

SLOVENSKI STANDARD
SIST EN 302 208-2 V2.1.1:2015
01-julij-2015

Elektromagnetna združljivost in zadeve v zvezi z radijskim spektrom (ERM) - Oprema za radiofrekvenčno identifikacijo (RFID), ki deluje v pasu od 865 MHz do 868 MHz z močnostnimi nivoji do 2 W in v pasu od 915 MHz do 921 MHz z močnostnimi nivoji do 4 W - 2. del: Harmonizirani EN, ki zajema bistvene zahteve člena 3.2 direktive R&TTE

Electromagnetic compatibility and Radio spectrum Matters (ERM) - Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4W - Part 2: Harmonized EN covering the essential requirements of article 3.2 of the R&TTE Directive

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 302 208-2 V2.1.1:2015](https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebeb-4082-a8e0-a0a8fdd3dfb1/sist-en-302-208-2-v2-1-1-2015)
https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebeb-4082-a8e0-a0a8fdd3dfb1/sist-en-302-208-2-v2-1-1-2015

Ta slovenski standard je istoveten z: EN 302 208-2 V2.1.1

ICS:

33.060.20	Sprejemna in oddajna oprema	Receiving and transmitting equipment
33.100.01	Elektromagnetna združljivost na splošno	Electromagnetic compatibility in general

SIST EN 302 208-2 V2.1.1:2015

en

**iTeh STANDARD PREVIEW
(standards.iteh.ai)**

SIST EN 302 208-2 V2.1.1:2015

<https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebeb-4082-a8e0-a0a8fdd3dfb1/sist-en-302-208-2-v2-1-1-2015>

ETSI EN 302 208-2 v2.1.1 (2015-02)



**Electromagnetic compatibility
and Radio spectrum Matters (ERM);
Radio Frequency Identification Equipment operating in the
band 865 MHz to 868 MHz with power levels up to 2 W and
in the band 915 MHz to 921 MHz with power levels up to 4 W;
Part 2: Harmonized EN covering the essential requirements of
article 3.2 of the R&TTE Directive**

Reference

REN/ERM-TG34-261

Keywords

ID, radio, regulation, RFID, SRD

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 - NAF 742 C
 Association à but non lucratif enregistrée à la
 Sous-Préfecture de Grasse 06 N° 7303/88

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 302 208-2 V2.1.1:2015

<https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebef-4082-a8e0-a0a8fd3d1f8c/v2.1.1/2015>
Important notice

The present document can be downloaded from:
<http://www.etsi.org/standards-search>

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 only prevailing document is the print of the Portable Document Format (PDF) version kept on a specific network drive within ETSI Secretariat.

Users of the present document should be aware that the document may be subject to revision or change of status.

Information on the current status of this and other ETSI documents is available at

<http://portal.etsi.org/tb/status/status.asp>

If you find errors in the present document, please send your comment to one of the following services:

<https://portal.etsi.org/People/CommitteeSupportStaff.aspx>

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.

© European Telecommunications Standards Institute 2015.
 All rights reserved.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are Trade Marks of ETSI registered for the benefit of its Members.
3GPP™ and **LTE™** are Trade Marks of ETSI registered for the benefit of its Members and

of the 3GPP Organizational Partners.

GSM® and the GSM logo are Trade Marks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	4
Foreword.....	4
Modal verbs terminology.....	4
Introduction	5
1 Scope	6
2 References	7
2.1 Normative references	7
2.2 Informative references.....	7
3 Definitions, symbols and abbreviations	7
3.1 Definitions.....	7
3.2 Symbols.....	8
3.3 Abbreviations	8
4 Technical requirements specifications	8
4.1 Environmental profile.....	8
4.1.1 Choice of samples for test suite	8
4.2 Transmitter conformance requirements.....	8
4.2.1 Frequency error.....	8
4.2.2 Frequency stability under low voltage conditions	8
4.2.3 Effective radiated power	8
4.2.4 Transmitter antenna beamwidth.....	8
4.2.5 Transmitter spectrum masks.....	9
4.2.6 Transmitter spurious emissions.....	9
4.2.7 Transmission times	9
4.2.8 Mitigation using DAA	9
4.3 Receiver conformance requirements.....	9
4.3.1 Receiver spurious radiations	9
4.4 Tag conformance requirements.....	9
4.4.1 Radiated power	9
4.4.2 Unwanted emissions	9
5 Testing for compliance with technical requirements.....	10
5.1 Environmental conditions for testing	10
5.1.1 Normal and extreme test conditions.....	10
5.1.2 Test power sources.....	10
5.2 Interpretation of the measurement results	10
5.3 Essential transmitter test suites.....	10
5.3.1 Frequency error.....	10
5.3.2 Frequency stability under low voltage conditions	10
5.3.3 Effective radiated power	10
5.3.4 Transmitter antenna beamwidth.....	11
5.3.5 Transmitter spectrum masks	11
5.3.6 Transmitter spurious emissions.....	11
5.3.7 Transmission times	11
5.3.8 Mitigation using DAA	11
5.4 Essential receiver test suites	11
5.4.1 Receiver spurious radiations	11
5.5 Essential tag test suites	11
5.5.1 Radiated power	11
5.5.2 Unwanted emissions	11
Annex A (normative): HS Requirements and conformance Test specifications Table (HS-RTT).....	12
Annex B (informative): Bibliography	14
History	15

Intellectual Property Rights

IPRs essential or potentially essential to the present document may have been declared to ETSI. The information pertaining to these essential IPRs, if any, is publicly available for **ETSI members and non-members**, and can be found in ETSI SR 000 314: *"Intellectual Property Rights (IPRs); Essential, or potentially Essential, IPRs notified to ETSI in respect of ETSI standards"*, which is available from the ETSI Secretariat. Latest updates are available on the ETSI Web server (<http://ipr.etsi.org>).

