Product End-of-Life Notification

EOL Number: SE071701A (REVISED)   **Date*:** May 1, 2007
See Bold Blue Text Below and Appendix A & B

Product Description & Replacement:
To improve production logistics and support core product offerings, a limited set of 64kbit Parallel EEPROMs offerings will be retired in favor of long term support for the newer generation EEPROM replacement alternatives.

EOL PRODUCTS:
AT28C64, AT28C64X, AT28C64E, AT28BV64 and AT28LV64

NOTE: The AT28C64B, AT28HC64B, AT28HC64BF, and AT28BV64B are long term support products and are *NOT* AFFECTED BY THIS NOTICE.

REPLACEMENT PRODUCTS:
See Appendix A

APPENDIX A: See Appendix A for the complete catalog part number of each effected product, and related product alternatives.

APPENDIX B: See Appendix B for application notes regarding conversion from EOL products to long term supply alternatives

Reason for EOL:
To improve production logistics and support core product offerings, a limited set of 64kbit Parallel EEPROMs offerings will be retired in favor of long term support for the newer generation EEPROM replacement alternatives.

Last Time Buy Date: December 1, 2007

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

Last Ship Date: June 30, 2008

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Appendix A

Last Time Buy and Replacement Guide

Note 1: The AT28C64B AT28HC64B AT28HC64BF and AT28BV64B are long term support products and are *NOT* AFFECTED BY THIS NOTICE.

