PCN / EOL Notification

Product Change Notification Number: CC070302 **Date:** January 24, 2007

Title: AT24C512 DIE SHRINK

Product Identification:
All Wafers, Packages and Voltages of the AT24C512, 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 AT24C512 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 AT24C512. A NEW part number will be created by adding “B” to the suffix of the part identifier for the shrink: AT24C512B.

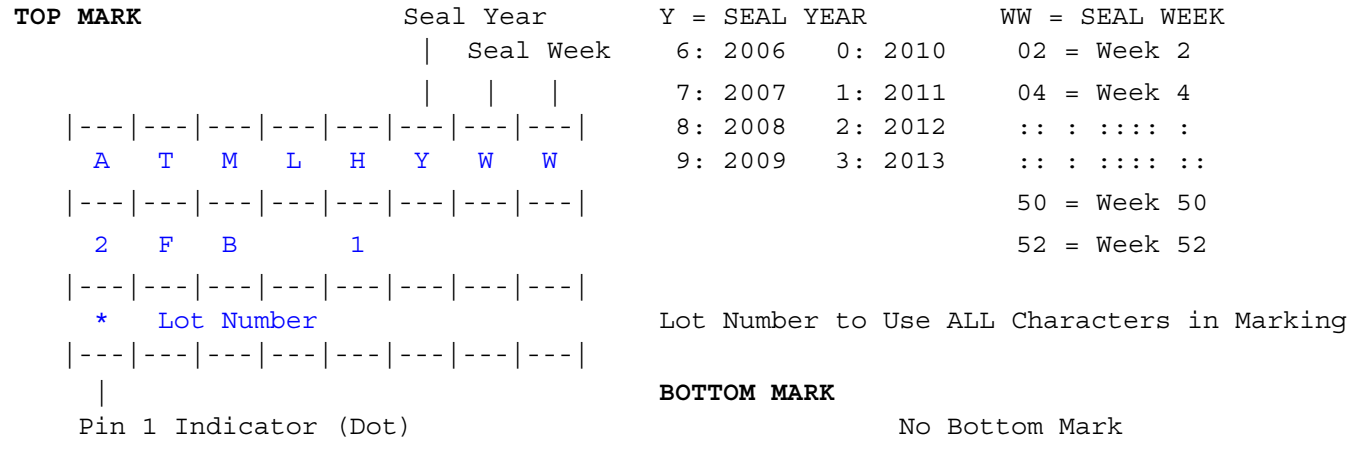
Atmel has also optimized the clock frequency at lower Vcc, and the new AT24C512B will operate at 400kHz at 1.8V & 1MHz at 2.5V versus 100kHz at 1.8V & 400kHz at 2.5V for the current AT24C512 device. In addition, an extra device address pin (A2) has been added for expanded cascadability.

The new packaged devices will be offered in 1.8 and 2.5 voltages: (1.8V to 3.6V) and (2.5V to 3.6V). The dBGA2, die, and wafer sales will only be offered in 1.8V.

To accommodate the growing movement to Lead-Free products, the new shrink will ONLY be available in Pb-Free (Green) / Halogen-Free packaging. The 8-SOIC, 8-TSSOP, 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.

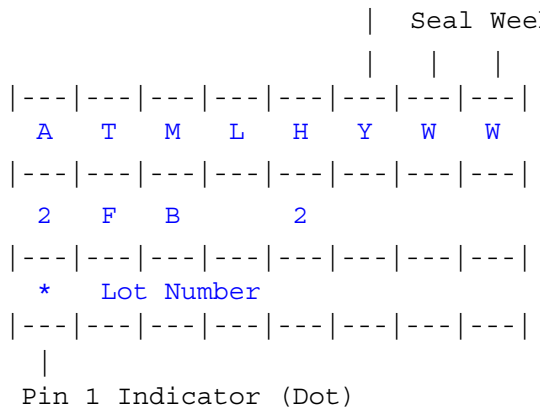
New physical part marking scheme:

8-SOIC(1.8V)



8-SOIC(2.5V)

