



SLOVENSKI STANDARD
oSIST prEN 301 126-1 V2.1.0:2025
01-junij-2025

Fiksni radijski sistemi - Preskušanje skladnosti - 1. del: Oprema tipa točka-točka - Definicije, splošne zahteve in preskusni postopki

Fixed Radio Systems - Conformance testing - Part 1: Point-to-point equipment - Definitions, general requirements and test procedures

iTeh Standards
(<https://standards.iteh.ai>)

Ta slovenski standard je istoveten z: ETSI EN 301 126-1 V2.1.0 (2025-04)

[oSIST prEN 301 126-1 V2.1.0:2025](#)

ICS:

33.060.30 Radiorelejni in fiksni satelitski komunikacijski sistemi Radio relay and fixed satellite communications systems

oSIST prEN 301 126-1 V2.1.0:2025 en

Draft ETSI EN 301 126-1 v2.1.0 (2025-04)



Fixed Radio Systems; Conformance testing; Part 1: Point-to-point equipment - Definitions, general requirements and test procedures

<https://standards.iteh.ai/>

<https://standards.iteh.ai/catalog/standards/sist/4f773569-599e-4167-a06b-dae219e9a962/osist-pren-301-126-1-v2-1-0-2025>

Reference
REN/ATTM-0462
Keywords
FWS, point-to-point, 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 - 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.

<https://standards.iteh.ai/catalog/standards/si/4772569-590c-4167-96b-dae2102e962/oSIST-prEN-301-126-1-v2-1-0-2025>

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
Introduction	6
1 Scope	7
2 References	7
2.1 Normative references	7
2.2 Informative references.....	8
3 Definition of terms, symbols and abbreviations.....	9
3.1 Terms.....	9
3.2 Symbols.....	10
3.3 Abbreviations	10
4 Requirements related to DFRS equipment <i>conformance test</i>	11
4.0 Test procedure summary	11
4.1 General requirements	18
4.2 Requirements classification.....	18
4.2.1 DFRS classification	18
4.3 EUT test arrangement for <i>conformance test</i>	18
4.4 EUT environmental characteristics for <i>conformance test</i>	20
4.4.1 Test in the reference conditions	20
4.4.2 Test in the extreme conditions	20
4.5 DFRS test report.....	20
5 Test procedures for DFRS characteristics requirements	21
5.0 IEC standards reference.....	21
5.1 General characteristics	21
5.1.1 Equipment Configuration	21
5.2 Transmitter characteristics.....	22
5.2.1.1 Maximum output power and power environmental variation	22
5.2.2 Minimum output power	22
5.2.3 Automatic Transmit Power Control (ATPC).....	22
5.2.4 Remote Transmit Power Control (RTPC).....	23
5.2.5 Radio frequency stability	23
5.2.6 RF spectrum mask	24
5.2.7 Remote frequency control.....	25
5.2.8 Tx discrete CW components exceeding the Transmitter RF spectrum masks limits	25
5.2.9 Unwanted emissions in the Spurious domain (external).....	25
5.3 Receiver characteristics	26
5.3.1 Input level range	26
5.3.2 Receiver unwanted emissions in the spurious domain.....	27
5.3.3 System performance without diversity	27
5.3.3.1 BER as a function of Receiver input Signal Level (RSL).....	27
5.3.3.2 Co-channel interference sensitivity- external.....	28
5.3.3.2.0 Introduction	28
5.3.3.2.1 Method 1.....	28
5.3.3.2.2 Method 2.....	30
5.3.3.3 Adjacent (1 st or 2 nd) channel interference sensitivity	31
5.3.3.3.0 Introduction	31
5.3.3.3.1 Method 1.....	32
5.3.3.3.2 Method 2.....	33
5.3.3.4 Blocking (CW spurious interference).....	34
5.3.3.5 Distortion sensitivity	35
5.3.4 System characteristics with diversity	37
5.3.4.1 BER performance.....	37