Note 2: LTB orders are Non cancellable/Non-returnable

EOL Part Number for Last Time Buy	Replacement Part Number	EOL Part Number for Last Time Buy	Replacement Part Number	EOL Part Number for Last Time Buy	Replacement Part Number
AT28BV64-20SC	AT28BV64B-20SU	AT28C64-20SC	AT28HC64BF-12SU	AT28C64E-25PC	AT28HC64BF-12PU
AT28BV64-20TI	AT28BV64B-20TU	AT28C64-20SI	AT28HC64BF-12SU	AT28C64E-25PI	AT28HC64BF-12PU
AT28BV64-25JC	AT28BV64B-20JU	AT28C64-20TC	AT28HC64BF-12TU	AT28C64E-25SC	AT28HC64BF-12SU
AT28BV64-25JI	AT28BV64B-20JU	AT28C64-20TI	AT28HC64BF-12TU	AT28C64E-25SI	AT28HC64BF-12SU
AT28BV64-25PC	AT28BV64B-20PU	AT28C64-25JC	AT28HC64BF-12JU	AT28C64E-25TI	AT28HC64BF-12TU
AT28BV64-25PI	AT28BV64B-20PU	AT28C64-25JI	AT28HC64BF-12JU	AT28C64X-15JC	AT28HC64BF-12JU
AT28BV64-25SC	AT28BV64B-20SU	AT28C64-25PC	AT28HC64BF-12PU	AT28C64X-15JI	AT28HC64BF-12JU
AT28BV64-25SI	AT28BV64B-20SU	AT28C64-25PI	AT28HC64BF-12PU	AT28C64X-15PC	AT28HC64BF-12PU
AT28BV64-25TC	AT28BV64B-20TU	AT28C64-25SC	AT28HC64BF-12SU	AT28C64X-15PI	AT28HC64BF-12PU
AT28BV64-25TI	AT28BV64B-20TU	AT28C64-25SI	AT28HC64BF-12SU	AT28C64X-15SC	AT28HC64BF-12SU
AT28BV64-30JC	AT28BV64B-20JU	AT28C64-25TC	AT28HC64BF-12TU	AT28C64X-15SI	AT28HC64BF-12SU
AT28BV64-30JI	AT28BV64B-20JU	AT28C64-25TI	AT28HC64BF-12TU	AT28C64X-20JC	AT28HC64BF-12JU
AT28BV64-30PC	AT28BV64B-20PU	AT28C64E-12JC	AT28HC64BF-12JU	AT28C64X-20JI	AT28HC64BF-12JU
AT28BV64-30PI	AT28BV64B-20PU	AT28C64E-12JI	AT28HC64BF-12JU	AT28C64X-20PC	AT28HC64BF-12PU
AT28BV64-30SC	AT28BV64B-20SU	AT28C64E-12JU	AT28HC64BF-12JU	AT28C64X-20PI	AT28HC64BF-12PU
AT28BV64-30SI	AT28BV64B-20SU	AT28C64E-12PC	AT28HC64BF-12PU	AT28C64X-20SC	AT28HC64BF-12SU
AT28BV64-30TC	AT28BV64B-20TU	AT28C64E-12PI	AT28HC64BF-12PU	AT28C64X-20SI	AT28HC64BF-12SU
AT28BV64-30TI	AT28BV64B-20TU	AT28C64E-12PU	AT28HC64BF-12PU	AT28C64X-25JC	AT28HC64BF-12JU
AT28C64-12JC	AT28HC64BF-12JU	AT28C64E-12SC	AT28HC64BF-12SU	AT28C64X-25JI	AT28HC64BF-12JU
AT28C64-12JI	AT28HC64BF-12JU	AT28C64E-12SI	AT28HC64BF-12SU	AT28C64X-25PC	AT28HC64BF-12PU
AT28C64-12PC	AT28HC64BF-12PU	AT28C64E-12SU	AT28HC64BF-12SU	AT28C64X-25PI	AT28HC64BF-12PU
AT28C64-12PI	AT28HC64BF-12PU	AT28C64E-12TU	AT28HC64BF-12TU	AT28C64X-25SC	AT28HC64BF-12SU
AT28C64-12SC	AT28HC64BF-12SU	AT28C64E-15JC	AT28HC64BF-12JU	AT28C64X-25SI	AT28HC64BF-12SU
AT28C64-12SI	AT28HC64BF-12SU	AT28C64E-15JI	AT28HC64BF-12JU	AT28LV64-20JC	AT28BV64B-20JU
AT28C64-12TC	AT28HC64BF-12TU	AT28C64E-15PC	AT28HC64BF-12PU	AT28LV64-20JI	AT28BV64B-20JU
AT28C64-15JC	AT28HC64BF-12JU	AT28C64E-15PI	AT28HC64BF-12PU	AT28LV64-20PC	AT28BV64B-20PU
AT28C64-15JI	AT28HC64BF-12JU	AT28C64E-15SC	AT28HC64BF-12SU	AT28LV64-20PI	AT28BV64B-20PU
AT28C64-15PC	AT28HC64BF-12PU	AT28C64E-15SI	AT28HC64BF-12SU	AT28LV64-20SC	AT28BV64B-20SU
AT28C64-15PI	AT28HC64BF-12PU	AT28C64E-15SU	AT28HC64BF-12SU	AT28LV64-20SI	AT28BV64B-20SU
AT28C64-15PU	AT28HC64BF-12PU	AT28C64E-15TC	AT28HC64BF-12TU	AT28LV64-20TC	AT28BV64B-20TU
AT28C64-15SC	AT28HC64BF-12SU	AT28C64E-15TI	AT28HC64BF-12TU	AT28LV64-20TI	AT28BV64B-20TU
AT28C64-15SI	AT28HC64BF-12SU	AT28C64E-20JC	AT28HC64BF-12JU	AT28LV64-30JC	AT28BV64B-20JU
AT28C64-15TC	AT28HC64BF-12TU	AT28C64E-20JI	AT28HC64BF-12JU	AT28LV64-30JI	AT28BV64B-20JU
AT28C64-15TI	AT28HC64BF-12TU	AT28C64E-20PC	AT28HC64BF-12PU	AT28LV64-30PC	AT28BV64B-20PU
AT28C64-15TU	AT28HC64BF-12TU	AT28C64E-20PI	AT28HC64BF-12PU	AT28LV64-30PI	AT28BV64B-20PU
AT28C64-20JC	AT28HC64BF-12JU	AT28C64E-20SC	AT28HC64BF-12SU	AT28LV64-30SC	AT28BV64B-20SU
AT28C64-20JI	AT28HC64BF-12JU	AT28C64E-20SI	AT28HC64BF-12SU	AT28LV64-30SI	AT28BV64B-20SU
AT28C64-20PC	AT28HC64BF-12PU	AT28C64E-25JC	AT28HC64BF-12JU	AT28LV64-30TC	AT28BV64B-20TU
AT28C64-20PI	AT28HC64BF-12PU	AT28C64E-25JI	AT28HC64BF-12JU	AT28LV64-30TI	AT28BV64B-20TU

