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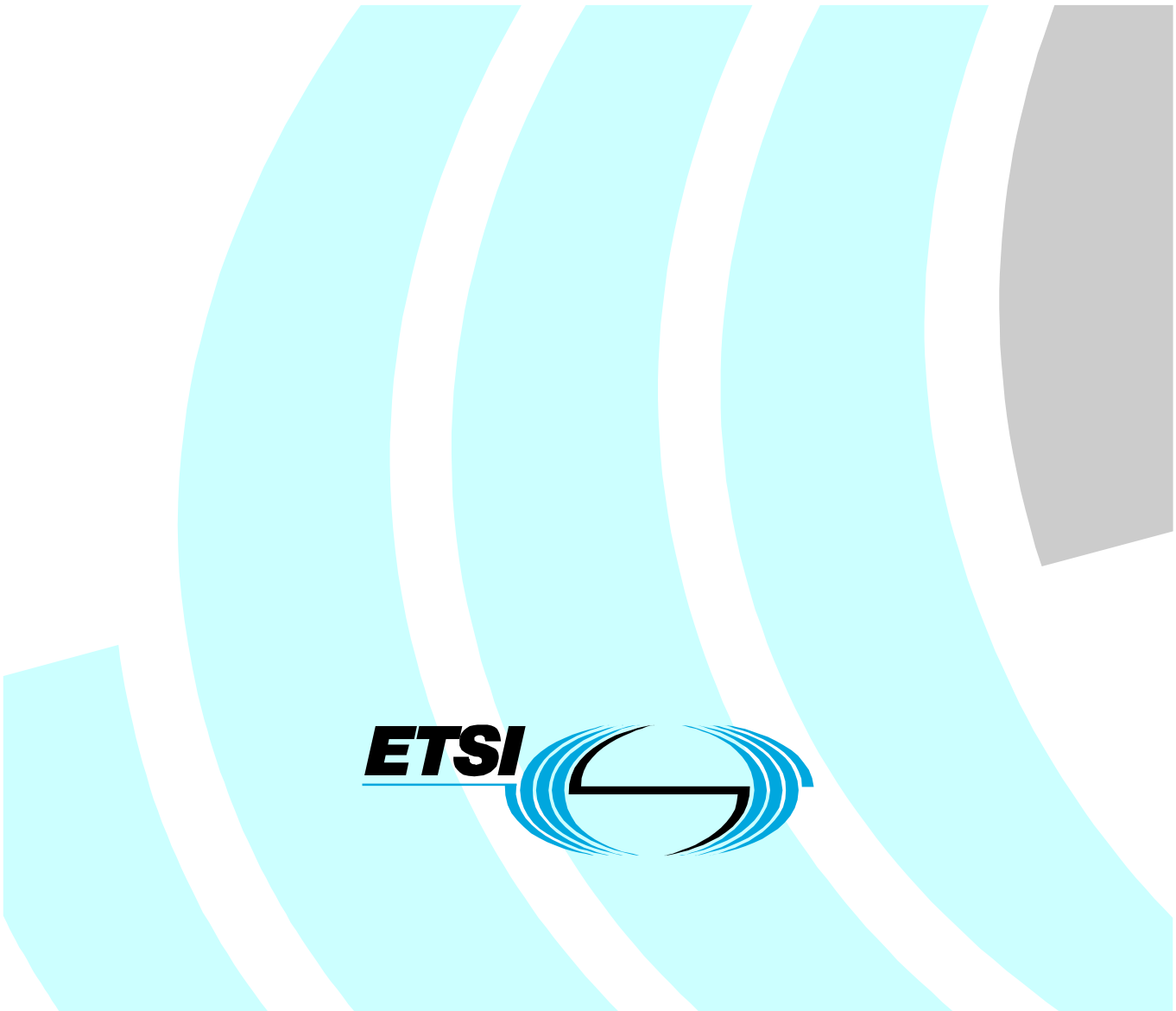
Harmonized European Standard (Telecommunications series)

Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF transmitters and receivers as Coast Stations for GMDSS and other applications in the maritime mobile service; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive



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Contents

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Foreword

This Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Electromagnetic compatibility and Radio spectrum Matters (ERM), and is now submitted for the ETSI standards One-step Approval Procedure.

