

Package Migration between Single Bit and MirrorBit™ Flash Device Densities

Application Note



July 2003

The following document refers to Spansion memory products that are now offered by both Advanced Micro Devices and Fujitsu. Although the document is marked with the name of the company that originally developed the specification, these products will be offered to customers of both AMD and Fujitsu.

Continuity of Specifications

There is no change to this document as a result of offering the device as a Spansion product. Any changes that have been made are the result of normal documentation improvements and are noted in the document revision summary, where supported. Future routine revisions will occur when appropriate, and changes will be noted in a revision summary.

Continuity of Ordering Part Numbers

AMD and Fujitsu continue to support existing part numbers beginning with "Am" and "MBM". To order these products, please use only the Ordering Part Numbers listed in this document.

For More Information

Please contact your local AMD or Fujitsu sales office for additional information about Spansion memory solutions.

Publication Number **26677** Revision **A** Amendment **+I** Issue Date **November 12, 2002**





Package Migration Between Single Bit and MirrorBit™ Flash Device Densities

Application Note

INTRODUCTION

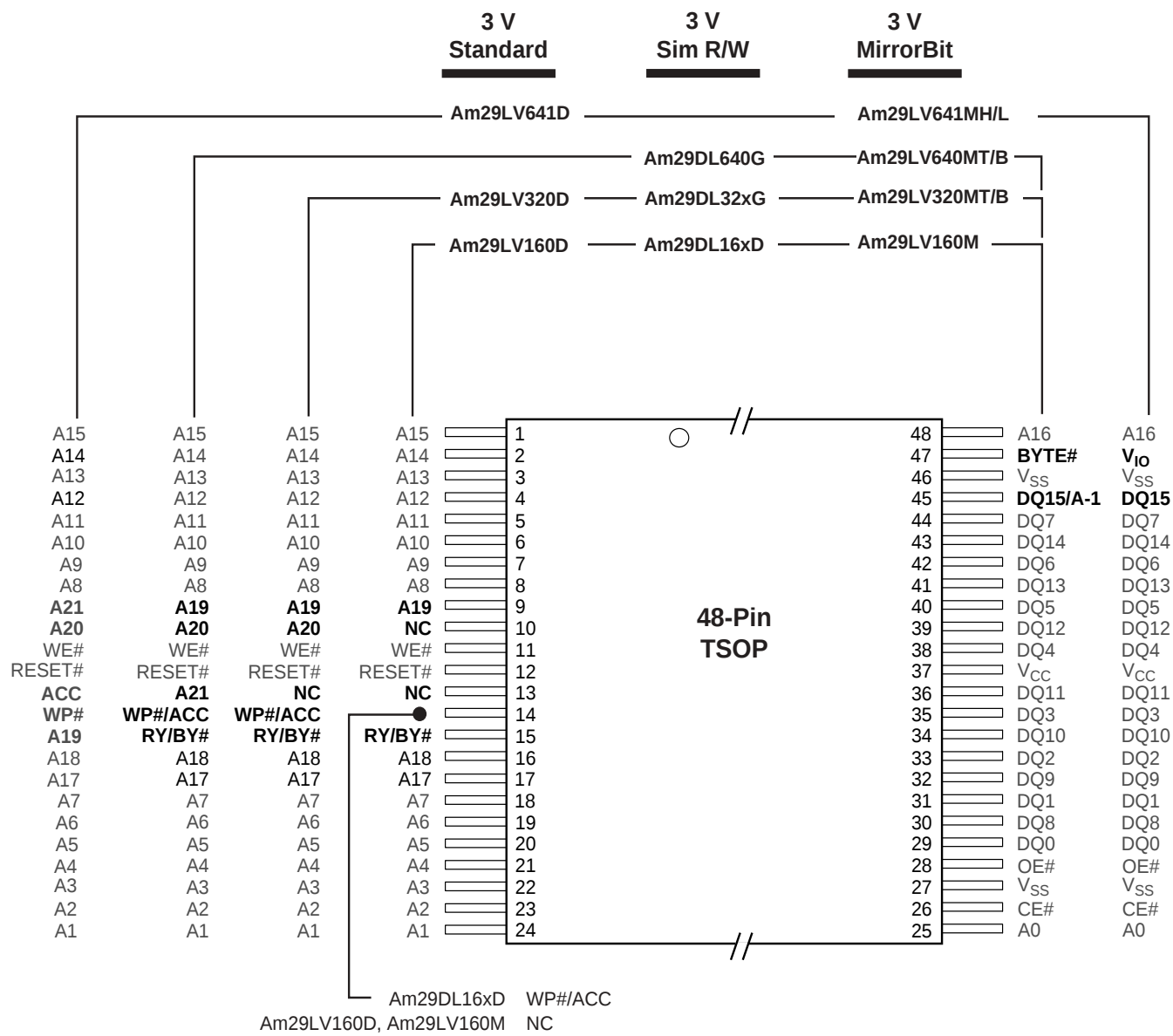
This application note illustrates migration options between 3V single bit and 3V MirrorBit™ devices. Each drawing shows at least one migration path. A “migration path” is a logical progression from one density to another within a group of devices sharing a common voltage range, architecture, bus width. All drawings show top view of packages.

