Mobile Double Data Rate (DDR) SDRAM

MT46H16M16LF – 4 Meg x 16 x 4 Banks
MT46H8M32LF – 2 Meg x 32 x 4 Banks

For a complete data sheet, please refer to www.micron.com/mobileds.

Features

- VDD = +1.8V ±0.1V, VDDQ = +1.8V ±0.1V
- Bidirectional data strobe per byte of data (DQS)
- Internal, pipelined double data rate (DDR) architecture; two data accesses per clock cycle
- Differential clock inputs (CK and CK#)
- Commands entered on each positive CK edge
- DQS edge-aligned with data for READs; center-aligned with data for WRITEs
- Four internal banks for concurrent operation
- Data masks (DM) for masking write data–one mask per byte
- Programmable burst lengths: 2, 4, 8, 16 or full page
- Concurrent auto precharge option is supported
- Auto refresh and self refresh modes
- 1.8V LVCMOS compatible inputs
- On-chip temperature sensor to control refresh rate
- Partial array self refresh (PASR)
- Deep power-down (DPD)
- Selectable output drive (DS)
- Clock stop capability

Options / Marking

- VDD/VDDQ
  - 1.8V/1.8V — H
- Configuration
  - 16 Meg x 16 (4 Meg x 16 x 4 banks) — 16M16
  - 8 Meg x 32 (2 Meg x 32 x 4 banks) — 8M32
- Plastic Package
  - 60-Ball VFBGA[1] — TBD
  - 90-Ball VFBGA[2]
- Timing – Cycle Time
  - 6ns @ CL = 3 — -6
  - 7.5ns @ CL = 3 — -75
  - 10ns @ CL = 3 — -10
- Operating Temperature Range
  - Commercial (0° to +70°C) — None
  - Industrial (-40°C to +85°C) — IT

Notes:1. Only available for x16 configuration.
2. Only available for x32 configuration.

Figure 1: 60-Ball VFBGA Assignment

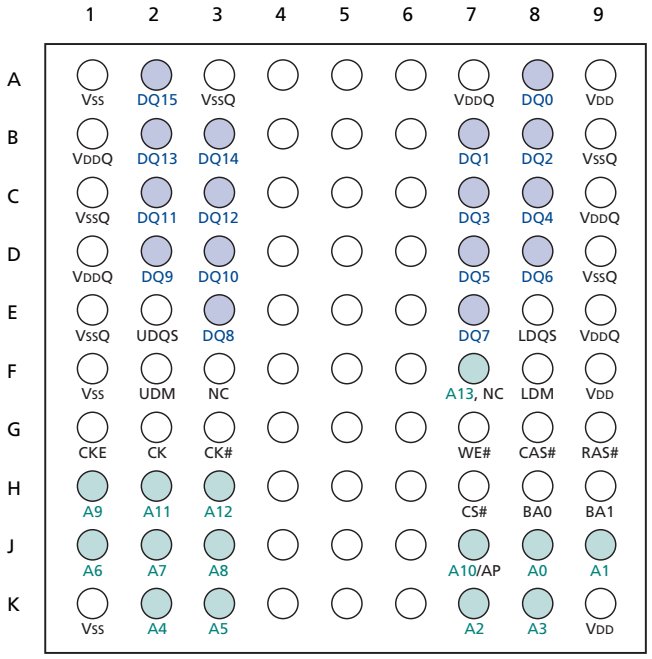

Table 1: Configuration Addressing

Architecture	16 Meg x 16	8 Meg x 32
Configuration	4 Meg x 16 x 4	2 Meg x 32 x 4
Refresh Count	8K	4K
Row Addressing	8K (A0–A12)	4K (A0–A11)
Bank Addressing	4 (BA0, BA1)	4 (BA0, BA1)
Column Addressing	1K (A0–A9)	1K (A0–A9)

8000 S. Federal Way, P.O. Box 6, Boise, ID 83707-0006, Tel: 208-368-3900
prodmktg@micron.com www.micron.com Customer Comment Line: 800-932-4992

Advance: This data sheet contains initial descriptions of products still under development.

Revision History

- Original Document, Preview 03/05