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC (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 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" [1]).

The present document is part 2 of a multi-part deliverable covering VHF transmitters and receivers as Coast Stations for GMDSS and other applications in the maritime mobile service, as identified below:

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

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

Technical specifications relevant to Directive 1999/5/EC are given in annex A.

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

1 Scope

The present document applies to the following radio equipment:

- Transmitters, receivers and transceivers fitted with external antenna connectors, used as coast stations, operating in the VHF band of the maritime mobile service as defined in the Radio Regulations, Appendix S18 [3] and utilizing class of emission G3E, and where relevant G2B for DSC signalling.
- This includes:
  - equipment operating under local or remote control;
  - equipment operating on 12,5 kHz or 25 kHz channel spacing;
  - equipment capable of analogue speech, Digital Selective Calling (DSC), or both;
  - equipment operating in Simplex, Semi-Duplex (Half Duplex) and Duplex modes;
  - equipment which may consist of more than one unit;
  - equipment which may be single-channel or multi-channel;
  - equipment operating on shared radio sites;
  - equipment operating in isolation from other radio equipment.

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] will 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.

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

[3] ITU Radio Regulations (2004).

[4] ETSI TR 102 273 (V1.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Improvement on Radiated Methods of Measurement (using test site) and evaluation of the corresponding measurement uncertainties".

[5] ETSI EN 301 929-1 (V1.2.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); VHF transmitters and receivers as Coast Stations for GMDSS and other applications in the maritime mobile service; Part 1: Technical characteristics and methods of measurement".

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:

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

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

G2B: phase-modulation with digital information, with a sub-carrier for Digital Selective Calling (DSC) operation

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

3.2 Abbreviations

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

DSC	Digital Selective Calling
EMC	Electro-Magnetic Compatibility
LV	Low Voltage
R&TTE	Radio and Telecommunications Terminal Equipment
SINAD	Signal + Noise + Distortion/Noise + Distortion
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. (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 301 929-1 [5], clause 8.1.1.

4.2.1.2 Limits

The transmitter frequency error limit shall be as stated in EN 301 929-1 [5], 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 is defined in EN 301 929-1 [5], clause 8.2.1.

4.2.2.2 Limits

The transmitter carrier power limit shall be as stated in EN 301 929-1 [5], 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 Transmitter frequency deviation

4.2.3.1 Definition

The transmitter frequency deviation is defined in EN 301 929-1 [5], clause 8.3.1.

4.2.3.2 Limits

The transmitter frequency deviation limit shall be as stated in EN 301 929-1 [5], 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 Transmitter adjacent channel power

4.2.4.1 Definition

The transmitter adjacent channel power is defined in EN 301 929-1 [5], clause 8.6.1.

4.2.4.2 Limits

The transmitter adjacent channel power limit shall be as stated in EN 301 929-1 [5], clause 8.6.3.

4.2.4.3 Conformance

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

4.2.5 Transmitter conducted spurious emissions conveyed to the antenna

4.2.5.1 Definition

Conducted spurious emissions conveyed to the antenna are defined in EN 301 929-1 [5], clause 8.7.1.

4.2.5.2 Limits

The transmitter conducted spurious emissions conveyed to the antenna limit shall be as stated in EN 301 929-1 [5], 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 cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

4.2.6.1 Definition

Cabinet radiation and conducted spurious emissions other than those conveyed to the antenna are defined in EN 301 929-1 [5], clause 8.8.1.

4.2.6.2 Limits

The transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna limit shall be as stated in EN 301 929-1 [5], 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 DSC transmitter modulation index

4.2.7.1 Definition

DSC transmitter modulation index is defined in EN 301 929-1 [5], clause 8.10.1.

