



Description

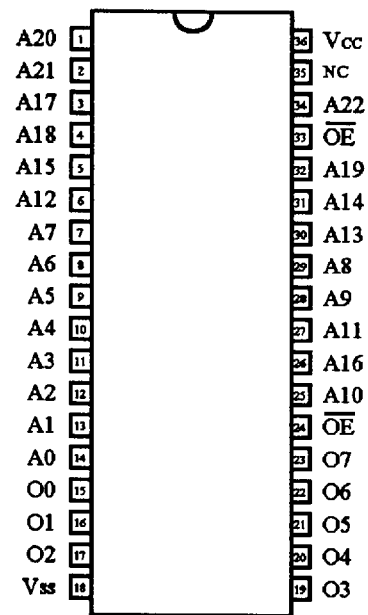
The GM23C64001 high performance read only memory is organised as 8,388,606 x 8 bits and has an access time of 120ns. It needs no external control clock to assure simple operation, because of its asynchronous operation. It is designed to be suitable for use in program memory of game machine, data memory and entertainments. The GM23C64001 is packaged in a 36 DIP, provides polarity programmable OE buffer as user option mode.

Features

- 8,388,606 x 8 bit Organization
- Single + 5V Supply
- Access Time : 120ns (Max)
- Operating current : 100mA (Max)
- TTL-compatible inputs and outputs
- Polarity programmable chip enable and out enable pin
- 3-State outputs for wired-OR expansion
- Package :
GM23C64001 : 36 Pin Plastic DIP (600 mil)

Pin Configuration

36 DIP



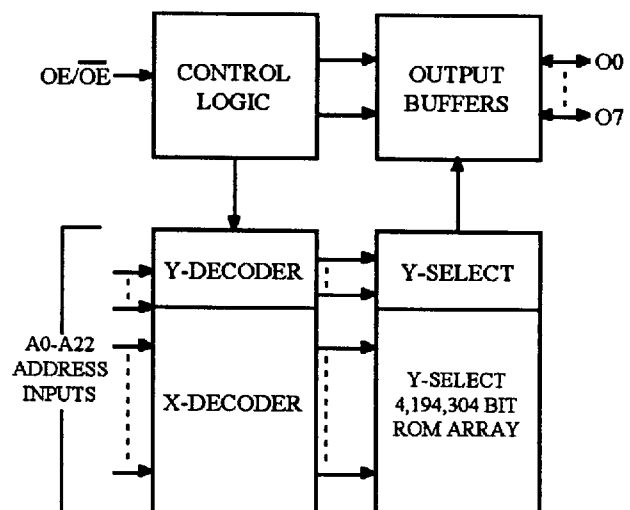
(Top View)

Pin Description

Pin	Function
A0-A22	Address Inputs
O0-O7	Data Outputs
OE/ $\overline{OE}$ *	Output Enable Input
Vcc	Power Supply (+5V)
Vss	Ground
NC	No Connection

*User Selectable Polarity.

Block Diagram





Absolute Maximum Ratings*

Symbol	Parameter	Rating	Unit
T _A	Ambient Operating Temperature	-10 ~ 80	°C
T _{STO}	Storage Temperature	-65 ~ 150	°C
V _{CC}	Supply Voltage to Ground Potential	-0.5 ~ V _{CC} + 0.5	V
V _{OUT}	Output Voltage	-0.5 ~ V _{CC} + 0.5	V
V _{IN}	Input Voltage	-0.5 ~ 7.0	V

***Comments**

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

Recommended DC Operating Conditions (V_{CC} = 5.0V ± 10%, T_A = 0 ~ 70°C)

Symbol	Parameter	Min	Typ	Max	Unit
V _{CC}	Supply Voltage	4.5	5.0	5.5	V
V _{SS}	Supply Voltage	0	0	0	V
V _{IH}	Input High Voltage	2.2	-	V _{CC} + 0.3	V
V _{IL}	Input Low Voltage	-0.3	-	0.8	V

DC Electrical Characteristics (V_{CC} = 5.0V ± 10%, T_A = 0 ~ 70°C)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
V _{OH}	Output High Voltage	I _{OH} = -1mA	2.4			V
V _{OL}	Output Low Voltage	I _{OL} = 2.1mA			0.4	V
I _{I(L)}	Input Leakage Current	V _{IN} = 0V to V _{CC}			± 10	μA
I _{O(L)}	Output Leakage Current	V _{OUT} = 0V to V _{CC}			± 10	μA
I _{CC}	Operating Supply Current (f = 6.7 MHz)	$\overline{CE} = V_{IL}, CE = V_{IH}$			100	mA

Capacitance (T_A = 25°C, f = 1.0 MHz)

Symbol	Parameter	Condition	Min	Max	Unit
C ₁	Input Capacitance	V _{IN} = 0V		10	pF
C ₀	Output Capacitance	V _{OUT} = 0V		10	pF

Note : Capacitance is periodically sampled and not 100% tested.

