DESCRIPTION

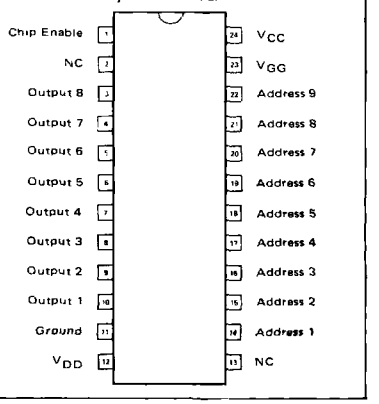
The 2516 is a 3072-bit Static ROM organized as 64x6x8. The product uses +5V, -5V and -12V power supplies,5V TTL level input signals and Tri-State outputs for direct, low cost interfacing with TTL, DTL and 2500 Series MOS.

TRUTH TABLE

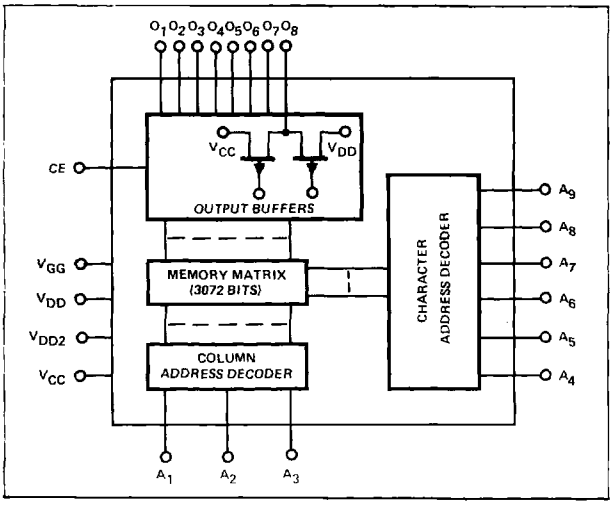
CE	OUTPUT
0	DATA
1	OPEN

PIN CONFIGURATION

N,I PACKAGE



BLOCK DIAGRAM



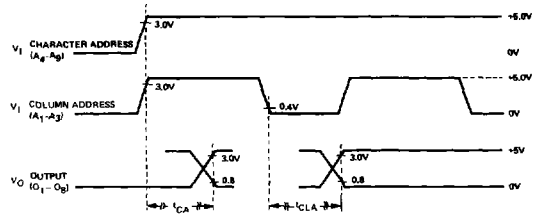
AC CHARACTERISTICS (NOTE 8)

T_A = 0°C to +70°C; V_{CC} = 5V (Note 8); V_{DD} = -5V ± 5%; V_{GG} = -12V ± 5%; unless otherwise noted.

SYMBOL	TEST	MIN	MAX	UNIT	CONDITIONS
t_{CA}	Character Access Time	600		ns	See AC Test Setup*
t_{CA}	Column Access Time (A_1 - A_3)	500		ns	See AC Test Setup*

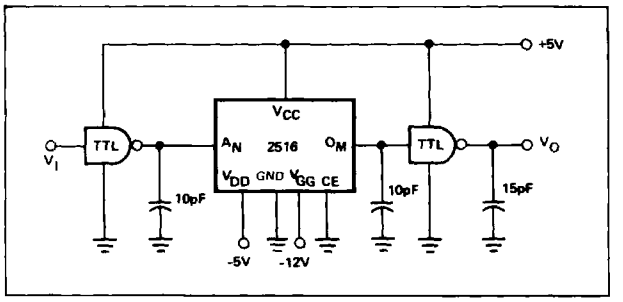
TA = 0° to +70°C

TIMING DIAGRAM

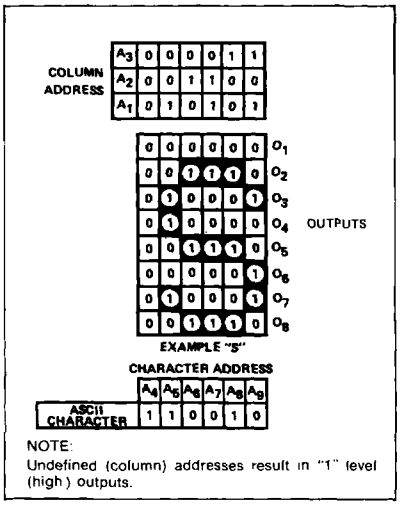


t_{CA} = CHARACTER ACCESS TIME
t_{CLA} = COLUMN ACCESS TIME

AC TEST SETUP



CHARACTER FORMAT



NOTE:
Undefined (column) addresses result in "1" level (high) outputs.