The following is a list of drawings in this document:

48-Pin TSOP: 3.0 V x8/x16 or x16-only Devices	2
56-PIN TSOP: 3.0 V x8/x16 Devices	3
40-Pin & 40- to 48-Pin TSOP: 3.0 V x8-only Devices	4
44-Pin SO: 3.0 V x8/x16 Devices	5
64-Ball Fortified BGA: 3.0 V x8/x16 or x16-only Devices ...	6
63-Ball FBGA and 48-Ball FBGA: 3.0 V x8/x16 or x16-only Devices	7
48- or 63-Ball FBGA: 3.0 V x8-only Devices	8
Revision Summary	9

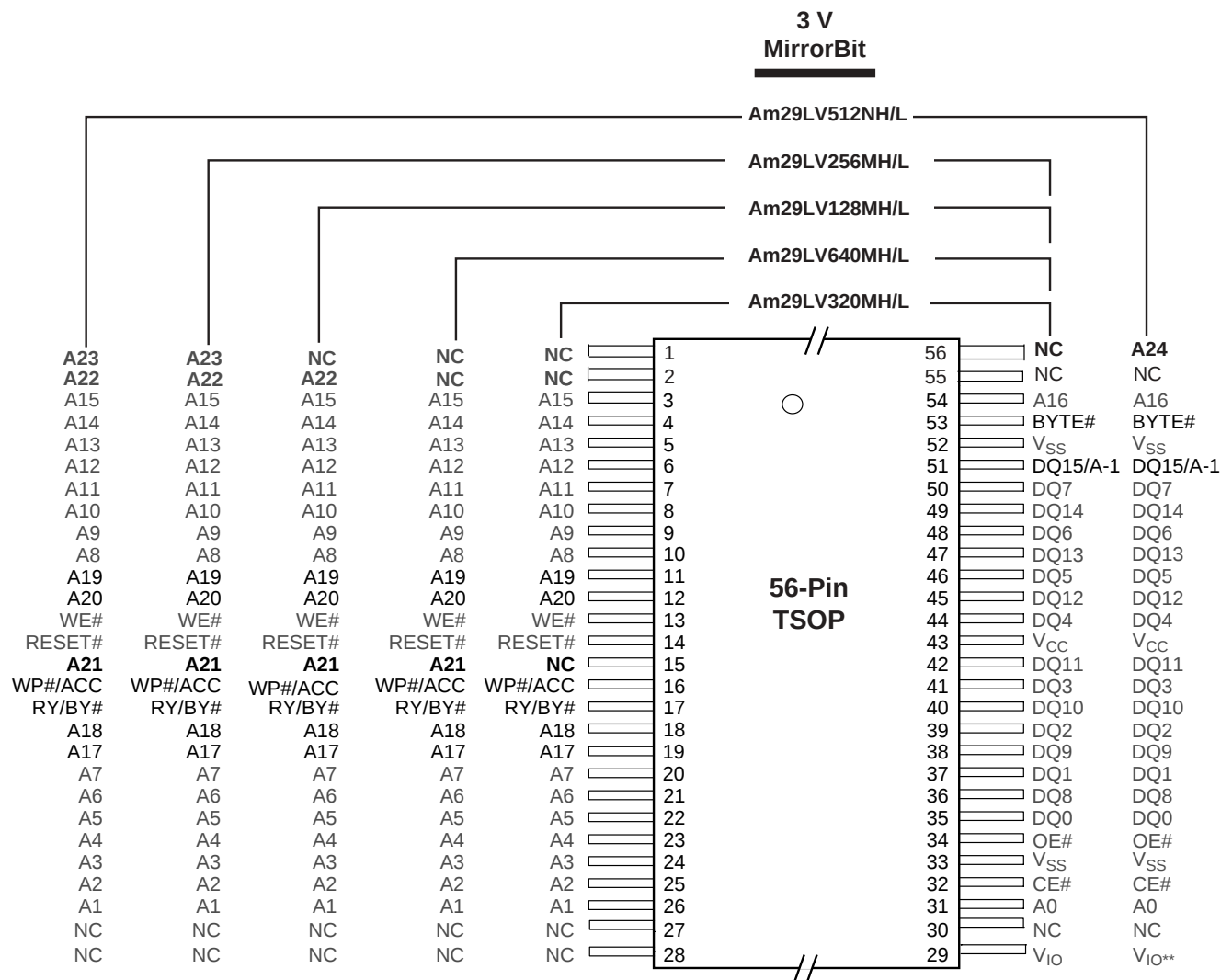


48-PIN TSOP: 3.0 V X8/X16 OR X16-ONLY DEVICES



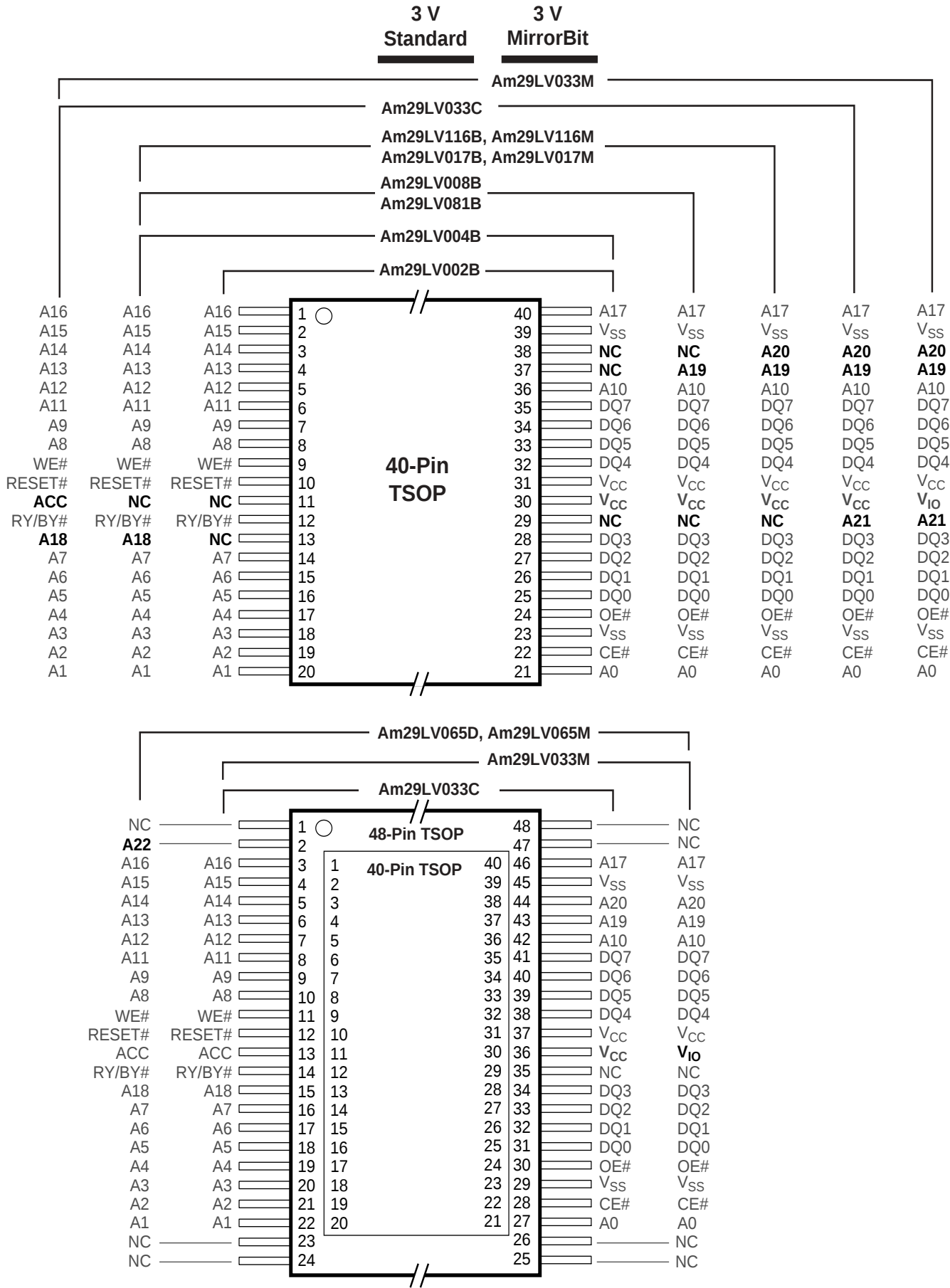
The Am29LV641 is a x16-only device.

