



# SLOVENSKI STANDARD

**DSIST EN 301 360:2002**

**01-gYdhYa VYf-2002**

---

GUH Y]hg\_Y nYa Y 'g\_ Y'dcgHUY]b' g]ghYa ]'fG9 GŁ! < Ufa cb]n]fUb] 9 B'nU]bhYfU\_hj bY  
gUhY]hg\_Y hYfa ]bUYfGHL]b'i dcfUVb]\_Y'gUhY]hg\_]A' hYfa ]bUc j'fGI HŁz\_j'cXXUVUc \  
[ YcgHUM]cbUfb]a 'gUhY]hca 'j' ZY\_j Yb' bYa 'cVa c '1'cX'&+ż' Xc'&-ż'; <nžhYf  
nU'Ya UV]glj YbYnU hYj Y 'YbU' "&X]fY\_hj YF/ HH9

Satellite Earth Stations and Systems (SES); Harmonized EN for Satellite Interactive Terminals (SIT) and Satellite User Terminals (SUT) transmitting towards geostationary satellites in the 27,5 GHz to 29,5 GHz frequency bands covering essential requirements under article 3.2 of the R&TTE Directive

**Ta slovenski standard je istoveten z: EN 301 360 Version 1.1.3**

---

**ICS:**

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

**DGIST EN 301 360:2002**

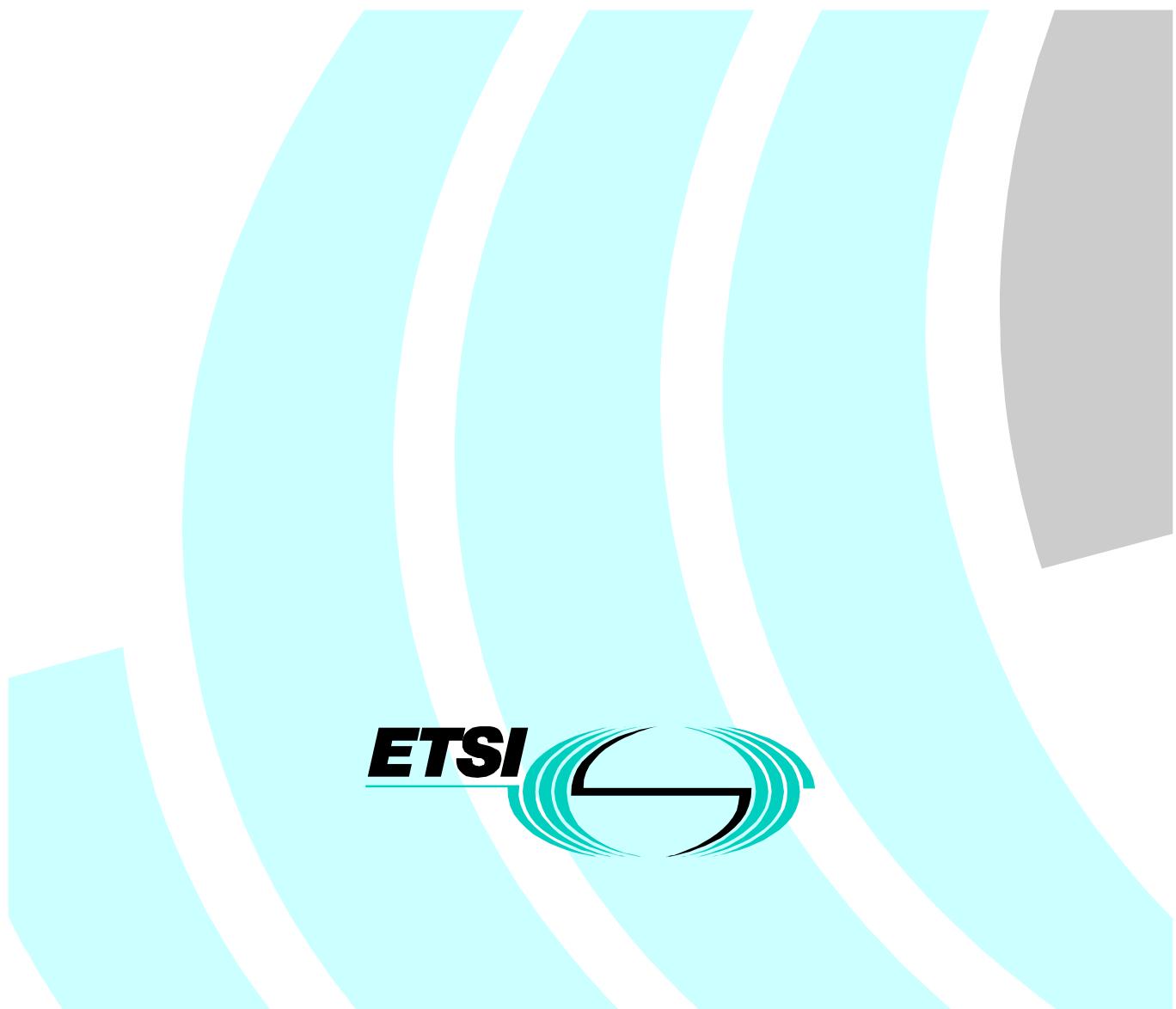
**en**



# ETSI EN 301 360 V1.1.3 (2001-09)

*Candidate Harmonized European Standard (Telecommunications series)*

**Satellite Earth Stations and Systems (SES);  
Harmonized EN for Satellite Interactive Terminals (SIT)  
and Satellite User Terminals (SUT)  
transmitting towards geostationary satellites  
in the 27,5 GHz to 29,5 GHz frequency bands  
covering essential requirements  
under article 3.2 of the R&TTE Directive**



---

Reference

DEN/SES-00028

---

Keywords

earth station, BSS, FSS, satellite, regulation

***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***

Individual copies of the present document can be downloaded from:  
<http://www.etsi.org>

The present document may be made available in more than one electronic version or in print. In any case of existing or perceived difference in contents between such versions, the reference version is the Portable Document Format (PDF). In case of dispute, the reference shall be the printing on ETSI printers of the 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, send your comment to:  
[editor@etsi.fr](mailto:editor@etsi.fr)

---

***Copyright Notification***

No part may be reproduced except as authorized by written permission.  