APPLICATIONS DATA:

OUTPUT INTERFACING NOTES

The tri-state outputs on this device exhibit three states:

"1" — low impedance to +5V
"0" — low impedance to -5V
OFF — high impedance 10 megohm

The "off" state is controlled by the chip enable control input.

CUSTOM ROM ORGANIZATIONS

The 2516 is a static ROM with a total 64 x 6 x 8 bit capacity. This allows a standard 5 x 7 font to be encoded in the ROM, e.g., the 2516/CM2150 ASCII font standard product. A custom coding configuration may make use of the full 6x8 dot matrix if desired.

ORGANIZATION AS CHARACTER GENERATOR

A six-bit binary address (A4 through A9) selects 1-of-64 matrix characters arranged 6 dots horizontally and 8 dots vertically. A three bit-binary address code (A1 through A3) selects 1 of 6 columns. Eight outputs display a complete column of the character matrix.

STANDARD PATTERN

A standard ASCII Character Font is available for the 2516. This device (2516N / CM2150) may be used for ASCII character generation or for device evaluation.

CUSTOM DEVICES

For unique custom memory patterns, the following formats should be used to transmit coding instructions. The nomenclature for each custom device will consist of the basic product type followed by a unique "CM" number assigned by Signetics. For example, "2516N/CM2151",

- **Programming with punched cards.**
  For maximum accuracy and minimum cost and turn-around time, the truth table should be transmitted to Signetics in the form of punched cards according to the format indicated on the following pages.

- **Programming with written truth table.**
  When punched data cards cannot be supplied, the truth table may be transmitted in written form using the attached blank truth table.

VERIFICATION

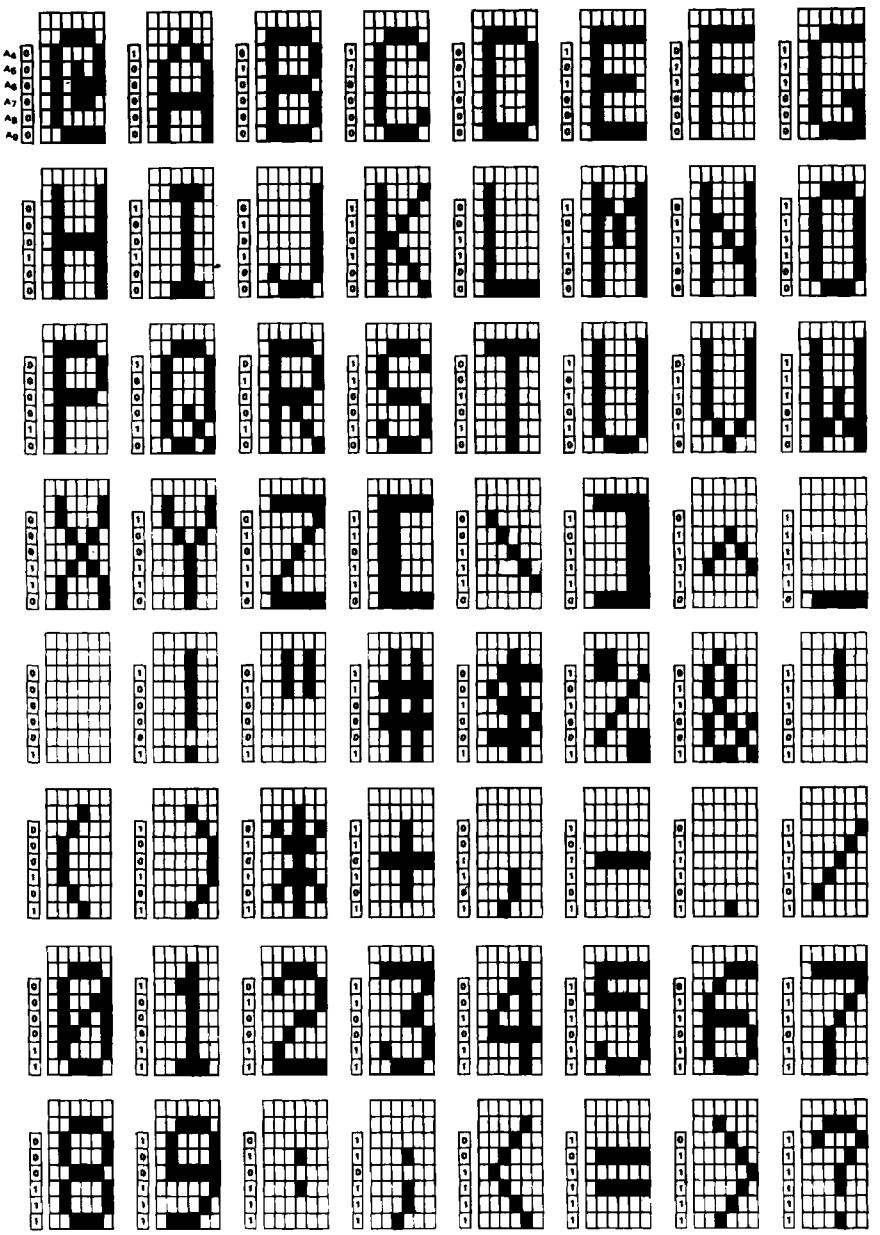
Upon receipt of either punched card or written truth table information, Signetics will prepare a computer tabulation of the instructions and return to the address indicated. If errors are detected, they should be transmitted to Signetics as quickly as possible.

