

Product Change Notification - S200000010 - JAON-14FRVC158

Date: 19 Jul 2017
Product Category: Clock and Timing - Clock and Data Distribution
Notification subject: CCB 1737.11 Final Notice: Release to production of listed Micrel Clock and Timing product type manufactured with the S2 process technology to Microchip Fab.
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 S2 process technology to Microchip Fab.

NOTE: Please review the FAQ linked [here](#) for additional information about this change.

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

Post Change:
 Fabricated at Microchip fabrication site using 8 inch wafers.

Pre and Post Change Summary:

	Pre Change	Post Change
Fab Site	Micrel fabrication site (San Jose, CA, USA)	Microchip fabrication site
Wafer Size	6 inch wafers	8 inch wafers

Impacts to Data Sheet:
 None

Reason for Change:
 To improve productivity with the closure of the Micrel fab 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:

	September 2015					->	November 2016				->	July 2017				August 2017				
Workweek	36	37	38	39	40		44	45	46	47		27	28	29	30	31	32	33	34	35
Initial PCN Issue Date CYER-31JLEX869	X																			
Qual Report Available JAON-14FRVC158							X													
Final PCN Issue Date JAON-14FRVC158-S200000010														X						
Estimated First Ship Date																As listed in the attached parts list				

Markings to Distinguish Revised from Unrevised Devices:
 Traceability code and shipping label see [FAQ](#).

Revision History:
September 1, 2015: Issued initial notification as PCN number [CYER-31JLEX869](#).
November 4, 2016: Issued intermediate notification as PCN number [JAON-14FRVC158](#). Attached the Qualification Report. Revised the estimated first ship date (EFSD) to inform that the EFSD will be revealed in the final PCN.
July 19, 2017: Issued final notification as PCN number [JAON-14FRVC158-S200000010](#) for listed Micrel's Clock and Timing products manufactured with the S2 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-14FRVC158-S200000010_Qual Report.pdf](#)
[PCN_JAON-14FRVC158-S200000010_Affected CPN.pdf](#)
[PCN_JAON-14FRVC158-S200000010_Affected CPN.xls](#)

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

Terms and Conditions:

If you wish to change your product/process change notification (PCN) profile please log on to our website at <http://www.microchip.com/PCN> sign into myMICROCHIP to open the myMICROCHIP home page, then select a profile option from the left navigation bar.

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."

JAON-14FRVC158-S200000010 - CCB 1737.11 Final Notice: Release to production of listed Micrel Clock and Timing product type manufactured with the S2 process technology to Microchip Fab.

Affected Catalog Part Numbers (CPN)

PCN_JAON-14FRVC158-S200000010	
CATALOG_PART_NBR	Estimated First Ship Date (EFSD)
SY89833LMG	August 30, 2017
SY89833LMG-TR	August 30, 2017
SY89847UMG	August 02, 2017
SY89847UMG-TR	August 30, 2017



MICROCHIP

QUALIFICATION REPORT SUMMARY
RELIABILITY LABORATORY

PCN #: JAON-14FRVC158-S200000010

Date
October 11, 2016

**Qualification of Microchip 8 inch Fabrication site for Micrel products
manufactured with the S2 Process Technology.**

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	FAB LOCATION	PROCESS NAME
SY100EP111UTG 2D801-035	TQFP_32L	AMKOR PHILIPPINES	MICROCHIP FAB-2 TEMPE AZ.	S2

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	1624	V216389217.000	0/77	0/77	0/77	
	Ta = + 125°C	1626	V216307756.110	0/77	0/76	0/76	
	Vcc = +3.3V	1626	V216429648.000	0/77	0/77	0/77	

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	1609	V216389217.000	+/-1500V	0/3	Note: ESD ratings are device specific. All Products qualified on the 8" Micrel process technologies will have the same or better ESD and Latch-up performance as the 6" San Jose Products.
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1609	V216389217.000	+/-1500V	0/3	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 TA = +25°C	1609	V216389217.000	I/O LU O/V LU	0/6 0/6	Same as 6 inch

PACKAGE QUALIFICATION RESULTS					
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	Rej/ss	COMMENTS
Level 2 Pre-conditioning Flow Use samples to perform PPOT/HAST/TCY	JESD22-A113 Use samples to	1624	V216389217.000	0/340	
		1626	V216307756.110	0/310	
		1626	V216429648.000	0/360	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
PRESSURE POT With Level 2 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A102 Ta = +121°C/100%RH 15 PSIG	1624	V216389217.000	0/77	
		1626	V216307756.110	0/77	
		1626	V216429648.000	0/77	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
HAST With Level 2 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED) Ta= +130°C/85%RH Vcc = +1.2V	1624	V216389217.000	0/77	
		1626	V216307756.110	0/77	
		1626	V216429648.000	0/77	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 CY Rej/ss	COMMENTS
TEMP CYCLE With Level 2 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A104 Ta = -65°C / +150°C	1624	V216389217.000	0/77	
		1626	V216307756.110	0/77	
		1626	V216429648.000	0/77	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +150°C	1624	V216389217.000	0/76	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +175°C	1624	V216389217.000	0/76	
		1626	V216307756.110	0/45	
		1626	V216429648.000	0/45	
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.			