PCN / EOL Notification

Product Change Notification Number: CC070603   **Date:** February 13, 2007

Title: AT24C128 DIE SHRINK

Product Identification:
All Wafers, Packages and Voltages of the AT24C128, Industrial Temperature Grade (-40C to +85C)
See Attachment A

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

Change Description:
Atmel has performed a die size reduction of the AT24C128 in the Industrial Temperature (-40 to +85C). The new version device will be manufactured utilizing the .25u process versus the .35u process for the current AT24C128. A NEW part number will be created by adding "B" to the suffix of the part identifier for the shrink: AT24C128B.

Atmel has also optimized the clock frequency at lower Vcc, and the new AT24C128B will operate at 400kHz at 1.8V & 1MHz at 2.5V versus 100kHz at 1.8V & 400kHz at 2.5V for the current AT24C128 device. In addition, an extra device address pin (A2) has been added for expanded cascadability. The new device will be offered only in 1.8V (Vcc = 1.8V to 3.6V).

To accommodate the growing movement to Lead-Free products, the new shrink will ONLY be available in Pb-Free (Green) / Halogen-Free, and RoHS compliant packaging. The 8-SOIC, 8-TSSOP, 8-ULTRA THIN MINI-MAP, and 8-ULTRA THIN SAP packages with NiPdAu lead finish will be designated by "H" in the catalogue part number.   The 8-lead PDIP and dBGA2 with the Matte Tin lead finish will be designated by "U" in the catalogue part number.

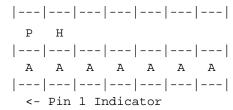**New physical part marking scheme:**

```
8-SOIC
TOP MARK                  Seal Year      Y = SEAL YEAR     WW = SEAL WEEK
                           | Seal Week   6: 2006   0: 2010   02 = Week 2
                           | |  |        7: 2007   1: 2011   04 = Week 4
    |---|---|---|---|---|---|---|---|    8: 2008   2: 2012   :: : :::: :
     A   T   M   L   H   Y   W   W       9: 2009   3: 2013   :: : :::: ::
    |---|---|---|---|---|---|---|---|                        50 = Week 50
     2   D   B       1                                       52 = Week 52
    |---|---|---|---|---|---|---|---|
     *   Lot Number                      Lot Number to Use ALL Characters in Marking
    |---|---|---|---|---|---|---|---|
     |                                   BOTTOM MARK
    Pin 1 Indicator (Dot)                     No Bottom Mark
```

8-TSSOP

TOP MARK

```
        Pin 1 Indicator (Dot)

         |
         |---|---|---|---|
         *   H   Y   W   W
        |---|---|---|---|---|
         2   D   B       1
        |---|---|---|---|---|
```

```
Y = SEAL YEAR        WW = SEAL WEEK

6: 2006   0: 2010    02 = Week 2
7: 2007   1: 2011    04 = Week 4
8: 2008   2: 2012    :: : :::: :
9: 2009   3: 2013    :: : :::: ::

                     50 = Week 50

                     52 = Week 52
```

BOTTOM MARK

```
   |---|---|---|---|---|---|---|
     P   H
   |---|---|---|---|---|---|---|
     A   A   A   A   A   A   A
   |---|---|---|---|---|---|---|
     <- Pin 1 Indicator
```

8-PDIP

TOP MARK

```
                    Seal Year
                     | Seal Week
                     |   |   |
  |---|---|---|---|---|---|---|---|
    A   T   M   L   U   Y   W   W
  |---|---|---|---|---|---|---|---|
    2   D   B       1
  |---|---|---|---|---|---|---|---|
    *   Lot Number
  |---|---|---|---|---|---|---|---|
    |
   Pin 1 Indicator (Dot)
```

```
Y = SEAL YEAR        WW = SEAL WEEK

6: 2006   0: 2010    02 = Week 2
7: 2007   1: 2011    04 = Week 4
8: 2008   2: 2012    :: : :::: :
9: 2009   3: 2013    :: : :::: ::

                     50 = Week 50

                     52 = Week 52
```

Lot Number to Use ALL Characters in Marking

BOTTOM MARK

No Bottom Mark

8-Ultra Thin Mini-MAP

TOP MARK

```
         |---|---|---|
           2   D   B
         |---|---|---|
           H   1
         |---|---|---|
           Y   X   X
         |---|---|---|
           *
           |
      Pin 1 Indicator (Dot)
```

Y = YEAR OF ASSEMBLY

XX = ATMEL LOT NUMBER TO COORESPOND WITH
NSEB TRACE CODE LOG BOOK.
(e.g. XX = AA, AB, AC,...AX, AY, AZ)

```
Y = SEAL YEAR
6: 2006   0: 2010
7: 2007   1: 2011
8: 2008   2: 2012
9: 2009   3: 2013
```