LOGIC CONVENTION

Logic "1"s of blackened squares in the truth table will result in "high" output from the indicated output terminal (i.e. +3.6V minimum). Similarly, a "1" address input level is interpreted as +3.2V minimum.

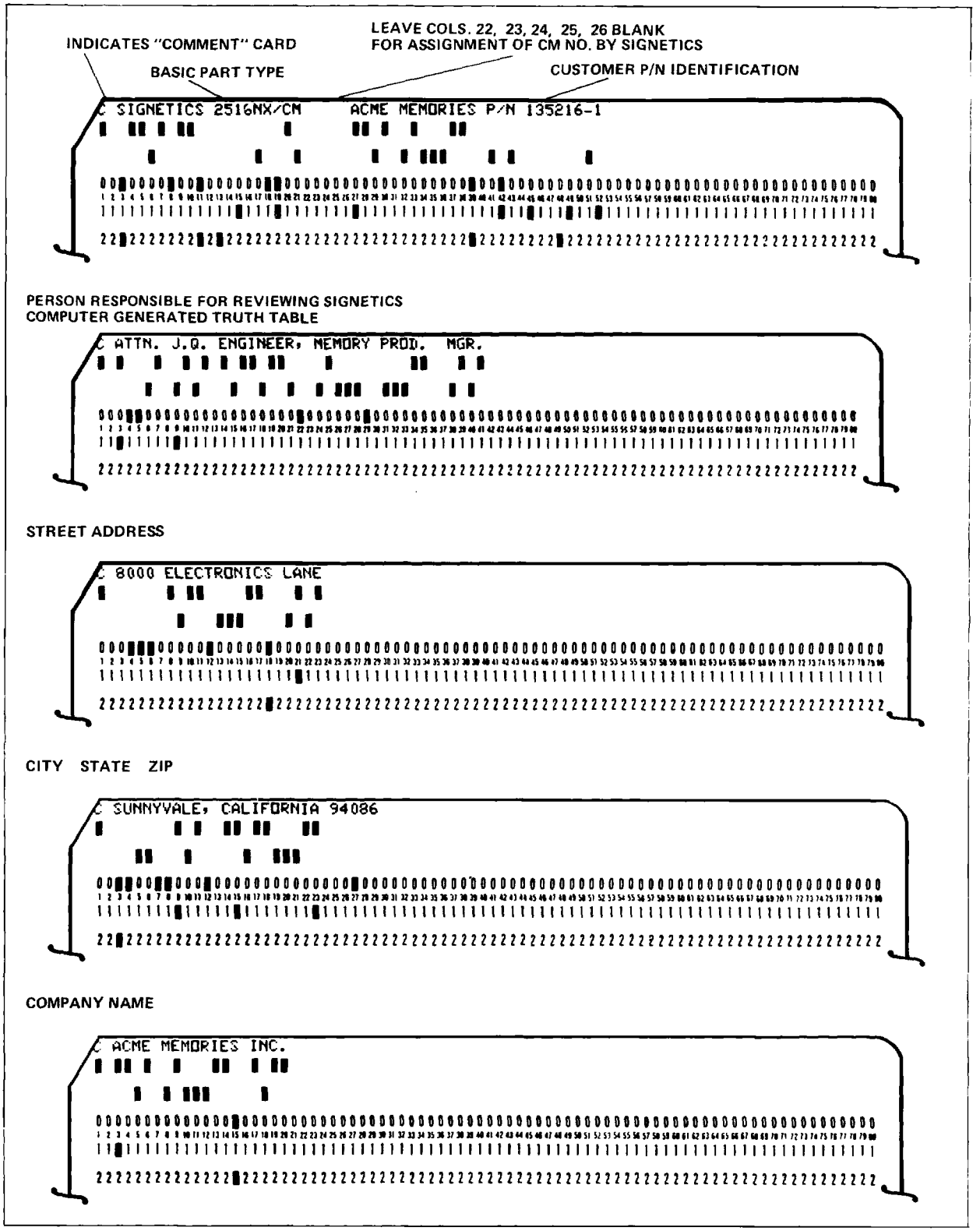
Undefined addresses result in "1" level outputs.

