

MEMORY

CMOS 1M × 16BIT HYPER PAGE MODE DYNAMIC RAM

MB8116165A-60/-70

CMOS 1,048,576 x 16BIT Hyper Page Mode Dynamic RAM

DESCRIPTION

The Fujitsu MB8116165A is a fully decoded CMOS Dynamic RAM (DRAM) that contains 16,777,216 memory cells accessible in 16-bit increments. The MB8116165A features a "hyper page" mode of operation whereby high-speed random access of up to 256-bits of data within the same row can be selected. The MB8116165A DRAM is ideally suited for mainframe, buffers, hand-held computers video imaging equipment, and other memory applications where very low power dissipation and high bandwidth are basic requirements of the design. Since the standby current of the MB8116165A is very small, the device can be used as a non-volatile memory in equipment that uses batteries for primary and/or auxiliary power.

The MB8116165A is fabricated using silicon gate CMOS and Fujitsu's advanced four-layer polysilicon and two-layer aluminum process. This process, coupled with advanced stacked capacitor memory cells, reduces the possibility of soft errors and extends the time interval between memory refreshes. Clock timing requirements for the MB8116165A are not critical and all inputs are TTL compatible.

ABSOLUTE MAXIMUM RATINGS (See NOTE)

Parameter	Symbol	Value	Unit
Voltage at any pin relative to V_{SS}	V_{IN}, V_{OUT}	-0.5 to + 7.0	V
Voltage of V_{CC} supply relative to V_{SS}	V_{CC}	-0.5 to + 7.0	V
Power Dissipation	PD	1.0	W
Short Circuit Output Current	I_{OUT}	-50 to + 50	mA
Operating Temperature	T_{OPE}	0 to 70	°C
Storage Temperature	T_{STG}	-55 to +125	°C

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.