M6MGB/T64BM34CWG

67,108,864-BIT (4,194,304-WORD BY 16-BIT) CMOS FLASH MEMORY & 33,554,432-BIT (2,097,152-WORD BY 16-BIT) CMOS MOBILE RAM

Stacked-CSP (Chip Scale Package)

Description

The M6MGB/T64BM34CWG is a Stacked Chip Scale Package (S-CSP) that contents 64M-bit Flash memory and 32M-bit Mobile RAM in a 67-pin Stacked CSP for lead free use.

64M-bit Flash memory is a 4,194,304 words, single power supply and high performance non-volatile memory fabricated by CMOS technology for the peripheral circuit and DINOR IV (Divided bit-line NOR IV) architecture for the memory cell. All memory blocks are locked and can not be programmed or erased, when F-WP# is Low. Using Software Lock Release function, program or erase operation can be executed.

32M-bit Mobile RAM is a 2,097,152 words high density RAM fabricated by CMOS technology for the peripheral circuit and DRAM cell for the memory array. The interface is compatible to an asynchronous SRAM.

The cells are automatically refreshed and the refresh control is not required for system. The device also has the partial block refresh scheme and the power down mode by writing the command.

The M6MGB/T64BM34CWG is suitable for a high performance cellular phone and a mobile PC that are required to be small mounting area, weight and small power dissipation.

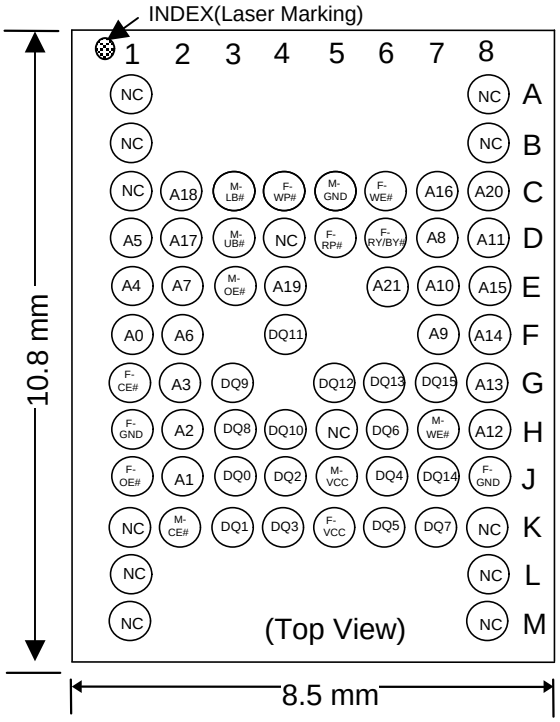
Features

Access Time	Flash	70ns (Max.)
	Mobile RAM	80ns (Max.)
Supply Voltage		F-VCC=M-VCC=2.7 ~ 3.0V
Ambient Temperature		Ta=-40 ~ 85 degree
Package		67pin S-CSP
		Ball pitch 0.80mm
		Outer-ball:Su-Ag-Cu

Application

Mobile communication products

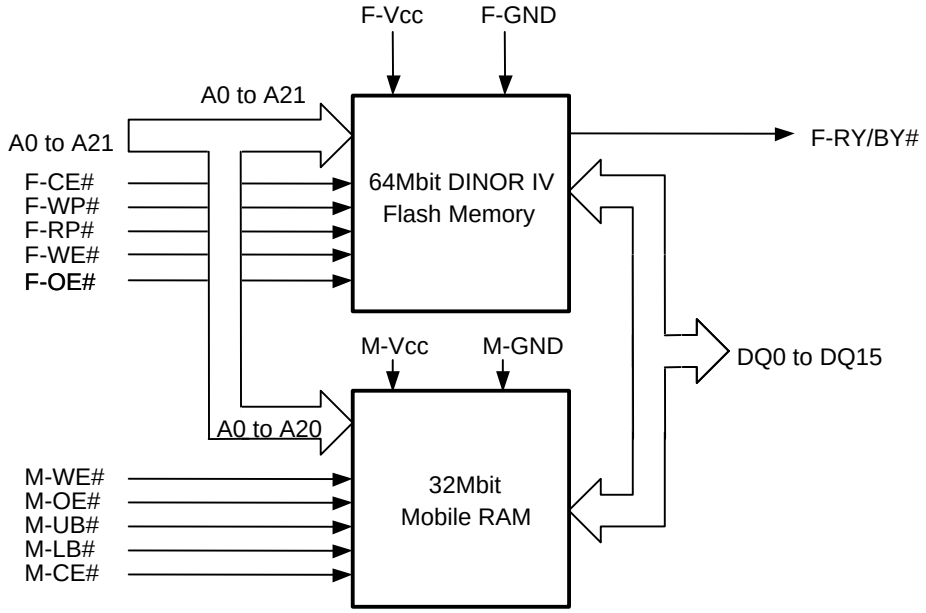
PIN CONFIGURATION (TOP VIEW)



F-VCC :VCC for Flash Memory
M-VCC :VCC for Mobile RAM
F-GND :GND for Flash Memory
M-GND :GND for Mobile RAM
A0-A20 :Common address for Flash/Mobile RAM
A21 :address for Flash
DQ0-DQ15 :Data I/O
F-CE# :Flash chip enable
M-CE# :Mobile RAM chip enable

F-RY/BY# : Flash Memory Ready /Busy
F-OE# :Output enable for Flash Memory
M-OE# :Output enable for Mobile RAM
F-WE# :Write enable for Flash Memory
M-WE# :Write enable for Mobile RAM
F-WP# :Write protect for Flash
F-RP# :Reset power down for Flash
M-LB# :Lower byte control for Mobile RAM
M-UB# :Upper byte control for Mobile RAM
NC : Non Connection

MCP Block Diagram



Note: In the data sheet there are "VCC"s , "GND"s , "OE"s and "WE"s.
In the Flash Memory part they mean F-Vcc, F-GND, F-OE# and F-WE#.
In the Mobile RAM part they mean M-Vcc, M-GND, M-OE# and M-WE#.
In the Mobile RAM part UB# and LB# are M-UB# and M-LB#, respectively.

Capacitance

Symbol	Parameter		Conditions	Limits			Unit
				Min.	Typ.	Max.	
CIN	Input capacitance	A21-A0, F-OE#, F-WE#, F-CE#, F-WP#, F-RP#, M-CE#, M-OE#, M-WE#, M-LB#, M-UB#	Ta=25°C, f=1MHz, Vin=Vout=0V			18	pF
COUT	Output Capacitance	DQ15-DQ0, F-RY/BY#				22	pF

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