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FUJITSU

DATA SHEET

MB81C1002A-60/-80/-10

CMOS 1,048,576 BIT STATIC COLUMN MODE DYNAMIC RAM

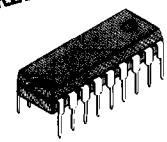
CMOS 1,048,576 X 1 BIT Static Column Mode Dynamic RAM

ADVANCE INFO.

The Fujitsu MB81C1002A is CMOS fully decoded dynamic RAM organized as 1,048,576 words x 1 bit. The MB81C1002A has been designed for mainframe memories, buffer memories, and video image memories requiring high speed, high-band width output with low power dissipation, as well as for memory systems of handheld computers which need very low power dissipation.

Fujitsu's advanced three-dimensional stacked capacitor cell technology makes the MB81C1002A *High α-ray soft error immunity and long refresh time.*

The CMOS circuits can be used as peripheral circuits. In addition, low power dissipation and high speed operation are realized.



DIP-18P-M04

T.B.D

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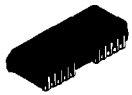
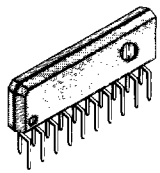


LCC-26P-M04



ZIP-20P-M02

PRODUCT LINE & FEATURES

Parameter	MB81C1002A-60	MB81C1002A-80	MB81C1002A-10
$\overline{RAS}$ Access Time	60ns max.	80ns max.	100ns max.
Randam Cycle Time	130ns min.	155ns min.	180ns min.
Address Access Time	30ns max.	40ns max.	50ns max.
$\overline{CAS}$ Access Time	15ns max.	20ns max.	25ns max.
Static Column Mode Cycle	35ns min.	45ns min.	55ns max.
Low Power Dissipation • Operating current	330mW max.	275mW max.	248mW max.
• Standby current	11mW max. (TTL level) / 5.5mW max. (CMOS level)		

- 1,048,576 words x 1 bit organization
- Silicon gate, CMOS, 3D-Stacked Capacitor Cell
- All input and output are TTL compatible
- *512 refresh cycles every 8.2 ms*
- Common I/O capability by using early write
- $\overline{RAS}$ only, $\overline{CAS}$-before-$\overline{RAS}$, or Hidden Refresh
- Static column Mode, Read-Modify-Write capability
- On chip substrate bias generator for high performance

ABSOLUTE MAXIMUM RATINGS (see NOTE)

Parameter		Symbol	Value	Unit
Voltage at any pin relative to VSS		V_{IN}, V_{OUT}	−1 to +7	V
Voltage of V_{CC} supply relative to VSS		V_{CC}	−1 to +7	V
Power Dissipation		PD	1.0	W
Short Circuit Output Current		—	50	mA
Storage Temperature	Ceramic	T_{STG}	−55 to +150	°C
	Plastic		−55 to +125	

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.