

## Product Change Notification - GBNG-06LXXH156

**Date:** 13 Mar 2017

**Product Category:** 8-bit PIC Microcontrollers

**Notification subject:** CCB 2856 Initial Notice: Qualification of Microchip Fabrication site (FAB 4) for Atmel products manufactured with the 59.91K process technology.

**Notification text:**

**PCN Status:**  
Initial notification

**Microchip Parts Affected:**  
Please open the attachments found in the attachments field below labeled as PCN\_#\_Affected\_CPN.

NOTE: For your convenience Microchip includes identical files in two formats (.pdf and .xls).

**Description of Change:**  
Qualification of Microchip Fabrication site (FAB 4) for Atmel products manufactured with the 59.91K process technology.

**Pre Change:**  
Fabricated at UMC5 and TPS5 fabrication sites using 8 inch wafers.

**Post Change:**  
Fabricated at Microchip Fabrication site (FAB 4) using 8 inch wafers.

**Pre and Post Change Summary:**

	Pre Change		Post Change
<b>Fab Site</b>	UMC5	TPS5	Microchip Fabrication site (FAB 4)
<b>Wafer Size</b>	8 inch wafers	8 inch wafers	8 inch wafers
<b>Quality Certification</b>	ISO/TS16949	ISO/TS16949	ISO/TS16949
<b>Design/Layout</b>	No Change	No Change	No Change
<b>Die Size</b>	No Change	No Change	No Change

**Impacts to Data Sheet:**  
None

**Change Impact:**  
None

**Reason for Change:**  
To improve capacity issue at UMC5 and TPS5 by qualifying Microchip Fabrication site (FAB 4).

**Change Implementation Status:**  
In progress

**Estimated Qualification Completion Date:**  
June 30, 2017

Note: Please be advised the qualification completion times may be extended because of unforeseen business conditions however implementation will not occur until after qualification has completed and a final PCN has been issued. The final PCN will include the qualification report and estimated first ship date.

**Time Table Summary:**

	March 2017	->	June 2017
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Workweek	10	11	12	13		22	23	24	25	26
Initial PCN Issue Date		X								
Qualification Report Availability										X
Final PCN Issue Date										X

**Method to Identify Change:**

Traceability code

**Qualification Plan:**

Please open the attachments included with this PCN labeled as PCN\_#\_Qual Plan.

**Revision History:**

**March 13, 2017:** Issued initial notification.

The change described in this PCN does not alter Microchip's current regulatory compliance regarding the material content of the applicable products.

**Attachment(s):**

[PCN\\_GBNG-06LXXH156\\_Qual\\_Plan1.pdf](#)

[PCN\\_GBNG-06LXXH156\\_Affected CPN.pdf](#)

[PCN\\_GBNG-06LXXH156\\_Affected CPN.xlsx](#)

Please contact your local [Microchip sales office](#) with questions or concerns regarding this notification.

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Affected Catalog Part Numbers (CPN)

<b>PCN_GBNG-06LXXH156</b>
<b>Catalog Part Numbers</b>
ATMEGA168-20AUR
ATMEGA168-20MQ
ATMEGA168-20MQR
ATMEGA168-20MUR
ATMEGA168A-AU
ATMEGA168A-AUR
ATMEGA168A-MU
ATMEGA168A-MUR
ATMEGA168P-20AN
ATMEGA168P-20ANR
ATMEGA168P-20AUR
ATMEGA168P-20MQ
ATMEGA168P-20MQR
ATMEGA168P-20MUR
ATMEGA168PA-AN
ATMEGA168PA-ANR
ATMEGA168PA-AU
ATMEGA168PA-AUR
ATMEGA168PA-MN
ATMEGA168PA-MNR
ATMEGA168PA-MU
ATMEGA168PA-MUR
ATMEGA168PB-AN
ATMEGA168PB-AN
ATMEGA168PB-ANR
ATMEGA168PB-ANR
ATMEGA168PB-AU
ATMEGA168PB-AU
ATMEGA168PB-AU
ATMEGA168PB-AUR
ATMEGA168PB-AUR
ATMEGA168PB-AUR
ATMEGA168PB-AUR
ATMEGA168PB-MN
ATMEGA168PB-MN
ATMEGA168PB-MNR
ATMEGA168PB-MNR
ATMEGA168PB-MU
ATMEGA168PB-MU
ATMEGA168PB-MU
ATMEGA168PB-MUR
ATMEGA168PB-MUR
ATMEGA168PB-MUR

