

Product Change Notification - S100000001 - JAON-01RSNA976

Date: 24 Oct 2017
Product Category: Clock and Timing - Clock and Data Distribution; Clock and Timing - High Speed Communication
Notification subject: CCB 2736 Final Notice: Release to production of listed Micrel Clock and Timing product type manufactured with the S1 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.

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:

Release to production of listed Micrel Clock and Timing product type manufactured with the S1 process technology to Fabrication site (FAB 5).

NOTE: Please review the FAQ attached in this notification for additional information regarding this change.

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)	Atmel Fabrication site FAB 5 (Colorado Springs, CO USA)
Wafer Diameter	6 inches (150 mm)	6 inches (150 mm)
Quality certification	ISO9001	ISO9001/TS16949
Data sheet / specifications	No Change	No Change
Design/layout	No Change	No Change
Die Size	No change	No change
Final test program	No change	No change
Package Type/MSL	No Change	No Change

Impacts to Data Sheet:

None

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:

As identified for each CPN listed in the attached parts list.

Summary Time Table of notable events to date:

	October 2016				->	March 2017					->	October 2017			
Workweek	40	41	42	43		09	10	11	12	13		40	41	42	43
Initial PCN Issue Date		X													
Qualification Report Availability and Intermediate PCN issue date JAON-01RSNA976							X								
Final PCN Issue Date JAON-01RSNA976-S100000001															X
Estimated First Ship Date															As listed in the attached parts list.

Method to Identify Change:

Traceability code.

Qualification Report:

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

Revision History:

October 14, 2016: Issued initial notification.

March 9, 2017: Issued intermediate notification. Attached the Qualification Report.

October 24, 2017: Issued final notification as PCN number JAON-01RSNA976-S100000001 for listed Micrel's Clock and Timing products manufactured with the S1 process technology. 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 Microchip's current regulatory compliance regarding the material content of the applicable products.

Attachment(s):

[PCN_JAON-01RSNA976-S100000001_Qual Report.pdf](#)

[PCN_JAON-01RSNA976-S100000001_Affected CPN.pdf](#)

[PCN_JAON-01RSNA976-S100000001_Affected CPN.xls](#)

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

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MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-01RSNA976-S100000001

Date
March 6, 2017

**Qualification of Fabrication site (FAB 5) for Micrel products manufactured
with the S1 process technology.**

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	FAB LOCATION	PROCESS NAME
SY100EL16VZG	SOIC-8L	STARS THAILAND	MICROCHIP FAB-5 Colorado Springs	S1

DIE QUALIFICATION RESULTS

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	500 HR Rej/ss	1000 HR Rej/ss	COMMENTS
HTOL High Temperature Operating Life Test	JESD22, Method 108	16340BC	FA23647B	0/80	0/80	0/80	
	Ta = +125°C	1636K98	6W4369	0/82	0/82	0/82	
	Vcc = +5.3V	1640T4U	FA20475	0/82	0/82	0/82	

ELECTROSTATIC DISCHARGE

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
ESD-HBM Human Body Model ATE Test @ Room +25C	R= 1500 Ohms C= 100 pF 1X +/- Voltage	16340BC	FA23647B	+/-2000V	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.
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	16340BC	FA23647B	+/-1500V	0/3	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 A = +25°C	16340BC	FA23647B	I/O LU O/V LU	0/6 0/6	Same as SJ 6 inch

PACKAGE QUALIFICATION RESULTS					
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	Rej/ss	COMMENTS
Level 1 Pre-conditioning Flow Use samples to perform PPOT/HAST/TCY	JESD22-A113	1636K98	6W4369	0/330	
		1640T4U	FA20475	0/350	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
PRESSURE POT With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A102 Ta = +121°C/100%RH 15 PSIG	1636K98	6W4369	0/82	
		1640T4U	FA20475	0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
HAST With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED) Ta= +130°C/85%RH Vcc = +1.5V	1636K98	6W4369	0/82	
		1640T4U	FA20475	0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 CY Rej/ss	COMMENTS
TEMP CYCLE With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A104 Ta = -65°C / +150°C	1636K98	6W4369	0/82	
		1640T4U	FA20475	0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +150°C	1636K98	6W4369	0/50	
		1640T4U	FA20475	0/50	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +175°C	1640T4U	FA20475	0/50	
FLAMMABILITY	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)

