

Unbuffered Memory Module Data Sheet

MW01GN5324U58

1 GByte, DDR2, PC2-4200 (533 MHz) CL4 240 Pin DIMM

MW01GN6625U58

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

Description:

MW01GN5324U58/MW01GN6625U58 are 1 Gigabyte Memory Modules, organized as 128Mx64 bits DDR2-SDRAM. Each module is composed by sixteen 64Mx8 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 64Mx8 DDR2-SDRAMs
- Differential clock inputs
- Programmable burst length: 4 or 8
- Clock Cycle Time (MW01GN5324U58)
 - (t_{CK}) = 3.75 ns (min.) / 8 ns (max.) @ CL=4
- Clock Cycle Time (MW01GN6625U58)
 - (t_{CK}) = 3.00 ns (min.) / 8 ns (max.) @ CL=5
- EEPROM Serial Presence Detection (SPD)
- Bidirectional, 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 V \pm 0.1 V

Specification:

| Symbol | AC Characteristic | Min. | Max. | Unit | |
|-----------|---|-----------------------|--------|------|----|
| t_{CK} | CLK Cycle Time | MW01GN5324U58 CL=4 | 3750 | 8000 | ps |
| | | MW01GN6625U58 CL=5 | 3000 | | |
| 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, 1 Bank Operating (Row Activating, Precharge) + 1 Bank Idle @VDD, VDDQ = 1.8V | MW01GN5324U58 | 2.016 | W | Ta=25°C |
| | MW01GN6625U58 | 2.160 | | |
| Operating temperature ¹ | | 0 ~ 85 | °C | |
| Storage temperature | | -55 ~ 100 | °C | |

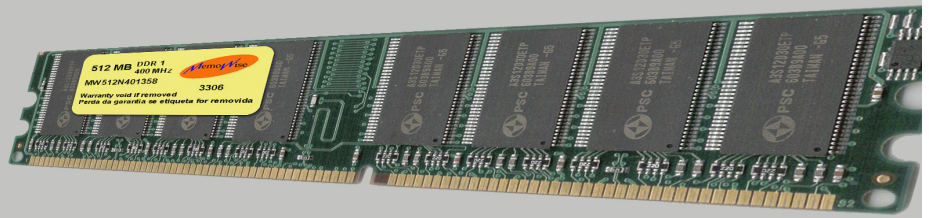
Notes:

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

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Dimensions

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