TOP MARK Seal Year 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

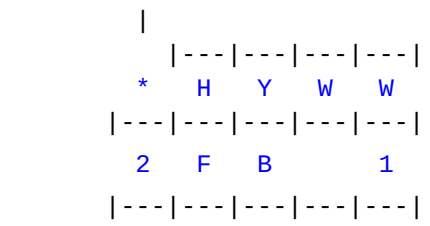
Lot Number to Use ALL Characters in Marking

BOTTOM MARK

No Bottom Mark

8-TSSOP(1.8V)

TOP MARK



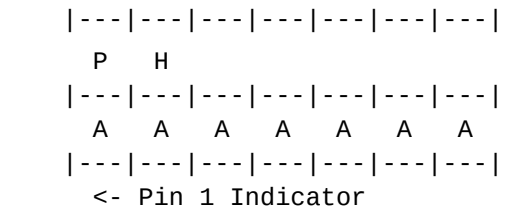
Y = SEAL YEAR

6: 2006 0: 2010
7: 2007 1: 2011
8: 2008 2: 2012
9: 2009 3: 2013

WW = SEAL WEEK

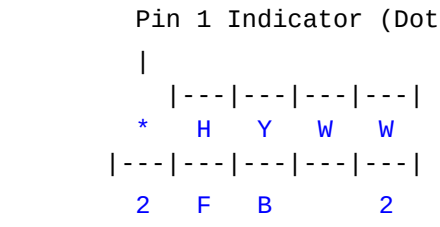
02 = Week 2
04 = Week 4
:: : :::: :
:: : :::: ::
50 = Week 50
52 = Week 52

BOTTOM MARK



8-TSSOP(2.5V)

TOP MARK



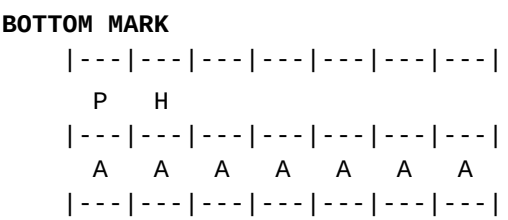
Y = SEAL YEAR

6: 2006 0: 2010
7: 2007 1: 2011
8: 2008 2: 2012
9: 2009 3: 2013

WW = SEAL WEEK

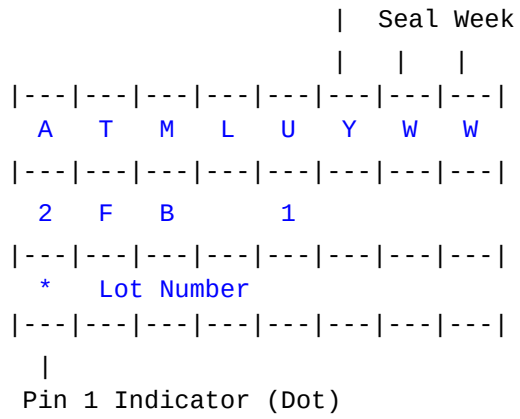
02 = Week 2
04 = Week 4
:: : :::: :
:: : :::: ::
50 = Week 50
52 = Week 52

BOTTOM MARK



8-PDIP(1.8V)

TOP MARK Seal Year 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

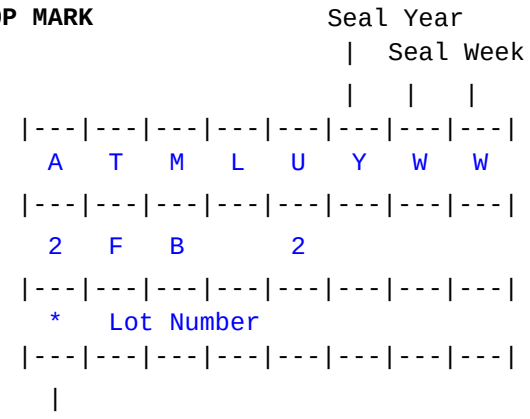
Lot Number to Use ALL Characters in Marking

BOTTOM MARK

No Bottom Mark

8-PDIP(2.5V)

