



Product Change Notification

Product Change Notification Number: **NC120602A (REVISED)**
See Changes in Blue Text Below

Notification Date: May 1, 2013

Title: Technology Shrink of Automotive Microcontrollers Product ATmega48/88/168 and ATmega164P/324P

Product Identification:

Current Product	New Product	Current Product	New Product
ATmega48-15MT	ATmega48PA-15MZ	ATmega48-15AZ	ATmega48PA-15AZ
ATmega48-15MT1	ATmega48PA-15MZ	ATmega88-15AT	ATmega88PA-15AZ
ATmega48-15MZ	ATmega48PA-15MZ	ATmega88-15AT1	ATmega88PA-15AZ
ATmega88-15MT	ATmega88PA-15MZ	ATmega88-15AZ	ATmega88PA-15AZ
ATmega88-15MT1	ATmega88PA-15MZ	ATmega168-15AT	ATmega168PA-15AZ
ATmega88-15MZ	ATmega88PA-15MZ	ATmega168-15AT1	ATmega168PA-15AZ
ATmega168-15MT	ATmega168PA-15MZ	ATmega168-15AZ	ATmega168PA-15AZ
ATmega168-15MT1	ATmega168PA-15MZ	ATmega164P-A15MZ	ATmega164P-B15MZ
ATmega168-15MZ	ATmega168PA-15MZ	ATmega324P-A15MZ	ATmega324P-B15MZ
ATmega48-15AT	ATmega48PA-15AZ	ATmega164P-A15AZ	ATmega164P-B15AZ
ATmega48-15AT1	ATmega48PA-15AZ	ATmega324P-A15AZ	ATmega324P-B15AZ

Note: Current Products are not phase out.

Reason for Change:

☐ Material / Composition

☐ Processing / Manufacturing

☒ Design / Firmware

☐ Logistics

☐ Manufacturing Location

☐ Quality / Reliability

Change Description:

Optimized std logic cells and metal interconnection width reduction. Resulting is reduced die size.
Replacements are: pin-to-pin and backward compatible; are production tested using similar automotive test programs; meet similar datasheet specifications as the current products.

Summarised as: same technology, different std cells, smaller die.

	<u>Current Product</u>	<u>New Product</u>
Technology	0.35µm 6"	Same
Wafer Production	Atmel, CSO	Same
Voltage Range	2.7V to 5.5V	Same
Package Type	QFN/TQFP	Same
Packaging Location	Multiple (see PPAP)	Same
Plating Type	Sn Matte	Same
Pin Positioning	Per datasheet	Same
Functionality	Per datasheet	Same
Docs provided as part of PCN process		Datasheet PPAP Packaging Spec

See product datasheet (available on Atmel website) for details of electrical characteristics.

Identification Method to Distinguish Change:

New catalog part number

Qualification Data:	☒ Available	☐ Will be available (mm/dd/yr): 30/03/2012	☐ Not Applicable
Samples:	☒ Available	☐ Will be available (mm/dd/yr):	☐ Not Applicable

Quantifiable Impact on Quality & Reliability:

None

Proposed First Ship Date*: ~~April 1, 2012~~ **August 1, 2013**

**The Proposed First Ship 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

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CUSTOMER ACKNOWLEDGEMENT OF RECEIPT: Atmel requests you acknowledge receipt of this PCN. Please complete and email to the Atmel Contact listed above. In your acknowledgement, you can grant approval or request additional information. **Atmel will deem this change accepted unless specific conditions of acceptance are provided in writing within 30 days from the date of this notice.**

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