

## Unbuffered Small Outline Memory Module Data Sheet

# MW512N6625S58

512 MBytes, DDR2, PC2-5300 (667 MHz) CL5 200 Pin SO-DIMM

### Description:

**MW512N6625S58** is a 512 Megabyte Memory Module, organized as 64Mx64 bits DDR2-SDRAM. Each module is composed by eight 64Mx8 DDR2-SDRAMs ICs in FBGA package and one serial EEPROM for SPD (Serial Presence Detect), mounted on a JEDEC-Standard 200-pin SO-DIMM (Small Outline Dual-In-Line Memory Module) with golden contacts.

### Features:

- 200-pin SO-DIMM outline, unbuffered
- Double Data Rate architecture; two data transfers per clock cycle
- On-Die Termination Control
- Uses 64Mx8 DDR2-SDRAMs
- Differential clock inputs
- Programmable burst length: 4 or 8
- Clock Cycle Time (MW512N6625S58)
  - $(t_{CK}) = 3.00 \text{ ns (min.)} / 8 \text{ ns (max.)} @ \text{CL}=5$
- EEPROM Serial Presence Detection (SPD)
- Bi-directional, differential data strobe (DQS and /DQS)
- Four internal device banks for concurrent operation
- Auto Refresh to Active ( $t_{RFC}$ ): 105ns (min)
- Auto precharge
- Auto-refresh and Self-refresh modes
- Row address  $A_0-A_{13}$
- Column address  $A_0-A_9$
- SSTL\_18 Interface
- $VDD = VDDQ = 1.8 \text{ V} \pm 0.1 \text{ V}$

### Specification:

Symbol	AC Characteristic		Min.	Max.	Unit
$t_{CK}$	CLK Cycle Time	MW5126625S58 CL=5	3000	8000	ps
$t_{RC}$	Row Cycle Time (Operation)		60	-	ns
$t_{RAS}$	Row Active Time		45	70,000	ns
$t_{RFC}$	Auto Refresh to Active / Auto Refresh Command Time		105	-	ns

### Ratings:

	Rating	Unit	Condition
Power Dissipation, Operating (Row Activating, Precharge) @VDD, VDDQ = 1.8V	1.584	W	Ta=25°C
Operating temperature <sup>1</sup>	0 ~ 85	°C	-
Storage temperature	-55 ~ 100	°C	-

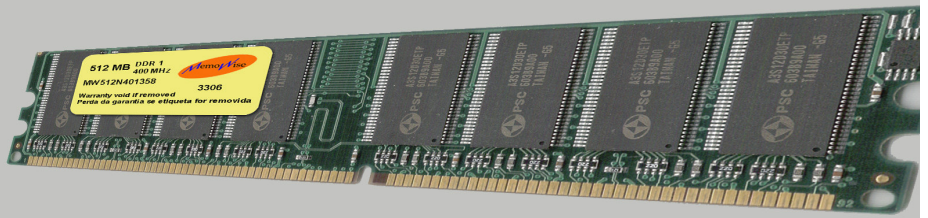
Note:

1. It refers to the operating case temperature of DRAM ICs

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## Dimensions

All dimensions are in millimeters (Inches); tolerance is  $\pm 0.1$  (0.0039") unless otherwise indicated