4.2.7.2 Limits

The DSC transmitter modulation index shall be as stated in EN 301 929-1 [5], clause 8.10.3.

4.2.7.3 Conformance

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

4.2.8 Transient frequency behaviour of the transmitter

4.2.8.1 Definitions

The transient frequency behaviour of the transmitter is defined in EN 301 929-1 [5], clause 8.13.1.

4.2.8.2 Limits

The transient frequency behaviour of the transmitter limit shall be as stated in EN 301 929-1 [5], clause 8.13.3.

4.2.8.3 Conformance

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

4.2.9 Intermodulation attenuation

4.2.9.1 Definitions

The intermodulation attenuation of the transmitter is defined in EN 301 929-1 [5], clause 8.14.1.

4.2.9.2 Limits

The intermodulation attenuation shall be as stated in EN 301 929-1 [5], clause 8.14.3.

4.2.9.3 Conformance

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

4.2.10 Receiver maximum usable sensitivity

4.2.10.1 Definition

The receiver maximum usable sensitivity of the receiver is defined in EN 301 929-1 [5], clause 9.4.1.

4.2.10.2 Limits

The receiver maximum usable sensitivity limit shall be as stated in EN 301 929-1 [5], clause 9.4.3.

4.2.10.3 Conformance

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

4.2.11 Receiver co-channel rejection

4.2.11.1 Definition

The receiver co-channel rejection is defined in EN 301 929-1 [5], clause 9.5.1.

4.2.11.2 Limits

The receiver co-channel rejection limit shall be as stated in EN 301 929-1 [5], clause 9.5.3.

4.2.11.3 Conformance

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

4.2.12 Receiver adjacent channel selectivity

4.2.12.1 Definition

The receiver adjacent channel selectivity is defined in EN 301 929-1 [5], clause 9.6.1.

4.2.12.2 Limit

The receiver adjacent channel selectivity limit shall be as stated in EN 301 929-1 [5], clause 9.6.3.

4.2.12.3 Conformance

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

4.2.13 Receiver spurious response

4.2.13.1 Definition

The receiver spurious response rejection is defined in EN 301 929-1 [5], clause 9.7.1.

4.2.13.2 Limit

The receiver spurious response rejection limit shall be as stated in EN 301 929-1 [5], clause 9.7.3.

4.2.13.3 Conformance

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

4.2.14 Receiver intermodulation response

4.2.14.1 Definition

The intermodulation response is defined in EN 301 929-1 [5], clause 9.8.1 for the receiver and in EN 301 929-1 [5], clause 9.20.1, for the DSC receiver.

4.2.14.2 Limit

The intermodulation response limit shall be as stated in EN 301 929-1 [5], clause 9.8.3 for the receiver and in EN 301 929-1 [5], clause 9.20.3, for the DSC receiver.

4.2.14.3 Conformance

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

4.2.15 Receiver blocking or desensitization

4.2.15.1 Definition

Blocking is defined in EN 301 929-1 [5], clause 9.9.1.

4.2.15.2 Limit

The receiver blocking or desensitization limit shall be as stated in EN 301 929-1 [5], clause 9.9.3.

4.2.15.3 Conformance

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

4.2.16 Receiver spurious emissions at the antenna

4.2.16.1 Definition

Spurious emissions are defined in EN 301 929-1 [5], clause 9.11.1.

4.2.16.2 Limit

The spurious emissions at the antenna limit shall be as stated in EN 301 929-1 [5], clause 9.11.2.2.

4.2.16.3 Conformance

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

4.2.17 Receiver cabinet radiated spurious emissions

4.2.17.1 Definition

Spurious emissions are defined in EN 301 929-1 [5], clause 9.11.1.

4.2.17.2 Limit

The cabinet radiated spurious emissions limit shall be as stated in EN 301 929-1 [5], clause 9.11.3.2.

