



Product Change Notification

Product Change Notification Number: WC124807

Notification Date: February 11, 2013

Title: Die Revision Change for ATxmega128A3U			
Product Identification:			
ATxmega128A3U-AU		ATxmega128A3U-AUR	
ATxmega128A3U-MH		ATxmega128A3U-MHR	
Reason for Change:	☒ Material / Composition	☒ Design / Firmware	☐ Manufacturing Location
	☐ Processing / Manufacturing	☐ Logistics	☒ Quality / Reliability
Change Description:			
This notification is to advise our customers that Atmel will introduce new revisions of the AVR microcontroller products listed above. The new revisions are package and pin compatible to the existing revisions. They are introduced in order to remove errata and enhance the product. Actual devices changes are minimal, but for your reference they are listed here. Samples are only available in bulk and can be ordered through Atmel Sample Centre by logging on to https://samples.atmel.com/scripts/samplecenter.dll?atmel?cmd=menu Specific ordering codes for new die revision samples only are shown in the table below, and are available for sample orders only until the proposed first shipment date. For all production orders, only standard existing ordering codes will be accepted.			
Part number		Ordering code for samples	
ATxmega128A3U-AU		ATxmega128A3U-AUK	
ATxmega128A3U-MH		ATxmega128A3U-MHK	
Note that the K in sample ordering codes will not be marked on the package.			
Changes			
The new revision change the following: • Reduced current consumption in Active and Idle modes • Bonding wire material has changed from gold to copper • The I/O pins comply with the JEDEC LVTTTL and LVCMOS specification and the high- and low level input and output voltage limits reflect or exceed this specification. See Appendix 1 for more details on changes in electrical parameters.			
Identification Method to Distinguish Change:			
For packages where space allows for die ID to be part of marking, new revision material is identified as 35966I.			
Qualification Data:	☒ Available	☐ Will be available (mm/dd/yr):	☐ Not Applicable
Samples:	☒ Available	☐ Will be available (mm/dd/yr):	☐ Not Applicable

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Quantifiable Impact on Quality & Reliability:

None

Proposed First Ship Date*: May 8, 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: Please contact your Atmel Sales Representative or Distributor for additional information (when replying via e-mail please include PCN number in subject line).

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CUSTOMER ACKNOWLEDGEMENT OF RECEIPT: Atmel requests you acknowledge receipt of this PCN. Please complete and email to pcnadm@atmel.com and 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.**

Company:

Name:

Title:

Date:

Email Address:

Location:

Comments:

Appendix 1: Change Description Details

Reduced current consumption in Active and Idle modes

The table below lists the typical and maximum current consumption in the existing and new revision.

Parameter	Condition		Existing revision			New revision			Units
			Min	Typ	Max	Min	Typ	Max	
Active power consumption	32kHz, Ext. Clk	V _{CC} = 1.8V		120			60		μA
		V _{CC} = 3.0V		270			140		
	1MHz, Ext. Clk	V _{CC} = 1.8V		350			280		
		V _{CC} = 3.0V		697			570		
	2MHz, Ext. Clk	V _{CC} = 1.8V		658	700		500	600	
		V _{CC} = 3.0V		1.1	1.4		1.0	1.4	mA
	32MHz, Ext. Clk			10.6	15		10.3	15	
Idle power consumption	32kHz, Ext. Clk	V _{CC} = 1.8V		4.3			3.5		μA
		V _{CC} = 3.0V		4.8			4.5		
	1MHz, Ext. Clk	V _{CC} = 1.8V		78			75		
		V _{CC} = 3.0V		150			140		
	2MHz, Ext. Clk	V _{CC} = 1.8V		150	350		150	250	
				290	600		280	450	mA
	32MHz, Ext. Clk			4.7	7.0		4.4	7.0	
Power-down power consumption	T = 25°C	V _{CC} = 3.0V		0.1	1.0		0.1	1.0	
	T = 85°C			1.8	5.0		1.6	5.0	
	WDT and sampled BOD enabled, T = 25°C			1.3	3.0		1.2	3.0	
	WDT and sampled BOD enabled, T = 85°C			3.1	7.0		2.8	7.0	
Power-save power consumption	RTC from ULP clock, WDT and sampled BOD enabled, T = 25°C	V _{CC} = 1.8V		1.2			1.2		μA
		V _{CC} = 3.0V		1.3			1.3		
	RTC from 1.024kHz low power 32.768kHz TOSC, T = 25°C	V _{CC} = 1.8V		0.6	2.0		0.5	2.0	
		V _{CC} = 3.0V		0.7	2.0		0.7	2.0	
	RTC from low power 32.768kHz TOSC, T = 25°C	V _{CC} = 1.8V		0.8	2.0		0.9	3.0	
		V _{CC} = 3.0V		1.0	3.0		1.2	3.5	
Reset power consumption	Current through RESET pin subtracted	V _{CC} = 3.0V		250			150		