

## Unbuffered Memory Module Data Sheet

### MW02GN6625UA8

2 GByte, DDR2, PC2-5300 (667 MHz) CL5 240 Pin DIMM

### MW02GN8026UA8

2 GByte, DDR2, PC2-6400 (800 MHz) CL6 240 Pin DIMM

#### Description:

**MW02GN6625UA8/MW02GN8026UA8** are 2 Gigabyte Memory Modules, organized as 256Mx64 bits DDR2-SDRAM. Each module is composed by sixteen 128Mx8 DDR2-SDRAMs ICs in FBGA package and one serial EEPROM for SPD (Serial Presence Detect), mounted on a JEDEC-Standard 240-pin DIMM (Dual In Line Memory Module) with golden contacts.

#### Features:

- 240-pin DIMM outline, unbuffered
- Double Data Rate architecture; two data transfers per clock cycle
- On-Die Termination Control
- Uses 128Mx8 DDR2-SDRAMs
- Differential clock inputs
- Programmable burst length: 4 or 8
- Clock Cycle Time (MW02GN6625UA8)
  - ( $t_{CK}$ ) = 3.00 ns (min.) / 8 ns (max.) @ CL=5
- Clock Cycle Time (MW02GN8026UA8)
  - ( $t_{CK}$ ) = 2.50 ns (min.) / 8 ns (max.) @ CL=6
- EEPROM Serial Presence Detection (SPD)
- Bidirectional, differential data strobe (DQS and /DQS)
- Eight internal device banks for concurrent operation
- Auto Refresh to Active ( $t_{RFC}$ ): 127.5ns (min)
- Auto precharge
- Auto-refresh and Self-refresh modes
- Row address  $A_0$ - $A_{13}$
- Column address  $A_0$ - $A_9$
- Bank address  $BA_0$ ~ $BA_2$
- SSTL\_18 Interface
- VDD = VDDQ = 1.8 V  $\pm$  0.1 V

#### Specification:

Symbol	AC Characteristic	Min.	Max.	Unit	
$t_{CK}$	CLK Cycle Time	MW02GN6625UA8 CL=5	3000	8000	ps
		MW02GN8026UA8 CL=6	2500		
$t_{RC}$	Row Cycle Time (Operation)	MW02GN6625UA8	57	-	ns
		MW02GN8026UA8	57.5		
$t_{RAS}$	Row Active Time	45	70,000	ns	
$t_{RFC}$	Auto Refresh to Active / Auto Refresh Command Time	127.5	-	ns	

#### Ratings:

		Rating	Unit	Condition
Power Dissipation, Operating 1 Bank Row Activating, Precharge 1 Bank Idle, Standby @VDD, VDDQ = 1.8V	MW01GN5324U58	3.024	W	Ta=25°C
	MW01GN6625U58	3.125		
Operating temperature <sup>1</sup>		0 ~ 85	°C	
Storage temperature		-55 ~ 100	°C	

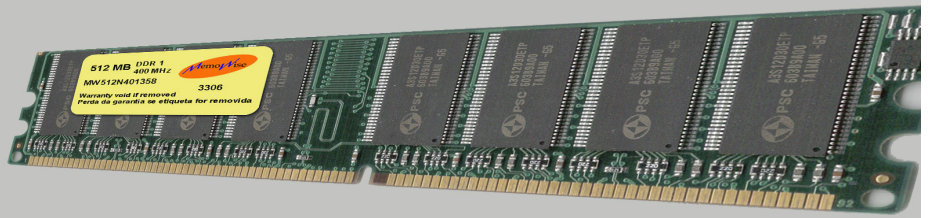
#### Notes:

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

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**Dimensions**

All dimensions are in millimeters (Inches); tolerance is  $\pm 0.127$  (0.005") unless otherwise indicated

