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TECHNOLOGIES

PCN / EOL Notification

Product Change Notification Number: PDF008   **Notification Date: August 21, 2013**

Title: 32-Mbit DataFlash® (AT45DB321D) Process Geometry Shrink and Device Enhancement	

Product Identification:

All wafer and package options of the Industrial Temperature grade (-40°C to +85°C) AT45DB321D

Reason for Change:	☐ Material / Composition	☒ Design / Firmware	☒ Manufacturing Location
	☒ Processing / Manufacturing	☐ Logistics	☐ Quality/Reliability

Change Description:

Adesto has performed a process geometry shrink and feature set enhancement of the 32-Mbit AT45DB321D DataFlash®. The catalog part number AT45DB321D will be replaced by AT45DB321E (see Table 1). The new AT45DB321E devices are pin-to-pin and functionally backward compatible with the current AT45DB321D devices with the following exceptions and enhancements.

Extended-VCC Operation

Adesto has designed the AT45DB321E devices to operate over a 2.3V to 3.6V range versus the previous 2.5V to 3.6V range options on the D series devices.

"Power of 2"binary page size option

The "power of 2" binary page size option can still be ordered as a factory-configured option. However, the catalog part number suffixes of SL954 and SL955 for the factory-configured option will no longer be used. The new Binary Page Mode option will be defined by the ordering code suffix '2B' incorporated into the base part number. As part of this part number change Binary Page mode options will be limited to T&R orders only. Please refer to Table 1 for the new catalog part number for the factory-programmed "power of 2" binary page size option.

Migration to a 5-byte Manufacturer and Device ID

The length of the complete Manufacturer and Device ID string has been extended from 4 bytes to 5 bytes to provide space for additional device information. The ID methodology still complies with the JEDEC standard and now utilizes the Extended Device Information (EDI) field. The Manufacturer and Device ID string changes as follows:

AT45DB321D: 1Fh + 27h + 00h + 00h

AT45DB321E: 1Fh + 27h + 00h + 01h + 00h

Lead Finish

The lead finish has been changed from Matte Sn to NiPdAu.

Identification Method:

New catalog part numbers use an "E" suffix for device revision (AT45DB321D changes to AT45DB321E).

Table 1:

EOL Part Number	Replacement Part Number	Carrier Type
AT45DB321D-CU	AT45DB321E-CCUF-T*	T for T/R
AT45DB321D-MU	AT45DB321E-MHF-Y	Y for Tray
	AT45DB321E-MHF-T	T for T/R
AT45DB321D-MU-SL954	AT45DB321E-MHF2B-T	Only T/R offered
AT45DB321D-MU-SL955		
AT45DB321D-MU-2.5	AT45DB321E-MHF-Y	Y for Tray
	AT45DB321E-MHF-T	T for T/R
AT45DB321D-MWU	AT45DB321E-MWHF-Y	Y for Tray
	AT45DB321E-MWHF-T	T for T/R
AT45DB321D-MWU-SL954	AT45DB321E-MWHF2B-T	Only T/R offered
AT45DB321D-MWU-SL955		
AT45DB321D-SU	AT45DB321E-SHF-B	B for Bulk
	AT45DB321E-SHF-T	T for T/R
AT45DB321D-SU SL954	AT45DB321E-SHF2B-T	Only T/R offered
AT45DB321D-SU SL955		
AT45DB321D-SU-2.5	AT45DB321E-SHF-B	B for Bulk
	AT45DB321E-SHF-T	T for T/R
AT45DB321D-TU	No offering in TSOP. Recommend SOIC	EOL
AT45DB321D-DWF	AT45DB321E-DWF	Whole Wafer, No Back Grind

Notes:

* BGA package changed from 24-Ball BGA for the 45DB321<u>D</u> to a 9-Ball BGA for the 45DB321<u>E</u>. The 9-Ball BGA utilizes the same center 9 balls (3 x 3 ball matrix) of the 24-Ball BGA footprint. Therefore, no PCB change is required.

Qualification Data:	☒ Available	☐ Will be available (mm/dd/yr):	☐ Not Applicable
Samples:	☒ Available	☐ Will be available (mm/dd/yr):	☐ Not Applicable

Quantifiable Impact on Quality & Reliability:

None

Forecasted Availability Date (AT45DB321E)**:** Now

Last Time Buy Date (AT45DB321D)**:** January 31, 2014

Last Ship Date (AT45DB321D)**:** July 31, 2014

*All orders placed after the notification date are non-cancellable and non-returnable (NCNR).

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