

# Automotive DDR4 SDRAM Coplanarity Addendum

MT40A256M16

## Description

This data sheet addendum provides information on the package coplanarity specification of automotive DDR4 SDRAM using 96b package x16 DDR4 SDRAM. This addendum describes package dimensions only. Refer to the standard DDR4 data sheet for complete specifications.

| Options  | Marking |
|--|---------|
| <ul style="list-style-type: none"><li>• Configuration<ul style="list-style-type: none"><li>– 256 Meg x 16</li></ul></li></ul>                            | 256M16  |
| <ul style="list-style-type: none"><li>• FBGA package (Pb-free) – x16<ul style="list-style-type: none"><li>– 96-ball (7.5mm x 13.5mm)</li></ul></li></ul> | LY      |
| <ul style="list-style-type: none"><li>• Die revision</li></ul>   | :F      |

## Important Notes and Warnings

Micron Technology, Inc. ("Micron") reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions. This document supersedes and replaces all information supplied prior to the publication hereof. You may not rely on any information set forth in this document if you obtain the product described herein from any unauthorized distributor or other source not authorized by Micron.

**Automotive Applications.** Products are not designed or intended for use in automotive applications unless specifically designated by Micron as automotive-grade by their respective data sheets. Distributor and customer/distributor shall assume the sole risk and liability for and shall indemnify and hold Micron harmless against all claims, costs, damages, and expenses and reasonable attorneys' fees arising out of, directly or indirectly, any claim of product liability, personal injury, death, or property damage resulting directly or indirectly from any use of non-automotive-grade products in automotive applications. Customer/distributor shall ensure that the terms and conditions of sale between customer/distributor and any customer of distributor/customer (1) state that Micron products are not designed or intended for use in automotive applications unless specifically designated by Micron as automotive-grade by their respective data sheets and (2) require such customer of distributor/customer to indemnify and hold Micron harmless against all claims, costs, damages, and expenses and reasonable attorneys' fees arising out of, directly or indirectly, any claim of product liability, personal injury, death, or property damage resulting from any use of non-automotive-grade products in automotive applications.

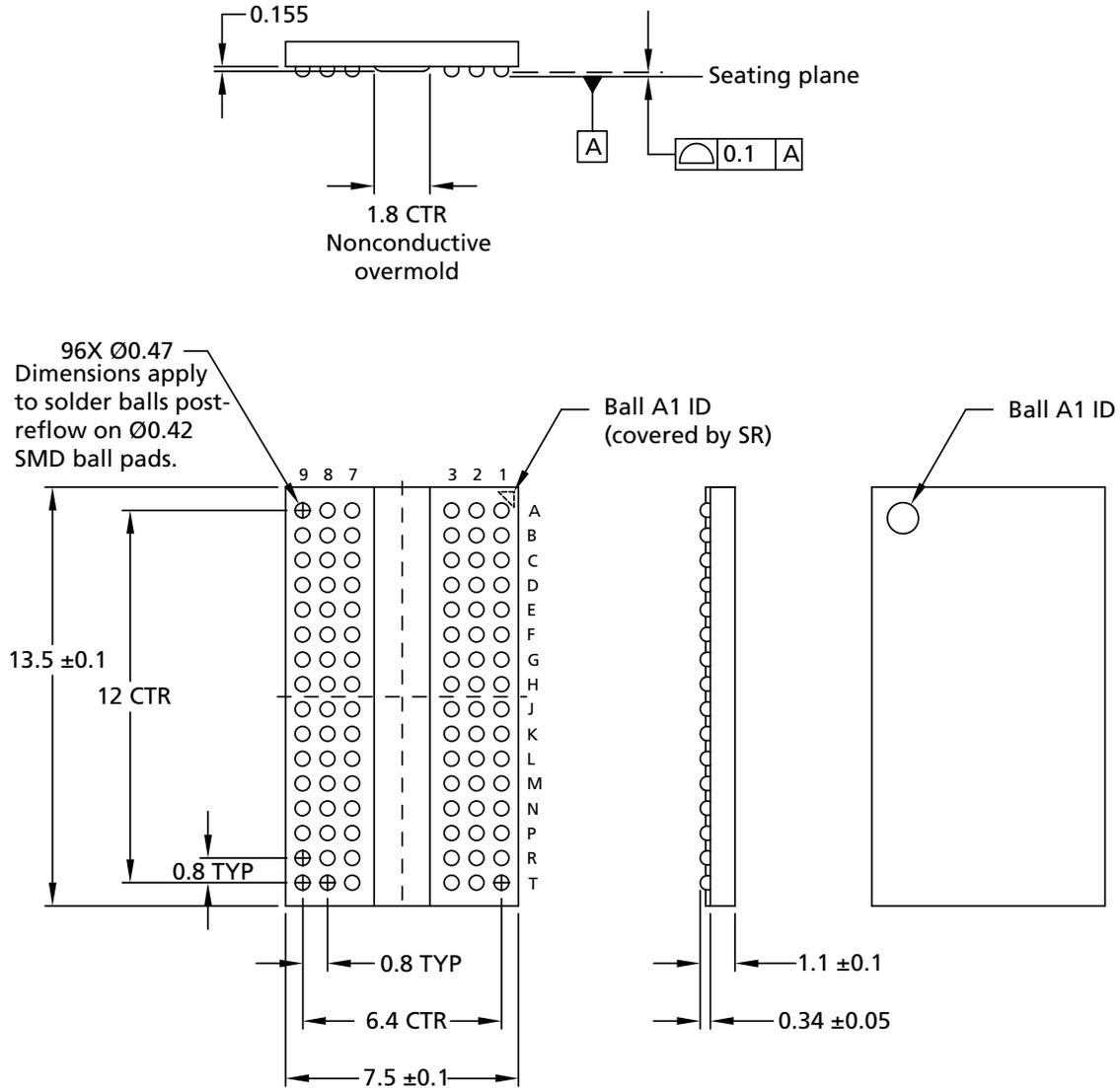
**Critical Applications.** Products are not authorized for use in applications in which failure of the Micron component could result, directly or indirectly in death, personal injury, or severe property or environmental damage ("Critical Applications"). Customer must protect against death, personal injury, and severe property and environmental damage by incorporating safety design measures into customer's applications to ensure that failure of the Micron component will not result in such harms. Should customer or distributor purchase, use, or sell any Micron component for any critical application, customer and distributor shall indemnify and hold harmless Micron and its subsidiaries, subcontractors, and affiliates and the directors, officers, and employees of each against all claims, costs, damages, and expenses and reasonable attorneys' fees arising out of, directly or indirectly, any claim of product liability, personal injury, or death arising in any way out of such critical application, whether or not Micron or its subsidiaries, subcontractors, or affiliates were negligent in the design, manufacture, or warning of the Micron product.