PCN_JAON-01RSNA976-S100000001	
CATALOG_PART_NBR	Estimated First Ship Date (EFSD)
SY100EL11VZG	October 27, 2017
SY100ELT22ZG	October 27, 2017
SY100EL16VZG	October 27, 2017
SY100ELT22LZG	October 27, 2017
SY100EL16VKG	October 27, 2017
SY100EPT22VKG	October 27, 2017
SY100EL11VZG-TR	October 27, 2017
SY100ELT22ZG-TR	October 27, 2017
SY100EL16VZG-TR	October 27, 2017
SY100ELT22LZG-TR	October 27, 2017
SY100EL16VKG-TR	October 27, 2017
SY100EPT22VKG-TR	October 27, 2017
SY89222LMG-TR	October 27, 2017
SY89322VMG-TR	October 27, 2017
SY100EL33LZG	October 27, 2017
SY100EL33LZG-TR	October 27, 2017
SY100EPT23LZG	October 27, 2017
SY100ELT23LZG	October 27, 2017
SY100EPT23LZG-TR	October 27, 2017
SY100ELT23LZG-TR	October 27, 2017
SY100EL32VZG	October 27, 2017
SY100EL32VZG-TR	October 27, 2017
SY100ELT21LZG	October 27, 2017
SY100ELT21LZG-TR	October 27, 2017
SY89321LMG-TR	October 27, 2017
SY100EL56VZG	October 27, 2017
SY100EL56VZG-TR	October 27, 2017
SY100EL16VCKG	October 27, 2017
SY100EL16VCKG-TR	October 27, 2017
SY100EL16VFKG	October 27, 2017
SY100EL16VFKG-TR	October 27, 2017
SY100EPT28LKG	October 27, 2017
SY100EPT28LKG-TR	October 27, 2017
SY89328LMG-TR	October 27, 2017
SY100EL29VZG	October 27, 2017
SY100EL29VZG-TR	October 27, 2017
SY100EL16VDKG	October 27, 2017
SY100EL16VDKG-TR	October 27, 2017
SY100EPT20VZG	October 27, 2017
SY100EPT20VZG-TR	October 27, 2017
SY89329VMG-TR	October 27, 2017
SY89113UMY	October 27, 2017

JAON-01RSNA976 - S100000001 - CCB 2736 Final Notice: Release to production of listed Micrel Clock and Timing product type manufactured with the S1 process technology to Fabrication site (FAB 5).

Affected Catalog Part Numbers (CPN)

PCN_JAON-01RSNA976-S100000001	
CATALOG_PART_NBR	Estimated First Ship Date (EFSD)
SY89113UMY-TR	October 27, 2017
SY898530UTZ	October 27, 2017
SY898530UTZ-TX	October 27, 2017
SY898530UTZ-TR	October 27, 2017
SY100E222LTY	October 27, 2017
SY100E222LTY-TR	October 27, 2017
SY100E222LTY-TX	October 27, 2017
SY10EP51VZG	October 27, 2017
SY10EP51VKG	October 27, 2017
SY10EP51VZG-TR	October 27, 2017
SY10EP51VKG-TR	October 27, 2017
SY88903VKG	October 27, 2017
SY88903VKG-TR	October 27, 2017
SY88927VKG	October 27, 2017
SY88933VKG	October 27, 2017
SY88922VKG	October 27, 2017
SY88822VKG	October 27, 2017
SY88927VKG-TR	October 27, 2017
SY88933VKG-TR	October 27, 2017
SY88922VKG-TR	October 27, 2017
SY88822VKG-TR	October 27, 2017
SY88803VKG	October 27, 2017
SY88803VKG-TR	October 27, 2017
SY88993AVKG	October 27, 2017
SY88993AVKG-TR	October 27, 2017
SY55855VKG	October 27, 2017
SY55855VKG-TR	October 27, 2017
SY88943VKG	October 27, 2017
SY88943VKG-TR	October 27, 2017
SY100EL14VZG	October 27, 2017
SY100EL14VZG-TR	October 27, 2017
SY100EL17VZG	October 27, 2017
SY100EL17VZG-TR	October 27, 2017