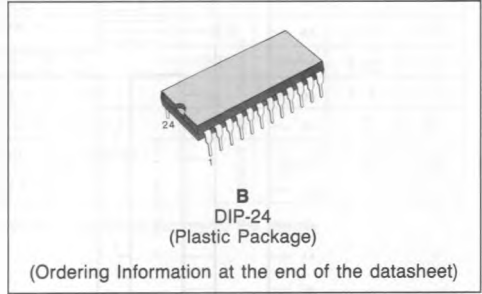


16K-BIT READ ONLY MEMORY

- SINGLE +5V ± 10% POWER SUPPLY
- ACCESS TIME 300 ns (MAX)
- COMPLETELY STATIC OPERATION
- INPUTS AND OUTPUTS TTL COMPATIBLE
- THREE PROGRAMMABLE CHIP SELECTS FOR SIMPLE MEMORY EXPANSION AND SYSTEM INTERFACE
- THREE STATE OUTPUTS FOR DIRECT BUS INTERFACE
- EPROMs ACCEPTED AS PROGRAM DATA INPUTS

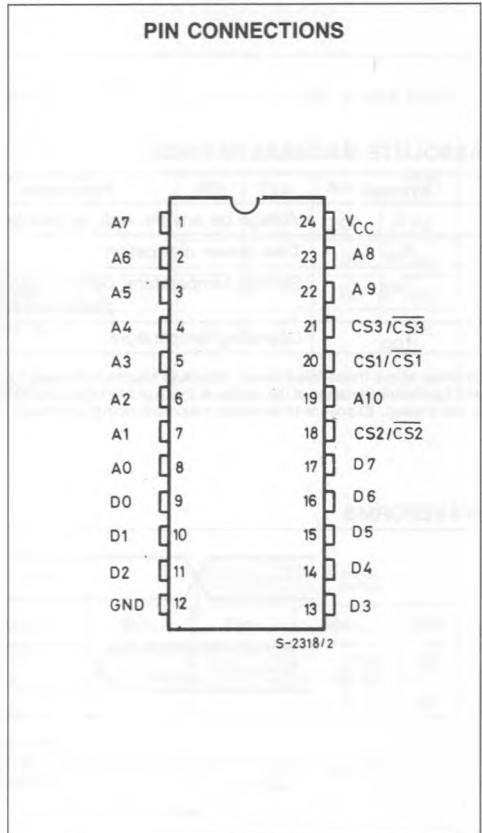


DESCRIPTION

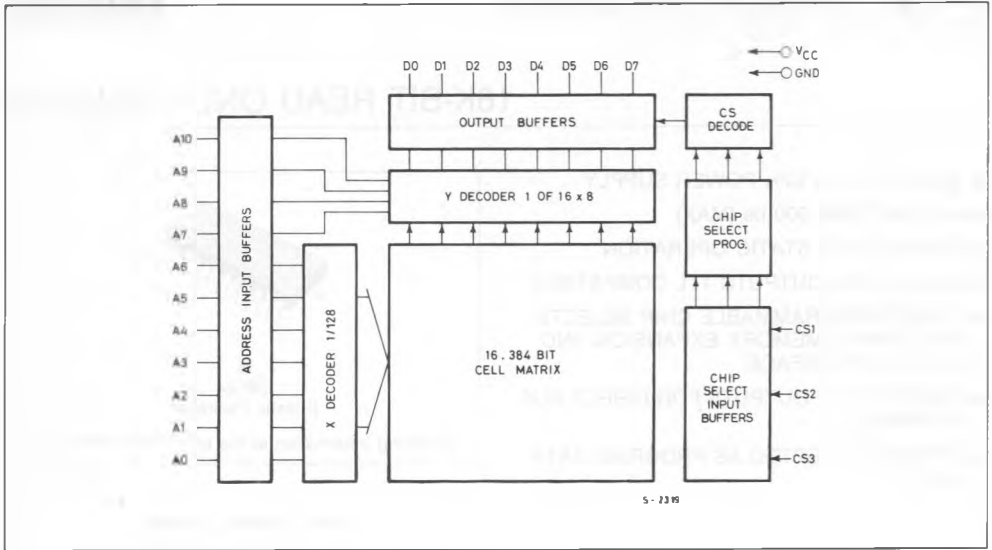
The M2316H is a 16,384-bit static Read Only Memory organized as 2,048 by 8 bits. It is manufactured using SGS-THOMSON' high density N-channel Si-Gate MOS process and is ideal for non volatile data storage applications such as program storage. The three-state outputs and TTL input/output levels allow for direct interface with common system bus structures. The M2316H is available in 24-lead dual in line plastic or ceramic packages.

