



**ElectroMagnetic Compatibility (EMC) standard
for marine radio equipment and services;
Harmonised Standard for electromagnetic compatibility;
Part 2: Specific conditions for VHF radiotelephone
transmitters and receivers operating in the frequency range
156 MHz to 174 MHz**

Reference

REN/ERM-EMC-414

Keywords

EMC, harmonised standard, maritime, radio,
regulation, VHF

ETSI

650 Route des Lucioles
F-06921 Sophia Antipolis Cedex - FRANCE

Tel.: +33 4 92 94 42 00 Fax: +33 4 93 65 47 16

Siret N° 348 623 562 00017 - APE 7112B
Association à but non lucratif enregistrée à la
Sous-Préfecture de Grasse (06) N° w061004871

Important notice

The present document can be downloaded from the
[ETSI Search & Browse Standards](#) application.

The present document may be made available in electronic versions and/or in print. The content of any electronic and/or print versions of the present document shall not be modified without the prior written authorization of ETSI. In case of any existing or perceived difference in contents between such versions and/or in print, the prevailing version of an ETSI deliverable is the one made publicly available in PDF format on [ETSI deliver](#) repository.

Users should be aware that the present document may be revised or have its status changed, this information is available in the [Milestones listing](#).

If you find errors in the present document, please send your comments to the relevant service listed under [Committee Support Staff](#).

If you find a security vulnerability in the present document, please report it through our [Coordinated Vulnerability Disclosure \(CVD\)](#) program.

Notice of disclaimer & limitation of liability

The information provided in the present deliverable is directed solely to professionals who have the appropriate degree of experience to understand and interpret its content in accordance with generally accepted engineering or other professional standard and applicable regulations.

No recommendation as to products and services or vendors is made or should be implied.
In no event shall ETSI be held liable for loss of profits or any other incidental or consequential damages.

Any software contained in this deliverable is provided "AS IS" with no warranties, express or implied, including but not limited to, the warranties of merchantability, fitness for a particular purpose and non-infringement of intellectual property rights and ETSI shall not be held liable in any event for any damages whatsoever (including, without limitation, damages for loss of profits, business interruption, loss of information, or any other pecuniary loss) arising out of or related to the use of or inability to use the software.

Copyright Notification

No part may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying and microfilm except as authorized by written permission of ETSI.

The content of the PDF version shall not be modified without the written authorization of ETSI.

The copyright and the foregoing restriction extend to reproduction in all media.

© ETSI 2025.
All rights reserved.

Contents

Intellectual Property Rights	5
Foreword.....	5
Modal verbs terminology.....	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	7
3 Definition of terms, symbols and abbreviations.....	8
3.1 Terms.....	8
3.2 Symbols.....	8
3.3 Abbreviations	8
4 General and operational requirements.....	8
4.1 Environmental profile.....	8
4.2 Arrangements for test signals	8
4.2.0 General.....	8
4.2.1 Arrangements for test signals at the input of the transmitter	8
4.2.2 Arrangements for test signals at the output of the transmitter	8
4.2.3 Arrangements for test signals at the input of the receiver	9
4.2.3.1 GNSS test signals.....	9
4.2.3.2 Marine communication test signals.....	9
4.2.4 Arrangements for test signals at the output of the receiver.....	9
4.2.5 Arrangements for testing transmitter and receiver together (as a system)	9
4.3 Exclusion bands.....	9
4.3.0 General.....	9
4.3.1 Exclusion bands for receivers and receiver parts of transceivers.....	10
4.3.1.1 GNSS exclusion bands	10
4.3.1.2 Marine communication exclusion bands.....	10
4.3.2 Exclusion band for transmitters	10
4.4 Intermediate frequency responses on receivers	10
4.5 Test modulation.....	10
5 Performance assessment.....	11
5.1 General	11
5.2 Equipment which can provide a continuous communication link	11
5.3 Equipment which does not provide a continuous communication link	11
5.4 Ancillary equipment	11
5.5 Equipment classification	11
6 Performance criteria	11
6.0 General	11
6.1 Performance criteria A for continuous phenomena applied to transmitters and receivers.....	11
6.2 Performance criteria B for transient phenomena applied to transmitters and receivers	11
6.3 Performance criteria C applied to power supply failure	12
6.4 Performance check	12
6.4.1 Transmitter.....	12
6.4.2 Receiver	12
6.4.2.1 GNSS	12
6.4.2.2 VHF Marine Receiver.....	12
7 Applicability overview	12
7.0 General	12
7.1 EMC Emission	13
7.1.1 General conditions	13
7.1.2 Special conditions.....	13