4.2.17.3 Conformance

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

4.2.18 DSC receiver maximum usable sensitivity

4.2.18.1 Definition

The maximum usable sensitivity of the DSC receiver is defined in EN 301 929-1 [5], clause 9.13.1.

4.2.18.2 Limit

The DSC receiver maximum usable sensitivity limit shall be as stated in EN 301 929-1 [5], clause 9.13.3.

4.2.18.3 Conformance

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

4.2.19 DSC receiver co-channel rejection

4.2.19.1 Definition

The co-channel rejection of the DSC receiver is defined in EN 301 929-1 [5], clause 9.14.1.

4.2.19.2 Limit

The DSC receiver co-channel rejection limit shall be as stated in EN 301 929-1 [5], clause 9.14.3.

4.2.19.3 Conformance

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

4.2.20 DSC receiver adjacent channel selectivity

4.2.20.1 Definition

The adjacent channel selectivity of the DSC receiver is defined in EN 301 929-1 [5], clause 9.15.1.

4.2.20.2 Limit

The DSC receiver adjacent channel selectivity limit shall be as stated in EN 301 929-1 [5], clause 9.15.3.

4.2.20.3 Conformance

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

4.2.21 Receiver desensitization with simultaneous transmission and reception (duplex operation)

4.2.21.1 Definition

The receiver desensitization with simultaneous transmission and reception is defined in EN 301 929-1 [5], clause 9.17.2.1.

4.2.21.2 Limit

The receiver desensitization with simultaneous transmission and reception limit shall be as stated in EN 301 929-1 [5], clause 9.17.2.3.

4.2.21.3 Conformance

Conformance tests as defined in clause 5.4.13 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 301 929-1 [5], clauses 6.1 to 6.8 and 7.1 to 7.5.

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 [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 measurement uncertainty
(Valid up to 1GHz for the RF parameters unless otherwise stated)

Parameter	Uncertainty
RF frequency	±1 x 10^{-7}
RF power	±0,75 dB
Maximum frequency deviation: - within 300 Hz to 6 kHz of audio frequency - within 6 kHz to 25 kHz of audio frequency	 ±5 % ±3 dB
Deviation limitation	±5 %
Adjacent channel power	±5 dB
Conducted spurious emissions of transmitter	±4 dB
Conducted spurious emissions of transmitter, valid to 12,75 GHz	±7 dB
Audio output power	±0,5 dB
Sensitivity at 20 dB SINAD	±3 dB
Conducted emission of receiver	±3 dB
Conducted emission of receiver, valid to 12,75 GHz	±6 dB
Two-signal measurement, valid to 4 GHz	±4 dB
Three-signal measurement	±3 dB
Radiated emissions of transmitter, valid to 4 GHz	±6 dB
Radiated emissions of receiver, valid to 4 GHz	±6 dB
Transmitter transient time	±20 %
Transmitter transient frequency	±250 Hz
Transmitter intermodulation	±3 dB
Receiver desensitization (duplex operation)	±0,5 dB

TR 102 273 [4] provides further information concerning the usage of test sites.

5.3 Essential radio test suites

5.3.1 Transmitter frequency error

The test method specified in EN 301 929-1 [5], 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 carrier power

The test method specified in EN 301 929-1 [5], clause 8.2.2, 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 frequency deviation

The test method specified in EN 301 929-1 [5], clause 8.3.2.1, 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 adjacent channel power

The test method specified in EN 301 929-1 [5], clause 8.6.2, 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 Transmitter conducted spurious emissions conveyed to the antenna

The test method specified in EN 301 929-1 [5], clause 8.7.2, 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 cabinet radiation and conducted spurious emissions other than those conveyed to the antenna

The test method specified in EN 301 929-1 [5], clause 8.8.2, 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 DSC transmitter modulation index

The test method specified in EN 301 929-1 [5], clause 8.10.2, 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 Transient frequency behaviour of the transmitter

The test method specified in EN 301 929-1 [5], clause 8.13.2, 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 Intermodulation attenuation

The test method specified in EN 301 929-1 [5], clause 8.14.2 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.

