RICOH

T-46-13-15 EK-060-9111

RP/RS53256E

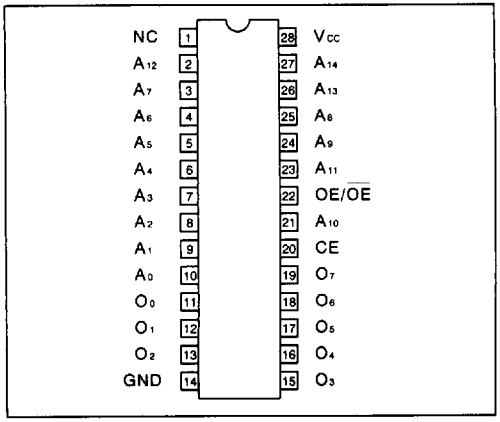
CMOS 256kbit MASK ROM

(32,768 word × 8 bit)

RP/RS53256E is a CMOS Read Only Memory organized as 32768 words × 8 bits and operates from a single 5V supply. The supply current is reduced from 50 mA (Max.) to 100 μA (Max.) by the power down function.

Accoding to your order, the logic of OE signal can be selected as either ACTIVE HIGH or ACTIVE LOW.

PIN CONFIGURATION (TOP VIEW)



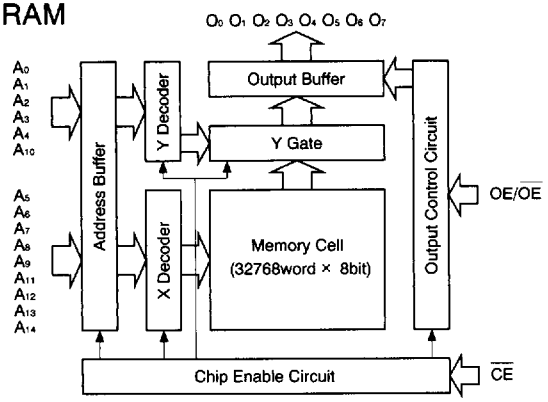
FEATURES

1. Organization: 32768 words × 8 bits
2. Access Time: 200 ns
3. TTL Compatible Input/Output
4. Single 5V Power Supply
5. Package RP53256E · · · 28pin DIP
   RS53256E · · · 28pin SOP

PIN DESCRIPTION

Pin Name	Function
$A_0 \sim A_{14}$	Address Input
$O_0 \sim O_7$	Data Output
OE/$\overline{OE}$	Output Enable Input
$\overline{CE}$	Chip Enable Input
V_{CC}	Power Supply (+5V)
GND	Ground

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
Pd	Power Consumption	Ta = 25℃	350	mW
Topr	Operating Temperature		0 ~ 70	℃
Tstg	Storage Temperature		− 40 ~ 125	℃

■ RECOMMENDED OPERATING CONDITION (Ta=0~70℃)

Symbol	Parameter	Min.	Typ.	Max.	Unit
V_{CC}	Supply Voltage	4.5	5.0	5.5	V

■ ELECTRICAL CHARACTERISTICS

●DC ELECTRICAL CHARACTERISTICS (Ta=0~70℃、Vcc=5V ±10%)

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
I_{CC1}	Supply Current (Operation)	t_{RC} = 200 ns			50	mA
I_{SB1}	Supply Current (Stand by)	$\overline{CE}$ = V_{IH}			2	mA
I_{SB2}		$\overline{CE}$ = V_{CC} − 0.2V			100	μA
V_{OH}	" H " Output Voltage	I_{OH} = − 0.4 mA	2.4			V
V_{OL}	" L " Output Voltage	I_{OL} = 1.6 mA			0.4	V
V_{IH}	" H " Input Voltage		2.2		V_{CC}	V
V_{IL}	" L " Input Voltage		− 0.3		0.8	V
I_{LI}	Input Lenkage Current	V_I = 0V ~ V_{CC}	− 10		10	μA
I_{LO}	Output Leakage Current	V_O = 0V ~ V_{CC} Chip Deselected	− 10		10	μA

