

STN	Rádiové zariadenia pracujúce pri prenosových rýchlostiach násobku gigabitov vo frekvenčnom pásme 60 GHz Harmonizovaná norma vzťahujúca sa na základné požiadavky článku 3.2 Smernice 2014/53/EU	STN EN 302 567 V2.1.1 87 2567
------------	--	---

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 09/18

Obsahuje: EN 302 567 V2.1.1:2017

127286

ETSI EN 302 567 V2.1.1 (2017-07)



**Multiple-Gigabit/s radio equipment
operating in the 60 GHz band;
Harmonised Standard covering the essential requirements
of article 3.2 of Directive 2014/53/EU**

Reference

REN/BRAN-60020

Keywords

access, broadband, LAN, radio, SRD, testing

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° 7803/88

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

<https://portal.etsi.org/TB/ETSIDeliverableStatus.aspx>

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

<https://portal.etsi.org/People/CommiteeSupportStaff.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.

© ETSI 2017.
All rights reserved.

DECT™, **PLUGTESTS™**, **UMTS™** and the ETSI logo are trademarks of ETSI registered for the benefit of its Members.

3GPP™ and **LTE™** are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners.

oneM2M logo is protected for the benefit of its Members.

GSM® and the GSM logo are trademarks registered and owned by the GSM Association.

Contents

Intellectual Property Rights	6
Foreword.....	6
Modal verbs terminology.....	6
Introduction	7
1 Scope.....	8
2 References	8
2.1 Normative references	8
2.2 Informative references.....	8
3 Definitions, symbols and abbreviations	9
3.1 Definitions.....	9
3.2 Symbols.....	10
3.3 Abbreviations	10
4 Technical requirements specifications	10
4.1 Environmental profile.....	10
4.2 Conformance requirements	11
4.2.1 Spectral power density.....	11
4.2.1.1 Definition	11
4.2.1.2 Limit.....	11
4.2.1.3 Conformance.....	11
4.2.2 RF output power	11
4.2.2.1 Definition	11
4.2.2.2 Limit.....	11
4.2.2.3 Conformance.....	11
4.2.3 Transmitter unwanted emissions.....	12
4.2.3.1 Definition	12
4.2.3.2 Limit.....	12
4.2.3.3 Conformance.....	12
4.2.4 Receiver unwanted emissions	12
4.2.4.1 Definition	12
4.2.4.2 Limit.....	12
4.2.4.3 Conformance.....	12
4.2.5 Adaptivity (medium access protocol)	13
4.2.5.1 Applicability.....	13
4.2.5.2 Definition	13
4.2.5.3 Requirement	13
4.2.5.4 Conformance.....	13
4.2.6 Void	14
4.2.7 Receiver Adjacent Channel Rejection	14
4.2.7.1 Applicability.....	14
4.2.7.2 Definition	14
4.2.7.3 Performance Criteria	14
4.2.7.4 Limits	14
4.2.7.5 Conformance.....	14
4.2.8 Transmitter unwanted emissions in the out-of-band domain	14
4.2.8.1 Definition	14
4.2.8.2 Limit.....	14
4.2.8.3 Conformance.....	15
4.2.9 Geo-location capability.....	15
4.2.9.1 Applicability.....	15
4.2.9.2 Definition	15
4.2.9.3 Requirements	15
4.2.9.4 Conformance.....	15
4.2.10 Occupied Channel Bandwidth	16
4.2.10.1 Applicability.....	16

4.2.10.2	Definition	16
4.2.10.3	Requirements	16
4.2.10.4	Conformance	16
5	Testing for compliance with technical requirements.....	16
5.1	Environmental conditions for testing	16
5.1.1	Introduction.....	16
5.1.2	Normal test conditions	16
5.1.2.1	Normal temperature and humidity	16
5.1.2.2	Normal power source	17
5.2	Interpretation of the measurement results	17
5.3	Test procedure for the essential radio test suites	17
5.3.0	General.....	17
5.3.1	Product Information.....	17
5.3.2	Test modulation, frequency and configuration	18
5.3.3	Spectral power density.....	18
5.3.4	RF output power	19
5.3.5	Transmitter unwanted emissions.....	20
5.3.5.0	Introduction.....	20
5.3.5.1	Pre-scan.....	20
5.3.5.2	Identified emissions	21
5.3.6	Receiver unwanted emissions	22
5.3.6.0	Introduction.....	22
5.3.6.1	Pre-scan.....	22
5.3.6.2	Identified emissions	22
5.3.7	Receiver Adjacent Channel Rejection	23
5.3.7.1	Test conditions.....	23
5.3.7.2	Test Method	23
5.3.8	Adaptivity (medium access protocol)	24
5.3.8.1	Test conditions	24
5.3.8.2	Test method.....	24
5.3.8.3	Generic test procedure for measuring channel/frequency usage	26
5.3.9	Transmitter unwanted emissions in the out-of-band domain	27
5.3.9.1	Test conditions	27
5.3.9.2	Test method.....	27
5.3.10	Occupied Channel Bandwidth	28
5.3.10.1	Test conditions	28
5.3.10.2	Test method.....	28
Annex A (informative):	Relationship between the present document and the essential requirements of Directive 2014/53/EU	29
Annex B:	Void	30
Annex C (normative):	Test sites and arrangements for radiated measurements.....	31
C.1	Test sites.....	31
C.1.1	Open air test sites	31
C.1.2	Anechoic chamber	32
C.1.2.1	General.....	32
C.1.2.2	Description.....	32
C.1.2.3	Influence of parasitic reflections.....	32
C.1.2.4	Calibration and mode of use	33
C.2	Test antenna.....	34
C.3	Substitution antenna	35
Annex D (normative):	General description of measurement	36
D.1	Radiated measurements.....	36
D.2	Substitution measurement	37

