

MB838000B

CMOS 8M-BIT MASK READ ONLY MEMORY

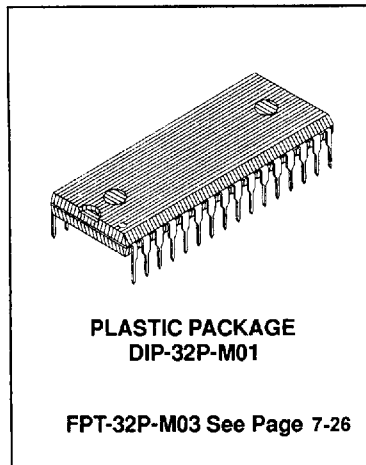
1M x 8 CMOS MASK READ ONLY MEMORY

The Fujitsu MB838000B is a CMOS Si-gate mask-programmable static read only memory organized as 1,048,576 words by 8 bits.

The MB838000B has TTL-compatible I/O 3-state output level with fully-static operation (i.e. no need of clock signal) and single +5V power supply.

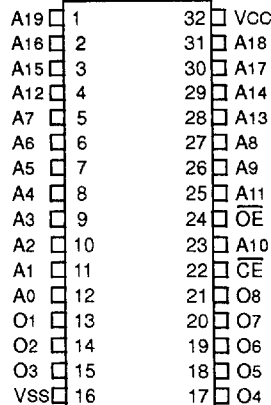
Also, the MB838000B is designed for applications such as character generator or program storage which require large memory capacity and high-speed/low-power operation.

- Organization: 1,048,576 words x 8 bits
- Access time: 120ns max.
- Completely static operation: No clock required
- TTL compatible Input/Output
- Three state output
- Single +5V power supply
- Power dissipation: 275mW max. (Active)
5.5mW max. (Standby, TTL input level)
55µW max. (Standby, CMOS input level)
- 32-pin Plastic DIP: Suffix: P
- 32-pin Plastic SOP: Suffix: PF



PIN ASSIGNMENT

(TOP VIEW)



DIP & SOP

ABSOLUTE MAXIMUM RATINGS (see NOTE)

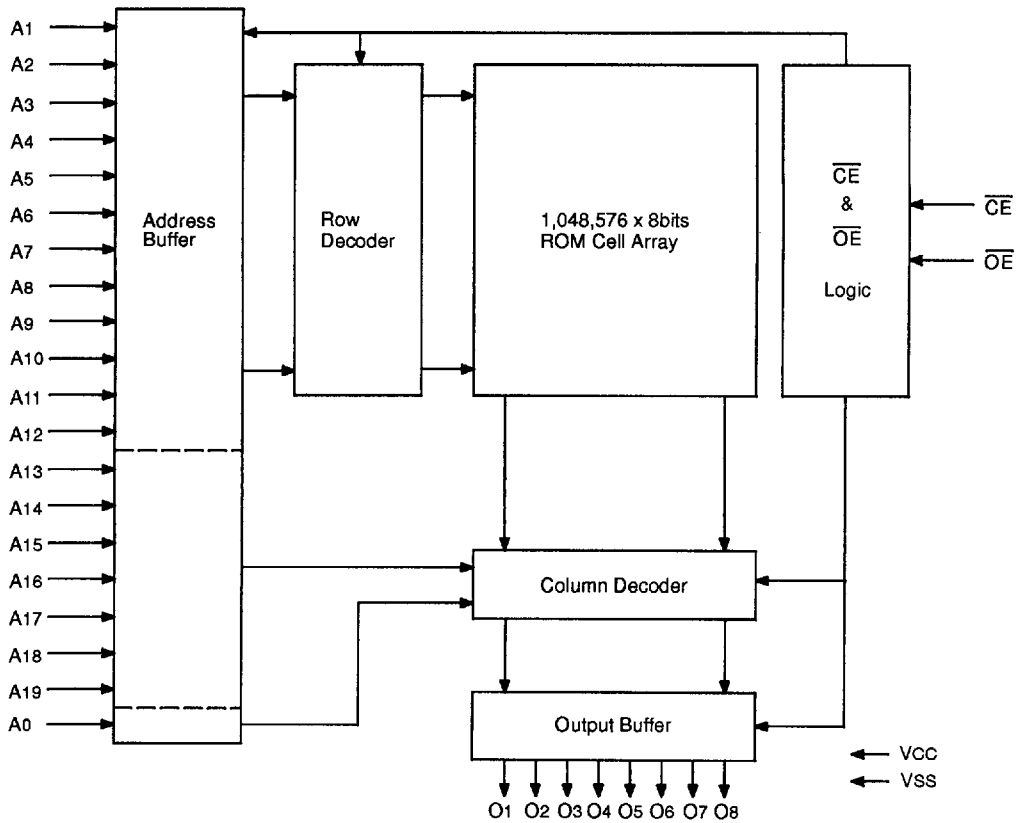
Rating	Symbol	Value	Unit
Supply Voltage	VCC	-0.3 to +7.0 *	V
Input Voltage	VIN	-0.5 to VCC +0.5 *	V
Output Voltage	VOUT	-0.5 to VCC +0.5 *	V
Temperature Under Bias	TBIAS	-10 to +85	°C
Storage Temperature Range	TSTG	-45 to +125	°C

* Referenced to GND

NOTE: Permanent device damage may occur if the above **Absolute Maximum Ratings** are exceeded. Functional operation should be restricted to the conditions as detailed in the operational sections of this data sheet. Exposure to absolute maximum rating conditions for extended periods may affect device reliability.

