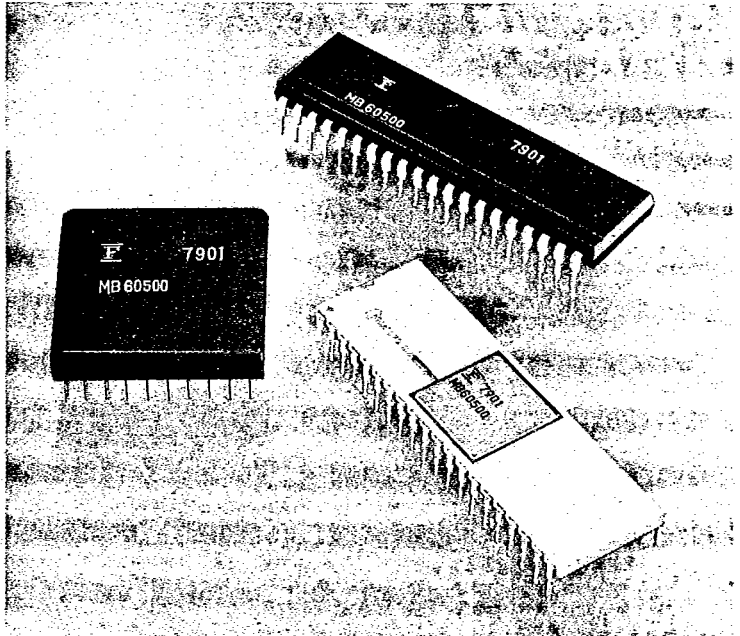


# C-1500 Gate Array

## MB60K Silicon Gate CMOS LSI

The Fujitsu C-1500 (MB60K Series) is a highly integrated, low power, gate array LSI fabricated with silicon gate CMOS technology. The array consists of 2000 internal basic unit cells (2 input NAND equivalent) and 72 I/O cells. With the application of a customized double-layer metal mask, a wide variety of random logic functions can be made. To assure quick, simple error-free implementation of the metal interconnection routing, Fujitsu utilizes a unique Computer-Aided Design System (CAD) to interface custom specifications with the manufacturing function. This CAD software provides the physical layout of the array, line routing, mask pattern data generation, and test programs as well as computer simulation of the final circuit.

The C-1500 can be packaged in a plug-in type 64 pin square package or 40-pin DIP depending on the number of input and output connections required by the design.



### Features

- \* Fast turn-around on design  
(15 weeks typically)
- \* Simplified customer interface with CAD support  
(Only logic design and test pattern information required)
- \* Sixty pre-designed logic cells available
- \* Standard 40 pin DIP or a plug-in type 64 pin square package
- \* Internal gate
  - High speed (5 to 15 ns/gate)
  - Low power dissipation  
(0 mW: Steady state, 50 mW: Operation)
- \* Output buffer
  - Versatile output option  
(Push-pull, Three-state, Bi-directional bus)
- \* Input buffer
  - Clock input buffer option

### Absolute Maximum Ratings

Rating	Symbol	Min.	Max.	Unit
Supply Voltage	$V_{DD}$	$V_{SS}-0.3^*$	7.0	V
Input Voltage	$V_I$	$V_{SS}-0.3^*$	$V_{DD}+0.3^*$	V
Output Voltage	$V_O$	$V_{SS}-0.3^*$	$V_{DD}+0.3^*$	V
Temperature under Operation	$T_{op}$	0	70	°C
Temperature under Storage	$T_{st}$	-55	150	°C

\*Note: Can accept 0.5V in transient (20~30 ns)

### Recommend Operational Conditions

Parameter	Symbol	Min.	Typ.	Max.	Unit
Supply Voltage	$V_{DD}$	4.75	5.0	5.25	V
Input Voltage	$V_{IH}$ $V_{IL}$	2.0		0.8	V V
Temperature under Operation	$T_{op}$	0		70	°C