Annex E (informative):	Bibliography.....	38
Annex F (informative):	Change History	39
History		40

Intellectual Property Rights

Essential patents

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 (<https://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.

Trademarks

The present document may include trademarks and/or tradenames which are asserted and/or registered by their owners. ETSI claims no ownership of these except for any which are indicated as being the property of ETSI, and conveys no right to use or reproduce any trademark and/or tradename. Mention of those trademarks in the present document does not constitute an endorsement by ETSI of products, services or organizations associated with those trademarks.

Foreword

This Harmonised European Standard (EN) has been produced by ETSI Technical Committee Broadband Radio Access Networks (BRAN).

The present document has been prepared under the Commission's standardisation request C(2015) 5376 final [i.2] to provide one voluntary means of conforming to the essential requirements of Directive 2014/53/EU on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC [i.6].

Once the present document is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of the present document given in table A.1 confers, within the limits of the scope of the present document, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

National transposition dates	
Date of adoption of this EN:	18 July 2017
Date of latest announcement of this EN (doa):	31 October 2017
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	30 April 2018
Date of withdrawal of any conflicting National Standard (dow):	30 April 2019

Modal verbs terminology

In the present document "**shall**", "**shall not**", "**should**", "**should not**", "**may**", "**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

60 GHz radio equipment are capable of operating at data rates of multiple-gigabit per second.

The spectrum usage conditions for this equipment are set in Commission Decision 2006/771/EC [i.5] and ERC Recommendation 70-03 [i.3], annex 3.

1 Scope

The present document specifies technical characteristics and methods of measurements for radio equipment with integral antennas operating indoor or outdoor at data rates of multiple-gigabit per second in the 60 GHz frequency range.

These radio equipments operate with very wideband communications using a variety of directional medium and high gain antennas to enable a high degree of spectrum reuse, and may use a flexible bandwidth scheme under which they normally operate in a wideband mode, and periodically reduce their bandwidth (e.g. for antenna training and other activities).

The technical characteristics of applications using these radio equipments are further described in ETSI TR 102 555 [i.1].

Equipment in this frequency range intended for outdoor Fixed Local Area Network Extension (FLANE) or Fixed Point-to-Point applications are not in the scope of the present document.

These radio equipment types are capable of operating in all or any part of the frequency bands given in table 1.

Table 1: Radiocommunications service frequency bands

	Radiocommunications service frequency bands
Transmit	57 GHz to 66 GHz
Receive	57 GHz to 66 GHz

The present document covers the essential requirements of article 3.2 of Directive 2014/53/EU [i.6] under the conditions identified in annex A.

2 References

2.1 Normative references

References are specific, identified by date of publication and/or edition number or version number. Only the cited version applies.

Referenced documents which are not found to be publicly available in the expected location might be found at <https://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.

Not applicable.

2.2 Informative 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.

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] ETSI TR 102 555: "Electromagnetic compatibility and Radio spectrum Matters (ERM); Technical characteristics of multiple gigabit wireless systems in the 60 GHz range System Reference Document".
- [i.2] Commission Implementing Decision C(2015) 5376 final of 4.8.2015 on a standardisation request to the European Committee for Electrotechnical Standardisation and to the European Telecommunications Standards Institute as regards radio equipment in support of Directive 2014/53/EU of the European Parliament and of the Council.
- [i.3] ERC Recommendation 70-03 (Tromsø 1997 and subsequent amendments): "Related to the Use of Short Range Devices (SRD)".
- [i.4] Void.
- [i.5] Commission Decision 2006/771/EC of 9 November 2006 on harmonisation of the radio spectrum for use by short-range devices.
- [i.6] Directive 2014/53/EU of the European Parliament and of the Council of 16 April 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of radio equipment and repealing Directive 1999/5/EC.
- [i.7] ETSI TR 100 028-2 (V1.4.1): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics; Part 2".
- [i.8] ETSI TR 100 028 (V1.4.1) (all parts): "Electromagnetic compatibility and Radio spectrum Matters (ERM); Uncertainties in the measurement of mobile radio equipment characteristics".

koniec náhľadu – text ďalej pokračuje v platenej verzii STN