5.4 Other test specifications

5.4.1 General

The requirements in clauses 4.2.9 to 4.2.19 inclusive have been set on the assumption that the test specifications in clauses 5.4.2 to 5.4.13 will be used to verify the performance of the equipment.

5.4.2 Receiver maximum usable sensitivity

The test method specified in EN 301 929-1 [5], clause 9.4.2, applies. The results obtained shall be compared to the limits in clause 4.2.9.2 in order to prove compliance with the requirement.

5.4.3 Receiver co-channel rejection

The test method specified in EN 301 929-1 [5], clause 9.5.2, applies. The results obtained shall be compared to the limits in clause 4.2.10.2 in order to prove compliance with the requirement.

5.4.4 Receiver adjacent channel selectivity

The test method specified in EN 301 929-1 [5], clause 9.6.2, applies. The results obtained shall be compared to the limits in clause 4.2.11.2 in order to prove compliance with the requirement.

5.4.5 Receiver spurious response

The test method specified in EN 301 929-1 [5], clause 9.7.2, applies. The results obtained shall be compared to the limits in clause 4.2.11.2 in order to prove compliance with the requirement.

5.4.6 Receiver intermodulation response

The test method specified in EN 301 929-1 [5], clause 9.8.2, for the receiver and 9.20.2 for the DSC receiver applies. The results obtained shall be compared to the limits in clause 4.2.12.2 in order to prove compliance with the requirement.

5.4.7 Receiver blocking or desensitization

The test method specified in EN 301 929-1 [5], clause 9.9.2, applies. The results obtained shall be compared to the limits in clause 4.2.13.2 in order to prove compliance with the requirement.

5.4.8 Receiver spurious emissions at the antenna

The test methods specified in EN 301 929-1 [5], clause 9.11.2.1, applies. The results obtained shall be compared to the limits in clause 4.2.14.2 in order to prove compliance with the requirement.

5.4.9 Receiver cabinet radiated spurious emissions

The test methods specified in EN 301 929-1 [5], clause 9.11.3.1, applies. The results obtained shall be compared to the limits in clause 4.2.15.2 in order to prove compliance with the requirement.

5.4.10 DSC receiver maximum usable sensitivity

The test methods specified in EN 301 929-1 [5], clause 9.13.2, applies. The results obtained shall be compared to the limits in clause 4.2.16.2 in order to prove compliance with the requirement.

5.4.11 DSC receiver co-channel rejection

The test methods specified in EN 301 929-1 [5], clause 9.14.2, applies. The results obtained shall be compared to the limits in clause 4.2.17.2 in order to prove compliance with the requirement.

5.4.12 DSC receiver adjacent channel selectivity

The test methods specified in EN 301 929-1 [5], clause 9.15.2, applies. The results obtained shall be compared to the limits in clause 4.2.18.2 in order to prove compliance with the requirement.

5.4.13 Receiver desensitization with simultaneous transmission and reception (duplex operation)

The test methods specified in EN 301 929-1 [5], clause 9.17.2.2, applies. The results obtained shall be compared to the limits in clause 4.2.19.2 in order to prove compliance with the requirement.

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 below 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 procedure 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 supplier 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;
- when the schedule is completed in respect of a particular equipment including the testing outcomes, including a completed version of table A.1 it provides a means to assert the “presumption of conformity” with the HS.

