



Product Change Notification - BCD0500011 - JAON-20BQVK768

Date:

05 Nov 2018

Product Category:

Power Management - Power Switches

Affected CPNs:**Notification subject:**

CCB 2837 Final Notice: Release to production of listed Micrel Power Switch product type manufactured with the BCD05 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 Power Switch product type manufactured with the BCD05 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)	Backup Fab Locations: Microchip Fabrication Sites (Tempe, AZ and Gresham, OR, 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
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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:

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

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:

	December 2016					->	May 2017				->	November 2018				
Workweek	48	49	50	51	52		18	19	20	21		44	45	46	47	48
Initial PCN Issue Date				X												
Qualification Report Availability and Intermediate PCN issue date							X									
JAON-20BQVK768																
Final PCN Issue Date													X			
JAON-20BQVK768 - BCD0500011																
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:

December 23, 2016: Issued initial notification.

May 4, 2017: Issued intermediate notification. Attached the Qualification Report.

November 05, 2018: Issued final notification as PCN number JAON-20BQVK768 - BCD0500011 for listed Micrel's Power switch products manufactured with the BCD05 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-20BQVK768-BCD0500011_Affected_CPN.pdf](#)

[PCN_JAON-20BQVK768-BCD0500011_Qual_Report.pdf](#)

[PCN_JAON-20BQVK768-BCD0500011_Affected_CPN.xls](#)

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

Terms and Conditions:

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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.

Affected Catalog Part Numbers (CPN)

MIC94162YCS-TR

MIC94163YCS-TR

JAON-20BQVK768-BCD0500011 – CCB 2837 Final Notice: Release to production of listed Micrel Power Switch product type manufactured with the BCD05 process technology to Fabrication site (FAB 5).

Affected Catalog Part Numbers (CPN)

PCN_JAON-20BQVK768-BCD0500011	
CATALOG_PART_NBR	Estimated First Ship Date (EFSD)
MIC94162YCS-TR	November 19, 2018
MIC94163YCS-TR	November 19, 2018



QUALIFICATION REPORT SUMMARY

PCN #: JAON-20BQVK768 - BCD0500011

Date
April 6, 2017

**Qualification of Fabrication site (FAB 5) for Micrel products
manufactured with the BCD05 process technology.**

PART NUMBER	PACKAGE TYPE	ASSEMBLY LOCATION	FAB LOCATION	PROCESS NAME
MIC2104YML	QFN33-16L	UNISEM, MALAYSIA	MICROCHIP FAB-5 Colorado Springs	BCD05/CSI05

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	1643	R6X0362 UNIS173100082.000	0/82	0/82	0/82	*Units went straight to 1000 hours. No read out at 500 hours.
	Ta = +125°C	1702	6Y2663 UNIS174200177.100B	0/80	-*	0/80	
	Vcc = +75V	1703	6Y0748 UNIS174300027.000	0/79	-*	0/78**	

*Lot 2 under 500HR went straight to 1000 HR skipping the 500 HR read.

** Lot 3 started with 79 units, one device removed at 168 hours, 78 units went straight to straight to 1000 hours

TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	168 HR Rej/ss	408 HR Rej/ss	COMMENTS
HTOL High Temperature Operating Life Test	JESD22, Method 108	1702	R6X0362 UNIS173100082.000	0/77	0/77	*77 units went straight to 408 hours. No read out at 168 hours.
	Ta = +150°C	1703	B6Y0748 UNIS174300027.000	-*	0/77	
	Vcc = +75V					

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	1643	R6X0362 UNIS173100082.000	+/-1000V	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.
	C= 100 pF 1X +/- Voltage					
ESD-CDM Charged Device Model ATE Test @ Room +25C	JESD22-C101 1X +/- Voltage	1643	R6X0362 UNIS173100082.000	+/-1500V	0/3	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	STRESS	RESULT Rej/ss	COMMENTS
LATCH-UP	JESD-78 A = +25°C	1643	R6X0362 UNIS173100082.000	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 UHAST/BHAST/TCY	JESD22-A113	1643 1702 1703	R6X0362 UNIS173100082.000 6Y2663 UNIS174200177.100 B6Y0748 UNIS174300027.000	0/375 0/272 0/431	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
UHAST With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	Ta= +131°C/85%RH JESD22-A118 (UNBIASED)	1643 1702 1703	R6X0362 UNIS173100082.000 6Y2663 UNIS174200177.100 B6Y0748 UNIS174300027.000	0/82 0/82 0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	96 HR Rej/ss	COMMENTS
BHAST With Level 1 Pre-conditioning Tpeak + 260°C 3X Reflow	JESD22-A110 (BIASED) Ta= +130°C/85%RH Vcc = +75V	1643 1702 1703	R6X0362 UNIS173100082.000 6Y2663 UNIS174200177.100 B6Y0748 UNIS174300027.000	0/82 0/82 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	1643 1702 1703	R6X0362 UNIS173100082.000 6Y2663 UNIS174200177.100 B6Y0748 UNIS174300027.000	0/82 0/82 0/82	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	500 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +175°C	1643	R6X0362 UNIS173100082.000	0/50	
TEST DESCRIPTION	METHOD/CONDITIONS	DATE CODE	LOT ID.	1000 HR Rej/ss	COMMENTS
HTSL High Temperature Storage Life	JESD22-A103 Ta = +150°C	1643	R6X0362 UNIS173100082.000	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.			