PIN NAMES

A0-A10	ADDRESS INPUTS
D0-D7	DATA OUTPUTS
CS1-CS3	CHIP SELECT INPUTS



BLOCK DIAGRAM

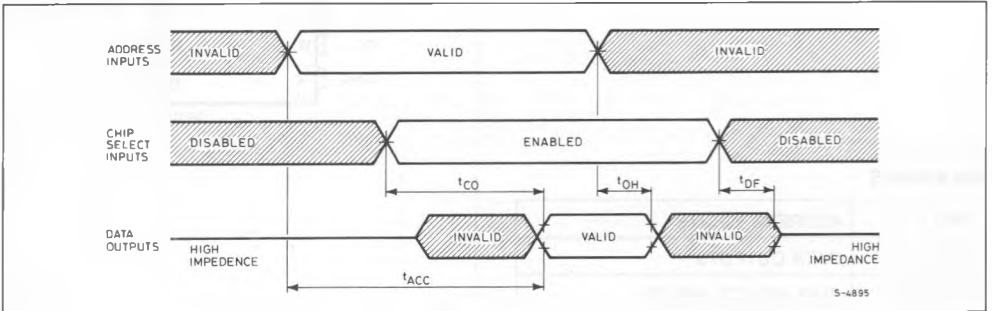


ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_I	Voltage on any pin with respect to ground	- 0.5 to + 7	V
P_{tot}	Total power dissipation	1	W
T_{stg}	Storage temperature: ceramic package plastic package	- 65 to + 150 - 55 to + 125	°C
T_{Op}	Operating temperature	0 to + 70	°C

Stresses above those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. This is a stress rating only and functional operation of the device at these or any other conditions above those indicated in the operational sections of this specification is not implied. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

WAVEFORMS



STATIC ELECTRICAL CHARACTERISTICS ($T_{amb} = 0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$, $V_{CC} = 5\text{V} \pm 10\%$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Values			Unit
			Min.	Typ.	Max.	
V_{OH}	Output High Voltage	$V_{CC} = 4.5\text{V}$, $I_{OH} = -400\ \mu\text{A}$	2.4		V_{CC}	V
I_{LO}	Output Leakage Current	Chip deselected $V_{OUT} = 0\text{V}$ to V_{CC}			10	μA
V_{IL}	Input Low Voltage	See Note 1	-0.5		0.8	V
V_{IH}	Input High Voltage		2.0		V_{CC}	V
V_{OL}	Output Low Voltage	$V_{CC} = 4.5\text{V}$ $I_{OL} = 2.1\ \text{mA}$			0.4	V
I_{LI}	Input Load Current	$V_{CC} = 5.5\text{V}$, $0\text{V} \leq V_{IN} \leq 5.5\text{V}$			10	V
I_{CC}	Power Supply Current	Output unloaded, Chip enabled $V_{CC} = 5.5\text{V}$, $V_{IN} = V_{CC}$		40	70	mA

Note 1: Input levels that swing more negative than -0.5V will be clamped and may cause damage to the device

DYNAMIC ELECTRICAL CHARACTERISTICS ($T_{amb} = 0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$, $V_{CC} = 5\text{V} \pm 10\%$ unless otherwise specified)

Symbol	Parameter	Test Conditions	Values			Unit
			Min	Typ.	Max	
t_{ACC}	Address Access Time	Output load: 1 TTL load and 100 pf			300	ns
t_{CO}	Chip Select Delay				100	ns
t_{DF}	Chip Deselect Delay	Input transition time: 20 ns			100	ns
t_{OH}	Previous Data Valid After Address Change Delay	Timing reference levels: Input: 1.5V Output: 0.8V and 2.0V	10			ns

CAPACITANCE ($T_{amb} = 25^{\circ}\text{C}$, $f = 1\ \text{MHz}$, see Note 2)

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
C_{IN}	Input Capacitance	All pins except pin under test tied to AC ground			7	pF
C_{OUT}	Output Capacitance				10	pF

Note 2: This parameter is sampled periodically and is not 100% tested.

ORDERING INFORMATION

Part Number	Access Time	Supply Voltage	Temp. Range	Package
M2316HB1	300ns	5V ± 10%	0° to +70°C	DIP-24

PACKAGE MECHANICAL DATA

24-PIN PLASTIC DIP