5.3.4.2	Interference sensitivity	37
5.3.4.3	Distortion sensitivity	37
Annex A (informative):	Example of Test report template	38
A.1	Test results.....	38
A.1.1	Summary of tests.....	38
A.1.2	General information about the tests.....	39
A.1.3	Test result forms.....	39
A.1.3.1	Transmitter characteristics	39
A.1.3.1.1	Transmitter power range	39
A.1.3.1.1.0	Generality	39
A.1.3.1.1.1	Maximum output power and power environmental variation.....	39
A.1.3.1.1.2	Minimum output power	40
A.1.3.1.2	Automatic transmit power control (ATPC).....	41
A.1.3.1.3	Remote Transmit Power Control (RTPC).....	41
A.1.3.1.4	Remote Frequency Control (RFC)	41
A.1.3.1.5	RF spectrum mask.....	41
A.1.3.1.6	Spectral lines at the symbol rate.....	43
A.1.3.1.7	Spurious emissions (Tx) - external.....	43
A.1.3.1.8	Tx radio frequency stability (short term)	45
A.1.3.2	Receiver characteristics	45
A.1.3.2.1	Input level range.....	45
A.1.3.2.2	Spurious emissions (Rx) - external	46
A.1.3.3	System performance without diversity	47
A.1.3.3.1	BER vs. Rx signal level	47
A.1.3.3.2	Interference sensitivity	49
A.1.3.3.2.1	Co-channel interference sensitivity - external and adjacent channel interference sensitivity	49
A.1.3.3.2.2	CW spurious interference	50
A.1.3.3.3	Distortion sensitivity	50
A.1.3.4	System performance with diversity	51
A.1.3.4.1	BER vs. Rx signal level	51
A.1.3.4.2	Interference sensitivity	53
A.1.3.4.2.1	Co-channel interference sensitivity	53
A.1.3.4.2.2	Adjacent channel interference sensitivity	53
A.1.3.4.3	Distortion sensitivity	53
A.2	Photographs of EUT	53
A.3	Test equipment used for tests	53
A.4	Additional information supplementary to the test report.....	54
Annex B (informative):	Distortion sensitivity for diversity receivers.....	55
Annex C (informative):	Bibliography	56
Annex D (informative):	Change history	57
History		58

Intellectual Property Rights

Essential patents

IPRs essential or potentially essential to normative deliverables may have been declared to ETSI. The declarations pertaining to these essential IPRs, if any, are 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 IPR online database](#).

Pursuant to the ETSI Directives including the ETSI IPR Policy, no investigation regarding the essentiality of IPRs, 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.

DECT™, PLUGTESTS™, UMTS™ and the ETSI logo are trademarks of ETSI registered for the benefit of its Members. **3GPP™, LTE™** and **5G™** logo are trademarks of ETSI registered for the benefit of its Members and of the 3GPP Organizational Partners. **oneM2M™** logo is a trademark of ETSI registered for the benefit of its Members and of the oneM2M Partners. **GSM®** and the GSM logo are trademarks registered and owned by the GSM Association.

Foreword

This draft European Standard (EN) has been produced by ETSI Technical Committee Access, Terminals, Transmission and Multiplexing (ATTM), and is now submitted for the combined Public Enquiry and Vote phase of the ETSI EN Approval Procedure.

[oSIST prEN 301 126-1 V2.1.0:2025](#)

The present document is part 1 of a multi-part EN covering the Fixed Radio System; Conformance testing, as identified below:

- Part 1: "Point-to-point equipment - Definitions, general requirements and test procedures";**
- Part 2-1: "Point-to-Multipoint equipment - Definitions and general requirements";
- Part 2-2: "Point-to-Multipoint equipment - Test procedures for FDMA systems";
- Part 2-3: "Point-to-Multipoint equipment - Test procedures for TDMA systems";
- Part 2-4: "Point-to-Multipoint equipment - Test procedures for FH-CDMA systems";
- Part 2-5: "Point-to-Multipoint equipment - Test procedures for DS-CDMA systems";
- Part 2-6: "Point-to-Multipoint equipment; Test procedures for Multi Carrier Time Division Multiple Access (MC-TDMA) systems";
- Part 3-1: "Point-to-Point antennas - Definitions, general requirements and test procedures";
- Part 3-2: "Point-to-Multipoint antennas - Definitions, general requirements and test procedures".