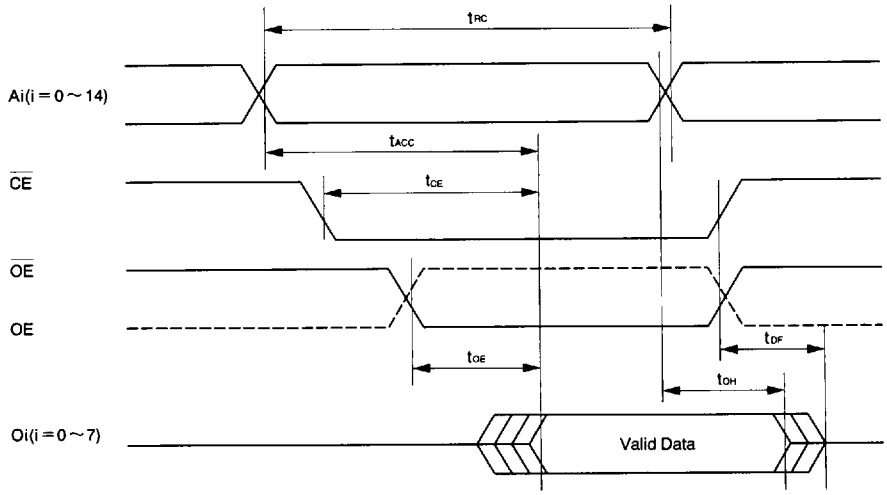
The supply current is measured at output open state.

●AC ELECTRICAL CHARACTERISTICS (Ta=0~70℃、Vcc=5V ±10%)

Symbol	Parameter	Min.	Typ.	Max.	Unit
t_{RC}	Read Cycle Time	200			ns
t_{ACC}	Address Access Time			200	ns
t_{CE}	Chip Enable 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

Input Voltage : V_{IL} = 0.6V、 V_{IH} = 2.4V 、 tr、tf = 10 ns
Output Load : 1 TTL + 100 pF
Measuring Voltage : V_{IL} = 0.8V、 V_{IH} = 2.2V 、 V_{OL} = 0.8V 、 V_{OH} = 2.2V

●TIMING CHART

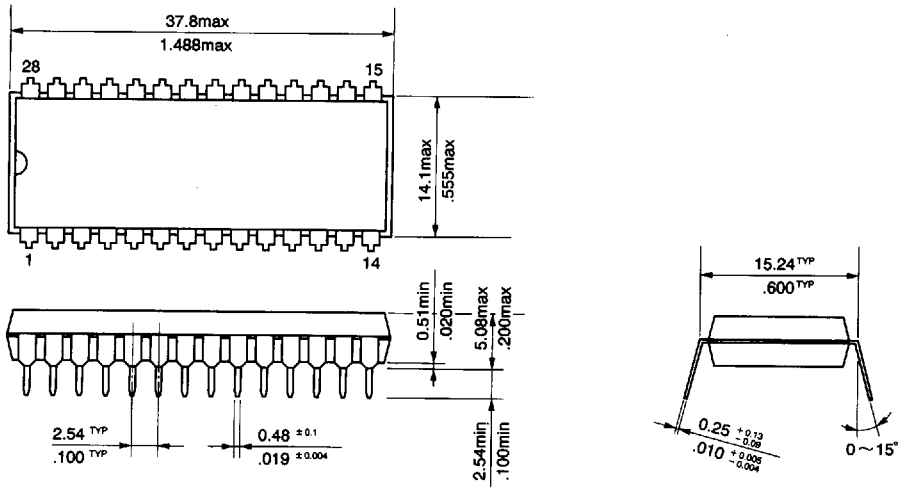


●CAPACITANCE

Symbol	Parameter	Condition	Min.	Typ.	Max.	Unit
Ci	Input Capacitance	f = 1MHz			10	pF
Co	Output Capacitance				12	pF

PACKAGE DIMENSION (Unit : mm/inch)

●28PIN DIP (RP53256E)



●28PIN SOP (RS53256E)