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Foreword

This Harmonized European Standard (EN) 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 the European Commission mandate M/284 issued under Directive 98/34/EC [i.2] as amended by Directive 98/48/EC [i.5].

The title and reference to the present document are intended to be included in the publication in the Official Journal of the European Union of titles and references of Harmonized Standard under the Directive 1999/5/EC [i.1].

See article 5.1 of Directive 1999/5/EC [i.1] for information on presumption of conformity and Harmonized Standards or parts thereof the references of which have been published in the Official Journal of the European Union.

The requirements relevant to Directive 1999/5/EC [i.1] are summarized in annex A.

The present document is part 2 of a multi-part deliverable covering the Electromagnetic compatibility and Radio spectrum Matters (ERM); Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands with integrated handheld class D 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".

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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 [i.1]. The modular structure is shown in EG 201 399 [i.4].

1 Scope

The present document states the minimum technical characteristics and methods of measurement required for portable Very High Frequency (VHF) radiotelephones with integrated handheld class D DSC operating in certain frequency bands allocated to the maritime mobile service using either 25 kHz channels or 25 kHz and 12,5 kHz channels.

The present document also specifies technical characteristics, methods of measurement and required test results.

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>.

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

2.1 Normative references

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

- [1] ETSI EN 302 885-1 (V1.3.1) (03-2014): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Portable Very High Frequency (VHF) radiotelephone equipment for the maritime mobile service operating in the VHF bands with integrated handheld class D DSC; Part 1: Technical characteristics and methods of measurement".
- [2] ETSI TR 100 028-1 (V1.4.1) (12-2001): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 1".

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 2013/638/EU of 12 August 2013 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 Harmonized Standards for application under the R&TTE Directive".
- [i.5] Directive 98/48/EC of the European Parliament and of the Council of 20 July 1998 amending Directive 98/34/EC laying down a procedure for the provision of information in the field of technical standards and regulations.

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:

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

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:

GMDSS	Global Maritime Distress and Safety System
R&TTE	Radio and Telecommunications Terminal Equipment
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 2013/638/EU [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 transmitter frequency error shall be as defined in EN 302 885-1 [1], clause 8.1.1.

4.2.1.2 Limit

The transmitter frequency error limit shall be as stated in EN 302 885-1 [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 carrier power

4.2.2.1 Definition

The transmitter carrier power shall be as defined in EN 302 885-1 [1], clause 8.2.1.

4.2.2.2 Limit

The transmitter carrier power limit shall be as stated in EN 302 885-1 [1], clause 8.2.3.

4.2.2.3 Conformance

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

4.2.3 Maximum transmitter frequency deviation

4.2.3.1 Definition

The transmitter frequency deviation shall be as defined in EN 302 885-1 [1], clause 8.3.1.

4.2.3.2 Limit

The maximum transmitter frequency deviation limit shall be as stated in EN 302 885-1 [1], clause 8.3.2.2.

4.2.3.3 Conformance

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

4.2.4 Reduction of frequency deviation at modulation frequencies above 3 kHz

4.2.4.1 Definition

The frequency deviation shall be as defined in EN 302 885-1 [1], clause 8.3.1.

4.2.4.2 Limit

The reduction of frequency deviation at modulation frequencies above 3 kHz shall be as stated in EN 302 885-1 [1], clause 8.3.3.2.

4.2.4.3 Conformance

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

4.2.5 Transmitter adjacent channel power

4.2.5.1 Definition

The transmitter adjacent channel power shall be as defined in EN 302 885-1 [1], clause 8.7.1.

4.2.5.2 Limit

The transmitter adjacent channel power limit shall be as stated in EN 302 885-1 [1], clause 8.7.3.

4.2.5.3 Conformance

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

4.2.6 Transmitter conducted spurious emissions conveyed to the antenna

4.2.6.1 Definition

The transmitter conducted spurious emissions conveyed to the antenna shall be as defined in EN 302 885-1 [1], clause 8.8.1.

4.2.6.2 Limit

The transmitter conducted emissions conveyed to the antenna limit shall be as stated in EN 302 885-1 [1], clause 8.8.3.

4.2.6.3 Conformance

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

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

4.2.7.1 Definition

The transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna shall be as defined in EN 302 885-1 [1], clause 8.9.1.

4.2.7.2 Limit

The transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna limit shall be as stated in EN 302 885-1 [1], clause 8.9.3.

4.2.7.3 Conformance

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

4.2.8 Transient frequency behaviour of the transmitter

4.2.8.1 Definition

The transient frequency behaviour of the transmitter shall be as defined in EN 302 885-1 [1], clause 8.11.1.

4.2.8.2 Limit

The transmitter frequency behaviour of the transmitter limit shall be as stated in EN 302 885-1 [1], clause 8.11.3.

4.2.8.3 Conformance

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

4.2.9 DSC frequency error (demodulated DSC signal)

4.2.9.1 Definition

The DSC frequency error is defined in EN 302 885-1 [1], clause 8.12.1.