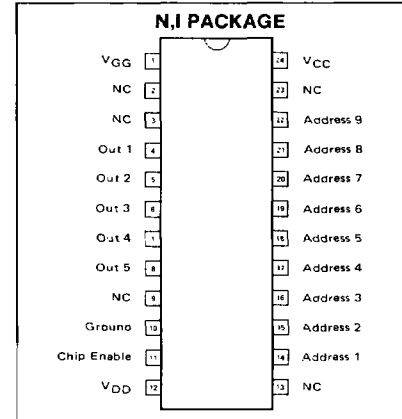


**DESCRIPTION**

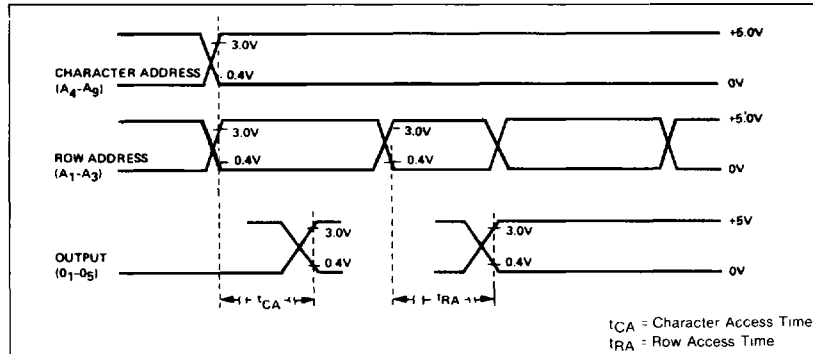
The Signetics 2513 is a high speed 2560-bit Static ROM organized as 64x8x5. A standard 7x5 dot matrix fits well in the 2513. The product uses +5V, -5V and -12V power supplies, TTL level interface signals and Tri-State Outputs for direct, low cost interfacing with TTL, DTL, CMOS and 2500 Series MOS.

CE	OUTPUT
0	DATA
1	OPEN

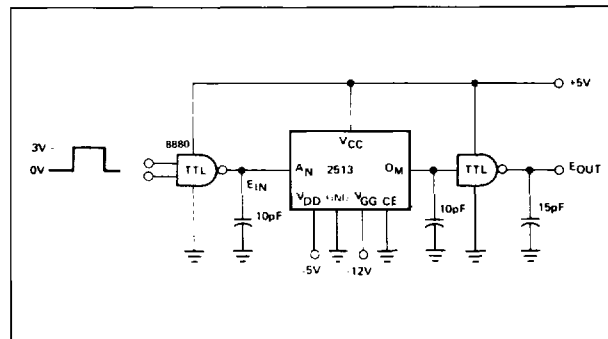
**PIN CONFIGURATION**



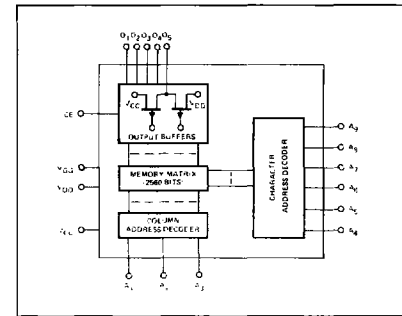
**TIMING DIAGRAM**



**AC TEST SETUP**



**BLOCK DIAGRAM**



**AC CHARACTERISTICS**

SYMBOL	TEST	MIN	TYP	MAX	UNIT
$t_{CA}$ (CM2140)	Character Access Time			600	ns
$t_{RA}$	Row Access Time (A <sub>1</sub> - A <sub>3</sub> )			500	ns
$t_{CE}$	Chip Enable to Output				ns

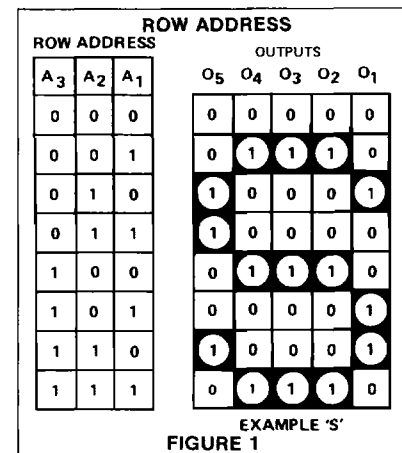
$T_A = 0^\circ\text{C}$  to  $70^\circ\text{C}$ ;  $V_{CC} = 5\text{V}$  (Note 8);  $V_{DD} = -5\text{V} \pm 5\%$ ;  $V_{GG} = -12\text{V} \pm 5\%$ ; unless otherwise noted.

COMPANY \_\_\_\_\_  
 ADDRESS \_\_\_\_\_  
 CITY \_\_\_\_\_ STATE \_\_\_\_\_ ZIP \_\_\_\_\_  
 TELEPHONE \_\_\_\_\_  
 AUTHORIZED \_\_\_\_\_  
 SIGNATURE \_\_\_\_\_  
 DATE \_\_\_\_\_  
 CUSTOMER PRINT OR ID NO. \_\_\_\_\_  
 PURCHASE ORDER NUMBER \_\_\_\_\_  
 DEVICE TYPE \_\_\_\_\_ 2513 \_\_\_\_\_  
 CUSTOM PATTERN NUMBER (TO BE ENTERED BY SIGNETICS) \_\_\_\_\_

**ORGANIZATION AS CHARACTER GENERATOR**

A six-bit binary address (A<sub>4</sub> through A<sub>9</sub>) selects 1-of-64 matrix characters arranged 5 dots horizontally and 8 dots vertically. A three bit binary address code (A<sub>1</sub> through A<sub>3</sub>) selects 1 of 8 rows. Five outputs display a complete row of the character matrix. See Figure 1. The devices may also be used in pairs to provide 9 X 7 and 10 X 8 vertical scan formats.

**CHARACTER FORMAT**



EXAMPLE 'S'  
FIGURE 1







ASCII CHARACTER FONT CM2140 (Upper Case); For Lower Case Order CM3021

