



# Product Change Notification - SIGE000003 - JAON-29XUTR452

**Date:**

27 Mar 2018

**Product Category:**

Clock and Timing - Clock and Data Distribution; Others

**Affected CPNs:****Notification subject:**

CCB 2871 Final Notice: Release to production of listed Micrel Clock and Timing product type manufactured with the SiGe process technology to Fabrication site (FAB 5).

**Notification text:****PCN Status:**

Final notification

Note: This final PCN only pertains to the products listed in this PCN. Additional final PCNs may be issued for this combination of product type and process technology.

**PCN Type:**

Manufacturing Change

**Microchip Parts Affected:**

Please open one of the icons found in the Affected CPNs section above.

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

**Description of Change:**

Release to production of listed Micrel Clock and Timing product type manufactured with the SiGe process technology to Fabrication site (FAB 5).

**Pre Change:**

Fabricated at Micrel fabrication site (San Jose, CA, USA) (SJ) using 6 inch wafers.

**Post Change:**

Fabricated at Atmel Fabrication site FAB 5 (Colorado Springs, CO, USA) (COS) using 6 inch wafers

**Pre and Post Change Summary:**

	Pre Change	Post Change	
Fabrication Location	Micrel Fabrication Site (San Jose, CA, USA)	Primary Fab Location: Atmel Fabrication site FAB 5 (Colorado Springs, CO USA)	Secondary Fab Location: Microchip Fabrication Site (Tempe, AZ USA)
Wafer Diameter	6 inches (150 mm)	6 inches (150 mm)	8 inches (200 mm)
Quality certification	ISO9001	ISO9001/TS16949	ISO/TS16949
Data sheet / specifications	No Change	No Change	No Change
Design/layout	No Change	No Change	No Change
Die Size	No change	No change	No change
Final test program	No change	No change	No change
Package Type/MSL	No Change	No Change	No Change

**Impacts to Data Sheet:**



No impact anticipated.

**Change Impact:**

None

**Reason for Change:**

To improve productivity with the closure of the Micrel fab (SJ) as part of the integration of Micrel and Microchip.

**Change Implementation Status:**

In Progress

**Estimated First Ship Date:**

Estimated First Ship Date (EFSD) are identified for each catalog part numbers (CPN) listed in the attached parts list. This can be found in the attachments field below labeled as PCN\_#\_Affected\_CPN.

**Summary Time Table of notable events to date:**

Workweek	March 2017					->	July 2017					->	March 2018				
	09	10	11	12	13		27	28	29	30	09		10	11	12	13	
Initial PCN Issue Date					X												
Qualification Report Availability and Intermediate PCN issue date <b>JAON-29XUTR452</b>						X											
Final PCN Issue Date JAON-29XUTR452 – SIGE000003														X			
Estimated First Ship Date																As listed in the attached parts list below.	

**Method to Identify Change:**

Traceability code.

**Qualification Report:**

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

**Revision History:**

**March 30, 2017:** Issued initial notification.

**July 5, 2017:** Issued intermediate notification. Attached the Qualification report.

**March 21, 2018:** Issued final notification as PCN number JAON-29XUTR452 – SIGE000003 for listed Micrel’s Clock and Timing products manufactured with the SiGe process technology to Fabrication site (FAB 5). Provided estimated first ship date (EFSD) for each CPN listed in the attached parts list.

**March 27, 2018:** Re-issued the final PCN to include the affected CPN list with Estimated First Ship Date (EFSD).

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



**Attachment(s):**

[PCN\\_JAON-29XUTR452-SIGE000003\\_Affected\\_CPN.pdf](#)

[PCN\\_JAON-29XUTR452-SIGE000003\\_Qual\\_Report.pdf](#)

[PCN\\_JAON-29XUTR452-SIGE000003\\_Affected\\_CPN.xls](#)

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

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To opt out of future offer or information emails (other than product change notification emails), click here to go to [microchipDIRECT](#) and login, then click on the "My account" link, click on "Update profile" and un-check the box that states "Future offers or information about Microchip's products or services."



**MICROCHIP**

## **QUALIFICATION REPORT SUMMARY**

**PCN #: JAON-29XUTR452 - SIGE000003**

**Date**  
**June 1, 2017**

**Qualification of Fabrication site (FAB 5) for Micrel products  
manufactured with the SiGe process technology.**

PART NUMBER / MASK	PACKAGE TYPE	ASSEMBLY LOCATION	FAB LOCATION	PROCESS NAME
SY58023UMG / 2D602	QFN33-16L	UNISEM, IPOH MALAYSIA	MICROCHIP FAB-5 Colorado Springs	S2_SiGe 0.6u

