

RP23256D/E, RP23257D/E

■ GENERAL DESCRIPTION

The RP23256D/E and RP23257D/E are static NMOS Read Only Memories organized as 32,768 words by 8-bits and operate from a single +5V supply.

The RP23256D/E and RP23257D/E features automatic power-down mode. When Chip Enable (\overline{CE}) goes HIGH level, the supply current is reduced from 100mA (max.) to 20mA (max.).

These devices have Chip Enable (\overline{CE}) input and two output Enable (OE/\overline{OE}) inputs allowing up to eight wired ORs to be tied without external decoding.

According to your order, logic of the following pins may be selected ACTIVE LOW or ACTIVE HIGH.

Pins 1, and 22 for RP23256D/E

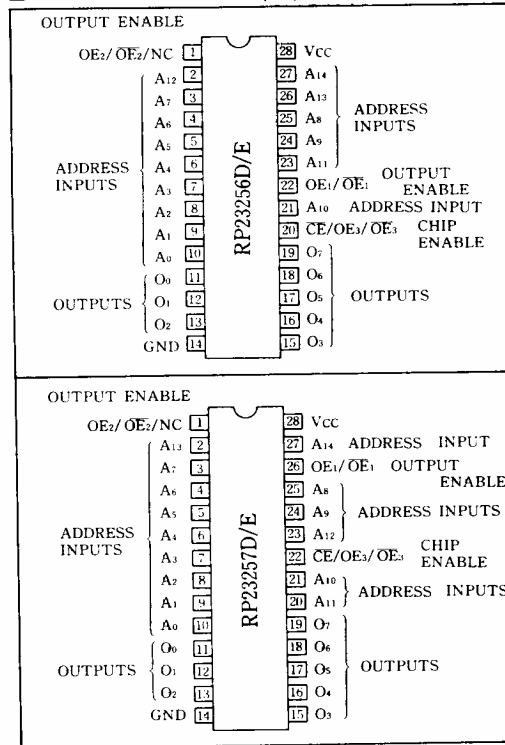
Pins 1, and 26 for RP23257D/E

and OE_2 may be changed to NC (No Connection), \overline{CE} may be selected to OE_3 .

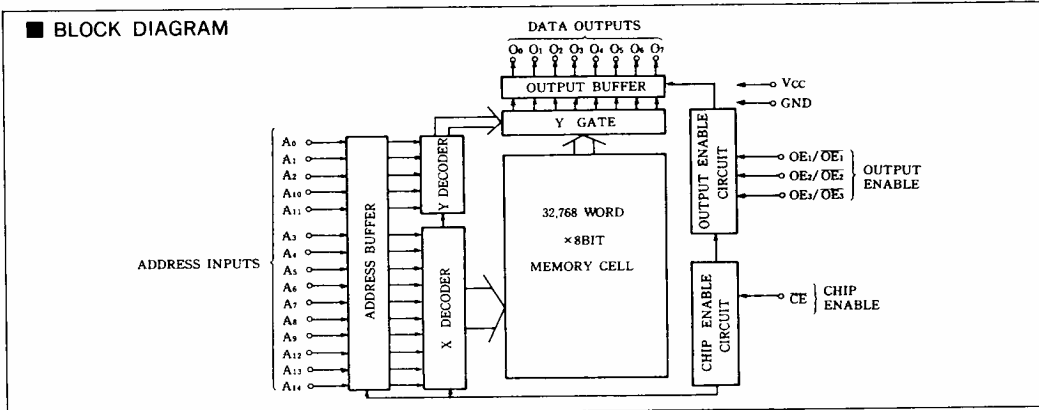
■ FEATURES

- 32,768 words × 8 bits organization
- Low power dissipation: Active 550mW max.
Standby 110mW max.
- Fast access time: RP23256D/257D 250ns max.
RP23256E/257E 200ns max.
- Single +5V ($\pm 10\%$) power supply
- Completely TTL compatible: All outputs and inputs
- 3-state outputs for wired-OR expansion
- Pin compatible with: Intel 27256 EPROM (RP23256D/E)
TI 2564 EPROM (RP23257D/E)