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

Harmonized Standard EN 301 929-2 The following technical requirements and test specifications are relevant to the presumption of conformity under Article 3.2 of the R&TTE Directive							
Technical Requirements reference			**Technical Requirement Conditionality**		**Test Specification**		
No	**Description**	**Reference: Clause No**	**U/C**	**Condition**	**E/O**	**Reference: Clause No**	**Observations**
1	Transmitter frequency error	4.2.1	U		E	5.3.1	
2	Transmitter carrier power	4.2.2	U		E	5.3.2	
3	Transmitter frequency deviation	4.2.3	U		E	5.3.3	
4	Transmitter adjacent channel power	4.2.4	U		E	5.3.4	
5	Transmitter conducted spurious emissions conveyed to the antenna	4.2.5	U		E	5.3.5	
6	Transmitter cabinet radiation and conducted spurious emissions other than those conveyed to the antenna	4.2.6	U		E	5.3.6	
7	DSC transmitter modulation index	4.2.7	U		E	5.3.7	
8	Transient frequency behaviour of the transmitter	4.2.8	U		E	5.3.8	
9	Transmitter Intermodulation Attenuation	4.2.9	U		E	5.3.9	
10	Receiver maximum usable sensitivity	4.2.10	U		O	5.4.2	
11	Receiver co-channel rejection	4.2.11	U		O	5.4.3	
12	Receiver adjacent channel selectivity	4.2.12	U		O	5.4.4	
13	Receiver spurious response	4.2.13	U		O	5.4.5	
14	Receiver intermodulation response	4.2.14	U		O	5.4.6	
15	Receiver blocking or desensitization	4.2.15	U		O	5.4.7	
16	Receiver spurious emissions at the antenna	4.2.16	U		O	5.4.8	

Harmonized Standard EN 301 929-2 The following technical requirements and test specifications are relevant to the presumption of conformity under Article 3.2 of the R&TTE Directive							
Technical Requirements reference			**Technical Requirement Conditionality**		**Test Specification**		
No	**Description**	**Reference: Clause No**	**U/C**	**Condition**	**E/O**	**Reference: Clause No**	**Observations**
17	Receiver cabinet radiated spurious emissions	4.2.17	U		O	5.4.9	
18	DSC receiver maximum usable sensitivity	4.2.18	U		O	5.4.10	
19	DSC receiver co-channel rejection	4.2.19	U		O	5.4.11	
20	DSC receiver adjacent channel selectivity	4.2.20	U		O	5.4.12	
21	Receiver desensitization with simultaneous transmission and reception (duplex working)	4.2.21	U		O	5.4.13	

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 Essential Requirement.

Reference: 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 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 whether “E” or “O” are relevant to essential requirements. Tests designated “E” collectively make up the Essential Radio Test Suite; those designated “O” make up the Other Test Suite. For those requirements for which no test specification applies are designated “X”. All tests classified “E” shall be performed as specified with satisfactory outcomes in order to allow a presumption of conformity. Requirements associated with tests classifies “O” or “X” must be complied with although the requirement shall be complied with as demonstrated by an equivalent test or by assertion by the supplier and asserted to be complied with to allow presumption of conformity.

Reference: 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.

Observations: Remains blank in the HS but is available for use for users of the standard to record the outcome of tests against each requirement.

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

Language	EN title
Czech	
Danish	
Dutch	
English	Electromagnetic compatibility and Radio Spectrum Matters (ERM); VHF transmitters and receivers as Coast Stations for GMDSS and other applications in the maritime mobile service; Part 2: Harmonized EN under article 3.2 of the R&TTE Directive
Estonian	
Finnish	
French	
German	
Greek	
Hungarian	
Icelandic	
Italian	
Latvian	
Lithuanian	
Maltese	
Norwegian	
Polish	
Portuguese	
Slovak	
Slovenian	
Spanish	
Swedish	

Annex C (informative): Bibliography

- Directive 89/336/EEC of 3 May 1989 on the approximation of the laws of the Member States relating to electromagnetic compatibility (EMC Directive).
- 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 (LV Directive).
- ETSI EN 301 489-1 (V1.6.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); ElectroMagnetic Compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements".

History

Document history		
V1.1.1	January 2002	Publication
V1.2.1	October 2006	One-step Approval Procedure OAP 20070209: 2006-10-11 to 2007-02-09