Mode Selection

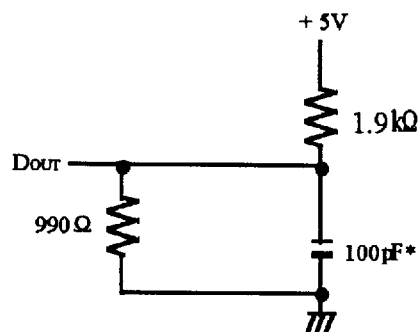
OE/ $\overline{\text{OE}}$ (24)	OE/ $\overline{\text{OE}}$ (33)	Mode	Data	Power
L/H	X	Standby	High Z	Active
X	L/H	Standby	High Z	Active
H/L	H/L	Operating	00 ~ 07	Active

AC Operating Characteristics ($V_{CC} = 5.0V \pm 10\%$, $T_A = 0 \sim 70^\circ\text{C}$)

Symbol	Parameter	GM23C64001		Unit
		Min	Max	
t_{RC}	Read Cycle Time	120		ns
t_{AA}	Address Access Time		120	ns
t_{AOE}	Output Enable Access Time		60	ns
t_{OH}	Output Hold From Address Change	0		ns
t_{HZ}	Output High-Z Delay		50	ns

AC Test Condition

Input Pulse Level	0.4V to 2.4V
Input Rise and Fall Time	10ns
Input and Output Timing Level	0.8V to 2.0V
Output Load	See Fig. 1



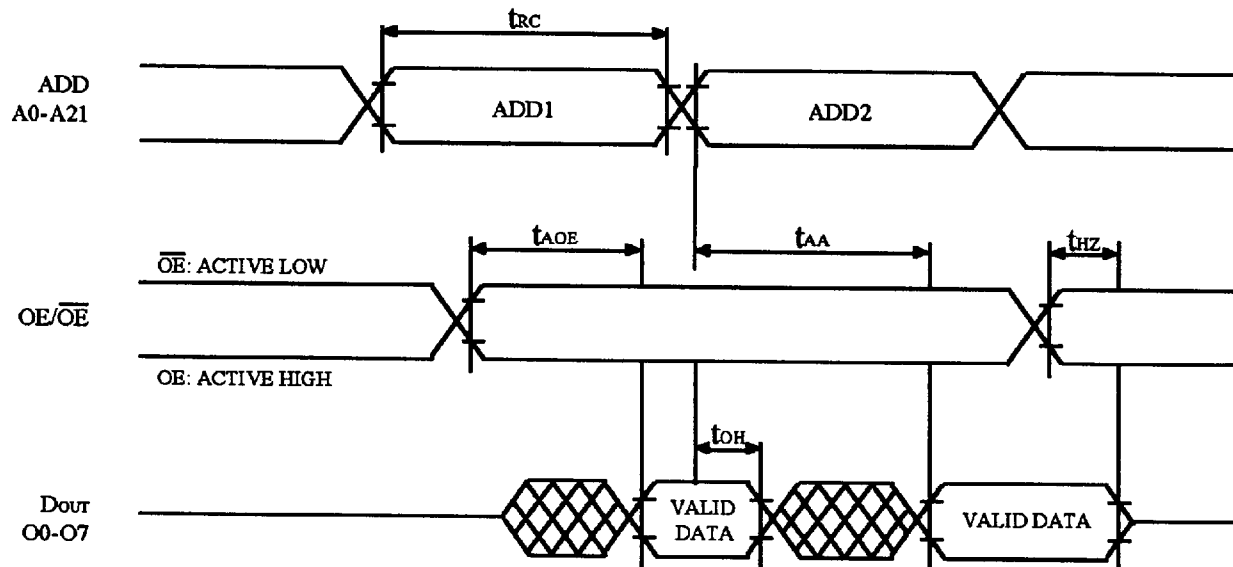
*Including scope and jig.

Fig. 1 Output Load Circuit



Timing Waveforms

Read



Package Dimensions

Unit: Inches (mm)

36 DIP