Appendix B

Compatibility and Conversion Notes

The AT28C64, C64E, and C64X products (hereinafter referred to as EOL products) are manufactured on an older technology and plans to retire this process are underway. The AT28HC64BF, **AT28C64B, AT28HC64B**, as well as the AT28BV64B, shown in the below table, remain as valid long-term production design-in products that may be used to replace the aforementioned EOL products, dependant upon end system requirements.

Catalog Part No.	Description	Pgm- Byte Mode	Pgm- Page Mode	Pgm Time	Data Poll	Rdy/Bsy Pin 1	#Pins	RoHS-compliant	Pb	Read Access Time	Production Status	Sftw data Protection	Replacement
AT28HC64BF	64 kbit (x8)	✓	✓	2 mS	✓		28	✓		70,90,120	Active- Long Term	✓	not applicable
AT28BV64B	64 kbit (x8)	✓	✓	10 mS	✓		28	✓		200	Active- Long Term	✓	not applicable
AT28C64B	64 kbit (x8)	✓	✓	10 mS	✓		28	✓		150	Active- Long Term	✓	not applicable
AT28HC64B	64 kbit (x8)	✓	✓	10 mS	✓		28	✓		70,90,120	Active- Long Term	✓	not applicable
AT28C64	64 kbit (x8)	✓		1 mS	✓	✓	28		✓	150	EOL		AT28HC64BF
AT28C64X	64 kbit (x8)	✓		1 mS	✓		28		✓	150	EOL		AT28HC64BF
AT28C64E	64 kbit (x8)	✓		200 uS	✓	✓	28	✓	✓	120	EOL		AT28HC64BF
AT28BV64	64 kbit (x8)	✓		1 mS	✓	✓	28		✓	200	Obsolete		AT28BV64B
AT28LV64	64 kbit (x8)	✓		3 mS	✓	✓	28		✓	200	Obsolete		AT28BV64B

If system considerations can not accept the AT28HC64BF, then the customer is encouraged to take advantage of the long term last-time-buy program offered by Atmel for the EOL products.

PROGRAMMING
The AT28C64, AT28C64E, and AT28C64X are all byte alterable ONLY products, whereas the AT28HC64BF is more flexible, offering both byte and page programming.
Impact: No system timing or software change respective of size of update is required.
PROGRAMMING TIMING
The EOL products provide relatively fast **single BYTE** programming times of 1mS down to 200uS. The AT28HC64BF programming is 2mS whether programming a single byte or an **entire 64 byte page in a single cycle.**
Impact: This may have a performance impact on system updates unless end-system programming timing is changed.
RDY/BSY
Some of the EOL products offer Pin 1 as RDY/BSY which is used to detect the end of a programming cycle in lieu of having to wait for the prescribed twc specification.
The AT28HC64BF (and EOL AT28C64X) have Pin 1 assigned as a 'no connect' without the Rdy/Bsy feature.
Impact: If the end-system configuration does NOT use the Rdy/Bsy function then no impact is foreseen when converting the socket to the AT28HC64BF, otherwise use of the LTB for the EOL products is recommended.
SOFTWARE DATA PROTECTION (SDP)
The AT28HC64BF product offers SDP which provides the greatest protection against corrupt memory due to system-induced, inadvertent programming commands. *However, this feature is an option and is only activated or enabled upon customer programming of the SDP algorithm (ref. datasheet).* The EOL products do not offer the Software data protection feature.

Impact: None