

Description

The μPD23C1010A is a 1,048,576-bit ROM fabricated with CMOS silicon-gate technology. The device is static in operation and organized as 131,072 words by 8 bits. It has three-state outputs, fully TTL-compatible inputs and outputs, and is available in a 28-pin plastic DIP.

Features

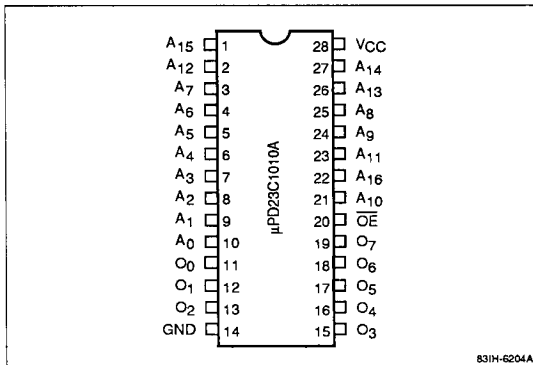
- 131,072 words by 8-bit organization
- Fast access time
- TTL-compatible inputs and outputs
- Three-state outputs
- Single +5-volt power supply
- CMOS technology
- Fully static operation
- Low power dissipation of 220 mW

Ordering Information

Part Number	Address Access Time (max)	Output Enable Access Time (max)	Package
μPD23C1010AC	200 ns	100 ns	28-pin plastic DIP

Pin Configuration

28-Pin Plastic DIP



Pin Identification

Symbol	Function
A ₀ - A ₁₆	Address Inputs
O ₀ - O ₇	Data outputs
OE	Output enable
GND	Ground
VCC	+5-volt power supply

Absolute Maximum Ratings

Supply voltage, V_{CC}	-0.3 to +7.0 V
Input voltage, V_I	-0.3 V to $V_{CC} + 0.3$ V
Output voltage, V_O	-0.3 V to $V_{CC} + 0.3$ V
Operating temperature, T_{OPR}	-10 to +70°C
Storage temperature, T_{STG}	-65 to +150°C

Exposure to Absolute Maximum Ratings for extended periods may affect device reliability; exceeding the ratings could cause permanent damage. The device should be operated within the limits specified under DC and AC Characteristics.

Capacitance

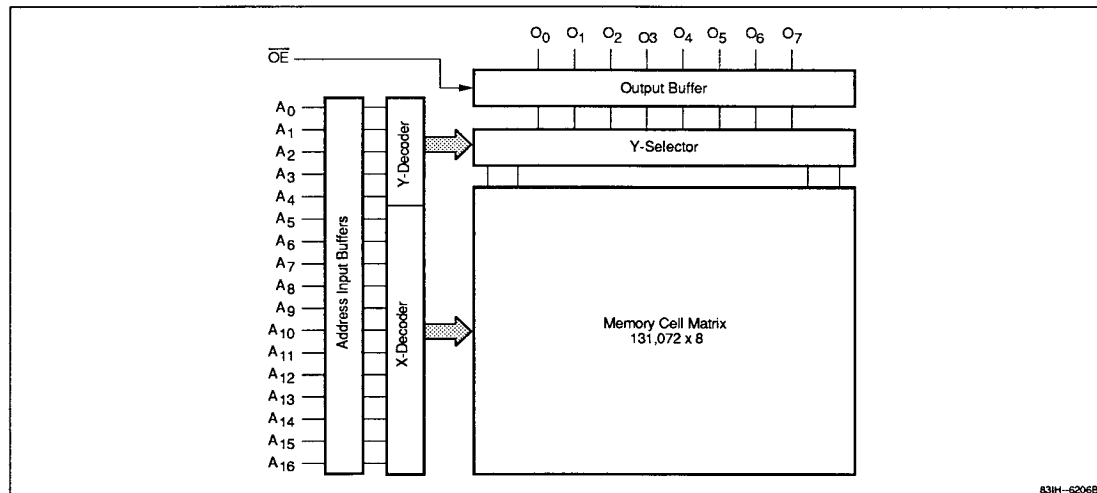
$T_A = 25^\circ\text{C}$; $f = 1$ MHz

Parameter	Symbol	Min	Typ	Max	Unit
Input capacitance	C_I			15	pF
Output capacitance	C_O			15	pF

Recommended Operating Conditions

Parameter	Symbol	Min	Typ	Max	Unit
Input voltage, high	V_{IH}	2.2		$V_{CC} + 0.3$	V
Input voltage, low	V_{IL}	-0.3		0.8	V
Supply voltage	V_{CC}	4.5	5.0	5.5	V
Ambient temperature	T_A	-10		70	°C

Block Diagram



83H-6206B

DC Characteristics

$T_A = -10$ to $+70^\circ\text{C}$; $V_{CC} = +5.0\text{ V} \pm 10\%$

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Output voltage, high	V_{OH}	2.4			V	$I_{OH} = -400\ \mu\text{A}$
Output voltage, low	V_{OL}			0.4	V	$I_{OL} = +2.5\ \text{mA}$
Input leakage current, high	I_{LIH}			10	μA	$V_i = V_{CC}$
Input leakage current, low	I_{LIL}			-10	μA	$V_i = 0\ \text{V}$
Output leakage current, high	I_{LOH}			10	μA	$V_O = V_{CC}$; output disabled
Output leakage current, low	I_{LOL}			-10	μA	$V_O = 0\ \text{V}$; output disabled
Power supply current	I_{CC1}			40	mA	

AC Characteristics

$T_A = -10$ to $+70^\circ\text{C}$; $V_{CC} = +5.0\text{ V} \pm 10\%$

Parameter	Symbol	Min	Typ	Max	Unit	Test Conditions
Address access time	t_{ACC}			200	ns	
Output enable access time	t_{OE}			100	ns	
Output hold time	t_{OH}	0			ns	
Output disable time	t_{DF}	0		60	ns	

Notes:

- (1) Input voltage rise and fall times = 20 ns; input and output timing reference levels = 0.8 and 2.0 V; output load = 1 TTL + 100 pF.

Timing Waveform