**Customer Responsibility.** Customers are responsible for the design, manufacture, and operation of their systems, applications, and products using Micron products. ALL SEMICONDUCTOR PRODUCTS HAVE INHERENT FAILURE RATES AND LIMITED USEFUL LIVES. IT IS THE CUSTOMER'S SOLE RESPONSIBILITY TO DETERMINE WHETHER THE MICRON PRODUCT IS SUITABLE AND FIT FOR THE CUSTOMER'S SYSTEM, APPLICATION, OR PRODUCT. Customers must ensure that adequate design, manufacturing, and operating safeguards are included in customer's applications and products to eliminate the risk that personal injury, death, or severe property or environmental damages will result from failure of any semiconductor component.

**Limited Warranty.** In no event shall Micron be liable for any indirect, incidental, punitive, special or consequential damages (including without limitation lost profits, lost savings, business interruption, costs related to the removal or replacement of any products or rework charges) whether or not such damages are based on tort, warranty, breach of contract or other legal theory, unless explicitly stated in a written agreement executed by Micron's duly authorized representative.

## Package Dimensions

Figure 1: 96-Ball FBGA – x16, "LY"



- Notes:
1. All dimensions are in millimeters.
  2. Solder ball material: SAC302 (Pb-free 96.8% Sn, 3% Ag, 0.2% Cu).
  3. Reference CSN33 for recommended PCB pad dimension for this package.



## Revision History

### Rev. A – 08/19

- Initial release.
- Reference document: CCMTD-1725822587-10418, 4gb\_auto\_ddr4\_sdram\_z90b\_z10B.pdf - Rev. I 05/19 EN

8000 S. Federal Way, P.O. Box 6, Boise, ID 83707-0006, Tel: 208-368-4000  
[www.micron.com/products/support](http://www.micron.com/products/support) Sales inquiries: 800-932-4992  
Micron and the Micron logo are trademarks of Micron Technology, Inc.  
All other trademarks are the property of their respective owners.

This data sheet contains minimum and maximum limits specified over the power supply and temperature range set forth herein. Although considered final, these specifications are subject to change, as further product development and data characterization sometimes occur.