This device contains circuitry to protect the inputs against damage due to high static voltages or electric fields. However, it is advised that normal precautions be taken to avoid application of any voltage higher than maximum rated voltages to this high impedance circuit.

Fig. 1 — MB83800B BLOCK DIAGRAM



TRUTH TABLE

\overline{CE}	\overline{OE}	Mode	Output	Power Dissipation Mode
H	X	NOT SELECTED	High-Z	STANDBY
L	H	NOT SELECTED	High-Z	ACTIVE
L	L	SELECTED	DOUT	ACTIVE

CAPACITANCE ($T_A=25^\circ C, f=1MHz$)

Parameter	Symbol	Min	Typ	Max	Unit
Output Capacitance ($V_{OUT}=0V$)	C_{OUT}			15	pF
Input Capacitance ($V_{IN}=0V$)	C_{IN}			10	pF

RECOMMENDED OPERATING CONDITIONS

(Referenced to GND)

Parameter	Symbol	Min	Typ	Max	Unit
Supply Voltage	VCC	4.5	5.0	5.5	V
Input Low Voltage	VIL	-0.3		0.8	V
Input High Voltage	VIH	2.2		VCC+0.3	V
Ambient Temperature	TA	0		70	°C

DC CHARACTERISTICS

(Recommended operating conditions unless otherwise noted.)

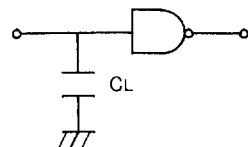
Parameter	Test Conditions	Symbol	Min	Typ	Max	Unit
Active Supply Current	$\overline{CE}=V_{IL}$, Minimum Cycle	ICC			50	mA
Standby Supply Current	$\overline{CE}=V_{IH}$	ISB1			1	mA
	$\overline{CE}=V_{CC}=V_{IH}$, $V_{IN}=V_{SS}$ or V_{CC}	ISB2			10	μA
Input Leakage Current	$V_{IN}=0$ to V_{CC}	ILI	-10		10	μA
Output Leakage Current	$\overline{CE}=V_{IH}$, $\overline{OE}=V_{IH}$	ILI/O	-10		10	μA
Output High Voltage	$I_{OH}=-400\mu A$	VOH	2.4			V
Output Low Voltage	$I_{OL}=2.1mA$	VOL			0.4	V

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AC TEST CONDITIONS

Fig.2 -- AC TEST CONDITIONS

- Input Pulse Level : 0.6 to 2.4V
- Input Pulse Rise and Fall Time : $t_T=5ns$
- Timing Reference Levels : Input: $V_{IL}=0.8V$, $V_{IH}=2.2V$
Output: $V_{OL}=0.8V$, $V_{OH}=2.2V$
- Output Load : 1 TTL Gate and 100pF



AC CHARACTERISTICS

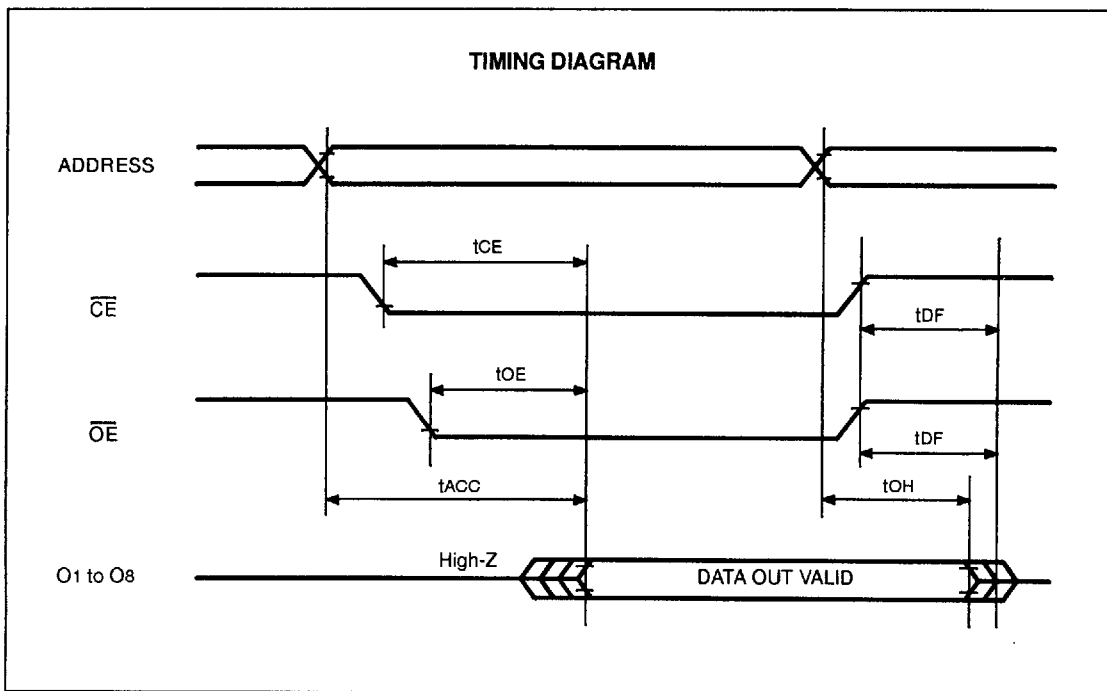
(Recommended operating conditions unless otherwise noted.)

