VHF rádiótelefon berendezések, és az ezekhez tartozó, D osztályú, digitális, szelektív hívóberendezések (DSC). 2. rész: Az R&TTE irányelv 3.2. cikkelye alá tartozó, harmonizált európai szabvány
Icelandic	Þættir sem varða rafsegulsviðssamhæfi og fjarskiptatíðni (ERM); VHF talstöðvarbúnaður til almennra fjarskipta og tengdur búnaður fyrir stafrænt valkall (DSC) í flokki 'D'. 2. hluti: Samræmdur Evrópustaðall skv. 2. mgr. 3. gr. í tilskipun 1999/5/EC um fjarskiptabúnað og endabúnað til fjarskipta
Italian	Compatibilità elettromagnetica e Questioni relative allo spettro delle radiofrequenze (ERM); apparecchiature radiotelefoniche VHF per comunicazioni generiche ed apparecchiature associate per Chiamate Digitali Selettive (DSC) di Classe "D", Part 2: Norma Europea armonizzata per l'articolo 3.2 della direttiva R&TTE
Latvian	Elektromagnētiskā saderība un radiofrekvenču spektra jautājumi (ERM) - Ultraīsviļņu (VHF) radiotelefona iekārta vispārējiem sakariem un saistītā iekārta "D" klases ciparu selektīvajam izsaukumam (DSC) - 2.daļa: Harmonizēts EN, kas atbilst R&TTE Direktīvas 3.2 pantam
Lithuanian	Elektromagnetinio suderinamumo ir radijo dažnių spektro dalykai. Bendrųjų ryšių LAD radiotelefono įrenginiai ir su jais susiję D klasės skaitmeninio atrankiojo kvietimo (SAK) įrenginiai. 2 dalis. Darnusis Europos standartas pagal 1999/5/EC direktyvos 3.2 straipsnį
Maltese	Kompatibilità elettromanjetika u materji relatati ma' spettru radjofoniku (ERM); Tagħmir tar-radjutelefonija fuq il-VHF għal komunikazzjonijiet ġenerali u tagħmir assoċjat għal Sejħat Selettivi Digitali ta' Klassi "D" (DSC) Parti 2: EN armonizzat taħt l-artiklu 3.2 tad-Direttiva R&TTE
Norwegian	Elektromagnetisk kompatibilitet og Radiospektrumspørsmål (ERM); VHF radiotelefonutstyr for generell kommunikasjon og assosiert utstyr for klasse "D" Digital selektiv oppringing (DSC); Del 2: Harmonisert EN i R&TTE direktivets artikkel 3.2
Polish	Kompatybilność Elektromagnetyczna i Zagadnienia Widma Radiowego (ERM) - Urządzenia radiotelefoniczne VHF dla łączności ogólnej i związane wyposażenie do wywoływania selektywnego cyfrowego (DSC) "klasy D" - Część 2: Zharmonizowana EN zgodna z artykułem 3.2 dyrektywy R&TTE

History

Document history		
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V1.4.1	September 2010	Publication

Language	EN title
Portuguese	Assuntos de Espectro Radioeléctrico e Compatibilidade Electromagnética (ERM); Equipamento radiotelefónico VHF destinado a comunicações genéricas e equipamento associado para Chamada Selectiva Digital (DSC) de Classe "D"; Parte 2: EN harmonizada cobrindo os requisitos essenciais no âmbito do Artigo 3.2 da Directiva R&TTE
Romania	
Slovak	Elektromagnetická kompatibilita a záležitosti rádiového spektra (ERM). Rádiotelefónne zariadenia VHF na všeobecné komunikácie a pridružené zariadenia triedy D digitálneho selektívneho volania (DSC). Časť 2: Harmonizovaná EN podľa článku 3.2 smernice R&TTE
Slovenian	Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) – Radiotelefonska oprema VHF za splošne komunikacije in pripadajoča oprema za digitalni selektivni klic (DSC) razreda "D" – 2. del: Harmonizirani EN v skladu s členom 3.2 direktive R&TTE
Spanish	Compatibilidad electromagnética y cuestiones de espectro de radiofrecuencia (ERM); Equipos radioteléfono VHF para comunicaciones generales y equipos asociados para clase "D" Llamada selectiva digital (DSC); Parte 2: EN armonizada cubriendo los requisitos esenciales según el artículo 3.2 de la directiva de R&TTE
Swedish	Elektromagnetisk kompatibilitet och radio spektrumfrågor (ERM); Radiotelefonutrustning på VHF avsedd för allmänna kommunikationer och associerad utrustning för Klass "D" digitalt selektivt anrop (DSC); Del 2: Harmoniserad EN enligt artikel 3.2 i R&TTE-direktivet

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Document history		
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V1.2.1	September 2004	Publication
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