

RICOH

EK-043-9004

NMOS 4Mbit MASK ROM (524,288word×8bit)

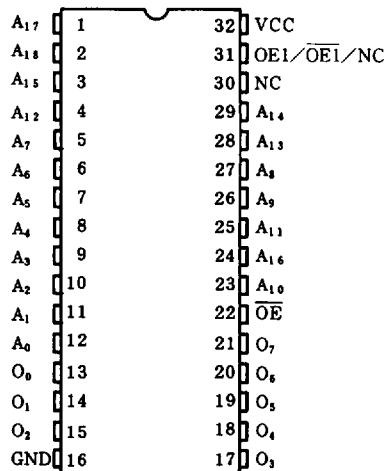
T-46-13-15

RP234096

The RP234096 is static NMOS Read Only Memory organized as 524288 words × 8bits and operates from a single +5V Supply. And the consumption current is 50mA (MAX). Tow Output Enable signals allows up to 4 wired ORs.

The Output Enable of the pin31 can be selected as Active High, Active Low or NC (No Connection).

■ PIN CONFIGURATION (Top view)



■ FEATURES

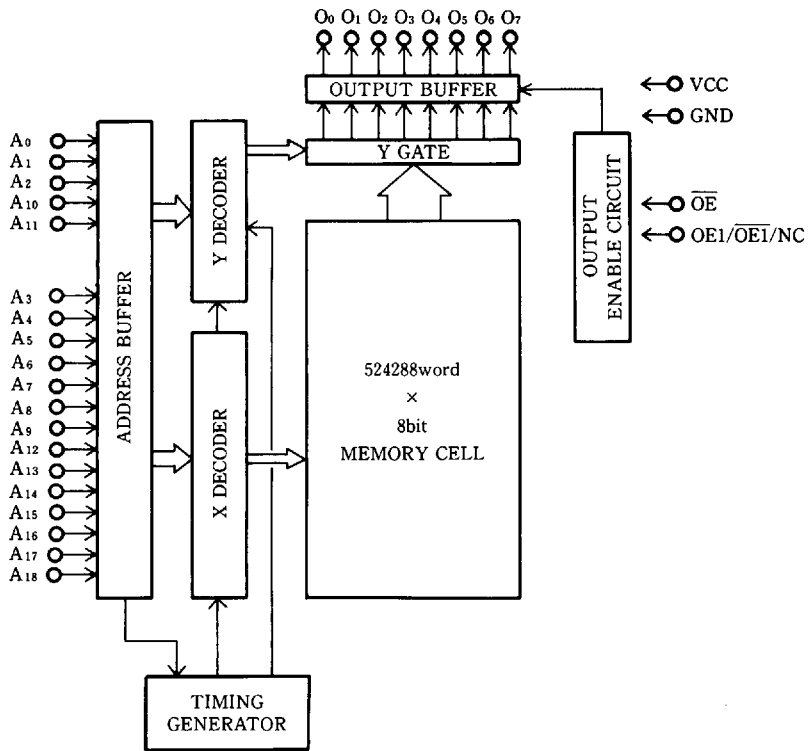
1. Organization: 524288words×8bits
2. Access Time: 200ns (MAX.)
3. Input/Output Level: TTL
4. Single 5V power supply
5. Package: 32pin plastic DIP

■ PIN DESCRIPTION

Pin Name	Description
A ₀ ~ A ₁₈	Address Input
O ₀ ~ O ₇	Data Output
\overline{OE}	Output Enable Input
OE1/ $\overline{OE1}$	Output Enable Input
NC	No Connection
V _{cc}	Power Supply (+5V)
GND	Ground

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■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATING

Symbol	Parameter	Condition	Limit	Unit
V _{cc}	Supply Voltage	With respect to GND	-0.3 ~ 7	V
V _i	Input Voltage		-0.3 ~ V _{cc} +0.3	V
V _o	Output Voltage		-0.3 ~ V _{cc} +0.3	V
P _d	Power Consumption	T _a = 25°C	350	mW
T _{opr}	Operating Temperature		0 ~ 70	°C
T _{stg}	Storage Temperature		-40 ~ 125	°C