Parameter	Test Conditions	Symbol	Min	Max	Unit
Address Access Time	$\overline{CE}=\overline{OE}=V_{IL}$	tACC		120	ns
Chip Enable Access Time	$\overline{OE}=V_{IL}$	tCE		120	ns
Output Enable Access Time	Note 1	tOE		60	ns
Output Disable Time	Note 2	tDF		50	ns
Output Hold Time	$\overline{CE}=\overline{OE}=V_{IL}$	tOH	0		ns

Note 1: Maximum \overline{OE} delay which does not affect tACC is tACC - tOE.

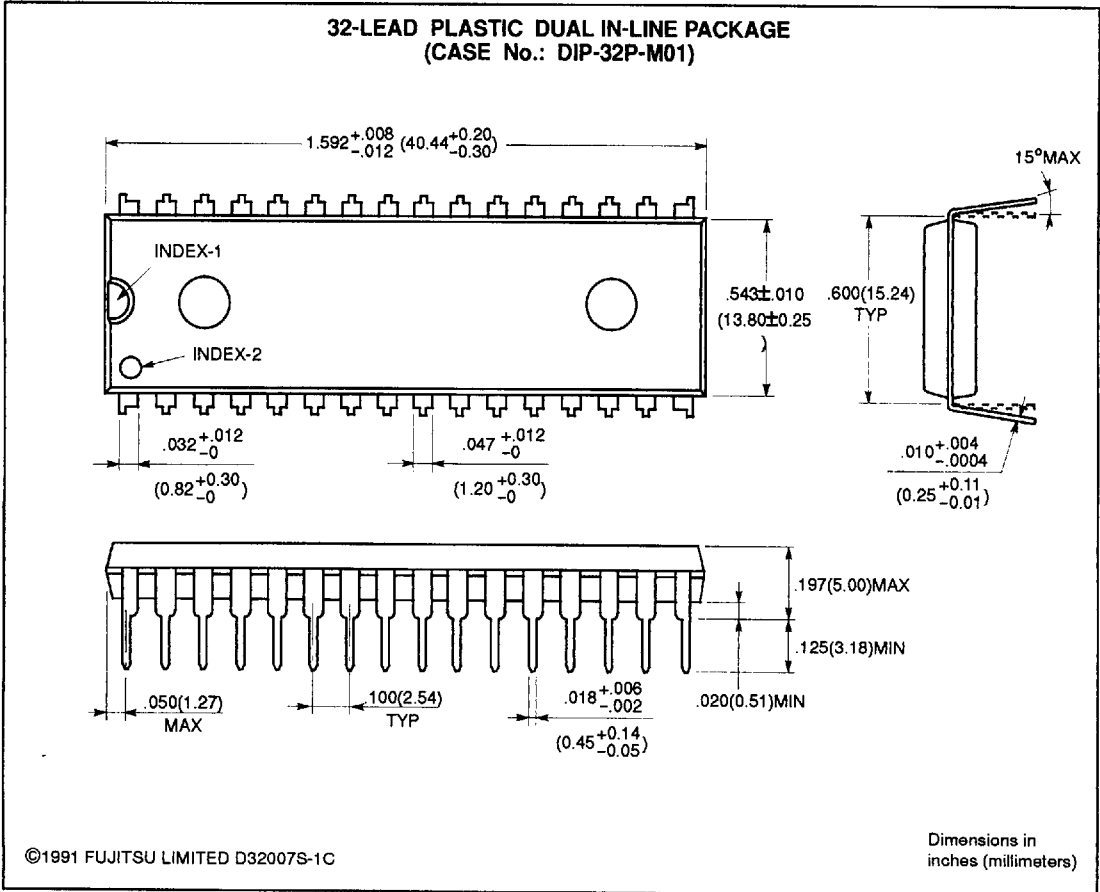
Note 2: tDF is specified by either of \overline{CE} or \overline{OE} changing to High earlier.

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PACKAGE DIMENSIONS

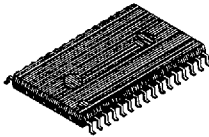
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PACKAGE DIMENSIONS

(Suffix: PF)



PLASTIC PACKAGE
FPT-32P-M03

32-LEAD PLASTIC FLAT PACKAGE (CASE No.: FPT-32P-M03)