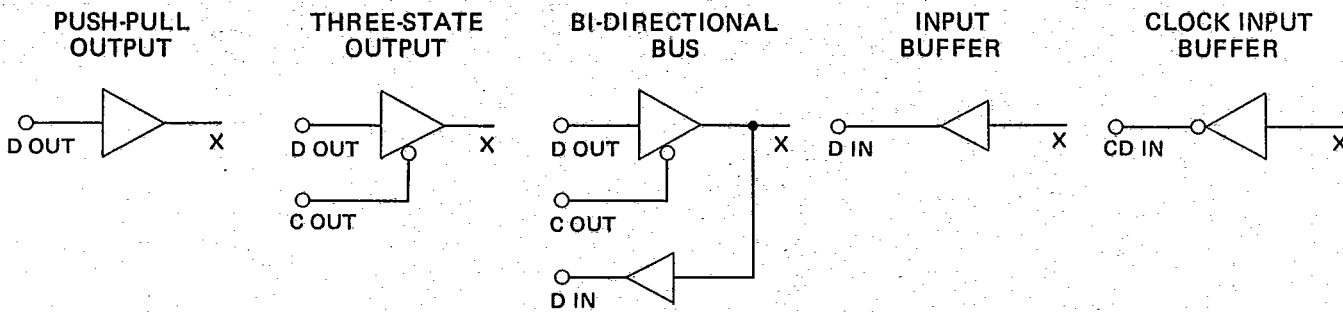
# C-1500 Gate Array

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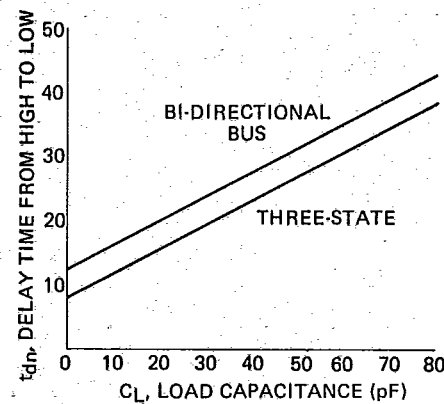
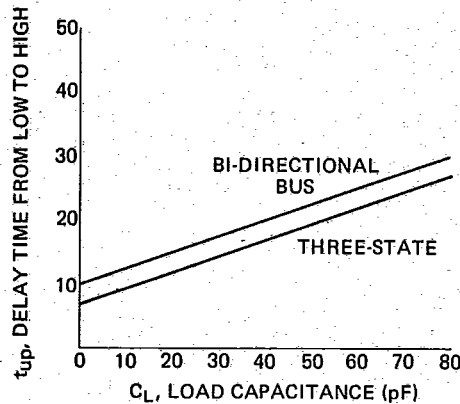
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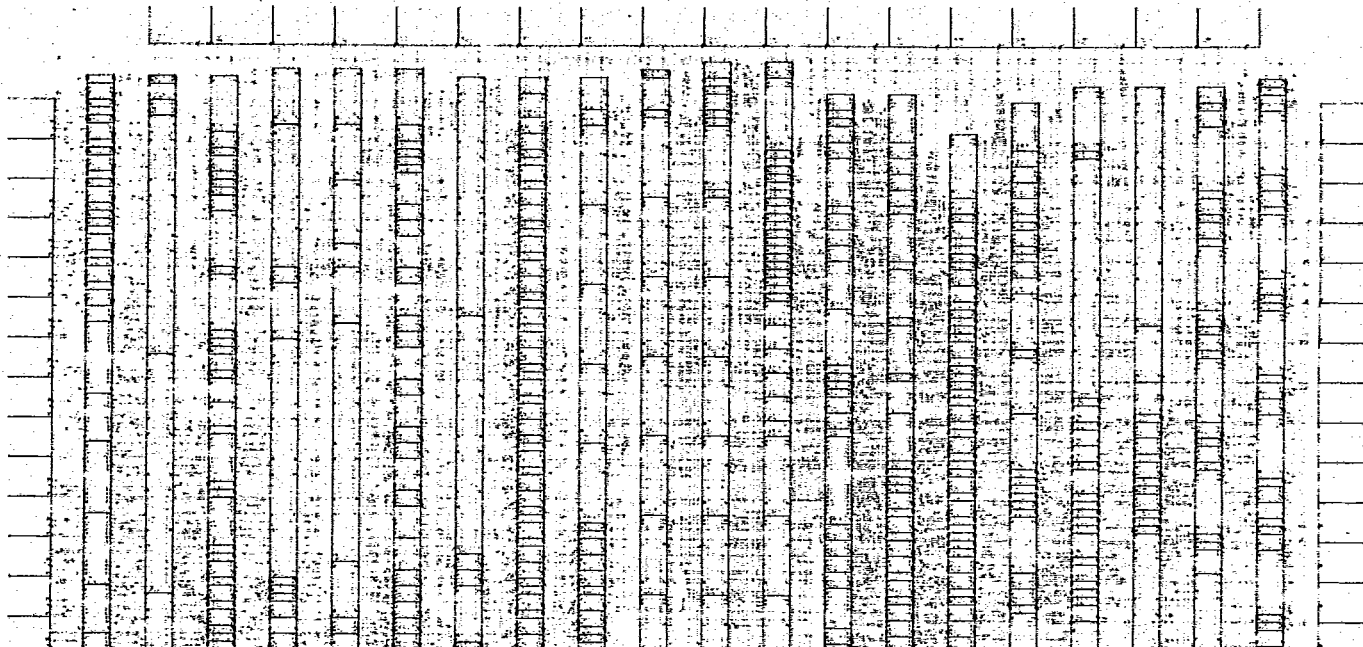
## I/O CELL Family



### Output Buffer Switching Characteristics (MEASURED AT 1.5 VOLTS)



### Chip Design Drawing via CAD



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Printed in Japan

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