Pursuant to the ETSI IPR Policy, no investigation, including IPR searches, has been carried out by ETSI. No guarantee can be given as to the existence of other IPRs not referenced in ETSI SR 000 314 (or the updates on the ETSI Web server) which are, or may be, or may become, essential to the present document.

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 mandate M/284 issued from the European Commission under Directive 98/34/EC [i.3] as amended by Directive 98/48/EC [i.4].

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].

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 Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W e.r.p. as identified below:

[SIST EN 302 208-2 V2.1.1:2015](#)

Part 1: "Technical requirements and methods of measurement".
https://standards.ieni.ae/catalog/standards/sist/373b13b7-ebeb-4082-a8e0-a0a8f4d3df1/sist_en_302_208-2_v2-1-1-2015

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

The present document includes improvements to the previous version of the standard that take advantage of technical developments within the RFID industry. In addition it includes provisions for RFID to operate in the band 915 MHz to 921 MHz at power levels up to 4 W e.r.p.

National transposition dates	
Date of adoption of this EN:	16 February 2015
Date of latest announcement of this EN (doa):	31 May 2015
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 November 2015
Date of withdrawal of any conflicting National Standard (dow):	30 November 2016

Modal verbs terminology

In the present document "shall", "shall not", "should", "should not", "may", "may not", "need", "need not", "will", "will not", "can" and "cannot" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](#) (Verbal forms for the expression of provisions).

"must" and "must not" are NOT allowed in ETSI deliverables except when used in direct citation.

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 ETSI EG 201 399 [i.2].

iTeh STANDARD PREVIEW (standards.iteh.ai)

SIST EN 302 208-2 V2.1.1:2015

<https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebeb-4082-a8e0-a0a8fdd3dfb1/sist-en-302-208-2-v2-1-1-2015>

1 Scope

The present document applies to RFID interrogators and tags operating together as a system. The interrogators transmit either within the lower band in up to four specified channels of 200 kHz or in the upper band in up to four specified channels of 400 kHz. The tags preferably respond with a modulated signal in the adjacent low power channels. Interrogators may be used with either integral or external antennas.

The present document applies to RFID interrogators used in conjunction with their RFID transponders (tags). The interrogators preferably operate in the dense interrogator mode in either 200 kHz channels or 400 kHz channels as applicable using a modulated carrier. The tags respond in the adjacent channels with a modulated signal. Interrogators may be used with either integral or external antennas.

The types of equipment covered by the present document are as follows:

- fixed interrogators;
- portable interrogators;
- batteryless tags;
- battery assisted tags;
- battery powered tags.

These radio equipment types are capable of operating in all or any part of the frequency band as specified below.

iTeh STANDARD PREVIEW

Equipment	(standards.iteh.ai)	Operating frequencies
Interrogator Transmit channel 4		865,6 MHz to 865,8 MHz
Interrogator Transmit channel 7		866,2 MHz to 866,4 MHz
Interrogator Transmit channel 10		866,8 MHz to 867,0 MHz
Interrogator Transmit channel 13		867,4 MHz to 867,6 MHz
Interrogator Receive	a0a81dd3db1/sist-en-302-208-2-v2.1.1-2015-02	865,0 MHz to 868,0 MHz
Tag Transmit		865,0 MHz to 868,0 MHz
Interrogator Transmit channel 3		916,1 MHz to 916,5 MHz
Interrogator Transmit channel 6		917,3 MHz to 917,7 MHz
Interrogator Transmit channel 9		918,5 MHz to 918,9 MHz
Interrogator Transmit channel 12		919,7 MHz to 920,1 MHz
Interrogator Receive		915,3 MHz to 925,0 MHz
Tag Transmit		915,3 MHz to 920,9 MHz

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.

NOTE: A list of such ENs is included on the web site <http://www.newapproach.org/>.

2 References

2.1 Normative 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 referenced 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.

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

- [1] ETSI EN 302 208-1 (V2.1.1) (02-2015): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Radio Frequency Identification Equipment operating in the band 865 MHz to 868 MHz with power levels up to 2 W and in the band 915 MHz to 921 MHz with power levels up to 4 W; Part 1: Technical requirements and methods of measurement".
- [2] ETSI TR 100 028 (V1.4.1) (12-2001) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

2.2 Informative references *(standards.iteh.ai)*

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 referenced document (including any amendments) applies. SIST EN 302 208-2 V2.1.1:2015

<https://standards.iteh.ai/catalog/standards/sist/375b13b7-ebcb-4082-a8e0>

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

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] ETSI EG 201 399 (V2.1.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); A guide to the production of candidate Harmonized Standards for application under the R&TTE Directive".
- [i.3] 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.4] Directive 98/48/EC of the European Parliament and of the Council laying down a procedure for the provision of information in the field of technical standards and regulations.

3 Definitions, symbols 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 ETSI EN 302 208-1 [1] apply.