ASCII CHARACTER FONT



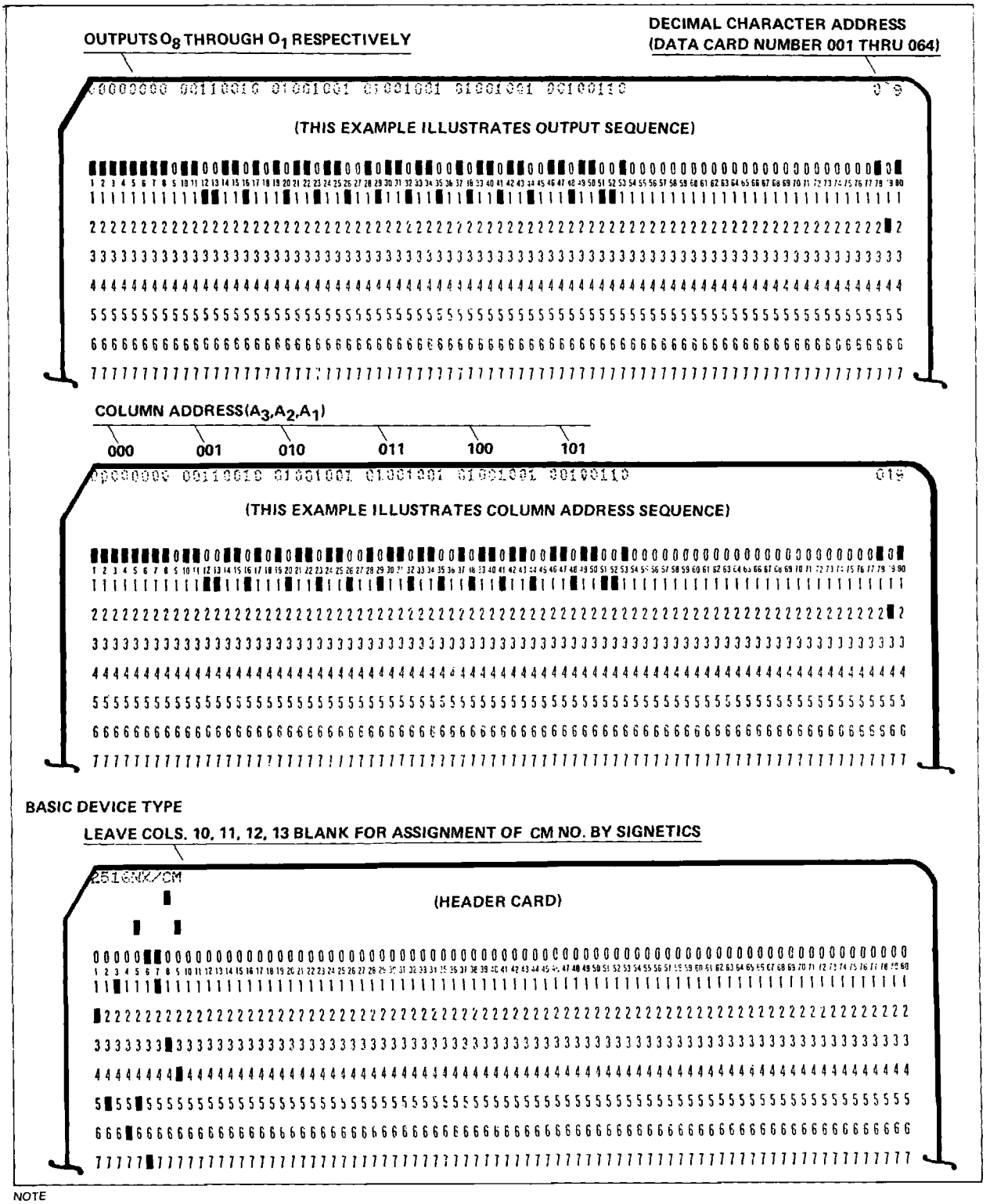
NOTE: Excess addresses yield logic "1" outputs.

IDENTIFICATION CARDS



2516-N,I

DATA CARDS



NOTE
"Character" number is in columns 78, 79, and 80.