■ PIN CONFIGURATION (Top view)



■ BLOCK DIAGRAM



■ ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Condition	Limit	Unit
V _{CC}	Supply Voltage	With respect to GND	-0.5~7	V
V _I	Input Voltage		-0.5~7	V
V _O	Output Voltage		-0.5~7	V
P _d	Maximum Power Dissipation	T _a =25°C	700	mW
T _{opr}	Operating Ambient Temperature		0~70	°C
T _{stg}	Storage Temperature		-40~125	°C

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

Symbol	Parameter	Specified Value			Unit
		Min	Typ	Max	
V _{CC}	Supply Voltage	4.5	5.0	5.5	V
V _{IH}	Input High Voltage	2.0		V _{CC}	V
V _{IL}	Input Low Voltage	-0.5		0.8	V

■ ELECTRICAL CHARACTERISTICS

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

Symbol	Parameter	Test Condition	Specified Value			Unit
			Min	Typ	Max	
I _{CC1}	Supply Current (Standby)	CE = V _{CC}			20	mA
I _{CC2}	Supply Current (Active)	I _O =0mA			100	mA
V _{OH}	Output High Voltage	I _{OH} = -400μA	2.4			V
V _{OL}	Output Low Voltage	I _{OL} = 3.2mA			0.4	V
V _{IH}	Input High Voltage		2.0		V _{CC}	V
V _{IL}	Input Low Voltage		-0.5		0.8	V
I _{L1}	Input Leakage Current	V _I = 0V ~ V _{CC}	-10		10	μA
I _{LO}	Output Leakage Current	V _O = 0V ~ V _{CC} Chip Deselected	-10		10	μA

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

Symbol	Parameter	Test Condition	RP23256D/257D			RP23256E/257E			Unit
			Min	Typ	Max	Min	Typ	Max	
t _{RC}	Read Cycle Time	Output Load = 1TTL+100pF	250			200			ns
t _{ACC}	Address Access Time				250			200	ns
t _{CE}	Chip Enable Access Time				250			200	ns
t _{OE}	Output Enable Access Time				100			80	ns
t _{DF}	Output Hold Time after Output Enable Change				100			80	ns
t _{OH}	Output Hold Time after Address Change			0		0			ns
t _{CH}	Output Hold Time after Chip Enable Change				100			80	ns

Notes : 1. Input Pulse Levels : V_{IL}=0.6V, V_{IH}=2.2V

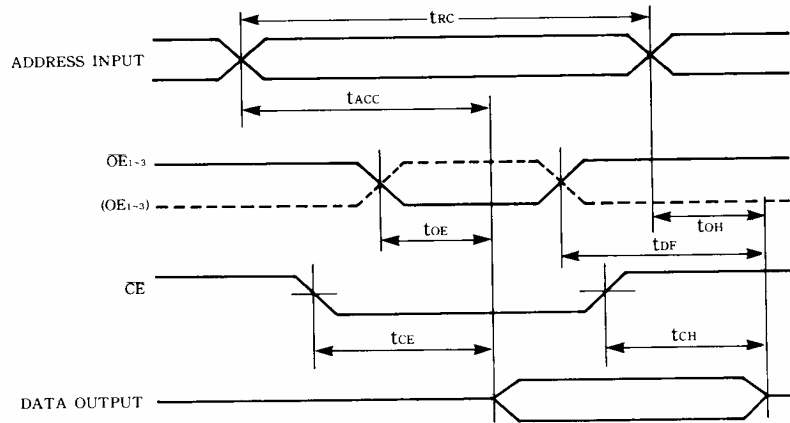
2. Output Timing Reference Level : V_{O1}=0.8V, V_{OH}=2.0V



● TERMINAL CAPACITANCE

Symbol	Parameter	Test Condition	Specified Value			Unit
			Min	Typ	Max	
C _i	Input Capacitance	f = 1MHz			8	pF
C _o	Output Capacitance				12	pF

■ TIMING CHART



■ 28 PIN PLASTIC PACKAGE (Unit : mm)