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Affected Catalog Part Numbers (CPN)

ATMEGA168PB-MUR
ATMEGA168PV-10AN
ATMEGA168PV-10AUR
ATMEGA168PV-10MUR
ATMEGA168V-10AUR
ATMEGA168V-10MQ
ATMEGA168V-10MQR
ATMEGA168V-10MUR
ATMEGA328-AU
ATMEGA328-AUR
ATMEGA328-AURA1
ATMEGA328-MU
ATMEGA328-MUR
ATMEGA328-MURA1
ATMEGA328P-AU
ATMEGA328P-AUA1
ATMEGA328P-AUR
ATMEGA328P-AURA1
ATMEGA328PB-AN
ATMEGA328PB-AN
ATMEGA328PB-ANR
ATMEGA328PB-ANR
ATMEGA328PB-AU
ATMEGA328PB-AU
ATMEGA328PB-AUR
ATMEGA328PB-AUR
ATMEGA328PB-MN
ATMEGA328PB-MN
ATMEGA328PB-MNR
ATMEGA328PB-MNR
ATMEGA328PB-MU
ATMEGA328PB-MU
ATMEGA328PB-MUR
ATMEGA328PB-MUR
ATMEGA328P-MU
ATMEGA328P-MUR
ATMEGA328P-MURA1
ATMEGA48-20AU
ATMEGA48-20MU
ATMEGA48-20MUR
ATMEGA48A-AU
ATMEGA48A-AUR
ATMEGA48A-MU
ATMEGA48A-MUR
ATMEGA48P-20AU

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Affected Catalog Part Numbers (CPN)

ATMEGA48P-20AUR
ATMEGA48P-20MU
ATMEGA48P-20MUR
ATMEGA48PA-AU
ATMEGA48PA-AUR
ATMEGA48PA-MU
ATMEGA48PA-MUR
ATMEGA48PB-AN
ATMEGA48PB-AN
ATMEGA48PB-ANR
ATMEGA48PB-ANR
ATMEGA48PB-AU
ATMEGA48PB-AU
ATMEGA48PB-AUR
ATMEGA48PB-AUR
ATMEGA48PB-MN
ATMEGA48PB-MN
ATMEGA48PB-MNR
ATMEGA48PB-MNR
ATMEGA48PB-MU
ATMEGA48PB-MU
ATMEGA48PB-MUR
ATMEGA48PB-MUR
ATMEGA48PV-10AU
ATMEGA48PV-10AUR
ATMEGA48PV-10MU
ATMEGA48PV-10MUR
ATMEGA48V-10MU
ATMEGA48V-10MUR
ATMEGA8-16AU
ATMEGA8-16AU
ATMEGA8-16AUR
ATMEGA8-16AUR
ATMEGA8-16MU
ATMEGA8-16MU
ATMEGA8-16MUR
ATMEGA8-16MUR
ATMEGA88-20AU
ATMEGA88-20MU
ATMEGA88-20MUR
ATMEGA88A-AU
ATMEGA88A-AUR
ATMEGA88A-MU
ATMEGA88A-MUR
ATMEGA88P-20AU

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Affected Catalog Part Numbers (CPN)

