



## Product Change Notification - SIGE000007 - JAON-29XUTR452

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**Date:**

25 Oct 2019

**Product Category:**

Clock and Timing - Clock and Data Distribution

**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:**

	March 2017					->	July 2017					->	October 2019					November 2019				
	09	10	11	12	13		27	28	29	30	40		41	42	43	44	45	46	47	48	45	
Initial PCN Issue Date				X																		
Qualification Report Availability and Intermediate PCN issue date  <u>JAON-29XUTR452</u>						X																
Final PCN Issue Date  JAON-29XUTR452 - SIGE000007														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.

**October 25, 2019:** Issued final notification as PCN number JAON-29XUTR452 - SIGE000007 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.

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-SIGE000007 Qual Report.pdf](#)

[PCN JAON-29XUTR452-SIGE000007 Affected CPN.pdf](#)

[PCN JAON-29XUTR452-SIGE000007 Affected CPN.xls](#)

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

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If you wish to change your PCN profile, including opt out, please go to the [PCN home page](#) select login and sign into your myMicrochip account. Select a profile option from the left navigation bar and make the applicable selections.



**MICROCHIP**

# **QUALIFICATION REPORT SUMMARY**

**PCN #: JAON-29XUTR452 - SIGE000007**

**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	0/6	
		1645E3C	FA23647B	O/V LU	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)

SY58034UMG

SY56034ARMG

SY58034UMG-TR

SY56034ARMG-TR