8-Ultra Thin SAP

```
TOP MARK                Seal Year
                        | Seal Week      Y = SEAL YEAR      WW = SEAL WEEK
                        |  |   |          6: 2006  0: 2010   02 = Week 2
    |---|---|---|---|---|---|---|---|     7: 2007  1: 2011   04 = Week 4
      A   T   M   L   H   Y   W   W       8: 2008  2: 2012   :: : :::: :
    |---|---|---|---|---|---|---|---|     9: 2009  3: 2013   :: : :::: ::
      2   D   B       1                                      50 = Week 50
    |---|---|---|---|---|---|---|---|                        52 = Week 52
      Lot Number
    |---|---|---|---|---|---|---|---|
      *
      |
    Pin 1 Indicator (Dot)
```

dBGA2

```
TOP MARK

LINE 1------->     2DBU
LINE 2------->     YMTC
                   |<--  Pin 1 This Corner


 Y = ONE DIGIT YEAR CODE
4: 2004   7: 2007
5: 2005   8: 2008
6: 2006   9: 2009

M = SEAL MONTH (USE ALPHA DESIGNATOR A-L)
  A = JANUARY
  B = FEBRUARY
  " "  """""""
  J = OCTOBER
  K = NOVEMBER
  L = DECEMBER



    TC = TRACE CODE (ATMEL LOT
    NUMBERS TO CORRESPOND
    WITH ATK TRACE CODE LOG BOOK)
```

Identification Method to Distinguish Change:
There will be a NEW part number created by adding a "B" to the suffix of the catalogue part number: The AT24C128 will now be AT24C128B**.**

Qualification Data:	☐ available	☒ will be available in Mar-2007	☐ not applicable
Samples:	☒ available	☐ will be available	☐ not applicable

Quantifiable Impact on Quality & Reliability:

The new devices are a form, fit and function equivalent of the current devices, which meet all databook specifications.

Proposed First Ship Date*:	May 25, 2007
Last Time Buy Date:	August 25, 2007
Last Ship Date:	February 25, 2008

*The Estimated Implementation Date is the forecasted date that a customer may expect to receive changed product. This is determined by the estimated date of inventory depletion on the PCN issue date. This may be affected by fluctuations in supply and demand. Consequently, although customers should be prepared to receive changed product on this date, Atmel will continue to ship pre-changed product until a time in which inventory has been depleted. This may result in pre-changed product being shipped to customers after this forecasted date.

Atmel Contact: pcnadm@atmel.com

Atmel will deem this change accepted unless specific conditions of acceptance are provided in writing within 30 days from the date of this notice. All correspondence must be sent to the Quality Contact e-mail address listed above.

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Attachment A

Current Part Number	Replacement Part Number
AT24C128-10PU-1.8	AT24C128B-PU (Bulk Only)
AT24C128-10PU-2.7	AT24C128B-PU (Bulk Only)
AT24C128-10TU-1.8 BULK	AT24C128B-TH-B
AT24C128-10TU-1.8 SL383 (T&R)	AT24C128B-TH-T (5k per reel)
AT24C128-10TU-2.7 BULK	AT24C128B-TH-B
AT24C128-10TU-2.7 SL383 (T&R)	AT24C128B-TH-T (5k per reel)
AT24C128-W1.8-11	AT24C128B-W-11
AT24C128-W1.8-7	AT24C128B-W-11
AT24C128-W2.7-11	AT24C128B-W-11
AT24C128-W2.7-27	AT24C128B-W-11
AT24C128-W2.7-7	AT24C128B-W-11
AT24C128-WG1.8-11	AT24C128B-WU-11 (Green only)
AT24C128W-10SU-1.8 BULK	AT24C128BW-SH-B *Not recommended for new design; please use AT24C128BN-SH-B (JEDEC SOIC) instead
AT24C128W-10SU-1.8 SL383 (T&R)	AT24C128BW-SH-T (2k per reel) *Not recommended for new design; please use AT24C128BN-SH-T (JEDEC SOIC) instead
AT24C128W-10SU-2.7 BULK	AT24C128BW-SH-B *Not recommended for new design; please use AT24C128BN-SH-B (JEDEC SOIC) instead
AT24C128W-10SU-2.7 SL383 (T&R)	AT24C128BW-SH-T (2k per reel) *Not recommended for new design; please use AT24C128BN-SH-T (JEDEC SOIC) instead
AT24C128N-10SU-1.8 BULK	AT24C128BN-SH-B
AT24C128N-10SU-1.8 SL383 (T&R)	AT24C128BN-SH-T (4k per reel)
AT24C128N-10SU-2.7 BULK	AT24C128BN-SH-B
AT24C128N-10SU-2.7 SL383 (T&R)	AT24C128BN-SH-T (4k per reel)
AT24C128U2-10UU-1.8 SL383 (T&R)	AT24C128BU2-UU-T (5k per reel)
AT24C128Y1-10YU-1.8 SL383 (T&R)	AT24C128BY6-YH-T (5k per reel) *Recommend Ultra Thin Mini-MAP (Y6) package for replacement