TOP MARK



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

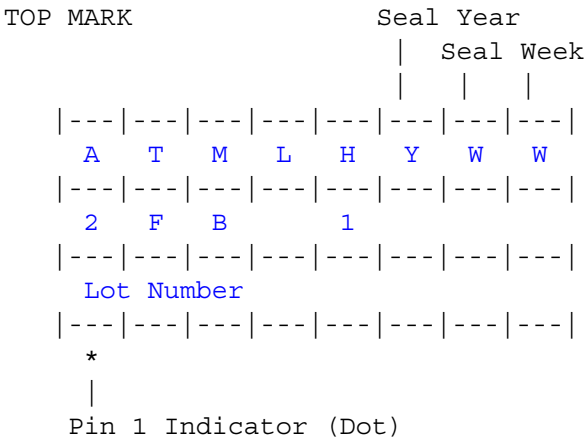
Lot Number to Use ALL Characters in Marking

BOTTOM MARK

No Bottom Mark

8-Ultra Thin SAP (1.8V)

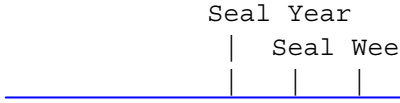
TOP MARK



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

8-Ultra Thin SAP (2.5V)

TOP MARK



6: 2006	0: 2010	02 = Week 2

```
|---|---|---|---|---|---|---|---|
  A   T   M   L   H   Y   W   W
|---|---|---|---|---|---|---|---|
  2   F   B       2
|---|---|---|---|---|---|---|---|
  Lot Number
|---|---|---|---|---|---|---|---|
  *
  |
 Pin 1 Indicator (Dot)
```

```
7: 2007   1: 2011     04 = Week 4
8: 2008   2: 2012     :: : :::: :
9: 2009   3: 2013     :: : :::: ::
                      50 = Week 50
                      52 = Week 52
```

dBGA2

```
TOP MARK

LINE 1------->     2FBU
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 AT24C512 will now be AT24C512**B.**

Qualification Data:	☐ available	☒ will be available in Feb-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*: April 24, 2007

Last Time Buy Date: July 24, 2007
Last Ship Date: January 24, 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.

Attachment A

Current Part Number	Replacement Part Number
AT24C512-10PU-1.8	AT24C512B-PU (Bulk Only)
AT24C512-10PU-2.7	AT24C512B-PU25 (Bulk Only)
AT24C512-10TU-1.8 BULK	AT24C512B-TH-B
AT24C512-10TU-1.8 SL383 (T&R)	AT24C512B-TH-T (5k per reel)
AT24C512-10TU-2.7 BULK	AT24C512B-TH25-B
AT24C512-10TU-2.7 SL383 (T&R)	AT24C512B-TH25-T (5k per reel)
AT24C512-W1.8-11	AT24C512B-W-11
AT24C512-W1.8-27	AT24C512B-W-11
AT24C512-W2.7-11	AT24C512B-W-11
AT24C512-W2.7-7	AT24C512B-W-11
AT24C512-WB1.8-11	AT24C512B-WU-11 (Green only)
AT24C512-WU1.8-11	AT24C512B-WU-11
AT24C512W-10SU-1.8 BULK	AT24C512BW-SH-B
AT24C512W-10SU-1.8 SL383 (T&R)	AT24C512BW-SH-T (2k per reel)
AT24C512W-10SU-2.7 BULK	AT24C512BW-SH25-B
AT24C512W-10SU-2.7 SL383 (T&R)	AT24C512BW-SH25-T (2k per reel)
AT24C512C1-10CU-1.8 SL383 (T&R)	AT24C512BY7-YH-T (5k per reel)
AT24C512C1-10CU-2.7 SL383 (T&R)	AT24C512BY7-YH25-T (5k per reel)
AT24C512N-10SU-1.8 BULK	AT24C512BN-SH-B
AT24C512N-10SU-1.8 SL383 (T&R)	AT24C512BN-SH-T (4k per reel)
AT24C512N-10SU-2.7 BULK	AT24C512BN-SH25-B
AT24C512N-10SU-2.7 SL383 (T&R)	AT24C512BN-SH25-T (4k per reel)
AT24C512U4-10UU-1.8 SL383 (T&R)	AT24C512BU4-UU-T (5k per reel)
AT24C512U4-10UU-2.7 SL383 (T&R)	AT24C512BU4-UU-T (5k per reel)