SLOVENSKI STANDARD

SIST EN 60679-1:2002/A2:2004

julij 2004

Quartz crystal controlled oscillators of assessed quality - Part 1: Generic specification - Amendment A2 (IEC 60679-1:1997/A2:2003)

ICS 31.140

Referenčna številka
SIST EN 60679-1:2002/A2:2004(en)

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60679-1/A2

September 2003

ICS 31.140

English version

Quartz crystal controlled oscillators of assessed quality
Part 1: Generic specification
(IEC 60679-1:1997/A2:2003)

Oscillateurs pilotés par quartz
sous assurance de la qualité
Partie 1: Spécification générique
(CEI 60679-1:1997/A2:2003)

Quarzoszillatoren mit bewerteter Qualität
Teil 1: Fachgrundspezifikation
(IEC 60679-1:1997/A2:2003)

This amendment A2 modifies the European Standard EN 60679-1:1998; it was approved by CENELEC on 2003-09-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this amendment the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This amendment exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Lithuania, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.

CENELEC
European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Ref. No. EN 60679-1:1998/A2:2003 E

Foreword

The text of document 49/591/FDIS, future amendment 2 to IEC 60679-1:1997, prepared by IEC TC 49, Piezoelectric and dielectric devices for frequency control and selection, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as amendment A2 to EN 60679-1:1998 on 2003-09-01.

The following dates were fixed:

- latest date by which the amendment has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2004-06-01
- latest date by which the national standards conflicting with the amendment have to be withdrawn (dow) 2006-09-01

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of amendment 2:2003 to the International Standard IEC 60679-1:1997 was approved by CENELEC as an amendment to the European Standard without any modification.

Annex ZA
(normative)

Normative references to international publications with their corresponding European publications

Publication	Year	Title	EN/HD	Year
Add:				
ITU-T Recommendation G.825	- [1)]	The control of jitter and wander within digital networks which are based on the synchronous digital hierarchy (SDH)	-	-
ITU-T Recommendation O.172	- [1)]	Jitter and wander measuring equipment for digital systems which are based on the synchronous digital hierarchy (SDH)	-	-
ANSI T1.105.03	- [1)]	Synchronous Optical Network (SONET) - Jitter at network Interfaces	-	-
ETSI EN 300 462	Series	Transmission and Multiplexing (TM); Generic requirements for synchronization networks	-	-
Telcordia GR-253	- [1)]	Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria	-	-

[1)] Undated reference.

NORME INTERNATIONALE

INTERNATIONAL STANDARD

CEI
IEC
60679-1

1997

AMENDEMENT 2
AMENDMENT 2
2003-05

Amendement 2

Oscillateurs pilotés par quartz sous assurance de la qualité –

Partie 1: Spécification générique

Amendment 2

Quartz crystal controlled oscillators of assessed quality –

Part 1: Generic specification

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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For price, see current catalogue

FOREWORD

This amendment has been prepared by IEC technical committee 49: Piezoelectric and dielectric devices for frequency control and selection.

The text of this amendment is based on the following documents:

FDIS	Report on voting
49/591/FDIS	49/605/RVD

Full information on the voting for the approval of this amendment can be found in the report on voting indicated in the above table.

The committee has decided that the contents of the base publication and its amendments will remain unchanged until 2005. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

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1.2 Normative references

Insert, on page 15, the following new standards:

ITU-T G.825, *The control of jitter and wander within digital networks which are based on the synchronous digital hierarchy (SDH)*

ITU-T O.172, *Jitter and wander measuring equipment for digital systems which are based on the synchronous digital hierarchy (SDH)*

ANSI T1.105.03, *Synchronous Optical Network (SONET) – Jitter at Network Interfaces*

ETSI EN 300462, *Transmission and Multiplexing™; Generic requirements for synchronization networks*

Telcordia GR-253, *Synchronous Optical Network (SONET) Transport Systems: Common Generic Criteria*

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2 Terminology and general requirements

2.2 Definitions

Add, on page 33, after definition 2.2.38, the following new definition:

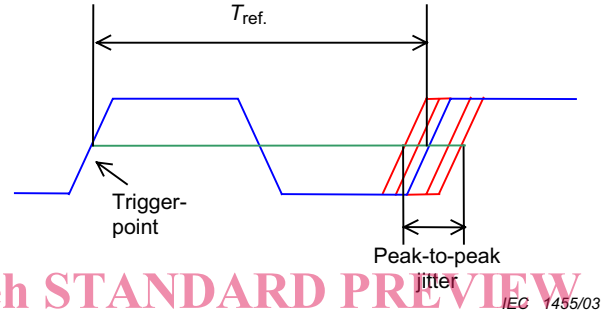
2.2.39 phase jitter

Phase jitter is the short-term variation of the zero crossings of the oscillator output signal from their ideal position in time. Phase jitter is defined as phase variation $\Delta\varphi$ with frequency components greater than or equal to 10 Hz. Variations slower than 10 Hz are called “wander”. Excessive jitter can increase the bit error rate (BER) of a communication signal by incorrectly transmitting a data-stream and can cause synchronisation problems.

The corresponding variation of the period length

$$\Delta T = \Delta\varphi / (2\pi f_c)$$

is called “period jitter” (f_c is the clock frequency).



Key

$T_{ref.}$ is the period of an ideal reference signal.

Figure 49 – Clock signal with phase jitter

The jitter amplitude is usually referred to the Unit Interval (UI) of one data bit-width (e.g. UI = 6,43 ns for 155,52 Mbit/s for STM-1/OC-3) or defined as absolute time variation (in nanoseconds, picoseconds or femtoseconds). It is quantified either as the peak-to-peak value, or as the r.m.s. value thereof.

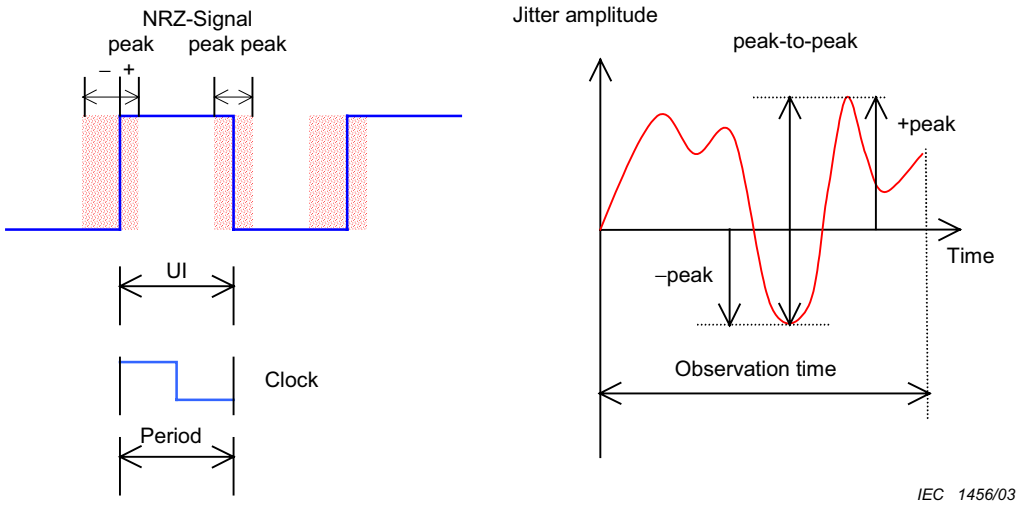


Figure 50 – Phase jitter measures