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Radijska oprema in sistemi (RES) - Tehniļne karakteristike, preskusni pogoji in merilne metode za brezvrviļne telefone CT 1 z radijskega vidika

Radio Equipment and Systems (RES); Technical characteristics, test conditions and methods of measurement for radio aspects of cordless telephones CT1

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Foreword

This Interim European Telecommunication Standard (I-ETS) has been produced by the Radio Equipment and Systems (RES) Technical Committee of the European Telecommunications Standards Institute (ETSI).

An ETSI standard may be given I-ETS status when it is regarded either as a provisional solution ahead of a more advanced standard, or because it is immature and requires a trial period. The life of an I-ETS is limited, at first, to three years after which it may be converted into a European Telecommunication Standard (ETS), have its life extended for a further two years, be replaced by a new version of the I-ETS or, finally, be withdrawn.

This I-ETS contains text concerning the conformance testing of the equipment to which it relates. This text should be considered solely as guidance, and does not make the I-ETS mandatory.

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1 Scope

Cordless Telephones (CT1) according to the CEPT Recommendation T/R 24-03 [5] "Radio Characteristics of Cordless Telephones" are widely used throughout Europe. This I-ETS is produced in order to maintain the CEPT T/R 24-03 [5] with respect to the development which has taken place since the introduction of the CEPT Recommendation in 1984.

Equipment according to this I-ETS is in the following designated CT1. CT1 uses the frequency band 914 - 915 MHz paired with 959 - 960 MHz providing 40 duplex channels. This frequency band forms part of the allocation for GSM.

Therefore, in some countries the frequency band 885 - 887 MHz paired with 930 - 932 MHz providing 80 channels has been made available. This equipment is in the following designated CT1+.

Either of these frequency bands is available in many, but not all European countries.

This I-ETS specifies CT1 equipment only. Deviating requirements for CT1+ equipment are contained in Annex B.

The I-ETS provides:

- harmonization on the broadest possible basis, of the radio technical parameters or cordless telephones;

- a basis for the mutual recognition of test reports;

- harmonized test procedures and test conditions for cordless telephones.

Where the fixed part of a cordless telephone is connected to the switched telephone network, requirements have to be met in specifying the network access. These requirements are not part of this I-ETS. Annex C of this I-ETS describes which parameters require different consideration than applied for a wired telephone.

2 Normative references

This I-ETS incorporates, by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this I-ETS only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

[1] CCITT Recommendation G.162: "Characteristic of compandors for telephony".

[2] ETS 300 086: "Radio Equipment and Systems (RES); Land Mobile Service".

[3] CCITT Recommendation O.41: "Psophometer for use on telephone type circuits".

[4] CEPT Recommendation T/R 24-01: "Specifications of equipment for use in the Land Mobile Service".

[5] CEPT Recommendation T/R 24-03: "Radio characteristics of cordless telephones".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of this I-ETS the following definition applies:

Cordless Telephone (CT1): a telephone terminal connected to an exchange line or an extension line. It consists of at least two parts, fixed and portable respectively, which are connected by a radio link.

3.2 Abbreviations

For the purposes of this I-ETS the following abbreviations apply:

CT	Cordless Telephone
CFP	Cordless Fixed Part
CPP	Cordless Portable Part
PSTN	Public Switched Telephone Network
RF	Radio Frequency

"Manufacturer" in this I-ETS is meant as the party submitting equipment for testing.

4 Principles of operation and general requirements

4.1 Procedure to set up the RF connection between fixed and portable part

Both fixed and portable part comprises a transmitter and a receiver which will perform full duplex operation. When the need for a radio frequency channel arises in any of the parts of a cordless telephone, this part will act in general as follows:

a) the initiating part searches for an idle duplex channel. A channel is considered to be idle if the initiating part of the cordless telephone senses that the radio frequency field strength on that specific channel is below a specified limit;

b) on the idle (duplex) channel, found under a), the initiating part starts transmitting signals to the desired part of the same cordless telephone. These signals contain an identification code which offers at least 999999 different combinations;

c) the receiver of each part of a cordless telephone is constantly scanning, searching for a signal which contains its matching identification code. Upon detection of this code, the receiver stops scanning and initiates its transmitter to return its identification code to the initiating part on this duplex channel;

d) as the receiver of the initiating part detects its matching identification code on the return frequency of the selected duplex channel, the duplex channel becomes available.