

**CT54V2G801AF**

**CT54V2G1601A**

**2-Gbit DDR2 SDRAM**

**EU RoHS Compliant Products**

**Data Sheet**

**Rev. H**

# 1 Overview

This chapter gives an overview of the 2-Gbit Double-Data-Rate-Two SDRAM product family and describes its main characteristics.

## 1.1 Features

The 2-Gbit Double-Data-Rate-Two SDRAM offers the following key features:

- 1.8 V  $\pm$  0.1 V Power Supply  
1.8 V  $\pm$  0.1 V (SSTL\_18) compatible I/O
- DRAM organizations with x8, x16 data in/outputs
- DDR2 SDRAM architecture:
  - Comply with JEDEC DDR2 SDRAM Standard
  - Eight internal banks for concurrent operation
- Programmable CAS Latency: 3, 4, 5, 6 and 7
- Programmable Burst Length: 4 and 8
- Differential clock inputs (CK and CK)
- Bi-directional, differential data strobes (DQS and DQS) are transmitted / received with data. Edge aligned with read data and center-aligned with write data.
- DLL aligns DQ and DQS transitions with clock
- DQS can be disabled for single-ended data strobe operation
- Commands entered on each positive clock edge, data and data mask are referenced to both edges of DQS
- Data masks (DM) for write data
- Posted CAS by programmable additive latency for better command and data bus efficiency
- Off-Chip-Driver impedance adjustment (OCD) and On-Die-Termination (ODT) for better signal quality
- Auto-Precharge operation for read and write bursts
- Support concurrent Auto Precharge function
- Auto-Refresh, Self-Refresh and power saving Power- Down modes
- Operating temperature range ( $T_{CASE}$ )
  - Commercial, (0 °C to 95 °C)
  - Industrial, I (-40 °C to 95 °C)
  - Automotive, A2 (-40 °C to 105 °C)
  - High-Rel, X (-55 °C to 125 °C)
- Average Refresh Period 7.8  $\mu$ s at a  $T_{CASE}$  lower than 85 °C, 3.9  $\mu$ s between 85 °C and 95 °C, and 1.95  $\mu$ s at a  $T_{CASE}$  Higher than 95 °C.
- Programmable self refresh rate via EMRS2 setting
- Full and reduced Strength Data-Output Drivers
- 1KB page size for x8, 2KB page size for x16
- Packages: PG-TFBGA-60 for x8, PG-TFBGA-84 for x16

**Note: Self Refresh Mode available on temperature less than 105°C (Tcase) only.**

如需获取完整版规格书  
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Linda