56-PIN TSOP: 3.0 V X8/X16 DEVICES

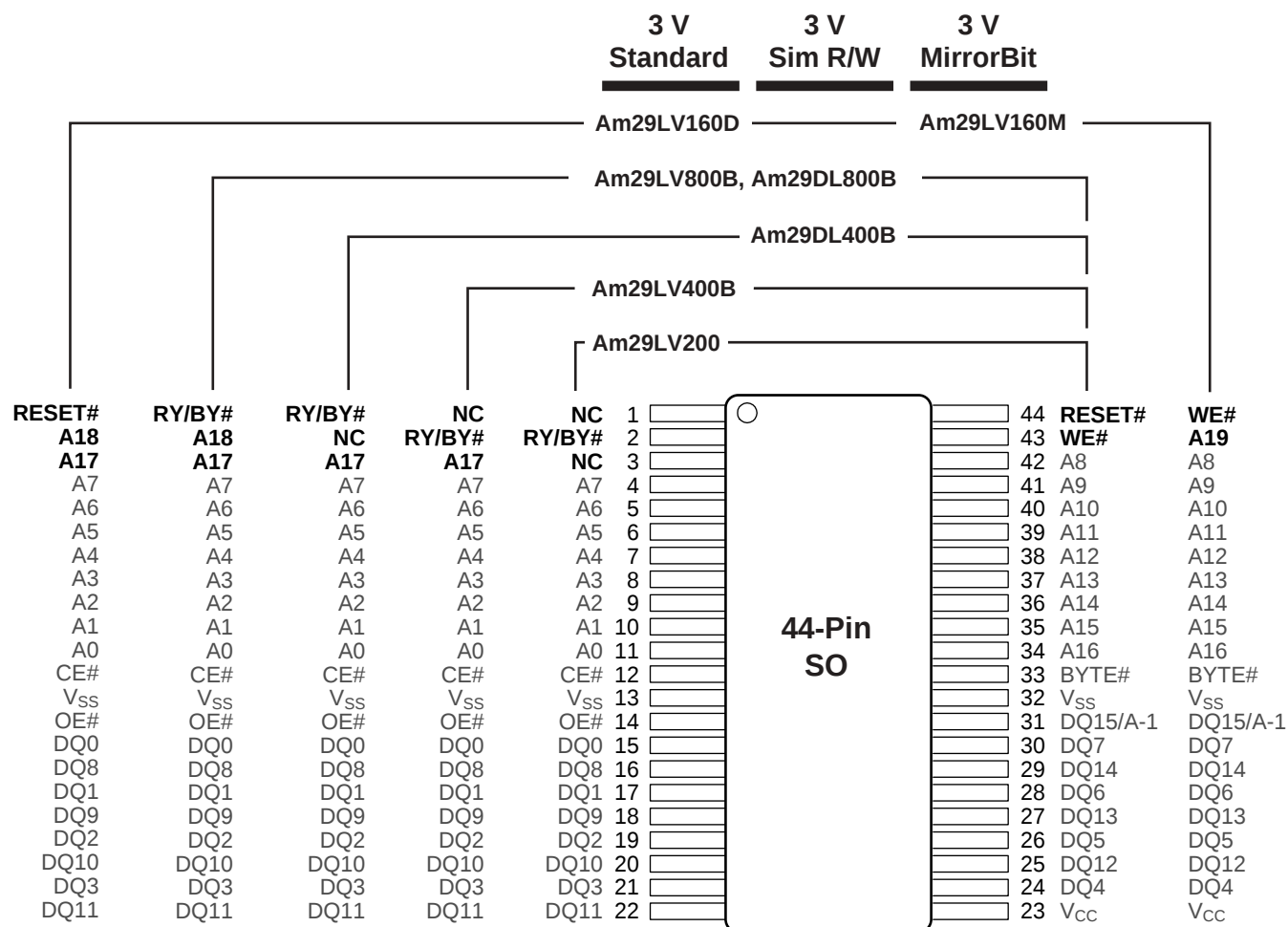


** V_{IO} may not be available for all 512 Mb MirrorBit devices. Please