

# M6MGB/T647M33KT

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- $\mu$ MCP (micro Multi Chip Package)

## Description

The M6MGB/T647M33KT is a Stacked micro Multi Chip Package (S- $\mu$ MCP) that contents 64M-bit Flash memory and 32M-bit Mobile RAM in a 52-pin TSOP.

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.

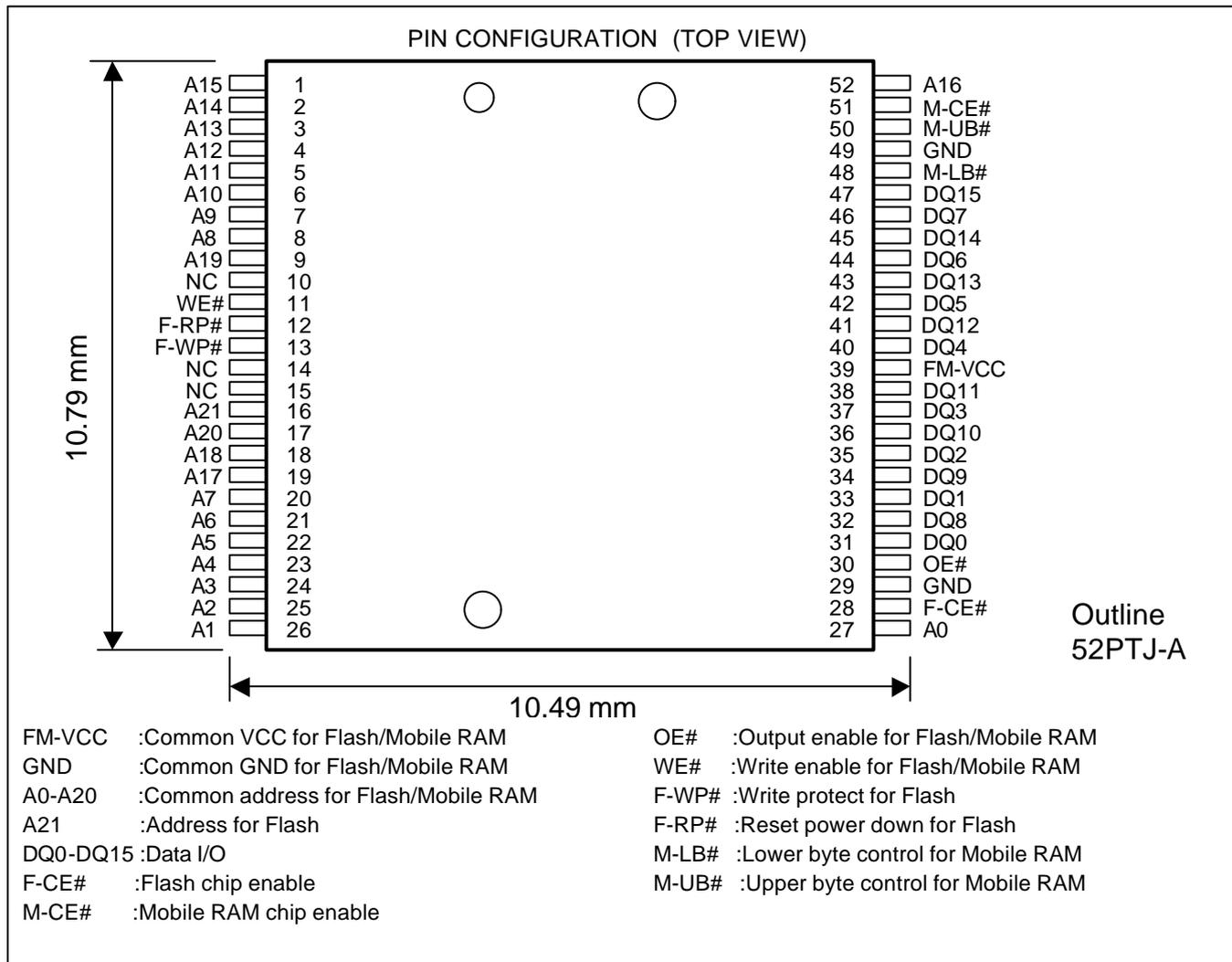
The M6MGB/T647M33KT is suitable for a high performance cellular phone and a mobile PC that are required to be small mounting area, weight and small power dissipation.

## Features

Access Time	Flash	85ns (Max.)
	Mobile RAM	85ns (Max.)
Supply Voltage		FM-VCC=2.7 ~ 3.0V
Ambient Temperature		Ta=-20 ~ 85°C
Package		52pin TSOP(Type-II), Lead pitch 0.4mm

## Application

Mobile communication products

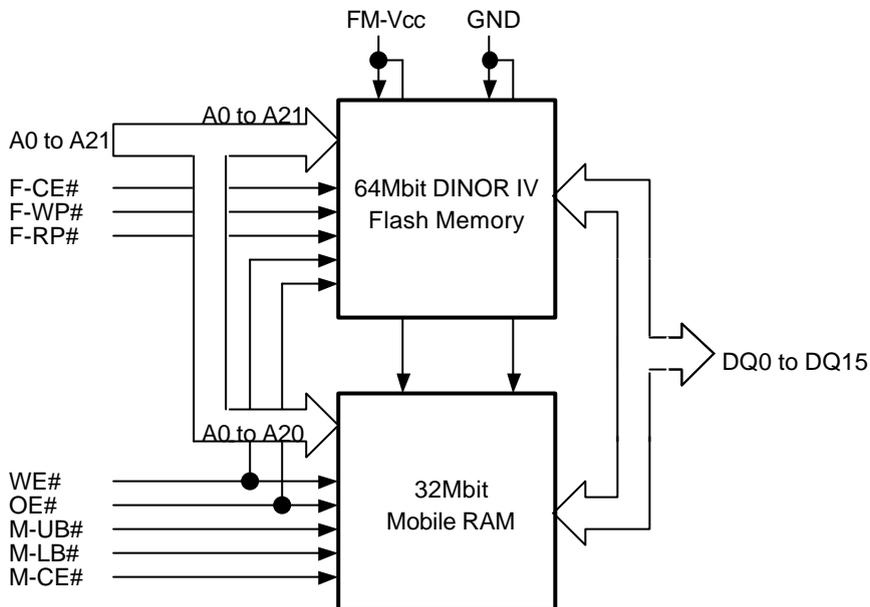


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## MCP Block Diagram



Note: In the data sheet there are "VCC"s and they means FM-VCC(the common power supply for Flash and Mobile RAM). In the Mobile RAM part UB# and LB# are M-UB# and M-LB#, respectively.

## Capacitance

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

Renesas LSIs

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