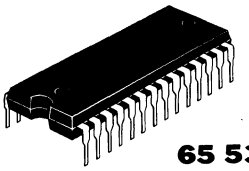


M5M2364-XXXP

65 536-BIT(8192-WORD BY 8-BIT)MASK-PROGRAMMABLE ROM

DESCRIPTION

The Mitsubishi M5M2364-XXXP is a 65536-bit mask-programmable high speed read-only memory.

The M5M2364-XXXP is fabricated by N-channel polysilicon gate technology and available in a 28-pin DIL package. It is interchangeable with the M5L2764K and Intel 2764 in read mode.

The XXX in type code is a three-digit decimal number assigned by Mitsubishi to identify the customer's specification to which the ROM has been programmed.

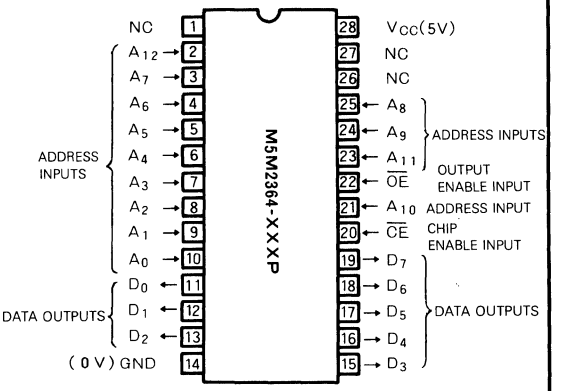
FEATURES

- 8192 words × 8-bit organization
- Access time ..... 250 ns (MAX)
- Two line control $\overline{OE}$, $\overline{CE}$
- Low power supply
  Current (Icc) active ..... 80 mA (MAX)
  standby ..... 20 mA (MAX)
- Single 5V power supply (V_{CC} = 5V ± 10%)
- 3-State output buffer
- Input and output
- Standard 28-pin DIL package
- Interchangeable with the M5L2764K and Intel 2764

APPLICATION

- Electronic computers and various software

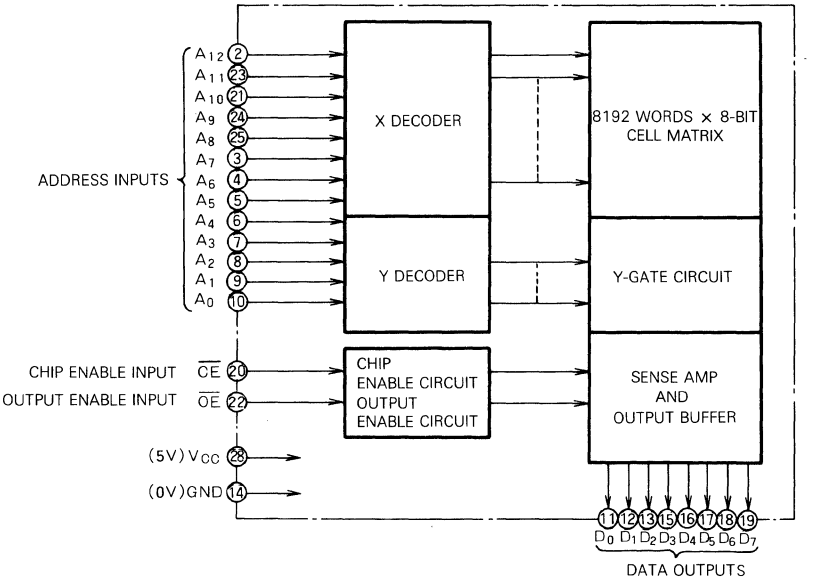
PIN CONFIGURATION (TOP VIEW)



Outline 28P4

NC: NO CONNECTION

BLOCK DIAGRAM



65 536-BIT(8192-WORD BY 8-BIT)MASK-PROGRAMMABLE ROM

FUNCTION

Set the $\overline{CE}$ and $\overline{OE}$ terminals to the read mode (low level).

Low level inputs to $\overline{CE}$ and $\overline{OE}$ and address signals to the address inputs ($A_0 \sim A_{12}$) make the data contents of the designated address location available at the data output ($D_0 \sim D_7$).

When the $\overline{CE}$ or $\overline{OE}$ signal is high, data output are in a floating state.

When the $\overline{CE}$ signal is high, the device is in the standby mode or power-down mode.

ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Conditions	Limits	Unit
T_{opr}	Operating ambient temperature		−10~80	°C
T_{stg}	Storage temperature		−65~150	°C
V_I	Input voltage	With respect to GND	−0.6~7	V

DC ELECTRICAL CHARACTERISTICS (T_a=0~70°C, V_{CC}=5V±10%, unless otherwise specified)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min.	Typ	Max	
I_{LI}	Input leakage current	V_{IN}=5.5V	−10		10	μA
I_{LO}	Output leakage current	V_{OUT}=5.5V	−10		10	μA
I_{CC1}	V_{CC} Supply voltage (Standby)	$\overline{CE}$=V_{IH}		10	20	mA
I_{CC2}	V_{CC} Supply voltage (Operating)	$\overline{CE}$=$\overline{OE}$=V_{IL}		40	80	mA
V_{IL}	Low level input voltage		−0.1		0.8	V
V_{IH}	High level input voltage		2.0		V_{CC}+1	V
V_{OL}	Low level output voltage	I_{OL}=2.1mA			0.45	V
V_{OH}	High level output voltage	I_{OH}=−400μA	2.4			V

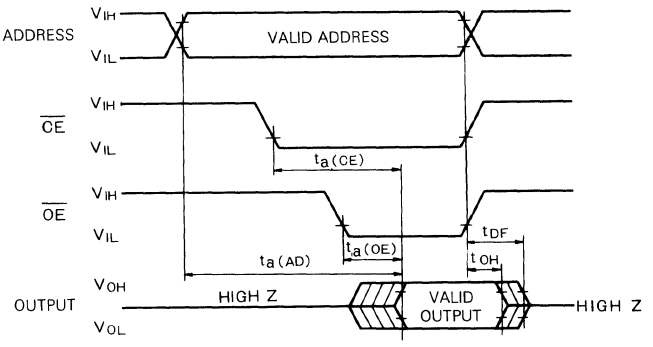
Note 2. Typical value is that with standard supply voltage applied and T_a=25°C.