consult datasheet ordering information.

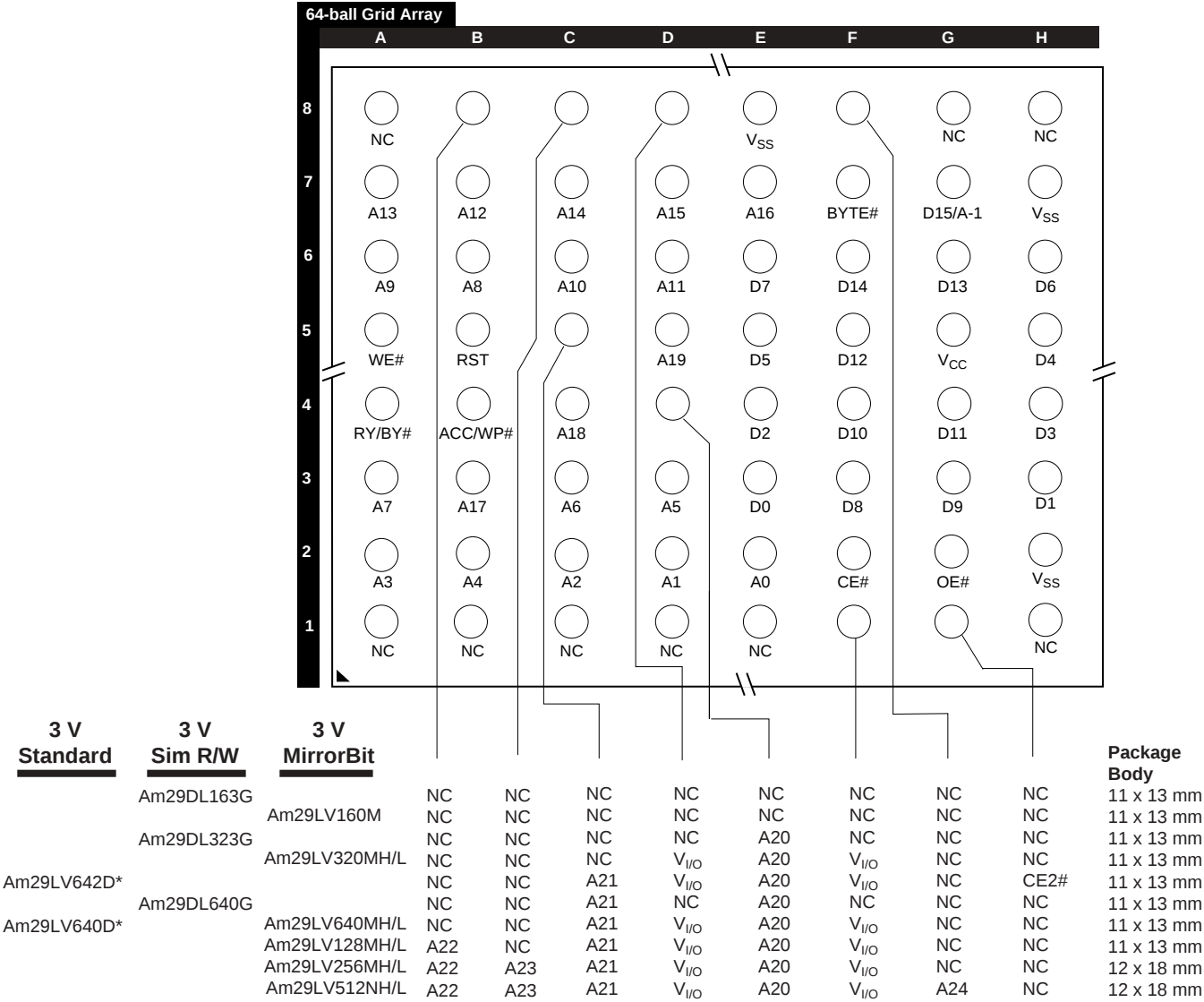
40-PIN & 40- TO 48-PIN TSOP: 3.0 V X8-ONLY DEVICES