The copyright and the foregoing restriction extend to reproduction in all media.

© European Telecommunications Standards Institute 2001.  
All rights reserved.

---

## Contents

Intellectual Property Rights .....	6
Foreword.....	6
Introduction .....	7
1    Scope .....	9
2    References .....	10
3    Definitions, symbols and abbreviations .....	10
3.1    Definitions.....	10
3.2    Abbreviations .....	11
4    Technical requirements specifications .....	12
4.1    Environmental profile.....	12
4.2    Conformance requirements .....	12
4.2.1    General.....	12
4.2.2    Off-axis spurious radiation .....	12
4.2.2.1    Purpose.....	12
4.2.2.2    Specification.....	12
4.2.2.3    Conformance tests.....	13
4.2.3    On-axis spurious radiation .....	14
4.2.3.1    Purpose.....	14
4.2.3.2    Specification.....	14
4.2.3.2.1    "Carrier-on" state .....	14
4.2.3.2.2    "Carrier-off" and "Transmission disabled" state.....	14
4.2.3.3    Conformance tests.....	14
4.2.4    Off-axis EIRP emission density within the band .....	14
4.2.4.1    Purpose.....	14
4.2.4.2    Specification.....	15
4.2.4.3    Conformance tests.....	16
4.2.5    Carrier suppression .....	16
4.2.5.1    Purpose.....	16
4.2.5.2    Specification.....	16
4.2.5.3    Conformance tests.....	16
4.2.6    Antenna pointing accuracy .....	16
4.2.6.1    Purpose.....	16
4.2.6.2    Specification.....	17
4.2.6.3    Conformance tests.....	17
4.2.7    Control and Monitoring Functions (CMF).....	17
4.2.7.1    General .....	17
4.2.7.2    Processor monitoring .....	18
4.2.7.2.1    Purpose .....	18
4.2.7.2.2    Specification.....	19
4.2.7.2.3    Conformance tests .....	19
4.2.7.3    Transmit subsystem monitoring .....	19
4.2.7.3.1    Purpose .....	19
4.2.7.3.2    Specification.....	19
4.2.7.3.3    Conformance tests .....	19
4.2.7.4    Power-on/Reset .....	19
4.2.7.4.1    Purpose .....	19
4.2.7.4.2    Specification.....	19
4.2.7.4.3    Conformance tests .....	19
4.2.7.5    Control Channel (CC) reception .....	19
4.2.7.5.1    Purpose .....	19
4.2.7.5.2    Specification.....	20
4.2.7.5.3    Conformance tests .....	20
4.2.7.6    Network control commands .....	20

