



PCN / EOL Notification

Product Change Notification Number: CC091701

Date: April 27, 2009

Title: AT93C46 **Automotive Product** Layout Optimization and Conversion to NiPdAu Plating and End-of-Life of AT93C46A Automotive Product

Product Identification:

All Packages, Automotive Grade with Temperatures (-40C to +125C) and Voltages of the AT93C46 and AT93C46A.

[See Attachment A for list of Parts](#)

Reason for Change:

- | | | |
|---|--|------------------------------------|
| ☒ Design | ☐ Processing | ☐ Logistics |
| ☐ Manufacturing Location | ☐ Quality/Reliability | ☐ Material |

Change Description:

Atmel has optimized the layout of the Serial EEPROM **Automotive Grade** AT93C46 device (3-wire interface, 1-Kbit density and **x8 as well x16 data format memory organization**). The catalogue part number AT93C46 will be replaced by AT93C46D. The new devices are pin-to-pin and backward compatible with the current AT93C46 devices. The new devices will be available in 2.5 volt (2.5V up to 5.5V) and Green Packaging only. "P" in the catalogue part number signifies Pb/Halogen-Free/RoHS compliant, with NiPdAu lead finish. See Attachment A for direct replacement.

Atmel hereby also announces that the Serial EEPROM Automotive Grade AT93C46A device (3-wire interface, 1-Kbit density and **only x16 data format memory organization**) has reached End-of-Life due to low customer demand. See Attachment A for suggested replacement.

Identification Method to Distinguish Change:

A NEW catalogue part numbers is created by adding a "D" to the AT93C46. The AT93C46 will now be the AT93C46D.

New physical part marking scheme:

AT93C46DN-SP25-T or AT93C46DN-SP25-B (8-SOIC T/R or Bulk)

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 P Y W W		9: 2009 3: 2013	:: : :::: ::
--- --- --- --- --- --- --- ---			50 = Week 50
4 6 D 2			52 = Week 52
--- --- --- --- --- --- --- ---			
* Lot Number		Lot Number to Use ALL Characters in Marking	
--- --- --- --- --- --- --- ---			
		BOTTOM MARK	
Pin 1 Indicator (Dot)		No Bottom Mark	

AT93C46D-TP25-T or AT93C46D-TP25-B (8-TSSOP T/R or Bulk)

TOP MARK

Pin 1 Indicator (Dot)

```

|
| --- | --- | --- | --- |
*  P   Y   W   W
| --- | --- | --- | --- |
4   6   D       2
| --- | --- | --- | --- |

```

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

```

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

```

Qualification Data:☒ available☐ will be available in☐ not applicable**Samples:**☒ available☐ will be available in☐ not applicable**Quantifiable Impact on Quality & Reliability:**

The new devices use same process technology and are form, fit and function equivalent of the current devices, which meet all datasheet specifications.

The NiPdAu plating option has the advantage of not introducing metal whiskering. This eliminates the possibility of electrical shorting between fine pitch designs. It also has no material residue build up during electrical test. Due to the high quality on this plating, there is now a general trend in the industry to move to NiPdAu plating. Packages with NiPdAu plating are Pb-free, RoHS compliant, Halide free and fully Green. Package Material Declaration Data sheets are available at:

<http://www.atmel.com/green/pmdds.asp#NiPdAuPlating>

Proposed First Ship Date*:

July 20, 2009

Last Time Buy Date:

April 20, 2010

Last Ship Date:

October 20, 2010

*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

This is the listing for standard datasheet offering, PCN also applies to all (customer specific) special CAN part numbers that are not listed in the table below:

Current Part Number	Replacement Part Number
AT93C46-10SQ-2.7 BULK	AT93C46DN-SP25-B
AT93C46-10SQ-2.7 SL383 (T&R)	AT93C46DN-SP25-T (4k per reel)
AT93C46-10TQ-2.7 BULK	AT93C46D-TP25-B
AT93C46-10TQ-2.7 SL383 (T&R)	AT93C46D-TP25-T (5k per reel)
AT93C46A-10SQ-1.8 BULK	*AT93C46DN-SP25-B
AT93C46A-10SQ-1.8 SL383 (T&R)	*AT93C46DN-SP25-T (4k per reel)
AT93C46A-10TQ-2.7 BULK	*AT93C46D-TP25-B
AT93C46A-10TQ-2.7 SL383 (T&R)	*AT93C46D-TP25-T (5k per reel)

[*Suggested Replacement, please refer to datasheet for detailed specification.](#)