



PCN / EOL Notification

REINSTATED LEGACY COMMANDS – EXTENDED LAST TIME BUY

Product Change Notification Number: PDF002

Notification Date*: December 7, 2012

Title: 2-Mbit DataFlash® (AT45DB021D) Process Geometry Shrink and Device Enhancement - REVISED

Product Identification:

All wafer and package options of the Industrial Temperature grade (-40°C to +85°C) AT45DB021D

Reason for Change:

☒ Material / Composition	☒ Design / Firmware	☐ Manufacturing Location
☒ Processing / Manufacturing	☒ Logistics	☐ Quality / Reliability

Change Description: (THIS PCN UPDATES AND REPLACES ATMEL PCN #SC121405A)

A process geometry shrink of the 2-Mbit AT45DB021D DataFlash from 130nm to 110nm. **The last Time Buy Date has been extended to April 30, 2013.** The catalog part number AT45DB021D will be replaced by AT45DB021E (see Table 1). The new AT45DB021E devices are pin-to-pin and functionally backward compatible with the current AT45DB021D devices with the following exceptions and enhancements.

Reinstatement of “legacy commands”

Atmel previously removed legacy commands on new “E” series devices, These legacy commands will be reinstated by Adesto Technologies. The following table details the list of “legacy commands” that will be reinstated:

Legacy Command	AT45DB021D Opcode	AT45DB021E Opcode
Buffer 1 Read	54h	54h
Main Memory Page Read	52h	52h
Continuous Array Read	68h	68h
Status Register Read	57h	57h

Date Code of Parts - Reinstated Legacy Commands

All “E” Series parts marked with date code after WW48 (2012) will include the reinstated commands. “E” Series parts marked with date code before WW48 (2012) do not include the legacy commands.

Extended-VCC Operation

With a growing number of application segments moving to lower supply voltages, Adesto is now introducing next generation devices that meet the needs of these lower voltage ranges that are also used by various MCUs, SoCs, and ASICs. In addition, the operating life of many battery powered applications can be dramatically extended if the application can utilize the full life of each battery cell. To address these requirements, Adesto has designed the AT45DB021E devices to operate over a 1.65V to 3.6V range versus the previous 2.7V to 3.6V range.

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:

AT45DB021D: 1Fh + 23h + 00h + 00h

AT45DB021E: 1Fh + 23h + 00h + 01h + 00h

“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, and the SL954/955 designation will not be marked on the packages. Please refer to Table 1 for the new catalog part number for the factory-programmed “power of 2” binary page size option.

Identification Method to Distinguish Change:

New catalog part numbers use an “E” suffix for the device revision (AT45DB021D changes to AT45DB021E).

Table 1.

EOL Part Number	Replacement Part Number	Carrier Type
AT45DB021D-MH-T	AT45DB021E-MH-N-T	T for T/R
AT45DB021D-MH-Y	AT45DB021E-MH-N-Y	Y for Tray
AT45DB021D-MH-T-SL954	no replacement	
AT45DB021D-SH-B	AT45DB021E-SH-N-B (AT45DB021E-SSH-N-B is recommended) ¹	B for Bulk
AT45DB021D-SH-T	AT45DB021E-SH-N-T (AT45DB021E-SSH-N-T is recommended) ¹	T for T/R
AT45DB021D-SH-T-SL955	AT45DB021E-SH-N2B-T (AT45DB021E-SSH-N2B-T is recommended) ¹	T for T/R
AT45DB021D-SSH-B	AT45DB021E-SSH-N-B	B for Bulk
AT45DB021D-SSH-T	AT45DB021E-SSH-N-T	T for T/R
AT45DB021D-SSH-T-SL955	AT45DB021E-SSH-N2B-T	T for T/R
	AT45DB021E-W4U27-N	Whole Wafer

Notes:

1. Narrow Body SOIC Package (SSH-N) is Recommended, Wide Body SOIC will be supported for legacy designs. For NEW designs the JEDEC SOIC (Narrow Body) is recommended as the industry is moving to the smaller footprint as customers reduce overall board space requirements.

2. New offering for AT45DB021E products

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 (AT45DB021E): April, 2013

Last Time Buy Date (AT45DB021D): April 30, 2013

Last Ship Date (AT45DB021D): July 31, 2013

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

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