4.2.7.6.1	Purpose .....	20
4.2.7.6.2	Specification.....	20
4.2.7.6.3	Conformance test.....	20
4.2.7.7	Initial burst transmission.....	20
4.2.7.7.1	Purpose .....	20
4.2.7.7.2	Specification.....	20
4.2.7.7.3	Conformance tests .....	21
5	Testing for compliance with technical requirements.....	21
5.1	Environmental conditions for testing .....	21
5.2	Essential radio test suites.....	21
6	Test method .....	21
6.1	General .....	21
6.2	Off-axis spurious radiation	22
6.2.1	Test method .....	22
6.2.2	Up to 1 000 MHz .....	22
6.2.2.1	Test site .....	22
6.2.2.2	Measuring receivers .....	23
6.2.2.3	Procedure .....	23
6.2.3	Above 1 000 MHz .....	23
6.2.3.1	Identification of the significant frequencies of spurious radiation .....	23
6.2.3.1.1	Test site.....	23
6.2.3.1.2	Procedure .....	24
6.2.3.2	Measurement of radiated power levels of identified spurious radiation.....	24
6.2.3.2.1	Test site.....	24
6.2.3.2.2	Procedure .....	24
6.2.3.3	Measurement of conducted spurious radiation at the antenna flange .....	25
6.2.3.3.1	Test site.....	25
6.2.3.3.2	Procedure .....	26
6.3	On-axis spurious radiation.....	26
6.3.1	Test method .....	26
6.3.1.1	Test site .....	26
6.3.1.2	Method of measurement.....	26
6.3.1.2.1	General .....	26
6.3.1.2.2	Method of measurement at the antenna flange .....	26
6.3.1.2.3	Method of measurement for an EUT with antenna.....	27
6.4	Off-axis EIRP emission density within the band.....	28
6.4.0	General.....	28
6.4.1	Test method .....	28
6.4.1.1	Transmit output power density .....	29
6.4.1.1.1	Test site.....	29
6.4.1.1.2	Method of measurement .....	29
6.4.1.2	Antenna transmit gain .....	30
6.4.1.2.1	General .....	30
6.4.1.2.2	Test site.....	30
6.4.1.2.3	Method of measurement .....	30
6.4.1.3	Antenna transmit radiation patterns .....	31
6.4.1.3.1	General .....	31
6.4.1.3.2	Test site.....	31
6.4.1.3.3	Test arrangement .....	32
6.4.1.3.4	Co-polar radiation pattern - azimuth.....	32
6.4.1.3.5	Co-polar radiation pattern - elevation .....	32
6.4.1.3.6	Cross-polar radiation pattern - azimuth .....	33
6.4.1.3.7	Cross-polar radiation pattern - elevation .....	33
6.4.2	Computation of results .....	34
6.5	Carrier suppression.....	34
6.5.1	Test method .....	34
6.6	Antenna pointing for STs .....	34
6.6.1	Test method .....	34
6.7	ST Control and Monitoring Functions (CMF).....	35
6.7.0	General.....	35

6.7.1	Test arrangement .....	36
6.7.2	Processor monitoring - Test method .....	36
6.7.3	Transmit subsystem monitoring - Test method.....	37
6.7.4	Power-on/Reset - Test method.....	37
6.7.5	Control Channel (CC) reception - Test method .....	37
6.7.6	Network Control commands - Test method .....	38
6.7.7	Initial burst transmission - Test method.....	40
<b>Annex A (normative):</b>	<b>The EN Requirements Table (EN-RT) .....</b>	<b>41</b>
<b>Annex B (informative):</b>	<b>Pointing stability methodology .....</b>	<b>42</b>
<b>Annex C (informative):</b>	<b>Bibliography.....</b>	<b>43</b>
History .....	.....	44

---

## 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://www.etsi.org/legal/home.htm>).

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 Candidate Harmonized European Standard (Telecommunications series) has been produced by ETSI Technical Committee Satellite Earth Stations and Systems (SES).

The present document has been produced by ETSI in response to a mandate from the European Commission issued under Council Directive 98/34/EC [3] (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 [1] 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").

Technical specifications relevant to Directive 1999/5/EC [1] are given in annex A.

<b>National transposition dates</b>	
Date of adoption of this EN:	31 August 2001
Date of latest announcement of this EN (doa):	30 November 2001
Date of latest publication of new National Standard or endorsement of this EN (dop/e):	31 May 2002
Date of withdrawal of any conflicting National Standard (dow):	31 May 2003