International Standard 3407

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION•МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ•ORGANISATION INTERNATIONALE DE NORMALISATION

Information processing — Information interchange on 3,81 mm (0.150 in) magnetic tape cassette at 4 cpmm (100 cpi), phase encoded at 63 ftpmm (1 600 ftpi)

Traitement de l'information — Échange d'information sur cassette de bande magnétique de 3,81 mm (0,150 in) *à* 4 cpmm (100 cpi), *enregistrée par codage de phase à* 63 ftpmm (1 600 ftpi)

Second edition — 1983-12-15

UDC 681.327.64 **Ref. No. ISO 3407-1983 (E)**

Descriptors : data processing, date storage devices, 3 mm 81 magnetic tapes, cassettes for magentic tapes, information interchange, specifications, dimensions.

Price based on 22 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work.

Draft International Standards adopted by the technical committees are circulated to the member bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3407 was developed by Technical Committee ISO/TC 97, *Information-processing systems.*

This second edition was submitted directly to the ISO Council, in accordance with clause 6.11.2 of part 1 of the Directives for the technical work of ISO. It cancels and replaces the first edition (i.e. ISO 3407-1976), which had been approved by the member bodies of the following countries:

Australia	Netherlands	Turkey
Bulgaria	New Zealand	United Kingdom
Czechoslovakia	Poland	USA
France	Portugal	USSR
Germany, F.R.	Romania	Yugoslavia
Hungary	Spain	
Italy	Switzerland	

The member bodies of the following countries had expressed disapproval of the document on technical grounds:

Belgium
Japan

Printed in Switzerland

Information processing — Information interchange on 3,81 mm (0.150 in) magnetic tape cassette at 4 cpmm (100 cpi), phase encoded at 63 ftpmm (1 600 ftpi)

1 Scope and field of application

This International Standard specifies the characteristics of a 3,81 mm (0.150 in) magnetic tape cassette to provide data interchange and physical interchangeability between information processing systems utilizing the ISO 7-bit coded character set (see ISO 646) and, where required, its extensions (see ISO 2022). The cassette is of the twin hub coplanar type, loaded with a 3,81 mm (0.150 in) wide magnetic tape for digital recording using the 31,5 bits per mm (800 bpi) phase encoding method. The direction of magnetization is in the longitudinal direction of the tape.

NOTES

1 Numeric values in the SI and/or Imperial measurement system in this International Standard may have been rounded, and are therefore consistent with, but not exactly equal to each other. Either system may be used, but the two should be neither intermixed nor converted. The original design was made using the metric measurement system.

2 Throughout the remainder of this International Standard for the sake of simplicity the recording density is stated as 32 bpmm (800 bpi) nominal.

This International Standard applies to cassettes and data used for interchange. Where it applies for testing only, this is specifically stated.

2 References

ISO 646, *Information processing — 7-bit coded character set for information interchange.*

ISO 2022, *Information processing — ISO 7-bit and 8-bit coded character set — Code extension techniques.*

3 Definitions

For the purpose of this International Standard, the following definitions apply:

3.1 magnetic tape: Tape which will accept and retain the magnetic signals intended for input, output and storage purposes on computers and associated equipment.

3.2 reference tape cassette: A tape cassette which has been selected for given properties for use in calibration.

3.3 secondary reference tape cassette: A tape cassette intended for routine calibrating purposes, whose performance is known and stated in relation to that of the reference tape cassette.

3.4 reference field: For the specified packing density (see 5.2), the minimum field applied to the signal amplitude reference tape cassette which causes an output signal equal to 95 % of the maximum output.

3.5 test recording current: A recording current between 145 % and 155 % of the current required to produce the reference field.

3.6 signal amplitude reference tape cassette: A reference tape cassette selected as a standard for signal amplitude.

NOTE — A master standard (computer amplitude reference), based on reference tape cassettes and heads, has been established as the result of work by national standardization organizations and national laboratories, coordinated by the U.S. National Bureau of Standards (NBS).

Secondary signal amplitude reference tape cassettes, certified by the National Bureau of Standards, Gaithersburg, Maryland, USA, and the Physikalish-Technische Bundesanstalt (PTB), Braunschweig, Germany, are available.

NBS certified cassettes are available directly from NBS under the part number SRM 1600. PTB certified cassettes are available through the European Computer Manufacturers Association (ECMA), 114, rue du Rhône, CH—1204 Geneva, Switzerland.

The calibration devices are correlated between NBS and PTB.

3.7 standard reference amplitude: The average peak-to-peak signal amplitude derived from the signal amplitude reference tape cassette, at the density of 63 ftpmm (1 600 ftpi) using the test recording current (see 3.5). The signal amplitude shall be averaged over 4 000 flux transitions.

3.8 average signal amplitude: The average peak-to-peak value of the signal output measured over at least 4 000 flux transitions.

3.9 in contact: An operating condition in which the magnetic surface of a tape is in contact with a magnetic head.