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	FAB LOT ID.	168 HR Rej/ss	408 HR Rej/ss	COMMENTS
<b>HTOL</b> <b>High Temperature Operating Life Test</b>	JESD22, Method 108	1645E3C	FA23647B	0/80	0/80	
	Tj = +135°C  Ta = +85°C  Vcc = +3.10V	1651CKW	A6Y2057	0/82	0/82	
<b>HTOL</b> <b>High Temperature Operating Life Test</b>	JESD22, Method 108	1651CKW	A6Y2057	0/82	0/82	
	Tj = +150°C  Ta = +105°C  Vcc = +3.10V	1703PVQ	6Y2092	0/82	0/82	

**ELECTROSTATIC DISCHARGE AND LATCH-UP**

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	FAB LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
<b>ESD-HBM</b>  Human Body Model ATE Test @ Room +25C	R= 1500 Ohms  C= 100 pF  1X +/- Voltage	N/A	7U2874	+/-500V	0/3	Note: ESD ratings are, device specific. All products, qualified on the 6" Micrel, process technologies at, Microchip Fabs will have the, same or better ESD and, Latch-up performance as the 6" products fabricated at San Jose wafer fabrication site.
<b>ESD-CDM</b>  Charged Device Model ATE Test @ Room +25C	JESD22-C101  1X +/- Voltage	1703PVQ	6Y2092	+/-250V +/-500V +/-750V +/-1000V +/-1500V +/-2000V	0/3 0/3 0/3 0/3 0/3 0/3	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
<b>LATCH-UP</b>	JESD-78  A = +25°C	1651CKW	A6Y2057	I/O LU O/V LU	0/6	
		1645E3C	FA23647B		0/6	

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PACKAGE QUALIFICATION RESULTS						
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	ASSEM LOT ID.	Rej/ss	COMMENTS	
<b>Level 1 Pre-conditioning Flow</b>  Use samples to perform PPOT/HAST/TCY	<b>JESD22-A113</b>	1651CKW	UNIS173900097.000	0/330		
		1703PVQ	UNIS174300114.000	0/310		
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	ASSEM LOT ID.	96 HR Rej/ss	COMMENTS	
<b>uHAST</b>  <b>With Level 1 Pre-conditioning</b>  Tpeak + 260°C 3X Reflow	<b>JESD22-A118</b>  Ta= +130°C/85%RH	1651CKW	UNIS173900097.000	0/82		
		1703PVQ	UNIS174300114.000	0/82		
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	ASSEM LOT ID.	96 HR Rej/ss	COMMENTS	
<b>HAST</b>  <b>With Level 1 Pre-conditioning</b>  Tpeak + 260°C 3X Reflow	<b>JESD22-A110 (BIASED)</b>  Ta= +130°C/85%RH  Vcc = +1.2V	1651CKW	UNIS173900097.000	0/80		
		1703PVQ	UNIS174300114.000	0/80		
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	ASSEM LOT ID.	500 CY Rej/ss	1000 CY Rej/ss	COMMENTS
<b>TEMP CYCLE</b>  <b>With Level 1 Pre-conditioning</b>  Tpeak + 260°C 3X Reflow	<b>JESD22-A104</b>  Ta = -65°C / +150°C	1651CKW	UNIS173900097.000	0/82	0/82	
		1703PVQ	UNIS174300114.000	0/82	0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	ASSEM LOT ID.	1000 HR Rej/ss	COMMENTS	
<b>HTSL</b>  <b>High Temperature Storage Life</b>	<b>JESD22-A103</b>  Ta = +150°C	1651CKW	UNIS173900097.000	0/50		
		1703PVQ	UNIS174300114.000	0/50		
<b>FLAMMABILITY</b>	UL-94V-0  Certified	All mold compounds used by Micrel meet this standard. See the UL website on-line list of material flammability certifications. Micrel requires a Certificate of Compliance from the assembly house and we verify the certifications on the web.				

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Affected Catalog Part Numbers (CPN)

<b>PCN_JAON-29XUTR452-SIGE000003</b>	
<b>CATALOG_PART_NBR</b>	<b>Estimated First Ship Date (EFSD)</b>
SY58024UMG	March 30, 2018
SY58024UMG-TR	March 30, 2018
SY58040UMY	March 30, 2018
SY58040UMY-TR	March 30, 2018
SY58033UMG	March 30, 2018
SY58033UMG-TR	March 30, 2018
SY58626LMH	March 30, 2018
SY58626LMH-TR	March 30, 2018
SY89855UMG	March 30, 2018
SY89855UMG-TR	March 30, 2018
SY58028UMG	March 30, 2018
SY58627LMG	March 30, 2018
SY58038UMY	March 30, 2018
SY58028UMG-TR	March 30, 2018
SY58627LMG-TR	March 30, 2018
SY58038UMY-TR	March 30, 2018
SY58018UMG	March 30, 2018
SY58606UMG	March 30, 2018
SY58018UMG-TR	March 30, 2018
SY58606UMG-TR	March 30, 2018
SY54011RMG	March 30, 2018
SY54011RMG-TR	March 30, 2018
SY58605UMG-TR	March 30, 2018