44-PIN SO: 3.0 V X8/X16 DEVICES

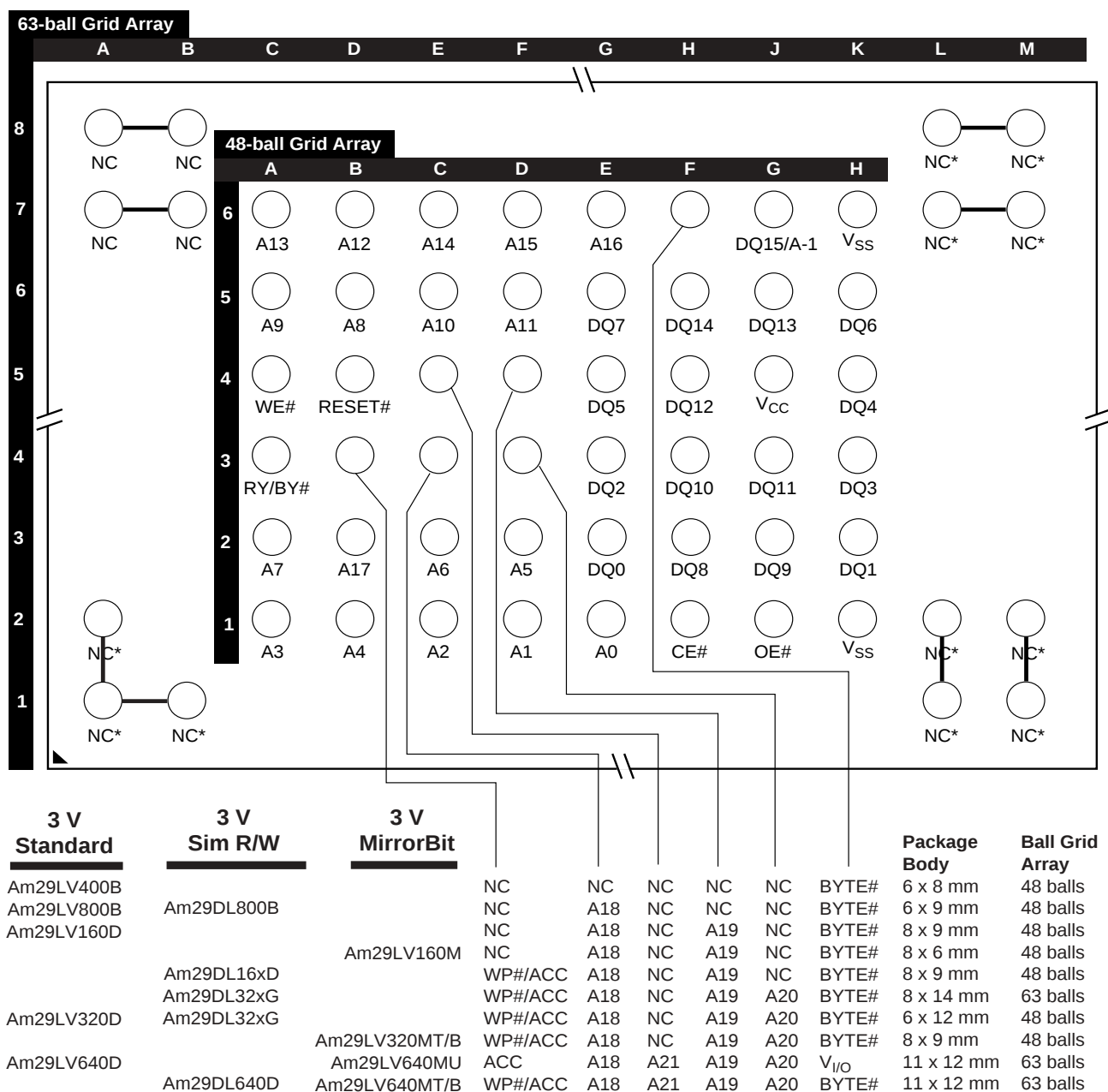


64-BALL FORTIFIED BGA: 3.0 V X8/X16 OR X16-ONLY DEVICES



Top view shown, with balls facing down.
* These are x16-only parts.