AC ELECTRICAL CHARACTERISTICS (T_a=0~70°C, V_{CC}=5V±10%, unless otherwise specified)

Symbol	Parameter	Test Conditions	Limits			Unit
			Min	Typ	Max	
$t_{a(AD)}$	Address access time	$\overline{CE}$=$\overline{OE}$=V_{IL}			250	ns
$t_{a(CE)}$	$\overline{CE}$ access time	$\overline{OE}$=V_{IL}			250	ns
$t_{a(OE)}$	$\overline{OE}$ access time	$\overline{CE}$=V_{IL}	10		100	ns
t_{DF}	$\overline{OE}$ output floating delay time	$\overline{CE}$=V_{IL}	0		90	ns
t_{OH}	Data validity period after $\overline{OE}$, $\overline{CE}$	$\overline{CE}$=$\overline{OE}$=V_{IL}	0			ns

65 536-BIT(8192-WORD BY 8-BIT)MASK-PROGRAMMABLE ROM

READ-OUT TIMING DIAGRAM



Switching Characteristics Test Conditions

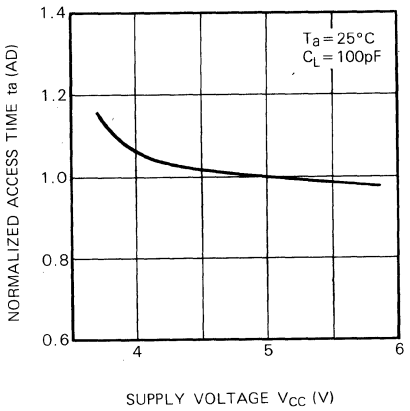
Input voltage: V_{IL} = 0.8V, V_{IH} = 2.2V
Input signal rise-fall time: ≤20ns
Reference voltage for timing measurements: Input 1V, 2V
Output 0.8V, 2V
Loading: 1TTL gate + CL (= 100pF)

INPUT/OUTPUT CAPACITANCE (T_a = 25°C, f = 1MHz, unless otherwise specified)

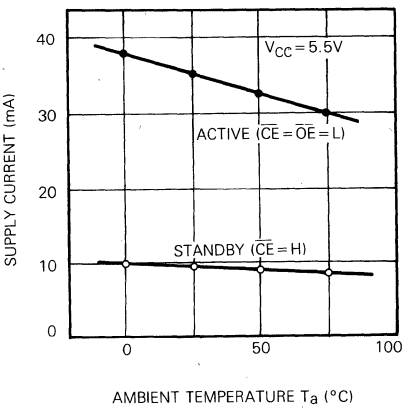
Symbol	Parameter	Test Conditions	Limits			Unit
			Min	Typ	Max	
C_{IN}	Input capacitance	V_{IN}=0V		4	6	pF
C_{OUT}	Output capacitance	V_{OUT}=0V		8	12	pF

TYPICAL CHARACTERISTICS

NORMALIZED ACCESS TIME vs. SUPPLY VOLTAGE

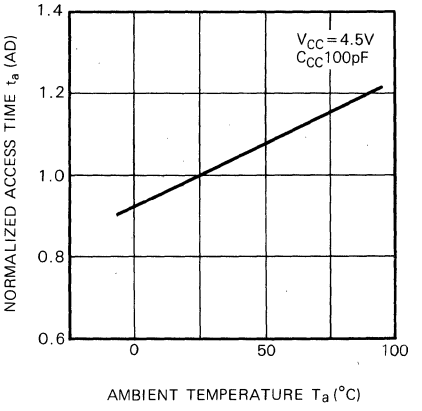


SUPPLY CURRENT VS AMBIENT TEMPERATURE

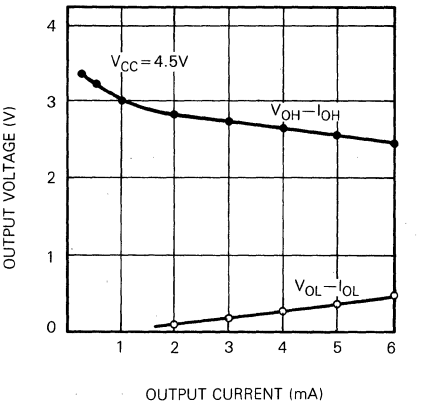


65 536-BIT(8192-WORD BY 8-BIT)MASK-PROGRAMMABLE ROM

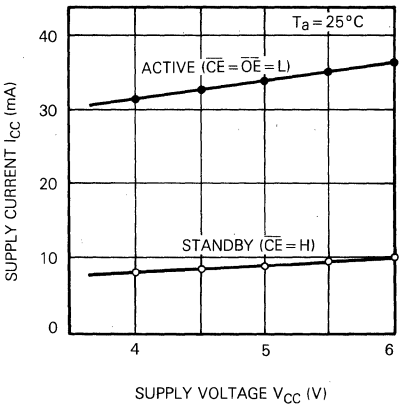
NORMALIZED ACCESS TIME vs. AMBIENT TEMPERATURE



OUTPUT VOLTAGE VS OUTPUT CURRENT



SUPPLY CURRENT VS SUPPLY VOLTAGE



MITSUBISHI ELECTRIC