■ RECOMMENDED OPERATING CONDITION (T_a = 0 ~ 70°C)

Symbol	Parameter	MIN.	TYP.	MAX.	Unit
V _{cc}	Supply Voltage	4.5	5.0	5.5	V
V _{IH}	"H" Input Voltage	2.0		V _{cc} +0.3	V
V _{IL}	"L" Input Voltage	-0.3		0.8	V

■ ELECTRICAL CHARACTERISTICS

● DC Electrical Characteristics (T_a = 0 ~ 70°C, V_{cc} = 5V±10%)

Symbol	Parameter	Condition	MIN.	TYP.	MAX.	Unit
I _{cc}	Supply Current (operation)	I _o = 0 mA			50	mA
V _{OH}	"H" Output Voltage	I _{OH} = -400 μA	2.4			V
V _{OL}	"L" Output Voltage	I _{OL} = 3.2 mA			0.4	V
V _{IH}	"H" Input Voltage		2.0		V _{cc} +0.3	V
V _{IL}	"L" Input Voltage		-0.3		0.8	V
I _{LI}	Input Leakage Current	V _i = 0V ~ V _{cc}	-10		10	μA
I _{LO}	Output Leakage Current	V _o = 0V ~ V _{cc} Output Deselected	-10		10	μA

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● AC Electrical Characteristics (Ta = 0~70°C, Vcc = 5V±10%)

Symbol	Parameter	MIN.	TYP.	MAX.	Unit
t _{RC}	Read Cycle Time	200			ns
t _{ACC}	Address Access Time			200	ns
t _{OE}	Output Enable Access Time			80	ns
t _{DF}	Output Floating Delay Time	0		80	ns
t _{OH}	Output Hold Time	0			ns

Note) Test Condition

Input Pulse Voltage: V_{IL} = 0.6V, V_{IH} = 2.4V

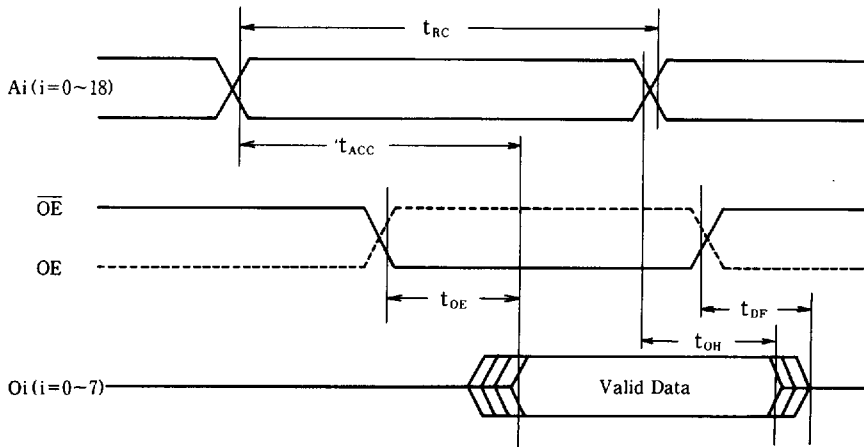
Input Pulse Rise/Fall Time: 10 ns

Timing Measuring Voltage: Input V_{IL} = 0.8V, V_{IH} = 2.2V

Output V_{OL} = 0.8V, V_{OH} = 2.2V

Output Load: 1TTL + 100pF (Including Jig capacitance)

● Timing Chart



* Valid data at power-on

Valid data is output after t_{ACC} from the change of at least one of the Address Input signals at the power-on.

● Capacitance

Symbol	Parameter	Condition	MIN.	TYP.	MAX.	Unit
C _i	Input Capacitance	f = 1MHz			8	pF
C _o	Output Capacitance	f = 1MHz			12	pF

■ PACKAGE DIMENSION (unit: $\frac{mm}{(inch)}$)

32 pin DIP