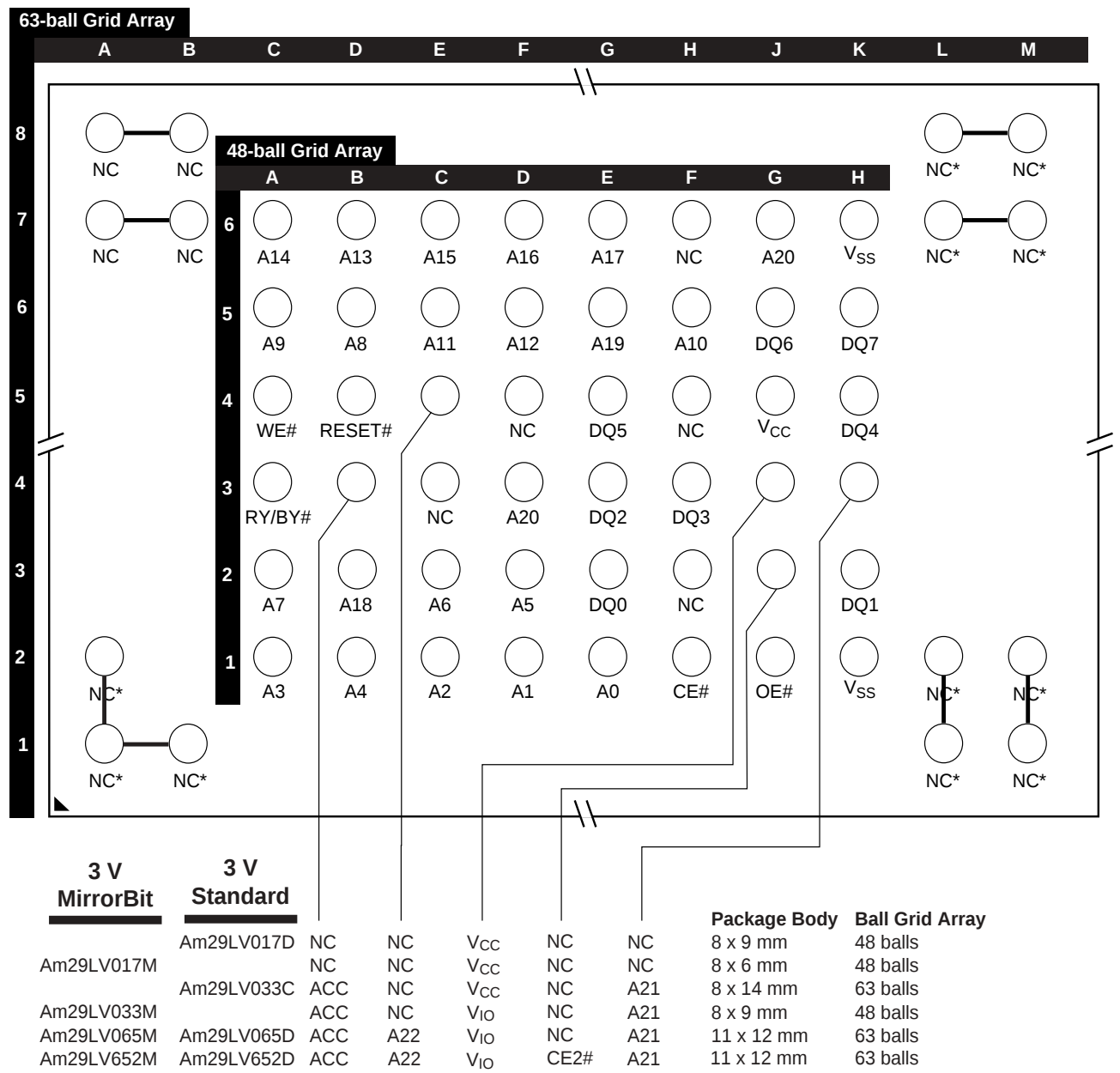
63-BALL FBGA AND 48-BALL FBGA: 3.0 V X8/X16 OR X16-ONLY DEVICES



Top view shown, with balls facing down. All grid arrays have 0.8 mm pitch.

* Balls are shorted together via the substrate but not connected to the die.

48- OR 63-BALL FBGA: 3.0 V X8-ONLY DEVICES



Top view shown, with balls facing down. All grid arrays have 0.8 mm pitch.

*Balls are shorted together via the substrate but not connected to the die.

REVISION SUMMARY

Revision A (September 25, 2002)

Initial release.

48- or 64-Ball FBGA: 3.0 V x8-only Devices

Changed chart to reflect new package size and pinout for Am29LV017M.

Revision A + 1 (November 12, 2002)

63-Ball FBGA and 48-Ball FBGA: 3.0 V x8/x16 or x16-only Devices

Changed chart to reflect new package sizes for Am29LV320MT/B and Am29LV160M.

Trademarks

Copyright © 2002 Advanced Micro Devices, Inc. All rights reserved.

AMD, the AMD logo, MirrorBit and combinations thereof are registered trademarks of Advanced Micro Devices, Inc.

Product names used in this publication are for identification purposes only and may be trademarks of their respective companies.