ATMEGA88P-20AUR
ATMEGA88P-20MU
ATMEGA88P-20MUR
ATMEGA88PA-AU
ATMEGA88PA-AUR
ATMEGA88PA-MU
ATMEGA88PA-MUR
ATMEGA88PB-AN
ATMEGA88PB-AN
ATMEGA88PB-ANR
ATMEGA88PB-ANR
ATMEGA88PB-AU
ATMEGA88PB-AU
ATMEGA88PB-AUR
ATMEGA88PB-AUR
ATMEGA88PB-MN
ATMEGA88PB-MN
ATMEGA88PB-MNR
ATMEGA88PB-MNR
ATMEGA88PB-MU
ATMEGA88PB-MU
ATMEGA88PB-MUR
ATMEGA88PB-MUR
ATMEGA88PB-MURB75
ATMEGA88PV-10AU
ATMEGA88PV-10AUR
ATMEGA88PV-10MU
ATMEGA88PV-10MUR
ATMEGA88V-10MU
ATMEGA88V-10MUR
ATMEGA8A-AU
ATMEGA8A-AU
ATMEGA8A-AUR
ATMEGA8A-AUR
ATMEGA8A-MU
ATMEGA8A-MU
ATMEGA8A-MUR
ATMEGA8A-MUR
ATMEGA8L-8AU
ATMEGA8L-8AU
ATMEGA8L-8AUR
ATMEGA8L-8AUR
ATMEGA8L-8MU
ATMEGA8L-8MU
ATMEGA8L-8MUR

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Affected Catalog Part Numbers (CPN)

ATMEGA8L-8MUR
ATTINY417-MFR
ATTINY417-MNR
ATTINY814-SSFR
ATTINY814-SSNR
ATTINY816-MFR
ATTINY816-MFR
ATTINY816-MNR
ATTINY816-SFR
ATTINY816-SNR
ATTINY817-MFR
ATTINY817-MFR
ATTINY817-MFR
ATTINY817-MNR



**MICROCHIP**

**QUALIFICATION PLAN SUMMARY**

**PCN #: GBNG-06LXXH156**

**Date**

**February 22, 2017**

**Qualification of Microchip Fabrication site (FAB 4) for Atmel products manufactured with the 59.91K process technology.**



### Process Qualification Reliability Test

Qualification Test	#Lots (total)	MCHP QCI39000-er QCI39000-002c	SS/Lot (incl. spares)	Total Sample	Bias Vdd(V)	Temp (°C)	Duration (Hrs or Cyc)	Comments
ELF	3	800	825	2475	5.5	150	48	
HTOL	4	200	210	840	5.5	(125) 150	(1000) 504	AUTO: Read out at -40/25/105
Endurance (read-out @10Kc / 100Kc)	3	77	82	246	5.5	25 85	100Kc	
Data Retention (Package level with 10K pre-cycling)	3	77	82	246	--	25 175	504	
Temperature Cycle	3	77	82	246	--	-65/150	504	
Biased HAST	3	77	82	246	5.5	130/85% (110/85%)	96 (264)	
Unbiased HAST	3	77	82	246	--	130/85% (110/85%)	96 (264)	

### Product Qualification Reliability Test

Qualification Test	#Lots (total)	MCHP QCI39000-er QCI39000-002c	SS/Lot (incl. spares)	Total Sample	Bias Vdd(V)	Temp (°C)	Duration (Hrs or Cyc)	Comments
ESD HBM	1	27	30	30	--	25		
ESD MM	1	12	30	30		25		Still required for AVR parts
ESD CDM	1	15	30	30	--	25		
Latch Up - TQFP	1	12	30	30	--	125		

### Package Qualification Reliability Test

Qualification Test	#Lots (total)	MCHP QCI39000-er QCI39000-002c	SS/Lot (incl. spares)	Total Sample	Bias Vdd(V)	Temp (°C)	Duration (Hrs or Cyc)	Comments
Solderability	1	15	18	18	--	260	168	
Bond Pull	1	15	18	18	--	25	168	
Ball Bond Shear	1	15	18	18	--	25	168	