AD-A163 689 UNIFIED MATRICES FOR ELECTRONIC COMPUTERS(U) FOREIGN TECHNOLOGY DIV WRIGHT-PATTERSON AFB OH 27 JAN 86 FTD-ID(RS)T-0036-86 1/1

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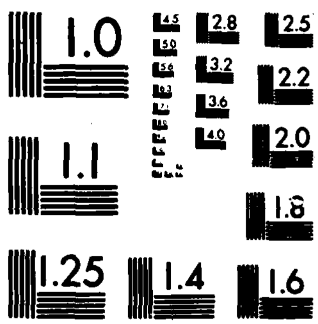


MICROCOPY RESOLUTION TEST CHART
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# FOREIGN TECHNOLOGY DIVISION

AIR FORCE SYSTEMS COMMAND

## UNIFIED MATRICES FOR ELECTRONIC COMPUTERS

FOREIGN TECHNOLOGY DIVISION

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# EDITED TRANSLATION

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UNIFIED MATRICES FOR ELECTRONIC COMPUTERS

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## U. S. BOARD ON GEOGRAPHIC NAMES TRANSLITERATION SYSTEM

| Block | Italic | Transliteration | Block | Italic | Transliteration |
|---|---|---|---|---|---|
| А а | *А а* | A, a | Р р | *Р р* | R, r |
| Б б | *Б б* | B, b | С с | *С с* | S, s |
| В в | *В в* | V, v | Т т | *Т т* | T, t |
| Г г | *Г г* | G, g | У у | *У у* | U, u |
| Д д | *Д д* | D, d | Ф ф | *Ф ф* | F, f |
| Е е | *Е е* | Ye, ye; E, e* | Х х | *Х х* | Kh, kh |
| Ж ж | *Ж ж* | Zh, zh | Ц ц | *Ц ц* | Ts, ts |
| З з | *З з* | Z, z | Ч ч | *Ч ч* | Ch, ch |
| И и | *И и* | I, i | Ш ш | *Ш ш* | Sh, sh |
| Й й | *Й й* | Y, y | Щ щ | *Щ щ* | Shch, shch |
| К к | *К к* | K, k | Ъ ъ | *Ъ ъ* | " |
| Л л | *Л л* | L, l | Ы ы | *Ы ы* | Y, y |
| М м | *М м* | M, m | Ь ь | *Ь ь* | ' |
| Н н | *Н н* | N, n | Э э | *Э э* | E, e |
| О о | *О о* | O, o | Ю ю | *Ю ю* | Yu, yu |
| П п | *П п* | P, p | Я я | *Я я* | Ya, ya |

*<u>ye</u> initially, after vowels, and after ъ, ь; <u>e</u> elsewhere.
When written as ё in Russian, transliterate as yё or ё.

## RUSSIAN AND ENGLISH TRIGONOMETRIC FUNCTIONS

| Russian | English | Russian | English | Russian | English |
|---|---|---|---|---|---|
| sin | sin | sh | sinh | arc sh | $\sinh^{-1}$ |
| cos | cos | ch | cosh | arc ch | $\cosh^{-1}$ |
| tg | tan | th | tanh | arc th | $\tanh^{-1}$ |
| ctg | cot | cth | coth | arc cth | $\coth^{-1}$ |
| sec | sec | sch | sech | arc sch | $\mathrm{sech}^{-1}$ |
| cosec | csc | csch | csch | arc csch | $\mathrm{csch}^{-1}$ |

| Russian | English |
|---|---|
| rot | curl |
| lg | log |

**GRAPHICS DISCLAIMER**

All figures, graphics, tables, equations, etc. merged into this translation were extracted from the best quality copy available.

UNIFIED MATRICES FOR ELECTRONIC COMPUTERS
Main Parameters

GOST 14288-69

By the Decree of the Committee of Standards, Measures, and Measuring Instruments, USSR Council of Ministers, from 3/6/1969, No. 330, in Effect since 1/1/1970

Violation of the Standard is Prosecuted in Accordance with the Law

1. This standard extends to the ferrite-core matrices operating on the ZD principle, which are intended for the storage units of the general-purpose electronic computers using the number system with a base of 2.

2. Matrices must be manufactured with a capacity of 256, 1024, 4096, (8192), 16384, (32768), 65536 of binary storage elements.

The matrix capacities in parentheses are not to be used in the new designs of storage units.

3. The construction of frames must ensure the following space between the coordinate leads: 2.0, 1.5, 1.2, 1.0, 0.8, 0.6, 0.4, and 0.2 mm.

4. The following parameters must be shown in the matrix's technical documentation:

a) static: ohmic resistance and inductance of windings;

b) dynamic: parameters of input currents; operating cycle of matrices; magnitude of amplitude and duration of signals of counted units and interferences obtained from matrices during a change in the operating recording currents (inhibition) and coordinate access currents; magnitude of amplitude and duration of interferences in the read and record windings during unfavorable operating conditions of a computer.

5. Mechanical, climatic, and reliability requirements, and also special requirements must be shown in the technical documentation of a

matrix.

6. The matrices must be identified by an alphanumeric code, which includes:

storage core control principle;

space between the coordinate leads;

type of unified frame used in the matrix;

type and external diameter of a core separated from one another by separating points.

An example of designating a matrix operating on the ZD principle with a step of 1.5 between the coordinate leads, a unified frame of type M2–2, and an external diameter of a circular storage core of 0.8:

Matrix 3D.1.5. M2–2. K–0.8 GOST 14288–69

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Supplement to GOST 14288-69

Definition of Basic Terms Encountered in the Standard

**Matrix** - a set of ferrite storage cores structurally unified in the same frame by a system of wires.

**ZD Principle** - a method of controlling a storage core, in which changing a core from one state to another is accomplished by the effect of an algebraic sum of two, during reading, and three, during recording, partial currents; in this case, each partial current is equal to a half of the total switching current.

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